

# Executive Summary



The California Department of Boating and Waterways administers many programs to provide for boating safety on the State's waterways. The 2000 California Boating Safety Report summarizes activities performed in three key safety program areas:

- Boating accident analysis
- Law enforcement
- Safety education.

This report also highlights the Department's current program enhancements and future safety initiatives designed to reduce accidents and make California's waterways safer.

Through the boating accident program, the Department provides useful accident information to boaters, law enforcement agencies, and educators. This information is communicated to the general public through the incorporation of accident analyses and relevant safety measures into the Department's safety education programs and law enforcement training programs. **Exhibit E-1** (starting on page 2) provides a summary of key boating accident statistics for 2000.

The Department provides supplemental funding to counties for law enforcement activities and promotes uniform enforcement of boating laws through its law enforcement training programs. In 2000, the financial aid program allocated \$8.1 million to 35 counties and 2 cities for enforcement personnel and operating costs. In turn, the counties provided crucial boating law enforcement, as well as safety training for law enforcement officers and the public. **Exhibit E-2** (on page 5) provides a summary of law enforcement activities supported by the Department's financial aid program.

In 2000, the law enforcement-training program included seven courses on various boating safety topics, in which Department staff trained nearly 500 marine enforcement officers.



The Department's safety education programs provided nearly 2 million individuals with boating safety training and materials. On-going partnerships with educational institutions, aquatic centers, and non-profit organizations provided crucial safety information to students and the general public. Additionally, the Department sponsored a statewide radio and billboard campaign to promote life jacket usage and highlight the dangers of mixing alcohol and

boating. **Exhibit E-3** (starting on page 5) provides a summary of the Department's safety education outreach programs.

New programs developed in 2000 focus on improving public outreach and expanding law enforcement training. Enhancements to existing programs reflect changing accident statistics and key safety concerns. **Exhibit E-4** (starting on page 6) presents a summary of 2000 program enhancements and initiatives.



## Exhibit E-1

### 2000 Boating Accident Summary Statistics

#### Overall Boating Accident Highlights

- In 2000, a total of 906 boating accidents were reported to the Department, involving 524 injuries, 51 fatalities, and \$3,038,400 in property damage.
- Operator inexperience (42%) was the most common cause of boating accidents, followed by operator inattention (32%), and excessive speed (24%). (*Many accidents had more than one cause.*)
- Accidents involving personal watercraft (PWC) increased from 264 in 1999 to 293 in 2000. The total number of PWC-related accidents, however remains well below the 391 which occurred in 1997, prior to two new laws that took effect in January 1998. The continued reduction in the number of PWC-related accidents appears to be attributable primarily to these laws.
- Open motorboats were involved in 51% of all accidents. PWC were involved in 32%.
- 38% of all vessels and 67% of PWC involved in accidents were operated by someone other than the registered owner. These findings demonstrate the need to emphasize boating education for all vessel operators as well as vessel owners.
- 73% of vessels involved in all accidents were less than 26 feet in length. 89% of vessels involved in fatal boating accidents were less than 26 feet in length.
- 38% of reported accidents resulted from collisions with other vessels.
- Accidents occurred mostly during the summer months (May through September), on weekends, during the hours between 10:00 a.m. - 6:00 p.m. The largest number of accidents (50%) occurred on lakes, followed by ocean/bay waters (28%).

## Exhibit E-1 (continued)

- Of operators whose ages were known, those in the 31-40 age group were involved in more accidents than any other age group, followed by the 21-30 age group.
- 20% of boating accidents occurred during the summer holiday weekends of Memorial Day, Independence Day, and Labor Day.
- 16% of boating accidents occurred during water skiing activities. *In this report, the term water skiing refers to all activities involving a vessel towing a person on a towline.*

### PWC Accident Statistics

- Accounting for 19% of registered vessels, PWC were involved in 32% of all accidents, 45% of all injuries, 12% of all fatalities and 14% of all property damage.
- In January 1998, two laws impacting PWC operators took effect. The first law raised the minimum age to operate a vessel over 15 horsepower from 12 to 16 years of age. Since the PWC is the vessel of choice for the vast majority of youth operators, we believe that this law has decreased the number of PWC-related accidents. A second law that prohibited activities such as wake jumping within 100 feet of another vessel, spraying down other vessels and playing “chicken” with another vessel has also had a positive impact on PWC-related accidents.
- Accidents involving PWC have decreased 25% since January 1998. Trends contributing to this result:
  - Accidents involving youths operating all types of vessels have decreased 33%.
  - PWC accidents involving radical maneuvers (such as wake jumping, donuts, and spraying other vessels) have decreased 33%.
- 67% of PWC accidents resulted from collisions with other vessels.
- In PWC collisions with another vessel, the other vessel was most often another PWC (64%).
- 31% of all PWC-related collisions involved operators who knew each other and were boating together.
- The most common cause of PWC-related accidents involved operator inexperience (61%), excessive speed (50%), and operator inattention (42%). *(Many accidents had more than one cause.)*
- PWC operators in the 11-20 age group were involved in more accidents than any other age group followed by the 21-30 age group.
- 67% of PWC involved in accidents were operated by someone other than the registered owner (45% were borrowed and 22% were rented).



## Exhibit E-1 *(continued)*

### Youth Accident Statistics *(Youth is under 18 years of age)*

- Since January 1998, when the minimum age to operate a vessel over 15 HP alone was raised from 12 to 16 years of age, the number accidents involving youth operators has decreased 33%, from 120 in 1997 to 80 in 2000.
- During the 2000 boating season, a total of 94 youth operators were involved in 9% of all accidents, 14% of all injuries, and 6% of all fatalities.
- 47 operators involved in accidents (50%) were under the age of 16. Six of those operators were under the age of 12.
- Of the 47 operators under 16 years of age, 74% did not have an adult on board.
- Collisions with other vessels accounted for 68% of accidents involving youth operators.
- Most of the collisions involved youth operators colliding with adult operators (74%).
- In collisions between youth and adult operators, youth operators were more likely to be exclusively at fault.
- Operator inexperience was a factor in 79% of accidents involving youth operators and was the most common cause of accidents involving them. Operator inexperience was a factor in only 42% of accidents involving operators of all ages.
- 89% of youth operators involved in accidents were operating a PWC.

### Fatal Accident Statistics

- Of the 51 fatalities in 2000, 47% occurred between May and September. 33% of all fatalities occurred on weekends.
- 25 victims (49%) were involved in fishing-related activities. 88% of those victims were not wearing life jackets.
- Over half (54%) of vessels involved in fatal accidents were open motorboats, 15% were cabin motorboats, 13% were PWC and 13% were paddle craft.
- The majority (89%) of vessels involved in fatal accidents were less than 26 feet in length.
- The most common causes of fatalities were operator inattention (35%), operator inexperience (31%), and overloading/improper loading (20%). *(Many accidents had more than one cause.)*
- 78% of the victims drowned. Of that group, 80% were not wearing a life jacket.
- Capsizing (29%) and falls overboard (29%) were the most common types of fatal accidents.
- Operators in the 41-50 age group were involved in more fatal boating accidents than any other age group.
- 39% of fatalities occurred on lakes. Another 31% occurred on oceans/bays.
- 39% of boating fatalities were found to be alcohol-related, where testing could be conducted.

## Exhibit E-2 Services Supported by the 2000 Financial Aid Program



Regulation Enforcement	
Verbal Warnings .....	53,695
Citations .....	8,735
Physical Arrests .....	631
Boater Assistance	
Persons Assisted.....	23,575
Vessels Assisted .....	16,010
Accident Investigations.....	783
Search and Rescue Operations	
Searches .....	1,315
Body Recovery Attempts .....	67
Boating Safety Presentations .....	3,835
Vessel Inspections .....	65,805
Organized Boating Event Supervision .....	309

## Exhibit E-3 2000 Boating Safety Education Programs



### Education Programs

AquaSMART Elementary Education Program .....	500,000	participating students
AquaSMART Boating High School Education Program .....	35,000	participating students
Home Study Course (General Public) .....	35,000	courses mailed
Poster Contest (Sixth Annual) .....	6,000	entries

### Aquatic Center Grant Program

Grants to universities and non-profit..... organizations for scholarships for the purchase of boats, equipment, and related safety supplies	120,000	individuals trained
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### Public Outreach Programs

In 2000, Department representatives:

- Attended numerous events to distribute boating safety literature and answer questions for the public.
- The Department continues an outdoor media campaign focusing on areas with the greatest number of accidents. This campaign consisted of 52 stationary billboards and



## Exhibit E-3 (continued)

10 mobile billboards which traveled to waterways throughout the summer, particularly on major holiday weekends. Special emphasis has been placed on educating anglers in this campaign.

- The Department has also increased outreach efforts to anglers by placing articles and messages in fishing publications throughout the State.
- Expanded a radio campaign targeting areas of California with the highest accident rates. Safety messages regarding PWC operation, river safety and overall boating safety were added to the messages already being aired promoting life jacket use and the dangers of mixing alcohol and boating. These messages were aired by more than 30 stations throughout the State.
- Increased outreach efforts to boaters at the water by:
  - ◆ Partnering with the California Coastal Commission's Adopt-a-Beach Program to put safety posters on refuse barrels on the docks and in picnic areas.
  - ◆ Placing all-weather safety posters at launching ramps, fuel docks, trash receptacles and park entrances.
- Distributed 1.2 million copies of boating safety literature.



### Abandoned Watercraft Removal Program

- In 2000, a total of \$341,685 was allocated to 9 public agencies for the removal and disposal of 75 abandoned vessels and 15 other substantial hazards to navigation.

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## Exhibit E-4

### 2000 Boating Safety Program Enhancements



#### Life Jacket Use

- The Department continues the Life Jacket Partner Program and the T-Shirt Program aimed at increasing the use of life jackets by children.
- The Department continues the Dairy Queen and Carl's Jr. program. Children wearing a life jacket while boating are rewarded with these coupons given by marine law enforcement officers.
- The Department continues a radio ad campaign promoting the use of life jackets. This safety message is being aired on radio stations throughout California and targets boaters in high accident areas.
- The Department continues placing billboards in areas where accidents are most prevalent and has added to this outreach effort by placing safety messages on posters

## Exhibit E-4 (continued)

and refuse barrels at marinas. The billboards inform boaters about the importance of wearing a life jacket while boating.

- The Department produced a new 30-second television public service announcement (PSA) that stresses the importance of wearing a life jacket.
- The Department is promoting the use of life jackets at safety fairs and boat shows throughout the State, through the annual *Safe and Wise Water Ways* poster contest for children, and at National Safe Boating Week events.

### Personal Watercraft

- The Department continues development of a new PWC Practical Handling Course. This course focuses on PWC operation and safe boat handling. The curriculum is designed for operators of all ages and will be available to the general public. It is designed to be incorporated into existing safety programs offered by organizations such as the U.S. Coast Guard Auxiliary, the U.S. Power Squadrons, marine law enforcement agencies, and aquatic centers. This course should be available in Summer 2001.
- The Department produced a 60-second radio message on the dangers of “horseplay” while operating a PWC which airs on radio stations throughout California.
- The Department produced a 30-second PSA on the subject of personal watercraft safety for distribution to television stations statewide this summer.

### Youth Operator Safety

- The Department continues distribution of the *AquaSMART Boating* program for high school students throughout California. This course incorporates lessons on key safety concerns identified by accident statistics. Four types of boating are addressed: personal watercraft, powerboating, sailing, and paddling. The course is available to schools, aquatic centers, and youth organizations.
- As part of a larger public outreach program, the Department will continue to publicize the law requiring operators to be at least 16 years of age to operate most vessels alone.



### Alcohol

- The Department continues a radio message campaign warning boaters of the dangers of drinking alcohol while boating. This safety message is airing on radio stations throughout California and targets boaters in areas with the highest accident rates.
- The Department produced a 30-second television PSA on the dangers of mixing alcohol and boating which has been distributed to television stations statewide.

## Exhibit E-4 (continued)

- The Department continues to notify law enforcement agencies statewide about alcohol-related fatalities and encourages them to strengthen their educational and enforcement efforts in this area. The Department reinforces this message at all of its law enforcement training classes.
- The curriculum for all *AquaSMART* youth programs includes information on the dangers of alcohol and drug use especially when boating. Zero tolerance is emphasized for all persons engaged in aquatic recreation.

### Other Safety Enhancements

- The Department produced a short video on general boating safety which was completed in March 2001.
- The Department produced a television PSA about fishing and boating safety. This PSA is currently being distributed to television stations statewide.
- The Department is working on a brochure promoting the importance of taking hands-on boating courses to improve safety on the water. The brochure will identify aquatic centers throughout the State where a variety of boating courses are provided. The brochure should be completed in Fall 2001.
- The Department produced a radio message promoting safe boating during whitewater activities which is airing on radio stations throughout the State. To further enhance river safety, the Department offers an assortment of river guides. The Department will continue to warn boaters about hazardous water conditions on California's rivers, especially during spring and early summer when water levels are high from snow pack run-off.
- The Department produced a "know before you go" radio ad that combines general boating safety preparedness with a message reminding boaters to be environmentally responsible.
- The Department is updating its water skiing safety video to include not only traditional water skiing activities, but also to include wakeboarding, kneeboarding, and inner tubing activities. This project should be completed in Spring 2002.
- The Department is working with the Department of Fish and Game to increase outreach efforts to anglers.
- The Law Enforcement unit continues to conduct the Accident Reconstruction Course on the water, providing staged accidents for reconstruction by students. Many law enforcement officers believe this course helps them reconstruct accidents more accurately.



# Section I

## Introduction



California's rivers, lakes, and coastal areas offer boating enthusiasts a wide variety of recreational opportunities, including:

- 1,356,780 surface acres of water
- 30 popular whitewater rivers with approximately 2,600 miles of waterways
- 3,427 miles of coastline and tidal shoreline.

Boating popularity grew steadily over the last decade, as reflected by the increase in the number of registered vessels. As of December 31, 2000, California had 904,843 registered vessels, the second highest in the nation.

The California Department of Boating and Waterways' mission is to provide safe and convenient public access to California waterways and to provide leadership in promoting the public's right to safe and enjoyable boating. To accomplish this, the Department administers statewide boating accident, law enforcement, and safety education programs.

The *California Boating Safety Report* highlights important statistics and describes current and future program activities to enhance boating safety.



### A. Boating Accident Program

The Department's boating accident program disseminates accident information to boaters, law enforcement agencies, educational organizations, and the media. The program is mandated by Part 173 of Title 33 of the U.S. Code of Federal Regulations. Annual accident information collected by the Department is forwarded to the U.S. Coast Guard in Washington D.C., and is made a part of the Coast Guard's annual publication, *Boating Statistics*.

California accident statistics are compiled under state law, Section 656 of the Harbors and Navigation Code, which requires a boater who is involved in an accident to file a written report with the Department when:

- A person dies, disappears, or is injured requiring medical attention beyond first aid; or
- Damage to a vessel or other property exceeds \$500, or there is complete loss of a vessel.

Department staff review reported accidents, determine the cause(s), and identify preventative measures and specific safety-related problems. Safety education and public information program staff incorporate these safety problems and related solutions into updated course materials, promotional activities, and brochures. Law enforcement staff also communicate these safety problems during Department-sponsored training sessions for law enforcement officers.

### **B. Boating Law Enforcement Programs**

The primary objective of the Department's law enforcement program is to assist law enforcement agencies that provide waterborne law enforcement services. These local agencies enhance boating safety through the enforcement of safety laws and regulations. To this end, the unit offers training to law enforcement officers to ensure uniform enforcement of boating laws, and provides financial support to counties for law enforcement programs and activities.

During FY1999/00, law enforcement officers from agencies participating in the financial aid program provided more than 63,000 operators with boating safety education through enforcement activities. Their verbal

warnings and written citations were instrumental in helping to prevent accidents and improve boating safety.

### **C. Boating Safety Education Programs**

The Department provides accessible boating safety education through partnerships with educational institutions and non-profit organizations. These entities, in turn, provide crucial aquatic and boating safety education to students and the general public. Both teachers and students praise the boating safety course materials developed by the Department for their exceptional content and ease of use.

Additionally, the Department's public information unit provides safety information to millions of boaters through publication distribution, public service announcements (PSAs), and press releases. The Department has more than 50 different boating safety publications covering many topics, such as boating and alcohol use and proper PWC handling. Basic boating information, including laws and regulations, rules of the road and safe operation practices, is provided to each person registering a vessel through the Department of Motor Vehicles.

Other safety messages are disseminated through the use of both radio ads and a billboard campaign. These methods allow the Department to reach boaters who may not otherwise come into contact with other forms of boating safety information found at safety fairs, boat shows, or in pamphlets.

In 2000, the Department received several awards from the State Information Officers Council for boating safety materials developed by staff.