

U.S. Department  
of Transportation  
**United States  
Coast Guard**



# BOATING STATISTICS - 1999



COMDTPUB P16754.13



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## **INTRODUCTION**

### **SCOPE**

This report contains statistics on numbered boats and recreational boating accidents, and information on boating safety activities for calendar year 1999. States and jurisdictions with Federally approved boat numbering systems file official reports which the Coast Guard uses to provide the boat numbering statistics. Data for the accident statistics come from two sources: (1) Boating Accident Report data forwarded to the Coast Guard by jurisdictions with an approved numbering and casualty reporting system; and (2) reports of Coast Guard investigations of fatal boating accidents that occurred on waters under Federal jurisdiction. Recreational Boating Accident Investigation data are used if submitted to the Coast Guard and are relied on as much as possible to provide accurate accident statistics. In the absence of investigations, information is collected from the accident reports filed by boat operators.

### **ACCIDENT REPORTING**

Current regulations (33 CFR 173-4) require the operator of any vessel, numbered or used for recreational purposes to file a Boating Accident Report (BAR) if the vessel is involved in an accident that results in:

1. Loss of life; or
2. Personal injury which requires medical treatment beyond first aid; or
3. Damage to the vessel and other property exceeding \$500; or
4. Complete loss of the vessel.

Boat operators are required to report their accidents to authorities in the State where the accident occurred. States with approved numbering systems furnish the Coast Guard with Boating Accident Report data. The minimum reporting requirements are set by Federal regulation, but States are allowed to have stricter requirements. The statistics in this publication cover only accidents meeting the Federal minimum reporting requirements listed above.

The statistics in this publication cover boating accidents reported on waters of joint Federal and State jurisdiction and exclusive State jurisdiction. Most States use Boating Accident Report forms that are similar to the Coast Guard form. A copy of the Coast Guard BAR form is on pages nine through eleven.

### **USE OF THE STATISTICS**

Users of the statistics in this report need to be aware of the following facts that may affect results of analyses of non-fatal accidents:

1. The Recreational Boat Casualty Reporting System does not include every accident involving a recreational vessel. Some accidents are not in the system because they are not required to be reported. Many more accidents are not reported because of ignorance of the law and difficulty in enforcing the law. We believe that only a small fraction of all non-fatal boating accidents occurring in the United States are reported to the Coast Guard, State or local law enforcement agencies. However, we believe that nearly all fatal recreational boating accidents are included in these statistics. Overall, the more serious the accident, the more frequent the reporting.

2. Federal regulations do not require the reporting of accidents on private waters, where States have no jurisdiction. Reports of accidents on such waters are included in this report when received by the Coast Guard if they satisfy the other requirements for inclusion.

3. Non-fatal accidents cannot be assumed to have occurred in numbers proportional to the reported statistics because the act of reporting an accident is not a random sampling of accidents in the statistical sense. Rather, selection is based on the ability and willingness of those involved to file a report. The reporting rates of subgroups of accidents, such as those involving personal watercraft, propeller strikes, collisions, or whitewater, probably differ greatly depending upon unspecified variables.

4. Fluctuations from year to year in non-fatal accident statistics may be caused by factors other than the change in the total number of recreational boating accidents. A seemingly small change in the low reporting rate may cause a relatively large change in the statistics.

### **CASES EXCLUDED FROM THE REPORT**

This report does not include the following:

1. Accidents involving only slight injury which did not require medical treatment beyond first aid;
2. Accidents involving property damage of not more than \$500;
3. Accidents which were not caused or contributed to by a vessel, its equipment, or its appendages;
4. Accidents in which the boat was used solely as a platform for other activities, such as swimming or skin diving. Such cases are not included because the victims freely left the safety of their boat. However, if a victim is struck by their boat or another one, the accident is included because it involves a boat as the instrument striking the person.

### **FATALITY RATE**

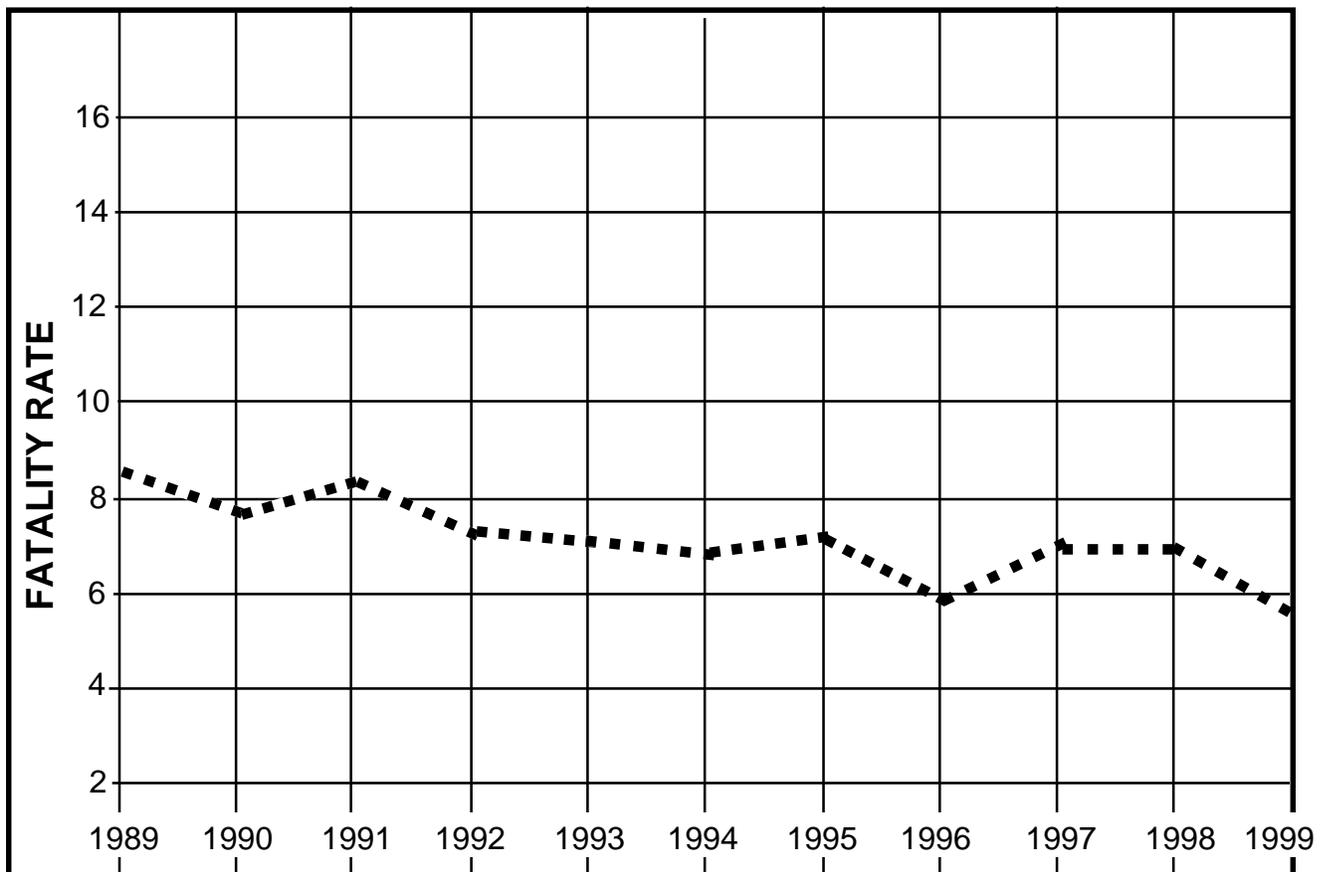
Historically, one indicator of safety in recreational boating is the fatality rate, e.g., the number of reported fatalities as compared to the number of numbered recreational boats. The numbered boat population is based on the annual Report of Certificates of Number Issued to Boats, each State and jurisdiction forwards to the Coast Guard. The report also provides statistics on numbered boats by length, hull material, and type of propulsion.

While a comparison between the 734 fatalities and the 12,738,271 numbered boats in 1999 for all States and jurisdictions allows one to estimate a national boating fatality rate, there are some serious limitations to this methodology. One is that fatality rate comparisons between States are invalid because of differences in the scope of each State's boat numbering system (see page 21). Another limitation is that fatalities occur on boats which are not numbered, and therefore not included in the boat numbering statistics. Users should be aware of these limitations when working with the fatality rate. A more reliable estimate of the fatality rate for each State or jurisdiction can be found by comparing fatalities occurring only on specific categories of numbered boats.

The graph on page three represents the fatality rate for 1999.

YEAR	FATALITIES	NUMBER OF NUMBERED BOATS	FATALITIES PER 100,000 NUMBERED BOATS
1989	896	10,777,370	8.3
1990	865	10,996,253	7.8
1991	924	11,068,440	8.3
1992	816	11,132,386	7.3
1993	800	11,282,736	7.1
1994	784	11,429,585	6.9
1995	829	11,734,710	7.1
1996	709	11,877,938	5.9
1997	821	12,312,982	6.7
1998	815	12,565,930	6.5
1999	734	12,738,271	5.8

### NUMBER OF FATALITIES PER 100,000 NUMBERED BOATS



# **EXECUTIVE SUMMARY BOATING STATISTICS - 1999**

## **Boating Accidents at a Glance**

The Coast Guard received reports for a total of 7,931 recreational boating accidents in 1999. The casualty data for 1999 showed 734 fatalities and 4,315 injuries (page 24).

## **Life Jackets & Risk of Dying in an Accident**

Five hundred and seventeen (517) boaters drowned in 1999 (page 34). Life jackets could have saved the lives of approximately 450 boaters who drowned. In 1999, approximately eight out of every 10 victims in fatal boating accidents were not wearing life jackets. Boaters continue to be at a greater risk of dying when involved in an accident during the fall and winter months than in the summer. Besides the colder weather and water, there are fewer boaters and patrol officers in the area to rescue boaters in distress. When waters are below 60 degrees Fahrenheit, hypothermia can set in quickly. Those who hunt and fish from boats, especially in colder weather, need to dress for possible immersion and wear their life jackets (pages 17 and 36). Boaters in larger bodies of water should also take advantage of using available distress alerting and position indicating technologies to improve their chances of survival if a mishap occurs.

## **Fatalities by Known Boat Length**

Seventy-six (76) percent of fatalities occurred on boats less than 26 feet in length (pages 12 and 37). Seventy (70) percent of those victims drowned (page 12). Specifically, 318 fatalities occurred on boats less than 16 feet in length and 242 occurred on boats 16 to less than 26 feet in length.

## **Alcohol Involvement in Boating Accidents**

Alcohol involvement in reported accidents accounted for 26 percent of all boating fatalities (page 31). A Coast Guard study estimates that boat operators with a blood alcohol concentration above .10 percent are estimated to be more than 10 times as likely to be killed in a boating accident than boat operators with zero blood alcohol concentration.

## **Fatalities by Known Boat Operator Education**

Ninety (90) percent of all boating fatalities occurred on boats where the operator had not completed a boating safety education course (page 15).

# EXECUTIVE SUMMARY BOATING STATISTICS - 1999

## Accident Causes

Nearly 70 percent of all reported accidents involve operator controllable factors. The remaining 30 percent involve boat or environmental factors. The primary causes of accidents are operator inattention, operator inexperience, careless/reckless operation, operating at an unsafe speed, and no proper lookout (page 16).

## Types of Boating Accidents

“Capsizings” and “Falls Overboard” accounted for 423 fatalities, more than half of all boating fatalities. Eight out of every 10 of those victims drowned (page 28). “Collision with Another Vessel” was the most reported type of accident (pages 24). These accidents resulted in 1,406 injuries and accounted for 8.4 million dollars in property damage.

## Age of Boating Fatality Victims

Fifty-one (51) children age 12 and under lost their lives while boating in 1999 (page 13). These 51 victims are nearly three times as many fatalities than the eighteen (18) reported in 1998.

## Types of Injuries

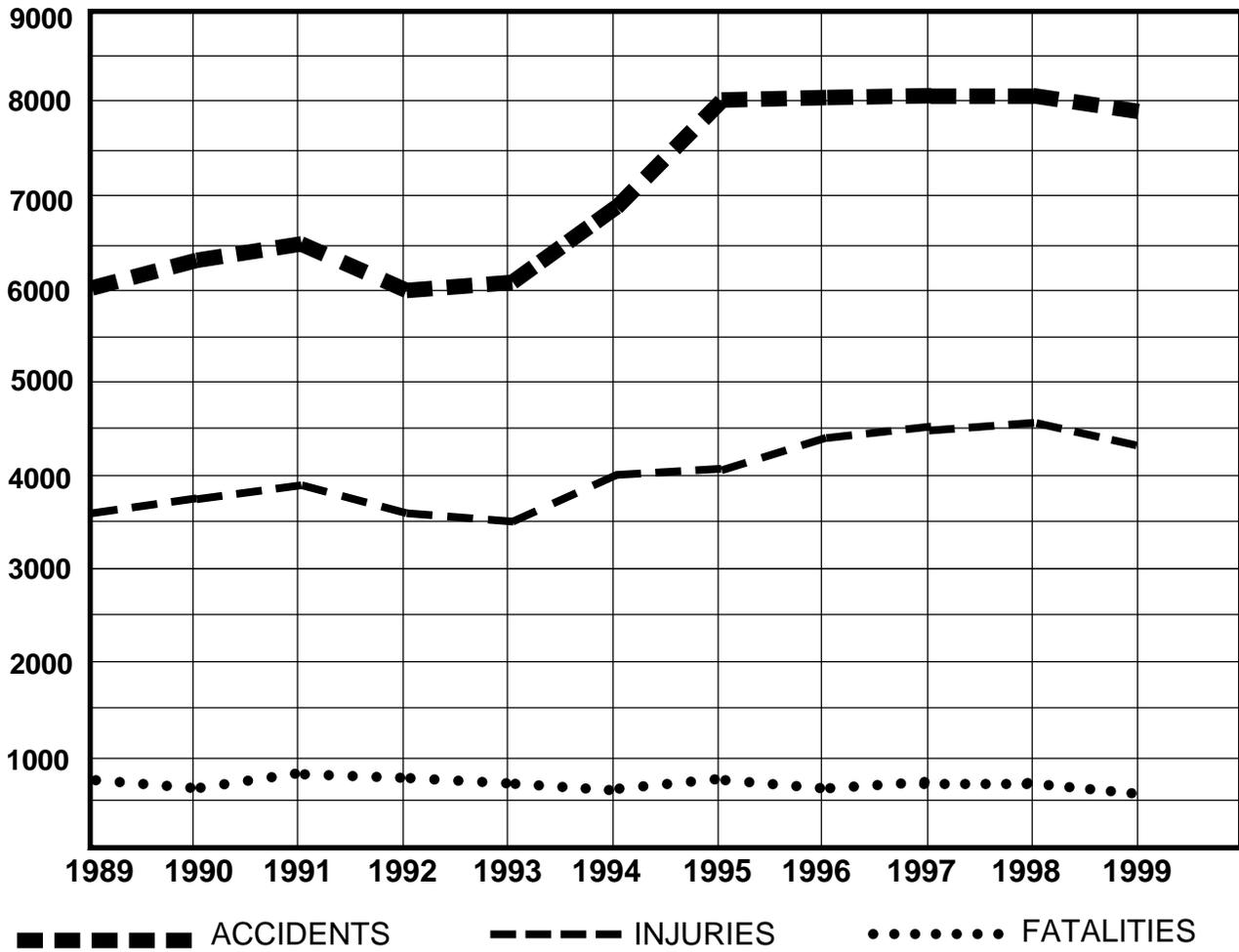
Nearly 30 percent of all reported injury victims were admitted to a hospital for medical treatment. The most frequently reported types of injuries suffered by boaters were lacerations, broken bones, and contusions (page 19).

## Numbered Recreational Boats

States and jurisdictions numbered a total of 12,738,271 recreational boats (pages 20-22). The following is a breakdown of the numbered motorboats by length:

<b>BOAT LENGTH</b>	<b>PERCENTAGE OF NUMBERED MOTORBOATS</b>
Less than 16' .....	46.0
16' to less than 26' .....	49.8
26' to less than 40' .....	3.7
40' and greater .....	0.5

## BOATING ACCIDENTS AT A GLANCE



YEAR	FATALITIES	INJURIES	ACCIDENTS
1989	896	3,635	6,063
1990	865	3,822	6,411
1991	924	3,967	6,573
1992	816	3,683	6,048
1993	800	3,559	6,335
1994	784	4,084	6,906
1995	829	4,141	8,019
1996	709	4,442	8,026
1997	821	4,555	8,047
1998	815	4,612	8,061
1999	734	4,315	7,931

## REPORTABLE RECREATIONAL BOATING ACCIDENTS

Subpart C of Section 173 of Title 33, Code of Federal Regulations -- Casualty and Accident Reporting, applies to vessels that are used by their operators for recreational purposes, or that are required to be numbered (including those documented for pleasure), except for those vessels required by law to have a Certificate of Inspection. A casualty or accident report must be submitted to the reporting authority if an occurrence involving these vessels or their equipment results in one or more of the following:

- a. A person dies;
- b. A person is injured and requires medical treatment beyond first aid (i.e. treatment at a medical facility or by a physician other than at the accident scene);
- c. Damage to the vessel and other property totals more than \$500.00, or there is a complete loss of the vessel; or
- d. A person disappears from the vessel under circumstances that indicate death or injury.

The following are examples of accidents that **fall within the reporting criteria**, and that might have been prevented or their effects mitigated by specific components of a boating safety program (i.e. by boating courses, public information campaigns, law enforcement, development and enforcement of boat construction or equipment standards, etc.):

- a. A fire, explosion, sinking or other occurrence involving a vessel, if the vessel, its installed or associated equipment or appendages failed, malfunctioned, or otherwise caused or contributed to the accident or casualty. (A vessel could be docked, moored, or anchored.)
- b. A person is burned, or otherwise injured or dies from exposure or immersion which is the result of an accident involving the vessel where the vessel or its equipment or appendages contributed to the accident or casualty.
- c. A person dies, is injured, or property damage exceeding \$500.00 results from any occurrence or incident that was caused by careless or improper use of the vessel.
- d. An oar or other piece of essential gear associated with propulsion of the vessel is lost from a vessel and a person is injured, drowns or otherwise dies in an attempt to retrieve the lost item.
- e. A person dies having jumped from, or swimming around a vessel that is improperly connected to shore power and resultant stray electrical current enters the water causing electrocution of the victim.

## NON-REPORTABLE RECREATIONAL BOATING ACCIDENTS

The following are examples of occurrences directly or indirectly involving a vessel that are generally considered to be outside the scope of a boating safety program and, therefore, are **non-reportable** as boating accidents. While they may or may not be reported in a State, these accidents are not included in Boating Statistics (COMDTPUB P16754) published annually by the U.S. Coast Guard.

- a. A person dies from self-inflicted wounds, ingestion of barbituates or poison, or from gunshot wounds or other assault by another person or persons while aboard a vessel.
- b. A person dies primarily from natural causes while aboard a vessel; boat operation activities do not contribute.
- c. A person drowns in swimming to retrieve a vessel that is adrift from its mooring or dock, having departed from a position of inherent safety such as a shore or pier.
- d. A person drowns while swimming from a vessel for pleasure and the vessel does not contribute to the drowning; it is a platform only.
- e. A person drowns after falling from a raft that is moored or anchored for use as a swimming platform or other purpose.
- f. A person dies or is injured away from the water while preparing a boat for launching. (If in the act of launching into a body of water, it is a reportable boating accident).
- g. Damage, injury or death results from a fire on shore or a pier that spreads to a vessel or vessels.
- h. A person drowns or is injured while surfing. (A surfboard is not a vessel).
- i. A person dies in an "ice boat" accident. (An ice boat is not considered to be a vessel).
- j. A fatality or injury occurs to an operator or a crewmember while participating in an organized and sanctioned race, or warm-up or in a boat uniquely designed for racing.
- k. Damage, injury or death on a docked or moored vessel resulting from storms.
- l. Damage, injury or death on a docked or moored vessel resulting from unusual tidal, sea or swell conditions.
- m. Damage to a docked or moored vessel due to theft or any vandalism.
- n. Deaths, injury or damage on a docked or moored or anchored non-propelled houseboat or other vessel used primarily as a permanent residence.

STATE ASSIGNED CASE NO. \_\_\_\_\_

THE OPERATOR/OWNER OF A VESSEL USED FOR RECREATIONAL PURPOSES IS REQUIRED TO FILE A REPORT IN WRITING WHENEVER AN ACCIDENT RESULTS IN: LOSS OF LIFE OR DISAPPEARANCE FROM A VESSEL; AN INJURY WHICH REQUIRES MEDICAL TREATMENT BEYOND FIRST AID; OR PROPERTY DAMAGE IN EXCESS OF \$500 OR COMPLETE LOSS OF THE VESSEL. REPORTS IN DEATH AND INJURY CASES MUST BE SUBMITTED WITHIN 48 HOURS. REPORTS IN OTHER CASES MUST BE SUBMITTED WITHIN 10 DAYS. REPORTS MUST BE SUBMITTED TO THE REPORTING AUTHORITY IN THE STATE WHERE THE ACCIDENT OCCURRED. THIS FORM IS PROVIDED TO ASSIST THE OPERATOR IN FILING THE REQUIRED WRITTEN REPORT.

**COMPLETE ALL BLOCKS** (INDICATE THOSE NOT APPLICABLE BY "NA")

**ACCIDENT DATA**

DATE OF ACCIDENT	TIME AM PM	NAME OF BODY OF WATER		LOCATION (GIVE LOCATION PRECISELY)		
NUMBER OF VESSELS INVOLVED	NEAREST CITY OR TOWN		COUNTY	STATE	ZIP CODE	
WEATHER (CHECK ALL APPLICABLE) [ ] CLEAR [ ] RAIN [ ] CLOUDY [ ] SNOW [ ] FOG [ ] HAZY	WATER CONDITIONS [ ] CALM (WAVES LESS THAN 6") [ ] CHOPPY (WAVES 6" TO 2') [ ] ROUGH (WAVES 2' TO 6') [ ] VERY ROUGH (GREATER THAN 6') [ ] STRONG CURRENT		TEMPERATURE (ESTIMATE) AIR _____°F WATER _____°F	WIND [ ] NONE [ ] LIGHT (0-6 MPH) [ ] MODERATE (7-14 MPH) [ ] STRONG (15-25 MPH) [ ] STORM (OVER 25 MPH)		VISIBILITY DAY NIGHT [ ] GOOD [ ] [ ] FAIR [ ] [ ] POOR [ ]
	NAME OF OPERATOR			OPERATOR ADDRESS		
OPERATOR TELEPHONE NUMBER ( )	DATE OF BIRTH MO DAY YR	OPERATOR'S EXPERIENCE [ ] NONE [ ] UNDER 100 HOURS [ ] ≥ 100 HOURS		INSTRUCTION IN BOATING SAFETY [ ] STATE COURSE [ ] U.S. POWER SQUADRON [ ] USCG AUXILIARY [ ] AMERICAN RED CROSS [ ] NONE		
[ ] MALE [ ] FEMALE	NAME OF OWNER		OWNER ADDRESS			
OWNER TELEPHONE NUMBER ( )	NUMBER OF PEOPLE ON BOARD	NUMBER OF PEOPLE BEING TOWED	RENTED BOAT? [ ] YES [ ] NO			

**BOAT NO. 1 (THIS VESSEL)**

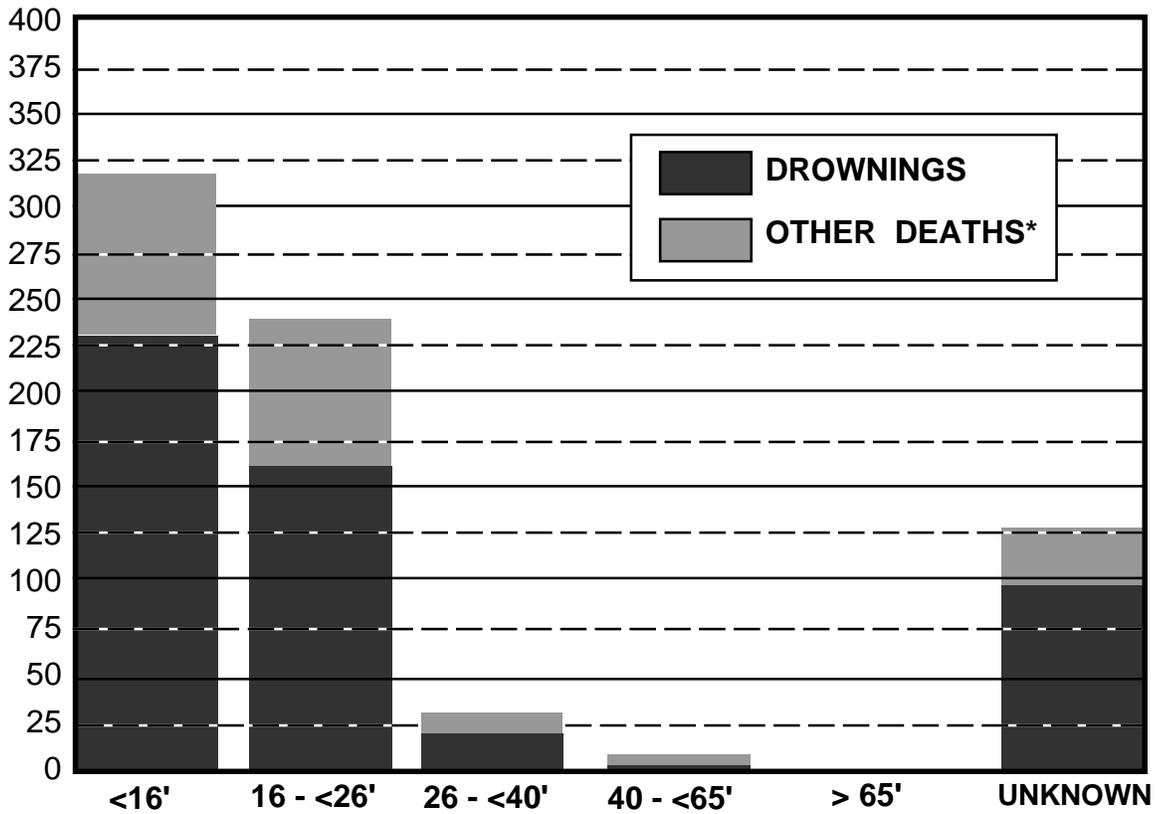
BOAT REGISTRATION OR DOCUMENTATION NUMBER		STATE	HULL IDENTIFICATION NUMBER		BOAT NAME
BOAT MANUFACTURER		LENGTH	MODEL		YEAR BUILT
TYPE OF BOAT [ ] OPEN MOTORBOAT [ ] CABIN MOTORBOAT [ ] AUXILIARY SAIL [ ] SAIL (ONLY) [ ] ROWBOAT [ ] CANOE/KAYAK [ ] PERSONAL WATERCRAFT [ ] PONTOON BOAT [ ] HOUSEBOAT [ ] OTHER (SPECIFY)	HULL MATERIAL [ ] WOOD [ ] ALUMINUM [ ] STEEL [ ] FIBERGLASS [ ] RUBBER/VINYL/CANVAS [ ] RIGID HULL INFLATABLE [ ] OTHER (SPECIFY)		ENGINE [ ] OUTBOARD [ ] INBOARD [ ] INBOARD-STERNDRIVE (I/O) [ ] AIRBOAT	PROPULSION [ ] PROPELLER [ ] WATER JET [ ] AIR THRUST [ ] MANUAL [ ] SAIL	PERSONAL FLOTATION DEVICES (PFDS): WAS BOAT ADEQUATELY EQUIPPED WITH COAST GUARD APPROVED PFDS? [ ] YES [ ] NO WERE PFDS ACCESSIBLE? [ ] YES [ ] NO
			FUEL [ ] GASOLINE [ ] DIESEL [ ] ELECTRIC	NUMBER OF ENGINES  TOTAL HORSEPOWER	FIRE EXTINGUISHERS ON BOARD? [ ] YES [ ] NO USED? [ ] YES [ ] NO
OPERATION AT TIME OF ACCIDENT (CHECK ALL APPLICABLE) [ ] CRUISING [ ] CHANGING DIRECTION [ ] CHANGING SPEED [ ] DRIFTING [ ] TOWING [ ] BEING TOWED [ ] ROWING/PADDLING [ ] SAILING [ ] LAUNCHING [ ] DOCKING/UNDocking [ ] AT ANCHOR [ ] TIED TO DOCK/MOORED [ ] OTHER (SPECIFY)	ACTIVITY AT TIME OF ACCIDENT (CHECK ANY IF APPLICABLE) [ ] FISHING [ ] TOURNAMENT [ ] HUNTING [ ] SWIMMING/DIVING [ ] MAKING REPAIRS [ ] WATERSKIING/TUBING/ETC. [ ] RACING [ ] WHITEWATER SPORTS [ ] FUELING [ ] STARTING ENGINE [ ] NON-RECREATIONAL [ ] OTHER (SPECIFY)		TYPE OF ACCIDENT [ ] GROUNDING [ ] CAPSIZING [ ] FLOODING/SWAMPING [ ] SINKING [ ] FIRE OR EXPLOSION (FUEL) [ ] FIRE OR EXPLOSION (OTHER) [ ] SKIER MISHAP [ ] COLLISION WITH VESSEL [ ] COLLISION WITH FIXED OBJECT [ ] COLLISION WITH FLOATING OBJ. [ ] FALLS OVERBOARD [ ] FALLS IN BOAT [ ] STRUCK BY BOAT [ ] STRUCK BY MOTOR/PROPELLER [ ] STRUCK SUBMERGED OBJECT [ ] OTHER (SPECIFY)		WHAT CONTRIBUTED TO ACCIDENT? (CHECK ALL APPLICABLE) [ ] WEATHER [ ] EXCESSIVE SPEED [ ] IMPROPER LOOKOUT [ ] RESTRICTED VISION [ ] OVERLOADING [ ] IMPROPER LOADING [ ] HAZARDOUS WATERS [ ] ALCOHOL USE [ ] DRUG USE [ ] HULL FAILURE [ ] MACHINERY FAILURE [ ] EQUIPMENT FAILURE [ ] OPERATOR INEXPERIENCE [ ] OPERATOR INATTENTION [ ] CONGESTED WATERS [ ] PASSENGER/SKIER BEHAVIOR [ ] DAM/LOCK [ ] OTHER (SPECIFY)
ESTIMATED SPEED [ ] 10 - 20 MPH	[ ] NONE [ ] 21 - 40 MPH	[ ] UNDER 10 MPH [ ] OVER 40 MPH	[ ] HIT AND RUN		

DECEASED (IF MORE THAN 2 FATALITIES, ATTACH ADDITIONAL FORMS)			
NAME OF VICTIM		ADDRESS OF VICTIM	
DATE OF BIRTH		DEATH CAUSED BY	
<input type="checkbox"/> MALE	<input type="checkbox"/> FEMALE	<input type="checkbox"/> DROWNING	<input type="checkbox"/> OTHER
		<input type="checkbox"/> DISAPPEARANCE	
NAME OF VICTIM		ADDRESS OF VICTIM	
DATE OF BIRTH		DEATH CAUSED BY	
<input type="checkbox"/> MALE	<input type="checkbox"/> FEMALE	<input type="checkbox"/> DROWNING	<input type="checkbox"/> OTHER
		<input type="checkbox"/> DISAPPEARANCE	
INJURED (IF MORE THAN 2 INJURIES, ATTACH ADDITIONAL FORMS)			
NAME OF VICTIM		ADDRESS OF VICTIM	
DATE OF BIRTH	MEDICAL TREATMENT BEYOND FIRST AID? ADMITTED TO HOSPITAL?	<input type="checkbox"/> YES <input type="checkbox"/> NO	DESCRIBE INJURY
		<input type="checkbox"/> YES <input type="checkbox"/> NO	
WAS PFD WORN?	<input type="checkbox"/> YES <input type="checkbox"/> NO	PRIOR TO ACCIDENT?	<input type="checkbox"/> YES <input type="checkbox"/> NO
WAS IT INFLATABLE?	<input type="checkbox"/> YES <input type="checkbox"/> NO	AS A RESULT OF ACCIDENT?	<input type="checkbox"/> YES <input type="checkbox"/> NO
NAME OF VICTIM		ADDRESS OF VICTIM	
DATE OF BIRTH	MEDICAL TREATMENT BEYOND FIRST AID? ADMITTED TO HOSPITAL?	<input type="checkbox"/> YES <input type="checkbox"/> NO	DESCRIBE INJURY
		<input type="checkbox"/> YES <input type="checkbox"/> NO	
WAS PFD WORN?	<input type="checkbox"/> YES <input type="checkbox"/> NO	PRIOR TO ACCIDENT?	<input type="checkbox"/> YES <input type="checkbox"/> NO
WAS IT INFLATABLE?	<input type="checkbox"/> YES <input type="checkbox"/> NO	AS A RESULT OF ACCIDENT?	<input type="checkbox"/> YES <input type="checkbox"/> NO
OTHER PEOPLE ABOARD THIS BOAT (IF MORE THAN 2 PEOPLE, ATTACH ADDITIONAL FORMS)			
NAME		ADDRESS	
DATE OF BIRTH	WAS PFD WORN? AS A RESULT OF ACCIDENT	<input type="checkbox"/> YES <input type="checkbox"/> NO	PRIOR TO ACCIDENT? WAS IT INFLATABLE?
		<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO
NAME		ADDRESS	
DATE OF BIRTH	WAS PFD WORN? AS A RESULT OF ACCIDENT	<input type="checkbox"/> YES <input type="checkbox"/> NO	PRIOR TO ACCIDENT? WAS IT INFLATABLE?
		<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO
BOAT NO. 2 (IF MORE THAN 2 VESSELS, ATTACH ADDITIONAL IDENTIFYING INFORMATION)			
NAME OF OPERATOR		OPERATOR ADDRESS	
OPERATOR TELEPHONE NUMBER ( )		BOAT REGISTRATION OR DOCUMENTATION NUMBER	STATE
NAME OF OWNER		OWNER ADDRESS	
OWNER TELEPHONE NUMBER ( )			
PROPERTY DAMAGE			
ESTIMATED AMOUNT: THIS BOAT AND CONTENTS:		OTHER BOAT(S) AND CONTENTS:	
\$		\$	
DESCRIBE PROPERTY DAMAGED		OTHER PROPERTY: \$	
WITNESSES NOT ON THIS VESSEL			
NAME		ADDRESS	TELEPHONE NUMBER ( )
NAME		ADDRESS	TELEPHONE NUMBER ( )
PERSON COMPLETING REPORT			
NAME		ADDRESS	TELEPHONE NUMBER ( )
SIGNATURE	QUALIFICATION	<input type="checkbox"/> OPERATOR <input type="checkbox"/> OWNER <input type="checkbox"/> INVESTIGATOR <input type="checkbox"/> OTHER	DATE SUBMITTED
FOR AGENCY USE ONLY			
CAUSES BASED ON (CHECK ONE): <input type="checkbox"/> THIS REPORT <input type="checkbox"/> INVESTIGATION <input type="checkbox"/> INVESTIGATION AND THIS REPORT <input type="checkbox"/> OTHER			
NAME OF REVIEWING OFFICE		DATE RECEIVED	RECREATIONAL <input type="checkbox"/> NON-REPORTABLE <input type="checkbox"/> COMMERCIAL <input type="checkbox"/>
PRIMARY CAUSE		SECONDARY CAUSE	

**ACCIDENT DESCRIPTION**

DESCRIBE WHAT HAPPENED (SEQUENCE OF EVENTS. INCLUDE FAILURE OF EQUIPMENT. INCLUDE A DIAGRAM IF NEEDED. CONTINUE ON ADDITIONAL SHEETS IF NECESSARY. INCLUDE ANY INFORMATION REGARDING THE INVOLVEMENT OF ALCOHOL AN/OR DRUGS IN CAUSING OR CONTRIBUTING TO THE ACCIDENT. INCLUDE ANY DESCRIPTIVE INFORMATION ABOUT THE USE OF PFD'S.)

### NUMBER OF FATALITIES BY BOAT LENGTH - 1999



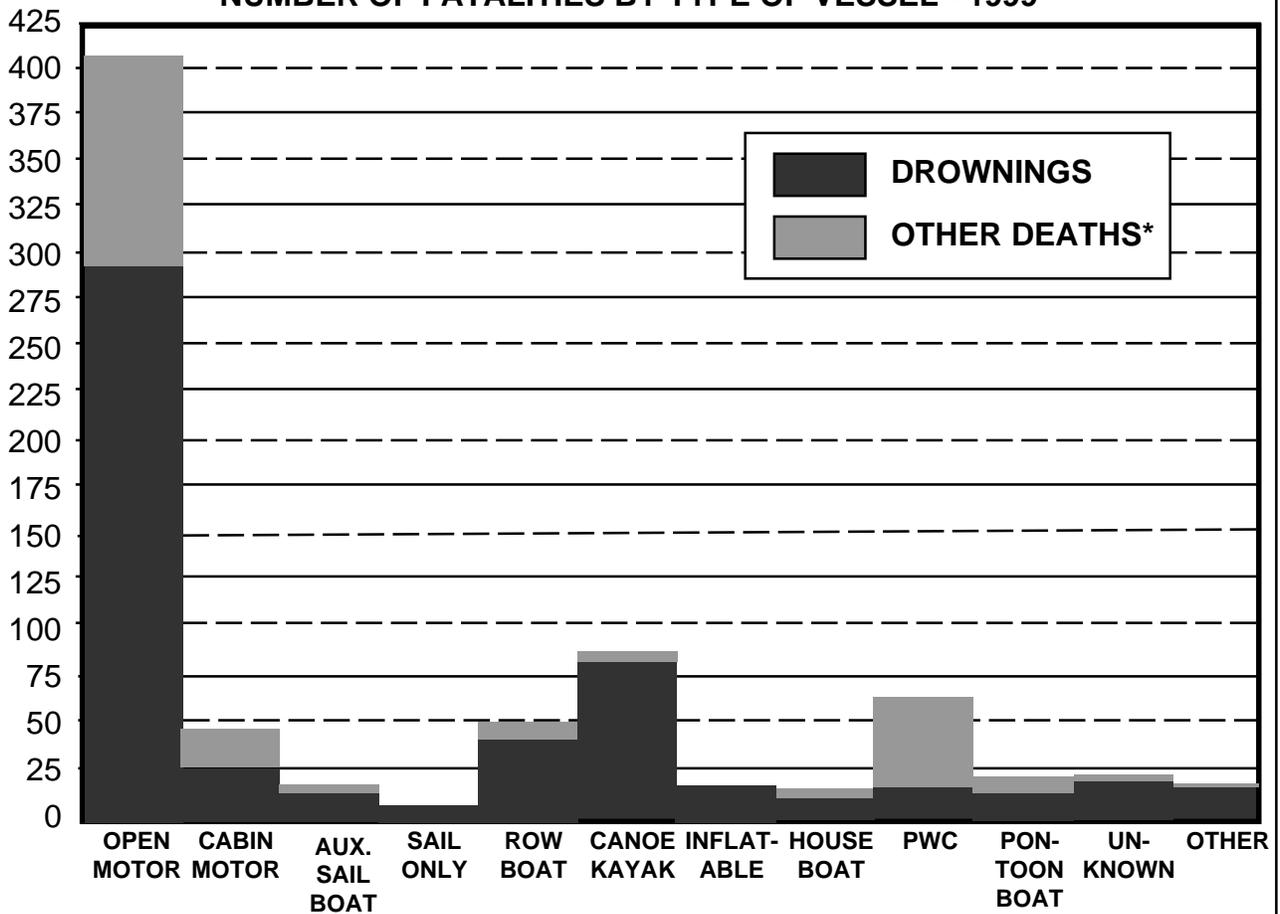
LENGTH	DROWNINGS	OTHER DEATHS*	TOTAL
Less than 16 feet	229	89	318
16 feet to less than 26 feet	161	81	242
26 feet to less than 40 feet	22	9	31
40 feet to 65 feet	6	8	14
More than 65 feet	1	2	3
Unknown	98	28	126
<b>Total</b>	<b>517</b>	<b>217</b>	<b>734</b>

\*Other deaths denotes types of fatalities other than drownings.

## AGE OF FATALITY VICTIMS - 1999

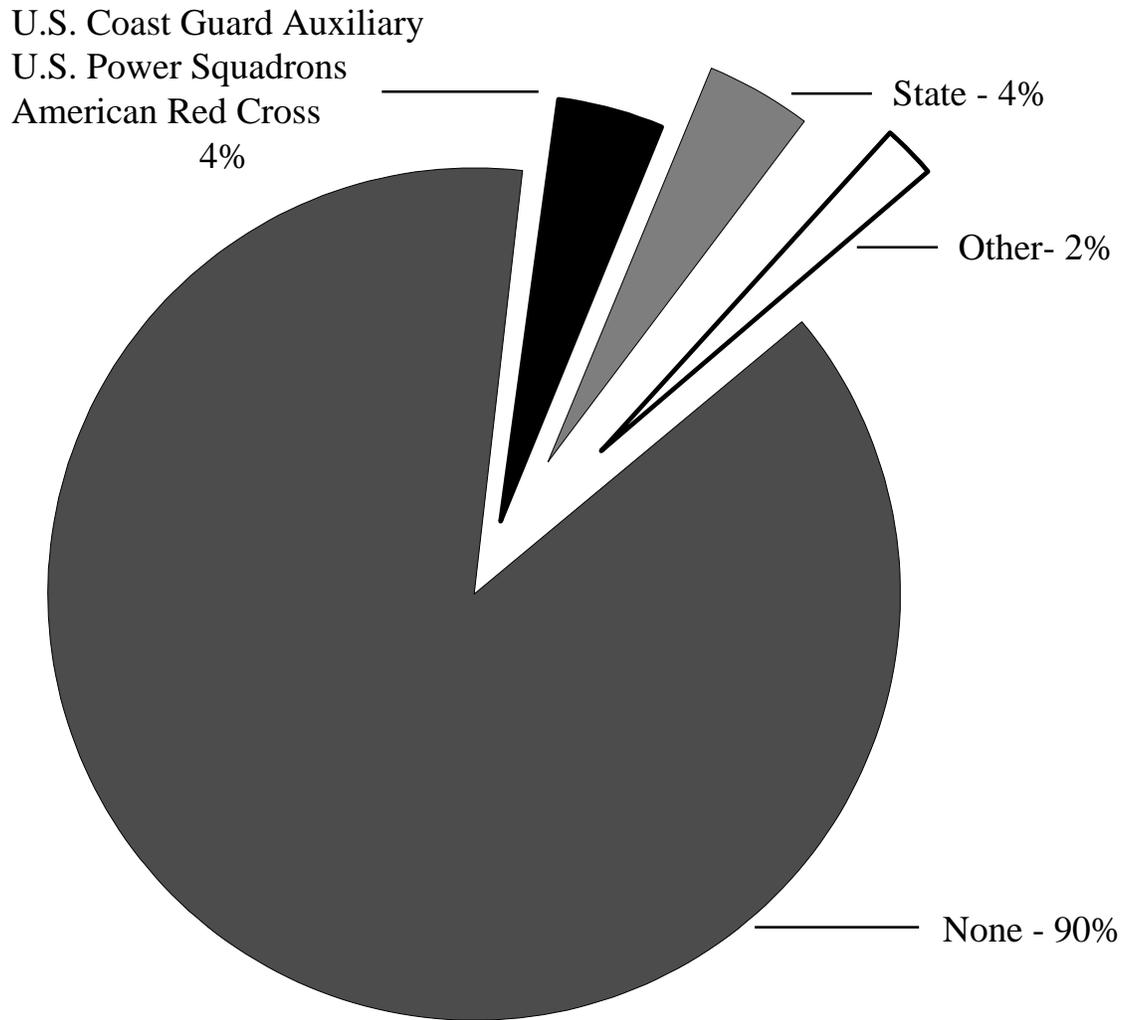
Age of Victim	Number of Drownings	Number of Other Deaths	Total Fatalities
1 .....	4 .....	1 .....	5
2 .....	1 .....	0 .....	1
3 .....	3 .....	0 .....	3
4 .....	4 .....	1 .....	5
5 .....	2 .....	1 .....	3
6 .....	1 .....	1 .....	2
7 .....	2 .....	2 .....	4
8 .....	3 .....	1 .....	4
9 .....	1 .....	1 .....	2
10 .....	3 .....	2 .....	5
11 .....	4 .....	4 .....	8
12 .....	3 .....	6 .....	9
<b>0 - 12 .....</b>	<b>31 .....</b>	<b>20 .....</b>	<b>51</b>
13 .....	2 .....	2 .....	4
14 .....	1 .....	3 .....	4
15 .....	7 .....	0 .....	7
16 .....	8 .....	5 .....	13
17 .....	4 .....	6 .....	10
18 .....	10 .....	2 .....	12
19 .....	8 .....	4 .....	12
<b>13 - 19 .....</b>	<b>40 .....</b>	<b>22 .....</b>	<b>62</b>
<b>20 - 29 .....</b>	<b>82 .....</b>	<b>41 .....</b>	<b>123</b>
<b>30 - 39 .....</b>	<b>109 .....</b>	<b>39 .....</b>	<b>148</b>
<b>40 - 49 .....</b>	<b>93 .....</b>	<b>33 .....</b>	<b>126</b>
<b>50 - 59 .....</b>	<b>76 .....</b>	<b>26 .....</b>	<b>102</b>
<b>60 - 69 .....</b>	<b>50 .....</b>	<b>15 .....</b>	<b>65</b>
<b>70 - 79 .....</b>	<b>18 .....</b>	<b>9 .....</b>	<b>27</b>
<b>older than 80 .....</b>	<b>9 .....</b>	<b>2 .....</b>	<b>11</b>
<b>Unknown .....</b>	<b>9 .....</b>	<b>10 .....</b>	<b>19</b>
<b>TOTAL .....</b>	<b>517 .....</b>	<b>217 .....</b>	<b>734</b>

**NUMBER OF FATALITIES BY TYPE OF VESSEL - 1999**



\*Other includes 10 drownings and one other type of death involving a jet boat.

**PERCENT OF FATALITIES BY KNOWN BOAT OPERATOR INSTRUCTION - 1999**

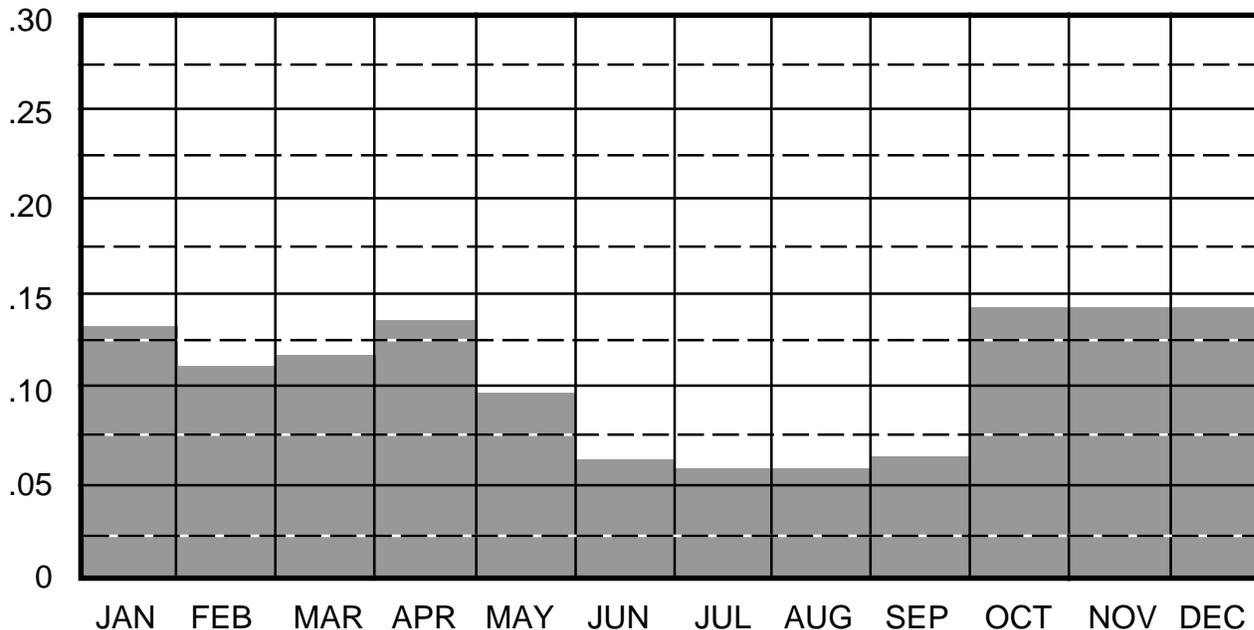


<b>TYPE OF BOATING INSTRUCTION</b>	<b>FATALITIES</b>
U.S. Coast Guard Auxiliary .....	15
U.S. Power Squadrons	
American Red Cross	
State .....	14
Other .....	11
None .....	356

**KNOWN ACCIDENT CONTRIBUTING FACTORS DIVIDED BY THOSE WHICH ARE  
OPERATOR CONTROLLABLE AND VESSEL/ENVIRONMENTAL**

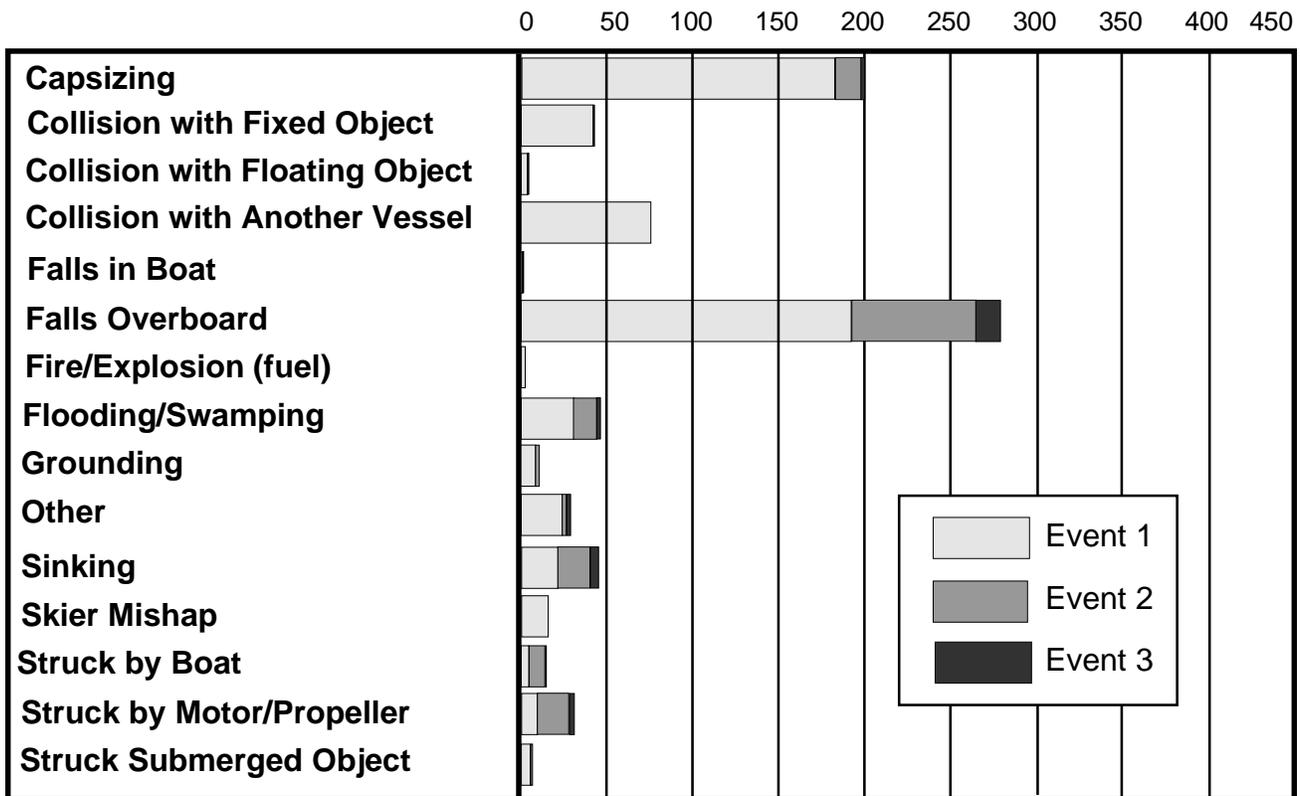
	100	200	300	400	500	600	700	800	900	1000
Operator Inattention .....										983
Operator Inexperience .....										947
Careless/Reckless Operation .....								830		
Excessive Speed .....						676				
No Proper Lookout .....					588					
Alcohol .....			337							
Passenger/Skier Behavior .....			333							
Restricted Vision .....	118									
Rules of the Road Infraction .....	93									
Sharp Turn .....	86									
Improper Loading .....	68									
Overloading .....	56									
Improper Anchoring .....	48									
Off-Throttle Steering .....	42									
Standing/Sitting on Gunwales, Bow, Transom .....	30									
Lack of or Improper Lights .....	21									
Failure to Ventilate .....	15									
Drug Use .....	3									
Starting In Gear .....	2									
<hr/>										
Hazardous Waters .....						585				
Machinery Failure .....					484					
Weather .....				366						
Equipment Failure .....		194								
Hull Failure .....	79									
Congested Waters .....	69									
Ignition of Spilled Fuel/Vapor .....	67									
Dam/Lock .....	5									
<hr/>										
Other .....			346							
Unknown .....				460						

**FATAL ACCIDENTS AS A PERCENTAGE OF TOTAL ACCIDENTS BY MONTH - 1999**



MONTH	FATAL ACCIDENTS	NON-FATAL ACCIDENTS	TOTAL ACCIDENTS	TOTAL FATALITIES	AVG. WATER TEMP. (°F) IN FATAL ACCIDENTS
January	18	125	143	23	49.7
February	17	139	156	25	56.3
March	26	196	222	29	51.6
April	62	371	433	72	59.7
May	94	1,002	1,096	103	61.4
June	90	1,116	1,206	100	69.2
July	123	1,975	2,098	139	75.5
August	79	1,193	1,272	89	75.5
September	46	651	697	54	71.6
October	46	287	333	55	63.4
November	22	132	154	29	56.3
December	15	94	109	15	58.6
Unknown	1	11	12	1	
<b>Total</b>	<b>639</b>	<b>7,292</b>	<b>7,931</b>	<b>734</b>	

## EVENTS IN FATAL BOATING ACCIDENT SEQUENCES - 1999



### Events in Fatal Boating Accident Sequences

Published statistics on the types of boating accidents refer only to the first event occurring in the accident sequence. However, many accidents involve more than one event. For example, 35 fatal accidents involve a person being struck by motor/propeller, either as the first, second or third event in the accident sequence.

	Event No. 1	Event No. 2	Event No. 3	Total
Capsizing .....	180	18	2	200
Collision with Fixed Object .....	40	2	0	42
Collision with Floating Object .....	5	0	0	5
Collision with Another Vessel .....	75	0	0	75
Falls In Boat .....	3	4	2	9
Falls Overboard .....	194	68	9	271
Fire/Explosion (fuel) .....	2	0	0	2
Fire/Explosion (other than fuel) .....	1	0	0	1
Flooding/Swamping .....	34	9	2	45
Grounding .....	13	2	0	15
Other .....	27	3	3	33
Sinking .....	24	13	8	45
Skier Mishap .....	14	0	0	14
Struck by Boat .....	4	11	1	16
Struck by Motor/Propeller .....	9	23	3	35
Struck Submerged Object .....	6	1	0	7

**TYPE OF INJURY BY TYPE OF VESSEL - 1999**

	Number of Injuries	Airboat	Aux. Sailboat	Cabin Motorboat	Canoe/Kayak	Houseboat	Inflatable	Jet Boat	Open Motorboat	Other	Personal Watercraft	Pontoon Boat	Rowboat	Sailboat	Unknown
<b>Total</b>	<b>4,315</b>	<b>4</b>	<b>50</b>	<b>328</b>	<b>78</b>	<b>32</b>	<b>41</b>	<b>10</b>	<b>1,936</b>	<b>35</b>	<b>1,614</b>	<b>74</b>	<b>13</b>	<b>25</b>	<b>75</b>
<b>Type of Injury</b>															
Amputation	35	0	2	3	0	0	0	0	16	0	9	3	0	0	2
Back Injury	260	0	2	24	0	0	3	0	129	1	91	2	2	1	5
Broken Bones	784	0	4	48	5	2	8	3	272	4	404	17	0	3	14
Burns	138	0	6	45	4	6	0	0	59	0	11	4	0	2	1
Contusion	552	1	6	37	2	1	12	1	210	4	257	9	0	5	7
Dislocation	98	0	2	8	3	1	2	0	38	1	40	1	0	1	1
Head Injury	394	0	3	31	4	0	1	1	174	4	162	6	2	2	4
Hypothermia	246	0	9	10	45	1	5	0	136	10	11	1	5	5	8
Internal Injuries	157	0	1	9	4	1	1	0	65	0	70	1	1	0	4
Laceration	909	1	8	67	3	9	5	4	484	5	288	19	1	5	10
Neck Injury	88	0	0	2	0	0	1	0	53	3	23	1	0	1	4
Other	2	0	0	0	0	1	0	0	1	0	0	0	0	0	0
Shock	21	1	0	2	2	0	0	0	13	0	2	0	1	0	0
Spinal Injury	34	1	1	7	0	0	1	0	14	0	9	0	0	0	1
Sprain/Strain	146	0	0	12	2	0	1	1	66	2	61	1	0	0	0
Teeth	18	0	0	2	0	0	0	0	8	0	8	0	0	0	0
Unknown	433	0	6	21	4	10	1	0	198	1	168	9	1	0	14

**HOSPITAL ADMISSIONS BY TYPE OF VESSEL - 1999**

	Number of Injuries	Admitted to Hospital	Not Admitted
<b>TOTALS</b>	<b>4,315</b>	<b>1,237</b>	<b>3,078</b>
Airboat	4	3	1
Auxiliary Sail	50	19	31
Cabin Motorboat	328	86	242
Canoe/Kayak	78	31	47
Houseboat	32	9	23
Inflatable	41	8	33
Jet Boat	10	3	7
Open Motorboat	1,936	512	1,424
Other	35	11	24
Personal Watercraft	1,614	504	1,110
Pontoon Boat	74	25	49
Rowboat	13	4	9
Sail (only)	25	8	17
Unknown	75	14	61

## BOAT NUMBERING

Chapter 123 of Title 46, United States Code requires each undocumented vessel equipped with propulsion machinery to be numbered in the State in which it is principally operated. The law allows the States and other jurisdictions to create their own numbering systems as long as they meet or exceed Federal requirements. Many States require the numbering of non-powered boats, such as sailboats. A list of the numbering requirements of the States is found on page 21.

The statistics on pages 21 and 22 are derived from reports of the actual counts of valid boat numbers that have been issued by States and other jurisdictions. Their accuracy is affected by several factors, including compliance of the boat owners with numbering and registration laws. The numbering requirements for each jurisdiction are given so that comparisons may be made. Estimates are provided for non-reporting jurisdictions based on the growth in numbering as reported in the past.

### TOTAL NUMBER OF NUMBERED BOATS 1977- 1999

<b>1999</b>	<b>12,738,271</b>
<b>1998</b>	<b>12,565,930</b>
<b>1997</b>	<b>12,312,982</b>
<b>1996</b>	<b>11,877,938</b>
<b>1995</b>	<b>11,734,710</b>
<b>1994</b>	<b>11,429,585</b>
<b>1993</b>	<b>11,282,736</b>
<b>1992</b>	<b>11,132,386</b>
<b>1991</b>	<b>11,068,440</b>
<b>1990</b>	<b>10,996,253</b>
<b>1989</b>	<b>10,777,370</b>
<b>1988</b>	<b>10,362,613</b>
<b>1987</b>	<b>9,963,696</b>
<b>1986</b>	<b>9,876,197</b>
<b>1985</b>	<b>9,589,483</b>
<b>1984</b>	<b>9,420,011</b>
<b>1983</b>	<b>9,165,094</b>
<b>1982</b>	<b>9,073,972</b>
<b>1981</b>	<b>8,905,097</b>
<b>1980</b>	<b>8,577,857</b>
<b>1979</b>	<b>8,278,723</b>
<b>1978</b>	<b>8,035,905</b>
<b>1977</b>	<b>7,975,587</b>

## NUMBERING DATA BY STATE

		TOTAL BOATS NUMBERED		SCOPE OF CURRENT BOAT NUMBERING SYSTEM <small>(Does not include sailboards which are numbered in some States)</small>
		1999	1998	
TOTAL	RANK	12,738,271	12,565,930	
Alabama	18	267,868	265,592	All motorboats, sailboats and rental boats
Alaska	50	25,960	26,230	All watercraft except sailboats; unpowered boats if requested
Arizona	29	153,517	158,726	All watercraft, except inflatables 12 feet in length or less
Arkansas	27	173,437	210,599	All motorboats and sailboats
California	2	955,700	895,132	All motorboats; sailboats over 8 feet in length
Colorado	34	101,137	98,190	All watercraft powered by motor or sail
Connecticut	33	102,071	102,630	All motorboats; sailboats 19.5 feet or more in length
Delaware	45	45,854	44,458	All motorboats
Dist. of Col.	54	1,811	1,811	All watercraft
Florida	3	805,079	805,581	All motorboats
Georgia	14	316,770	303,129	All motorboats; sailboats 12 feet or more in length
Hawaii	51	15,147	15,290	All motorboats; sailboats over 8 feet in length
Idaho	36	83,554	83,501	All motorboats and sailboats
Illinois	10	372,618	396,945	All watercraft, except non-profit org. owned canoes and kayaks
Indiana	23	219,089	214,474	All motorboats
Iowa	25	203,081	211,972	All watercraft with exceptions <sup>1</sup>
Kansas	32	102,424	101,306	All motorboats and sailboats
Kentucky	28	169,759	162,780	All motorboats, except electric motors 1 hp or less
Louisiana	16	313,035	305,386	All motorboats; sailboats more than 12 feet in length
Maine	31	120,197	177,706	All motorboats
Maryland	24	208,766	192,946	All motorboats
Massachusetts	30	149,170	146,957	All motorboats
Michigan	1	985,732	980,378	All watercraft with exceptions <sup>2</sup>
Minnesota	4	793,107	780,097	All motorboats with exceptions <sup>3</sup>
Mississippi	17	281,958	270,868	All motorboats and sailboats
Missouri	13	331,693	326,879	All motorboats; sailboats over 12 feet in length
Montana	44	50,687	49,336	All motorboats; sailboats 12 feet or more in length
Nebraska	39	72,153	72,649	All watercraft
Nevada	40	60,644	59,404	All motorboats
New Hampshire	35	96,456	92,168	All motorboats; sailboats 20 feet or more in length
New Jersey	22	221,152	197,672	All watercraft with exceptions <sup>4</sup>
New Mexico	37	78,945	72,456	All motorboats and sailboats
New York	7	524,326	514,749	All motorboats
North Carolina	11	353,166	334,862	All motorboats; sailboats more than 14 feet in length
North Dakota	46	42,380	48,523	All motorboats
Ohio	9	407,347	407,686	All watercraft
Oklahoma	21	229,770	227,826	All watercraft
Oregon	26	196,102	197,634	All motorboats; sailboats 12 feet or more in length
Pennsylvania	12	352,231	348,727	All motorboats and certain non-powered craft <sup>5</sup>
Rhode Island	48	36,522	35,378	All watercraft except rowboats, canoes, kayaks & ferries
South Carolina	8	414,527	394,842	All watercraft
South Dakota	42	52,499	47,465	All motorboats; all other boats over 12 feet in length
Tennessee	15	314,624	312,030	All motorboats and sailboats
Texas	5	629,640	625,754	All motorboats and sailboats 14 feet or more in length
Utah	38	77,171	76,346	All motorboats and sailboats
Vermont	47	37,932	38,105	All motorboats
Virginia	20	235,330	232,409	All motorboats
Washington	19	250,606	249,968	All motorboats with exceptions <sup>6</sup> ; sailboats ≥16 ft in length
West Virginia	41	54,477	67,382	All motorboats
Wisconsin	6	564,313	559,321	All motorboats; sailboats over 12 feet in length
Wyoming	49	26,287	25,828	All motorboats and sailboats
Guam	53	3,000	3,000	All watercraft (estimated)
Puerto Rico	43	52,186	49,595	All motorboats; vessels adapted to hold a motor
Virgin Islands	52	4,072	4,106	All watercraft
Am. Samoa	56	146	145	All watercraft
N. Marianas	55	1,046	1,001	All motorboats

<sup>1</sup> Iowa excludes inflatables under 7 feet in length and canoes/kayaks under 13 feet in length.

<sup>2</sup> Michigan excludes manually propelled boats 16 feet or less in length, and nonmotorized rafts, canoes, and kayaks.

<sup>3</sup> Minnesota excludes nonmotorized boats nine feet or less in length, duckboats during duckhunting season, and riceboats during harvest season and seaplanes.

<sup>4</sup> New Jersey excludes non-motorized boats 12 feet or less in length and canoes, kayaks, racing shells and rowing sculls.

<sup>5</sup> Pennsylvania registers non-powered craft using lakes or access areas owned by the State Fish & Boat Commission.

<sup>6</sup> Washington excludes motorboats < 16 feet with motors 10 horsepower or less used solely on exclusive State waters

## BOAT NUMBERING DATA BY STATE AND TYPE OF PROPULSION<sup>1</sup>

	POWERED					NON-POWERED			OTHER	TOTAL
1999	INBOARD	OUTBOARD	STERNDRIIVE	AUXILIARY SAIL	PWC	ROWBOAT	CANOE OR KAYAK	SAIL ONLY	OTHER BOATS	TOTAL
<b>TOTALS</b>	<b>1,406,729</b>	<b>8,215,736</b>	<b>1,583,116</b>	<b>205,184</b>	<b>400,797</b>	<b>85,924</b>	<b>257,875</b>	<b>137,392</b>	<b>445,518</b>	<b>12,738,271</b>
Alabama	18,135	208,651	21,238	1,132	14,079	628	181	2,933	891	267,868
Alaska	2,440	17,887	4,041	549	728	0	0	75	240	25,960
Arizona	43,353	68,221	0	214	27,748	1,750	4,496	1,053	6,682	153,517
Arkansas	28,611	143,835	0	0	0	0	0	405	586	173,437
California	71,208	377,661	189,346	21,672	0	9,693	7,754	40,584	237,782	955,700
Colorado	6,501	54,178	20,028	0	15,326	0	0	4,384	730	101,137
Connecticut	7,658	66,319	16,117	5,318	5,652	462	37	240	268	102,071
Delaware	9,025	30,254	6,045	0	0	0	0	0	530	45,854
Dist. of Col.	530	595	344	194	0	0	0	146	2	1,811
Florida	131,771	561,926	79,100	9,717	0	0	0	0	22,565	805,079
Georgia	16,824	218,573	35,242	0	29,320	0	0	4,876	11,935	316,770
Hawaii	1,725	8,090	2,310	1,203	1,163	0	0	612	44	15,147
Idaho	20,670	43,492	14,786	846	0	0	0	795	2,965	83,554
Illinois	26,060	238,475	52,779	3,053	14,958	15,939	0	9,208	12,146	372,618
Indiana	23,949	146,147	36,259	2,018	0	0	0	0	10,716	219,089
Iowa	18,093	129,021	22,020	517	0	957	21,809	4,466	6,198	203,081
Kansas	7,027	70,331	9,410	505	10,017	1,320	288	3,115	411	102,424
Kentucky	16,939	120,736	21,858	325	0	0	0	0	9,901	169,759
Louisiana	15,466	287,158	0	0	10,411	0	0	0	0	313,035
Maine	8,684	99,823	11,690	0	0	0	0	0	0	120,197
Maryland	29,766	112,644	36,053	11,904	0	0	0	462	17,937	208,766
Massachusetts	9,765	88,504	16,434	0	7,264	0	0	0	27,203	149,170
Michigan	254,044	611,881	49,622	70,185	0	0	0	0	0	985,732
Minnesota	19,471	489,436	49,061	3,008	32,218	13,787	158,234	16,908	10,984	793,107
Mississippi	20,339	240,284	16,313	5,022	0	0	0	0	0	281,958
Missouri	11,007	233,953	48,178	149	34,256	582	566	2,366	636	331,693
Montana	16,642	33,411	0	119	0	170	19	326	0	50,687
Nebraska	4,311	48,696	9,144	74	8,044	350	433	415	686	72,153
Nevada	2,966	23,222	18,607	548	14,432	296	0	185	388	60,644
New Hampshire	15,779	55,433	11,768	2,445	6,613	0	0	4,418	0	96,456
New Jersey	17,740	119,989	38,520	9,184	19,261	7,709	0	8,381	368	221,152
New Mexico	10,040	40,690	14,034	2,627	9,240	0	0	2,314	0	78,945
New York	93,720	288,108	127,339	6,354	0	0	0	0	8,805	524,326
North Carolina	19,432	242,558	44,754	3,814	33,729	0	0	1,927	6,952	353,166
North Dakota	5,068	31,887	4,530	106	0	0	438	52	299	42,380
Ohio	35,740	198,054	66,368	2,006	40,370	9,223	41,410	7,369	6,807	407,347
Oklahoma	35,436	171,371	21,540	1,423	0	0	0	0	0	229,770
Oregon	61,985	126,413	0	5,045	0	0	0	0	2,659	196,102
Pennsylvania	36,003	245,362	40,291	357	0	2,417	21,275	1,844	4,682	352,231
Rhode Island	5,847	23,058	5,628	1,989	0	0	0	0	0	36,522
South Carolina	14,541	310,532	37,389	7,619	19,476	20,427	741	1,794	2,008	414,527
South Dakota	4,764	35,488	5,833	241	0	0	0	0	6,173	52,499
Tennessee	44,331	233,494	30,688	6,111	0	0	0	0	0	314,624
Texas	106,966	426,925	85,708	0	0	0	0	1,837	8,204	629,640
Utah	0	26,721	38,946	207	10,087	0	0	1,210	0	77,171
Vermont	9,002	28,930	0	0	0	0	0	0	0	37,932
Virginia	5,756	155,274	42,178	4,720	21,069	0	0	224	6,109	235,330
Washington	0	150,198	89,963	10,445	0	0	0	0	0	250,606
West Virginia	5,848	36,348	5,255	0	0	0	0	0	7,026	54,477
Wisconsin	13,835	459,683	78,780	0	0	0	0	12,015	0	564,313
Wyoming	14,330	3,659	5,782	0	2,194	0	123	199	0	26,287
Guam	0	0	0	0	0	0	0	0	3,000	3,000
Puerto Rico	7,133	29,765	1,517	965	12,806	0	0	0	0	52,186
Virgin Islands	316	1,520	263	1,231	225	209	65	243	0	4,072
Amer. Samoa	22	83	2	17	0	5	6	11	0	146
No. Marianas	115	789	25	6	111	0	0	0	0	1,046

<sup>1</sup> The figures in this table are derived from reports from the States and jurisdictions. There are a total of 12,738,271 numbered recreational vessels. This table classifies numbered motorboats and numbered non-powered boats for each State and jurisdiction. Please note that the scope of the boat numbering system for each State and jurisdiction is not the same (page 21). This explains why some States report the number of non-powered vessels such as rowboats, canoes, and non-powered sailboats and others do not. Also notice that some States and jurisdictions report Personal Watercraft (PWC) as a separate vessel category and others report PWC as an inboard motorboat. An accurate figure on the number of PWC will be provided when all States and jurisdictions classify and report PWC as a separate vessel category.

**FIVE YEAR SUMMARY OF SELECTED ACCIDENT DATA BY STATE  
1995 - 1999**

	TOTAL NUMBER OF ACCIDENTS					FATAL ACCIDENTS					FATALITIES				
	1995	1996	1997	1998	1999	1995	1996	1997	1998	1999	1995	1996	1997	1998	1999
<b>TOTALS</b>	<b>8,019</b>	<b>8,026</b>	<b>8,047</b>	<b>8,061</b>	<b>7,931</b>	<b>711</b>	<b>610</b>	<b>716</b>	<b>709</b>	<b>639</b>	<b>829</b>	<b>709</b>	<b>821</b>	<b>815</b>	<b>734</b>
Alabama	159	120	173	138	118	22	21	24	27	17	26	24	25	32	17
Alaska	24	91	90	99	77	12	13	19	24	21	18	14	23	38	26
Arizona	281	327	321	239	302	7	7	7	10	7	9	8	8	14	9
Arkansas	66	92	111	115	91	10	19	14	18	14	11	20	15	20	15
California	823	849	920	770	894	50	48	41	45	36	53	56	42	56	42
Colorado	78	77	66	91	85	10	10	5	9	9	11	12	6	9	11
Connecticut	65	52	70	63	72	2	5	5	6	5	2	6	5	8	5
Delaware	24	27	27	37	22	5	2	1	5	3	5	2	2	6	3
Dist. of Columbia	0	0	5	2	16	0	0	1	0	0	0	0	1	0	0
Florida	1,365	1,261	1,215	1,255	1,299	71	52	53	67	52	81	59	67	73	58
Georgia	87	98	147	155	195	15	16	24	15	16	16	17	27	16	16
Hawaii	27	18	23	39	15	5	2	3	4	0	7	2	3	4	0
Idaho	101	86	58	49	68	11	6	16	10	12	12	6	20	10	13
Illinois	164	156	145	159	159	15	22	13	16	13	16	27	14	19	13
Indiana	154	143	115	132	150	16	12	9	10	4	20	15	11	12	4
Iowa	65	66	93	82	86	8	8	5	3	6	8	10	5	4	6
Kansas	63	59	60	78	50	5	4	6	4	5	5	6	7	4	5
Kentucky	83	95	79	63	75	18	7	18	10	14	23	8	19	10	20
Louisiana	145	146	123	171	178	37	31	25	29	30	38	37	31	35	35
Maine	61	42	72	70	55	3	0	7	8	6	3	0	10	8	7
Maryland	205	197	223	215	182	12	16	6	9	6	14	19	6	11	6
Massachusetts	83	21	47	58	49	12	4	11	9	10	14	5	11	9	10
Michigan	395	478	354	451	343	22	19	22	21	27	29	20	22	25	28
Minnesota	151	138	178	165	160	20	12	16	13	17	20	12	21	13	22
Mississippi	65	98	71	74	87	10	9	15	11	17	10	13	19	11	24
Missouri	278	315	333	238	240	16	18	22	22	19	20	22	25	23	23
Montana	29	32	23	14	25	6	11	9	6	5	6	13	12	7	6
Nebraska	32	40	40	53	54	1	5	4	4	3	1	6	4	4	4
Nevada	233	193	153	118	129	5	8	6	7	2	6	9	6	7	2
New Hampshire	67	37	81	74	109	4	4	6	6	6	4	4	6	8	6
New Jersey	278	260	237	225	212	7	17	6	10	7	7	17	6	10	7
New Mexico	45	72	56	65	37	3	2	1	1	0	4	3	2	1	0
New York	292	325	322	326	314	25	15	32	26	22	31	23	37	28	25
North Carolina	220	190	198	223	187	22	18	21	30	20	25	20	25	34	29
North Dakota	22	16	13	25	15	2	3	2	2	1	3	3	3	4	1
Ohio	291	242	197	228	232	10	9	12	17	19	13	10	15	18	19
Oklahoma	77	117	133	105	92	11	9	9	11	12	12	11	9	12	16
Oregon	133	106	108	120	95	15	8	15	16	13	18	8	19	20	16
Pennsylvania	95	117	119	122	125	8	7	17	10	10	10	7	18	10	10
Rhode Island	28	36	18	33	38	2	1	2	3	3	2	1	2	5	3
South Carolina	148	115	125	165	120	23	17	22	25	16	27	20	30	28	18
South Dakota	22	20	29	18	8	2	1	0	1	1	2	1	0	1	1
Tennessee	46	154	119	166	130	6	26	14	9	16	7	31	16	11	19
Texas	164	160	215	228	210	52	24	53	39	42	65	28	61	46	51
Utah	177	170	77	156	156	15	3	8	10	4	18	4	8	10	4
Vermont	3	7	10	7	13	3	1	0	4	2	3	1	0	4	0
Virginia	160	176	222	182	184	19	10	24	17	19	22	13	27	20	21
Washington	156	131	169	144	114	31	21	29	20	28	37	25	30	22	31
West Virginia	27	18	20	18	25	4	6	4	6	3	8	7	4	8	3
Wisconsin	231	225	211	205	167	14	18	24	15	16	16	20	28	15	18
Wyoming	21	9	11	12	24	4	1	2	1	2	6	0	2	1	3
Guam	7	0	7	2	5	0	0	0	0	0	0	0	0	0	0
Puerto Rico	3	2	0	9	13	3	2	0	3	0	5	3	0	3	0
Virgin Islands	0	4	3	5	5	0	0	3	0	0	0	0	3	0	2
Am. Samoa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N. Marianas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Offshore\*  
 Atlantic Ocean ..... 6 ..... 2 ..... 12 ..... 2 ..... 1 ..... 2 ..... 3 ..... 1  
 Gulf of Mexico ..... 1 ..... 1 ..... 0 ..... 0 ..... 1 ..... 0 ..... 0 ..... 3 ..... 0  
 Pacific Ocean ..... 5 ..... 2 ..... 13 ..... 1 ..... 2 ..... 0 ..... 1 ..... 2 ..... 0

\*1997 was the first year statistics were compiled for accidents that occurred three or more miles offshore in the Atlantic Ocean and Pacific Ocean and nine miles offshore in the Gulf of Mexico.

## FIVE YEAR SUMMARY OF BOATING ACCIDENTS

1999 TYPE OF ACCIDENT	TOTAL	FATALITIES	INJURIES	PROPERTY DAMAGE
<b>TOTAL</b>	<b>7,931</b>	<b>734</b>	<b>4,315</b>	<b>\$28,890,185</b>
Grounding	507	13	190	\$2,974,355
Capsizing	549	223	269	\$1,571,236
Swamping/Flooding	460	43	91	\$1,808,487
Sinking	220	29	53	\$1,631,420
Fire or Explosion of Fuel	222	2	125	\$2,804,796
Other Fire or Explosion	141	2	18	\$2,782,633
Collision with Another Vessel	2,729	93	1,406	\$8,411,006
Collision with Fixed Object	881	44	460	\$4,902,059
Collision with Floating Object	172	5	63	\$516,931
Falls Overboard	624	200	439	\$247,933
Falls Within Boat	352	3	362	\$35,181
Struck by Boat	132	5	112	\$115,699
Struck by Motor/Propeller	99	9	98	\$9,253
Struck Submerged Object	161	6	42	\$621,997
Skier Mishap	450	14	444	\$20,301
Other Casualty; Unknown	232	43	143	\$436,898
<b>1998 TYPE OF ACCIDENT</b>	<b>TOTAL</b>	<b>FATALITIES</b>	<b>INJURIES</b>	<b>PROPERTY DAMAGE</b>
<b>TOTAL</b>	<b>8,061</b>	<b>815</b>	<b>4,612</b>	<b>\$31,027,432</b>
Grounding	472	11	251	\$2,540,774
Capsizing	569	243	269	\$1,239,643
Swamping/Flooding	439	60	80	\$1,777,874
Sinking	243	20	22	\$2,524,419
Fire or Explosion of Fuel	202	4	90	\$3,878,520
Other Fire or Explosion	110	1	19	\$3,660,569
Collision with Another Vessel	2,837	112	1,540	\$8,207,209
Collision with Fixed Object	833	60	508	\$4,584,977
Collision with Floating Object	172	11	77	\$572,357
Falls Overboard	662	234	455	\$332,558
Falls Within Boat	343	7	345	\$69,776
Struck by Boat	142	7	123	\$114,728
Struck by Motor/Propeller	101	1	98	\$32,114
Struck Submerged Object	165	4	37	\$889,784
Skier Mishap	497	17	496	\$5,155
Other Casualty; Unknown	274	23	202	\$596,976
<b>1997 TYPE OF ACCIDENT</b>	<b>TOTAL</b>	<b>FATALITIES</b>	<b>INJURIES</b>	<b>PROPERTY DAMAGE</b>
<b>TOTAL</b>	<b>8,047</b>	<b>821</b>	<b>4,555</b>	<b>\$29,003,707</b>
Grounding	383	15	217	\$1,295,354
Capsizing	496	245	226	\$949,662
Swamping/Flooding	323	43	67	\$1,476,229
Sinking	177	23	35	\$746,198
Fire or Explosion of Fuel	160	0	76	\$3,355,236
Other Fire or Explosion	78	2	8	\$3,893,501
Collision with Another Vessel	2,581	80	1,309	\$7,333,307
Collision with Fixed Object	623	56	329	\$2,228,682
Collision with Floating Object	206	14	80	\$868,888
Falls Overboard	669	243	465	\$278,311
Falls Within Boat	319	6	332	\$33,255
Struck by Boat	133	8	123	\$42,220
Struck by Motor or Propeller	123	1	126	\$4,321
Struck Submerged Object	135	6	29	\$763,749
Skier Mishap	445	8	444	\$10,665
Other Casualty; Unknown	1,196	71	689	\$5,724,129

## FIVE YEAR SUMMARY OF BOATING ACCIDENTS

1996 TYPE OF ACCIDENT	TOTAL	FATALITIES	INJURIES	PROPERTY DAMAGE
<b>TOTAL</b>	<b>8,026</b>	<b>709</b>	<b>4,442</b>	<b>\$23,164,623</b>
Grounding	363	10	147	\$1,553,309
Capsizing	471	207	217	\$1,059,708
Swamping/Flooding	295	42	87	\$879,148
Sinking	202	27	29	\$1,010,774
Fire or Explosion of Fuel	190	0	97	\$1,360,368
Other Fire or Explosion	72	3	10	\$1,553,505
Collision with Another Vessel	2,639	77	1,283	\$6,612,180
Collision with Fixed Object	580	32	339	\$1,963,508
Collision with Floating Object	203	14	73	\$550,918
Falls Overboard	648	180	480	\$295,829
Falls Within Boat	316	4	333	\$81,501
Struck by Boat	147	11	125	\$71,443
Struck by Motor/Propeller	119	5	114	\$10,120
Skier Mishap	378	3	372	\$15,576
Struck Submerged Object	110	0	16	\$420,862
Other Casualty; Unknown	1,293	94	720	\$5,725,876

1995 TYPE OF ACCIDENT	TOTAL	FATALITIES	INJURIES	PROPERTY DAMAGE
<b>TOTAL</b>	<b>8,019</b>	<b>829</b>	<b>4,141</b>	<b>\$30,318,659</b>
Grounding	360	5	137	\$1,350,234
Capsizing	520	255	216	\$908,625
Swamping/Flooding	236	51	63	\$547,032
Sinking	210	20	38	\$1,097,335
Fire or Explosion of Fuel	204	1	81	\$12,216,140
Other Fire or Explosion	42	2	12	\$968,470
Collision with Another Vessel	2,687	86	1,255	\$6,879,951
Collision with Fixed Object	584	59	281	\$1,764,552
Collision with Floating Object	201	5	68	\$472,660
Falls Overboard	660	215	455	\$135,593
Falls Within Boat	219	4	224	\$49,516
Struck by Boat	185	5	142	\$107,737
Struck by Motor/Propeller	117	2	109	\$19,600
Skier Mishap	346	10	328	\$9,577
Struck Submerged Object	100	2	12	\$373,891
Other Casualty, Unknown	1,345	107	720	\$3,417,747

1999	TOTAL	FATALITIES	INJURIES	PROPERTY DAMAGE
	7,931	734	4,315	\$28,890,185

1998	TOTAL	FATALITIES	INJURIES	PROPERTY DAMAGE
	8,061	815	4,612	\$31,027,432

1997	TOTAL	FATALITIES	INJURIES	PROPERTY DAMAGE
	8,047	821	4,555	\$29,003,707

1996	TOTAL	FATALITIES	INJURIES	PROPERTY DAMAGE
	8,026	709	4,442	\$23,164,623

1995	TOTAL	FATALITIES	INJURIES	PROPERTY DAMAGE
	8,019	829	4,141	\$30,318,659

## ACCIDENT DATA BY STATE - 1999

	NUMBER OF ACCIDENTS			NO. OF PERSONS		PROP. DAMAGE	
<small>*These accidents fall into one category only, with fatal being the highest priority, followed by non-fatal injury, followed by property damage. For example, if two vessels are in an accident resulting in a fatality and a non-fatal injury, the accident is counted as a fatal accident involving two vessels. If two vessels are in an accident resulting in a non-fatal injury and property damage, the accident is counted as a non-fatal injury accident involving two vessels.</small>							
	TOTAL	FATAL	NON-FATAL INJURY	PROPERTY DAMAGE	KILLED	INJURED	PROPERTY DAMAGE
<b>TOTALS</b>	<b>7,931</b>	<b>639</b>	<b>3,275</b>	<b>4,017</b>	<b>734</b>	<b>4,315</b>	<b>\$28,890,185</b>
Alabama	118	17	61	40	17	85	\$849,671
Alaska	77	21	14	42	26	22	\$464,303
Arizona	302	7	124	171	9	145	\$601,087
Arkansas	91	14	29	48	15	48	\$194,801
California	894	36	365	493	42	482	\$2,621,707
Colorado	85	9	36	40	11	57	\$96,285
Connecticut	72	5	22	45	5	32	\$517,594
Delaware	22	3	13	6	3	21	\$103,400
District of Columbia	16	0	4	12	0	4	\$37,088
Florida	1,299	52	450	797	58	560	\$7,323,743
Georgia	195	16	127	52	16	151	\$243,258
Hawaii	15	0	6	9	0	8	\$118,227
Idaho	68	12	24	32	13	38	\$147,294
Illinois	159	13	59	87	13	76	\$584,004
Indiana	150	4	74	72	4	90	\$242,313
Iowa	86	6	44	36	6	68	\$157,658
Kansas	50	5	14	31	5	21	\$60,250
Kentucky	75	14	32	29	20	43	\$249,250
Louisiana	178	30	84	64	35	128	\$341,632
Maine	55	6	22	27	7	26	\$135,291
Maryland	182	6	69	107	6	91	\$1,201,478
Massachusetts	49	10	12	27	10	30	\$444,682
Michigan	343	27	177	139	28	215	\$591,400
Minnesota	160	17	82	61	22	94	\$330,006
Mississippi	87	17	42	28	24	55	\$217,026
Missouri	240	19	86	135	23	134	\$1,385,462
Montana	25	5	10	10	6	18	\$78,410
Nebraska	54	3	23	28	4	33	\$120,500
Nevada	129	2	47	80	2	48	\$357,277
New Hampshire	109	6	43	60	6	57	\$340,399
New Jersey	212	7	80	125	7	103	\$542,775
New Mexico	37	0	17	20	0	22	\$64,531
New York	314	22	148	144	25	193	\$1,052,816
North Carolina	187	20	90	77	29	126	\$645,324
North Dakota	15	1	6	8	1	6	\$28,605
Ohio	232	19	81	132	19	112	\$755,767
Oklahoma	92	12	47	33	16	69	\$327,995
Oregon	95	13	32	50	16	46	\$338,161
Pennsylvania	125	10	72	43	10	82	\$375,690
Rhode Island	38	3	10	25	3	16	\$121,264
South Carolina	120	16	36	68	18	52	\$611,460
South Dakota	8	1	4	3	1	4	\$52,100
Tennessee	130	16	58	56	19	77	\$333,056
Texas	210	42	77	91	51	101	\$721,383
Utah	156	4	68	84	4	100	\$232,564
Vermont	13	2	5	6	2	5	\$90,053
Virginia	184	19	62	103	21	83	\$1,006,299
Washington	114	28	45	41	31	56	\$116,502
West Virginia	25	3	11	11	3	21	\$85,754
Wisconsin	167	16	94	57	18	117	\$516,546
Wyoming	24	2	10	12	3	13	\$33,616
Guam	5	0	4	1	0	5	\$6,002
Puerto Rico	13	0	9	4	0	10	\$256,293
American Samoa	0	0	0	0	0	0	0
N. Marianas	0	0	0	0	0	0	0
Virgin Islands	5	0	2	3	0	2	\$33,861
Offshore*							
Atlantic Ocean	12	1	5	6	1	5	\$131,000
Gulf of Mexico	0	0	0	0	0	0	0
Pacific Ocean	13	0	7	6	0	9	\$255,350

\*1997 was the first year statistics were compiled for accidents that occurred three or more miles offshore in the Atlantic Ocean and Pacific Ocean and nine miles offshore in the Gulf of Mexico.

## TYPES OF ACCIDENTS BY STATE - 1999

	NUMBER OF ACCIDENTS																VICTIMS						
	TOTAL ACCIDENTS*	CAPSIZING	COLLISION WITH FIXED OBJECT	COLLISION WITH FLOATING OBJECT	COLLISION WITH ANOTHER VESSEL	FALLS WITHIN BOAT	FALLS OVERBOARD	FUEL	FIRE/EXPLOSION	FIRE/EXPL. OTHER	FLOODING <sup>1</sup>	GROUNDING	OTHER	SINKING	SKIER MISHAP	STRUCK BY BOAT	STRUCK BY MOTOR AND/OR PROPELLER	MERGED OBJECT	STRUCK SUB-	UNKNOWN	DROWNING	OTHER DEATHS	INJURIES
	vessels involved																						
<b>TOTALS</b>	<b>7,931</b>	<b>549</b>	<b>881</b>	<b>172</b>	<b>2,729</b>	<b>352</b>	<b>624</b>	<b>222</b>	<b>141</b>	<b>460</b>	<b>507</b>	<b>197</b>	<b>220</b>	<b>450</b>	<b>132</b>	<b>99</b>	<b>161</b>	<b>35</b>	<b>517</b>	<b>217</b>	<b>4,315</b>		
Alabama	118	6	26	7	39	0	19	4	4	0	2	2	6	2	0	1	0	0	10	7	85		
Alaska	77	10	2	3	8	6	10	4	5	7	10	8	1	0	1	0	2	0	22	4	22		
Arizona	302	11	16	10	136	12	16	8	1	20	17	7	10	22	12	3	0	1	2	7	145		
Arkansas	91	7	13	5	32	0	10	2	1	3	7	0	5	3	1	2	0	0	14	1	48		
California	894	67	28	8	330	26	47	18	23	103	101	25	9	70	8	9	20	2	26	16	482		
Colorado	85	16	3	2	32	2	7	1	0	2	8	2	2	6	2	0	0	0	11	0	57		
Connecticut	72	8	4	4	20	2	6	1	1	3	6	0	4	1	5	1	6	0	5	0	32		
Delaware	22	3	5	0	3	2	2	0	0	2	1	1	0	0	1	0	2	0	2	1	21		
District of Columbia	16	1	4	0	5	0	0	1	1	0	0	1	1	0	0	0	2	0	0	0	4		
Florida	1,299	43	274	26	409	108	61	36	30	98	96	21	18	31	8	5	28	7	35	23	560		
Georgia	195	10	16	7	53	7	19	3	0	3	10	12	3	23	8	16	1	4	8	8	151		
Hawaii	15	4	0	0	5	1	0	0	0	1	4	0	0	0	0	0	0	0	0	0	8		
Idaho	68	11	12	2	13	1	7	1	0	7	1	1	1	8	2	0	1	0	12	1	38		
Illinois	159	11	9	4	67	7	15	3	1	10	4	1	1	8	1	3	14	0	10	3	76		
Indiana	150	10	9	5	53	5	22	3	0	2	1	2	17	19	0	0	1	1	4	0	90		
Iowa	86	2	1	3	31	4	6	2	0	6	6	4	0	9	6	0	4	2	4	2	68		
Kansas	50	10	1	1	15	1	2	0	1	8	2	0	3	2	1	0	2	1	4	1	21		
Kentucky	75	4	4	4	31	1	7	5	0	1	5	1	3	6	2	1	0	0	8	12	43		
Louisiana	178	12	37	2	56	1	20	8	1	1	5	4	8	1	1	9	4	19	16	128			
Maine	55	8	6	0	16	2	6	2	1	2	2	3	1	5	0	0	1	0	6	1	26		
Maryland	182	10	26	3	72	5	17	4	9	3	7	9	5	2	4	3	3	0	5	1	91		
Massachusetts	49	4	1	1	27	2	6	3	0	0	1	0	1	0	3	0	0	0	7	3	30		
Michigan	343	22	35	4	116	16	33	7	6	2	16	17	14	32	1	15	0	7	24	4	215		
Minnesota	160	13	10	3	52	8	18	10	5	3	4	6	3	23	1	1	0	0	17	5	94		
Mississippi	87	9	12	1	18	3	12	2	1	4	4	2	4	9	3	0	3	0	16	8	55		
Missouri	240	11	26	9	94	13	13	8	7	19	21	2	0	4	2	5	6	0	13	10	134		
Montana	25	7	3	2	6	0	1	1	0	0	1	0	2	1	0	1	0	0	5	1	18		
Nebraska	54	5	4	1	22	2	1	2	1	5	2	1	2	4	2	0	0	0	4	0	33		
Nevada	129	5	7	1	53	2	6	4	2	14	12	1	7	11	4	0	0	0	1	1	48		
New Hampshire	109	8	22	0	30	6	13	1	3	0	6	3	3	8	3	0	2	1	4	2	57		
New Jersey	212	15	27	1	77	18	17	4	9	19	10	2	0	6	0	1	6	0	5	2	103		
New Mexico	37	0	4	0	17	0	3	2	1	3	0	0	2	3	1	1	0	0	0	0	22		
New York	314	20	23	8	118	21	36	14	2	10	21	4	11	12	3	3	8	0	16	9	193		
North Carolina	187	18	23	10	58	3	23	5	0	3	14	8	7	7	5	3	0	0	26	3	126		
North Dakota	15	0	4	0	8	0	2	1	0	0	0	0	0	0	0	0	0	0	1	0	6		
Ohio	232	11	24	2	68	12	21	5	5	26	16	4	7	11	5	1	13	1	14	5	112		
Oklahoma	92	11	5	2	33	1	5	4	0	0	7	2	10	8	3	1	0	0	10	6	69		
Oregon	95	10	18	1	36	1	1	1	0	12	10	1	0	4	0	0	0	0	13	3	46		
Pennsylvania	125	14	16	2	29	6	17	6	0	7	7	2	3	10	2	4	0	0	6	4	82		
Rhode Island	38	6	0	1	14	0	3	2	0	4	1	0	1	1	4	1	0	0	2	1	16		
South Carolina	120	10	24	1	49	2	12	2	1	5	8	0	1	3	2	0	0	0	11	7	52		
South Dakota	8	0	0	0	3	0	1	1	0	1	0	0	1	1	0	0	0	0	1	0	4		
Tennessee	130	10	11	7	36	5	10	11	2	8	3	5	7	8	5	1	1	0	11	8	77		
Texas	210	20	21	1	85	4	21	5	2	0	18	3	7	14	0	2	5	2	36	15	101		
Utah	156	6	18	6	66	4	8	1	1	5	12	4	10	7	4	2	1	1	4	0	100		
Vermont	13	1	0	1	4	0	1	0	2	0	1	1	0	1	1	0	0	0	2	0	5		
Virginia	184	11	19	7	62	7	11	3	8	11	9	11	4	4	2	6	9	0	16	5	83		
Washington	114	15	8	0	35	1	10	2	1	0	1	9	8	10	8	2	3	1	27	4	56		
West Virginia	25	3	1	1	9	3	1	1	1	0	0	1	3	0	0	0	1	0	1	2	21		
Wisconsin	167	9	13	1	56	12	17	4	1	8	6	2	3	21	5	2	7	0	14	4	117		
Wyoming	24	1	4	1	13	0	1	1	0	0	0	0	0	2	0	1	0	0	2	1	13		
Guam	5	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5		
Puerto Rico	13	3	0	0	5	1	0	1	0	1	0	0	1	0	0	1	0	0	0	0	10		
Virgin Islands	5	0	2	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2		
Atlantic Ocean	12	1	0	0	1	5	0	0	1	4	0	0	0	0	0	0	0	0	1	0	5		
Pacific Ocean	13	3	0	1	1	1	1	1	0	3	1	1	0	0	0	0	0	0	0	0	9		
Gulf of Mexico	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

\*Type of accident refers only to the first event that occurred. Some accidents involve more than one event. A grounding followed by a sinking is counted only as a grounding even though the sinking may have directly led to a fatality. <sup>1</sup> Includes swamping.



## TYPES OF BOATING ACCIDENTS - 1999

	ACCIDENTS	VESSELS INVOLVED	DROWNING DEATHS	OTHER DEATHS	TOTAL FATALITIES
<b>TOTALS</b>	<b>7,931</b>	<b>11,190</b>	<b>517</b>	<b>217</b>	<b>734</b>
Capsizing	549	567	204	19	223
Collision with Fixed Object	881	1,017	20	24	44
Collision with Floating Object	172	211	4	1	5
Collision with Another Vessel	2,729	5,511	24	69	93
Falls Within Boat	352	375	3	0	3
Falls Overboard	624	653	158	42	200
Fire/Explosion (fuel)	222	225	0	2	2
Fire/Explosion (other than fuel)	141	156	0	2	2
Flooding/Swamping	460	480	40	3	43
Grounding	507	526	5	8	13
Other	197	249	16	19	35
Sinking	220	226	25	4	29
Skier Mishap	450	471	5	9	14
Struck by Boat	132	193	1	4	5
Struck Submerged Object	161	164	5	1	6
Struck by Motor or Propeller	99	123	1	8	9
Unknown	35	43	6	2	8

## TYPES OF ACCIDENTS BY TYPE OF VESSEL - 1999

	NUMBER OF VESSELS INVOLVED IN ACCIDENTS															VICTIMS							
	TOTAL VESSELS INVOLVED	CAPSIZING	FIXED OBJECT COLLISION WITH	FLOATING OBJECT COLLISION WITH	ANOTHER VESSEL COLLISION WITH	FALLS IN BOAT	FALLS OVERBOARD	FIRE OR EXPLOSION (FUEL)	FIRE OR EXPLOSION (OTHER)	FLOODING <sup>1</sup>	GROUNDING	OTHER CASUALTIES <sup>2</sup>	SINKING	SKIER MISHAP	STRUCK BY BOAT OR PROPELLER	STRUCK BY MOTOR OR PROPELLER	STRUCK SUBMERGED OBJECT	UNKNOWN	DROWNINGS	OTHER DEATHS	TOTAL DEATHS	INJURIES	
<b>TOTALS</b>	<b>11,190</b>	<b>567</b>	<b>1,017</b>	<b>211</b>	<b>5,511</b>	<b>375</b>	<b>653</b>	<b>225</b>	<b>156</b>	<b>480</b>	<b>526</b>	<b>249</b>	<b>226</b>	<b>471</b>	<b>193</b>	<b>123</b>	<b>164</b>	<b>43</b>	<b>517</b>	<b>217</b>	<b>734</b>	<b>4,315</b>	
Airboat	6	2	0	0	1	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	4
Auxiliary Sail	425	19	55	3	235	7	14	0	16	9	38	15	5	0	6	1	1	1	11	3	14	50	
Cabin motorboat	1,572	26	221	40	647	52	29	69	70	67	155	56	40	16	14	18	46	6	25	21	46	328	
Canoe/Kayak	151	107	10	1	8	0	13	0	0	9	0	2	0	0	0	1	0	0	80	4	84	78	
Houseboat	176	1	21	3	89	1	9	12	7	8	4	7	5	1	4	2	1	1	9	5	14	32	
Inflatable	51	15	5	3	1	8	13	0	1	0	0	2	1	0	1	1	0	0	13	1	14	41	
Jet Boat	24	0	1	0	14	3	1	1	0	0	1	0	1	1	0	0	1	0	0	1	1	10	
Open motorboat	4,357	285	408	94	1,586	124	258	112	47	344	238	95	143	381	53	69	102	18	294	114	408	1,936	
Other	133	12	19	5	64	2	3	1	1	3	2	7	7	2	3	1	1	0	10	0	10	35	
PWC <sup>3</sup>	3,374	40	196	48	2,355	154	261	21	2	9	67	39	7	47	89	22	7	10	15	51	66	1,614	
Pontoon Boat	242	6	24	4	128	4	23	5	1	8	4	6	5	9	7	3	3	2	12	8	20	74	
Rowboat	65	26	0	0	6	2	17	0	0	8	1	1	3	0	1	0	0	0	43	7	50	13	
Sail Only	94	20	7	0	47	2	2	0	2	0	4	4	3	1	1	0	1	0	5	0	5	25	
Unknown	520	8	50	10	330	16	10	4	9	15	12	15	4	13	14	5	0	5	0	2	2	75	

Type of accident refers only to the first event that occurred. Some accidents involve more than one event. A grounding followed by a sinking is counted only as a grounding even though the sinking may have directly led to a fatality. <sup>1</sup> Includes swamping. <sup>2</sup> Includes unknowns. <sup>3</sup> Personal watercraft

## TYPES OF ACCIDENTS BY LENGTH OF VESSEL - 1999

	NUMBER OF VESSELS INVOLVED IN ACCIDENTS																VICTIMS					
	TOTAL VESSELS INVOLVED	CAPSIZING	COLLISION WITH FIXED OBJECT	COLLISION WITH FLOATING OBJECT	COLLISION WITH ANOTHER VESSEL	FALLS IN BOAT	FALLS OVERBOARD	FIRE OR EXPLOSION (FUEL)	FIRE OR EXPLOSION (OTHER)	FLOODING <sup>1</sup>	GROUNDING	OTHER CASUALTIES	SINKING	SKIER MISHAP	STRUCK BY BOAT	STRUCK BY MOTOR OR PROPELLER	STRUCK SUBMERGED OBJECT	UNKNOWN	DROWNINGS	OTHER DEATHS	TOTAL DEATHS	INJURIES
<b>TOTALS</b>	<b>11,190</b>	<b>567</b>	<b>1,017</b>	<b>211</b>	<b>5,511</b>	<b>375</b>	<b>653</b>	<b>225</b>	<b>156</b>	<b>480</b>	<b>526</b>	<b>249</b>	<b>226</b>	<b>471</b>	<b>193</b>	<b>123</b>	<b>164</b>	<b>43</b>	<b>517</b>	<b>217</b>	<b>734</b>	<b>4,315</b>
4 feet	2	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	2	4
5 feet	8	1	0	0	6	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1
6 feet	31	2	2	0	23	0	2	0	0	0	0	1	0	0	1	0	0	0	3	1	4	12
7 feet	95	6	2	0	61	2	8	0	1	0	4	3	1	2	3	2	0	0	8	1	9	53
8 feet	635	18	28	9	426	25	62	4	2	4	8	14	3	5	18	5	2	2	18	11	29	313
9 feet	1,737	19	126	24	1,192	106	122	13	0	7	29	15	8	22	34	9	3	8	9	26	35	822
10 feet	884	33	38	15	600	21	77	4	0	8	25	8	1	16	29	6	3	0	29	10	39	410
11 feet	55	6	3	0	32	2	2	0	0	2	1	2	2	0	3	0	0	0	8	0	8	18
12 feet	162	42	8	3	44	7	29	0	0	12	2	4	4	3	2	0	2	0	49	10	59	62
13 feet	45	13	4	2	13	0	6	0	0	3	2	0	0	1	1	0	0	0	11	1	12	13
14 feet	257	59	16	5	52	6	42	5	0	30	9	2	17	6	2	0	5	1	51	15	66	128
15 feet	249	46	22	5	60	4	22	3	1	33	7	2	17	10	6	5	3	3	40	13	53	141
16 feet	455	56	40	10	160	12	39	8	5	27	20	10	18	26	3	8	12	1	50	14	64	240
17 feet	482	50	49	7	171	9	20	20	3	42	15	9	20	40	4	15	8	0	39	19	58	228
18 feet	621	24	47	16	238	13	25	19	9	39	37	17	25	72	9	14	16	1	23	13	36	296
19 feet	468	12	46	9	184	15	11	17	2	18	41	14	13	58	9	8	10	1	8	7	15	231
20 feet	494	14	41	15	207	15	20	14	6	20	29	13	10	60	8	6	15	1	9	11	20	212
21 feet	316	5	29	7	133	8	10	11	1	18	25	5	9	34	6	5	8	2	10	3	13	128
22 feet	216	11	21	8	93	5	9	9	7	10	11	5	5	14	1	4	2	1	9	4	13	86
23 feet	137	3	12	6	60	4	4	3	3	4	17	4	2	6	0	5	4	0	1	5	6	50
24 feet	231	8	21	4	106	7	14	9	5	6	14	7	5	11	2	5	6	1	7	5	12	90
25 feet	138	3	16	2	66	2	4	2	6	3	16	4	3	3	0	4	4	0	5	0	5	22
26 feet	124	5	12	2	53	5	7	4	5	8	8	4	4	0	1	2	3	1	5	1	6	25
27 feet	113	0	10	2	59	6	4	5	2	3	12	2	3	1	2	0	2	0	6	2	8	31
28 feet	95	5	12	2	35	4	5	2	7	7	4	2	2	2	2	0	4	0	4	2	6	35
29 feet	41	2	4	4	15	2	2	1	0	1	5	1	1	2	0	0	1	0	0	0	0	11
30 feet	98	1	7	0	46	6	3	2	4	3	11	2	5	1	3	0	4	0	2	0	2	19
31 feet	47	2	2	1	22	3	2	5	2	2	1	1	0	0	0	1	3	0	2	0	2	13
32 feet	73	0	8	3	32	1	0	5	3	8	6	3	0	0	0	2	2	0	1	0	1	14
33 feet	37	0	2	1	22	1	1	0	2	1	2	1	1	0	1	0	2	0	0	0	0	5
34 feet	59	0	3	0	29	0	3	3	5	2	6	1	3	0	3	0	1	0	0	1	1	8
35 feet	39	0	3	0	23	0	1	1	3	0	3	2	1	0	1	0	1	0	1	0	1	5
36 feet	62	1	5	2	32	0	1	2	6	1	4	4	2	0	1	1	0	0	1	3	4	10
37 feet	36	1	2	0	19	1	0	0	2	2	5	1	1	0	2	0	0	0	0	0	0	10
38 feet	36	0	4	0	14	1	0	1	2	3	10	0	0	0	1	0	0	0	0	0	0	11
39 feet	23	0	1	1	16	0	2	0	1	0	1	0	0	0	0	0	1	0	0	0	0	4
40 feet	52	0	4	0	24	2	1	2	1	3	6	6	2	1	0	0	0	0	0	0	6	18
41 feet	18	1	1	1	10	1	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	6
42 feet	41	1	7	0	17	1	2	3	3	1	0	2	0	0	0	1	1	2	1	0	1	7
43 feet	22	0	1	0	17	0	0	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0
44 feet	20	0	1	0	10	0	1	1	1	1	3	1	1	0	0	0	0	0	1	0	1	3
45 feet	26	0	3	1	13	0	0	0	4	1	4	0	0	0	0	0	0	0	0	0	0	0
46 to 65 feet	187	1	27	3	102	6	3	3	9	3	6	11	7	0	4	0	2	0	4	2	6	17
More than 65 feet	58	2	8	3	33	0	2	1	0	1	0	5	0	0	2	1	0	0	1	2	3	12
Unknown	2,165	114	319	38	940	72	84	41	43	142	115	59	28	76	29	13	34	18	98	28	126	491

Type of accident refers only to the first event that occurred. Some accidents involve more than one event. A grounding followed by a sinking is counted only as a grounding even though the sinking may have directly led to a fatality. <sup>1</sup> Includes swamping.

## TYPES OF ACCIDENTS BY TYPE OF PROPULSION - 1999



	NUMBER OF VESSELS INVOLVED IN ACCIDENTS																VICTIMS					
	TOTAL VESSELS INVOLVED	CAPSIZING	COLLISION WITH FIXED OBJECT	COLLISION WITH FLOATING OBJECT	COLLISION WITH ANOTHER VESSEL	FALLS IN BOAT	FALLS OVERBOARD	FIRE OR EXPLOSION (FUEL)	FIRE OR EXPLOSION (OTHER)	FLOODING <sup>1</sup>	GROUNDING	CASUALTIES	SINKING	SKIER MISHAP	STRUCK BY BOAT	STRUCK BY MOTOR OR PROPELLER	STRUCK SUBMERGED OBJECT	UNKNOWN	DROWNING	OTHER DEATHS	TOTAL DEATHS	INJURIES
<b>TOTALS</b>	11,190	567	1,017	211	5,511	375	653	225	156	480	526	249	226	471	193	123	164	43	517	217	734	4,315
Air Thrust	83	4	14	0	29	7	6	1	0	5	5	3	2	1	3	1	1	1	0	2	2	53
Manual	214	118	17	4	17	6	29	2	1	10	0	5	4	0	1	0	0	0	109	5	114	100
Propeller	5,902	312	637	135	2,372	162	300	172	123	376	379	141	168	329	69	76	135	16	303	118	421	2,060
Sail	134	20	12	0	75	2	2	0	10	1	10	1	1	0	0	0	0	0	4	3	7	22
Water Jet	3,612	45	223	47	2,457	157	258	29	7	39	87	43	22	64	87	24	13	10	18	57	75	1,682
Unknown	1,245	68	114	25	561	41	58	21	15	49	45	56	29	77	33	22	15	16	83	32	115	398
<b>TYPES OF ACCIDENTS BY TYPE OF PROPELLER DRIVEN ENGINE</b>																						
Inboard	1,742	30	224	30	758	52	44	63	54	68	151	53	34	105	20	26	26	4	27	23	50	507
Inboard/Stern drive	1,270	16	133	32	477	42	26	70	47	50	108	34	28	128	12	21	46	0	20	15	35	465
Outboard	2,712	260	269	72	1,030	65	223	37	18	249	111	47	105	92	34	27	61	12	252	74	326	1,054
Unknown	178	6	11	1	107	3	7	2	4	9	9	7	1	4	3	2	2	0	4	6	10	34

Type of accident refers only to the first event that occurred. Some accidents involve more than one event. A grounding followed by a sinking is counted only as a grounding even though the sinking may have directly led to a fatality. <sup>1</sup> Includes swamping.

## REPORTING OF ALCOHOL INVOLVEMENT

Alcohol involvement in a boating accident includes any accident in which alcoholic beverages are consumed in the boat and the investigating official has determined that the operator was impaired or affected while operating the boat. In most cases, there is not enough data available to provide the level of impairment. Higher accident figures for some States may be an indication of better reporting in those States than a more serious problem of alcohol involvement in boating accidents.

Historically, the reporting of alcohol involvement in recreational boating accidents has been lower than expected. Beginning in 1987 the recommended Boating Accident Report (BAR) form contained a block for indicating the involvement of alcohol. Obviously operators are not motivated to report themselves as having had alcohol before a boating accident occurred. Many BAR's are filed by law enforcement officials, who should not have failed to report the involvement of alcohol.

The table on page 31 shows alcohol involvement reporting for the last five years. These statistics include all victims in reported alcohol-related accidents, where there was evidence or a reasonable likelihood that alcohol was consumed by a boat's occupants.



## ALCOHOL INVOLVEMENT IN BOATING ACCIDENTS 1995 - 1999

Accidents where there was evidence or a reasonable likelihood that alcohol was consumed by a boat's occupants.

	FATALITIES					INJURIES					BOATING ACCIDENTS WITH ALCOHOL INVOLVED				
	1995	1996	1997	1998	1999	1995	1996	1997	1998	1999	1995	1996	1997	1998	1999
<b>TOTAL</b>	<b>171</b>	<b>190</b>	<b>223</b>	<b>217</b>	<b>191</b>	<b>323</b>	<b>428</b>	<b>566</b>	<b>535</b>	<b>476</b>	<b>472</b>	<b>601</b>	<b>698</b>	<b>704</b>	<b>633</b>
Alabama	3	2	5	7	2	6	2	8	4	16	8	5	12	12	12
Alaska	2	4	7	9	3	0	1	5	2	3	1	12	14	10	8
Arizona	1	5	5	6	2	7	9	15	14	5	7	18	23	11	15
Arkansas	5	8	4	2	2	5	6	11	7	11	8	15	13	8	11
California	13	15	9	12	12	23	19	27	21	24	29	32	39	33	40
Colorado	0	2	0	3	3	0	3	0	4	1	1	5	3	8	5
Connecticut	1	0	1	5	1	1	0	5	10	4	3	1	6	9	5
Delaware	0	0	0	0	0	0	0	12	0	0	0	0	5	0	0
Dist. of Columbia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Florida	34	20	32	26	28	104	66	73	58	57	109	77	83	94	85
Georgia	2	6	6	3	2	5	4	8	8	14	9	13	15	14	16
Hawaii	1	0	0	0	0	0	0	0	1	0	1	0	2	2	0
Idaho	3	4	12	4	4	4	9	8	1	4	5	14	14	11	8
Illinois	7	12	2	11	8	13	7	13	55	13	15	19	10	36	21
Indiana	0	2	1	6	0	4	1	8	21	10	9	5	6	14	12
Iowa	2	5	1	4	5	2	8	9	1	11	7	8	5	4	13
Kansas	0	2	3	3	0	0	5	0	4	0	2	7	3	7	2
Kentucky	3	2	6	4	12	3	4	2	11	3	5	4	5	9	6
Louisiana	6	2	2	4	7	5	4	7	13	8	15	8	10	8	13
Maine	0	0	0	0	1	2	1	3	1	0	6	3	3	2	1
Maryland	4	2	0	1	3	2	3	1	6	6	6	9	3	4	14
Massachusetts	1	2	2	2	3	2	2	0	0	5	6	2	2	2	4
Michigan	3	5	3	7	6	2	44	31	33	32	5	36	39	48	39
Minnesota	5	6	8	6	7	3	20	32	32	23	14	31	41	43	26
Mississippi	1	1	5	4	2	1	7	3	3	2	4	5	6	8	4
Missouri	3	10	10	10	13	5	50	54	48	63	13	58	76	67	64
Montana	0	4	3	2	2	0	0	5	1	5	1	4	5	2	3
Nebraska	0	3	0	1	0	1	2	17	3	0	3	5	2	3	1
Nevada	1	2	2	3	1	3	4	4	6	3	9	9	6	10	6
New Hampshire	1	2	1	2	1	1	0	2	0	1	2	2	2	1	3
New Jersey	1	2	1	2	2	1	12	15	11	7	2	15	8	11	7
New Mexico	3	3	2	0	0	1	9	3	4	5	2	8	5	5	3
New York	8	4	11	5	5	14	17	26	31	22	21	24	35	27	30
North Carolina	8	2	2	11	6	10	9	18	20	15	18	14	18	35	22
North Dakota	2	1	1	0	0	0	4	0	0	0	2	2	1	1	0
Ohio	1	2	3	8	6	5	3	22	21	12	5	8	20	19	16
Oklahoma	3	3	2	2	2	4	12	7	7	14	3	9	9	9	10
Oregon	3	1	6	1	2	0	3	4	5	1	6	5	6	6	3
Pennsylvania	5	1	4	3	3	1	4	4	1	6	8	4	11	4	8
Rhode Island	1	0	2	0	2	3	0	2	2	4	2	0	4	2	4
South Carolina	2	5	9	7	5	2	4	19	6	4	7	10	21	15	12
South Dakota	1	0	0	0	0	4	1	0	0	1	2	1	2	1	1
Tennessee	2	1	4	0	1	0	4	5	3	5	2	6	8	6	8
Texas	8	8	14	8	11	8	4	7	8	12	14	15	17	17	18
Utah	1	1	3	2	0	2	1	2	3	5	4	4	4	7	3
Vermont	0	0	0	2	0	0	0	0	1	0	0	0	0	2	1
Virginia	2	3	3	1	3	0	3	5	14	1	5	6	9	8	5
Washington	4	10	7	8	7	4	12	19	13	6	8	17	21	23	14
West Virginia	5	3	2	5	1	7	3	4	1	11	3	3	4	3	4
Wisconsin	8	12	14	5	5	53	41	35	16	20	54	42	37	23	26
Wyoming	0	0	1	0	0	0	1	2	0	0	0	1	2	0	0
Guam	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0
Puerto Rico	1	0	0	0	0	0	0	0	0	1	1	0	0	0	1
Virgin Islands	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0
Am. Samoa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No.Marianas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



## CAUSES OF BOATING ACCIDENTS - 1999

	ACCIDENTS	FATALITIES
<b>TOTALS</b>	<b>7,931</b>	<b>734</b>
<b>LOADING OF PASSENGERS OR GEAR</b>		
Passenger/Skier behavior	333	35
Improper loading	68	23
Overloading	56	28
Improper anchoring	48	3
Sitting on gunwale, transom, bow or seat back	30	10
<b>HULL FAILURE</b>	79	4
<b>MACHINERY</b>		
Machinery Failure	94	7
Electrical System Failure	79	0
Engine Failure	149	9
Fuel System Failure	42	0
Shift Failure	30	0
Steering System Failure	52	8
Throttle Failure	26	1
Ventilation System Failure	12	2
<b>EQUIPMENT</b>		
Equipment Failure	137	8
Anchor	3	0
Auxiliary Equipment Failure	41	5
Bilge Pump	2	0
Boat Plug	3	1
Seat Broke Loose	8	5
<b>OPERATION OF VESSEL</b>		
Alcohol use	337	110
Careless/Reckless Operation	830	36
Drug Use	3	0
Excessive Speed	676	23
Failure to ventilate	15	1
Lack of or improper lights	21	1
No proper Lookout	588	22
Off-Throttle Steering - Jet	42	0
Operator inattention	983	57
Operator inexperience	947	60
Restricted Vision	118	4
Rules of the Road Infraction	93	1
Sharp Turn	86	6
Starting in Gear	2	0
<b>ENVIRONMENT</b>		
Congested Waters	69	0
Dam or Lock	5	4
Hazardous Waters	585	85
Weather	366	76
<b>IGNITION OF SPILLED FUEL OR VAPOR</b>	67	2
<b>OTHER</b>	346	36
<b>UNKNOWN</b>	460	61



### OPERATION AT TIME OF ACCIDENTS - 1999

	VESSELS INVOLVED	FATALITIES
<b>TOTALS</b>	<b>11,190</b>	<b>734</b>
At anchor	381	31
Being towed	47	0
Changing direction	1,034	42
Changing speed	316	6
Cruising	5,425	276
Docking/Leaving dock	780	13
Drifting	810	142
Launching	51	4
Other	380	26
Rowing/paddling	153	75
Sailing	128	10
Tied to Dock/Moored	677	8
Towing another boat	36	0
Unknown	972	101



### ACTIVITY AT TIME OF ACCIDENTS - 1999

	VESSELS INVOLVED	FATALITIES
<b>TOTALS</b>	<b>11,190</b>	<b>734</b>
Diving/Swimming	54	6
Fishing	619	181
Fueling	39	0
Hunting	36	13
Making Repairs	60	12
Other	264	9
Racing	42	2
Skiing/Tubing	661	22
Starting Engine	69	1
Whitewater Sports	66	25
Not Reported	9,280	463



## OPERATOR INFORMATION - 1999

		VESSELS INVOLVED	FATALITIES
<b>TOTALS</b>		<b>11,190</b>	<b>734</b>
<b>AGE OF OPERATOR</b>	Under 12 years	42	6
	12 to 18 years	1,020	38
	19 to 25 years	1,520	75
	26 to 35 years	2,140	139
	36 to 55	3,549	288
	Over 55 years	1,079	139
	Unknown	1,840	49
<b>OPERATOR'S EXPERIENCE</b>	Less than 10	1,265	62
	10 to 100 hours	2,318	152
	Over 100 hours	4,527	239
	Unknown	3,080	281
<b>NUMBER OF PERSONS ON BOARD</b>	None	1,082	5
	One	3,352	208
	Two	2,708	209
	Three	1,070	117
	Four	846	75
	Five	421	27
	Six	314	23
	Seven	157	9
	Eight	96	4
	Nine	55	5
	Ten	36	2
	More than 10	44	9
Unknown	1,009	41	
<b>EDUCATION OF OPERATOR <sup>1</sup></b>	American Red Cross	87	2
	Informal	278	8
	None	5,357	356
	Other	251	3
	State	632	14
	USCG Auxiliary	663	10
	US Power Squadrons	234	3
Unknown	3,688	338	
<b>LIFE JACKETS</b>	Approved, accessible	7,009	329
	Approved, not accessible	1,746	137
	Not approved, accessible	283	24
	Not approved, not accessible	2,152	244
<b>TYPE OF DEATH AND LIFE JACKET STATUS</b>	Carbon Monoxide	Not Worn	9
	Drowning	Worn	64
	Drowning	Not Worn	453
	Hypothermia	Worn	5
	Hypothermia	Not Worn	10
	Other	Worn	12
	Other	Not Worn	30
	Trauma	Worn	55
	Trauma	Not Worn	82
	Unknown	Worn	3
Unknown	Not Worn	11	

<sup>1</sup> Education of operator implies that some education has been received, but not necessarily that a course was successfully completed.



## WEATHER AND WATER CONDITIONS - 1999

		ACCIDENTS	FATALITIES
<b>TOTALS</b>		<b>7,931</b>	<b>734</b>
<b>TYPE OF BODY OF WATER</b>	Ocean/Gulf	494	37
	Great Lakes (not tributaries)	202	13
	Bays, inlets, sounds, harbors,	1,418	88
	Rivers, streams, creeks	2,025	228
	Lakes, ponds, reservoirs, dams, gravel pits	3,509	333
	Other	260	31
	Unknown	23	4
<b>WATER CONDITIONS<sup>1</sup></b>	Calm (waves less than 6")	4,069	321
	Choppy (waves 6" to 2')	2,386	159
	Rough (waves 2' to 6')	817	114
	Very Rough (waves larger than 6')	213	39
	Strong current	1,101	133
	Unknown	446	101
<b>WIND</b>	None	969	78
	Light (0 - 6 mph)	3,724	311
	Moderate (7 - 14 mph)	1,994	130
	Strong (15 - 25 mph)	682	91
	Storm (over 25 mph)	144	34
	Unknown	418	90
<b>VISIBILITY<sup>2</sup></b>	Good - Day	5,703	418
	Fair - Day	264	32
	Poor - Day	87	19
	Good - Night	671	96
	Fair - Night	214	32
	Poor - Night	144	25
	Unknown - Day	665	80
	Unknown - Night	183	32
<b>WATER TEMPERATURE</b>	Below 30 degrees F	5	0
	30 - 39 degrees F	30	13
	40 - 49 degrees F	182	54
	50 - 59 degrees F	495	101
	60 - 69 degrees F	1,329	111
	70 - 79 degrees F	2,440	139
	80 - 89 degrees F	1,450	102
	90 degrees F and above	70	3
	Unknown	1,930	211

<sup>1</sup> A Boating Accident Report may indicate strong current and any one of the other types of water conditions.

<sup>2</sup> Accidents are reported as "dark" when they occur at night even if the visibility is reported "good," "fair," or "poor."



## MISCELLANEOUS DATA - 1999

		ACCIDENTS	FATALITIES
<b>TOTALS</b>		<b>7,931</b>	<b>734</b>
<b>TIME OF DAY</b>	Midnight to 2:30 am	151	38
	2:31 am to 4:30 am	68	13
	4:31 am to 6:30 am	73	6
	6:31 am to 8:30 am	169	25
	8:31 am to 10:30 am	395	40
	10:31 am to 12:30 pm	813	64
	12:31 pm to 2:30 pm	1,286	89
	2:31 pm to 4:30 pm	1,681	91
	4:31 pm to 6:30 pm	1,416	114
	6:31 pm to 8:30 pm	756	63
	8:31 pm to 10:30 pm	346	55
	10:31 pm to midnight	169	17
	Unknown	608	119
<b>MONTH OF YEAR</b>	January	143	23
	February	156	25
	March	222	29
	April	433	72
	May	1,096	103
	June	1,206	100
	July	2,098	139
	August	1,272	89
	September	697	54
	October	333	55
	November	154	29
	December	109	15
	Not reported	12	1
<b>DAY OF WEEK</b>	Sunday	2,303	178
	Monday	844	90
	Tuesday	509	62
	Wednesday	564	63
	Thursday	550	63
	Friday	805	90
	Saturday	2,345	187
	Not reported	11	1



## VESSEL INFORMATION - 1999

		VESSELS INVOLVED	FATALITIES
<b>TOTALS</b>		<b>11,190</b>	<b>734</b>
<b>HULL MATERIAL</b>	Aluminum	1,008	215
	Fiberglass	8,757	389
	Other	14	6
	Rubber, vinyl, canvas	91	31
	Steel	132	3
	Unknown	980	73
	Wood	208	17
<b>SPEED</b>	Not moving	1,339	64
	Under 10 mph	1,724	115
	10 to 20 mph	1,399	33
	21 to 40 mph	1,165	33
	Over 40 mph	163	14
	Not Reported	5,400	475
<b>HORSEPOWER</b>	Unknown	3,895	241
	No engine	348	121
	10 hp or less	204	53
	11-25 hp	224	49
	26-75 hp	1,306	87
	Over 75 hp	5,213	183
<b>YEAR BUILT</b>	1999	970	28
	1998	907	45
	1996 - 1997	1,697	53
	1994 - 1995	1,140	37
	1991 - 1993	711	31
	1986 - 1990	1,356	90
	Prior to 1986	2,437	200
	Unknown	1,972	250
<b>LENGTH</b>	Less than 16 feet	4,160	318
	16 feet to less than 26 feet	3,558	242
	26 feet to less than 40 feet	883	31
	40 feet to not more than 65 feet	350	14
	More than 65 feet	74	3
	Unknown	2,165	126

## GLOSSARY

**At anchor** - Held in place in the water by an anchor; includes “moored” to a buoy or anchored vessel and “dragging anchor”.

**Cabin motorboat** - Motorboats with a cabin which can be completely closed by means of doors or hatches. Large motorboats with cabins, even though referred to as yachts, are considered to be cabin motorboats.

**Capsizing** - Overturning of a vessel. The bottom must become uppermost, except in the case of a sailboat, which lies on its side.

**Collision with another vessel** - Any striking together of two or more vessels, regardless of operation at time of the accident, is a collision. (Also includes colliding with the tow of another vessel, regardless of the nature of the tow, i.e., surfboard, ski ropes, skier, tow line, etc.)

**Collision with fixed object** - The striking of any fixed object, above or below the surface of the water.

**Collision with floating object** - Collision with any waterborne object above or below the surface that is free to move with the tide, current, or wind, except another vessel.

**Cruising** - Proceeding normally, unrestricted, with an absence of drastic rudder or engine changes.

**Documented yacht** - A vessel of five or more net tons owned by a citizen of the United States and used exclusively for pleasure with a valid marine document issued by the Coast Guard. Documented vessels are not numbered.

**Drifting** - Underway, but proceeding over the bottom without use of engines, oars or sails; being carried along only by the tide, current, or wind.

**Fallen Skier** - A person who has fallen off their waterskis.

**Fault of operator** - Speeding; overloading; improper loading, not properly seating occupants of boat; no proper lookout; carelessness; failure to heed weather warnings; operating in a congested area; not observing the Rules of the Road; unsafe fueling practices; lack of experience; ignorance of aids to navigation; lack of caution in an unfamiliar area of operation; improper installation or maintenance of hull, machinery or equipment; poor judgment; recklessness; overpowering the boat; panic; proceeding in an unseaworthy craft; operating a motorboat near persons in the water; starting engine with clutch engaged or throttle advanced; irresponsible boat handling such as quick, sharp turns.

**Fiberglass (plastic) hull** - Hulls of fiber reinforced plastic. The laminate consists of two basic components, the reinforcing material (glass filaments) and the plastic or resin in which it is embedded.

**Fire/explosion (fuel)** - Accidental combustion of vessel fuel, liquids, including their vapors, or other substances, such as wood or coal.

**Fire/explosion (other)** - Accidental burning or explosion of any material on board except vessel fuels or their vapors.

**Flooding** - Filling with water, regardless of method of ingress, but retaining sufficient buoyancy to remain on the surface.

**Fueling** - Any stage of the fueling operation; primarily concerned with introduction of explosive or combustible vapors or liquids on board.

**Grounding** - Running aground of a vessel, striking or pounding on rocks, reefs, or shoals; stranding.

**Improper loading** - Loading, including weight shifting, of the vessel causing instability, limited maneuverability, or dangerously reduced freeboard.

**Improper lookout** - No proper watch; the failure of the operator to perceive danger because no one was serving as lookout, or the person so serving failed in that regard.

**Inboard-outboard** - Also referred to as inboard/outdrive. Regarded as inboard because the power unit is located inside the boat.

**Maneuvering** - Changing of course, speed, or similar boat handling action during which a high degree of alertness is required or the boat is imperiled because of the operation, i.e. docking, mooring, undocking, etc.

**Motorboat** - Any vessel equipped with propulsion machinery, not more than sixty-five feet in length.

**Motor vessel** - Any vessel equipped with propulsion machinery (other than steam) more than 65 feet long.

**Numbered vessel** - An undocumented vessel numbered by a state with an approved numbering system or by the Coast Guard under Chapter 123 of title 46, U.S.C.

**Open Motorboat** - Craft of open construction specifically built for operating with a motor, including boats canopied or fitted with temporary partial shelters.

**Outboard** - An engine not permanently affixed to the structure of the craft, regardless of the method or location used to mount the engine, e.g., motor wells, “kicker pits”, motor pockets, etc.

**Overloading** - Excessive loading of the vessel causing instability, limited maneuverability, dangerously reduced freeboard, etc.

**Personal Watercraft** - Craft less than 13 feet in length designed to be operated by a person or persons sitting, standing or kneeling on the craft rather than within the confines of a hull.

**Rules of the Road** - Statutory and regulatory rules governing navigation of vessels.

**Sailboat or auxiliary sailboat** - Craft intended to be propelled primarily by sail, regardless of size or type.

**Sinking** - Losing enough buoyancy to settle below the surface of the water.

**Speeding** - Operating at a speed, possibly below the posted limit, above that which a reasonable and prudent person would operate under the circumstances.

**Steel hull** - Hulls of sheet steel or steel alloy, not those with steel ribs and wood, canvas, or plastic hull coverings.

**Struck by boat or propeller** - Striking of a victim who is outside of the boat, but not necessarily a swimmer.

**Swamping** - Filling with water, particularly over the side, but retaining sufficient buoyancy to remain on the surface.

**Towing** - Engaged in towing any vessel or object, other than a person.

**Wood hull** - Hulls of plywood, molded plywood, wood planking, or any other wood fiber in its natural consistency, including those of wooden construction that have been “sheathed” with fiberglass or sheet metal.