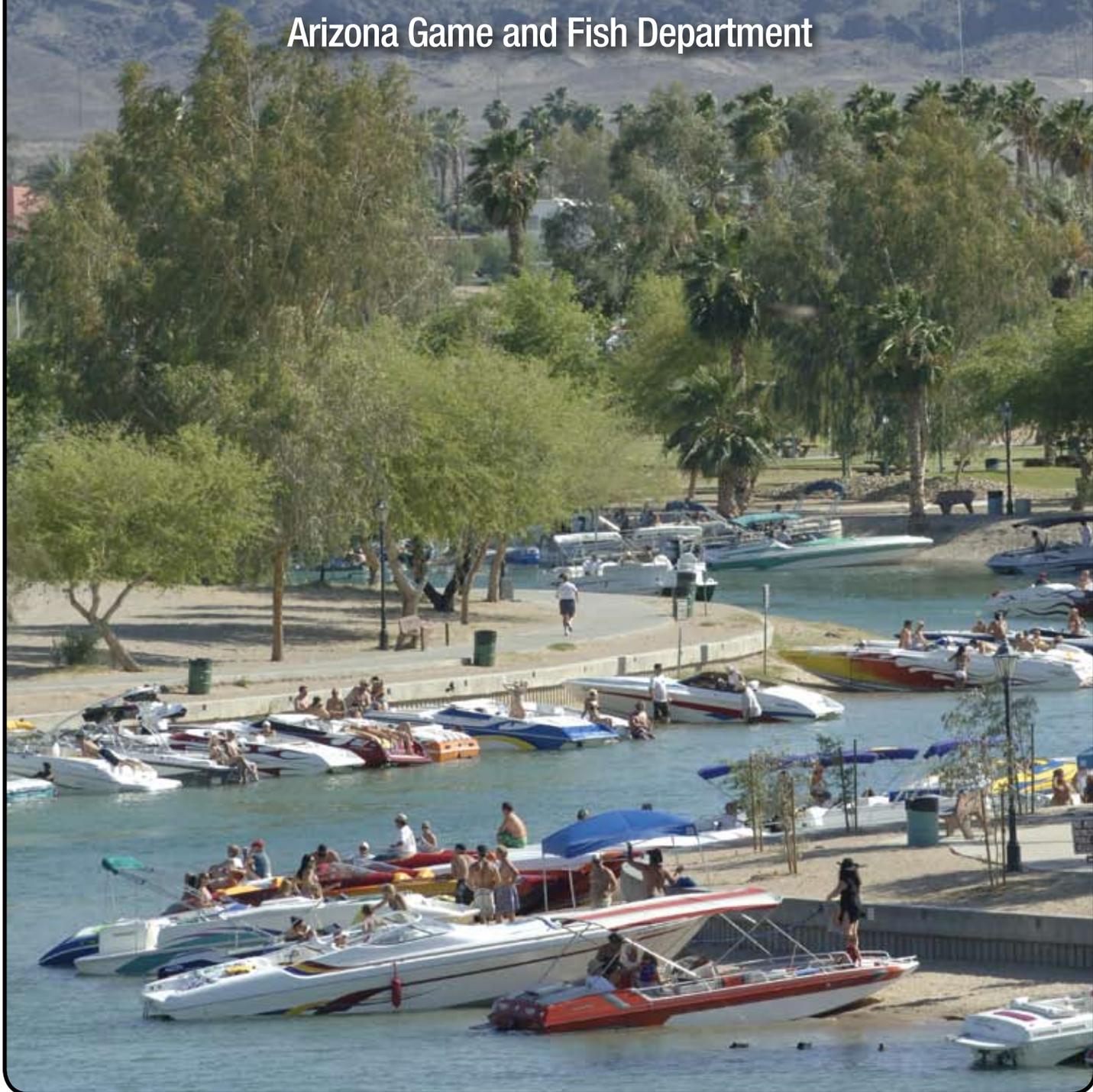


2007 ARIZONA BOATING SAFETY REPORT



Arizona Game and Fish Department





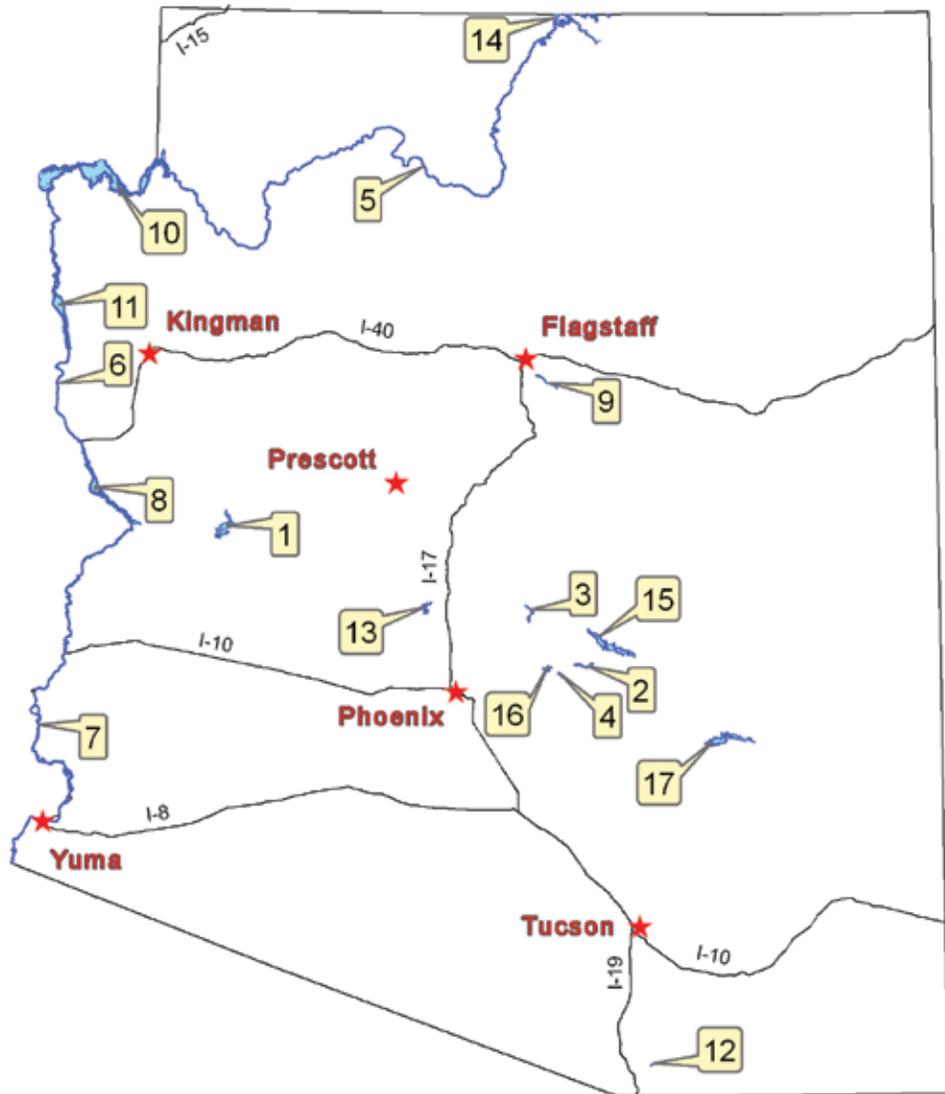
- 1: Alamo Lake
- 2: Apache Lake
- 3: Bartlett Lake
- 4: Canyon Lake
- 5: Upper Colorado River
- 6: Middle Colorado River
- 7: Lower Colorado River
- 8: Lake Havasu
- 9: Lake Mary
- 10: Lake Mead
- 11: Lake Mohave
- 12: Patagonia Lake
- 13: Lake Pleasant
- 14: Lake Powell
- 15: Roosevelt Lake
- 16: Saguaro Lake
- 17: San Carlos Reservoir

- ★ Cities
- Colorado River
- Lakes
- Interstates

0 25 50 75 100 Kilometers



Arizona Bodies of Water



**This map does not include all lakes and rivers in Arizona.

Map produced by JPH
AGFD Habitat Branch
5/15/2008

Special thanks to the following agencies for their cooperation in providing accident and enforcement data for this report:

Arizona Game and Fish Department
Arizona State Parks
Bullhead City Police Department
Coconino County Sheriff's Office
Gila County Sheriff's Office

Lake Havasu City Police Department
La Paz County Sheriff's Office
Maricopa County Sheriff's Office
Mohave County Sheriff's Office
Mohave County Parks Department

National Park Service
Nevada Department of Wildlife
San Bernardino County
Sheriff's Department
U.S. Fish and Wildlife Service

Cover photo:

A warm and sunny day at Lake Havasu's bridgewater channel.

The 2007 Arizona Boating Safety Report is a technical report provided by the Arizona Game and Fish Department. The data and statistics were researched, compiled and written by Cindy Wall, Ryan Babel, Teresa Guillen, Ed Huntsman, Kelley Fowke and Kevin Bergersen.

ARIZONA GAME AND FISH DEPARTMENT • www.azgfd.gov

ARIZONA GAME AND FISH DEPARTMENT

Boating Enforcement and Education

Boating Law Administrator

Kevin Bergersen

Law Enforcement

Programs Coordinator

Phone: (623) 236-7383

Fax: (623) 236-7945

E-mail: kbergersen@azgfd.gov



Kevin Bergersen

Boating Law Administrator

Public Information

Teresa Guillen

Public Information Officer

Phone: (623) 236-7377

Fax: (623) 236-7903

E-mail: tguillen@azgfd.gov

Education

Ed Huntsman

Boating Safety Education

Program Manager

Phone: (623) 236-7237

Fax: (623) 236-7903

E-mail: ehuntsman@azgfd.gov

Kelley Fowke

Boating Safety Education

Coordinator

Phone: (623) 236-7281

Fax: (623) 236-7903

E-mail: kfowke@azgfd.gov

Enforcement

Pat Barber

Law Enforcement Branch Chief

Phone: (623) 236-7307

Fax: (623) 236-7945

E-mail: pbarber@azgfd.gov

Facilities

Ron Christofferson

Boating Facilities

Program Manager

Phone: (623) 236-7481

Fax: (623) 236-7327

E-mail: rchristofferson@azgfd.gov

Titling and Registration

Madelynn Fenske

Watercraft Administrator

Phone: (623) 236-7403

Fax: (623) 236-7729

E-mail: mfenske@azgfd.gov

Watercraft Law Enforcement Training

Joe Sacco

Watercraft/OHV Law Enforcement

Program Manager

Phone: (623) 236-7931

Fax: (623) 236-7945

E-mail: jsacco@azgfd.gov

Watercraft Accident Public Records

Cindy Wall

Law Enforcement Programs

Administrative Assistant

Phone: (623) 236-7380

Fax: (623) 236-7945

E-mail: cwall@azgfd.gov

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ARIZONA GAME AND FISH DEPARTMENT

Boating Enforcement and Education

ADMINISTRATIVE AUTHORITY

The Arizona Game and Fish Department and Commission have been involved in boating safety and law enforcement since passage of the Federal Boat Safety Act of 1971. The Commission and Department derive their authority from state law contained within Arizona Revised Statutes (ARS), Title V.

ARS 5-311 outlines the powers and duties of the Arizona Game and Fish Commission to make the rules and regulations required to carry out, in the most effective manner, all the provisions of boating safety for the state of Arizona. By statute, the Arizona Game and Fish Commission's boating safety and registration mandates are extremely



Horizontal Gaze Nystagmus (HGN) is an important tool officers use when determining if boat operators are impaired.

broad. The Department is responsible for providing a safe watercraft recreation environment so that Arizona's lakes will be used, enjoyed and appreciated by present and future generations.

WATERCRAFT LAW ENFORCEMENT

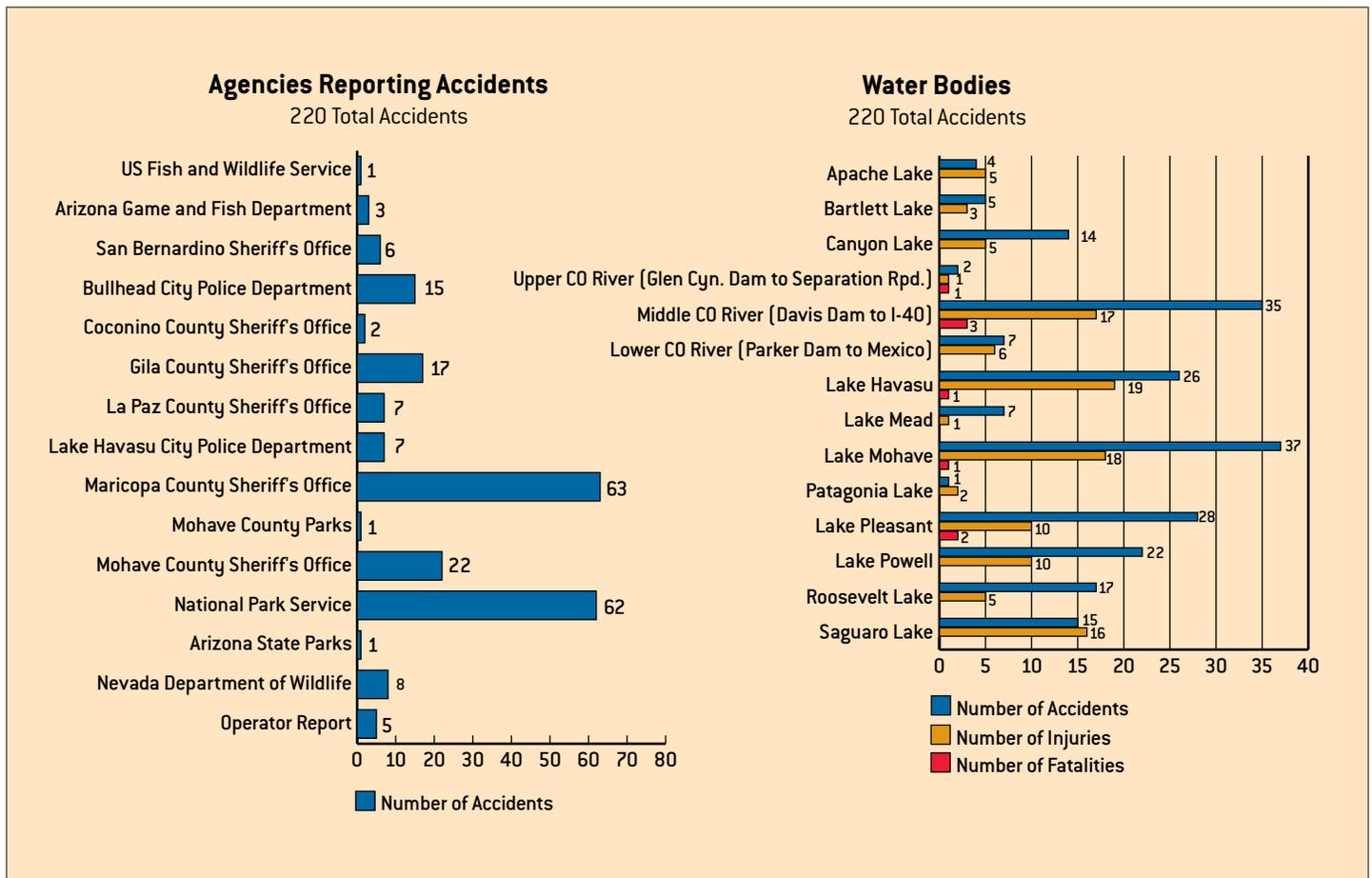
Although the Arizona Game and Fish Department administers and provides boating law enforcement efforts on a state level, primary law enforcement authority resides with local agencies, which might be a state, county, municipality, park, reservation or land management agency depending on the location.

The Arizona Game and Fish Department is the administrative agency responsible for watercraft



Lake Havasu's bridgewater channel continues to be one of the most popular day use areas along the Colorado River.

accident reporting in the state of Arizona. Initial reports and investigations are completed by either the boat operator or the jurisdictional agency, and submitted to the Department. These reports are then compiled, tabulated and forwarded to the U.S. Coast Guard for use in national statistics.

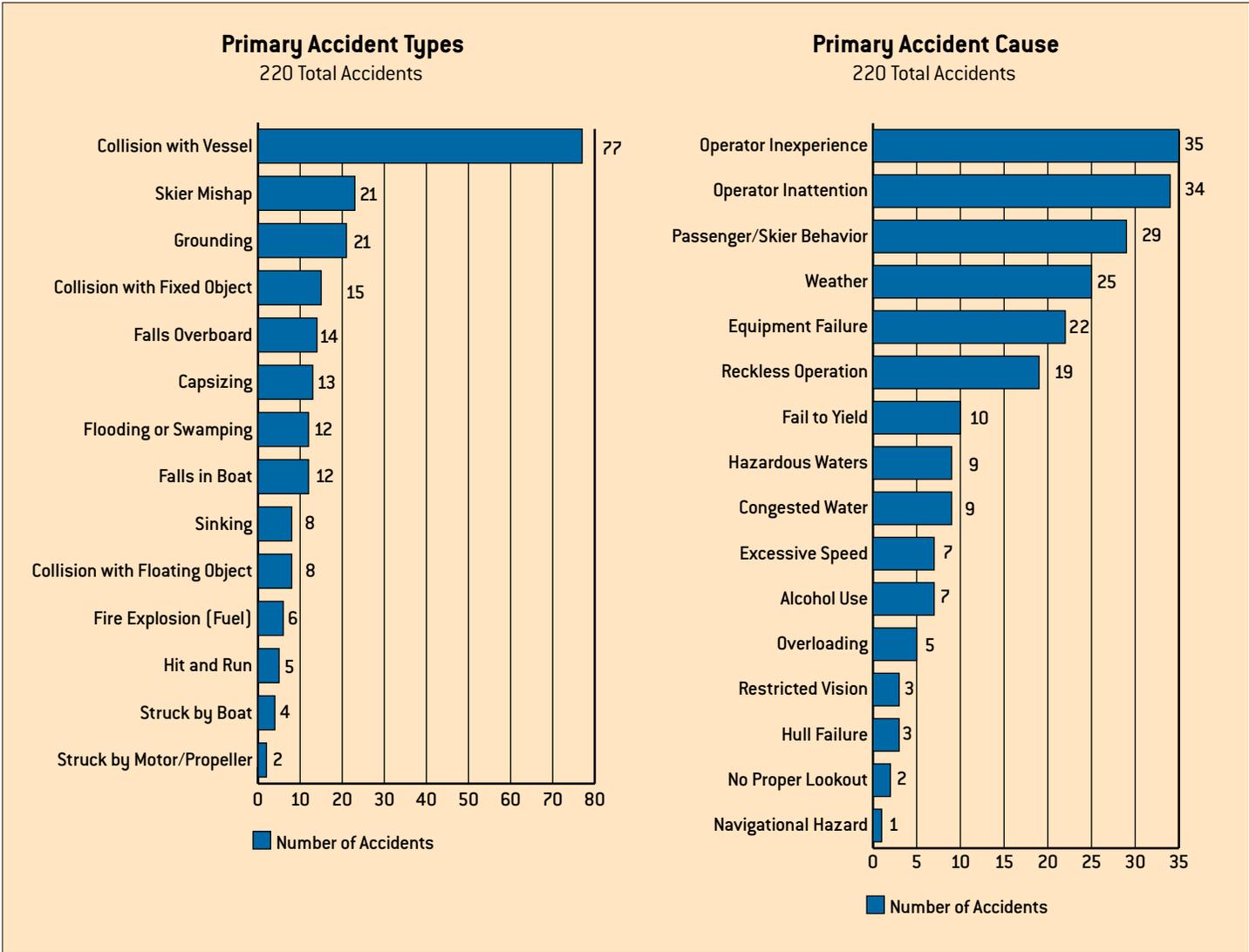




In 2007, watercraft officers at Lake Powell conduct vessel safety checks for safety equipment required by law. Insufficient life jackets are the most common violation.



Since personal flotation laws were revised in 1992, juvenile drowning statistics have dropped in Arizona and nationwide.

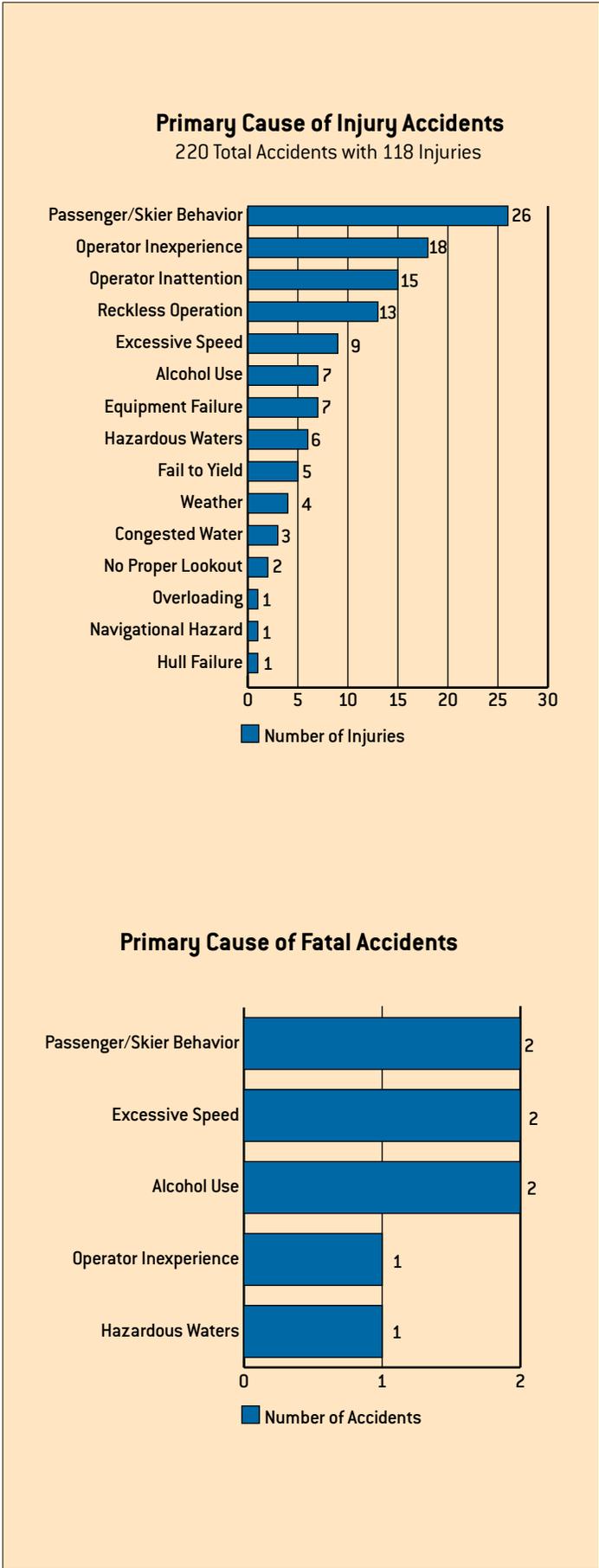


In 2007, 15 different law enforcement agencies, along with boat operators, reported 220 watercraft-related accidents to the Department. This number does not include 31 boat accident reports that did not meet minimum state or U.S. Coast Guard reporting guidelines. Information from these accident reports assist Arizona law enforcement agencies in identifying safety needs, developing new regulations, designing new enforcement techniques, identifying manufacturer problems, and directing boating safety programs and law enforcement resources to particular areas of concern.

Law enforcement agencies investigating boating accidents and operators involved in accidents are required by law to report such accidents to the Arizona Game and Fish Department. If the accident involves an injury or fatality, a written report must be submitted within 48 hours. All other accidents must be reported within five days.



PBT (Preliminary Breath Testing) devices are used to enforce the State's Operating under the Influence (OUI) laws.





Wearing a life jacket in cold water is more than smart, it's extremely important to your survival if you fall overboard.

According to 2007 statistics, a significant number of boating accidents continue to occur along the Arizona border on the Colorado River. This stretch of the river includes Lake Powell, Lake Mead, Lake Mohave, Lake Havasu and several other open areas of the Colorado River. A number of these accidents were related to the use of drugs and alcohol. In 2007, eight (8) people died on Arizona waterways. Four (4) of the deaths (50 percent) were alcohol-related.

In an effort to reduce those numbers, federal, state, county and local law enforcement agencies have developed partnerships to conduct cooperative operating under the influence (OUI) patrol efforts. These special projects include on-the-water OUI checkpoints and high-density law enforcement saturation patrols involving law enforcement agencies from Arizona, Nevada, Utah

and California, as well as federal officers from the National Park Service, the Bureau of Land Management and the U.S. Fish and Wildlife Service.

Statewide, watercraft law enforcement officers were very successful in detecting and arresting impaired boat operators. In 2007, Arizona watercraft law enforcement agencies arrested 357 individuals for operating under the influence (Figure 1). Seventy-Six (76) of those arrests occurred during the year's 16 OUI special project patrols. These cooperative projects contacted 1,690 watercraft (with 6,549 persons on board), and law enforcement officers issued 456 citations. The boating public has continued to be highly supportive of OUI patrol

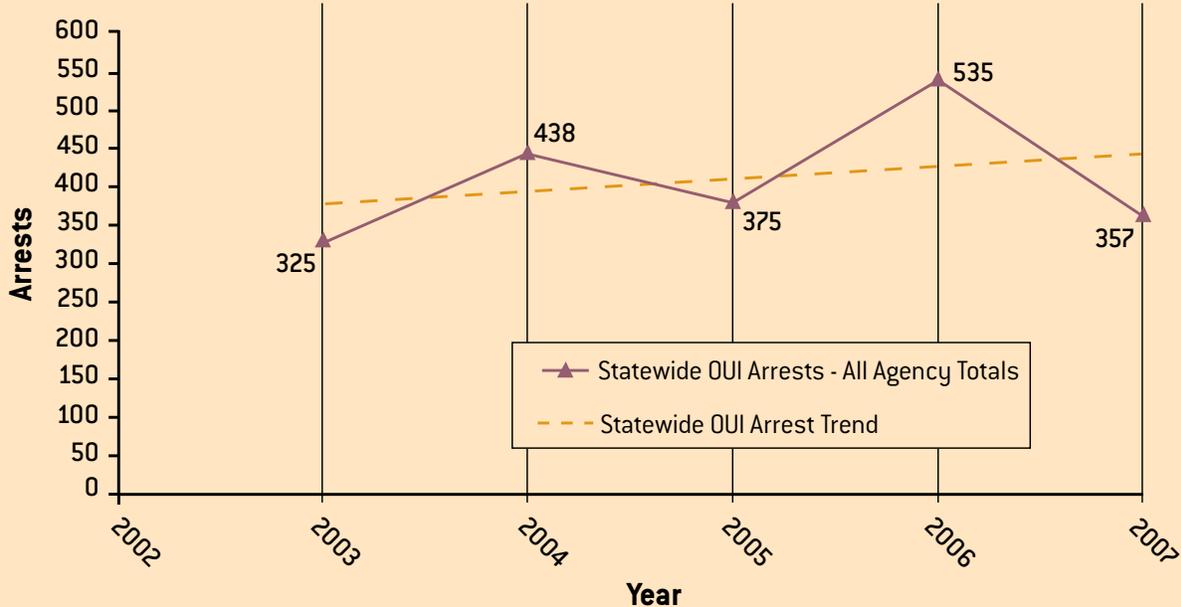


Many law enforcement agencies, including Coconino County Sheriff's Office, use PWCs for patrolling.

CATEGORY	2006	2007	INCREASE/DECREASE
Total Number of Accidents	261	220	Decrease of 41 Accidents
Total Number of Vessels	374	315	Decrease of 59 Vessels
Total Number of Injuries	157	118	Decrease of 39 Injuries
Total Number of Fatalities	14	8	Decrease of 6 Fatalities
Total Property Damage	\$622,221	\$802,532	Increase of \$180,311

Figure 1

All Agencies Statewide OUI Arrests Trend Data



2007 STATEWIDE OUI ARREST TOTALS BY AGENCY

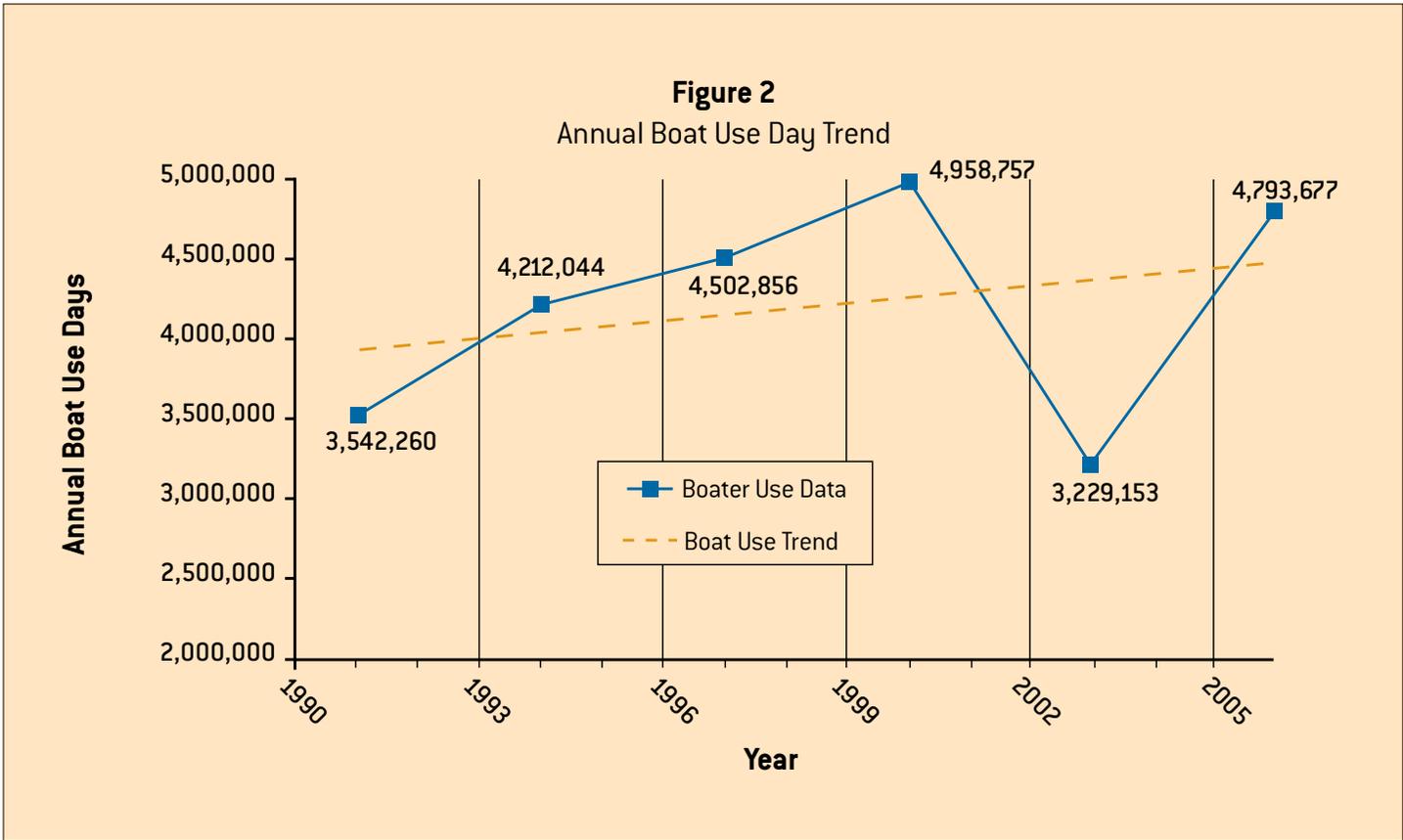
Agency	Arrests
Mohave County Sheriff's Office	102
Arizona Game and Fish Department	89
Maricopa County Sheriff's Office	42
Lake Havasu City Police Department	35
La Paz County Sheriff's Office	33
National Park Service	18
U.S. Fish and Wildlife Service	13
Gila County Sheriff's Office	13
Arizona State Parks	4
Yuma County Sheriff's Office	3
Coconino County Sheriff's Office	3
Bullhead City Police Department	2
357 Total	

Many boat operators appear to be heeding the message of sober boating on the state's waterways. The number of statewide OUI arrests in 2007 were down from 2006's statewide total of 535. Watercraft law enforcement officers statewide have reported a marked increase in the percentage of designated sober operators encountered during routine contacts. Drinking while boating continues to be a critical problem and a high-priority target enforcement objective for officers. The fact that many boat operators practice safe and sober boating is highly encouraging.

WATERCRAFT ACCIDENTS

While boat use has gradually increased since 1991 (Figure 2), an analysis of boat accident data

efforts. Approximately 16 interagency OUI patrol activities have been planned for the 2008 watercraft season.



reveals a downward trend in total accidents, injuries and fatalities over that same time frame. This is reflected in 2007 accidents statistics where Arizona saw 220 boating accidents involving 315 boats, with 118 individuals reportedly injured. An analysis of these numbers reveals there were 59 fewer vessels involved in accidents than in the prior year and that the total number of accidents decreased by 41 (Figure 3), and the number of injuries decreased by 39 (Figure 4). In addition, there was a significant decrease in the number of fatal boat accidents. In 2007, the total number of fatalities dropped to eight, as compared to fourteen in 2006 (Figure 5). The eight fatalities were all operationally related fatalities and one was also weather-related. Breaking it down further, fatal accident data also

indicates there were four trauma-related, one cold water/dangerous waters drowning, and three warm-water drowning fatalities. It is highly significant to note that of the four drowning fatalities, three (75 percent) of the victims were not wearing life jackets.

Boating continues to be an increasingly popular form of recreation in Arizona. The number of registered watercraft in Arizona has grown from 105,000 in 1986 to 144,570 in 2007. This trend is supported by data derived from the Watercraft Gas Tax Survey conducted triennially. According to the 2006 Watercraft Gas Tax Survey, 4,793,677 total boat use days were reported for Arizona. This indicates a 48 percent increase from the 3,229,153 boater use days calculated from the 2003 survey

Figure 3

Annual Total Accident Trend Data

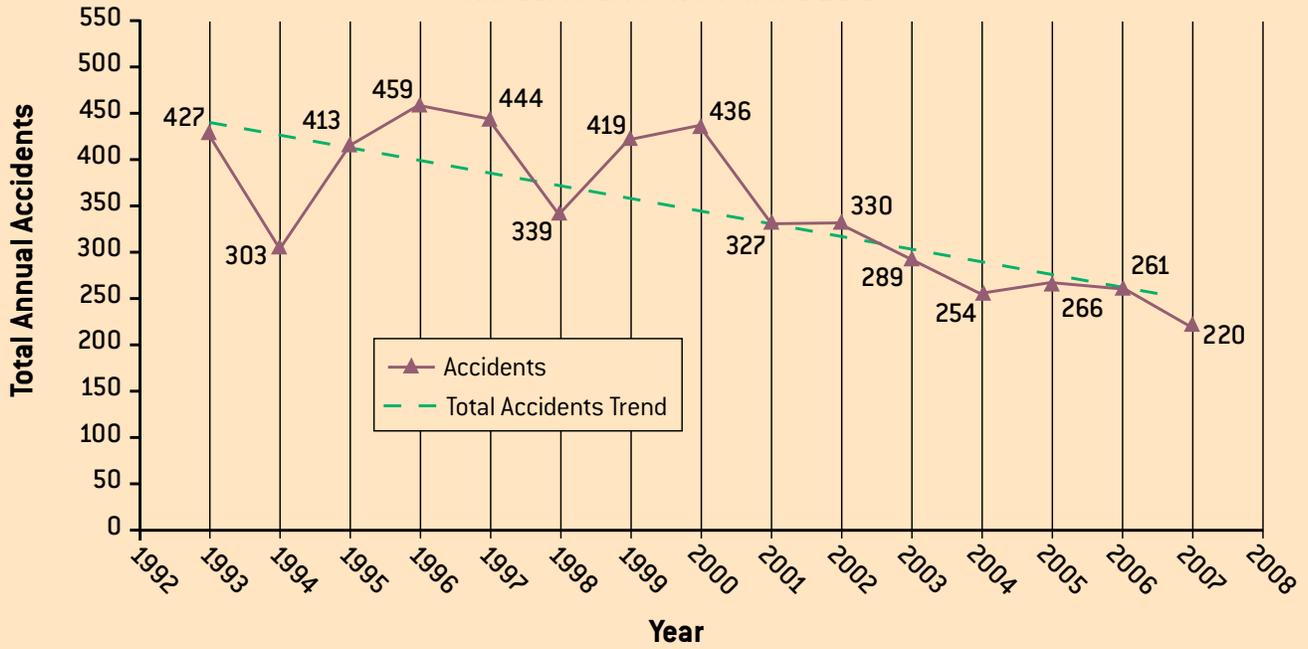


Figure 4

Annual Injury Trend Data

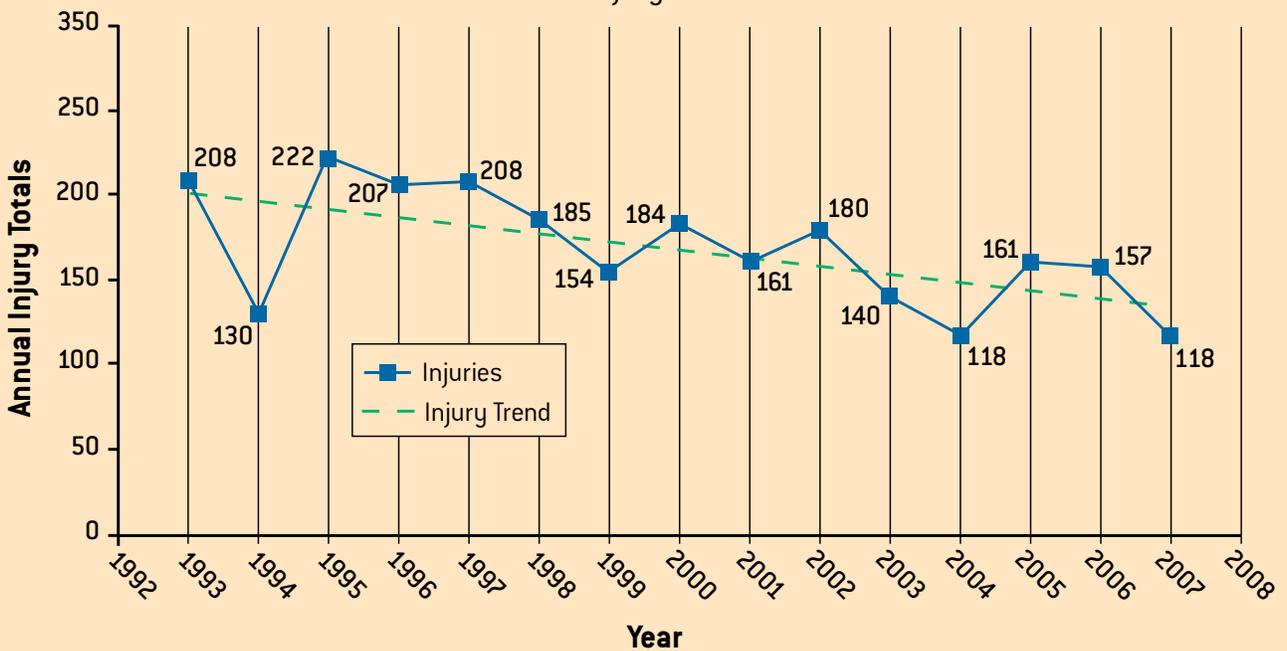
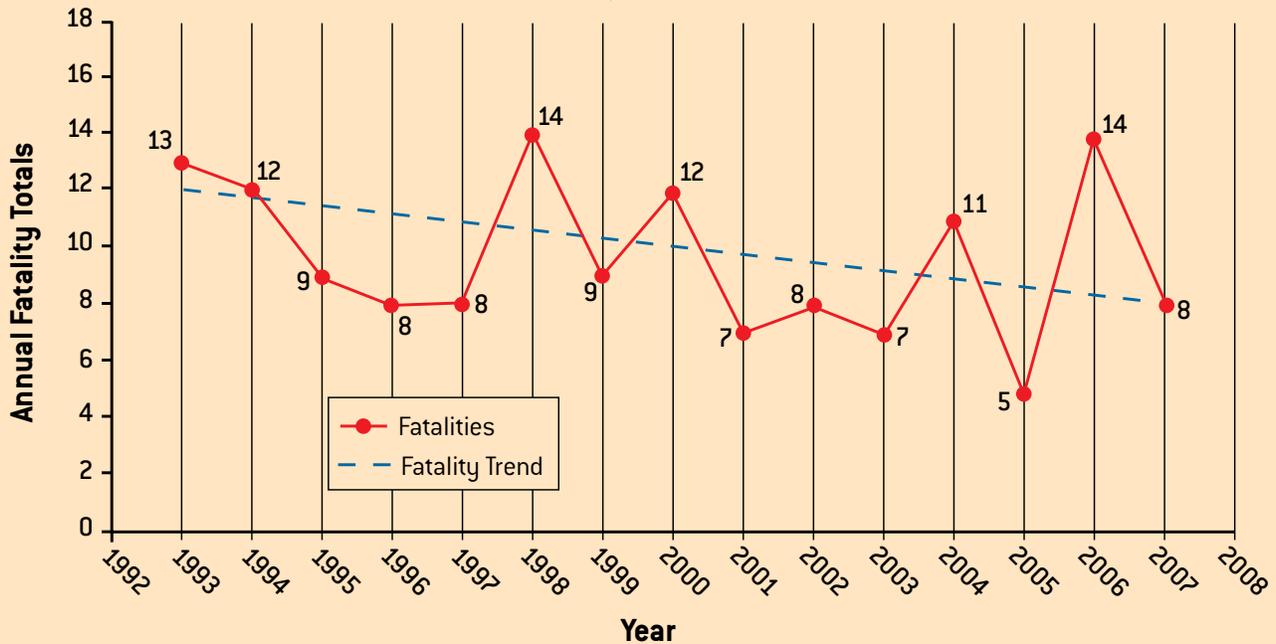


Figure 5
Fatality Trend Data



data. Arizona boaters comprised 48 percent of those days, while California boaters made up 42 percent. Nevada boaters represented most of the remaining percentage. Promoting the safety and education of all recreational boaters in Arizona, regardless of where they reside, is the main focus of the Arizona Game and Fish Department's Boating Safety Program.

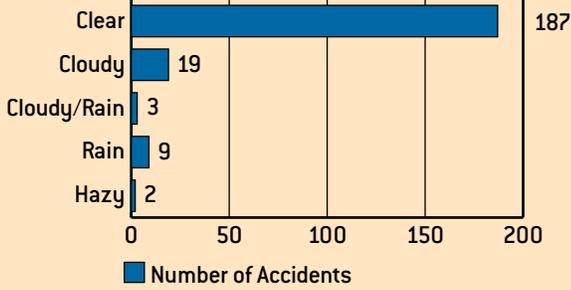
In analyzing watercraft accident information, there are five main areas of interest: type and cause of the accident, operator information, boats and equipment involved, environmental conditions at the time of the accident, and time and location of the accident. The leading cause of accidents for the 14th consecutive year in Arizona was operator inexperience. Operator inattention and passenger/



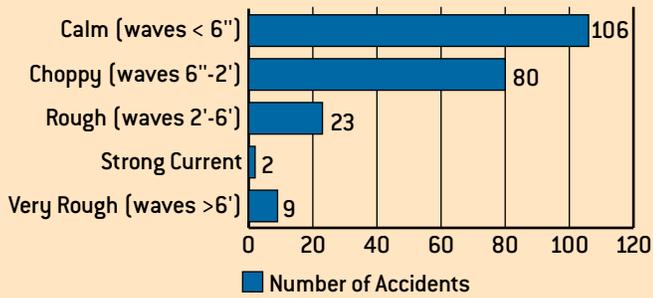
An Arizona Game and Fish Department officer examines this watercraft for stress fractures and compression damage.

skier behavior were the second and third leading causes. Forty-nine percent of operators involved in Arizona boating accidents were residents of the state and thirty-four percent were from California. The types of watercraft most often involved in accidents were open motorboats 24 feet or more in

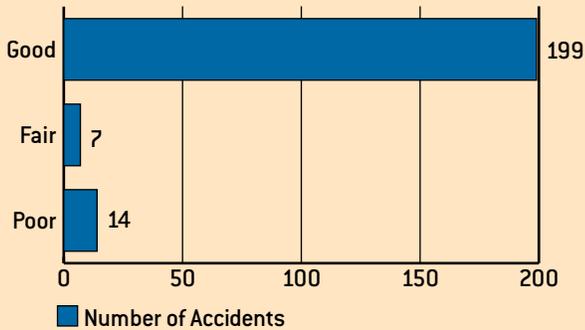
Weather Conditions



Water Conditions



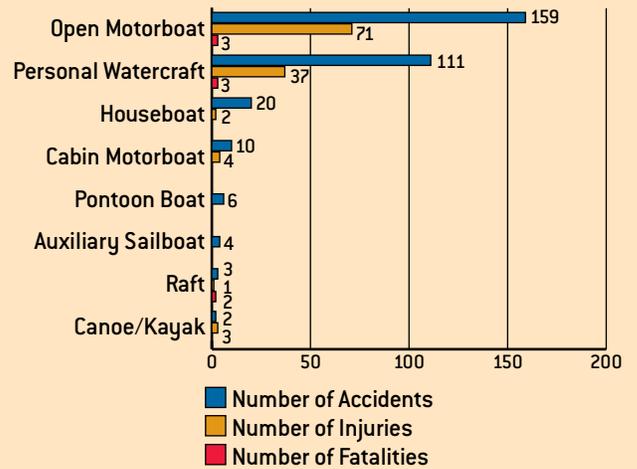
Visibility Conditions



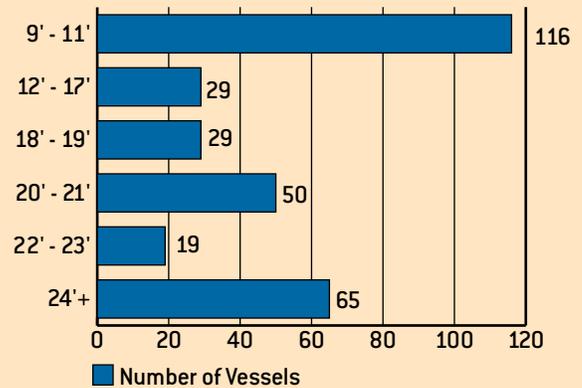
Six law enforcement agencies performed this checkpoint in June 2007 at Topock Gorge on the Colorado. Interagency OUI checkpoints continue to be very effective.

Types of Watercraft in Accidents

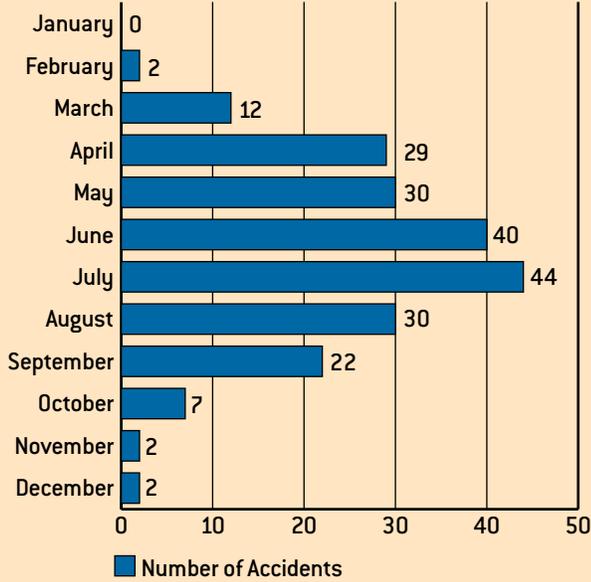
118 Total Injuries and 8 Fatalities



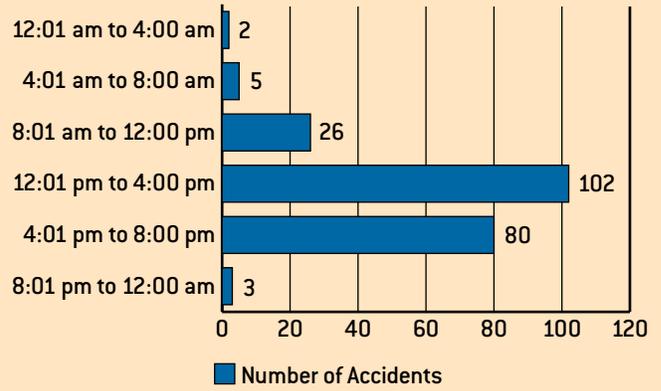
Length of Watercraft



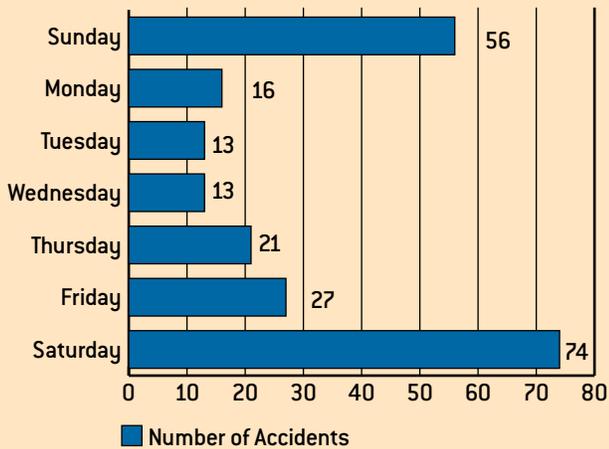
Accidents by Month



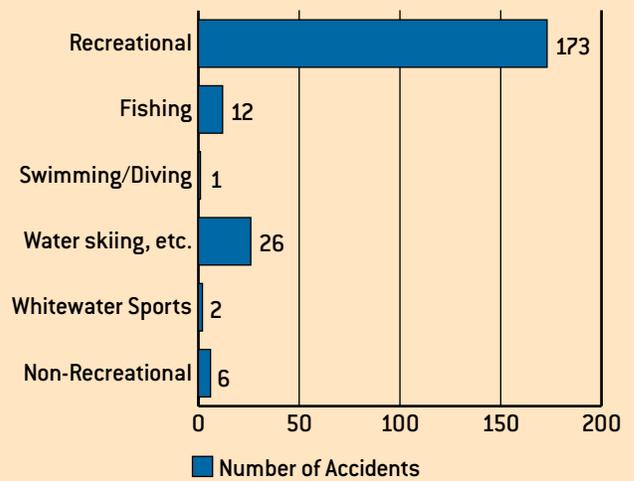
Accidents by Time of Day



Accidents by Day of Week



Activity at Time of Accident





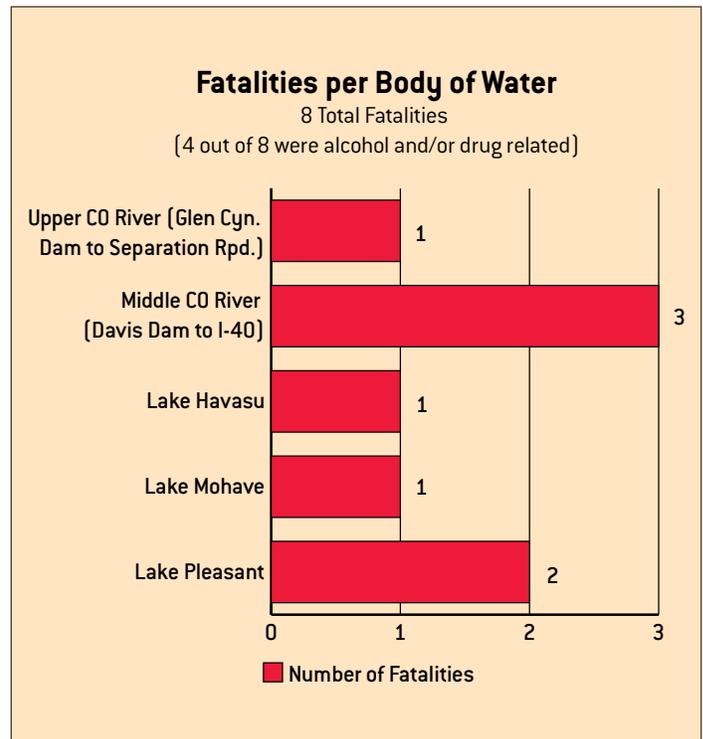
A Lake Havasu City police officer conducts an OUI investigation during an interagency OUI checkpoint along the Colorado River in June 2007.

length (61 percent) and personal watercraft smaller than 12 feet in length (35 percent).

The average accident occurred during the day when weather conditions were usually clear, with good visibility and calm or choppy waters. The most dangerous month for recreational boating in 2007 was July. June was second, with May and August tied for third. The months of May, June, July, August and September traditionally have high numbers of boating accidents because these months reflect peak boater day use along with the summer's busiest boating holidays: Memorial Day, Independence Day and Labor Day. In 2007, 46 percent of all accidents occurred between noon and 4 p.m., and Saturdays had the most accidents and injuries.

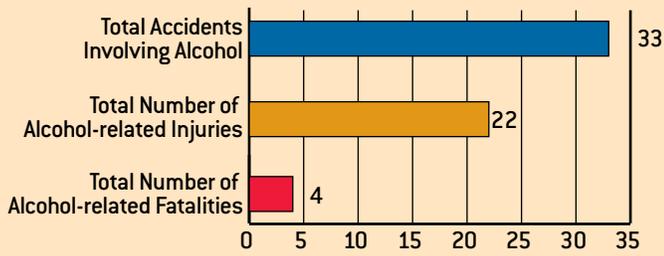
WATERCRAFT EDUCATION

Education is considered one of the most effective ways to reduce the number of boating accidents. The Arizona Game and Fish Department provides

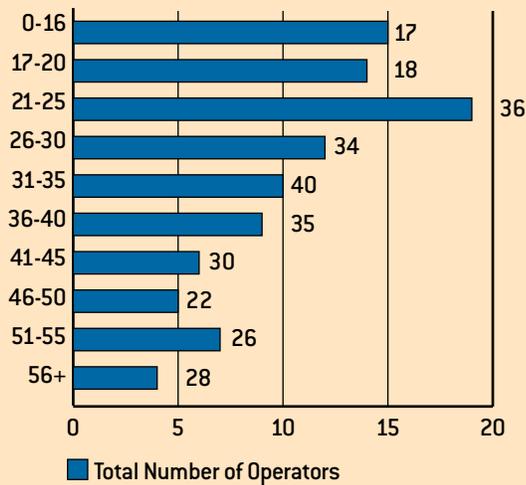


an eight-hour boating education course developed for recreational boaters. Many insurance companies offer discounts to those who successfully complete the course as a way to encourage boater education. Currently, the Arizona Game and Fish Department's Information and Education Division coordinates the course content and availability of these classes. Approximately 62 active volunteer boating education instructors from across the state provide classroom instruction. In FY2007, the Department offered 76 boating education classes in Arizona, with 1,033 recreational boaters having completed them. This reflects a 10 percent student increase from 2006, which had 935 students attending 84 classes. Additionally, the Department introduced an Internet based boating safety education course that can be completed online at the student's convenience.

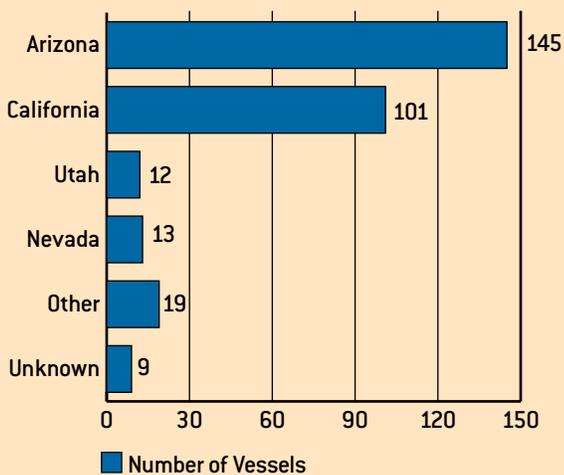
Total Number of Alcohol-Related Accidents



Age of Watercraft Operators



Residence of Operators



The highly invasive quagga mussels have the ability to reproduce in untold numbers that could clog the intakes and through hull fittings on boats.

The Arizona sections of both the U.S. Coast Guard Auxiliary and the U.S. Power Squadron also conduct boating safety education training in Arizona. U.S. Coast Guard boating safety classes vary from an eight-hour basic safety course to 80 hours of instruction. The U.S. Power Squadron offers a six-chapter boating course, as well as a shorter, more intense, three-chapter course.

The Arizona Game and Fish Department continues to work with the judicial system throughout the state to include its boating safety education program as part of sentencing for violators of boating rules and regulations. Judges are encouraged to use the program in lieu of, or in addition to, a fine to help increase the boat operator's knowledge of boating safety information and regulations. So far, judges and boating violators have indicated the program has proven positive in increasing awareness of boating safety issues.

BOATING ACCIDENT STATISTICS

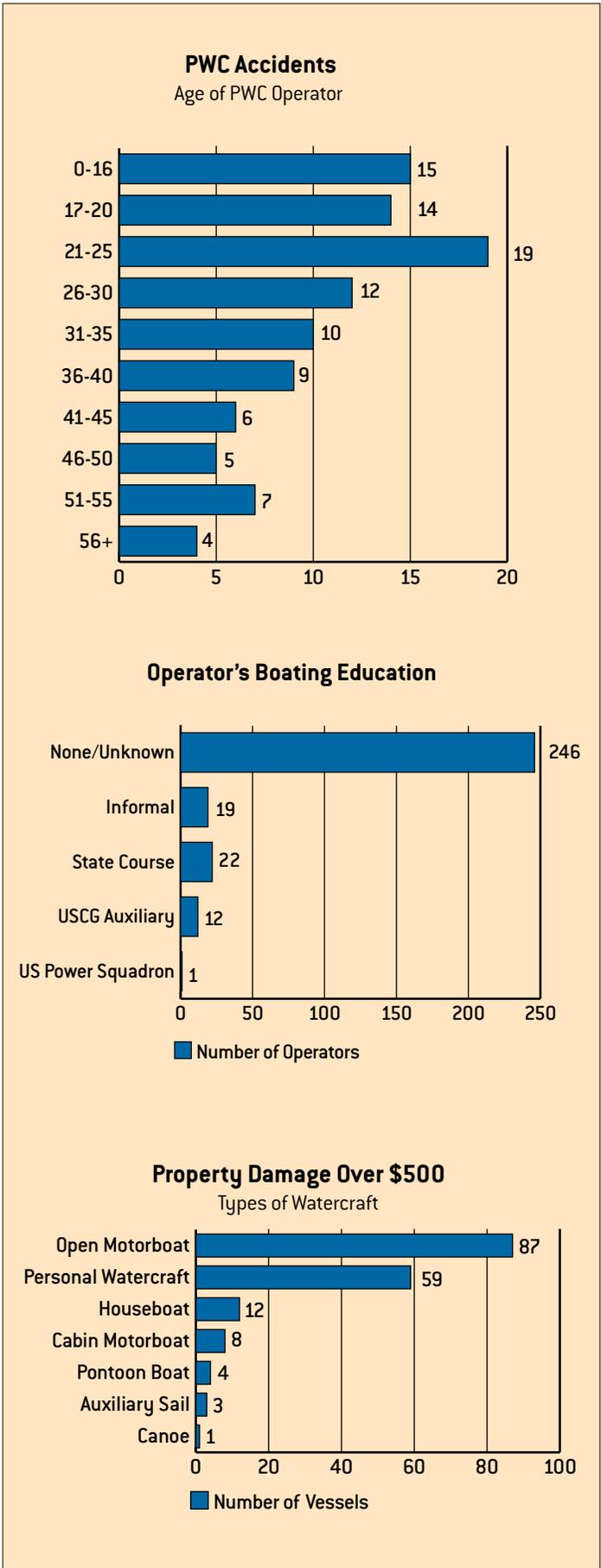
An area of priority to both recreational boaters and law enforcement agencies is the increasing use of personal watercraft (PWC) on Arizona waterways. In 1990, only 8,168 PWCs were registered in Arizona, compared to more than 28,475 in 2007. While PWCs comprise approximately 20 percent of all Arizona watercraft registrations, they account for 35 percent of all accidents and 32 percent of all injuries. Many of these accidents can be attributed to numerous first-time operators that are renting or have just recently purchased a PWC. A PWC is operated differently and averages more time on the water than a traditional watercraft.

The increased use of the Colorado River system from Lake Powell (north) to Yuma (south) is another area of concern to the Arizona Game and Fish Department and other law enforcement agencies.

Seventy-four percent of all Arizona watercraft accidents occurred along the Colorado River, and since 1993, statistics demonstrate that 65 percent

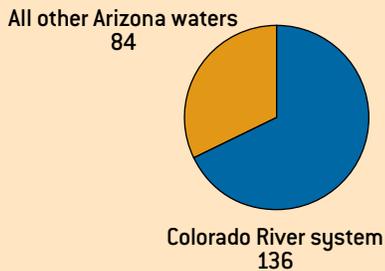


Bullhead City officers patrol for reckless and impaired boat operators on the Colorado River, one of the busiest recreational boating waterways in America in boater use days and accident totals.



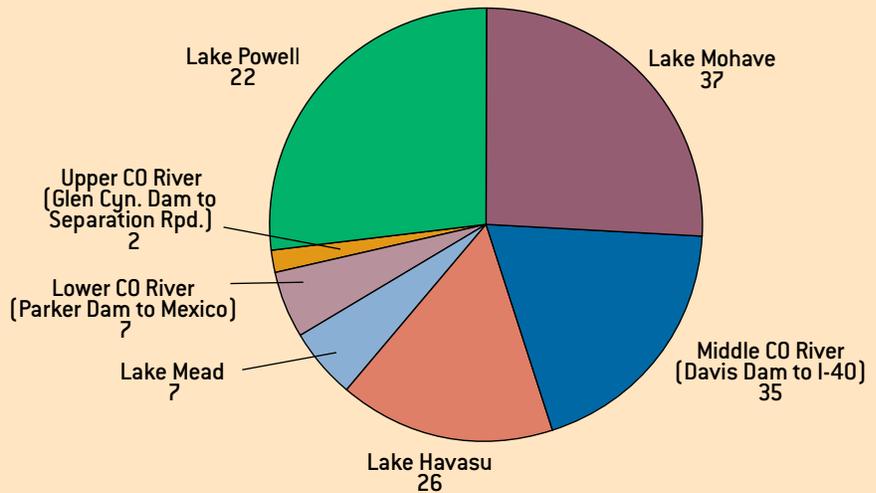
Colorado River System Compared to All Other Arizona Waters

220 Total Accidents



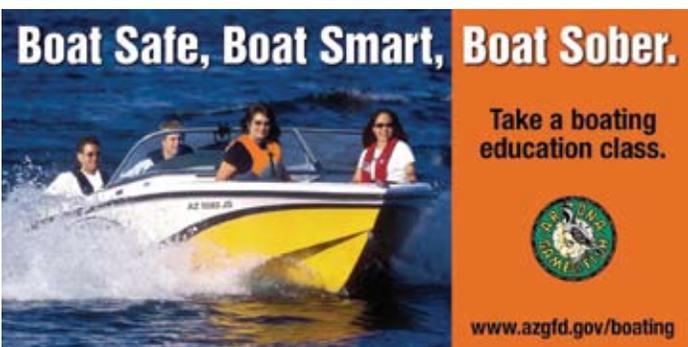
Colorado River System

Accidents Reported in Arizona



Three children enjoy a day in the sun at Lake Pleasant in June 2007.

of all Arizona fatal watercraft accidents occur along the river. Operator residency data indicate that 80 percent of the Colorado River fatal accidents involved California boat operators. An increase in law enforcement activity on both sides of the river, particularly OUI enforcement, and a focus on boating education have been shown to help reduce the number of boating accidents along this high-use area.



This information was compiled from boating accident reports submitted to the Arizona Game and Fish Department by watercraft enforcement agencies and persons involved in watercraft accidents throughout Arizona. For more information on boating safety education, call (623) 236-7235.

The Arizona Legislature appropriated \$1 million to Arizona Game and Fish Department's Boating Safety Program for an OUI awareness campaign for fiscal year 2007-08. Using the slogan Boat Safe, Boat Smart, Boat Sober, television and radio commercials, billboards, print advertising, and much more, were strategically launched statewide.

Combined 2007 Colorado River statistics from California, Arizona and Nevada: 275 accidents, 176 injuries and 12 fatalities.

ARIZONA'S 2007 BOATING LAW ENFORCEMENT OFFICER OF THE YEAR

For more than 23 years, Sgt. Doug Schuster is a nineteen year veteran with the Mohave County Sheriff's Office and for the last 10 years has held the position of Boating Safety Supervisor on Lake Havasu. Throughout his career, Sgt. Schuster has logged well over 5000 hours at the helm. In his tenure he has personally made over 300 arrests for impaired operation of a watercraft. In addition, Sgt. Schuster has motivated his personnel to aggressively enforce alcohol violations resulting in consistently leading all Arizona watercraft law enforcement agencies in OUI arrests for these statistical categories. Furthermore, Sgt. Schuster has personally investigated hundreds of serious boating accidents and has supervised countless additional accident investigations. He is highly regarded in the field of boating accident investigation and reconstruction and readily shares his knowledge and experience with his subordinates and other boating officers.

As Supervisor of our Boating Safety Unit, Sgt. Schuster is on-call virtually year around to respond to Search and Rescue calls of missing persons or overdue boaters. Trained as an Arizona Search and

Rescue Coordinator, Sgt. Schuster is well versed in rapid emergency response. Having overseen hundreds of these operations, most of which conclude in a successful ending, Sgt. Schuster is always willing to go the "extra mile" to help.

In addition to Sgt. Schuster's law enforcement contributions, Doug is a strong proponent of boating safety education. In an effort to prevent future tragedies, Sgt. Schuster is dedicated to the proactive approach of educating elementary age students. Sgt. Schuster has implemented a training program for the three local schools and is responsible for teaching boating safety to over 500 children in grades 1 through 3. To enhance this effort, Sgt. Schuster recently acquired grant funding to purchase educational materials too further the educational efforts of our agency. When not in the school system teaching the community's youth, Sgt. Schuster is also very active in educating the adult community. Each year he attends safety fairs, parades and other events to promote boating safety.



Mohave County Sergeant Doug Schuster

Previous Arizona Boating Law Enforcement Officer of the Year Recipients:

- 2007 Sargeant Wayne Lupinski, Maricopa County Sheriff's Office
- 2006 Jared Kayer, Mohave County Sheriff's Office
- 2005 Tim Baumgarten, Arizona Game and Fish Department
- 2004 Jerry Burns, La Paz County Sheriff's Office
- 2003 Deanna Pflieger, Arizona Game and Fish Department
- 2002 No Arizona officer named
- 2001 Gerald Duvall, Bullhead City Police Department
- 2000 Steve Andrews, Arizona Game and Fish Department





Boat Safe, Boat Smart, Boat Sober.



- Wear your life jacket
- Boat sober
- Take a boating class
- Get a vessel safety check



Take a boating safety class online at www.azgfd.gov/boat-ed
or call the Arizona Game and Fish Department at (623) 236-7235.