

# RECREATIONAL BOATING STATISTICS 2010



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U.S. DEPARTMENT OF HOMELAND SECURITY  
U.S. COAST GUARD  
OFFICE OF AUXILIARY AND BOATING SAFETY



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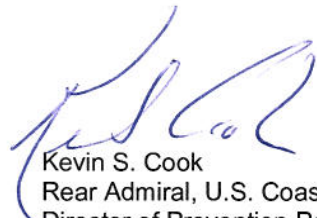
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FOREWORD

Under the authority of Title 46, United States Code, the Prevention Policy Directorate has been delegated the responsibility to collect, analyze, and annually publish statistical information obtained from recreational boat numbering and casualty reporting systems. Within the Directorate, the Office of Auxiliary and Boating Safety, Boating Safety Division has Recreational Boating Safety Program responsibility.

Recreational Boating Statistics 2010, the 52nd annual report, contains statistics on recreational boating accidents and state vessel registration. This publication is a result of the coordinated effort of the Coast Guard and those states and territories that have Federally-approved boat numbering and casualty reporting systems. These include all states, the District of Columbia, Puerto Rico, Guam, the Virgin Islands, American Samoa, and the Commonwealth of the Northern Mariana Islands.

Recreational Boating Statistics 2010 may be copied and distributed freely in the interest of boating safety. For questions and suggestions regarding content, use the address, telephone number, or email address at the top of this page. For an electronic copy, visit the Boating Safety Division website at [www.uscgboating.org](http://www.uscgboating.org).



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## 2010 EXECUTIVE SUMMARY

- In 2010, the Coast Guard counted 4604 accidents that involved 672 deaths, 3153 injuries and approximately \$35.5 million dollars of damage to property as a result of recreational boating accidents.
  - The fatality rate was 5.4 deaths per 100,000 registered recreational vessels. This rate represents a 6.9% decrease from last year's fatality rate of 5.8 deaths per 100,000 registered recreational vessels.
  - Compared to 2009, the number of accidents decreased 2.66%, the number of deaths decreased 8.70% and the number of injuries decreased 6.10%.
- Almost three-fourths of all fatal boating accident victims drowned, and of those, eighty-eight (88) percent were not reported as wearing a life jacket.
- Only nine percent of deaths occurred on boats where the operator had received boating safety instruction. Only six percent of deaths occurred on vessels where the operator had received boating safety instruction from a NASBLA-approved course provider.
- Eight out of every ten boaters who drowned were using vessels less than 21 feet in length.
- Operator inattention, improper lookout, operator inexperience, excessive speed, and alcohol rank as the top five primary contributing factors in accidents.
- Alcohol use is the leading contributing factor in fatal boating accidents; it was listed as the leading factor in 19% of the deaths.
- Twenty-one children under age thirteen lost their lives while boating in 2010. 42% of the children who died in 2010 died from drowning. 44% of those who drowned were wearing a life jacket even though only half of them were required to do so by state law.
- The most common types of vessels involved in reported accidents were open motorboats (46%), personal watercraft (20%), and cabin motorboats (14%).
- The 12,438,926 recreational vessels registered by the states in 2010 represent a 2.2% decrease from last year when 12,721,541 recreational vessels were registered.



**Table 1 • 2010 EXECUTIVE SUMMARY**

<b>TOP FIVE PRIMARY ACCIDENT TYPES</b>						
Accident Rank	Accident Type	Number of Accidents		Number of Deaths	Number of Injuries	
1	Collision with Recreational Vessel	1088		64	747	
2	Collision with Fixed Object	456		38	332	
3	Flooding/Swamping	448		72	158	
4	Skier Mishap	447		15	471	
5	Capsizing	335		180	199	
<b>VESSEL TYPES WITH THE TOP CASUALTY NUMBERS</b>						
Casualty Rank	Type of Boat	Drownings	Other Deaths	Total Deaths	Total Injuries	Total Casualties
1	Open Motorboat	213	112	325	1644	1969
2	Personal Watercraft	9	29	38	776	814
3	Cabin Motorboat	19	12	31	298	329
4	Canoe/Kayak	128	13	141	96	237
5	Pontoon	25	4	29	121	150
<b>LIFE JACKET WEAR BY TOP FIVE KNOWN CAUSES OF DEATH</b>						
Known Cause of Death Rank	Cause of Death	Number of Deaths	Life Jacket			
			Worn	Not Worn	Unknown if worn	
1	Drowning	484	57	395	32	
2	Trauma	123	49	59	15	
3	Cardiac Arrest	15	8	6	1	
4	Hypothermia	11	5	6	0	
5	Carbon Monoxide Poisoning	6	0	5	1	
<b>TOP TEN KNOWN PRIMARY CONTRIBUTING FACTORS OF ACCIDENTS</b>						
Accident Rank	Contributing Factor	Number of Accidents		Number of Deaths	Number of Injuries	
1	Operator Inattention	759		49	457	
2	Improper Lookout	375		17	266	
3	Operator Inexperience	358		33	265	
4	Excessive Speed	337		18	324	
5	Alcohol Use	330		126	293	
6	Force of Wave/Wake	272		5	252	
7	Hazardous Waters	265		100	156	
8	Machinery Failure	257		10	75	
9	Rules of the Road	211		16	202	
10	Weather	209		41	102	

**Mission and Strategic Plan of the National Recreational Boating Safety Program**

The mission of the National RBS Program is “to ensure the public has a safe, secure, and enjoyable recreational boating experience by implementing programs that minimize the loss of life, personal injury, and property damage while cooperating with environmental and national security efforts”.

The Strategic Plan of the National Recreational Boating Safety Program delineates the Program’s eleven objectives to reduce casualties which include 1) tracking and increasing the number of educated boaters; 2) increasing boating safety messages to target audiences; 3) increasing on-the-water boating instruction; 4) studying and increasing life jacket wear rates; 5) increasing knowledge of and compliance with navigation rules; 6) decreasing boating under the influence; 7) decreasing the number of defective vessels; 8) increasing boater compliance with vessel carriage requirements; 9) increasing the accuracy and reporting rates of reportable accidents; 10) conducting research and development of boating safety initiatives; and 11) measuring the effectiveness of non-profit organization grants. To view the Strategic Plan of the Program, please visit the Office’s website at <http://www.uscgboating.org>.

**Overview of Statistics**

This report contains statistics on registered recreational vessels and boating accidents during calendar year 2010. Data used to compile the recreational boating accident statistics come from three sources:

- Boating Accident Report data forwarded to the Coast Guard by states with an approved casualty reporting system; and
- 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 investigation data, information is collected from the accident reports filed by boat operators; and
- Reports received from news media sources that the Coast Guard did not receive investigative data on by the state. The following table reflects the number of accidents, deaths, injuries, and losses of vessels that were captured in news media sources that met reporting requirements for which the Coast Guard did not receive a report:

<b>Table 2 • NEWS MEDIA ACCIDENTS AND CASUALTIES</b>					
	Accidents	Deaths	Injuries	Losses of vessels	Damages
Nationally	56	11	46	13	\$3,252,430

**Changes to the Publication**

Some of the tables in this edition of the Statistics have changed because of alterations to the content on the Coast Guard’s Boating Accident Report (BAR) form. One of the most dramatic changes lies in the cause categories. “Passenger/skier behavior” and “careless/reckless operation” were removed from the latest BAR form because it was believed that the public would not report a negative behavior about themselves. Since these categories were removed from the Coast Guard form, they will not be reported in the national publication. For those jurisdictions that did not use the Coast Guard form to collect information and still used passenger/skier behavior and careless/reckless operation as a cause, the Coast Guard coded their cause according to the choices on the Coast Guard BAR form. An example of a case where the Coast Guard was able to code one of these causes to one available on the Coast Guard form is as follows: if a jurisdiction had selected “passenger/skier behavior” to describe an accident where an occupant stood up in a canoe which led to the capsizing of the vessel, the Coast Guard coded this cause as “improper loading” instead of “passenger/skier behavior”. An example of a case where the Coast Guard was not able to code one of these causes to a cause available on the Coast Guard form is as follows:



a passenger on a vessel became injured while jumping out of a vessel while it was in motion. In this case, the Coast Guard coded the accident as “other” and captured “passenger/skier behavior” in the “other accident cause” category. “Careless/reckless operation” was likewise coded such that when applicable, it was coded as “Rules of the Road”. In other cases, the cause was coded as “other”.

The second change to the tables is the removal of Table 24, Life Jacket Information. Part of this table was removed because the Coast Guard no longer collects life jacket carriage equipment information in the same manner. The remaining part of this table was removed because the information in it was already presented in another table (Table 34).

The third change to the tables in this edition is the merger of Tables 17 and 18, which address the series of events of accidents. An accident can be coded with up to three standardized fields that describe the order in which events occurred in an accident. Table 17 provided a snapshot of accident types with a casualty count for the latest five years of data whereas Table 18 provided a snapshot of the frequency of events in accidents with a resulting casualty count. Because the Coast Guard considers all events in a regulatory study, the Office decided that it would be important to present this information for public use. Thus, Table 17 now provides the frequency of accident events with a casualty count for the latest five years of data.

The fourth change is the removal of the section on “speed” from Table 13. This section was removed because the Coast Guard no longer collects information about speed on the BAR form.

The final major change was the addition of a table to describe injuries. With the implementation of the latest Coast Guard BAR form, the injury section was reorganized to focus on two fields, the nature of most serious injury and the body part of the most serious injury. Thus, a crosstab table (Table 27 - Nature of Primary Injury Type by Area of Injury ) was created to present the types of injuries by area of injury.

#### **Accident Reporting as Required by Federal Law**

Under federal regulations (33 CFR Part 173; Subpart C – Casualty and Accident Reporting) the operator of any numbered vessel that was not required to be inspected or a vessel that was used for recreational purposes is required to file a BAR when, as a result of an occurrence that involves the vessel or its equipment:

1. A person dies; or
2. A person disappears from the vessel under circumstances that indicate death or injury; or
3. A person is injured and requires medical treatment beyond first aid; or
4. Damage to vessels and other property totals \$2,000 or more; or
5. There is a complete loss of any vessel.

If the above conditions are met, the federal regulations state that the operator or owner must report their accident to a state reporting authority, abbreviated in this publication as “state”. The reporting authority can be either the state where the accident occurred, the state in which the vessel was numbered, or, if the vessel does not have a number, the state where the vessel was principally used. The owner must submit the report if the operator is deceased or unable to make the report.

The regulations also state the acceptable length of time in which the accident report must be submitted to the reporting authority. Boat operators or owners must submit:

1. Accident reports within 48 hours of an occurrence if:
  - a. A person dies within 24 hours of the occurrence; or
  - b. A person requires medical treatment beyond first aid; or
  - c. A person disappears from the vessel.
2. Accident reports within 10 days of an occurrence if there is damage to the vessel/property only.

The minimum reporting requirements are set by Federal regulation, but states are allowed to have more stringent requirements. For example, some states have a lower threshold for reporting damage to vessels and other property.

Federal Regulations (33 CFR 174.121) require accident report data to be forwarded to Coast Guard Headquarters within 30 days of receipt by a state.

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 used for this report is on pages 67-72. This Coast Guard form was approved by the Office of Management and Budget in the summer of 2008. 2009 was the first year that the form was used for data collection on a national basis.

### **Casualty and Accident Reporting Guidelines**

Casualty and accident reporting applies to each "vessel" used by its operator for recreational purposes or vessels that are required to be numbered and are not subject to inspection.

The term "vessel" includes every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on the water. Terms used to describe the various types of watercraft are: airboat, auxiliary sailboat, cabin motorboat, canoe, houseboat, inflatable boat, kayak, open motorboat, personal watercraft, pontoon boat, raft, rowboat, and sailboat. Unmodified inner tubes have not been determined to be "vessels" to date and thus any accident that only involves an unmodified inner tube has not been included in the statistics in the main body of this report.

### **"Reportable" Boating Accidents**

A vessel is considered to be involved in a "boating accident" whenever a death, missing person, personal injury, property damage, or total vessel loss results from the vessel's operation, construction, seaworthiness, equipment, or machinery.

The following are examples of accident types that are used in this report:

- Grounding, capsizing, sinking, or flooding/swamping
- Falls in or overboard a vessel
- Persons ejected from a vessel
- Fire or explosions that occur while underway and while anchored, moored or docked if the fire resulted from the vessel or vessel equipment.
- Water-skiing or other mishap involving a towable device
- Collision with another vessel or object
- Striking a submerged object
- A person struck by a vessel, propeller, propulsion unit, or steering machinery
- Carbon monoxide exposure
- Electrocutation due to stray current related to a vessel
- Casualties while swimming from a vessel that is not anchored, moored or docked.
- Casualties where natural causes served as a contributing factor in the death of an individual but the determined cause of death was drowning.
- Casualties from natural phenomena such as interaction with marine life (i.e. leaping sturgeon causes casualty to person) and interaction with nature (i.e. mountain side falls onto vessel causing casualties).
- Casualties where a person falls off an anchored vessel.

### **“Non-Reportable” Boating Accidents**

Not every occurrence involving a vessel is considered within the scope of the National Recreational Boating Safety Program. The following occurrences involving a vessel may be required to be reported to the state, but for statistical purposes are excluded from this report and are considered “non-reportable” boating accidents:

- A person dies, is injured, or is missing as a result of self-inflicted wounds, alcohol poisoning, gunshot wounds, or the ingestion of drugs, controlled substances or poison.
- A person dies, is injured, or is missing as a result of assault by another person or persons while aboard a vessel.
- A person dies or is injured from natural causes while aboard a vessel.
- A person dies, is injured, or is missing as a result of jumping, diving, or swimming for pleasure from an anchored, moored or docked vessel.
- A person dies, is injured, or is missing as a result of swimming to retrieve an object or a vessel that is adrift from its mooring or dock, having departed from a place of inherent safety, such as the shore or pier.
- Property damage occurs or a person dies, is injured, or is missing while preparing a vessel for launching or retrieving and the vessel is not on the water and capable / ready for its intended use.
- Property damage occurs or a person dies, is injured, or is missing as a result of a fire on shore or a pier that spreads to a vessel or vessels.
- Property damage occurs to a docked or moored vessel or a person dies, is injured, or is missing from such a vessel as a result of storms, or unusual tidal or sea conditions; or when a vessel gets underway in those conditions in an attempt to rescue persons or vessels.
- Property damage occurs to a docked or moored vessel due to lack of maintenance on the vessel or the structure to which it was moored.
- Property damage occurs to a docked or moored vessel due to theft or vandalism.
- Property damage occurs to, a person dies or is injured on, or a person is missing from a non-propelled houseboat or other vessel used primarily as a residence when such a vessel is not underway.
- Casualties that result from falls from or on docked vessels or vessels that are moored to a permanent structure.
- Casualties that result from a person climbing aboard an anchored vessel from the water or swimming near an anchored vessel.
- Fire or explosions on anchored, docked or moored boats where the cause of the fire was not attributed to the vessel or vessel equipment.
- Casualty or damage that results when the vehicle used for trailering the vessel fails.
- Casualties or damage that occur during accidents that only involve unmodified inner tubes.
- Casualties or damage that occur when the only vessel(s) involved are being used solely for governmental, commercial or criminal activity.
- Casualties or damage that occur when the only vessel(s) involved are not numbered and are being used exclusively for racing.
- Casualties or damage that occur when the only vessel(s) involved are foreign vessels and thus not subject to U.S. federal reporting requirements.

<b>Table 3 • Non-Reportable Scenarios with their Casualty Count</b>						
<b>Does not meet Coast Guard Policy</b>	Accidents	Deaths	Injuries	Vessels	Vessels Lost	Damages
Swimming for pleasure from an anchored, moored or docked vessel	14	7	8	14	0	\$0
Unmodified inner tubes	4	2	2	4	0	\$0
Vessels involved are being used solely for governmental, commercial, or criminal activity	203	30	144	216	8	\$1,241,568
Falls from or on a docked vessel or vessel that is moored to a permanent structure	11	8	3	12	0	\$0
Fire or explosion on anchored, docked or moored boats where the cause of the fire was not attributed to the vessel or vessel equipment	4	0	0	6	1	\$280,000
A person dies or is injured from natural causes while aboard a vessel	4	4	0	4	0	\$0
Property damage occurs to a docked or moored vessel due to lack of maintenance on the vessel or the structure to which it is moored	32	0	0	33	6	\$430,167
Property damage occurs to a docked or moored vessel or a person dies, is injured, or is missing from such a vessel as a result of storms, or unusual tidal or sea conditions; or when a vessel gets underway in those conditions in an attempt to rescue person	62	0	1	82	11	\$750,831
Property damage occurs or a person dies, is injured, or is missing while preparing a vessel for launching or retrieving and the vessel is not on the water and capable/ready for its intended use	4	0	3	4	0	\$213,000
A person dies, is injured, or is missing as a result of self-inflicted wounds, alcohol poisoning, gunshot wounds, or the ingestion of drugs, controlled substances or poison	1	1	0	1	0	\$0
<b>Does not meet federal reporting requirements</b>	667	0	43	999	0	\$494,036
<b>Total</b>	1006	52	204	1375	26	\$3,409,602

### **Use of Statistics**

Following are some important points that users of these statistics need to be aware of:

1. An approved casualty reporting system does not include every accident involving a vessel that is being used for recreational purposes. Some accidents are not in the system because they are not required to be reported. Many accidents are not reported because boaters are not aware of the accident reporting regulations or fail to comply with such regulations.

In an attempt to make sure all fatal boating accidents are captured by the casualty reporting system and required data are input into the Boating Accident Report Database (BARD) System, the Coast Guard notifies and provides information from its Marine Information for Safety and Law Enforcement (MISLE) system to state Boating Law Administrators (BLAs) of fatal accidents that occurred in their state. The Coast Guard also sends news media stories to state BLAs on fatal and non-fatal boating accidents that occur in their state to capture accidents that may have been missed.

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.

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

The statistics in this publication are based on accident data submitted by reporting states as of April 25, 2011 with subsequent updates as information is reviewed and standardized. This publication covers only accidents meeting the aforementioned reporting requirements.

# ACCIDENT CAUSES & CONDITIONS



## **Explanation of Accident Causes and Conditions Section**

The following seventeen tables and figures focus on the causes of accidents with a special focus on alcohol use, the operation and activity at the time of accident, weather and water conditions, vessel information, and the time of accidents.

### **Percent of Accidents that are Fatal by Month (Table 4 & Figure 1, Page 17)**

This table provides information about total accidents, fatal accidents, non-fatal accidents, and deaths. The figure focuses on the percent of fatal accidents by month.

As a background note, fatal accidents are accidents that involve at least one death. For example, a fatal accident could be a capsizing that resulted in three deaths. It was an accident that had at least one death.

### **Primary Contributing Factor of Accidents & Casualties (Table 5, Page 18)**

The "contributing factors" of an accident are the causes of the accident. In the Coast Guard's national accident reporting database, there are allowances for up to four causes. This table reflects the first cause listed for all accidents, deaths and injuries nationwide.

For the purposes of displaying information in a simplified manner, the Coast Guard divided the contributing factor categories into five larger categories: operation of vessel, loading of passengers or gear, environment, failure of vessel or vessel equipment, and miscellaneous. These five categories are situated in the leftmost column of the table and have the total number of accidents, deaths, and injuries associated with each category under the category name.

### **Machinery & Equipment Primary Contributing Factor of Accidents & Casualties (Table 6, Page 19)**

This table reflects the number of accidents, deaths, and injuries where machinery or equipment failure was listed as a first cause of the accident. The table also delineates the different types of failure that were listed.

### **Primary Contributing Factor of Accidents (Figure 2, Page 20)**

This figure reflects the first cause of accidents for all accidents nationwide.

### **Primary Contributing Factor of Deaths (Figure 3, Page 21)**

This table reflects the first cause listed for all deaths.

### **Primary Contributing Factor of Injuries (Figure 4, Page 22)**

This table reflects the first cause listed for all injuries.

### **Number of Vessels in Accidents by Vessel Type & Primary Contributing Factor (Table 7, Page 23)**

This table looks at the number of vessels involved in accidents by vessel type and the primary cause of the accident.

### **Alcohol Use as a Contributing Factor in Accidents & Casualties by State 06-10 (Table 8, Page 24)**

This table reflects a tally of all four causes of accidents listed for all national accidents, deaths and injuries.

This table lists accidents where alcohol use by the vessel's occupants was listed as a direct or indirect cause of the accident. There are other cases in the national database where alcohol use is listed as being involved in the accident but it was not determined to be a cause of the accident.

### **Vessel Operation at the Time of Accident (Table 9, Page 25)**

This table focuses on the vessel and victim operation at the time of the accident. The table lists information about the number of vessels involved, the resulting number of deaths and the resulting number of

injuries.

**Vessel Activity at the Time of Accident (Table 10, Page 25)**

This table examines the vessel and victim activity at the time of the accident. The table provides information about the number of vessels involved, the resulting number of deaths, and the resulting number of injuries.

**Weather & Water Conditions (Table 11, Page 26)**

This table documents some of the environmental characteristics of national accidents. It focuses on accidents, deaths and injuries by type of body of water, water conditions, wind level, visibility, and water temperature.

**Time Related Data (Table 12, Page 27)**

These three sections independently examine time-related information for national accidents, deaths and injuries. The top section documents the number of accidents, deaths and injuries that occurred during a time frame. The middle section documents the number of accidents, deaths and injuries that occurred during a given month. Finally, the bottom section documents the number of accidents, deaths and injuries that occurred during a given day of the week.

These sections each examine the national data separately and should not be combined to draw conclusions. For instance, one cannot use them to deduce that the majority of accidents occur from 2:31 pm-4:30 pm in July on the weekends. However, you could deduce that 2:31 pm-4:30 pm was the time frame that accidents occurred during calendar year 2010. Furthermore, the month with the highest number of accidents was July. Finally, the two days of the week with the greatest number of accidents were Saturday and Sunday.

**Vessel Information (Table 13, Page 28)**

This table documents some of the characteristics of vessels involved in accidents nationwide. It provides information about the number of accidents, deaths and injuries by horsepower, year built, length, and hull material.

**Rental Status of Vessels Involved in Accidents (Table 14, Page 29)**

This table examines whether a vessel involved in an accident was rented. It also provides information on whether deaths and injuries occurred on rented vessels.

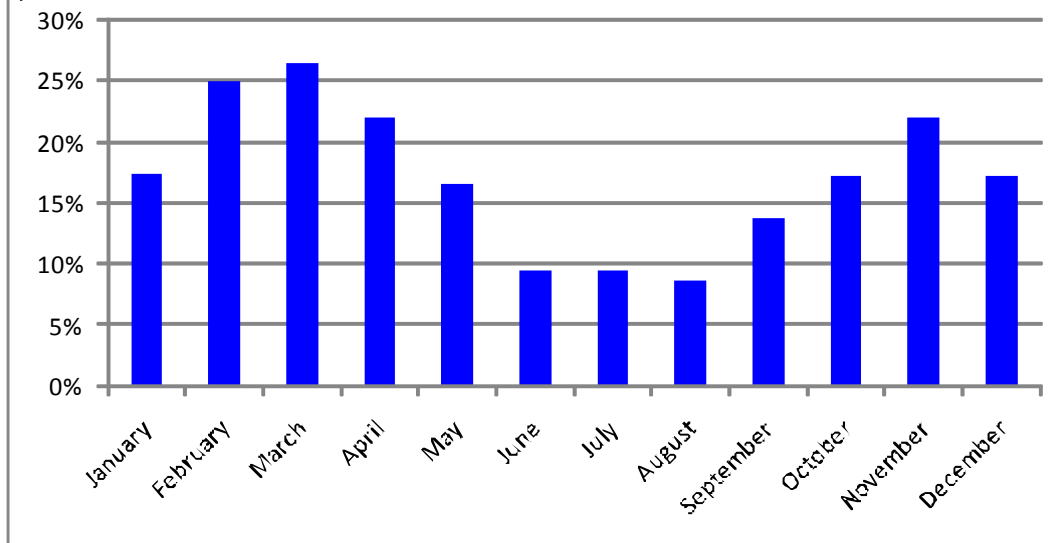
**Number & Percentage of Deaths by Vessel Length (Figure 5 & Table 15, Page 30)**

This table focuses on the number of deaths by vessel length. Deaths are categorized into drownings and non-drownings. The table also provides a percentage of all deaths that were caused by drowning.





**Figure 1 PERCENT OF ACCIDENTS THAT ARE FATAL BY MONTH 2010**




**Table 4 - PERCENT OF ACCIDENTS THAT ARE FATAL BY MONTH 2010**

Month	Fatal Accidents	Non-Fatal Accidents	Total Accidents	Accidents Resulting in Deaths	Total Deaths
January	13	62	75	17%	14
February	15	45	60	25%	16
March	41	114	155	26%	46
April	56	198	254	22%	67
May	108	544	652	17%	121
June	63	608	671	9%	70
July	108	1032	1140	9%	118
August	65	691	756	9%	71
September	56	353	409	14%	58
October	42	202	244	17%	46
November	26	92	118	22%	30
December	12	58	70	17%	15
Total	605	3999	4604	13%	672



**Table 5 - PRIMARY CONTRIBUTING FACTOR OF ACCIDENTS & CASUALTIES 2010**

		Accidents	Deaths	Injuries
<b>Operation of Vessel</b> <b>2,583 Accidents</b> <b>287 Deaths</b> <b>1,978 Injuries</b>	Alcohol Use	330	126	293
	Drug Use	6	3	3
	Excessive Speed	337	18	324
	Failure to Ventilate	38	5	30
	Improper Lookout	375	17	266
	Inadequate On-board Navigation Lights	23	3	18
	Operator Inattention	759	49	457
	Operator Inexperience	358	33	265
	Restricted Vision	62	7	39
	Rules of the Road Infraction	211	16	202
	Sharp Turn	81	9	80
Starting in Gear	3	1	1	
<b>Loading of Passengers or Gear</b> <b>179 Accidents</b> <b>80 Deaths</b> <b>85 Injuries</b>	Improper Anchoring	27	4	1
	Improper Loading/Weight Distribution	58	30	31
	Overloading	51	27	24
	People on Gunwale, Bow or Transom	43	19	29
<b>Failure of Boat or Boat Equipment</b> <b>366 Accidents</b> <b>20 Deaths</b> <b>108 Injuries</b>	Equipment Failure	60	7	20
	Hull Failure	49	3	13
	Machinery Failure	257	10	75
<b>Environment</b> <b>826 Accidents</b> <b>157 Deaths</b> <b>548 Injuries</b>	Congested Waters	36	3	23
	Dam/Lock	11	6	6
	Force of Wave/Wake	272	5	252
	Hazardous Waters	265	100	156
	Missing or Inadequate Navigation Aids	33	2	9
	Weather	209	41	102
<b>Miscellaneous</b> <b>650 Accidents</b> <b>128 Deaths</b> <b>434 Injuries</b>	Ignition of Spilled Fuel or Vapor	59	1	38
	Carbon Monoxide	2	0	7
	Sudden Medical Condition	17	12	7
	Other	414	51	325
	Unknown	158	64	57
<b>All Categories Combined</b>		<b>4604</b>	<b>672</b>	<b>3153</b>

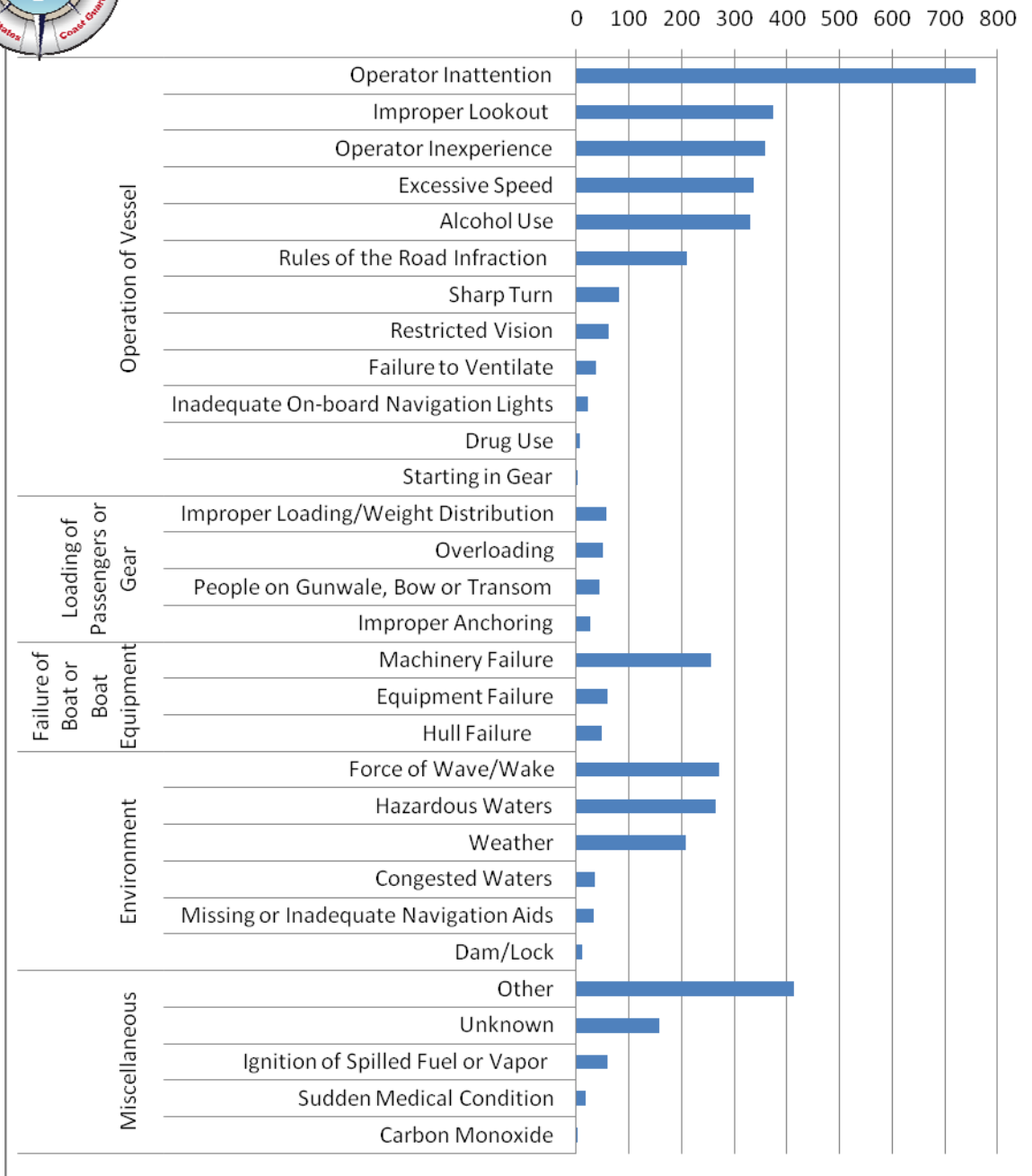


**Table 6 • MACHINERY & EQUIPMENT PRIMARY CONTRIBUTING FACTOR OF ACCIDENTS & CASUALTIES 2010**

		Accidents	Deaths	Injuries
Machinery Failure	Electrical System Failure	40	1	8
	Engine Failure	125	6	22
	Exhaust System Failure	3	2	0
	Fuel System Failure	15	0	11
	Shift Failure	23	0	3
	Steering System Failure	25	1	24
	Throttle Failure	12	0	2
	Ventilation System Failure	3	0	4
	Not Specified	11	0	1
Equipment Failure	Auxiliary Equipment Failure	11	1	3
	Fire Extinguisher Failure	0	0	0
	Sail Dismasting	7	0	1
	Seat Broke Loose	11	4	6
	Other	19	2	6
	Not specified	12	0	4

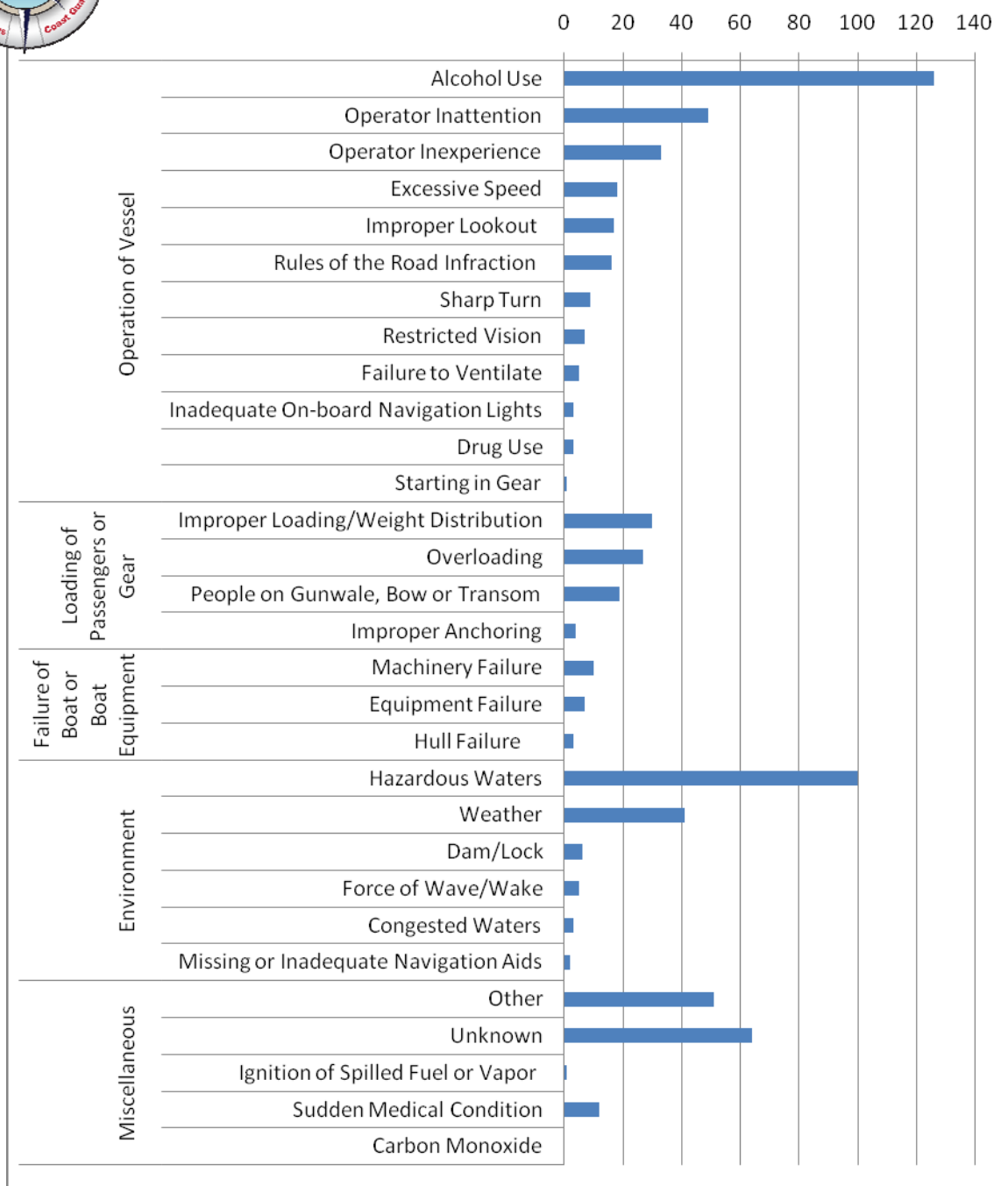


Figure 2 PRIMARY CONTRIBUTING FACTOR OF ACCIDENTS 2010





**Figure 3 PRIMARY CONTRIBUTING FACTOR OF DEATHS 2010**





**Figure 4 PRIMARY CONTRIBUTING FACTOR OF INJURIES 2010**

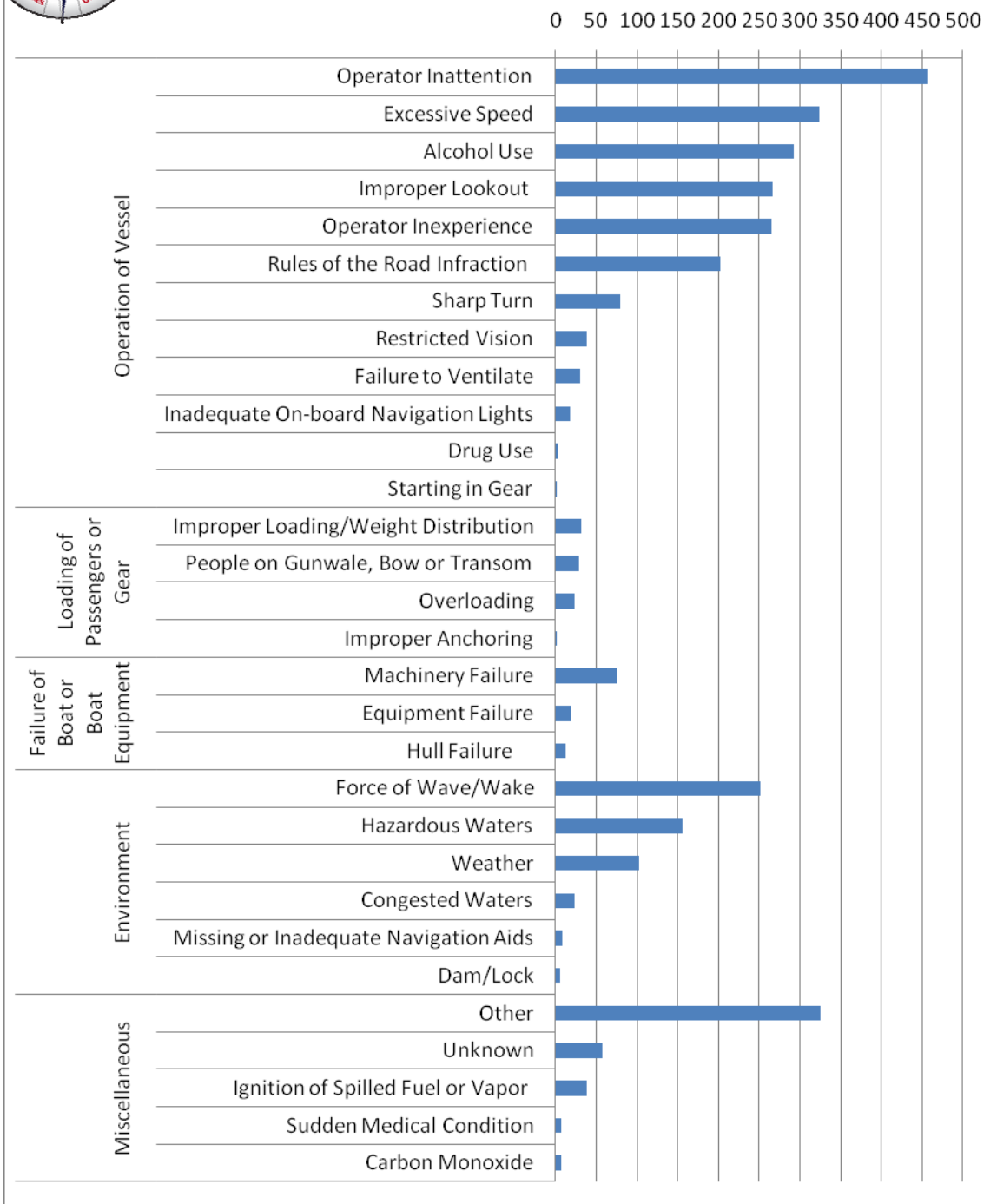


Table 7 - NUMBER OF VESSELS IN ACCIDENTS BY VESSEL TYPE & PRIMARY CONTRIBUTING FACTOR 2010



All Vessels	6062	428	2	54	11	8	62	488	38	301	280	50	67	31	58	587	48	313	34	1120	515	53	43	87	391	86	4	17	281	422	183
Airboat	40	1	0	1	0	0	0	10	0	0	0	0	0	0	0	14	0	2	0	7	3	0	1	0	0	1	0	0	0	0	0
Auxiliary Sailboat	286	8	0	2	0	0	8	10	3	3	13	0	3	4	0	38	0	29	1	70	25	0	0	2	11	1	0	0	35	7	13
Cabin Motorboat	869	53	2	7	0	1	11	48	12	22	18	10	26	4	1	104	5	105	7	201	60	2	2	11	26	2	0	1	47	47	34
Canoe	120	22	0	0	0	1	0	3	0	3	22	0	0	0	15	2	0	0	0	6	15	5	2	0	2	0	0	1	10	3	8
Houseboat	87	1	0	0	0	0	0	3	3	2	1	0	1	0	1	2	0	18	0	23	8	0	0	0	3	0	0	0	12	4	5
Inflatable	46	2	0	0	1	1	0	1	0	0	16	0	1	0	2	1	0	0	0	4	10	1	1	0	0	0	0	0	1	2	2
Kayak	92	7	0	0	2	0	0	1	0	3	41	3	0	0	0	1	0	0	0	4	8	1	0	0	0	0	0	2	8	1	10
Open Motorboat	2793	224	0	31	7	3	34	213	17	179	126	29	27	20	25	255	37	129	24	472	140	36	27	56	142	45	3	10	120	299	63
Personal Watercraft	1221	61	0	10	1	2	1	175	3	68	19	3	7	0	1	126	0	13	1	238	213	2	0	6	186	33	1	3	11	28	9
Pontoon Boat	224	33	0	1	0	0	2	9	0	8	5	4	2	1	1	25	4	10	0	46	15	2	7	5	9	1	0	0	6	25	3
Rowboat	58	7	0	0	0	0	1	1	0	0	6	0	0	0	11	3	0	1	0	7	3	2	2	1	2	0	0	0	3	1	7
Sailboat Only	59	2	0	0	0	0	3	3	0	3	4	0	0	1	0	3	0	0	1	13	3	0	0	1	1	1	0	0	15	1	4
Sailboat (unknown)	5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	1
Other	62	5	0	1	0	0	1	2	0	3	2	1	0	0	1	7	1	2	0	15	7	1	0	2	3	1	0	0	3	1	3
Unknown	100	2	0	1	0	0	1	9	0	7	6	0	0	1	0	6	1	4	0	14	4	1	1	2	6	1	0	0	9	3	21



**Table 8 - ALCOHOL USE AS A CONTRIBUTING FACTOR IN ACCIDENTS & CASUALTIES BY STATE 2006-2010**

	Accidents					Deaths					Injuries				
	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
USA	403	421	387	397	395	148	157	153	165	154	366	373	346	422	344
AL	13	19	9	10	12	7	3	5	4	5	14	14	13	9	8
AK	6	8	7	4	1	5	7	6	3	1	11	4	3	2	0
AZ	10	13	11	9	9	1	3	1	1	3	12	21	8	10	10
AR	6	16	7	9	2	1	6	3	4	0	1	28	2	5	2
CA	26	34	36	22	15	7	11	15	11	4	24	38	38	28	17
CO	3	4	2	9	1	3	1	1	3	0	1	2	1	11	0
CT	1	5	6	9	4	0	3	4	5	2	0	4	9	11	1
DE	1	1	2	0	2	0	0	1	0	2	0	0	1	0	0
DC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FL	28	38	34	33	39	11	20	14	17	15	21	19	34	43	27
GA	9	8	15	12	11	4	3	4	3	5	9	5	13	11	6
HI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ID	11	3	9	9	14	4	0	5	4	6	7	0	3	13	11
IL	13	14	6	11	18	7	2	2	3	6	14	11	5	15	18
IN	2	3	1	2	2	0	4	0	0	0	2	2	3	2	0
IA	10	12	4	5	10	3	5	0	2	2	10	4	1	2	6
KS	1	3	0	0	1	1	1	0	0	0	0	3	0	0	0
KY	10	10	2	10	10	5	6	1	3	5	9	9	2	8	10
LA	10	18	18	23	9	2	6	13	17	5	11	17	23	36	13
ME	0	7	3	5	4	0	5	3	2	1	0	3	0	4	7
MD	10	8	11	13	11	3	2	1	6	1	10	5	22	14	10
MA	1	6	2	5	11	1	3	1	4	6	0	1	1	3	3
MI	13	5	7	12	16	0	4	3	9	8	19	2	2	10	11
MN	16	17	13	12	6	3	2	5	4	3	19	15	7	13	2
MS	4	4	3	2	4	2	1	0	2	4	5	6	2	2	1
MO	21	13	18	11	14	8	4	1	3	2	21	11	22	12	11
MT	3	3	9	3	0	1	0	4	1	0	2	4	5	6	0
NE	3	4	3	6	4	3	3	1	2	2	2	2	2	4	4
NV	6	2	11	6	3	2	0	4	1	1	4	2	2	7	2
NH	6	3	1	3	0	0	1	1	1	0	4	0	2	4	0
NJ	6	1	6	4	2	4	0	0	1	2	0	2	3	4	0
NM	1	2	1	2	5	0	1	0	1	6	1	4	1	1	0
NY	24	14	11	11	22	4	8	6	7	4	27	8	8	13	21
NC	16	19	19	13	15	5	4	5	5	6	13	24	19	11	18
ND	0	0	1	2	1	0	0	0	0	1	0	0	2	0	0
OH	17	17	9	9	17	5	5	3	2	8	13	13	7	9	9
OK	4	7	1	3	11	2	3	1	3	5	6	14	0	3	5
OR	0	2	4	5	6	0	1	2	1	1	0	2	3	4	8
PA	8	4	10	6	2	11	2	1	2	1	4	4	11	10	2
RI	0	4	1	2	2	0	0	0	0	2	0	5	0	2	3
SC	4	5	9	5	7	1	0	4	0	4	2	10	9	5	5
SD	5	1	2	5	1	2	0	0	0	0	7	1	3	6	2
TN	13	12	17	15	16	5	3	7	4	8	11	8	16	11	17
TX	16	17	16	17	31	7	7	11	9	8	10	11	11	14	46
UT	1	1	0	1	4	0	0	0	0	1	0	0	0	0	8
VT	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
VA	8	6	4	7	2	1	1	1	2	1	10	4	4	5	5
WA	23	13	9	11	3	9	10	6	6	1	18	7	10	13	6
WV	2	3	1	3	5	2	1	0	1	3	0	3	2	3	1
WI	9	10	16	18	6	4	4	7	5	3	11	18	11	15	4
WY	3	2	0	2	3	2	1	0	1	0	1	3	0	7	3
GU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PR	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
VI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CNMI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0





**Table 9 • VESSEL OPERATION AT THE TIME OF ACCIDENT 2010**

	Vessels Involved	Deaths	Injuries
<b>Totals</b>	6062	672	3153
At Anchor	231	21	72
Being Towed	29	1	9
Changing Direction	657	39	436
Changing Speed	493	16	306
Cruising	2726	198	1684
Docking/Undocking	262	12	73
Drifting	556	164	263
Idling	40	8	22
Launching/Loading	51	8	17
Rowing/Paddling	218	132	106
Sailing	98	6	34
Tied to Dock/Moored	469	7	47
Towing	25	0	8
Trolling	23	11	8
Other	17	1	11
Unknown	167	48	57


**Table 10 • VESSEL ACTIVITY AT THE TIME OF ACCIDENT 2010**


	Vessels Involved	Deaths	Injuries
<b>Totals</b>	6062	672	3153
Boating/Relaxation	3805	337	1993
Commercial	62	0	10
Fishing	643	204	290
Fueling	33	1	25
Hunting	39	15	33
Racing	52	2	19
Repairs	52	8	22
Starting Engine	56	2	44
Swimming/Snorkeling	99	48	62
Towed Watersports	618	20	575
Towing	42	0	10
Whitewater	47	23	29
Other	42	5	17
None; not in operation	387	0	0
Unknown	85	7	24



**Table 11 • WEATHER AND WATER CONDITIONS 2010**

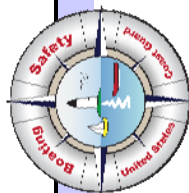
		<b>Accidents</b>	<b>Deaths</b>	<b>Injuries</b>
		4604	672	3153
<b>TYPE OF BODY OF WATER</b>	Lakes, Ponds, Reservoirs, Dams, Gravel Pits	2274	326	1684
	Rivers, Streams, Creeks, Swamps, Bayous	1000	198	686
	Bays, Inlets, Marinas, Sounds, Harbors, Channels, Canals, Sloughs, Coves	825	75	489
	Ocean/Gulf	383	53	222
	Great Lakes (not tributaries)	120	20	71
	Unknown	2	0	1
<b>WATER CONDITIONS</b>	Calm (waves less than 6")	2569	328	1843
	Choppy (waves 6" to 2')	1228	142	854
	Rough (waves 2' to 6')	437	94	230
	Very Rough (waves larger than 6')	93	25	59
	Unknown	277	83	167
<b>WIND</b>	None	499	61	358
	Light (0 - 6 mph)	2420	330	1779
	Moderate (7 - 14 mph)	1055	145	691
	Strong (15 - 25 mph)	360	74	168
	Storm (over 25 mph)	75	19	36
	Unknown	195	43	121
<b>VISIBILITY</b>	Poor - Day	56	12	34
	Poor - Night	115	28	87
	Poor - Unknown if day or night	1	0	1
	Fair - Day	171	31	105
	Fair - Night	141	28	92
	Good - Day	2926	369	2055
	Good - Night	394	84	294
	Good- Unknown if day or night	1	1	1
	Unknown - Day	661	92	412
	Unknown - Night	130	23	70
Unknown - Unknown if day or night	8	4	2	
<b>WATER TEMPERATURE</b>	39 degrees F and below	32	15	17
	40 - 49 degrees F	141	64	76
	50 - 59 degrees F	338	101	186
	60 - 69 degrees F	736	96	468
	70 - 79 degrees F	1327	106	925
	80 - 89 degrees F	1126	132	843
	90 degrees F and above	89	11	72
	Unknown	815	147	566

Table 12 • TIME RELATED DATA 2010				
 <p><b>Time of Day</b></p>	Accidents	Deaths	Injuries	
		4604	672	3153
	12:00 am to 2:30 am	114	28	91
	2:31 am to 4:30 am	52	11	28
	4:31 am to 6:30 am	57	14	28
	6:31 am to 8:30 am	146	25	76
	8:31 am to 10:30 am	239	34	156
	10:31 am to 12:30 pm	500	49	337
	12:31 pm to 2:30 pm	718	104	467
	2:31 pm to 4:30 pm	924	99	651
	4:31 pm to 6:30 pm	873	121	630
	6:31 pm to 8:30 pm	525	86	382
	8:31 pm to 10:30 pm	275	50	210
	10:31 pm to 11:59 pm	124	24	81
	Unknown	57	27	16
<p><b>Month of Year</b></p>	January	75	14	51
	February	60	16	30
	March	155	46	91
	April	254	67	133
	May	652	121	424
	June	671	70	486
	July	1140	118	856
	August	756	71	528
	September	409	58	301
	October	244	46	150
	November	118	30	66
	December	70	15	37
<p><b>Day of Week</b></p>	Sunday	1251	155	916
	Monday	437	60	279
	Tuesday	288	60	165
	Wednesday	294	57	188
	Thursday	351	49	227
	Friday	577	98	355
	Saturday	1406	193	1023



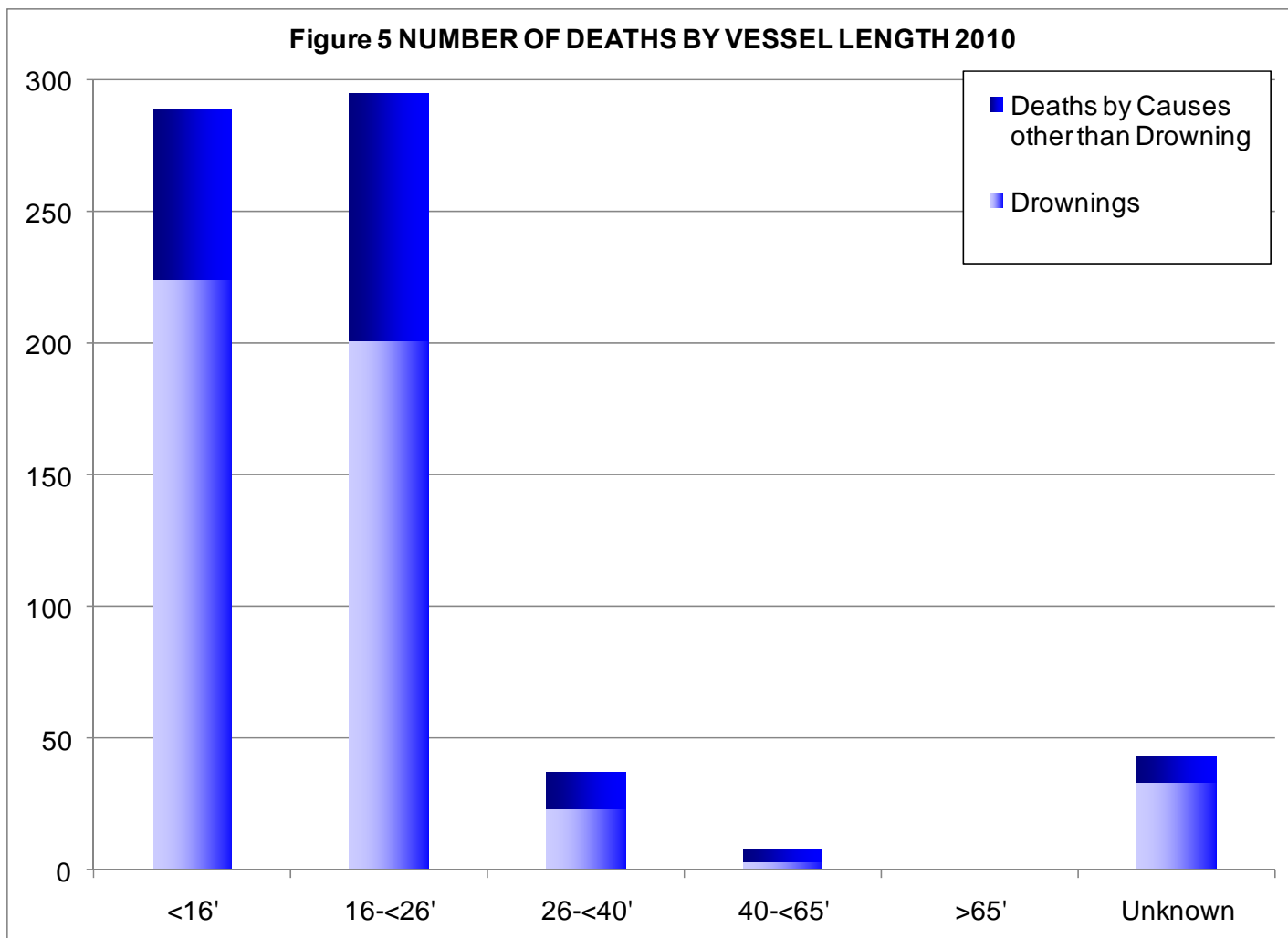
**Table 13 - VESSEL INFORMATION 2010**

		<b>Vessels Involved</b>	<b>Deaths</b>	<b>Injuries</b>
		6062	672	3153
<b>Hull Material</b>	Aluminum	827	196	422
	Fiberglass	4708	345	2540
	Plastic	77	51	32
	Rubber/Vinyl/Canvas	62	26	34
	Steel	60	4	21
	Wood	73	2	30
	Other	2	0	1
	Unknown	253	48	73
	<b>Horsepower</b>	No Engine	361	193
10 hp or less		132	37	62
11 - 25 hp		156	52	76
26 - 75 hp		510	77	257
76 - 150 hp		1235	96	701
151 - 250 hp		858	49	513
Over 250 hp		1136	37	564
Unknown		1674	131	809
<b>Year Built</b>		2010	170	24
	2009	202	10	134
	2007 - 2008	665	44	376
	2005 - 2006	618	44	344
	2002 - 2004	640	54	348
	1997 - 2001	967	66	492
	Prior to 1997	2168	252	1071
	Unknown	632	178	279
<b>Length</b>	Less than 16 feet	1782	289	1075
	16 feet to <26 feet	2817	295	1641
	26 feet to <40 feet	798	37	278
	40 feet to 65 feet	358	8	74
	More than 65 feet	66	0	3
	Unknown	241	43	82



**Table 14 - RENTAL STATUS OF VESSELS INVOLVED IN ACCIDENTS**

	Vessels				Deaths				Injuries			
	# of Vessels	Rented	Not Rented	Unknown if rented	# of Deaths	Rented	Not rented	Unknown if rented	# of Injuries	Rented	Not rented	Unknown if rented
<b>All Vessels</b>	6062	574	4417	1071	672	40	491	141	3153	326	2296	531
Airboat	40	0	40	0	2	0	2	0	26	0	26	0
Auxiliary Sailboat	286	15	186	85	15	0	9	6	48	2	36	10
Cabin Motorboat	869	21	690	158	31	0	24	7	298	12	216	70
Canoe	120	17	72	31	89	8	60	21	62	10	32	20
Houseboat	87	24	55	8	5	4	1	0	29	8	17	4
Inflatable	46	6	23	17	22	0	13	9	25	6	11	8
Kayak	92	8	60	24	52	6	34	12	34	3	22	9
Open Motorboat	2793	119	2258	416	325	5	264	56	1644	81	1310	253
Personal Watercraft	1221	304	767	150	38	5	30	3	776	173	503	100
Pontoon Boat	224	44	145	35	29	9	16	4	121	23	84	14
Rowboat	58	4	40	14	35	1	24	10	20	3	13	4
Sailboat (only)	59	5	32	22	8	1	3	4	20	1	17	2
Sailboat (unknown)	5	0	0	5	0	0	0	0	0	0	0	0
Other	62	5	38	19	11	1	7	3	13	4	6	3
Unknown	100	2	11	87	10	0	4	6	37	0	3	34



**Table 15 • NUMBER & PERCENTAGE OF DEATHS BY VESSEL LENGTH**

Length	Drownings	Deaths by Causes other than Drowning	Total Deaths	Percent of Deaths from Drowning
<16'	224	65	289	78%
16-<26'	201	94	295	68%
26-<40'	23	14	37	62%
40-<65'	3	5	8	38%
>65'	0	0	0	0%
Unknown	33	10	43	77%
<b>Total</b>	<b>484</b>	<b>188</b>	<b>672</b>	<b>72%</b>

# ACCIDENT TYPES



### Explanation of Accident Types Section

The following section contains six tables that examine data related to the events, called accident types, in accidents. The tables focus on these events and break down information by state, vessel type, vessel length, engine type, and propulsion.

In the Coast Guard's national database, there are four fields that can be used to define the series of events in an accident. By events, we mean the series of occurrences that passed during an accident. If a wave broke over a vessel causing it to take on water, capsize, and eject its occupant, the Coast Guard would categorize this accident by three events. First, there was a flooding/swamping. Then, there was a capsizing. Third, there was an "ejected from vessel."

With the exception of one table, the tables and figures in this report focus only on the first event in the sequence. The rationale for providing only the first accident type is to keep the tables simplistic; if we added the second, third, and fourth events in the boating sequence, our accident, casualty, and damage totals would not match up because they would be double-counting the accidents, casualties, and damages for cases that had more than one event.

#### **Accident, Vessel & Casualty Numbers by Primary Accident Type (Table 16, Page 34)**

This table focuses on the first event in a boating accident and provides information on the number of accidents, vessels, and casualties attributed to that first event. The deaths section is also separated by the categories drownings and non-drownings.

#### **Five-year Summary of Frequency of Events in Accidents & Casualties Nationwide (Table 17, Pages 35-38)**

As mentioned in the introductory paragraph, there are four fields that can be used to define the series of events in an accident. This table focuses on the first three events in an accident and the number of casualties associated with each event. The Coast Guard leaves out the fourth because it is not a standardized field.

Using the example in the opening paragraphs, the flooding/swamping would fall under the intersection of the column "First Event in an Accident" and the row "Flooding/swamping". The capsizing would be marked under the column "Second Event in an Accident" and the row "Capsizing". Finally, the ejection would be marked under the column "Third Event in an Accident" and the row "Ejected from Vessel".

This table focuses on the frequency that these events occurred nationally and the total number of deaths that were associated with each accident type. If we turn back to our example and focus on deaths as a result of flooding/swamping, we see that there were 448 accidents where flooding/swamping was the first event in the boating accident. There were 72 deaths associated with this first event type. However, there were other accidents that involved a flooding/swamping as a second or third occurrence. There were 155 accidents and 10 deaths associated with flooding/swamping as a second event and 31 accidents and 12 deaths associated with flooding/swamping as a third event. All combined, you get the sixth column of the table that looks at how many deaths were associated with an event that occurred either as the first, second, or third occurrence in an accident. In the example, there were 634 accidents and 94 deaths associated with flooding/swamping as a first, second, or third event.

This table can be difficult to understand, especially when the reader is under the expectation that the tallies of the casualty columns will equal the numbers published at the front of this report that reference the number of reportable accidents and deaths.

#### **Number of Vessels in Accidents by Vessel Length & Primary Accident Type (Table 18, Page 39)**

This table displays the types of accidents by the length of vessel. The table lists vessel length by foot for vessels of lengths 4 ft-39 ft. After 39 ft, information is categorized in ranges. This table also provides information about the number of casualties and vessels associated by length of vessel.



**Number of Vessels in Accidents by Vessel Type & Primary Accident Type (Table 19, Page 40)**

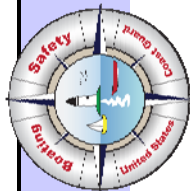
This table examines the first event of a boating accident for all vessels involved in an accident. It also provides information about the casualties associated with each vessel type.

**Number of Vessels in Accidents by Primary Accident Type & Propulsion Type (Table 20, Page 41)**

This table provides information about the number of vessels involved in accidents by primary accident type, propulsion, and engine type.

**Number of Vessels in Accidents by Primary Accident Type & Engine Type (Table 21, Page 41)**

This table provides information about the number of casualties and vessels associated by propulsion, engine and primary accident type.



**Table 16 - ACCIDENT, VESSEL & CASUALTY NUMBERS BY PRIMARY ACCIDENT TYPE 2010**

	Accidents	Vessels Involved	Drowning Deaths	Other Deaths	Total Deaths	Total Injuries	Damages
<b>All Accident Types</b>	<b>4604</b>	<b>6062</b>	<b>484</b>	<b>188</b>	<b>672</b>	<b>3153</b>	<b>\$35,552,283</b>
Capsizing	335	350	167	13	180	199	\$1,540,575
Carbon Monoxide Poisoning	12	13	0	6	6	22	\$11,250
Collision with Fixed Object	456	515	19	19	38	332	\$4,030,139
Collision with Floating Object	52	56	6	2	8	27	\$438,259
Collision with Commercial Vessel	29	57	5	3	8	22	\$649,226
Collision with Governmental Vessel	8	16	0	0	0	3	\$45,817
Collision with Recreational Vessel	1088	2255	10	54	64	747	\$7,004,464
Collision with Submerged Object	169	176	5	3	8	43	\$2,173,235
Departed Vessel	100	104	57	5	62	46	\$43,890
Ejected from Vessel	240	263	11	9	20	253	\$610,486
Electrocution	4	4	0	2	2	7	\$0
Fall in Vessel	207	221	3	3	6	215	\$63,710
Falls Overboard	291	303	130	31	161	144	\$107,585
Fire/Explosion (fuel)	159	176	0	2	2	91	\$4,392,022
Fire/Explosion (non-fuel)	81	90	0	0	0	11	\$5,228,051
Fire/Explosion (unknown origin)	6	8	0	0	0	0	\$749,079
Flooding/Swamping	448	469	61	11	72	158	\$4,952,030
Grounding	309	313	3	8	11	204	\$3,382,478
Person Struck by Propeller	49	51	0	1	1	51	\$0
Person Struck by Vessel	31	41	0	0	0	34	\$5,017
Sinking	2	3	0	0	0	3	\$0
Skier Mishap	447	480	2	13	15	471	\$39,345
Other	80	97	5	3	8	70	\$85,625
Unknown	1	1	0	0	0	0	\$0


Table 17 • FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
 <b>2010</b>	First Event in an Accident	Second Event in an Accident	Third Event in an Accident	Total Times Event Occurred in all Accidents	Deaths Associated with Event in all Accidents	Injuries Associated with Event in all Accidents	Damages Associated with Event in all Accidents
	Capsizing	335	225	27	587	238	346
Carbon Monoxide Poisoning	12	2	0	14	6	24	\$15,750
Collision with Fixed Object	456	42	3	501	40	346	\$4,275,598
Collision with Floating Object	52	0	0	52	8	27	\$438,259
Collision with Commercial Vessel	29	2	0	31	8	22	\$653,226
Collision with Governmental Vessel	8	1	0	9	0	4	\$46,567
Collision with Recreational Vessel	1088	43	1	1132	68	769	\$7,550,040
Collision with Submerged Object	169	1	0	170	8	43	\$2,179,935
Departure from Vessel	100	39	3	142	85	65	\$483,635
Ejected from Vessel	240	594	270	1104	310	1018	\$6,046,912
Electrocution	4	0	1	5	2	8	\$0
Fall in Vessel	207	341	45	593	29	866	\$3,203,432
Falls Overboard	291	13	1	305	165	154	\$139,335
Fire/Explosion (fuel)	159	2	0	161	2	92	\$4,587,022
Fire/Explosion (non-fuel)	81	2	1	84	0	12	\$6,428,251
Fire/Explosion (unknown origin)	6	0	0	6	0	0	\$749,079
Flooding	448	155	31	634	94	236	\$9,961,999
Grounding	309	47	15	371	20	236	\$4,184,050
Person Struck by Propeller	49	114	16	179	27	178	\$109,985
Person Struck by Vessel	31	221	19	271	32	325	\$700,418
Sinking	2	108	40	150	28	45	\$4,563,582
Skier Mishap	447	4	0	451	16	476	\$42,045
Other	80	7	1	88	8	79	\$90,125
Unknown	1	0	0	1	0	0	\$0
<b>2009</b>							
Capsizing	369	246	27	642	280	373	\$2,694,728.00
Carbon Monoxide Poisoning	17	0	0	17	1	39	\$0
Collision with Fixed Object	446	45	7	498	41	358	\$5,331,520.99
Collision with Floating Object	73	2	0	75	3	38	\$579,379.00
Collision with Commercial Vessel	29	1	1	31	13	29	\$315,343.00
Collision with Governmental Vessel	2	0	0	2	0	0	\$7,250.00
Collision with Recreational Vessel	1100	50	7	1157	54	858	\$7,490,097.82
Collision with Submerged Object	165	5	0	170	13	58	\$1,573,118.72
Departed Vessel	100	60	22	182	85	100	\$843,575.00


Table 17 Continued • FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
 <b>2009</b> Continued	First Event in an Accident	Second Event in an Accident	Third Event in an Accident	Total Times Event Occurred in all Accidents	Deaths Associated with Event in all Accidents	Injuries Associated with Event in all Accidents	Damages Associated with Event in all Accidents
	Ejected from Vessel	176	636	225	1037	335	976
Electrocution	0	0	1	1	0	1	\$40,450.00
Fall in Boat	207	233	26	466	30	643	\$1,692,143.08
Falls Overboard	349	32	3	384	201	204	\$144,100.00
Fire/Explosion (fuel)	174	4	0	178	3	113	\$5,692,477.00
Fire/Explosion (non-fuel)	74	12	1	87	4	19	\$6,917,936.00
Fire/Explosion (unknown origin)	12	0	0	12	0	4	\$1,646,100.00
Flooding/Swamping	436	151	30	617	122	207	\$7,493,097.26
Grounding	308	52	17	377	19	244	\$4,533,175.12
Sinking	8	129	85	222	49	45	\$7,221,576.00
Skier mishap	464	1	0	465	13	491	\$5,960.00
Person Struck by Vessel	49	205	27	281	26	355	\$619,535.10
Person Struck by Propeller	67	97	20	184	25	182	\$58,950.00
Other	101	18	0	119	1	120	\$120,360.00
Unknown	4	0	0	4	4	4	\$1,648,100.00
<b>2008</b>							
Capsizing	348	239	33	620	268	425	\$3,215,281.00
Carbon Monoxide Poisoning	18	0	0	18	11	40	\$0
Collision with Fixed Object	446	47	9	502	56	368	\$5,394,454.00
Collision with Floating Object	59	1	0	60	5	30	\$801,231.00
Collision with Vessel	1237	63	7	1307	63	882	\$9,000,016.00
Departure from vessel	87	54	8	169	74	99	\$914,581.00
Ejected from vessel	123	586	208	917	275	932	\$4,029,205.00
Electrocution	0	0	0	0	0	0	\$0
Falls in Vessel	140	175	16	331	10	427	\$1,280,590.00
Falls on Vessel	62	14	1	77	1	84	\$45,700.00
Falls Overboard	431	69	8	508	215	318	\$583,565.00
Fire/Explosion (fuel)	136	3	0	139	1	91	\$4,548,917.00
Fire/Explosion (non-fuel)	78	5	2	85	2	14	\$3,800,710.00
Fire/Explosion (unknown origin)	25	0	0	25	2	10	\$15,980,500.00
Flooding/Swamping	475	149	20	644	109	264	\$10,378,269.00



Table 17 Continued • FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
 <b>2008</b> continued	First Event in an Accident	Second Event in an Accident	Third Event in an Accident	Total Times Event Occurred in all Accidents	Deaths Associated with Event in all Accidents	Injuries Associated with Event in all Accidents	Damages Associated with Event in all Accidents
	Grounding	322	63	19	404	29	279
Sinking	16	189	80	285	51	89	\$6,725,029.00
Skier mishap	383	0	1	384	10	397	\$121,226.00
Struck by Vessel	37	188	32	257	26	315	\$800,750.00
Struck by Motor/Propeller	83	80	18	181	21	176	\$89,100.00
Struck Submerged Object	154	2	1	157	5	71	\$4,094,382.00
Other	123	28	3	154	10	144	\$350,570.00
Unknown	6	0	0	6	6	0	\$500.00
<b>2007</b>							
Capsizing	398	89	10	497	220	338	\$2,392,352.00
Carbon Monoxide Poisoning	14	1	0	15	7	42	\$0
Collision with Fixed Object	558	33	1	592	43	407	\$9,501,968.12
Collision with Floating Object	143	9	0	152	4	104	\$2,680,482.59
Collision with Vessel	1329	64	2	1395	72	981	\$11,938,172.94
Departure from vessel	69	12	4	85	37	47	\$460,600
Ejected from vessel	120	180	23	323	79	309	\$2,283,453.55
Electrocution	0	1	0	1	1	0	\$0
Falls in Vessel	211	73	4	288	7	343	\$771,878.00
Falls on Vessel	10	0	0	10	0	10	\$85,000.00
Falls Overboard	485	195	25	705	297	532	\$1,637,975.00
Fire/Explosion (fuel)	113	3	1	117	3	70	\$3,027,806.00
Fire/Explosion (non-fuel)	93	9	0	102	0	0	\$7,207,722.01
Fire/Explosion (unknown origin)	16	1	0	17	1	8	\$340,350.00
Flooding/Swamping	285	144	25	454	62	154	\$9,562,143.52
Grounding	324	82	15	421	13	285	\$7,466,889.88
Sinking	84	166	76	326	34	103	\$10,170,041.00
Skier Mishap	492	12	1	505	11	519	\$28,115.00
Struck by Vessel	83	154	33	270	32	268	\$398,180.89
Struck by Motor/propeller	80	85	11	176	24	166	\$75,090.00
Struck Submerged Object	157	30	7	194	5	80	\$7,392,934.00
Other	111	13	1	125	19	106	\$255,143.00
Unknown	16	0	0	16	7	5	\$68,900.00

Table 17 Continued • FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
 <b>2006</b>	First Event in an Accident	Second Event in an Accident	Third Event in an Accident	Total Times Event Occurred in all Accidents	Deaths Associated with Event in all Accidents	Injuries Associated with Event in all Accidents	Damages Associated with Event in all Accidents
	Capsizing	455	23	0	478	222	255
Carbon Monoxide Poisoning	18	0	0	18	12	51	\$99,500.00
Collision with Fixed Object	517	21	0	538	52	404	\$5,099,684.64
Collision with Floating Object	142	11	0	153	9	97	\$1,274,203.67
Collision with Vessel	1360	48	3	1411	77	1026	\$9,812,036.90
Departure from vessel	43	4	0	47	36	9	\$32,000.00
Ejected from vessel	40	29	3	72	29	55	\$572,461.00
Electrocution	2	0	0	2	1	3	\$0
Falls in Vessel	199	55	1	255	8	326	\$567,376.00
Falls on Vessel	29	7	0	36	1	33	\$9,451.00
Falls Overboard	485	218	18	721	275	525	\$1,673,825.00
Fire/Explosion (fuel)	141	5	0	146	1	70	\$6,094,963.90
Fire/Explosion (non-fuel)	63	12	0	75	3	17	\$13,391,356.00
Flooding	216	117	18	351	53	114	\$4,148,829.00
Grounding	252	90	16	358	30	244	\$3,992,835.40
Sinking	114	156	45	315	39	89	\$6,948,811.00
Skier Mishap	510	22	2	534	13	540	\$3,703.00
Struck by Vessel	66	144	40	250	20	224	\$774,875.00
Struck by Motor/Propeller	107	104	23	234	28	227	\$176,144.13
Struck Submerged Object	86	50	7	143	4	48	\$2,361,859.49
Other	99	285	24	408	54	331	\$14,237,648.00
Unknown	23	0	0	23	12	8	\$21,550.00



**Table 19 - NUMBER OF VESSELS IN ACCIDENTS BY VESSEL TYPE & PRIMARY ACCIDENT TYPE WITH NUMBER OF CASUALTIES BY CASUALTY TYPE & VESSEL TYPE 2010**

<b>All boats</b>	6062	350	13	515	56	57	16	2255	176	104	263	4	221	303	176	90	8	469	313	51	41	3	480	97	1	484	188	672	3153
Airboat	40	4	0	8	0	0	0	13	2	0	0	0	1	0	0	0	0	6	6	0	0	0	0	0	0	0	0	2	26
Auxiliary Sailboat	286	10	2	30	1	2	0	150	5	3	2	0	11	7	5	8	0	9	29	0	1	0	0	0	11	0	13	2	48
Cabin Motorboat	869	13	6	115	7	10	1	348	29	12	8	0	24	13	66	46	6	47	78	4	3	0	18	15	0	19	12	31	298
Canoe	120	78	0	8	2	0	0	4	2	1	1	0	0	10	0	0	0	14	0	0	0	0	0	0	0	86	3	89	62
Houseboat	87	1	3	4	1	0	1	47	0	1	0	3	1	1	11	1	0	5	1	1	2	0	1	2	0	1	4	5	29
Inflatable	46	12	0	8	0	0	0	4	1	2	5	0	1	11	1	0	0	0	0	0	0	0	0	0	0	22	0	22	25
Kayak	92	48	0	7	1	0	0	4	0	1	4	0	2	18	0	0	0	6	0	0	0	0	0	0	1	42	10	52	34
Open Motorboat	2793	103	2	247	37	25	7	786	120	48	84	0	116	139	77	30	2	333	164	41	9	1	378	43	1	213	112	325	1644
Personal Watercraft	1221	26	0	53	4	2	4	721	6	12	148	1	59	52	12	0	0	10	19	0	24	1	58	9	0	9	29	38	776
Pontoon Boat	224	3	0	22	2	1	0	86	4	20	4	0	3	26	4	2	0	9	6	5	1	0	18	8	0	25	4	29	121
Rowboat	58	23	0	5	1	0	0	6	3	0	0	0	0	11	0	0	0	6	0	0	1	0	0	2	0	33	2	35	20
Sail (only)	59	15	0	2	0	0	0	24	0	1	1	0	1	6	0	0	0	3	3	0	0	0	0	3	0	6	2	8	20
Sailboat (unknown)	5	0	0	0	0	0	0	2	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Other	62	3	0	1	0	17	2	12	2	2	3	0	1	6	0	0	0	8	1	0	0	0	2	2	0	9	2	11	13
Unknown	100	11	0	5	0	0	1	48	2	1	3	0	1	3	0	3	0	10	6	0	0	0	5	1	0	6	4	10	37







# **OPERATOR & PASSENGER INFORMATION**



### Explanation of Operator/Passenger Information Section

The following section contains eight tables and figures that examine data relating to the operators and passengers in accidents. Information is displayed by age, boating safety instruction, type of injury, and cause of death.

#### **Operator Information (Table 22, Page 44)**

This table provides information about the operator. Information covers a variety of topics including age, boating operation hours experience, number of people onboard the vessel, and the boating safety instruction level of the operator.

Examples of “other” boating safety instruction include licenses issued from the Coast Guard, military training, police academy training, rental operator training to camp training. Informal training signifies that the operator did not receive instruction in a formal classroom setting but rather learned from experience.

#### **Number of Deaths by Type of Operator Boating Instruction (Table 23 & Figure 6, Page 45)**

This table and accompanying figure focus on boating safety instruction for those operators who had a person die on their vessel. The table and figure both focus on instruction provided by the U.S. Coast Guard Auxiliary, U.S. Power Squadrons, American Red Cross, and State sources. The figure examines only deaths where the operator instruction was known.

#### **Number of Deaths by Vessel Type (Table 24 & Figure 7, Page 46)**

This table documents deaths by vessel type with a focus on drownings. It also provides the percentage of deaths by drowning by type of vessel.

#### **Number of Deceased Victims by Age & Vessel Type (Table 25, Page 47)**


This table documents the age of fatal victims by vessel type. It also delineates the number of drownings, non-drownings, and total deaths by age.

#### **Number of Injured Victims by Age & Vessel Type (Table 26, Page 48)**

This table documents the age of injured victims by vessel type.

#### **Nature of Primary Injury Type by Area of Injury 2010 (Table 27, Page 49)**

This table focuses on the nature and area of the primary injury of injured victims.

 <b>Table 22 • OPERATOR INFORMATION 2010</b>				
		Vessels Involved	Deaths	Injuries
		6062	672	3153
<b>Age of Operator</b>	12 years and under	28	5	24
	13 to 18 years	350	15	223
	19 to 25 years	691	74	447
	26 to 35 years	906	109	560
	36 to 55 years	2140	248	1220
	Over 55 years	992	170	481
	Unknown	955	51	198
<b>Operator's Experience</b>	No Experience	63	5	49
	Under 10 hours	473	50	273
	10 to 100 hours	1073	96	634
	101 to 500 hours	1266	114	723
	Over 500 Hours	755	53	406
	Unknown	1918	343	1023
	No Operator	514	11	45
<b>Number of Persons on Board</b>	None	348	0	4
	One	1725	230	628
	Two	1608	193	901
	Three	687	95	423
	Four	554	67	407
	Five	329	25	273
	Six	227	13	193
	Seven	125	10	105
	Eight	110	10	96
	Nine	61	12	38
	Ten	35	6	20
	More than 10	79	4	34
	Unknown	174	7	31
<b>Education of Operator</b>	American Red Cross	26	0	19
	Informal	209	13	131
	Internet Course	45	0	29
	State Course	722	33	384
	US Power Squadrons	98	4	46
	USCG Auxiliary	248	5	125
	Other	102	4	47
	No Education	2723	304	1658
	Unknown	1375	298	669
	No Operator	514	11	45

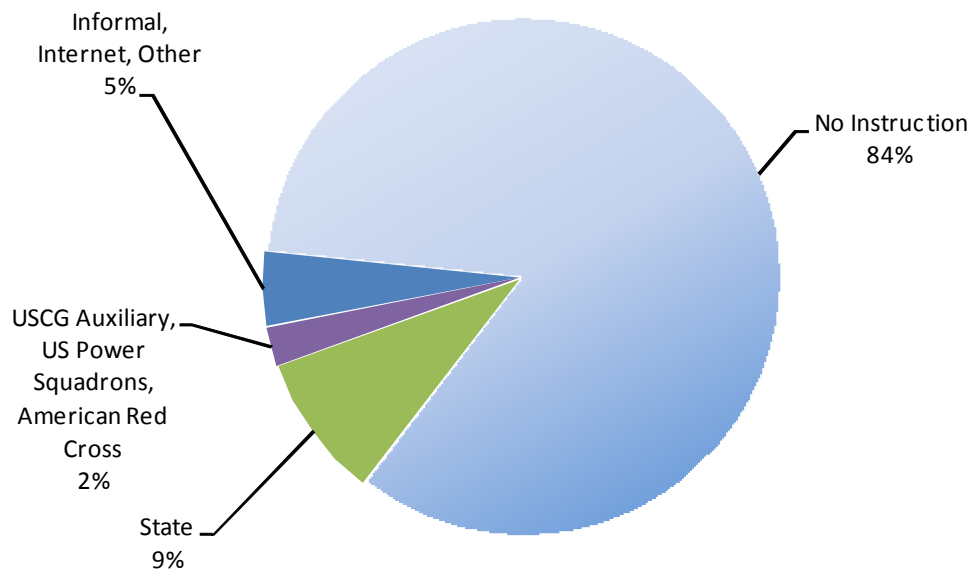
**BOATING SAFETY INSTRUCTION**



**Table 23 • NUMBER OF DEATHS BY TYPE OF OPERATOR BOATING INSTRUCTION 2010**

Type of Boating Instruction	Deaths
American Red Cross	0
Informal	13
Internet Course	0
State	33
U.S. Coast Guard Auxiliary	5
U.S. Power Squadron	4
Other	4
No Education	304
<b>Total Deaths - Known Operator Instruction</b>	<b>363</b>
<b>Total Deaths - Unknown Operator Instruction</b>	<b>298</b>
<b>Total Deaths - No Operator</b>	<b>11</b>
<b>Total Deaths - Known &amp; Unknown Operator Instruction</b>	<b>672</b>

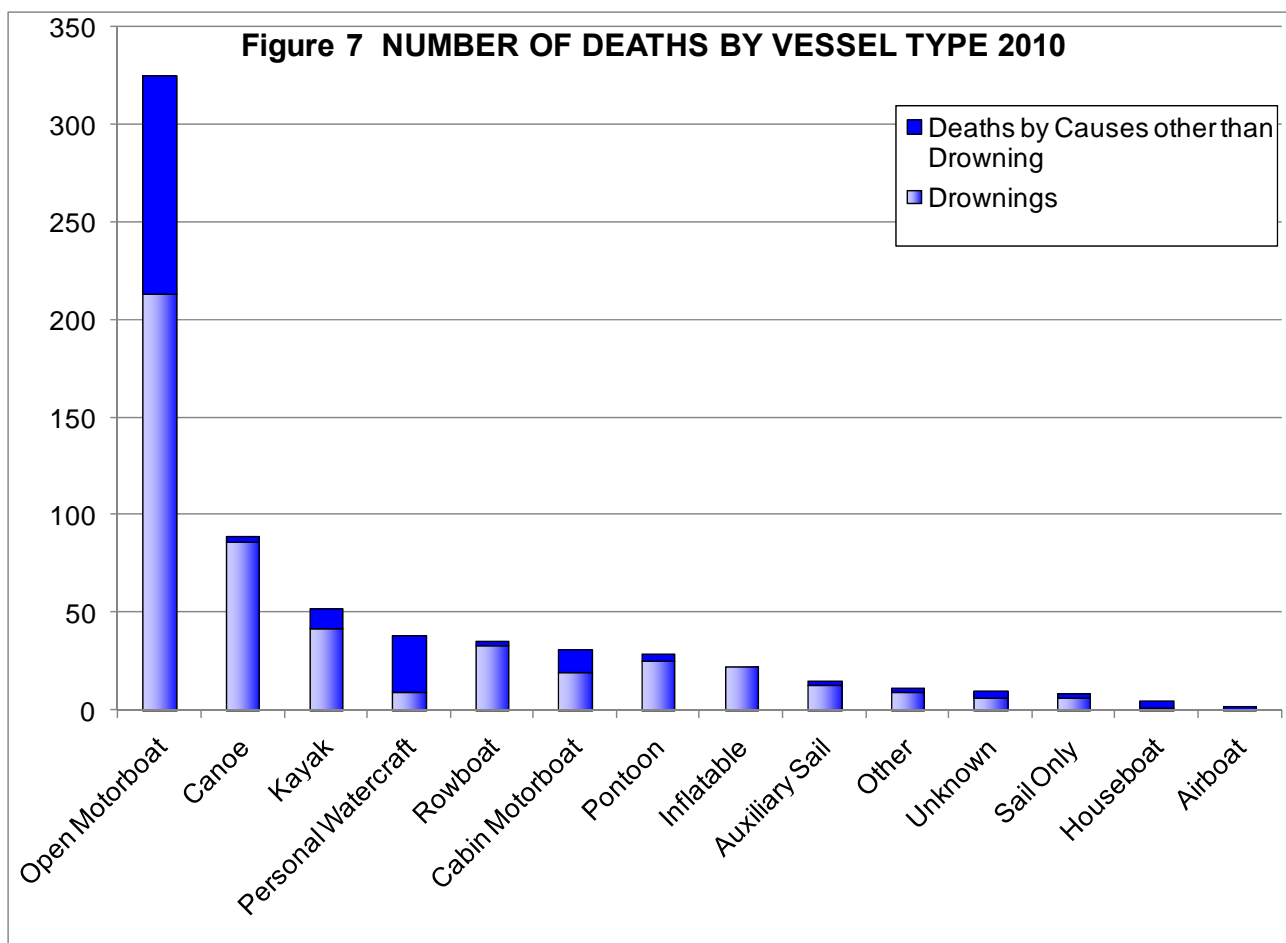
**Figure 6 PERCENT OF DEATHS BY KNOWN OPERATOR INSTRUCTION 2010**






**Table 24 • NUMBER OF DEATHS BY VESSEL TYPE 2010**


Boat Type	Drownings	Deaths by Causes other than Drowning	Total Deaths	Percentage of Deaths from Drowning
Airboat	0	2	2	0%
Auxiliary Sailboat	13	2	15	87%
Cabin Motorboat	19	12	31	61%
Canoe	86	3	89	97%
Houseboat	1	4	5	20%
Inflatable	22	0	22	100%
Kayak	42	10	52	81%
Open Motorboat	213	112	325	66%
Personal Watercraft	9	29	38	24%
Pontoon	25	4	29	86%
Rowboat	33	2	35	94%
Sailboat (only)	6	2	8	75%
Other	9	2	11	82%
Unknown	6	4	10	60%
<b>Total</b>	<b>484</b>	<b>188</b>	<b>672</b>	<b>72%</b>





**Table 25 • NUMBER OF DECEASED VICTIMS BY AGE AND VESSEL TYPE 2010**

Age of Deceased Victim	Type of Vessel													Drownings	Other Deaths	Total Deaths	
	Airboat	Auxiliary Sailboat	Cabin Motorboat	Canoe	Houseboat	Inflatable	Kayak	Open Motorboat	Personal Watercraft	Pontoon Boat	Rowboat	Sailboat (only)	Other				Unknown
Total	2	15	31	89	5	22	52	325	38	29	35	8	11	10	484	188	672
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	1	0	0	0	2	0	0	0	0	0	0	2	1	3
6	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	4	0	0	0	0	1	0	2	3	5
9	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1
10	0	0	0	1	0	0	1	2	0	0	0	0	0	0	1	3	4
11	0	0	0	2	0	0	0	3	0	0	0	0	0	0	2	3	5
12	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
0-12	0	0	0	4	0	0	2	14	0	0	0	0	1	0	9	12	21
13 - 19	0	0	0	7	1	2	4	19	0	1	1	0	2	0	26	11	37
20 - 29	1	5	6	36	1	5	4	43	13	9	2	1	2	1	93	36	129
30 - 39	0	1	6	9	0	3	7	49	5	5	0	2	1	0	65	23	88
40 - 49	0	1	3	12	3	3	11	62	13	7	8	1	3	1	91	37	128
50 - 59	0	5	7	14	0	2	15	49	5	2	9	2	1	1	83	29	112
60 - 69	0	3	1	5	0	4	8	51	1	4	6	2	0	6	68	23	91
70 - 79	0	0	5	1	0	3	0	23	0	0	6	0	0	0	31	7	38
80 and Over	1	0	0	0	0	0	0	9	0	1	1	0	0	0	8	4	12
Unknown	0	0	3	1	0	0	1	6	1	0	2	0	1	1	10	6	16



**Table 26 • NUMBER OF INJURED VICTIMS BY AGE AND VESSEL TYPE 2010**

Age of Injured Victim	Total Injuries	Airboat	Auxiliary Sailboat	Cabin Motorboat	Canoe	Houseboat	Inflatable	Kayak	Open Motorboat	Personal Watercraft	Pontoon Boat	Rowboat	Sailboat (only)	Other	Unknown
<b>Total</b>	<b>3153</b>	<b>26</b>	<b>48</b>	<b>298</b>	<b>62</b>	<b>29</b>	<b>25</b>	<b>34</b>	<b>1644</b>	<b>776</b>	<b>121</b>	<b>20</b>	<b>20</b>	<b>13</b>	<b>37</b>
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	4	0	1	2	0	1	0	0	0	0	0	0	0	0	0
2	4	0	0	0	0	0	0	0	1	1	1	0	0	0	1
3	9	0	0	1	1	0	0	0	6	1	0	0	0	0	0
4	12	0	1	0	0	0	0	0	8	1	2	0	0	0	0
5	12	0	0	4	0	0	0	0	4	4	0	0	0	0	0
6	10	0	0	1	0	0	0	0	6	2	1	0	0	0	0
7	13	0	1	2	0	0	0	0	5	4	1	0	0	0	0
8	23	0	0	0	1	0	0	0	10	9	2	1	0	0	0
9	23	0	0	1	0	0	1	0	15	6	0	0	0	0	0
10	29	0	0	3	0	0	0	0	18	6	2	0	0	0	0
11	27	0	0	0	0	0	0	0	16	10	0	0	1	0	0
12	59	0	0	3	1	1	0	0	33	18	2	0	0	1	0
0 - 12	225	0	3	17	3	2	1	0	122	62	11	1	1	1	1
13 - 19	526	3	0	22	17	2	2	5	245	208	15	0	3	3	1
20 - 29	667	7	1	46	11	7	4	6	345	213	19	4	0	3	1
30 - 39	487	2	9	38	9	7	2	5	263	119	27	3	0	1	2
40 - 49	462	8	9	45	4	7	5	8	246	102	20	2	2	2	2
50 - 59	360	2	10	59	3	2	2	4	208	47	12	7	2	2	0
60 - 69	177	2	5	31	6	2	3	3	106	9	5	0	3	0	2
70 - 79	73	1	5	14	2	0	3	0	43	2	3	0	0	0	0
80 and Over	21	0	0	2	0	0	0	0	16	0	1	1	1	0	0
Unknown	155	1	6	24	7	0	3	3	50	14	8	2	8	1	28





**Table 27 • NATURE OF PRIMARY INJURY TYPE BY AREA OF INJURY 2010**

	All Areas	Arm	Body	Foot	Hand	Head	Leg	Neck	Trunk	Unknown
<b>All Primary Injury Types</b>	<b>3153</b>	<b>253</b>	<b>339</b>	<b>132</b>	<b>109</b>	<b>768</b>	<b>538</b>	<b>97</b>	<b>634</b>	<b>283</b>
Amputation	39	5	0	4	28	0	2	0	0	0
Broken Bone	565	66	0	60	27	57	162	9	146	38
Burn	79	17	8	4	2	6	18	3	4	17
Carbon Monoxide	23	0	23	0	0	0	0	0	0	0
Concussion	353	0	0	0	0	353	0	0	0	0
Dislocation	70	32	0	3	0	2	19	0	8	6
Electric Shock	6	0	6	0	0	0	0	0	0	0
Hypothermia	279	0	279	0	0	0	0	0	0	0
Internal organ injury	139	4	0	0	0	5	6	1	119	4
Laceration	676	59	0	37	33	263	175	3	44	62
Scrape/Bruise	442	44	6	8	11	80	107	7	103	76
Spinal Cord Injury	31	0	0	0	0	0	0	3	28	0
Sprain/Strain	358	25	1	16	8	1	46	68	177	16
Other	17	0	16	0	0	0	0	0	1	0
Unknown	76	1	0	0	0	1	3	3	4	64

# CASUALTY DATA



## Explanation of Casualty Data Section

This section contains eleven tables and figures that examine data relating to the victims in boating accidents. The following pages focus on historical casualty information, casualty-vessel information, and state-specific casualty information.

### **Accidents & Casualties by Year, 1996-2010 (Figure 8 & Table 28, Page 52)**

This figure and table document the number of accidents and casualties from 1996-2010.

### **Accident, Casualty & Damage Data by State (Table 29, Page 53)**

This table provides accident, casualty, and damage information by state for the year 2010. Accidents are broken down into three levels of severity— fatal accidents, non-fatal injury accidents, and property damage only accidents. This table also provides the number of casualties and property damage by state.

### **Distribution of Recreational Boating Deaths by State (Figure 9, Page 54)**

This figure provides the percentage that each state contributed to the national death count. So, for instance, Michigan had 27 deaths. Out of the total national death count of 672, Michigan contributed 4.0%  $((27/672) * 100)$  of deaths to the national count.

### **Annual Recreational Boating Fatality Rates 1996-2010 (Figure 10 & Table 30, Page 55)**

This table provides the fatality rates from 1996-2010. The fatality rate is calculated by dividing the number of fatalities by the total national vessel registration. The Coast Guard then multiplied by a factor of 100,000 to arrive at the number of deaths per 100,000 registered vessels. The accompanying figure shows the trend of fatality rates from 1996-2010.

### **States Coded by their 2010 Fatality Rate (Figure 11, Page 56)**

This figure displays states that are color-coded depending on their fatality rate which is expressed as the number of deaths that occurred in that state per 100,000 vessels that that state registered. It is important to note that not all states register the same types of vessels which could skew the fatality rates provided. Please see Table 38, Recreational Registration Data by State 2009-2010 to view the Scope of each state's registration system.

### **Five-year Summary of Selected Accident Data by State (Table 31, Page 57)**

This table examines the number of accidents, fatal accidents, and fatalities by state for years 2006-2010.

### **Number of Accidents by Primary Accident Type & State (Table 32, Page 58-59)**

This table documents the first accident event by state. It also provides information about the total number of accidents and casualties by state.

### **Number of Injured Victims by Primary Injury & Vessel Type (Table 33, Page 60)**

This table displays the number of injured victims by primary injury and vessel type.

### **Number of Fatal Victims by Life Jacket Wear, Cause of Death, & Vessel Type (Table 34, Page 60)**

This table displays the number of fatal victims by vessel type and cause of death. The table also provides information on whether the deceased victim was wearing a life jacket.



**Figure 8 DEATHS, INJURIES & ACCIDENTS BY YEAR, 1996-2010**

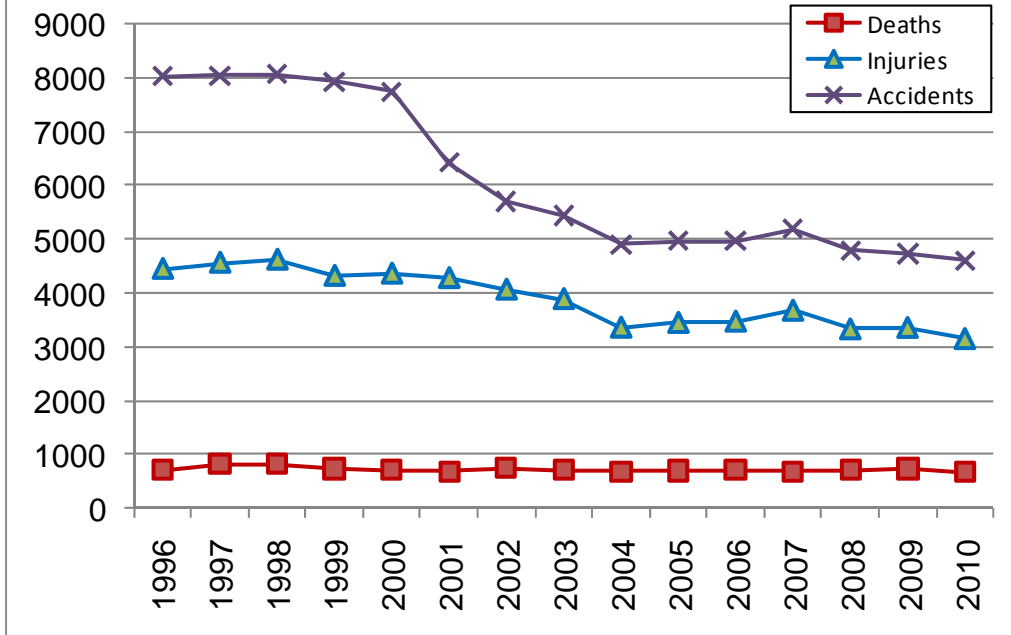


Table 28 • DEATHS, INJURIES & ACCIDENTS BY YEAR, 1996-2010			
Year	Deaths	Injuries	Accidents
1996	709	4442	8026
1997	821	4555	8047
1998	815	4612	8061
1999	734	4315	7931
2000	701	4355	7740
2001	681	4274	6419
2002	750	4062	5705
2003	703	3888	5438
2004	676	3363	4904
2005	697	3451	4969
2006	710	3474	4967
2007	685	3673	5191
2008	709	3331	4789
2009	736	3358	4730
2010	672	3153	4604

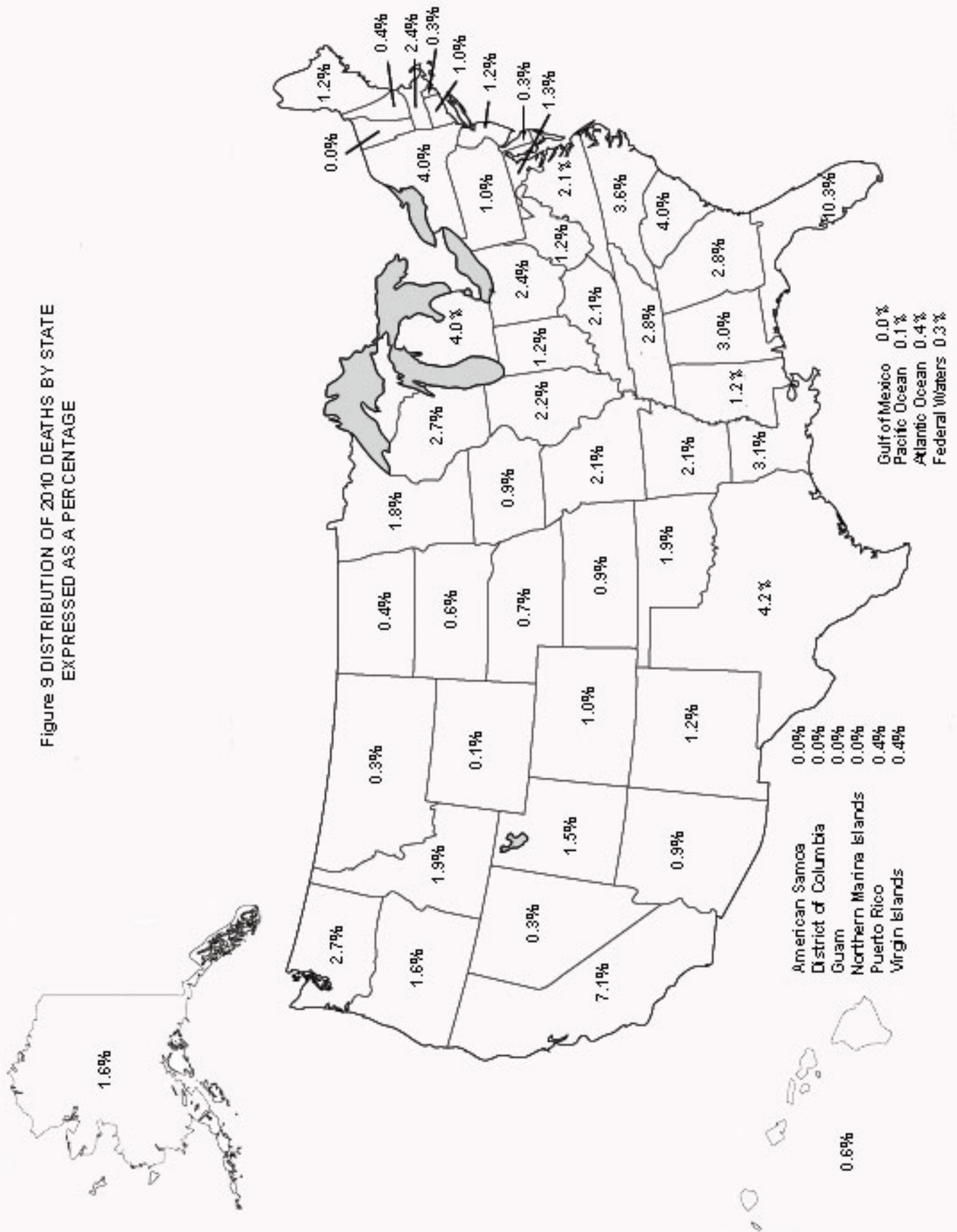
\* On July 2, 2001, the Federal threshold of property damage for reports of accidents involving recreational vessels changed from \$500 to \$2000.

**Table 29 • ACCIDENT, CASUALTY & DAMAGE DATA BY STATE 2010**

	Number of Accidents				Persons Involved		Damages
	Total	Fatal	Non-Fatal	Property Damage	Deaths	Injured	
<b>Totals</b>	<b>4604</b>	<b>605</b>	<b>2204</b>	<b>1795</b>	<b>672</b>	<b>3153</b>	<b>\$35,552,283</b>
AK	24	8	8	8	11	13	\$753,675
AL	90	20	35	35	20	51	\$658,293
AR	60	12	23	25	14	34	\$408,043
AZ	113	3	78	32	6	91	\$463,115
CA	412	44	200	168	48	281	\$3,613,300
CO	53	6	27	20	7	36	\$73,141
CT	52	6	19	27	7	24	\$451,743
DE	21	1	11	9	2	13	\$137,560
DC	1	0	0	1	0	0	\$3,000
FL	608	65	249	294	69	364	\$7,408,264
GA	135	18	69	48	19	94	\$230,055
HI	15	4	4	7	4	4	\$57,000
IA	54	6	33	15	6	40	\$331,984
ID	67	9	35	23	13	49	\$295,122
IL	97	14	44	39	15	81	\$544,759
IN	43	6	25	12	8	33	\$261,250
KS	30	4	12	14	6	16	\$94,950
KY	75	14	28	33	14	51	\$368,839
LA	105	16	56	33	21	90	\$769,434
MA	60	16	25	19	16	42	\$1,610,811
MD	196	9	121	66	9	152	\$854,545
ME	34	6	21	7	8	30	\$212,500
MI	132	25	61	46	27	90	\$457,360
MN	82	11	42	29	12	54	\$459,632
MO	161	13	83	65	14	111	\$1,061,253
MS	17	7	6	4	8	7	\$165,803
MT	11	2	5	4	2	9	\$136,600
NC	148	23	80	45	24	120	\$569,443
ND	11	3	6	2	3	6	\$19,637
NE	24	5	13	6	5	19	\$87,250
NH	46	3	22	21	3	27	\$160,692
NJ	116	8	33	75	8	49	\$153,302
NM	37	7	15	15	8	20	\$80,957
NV	59	2	34	23	2	45	\$444,608
NY	211	24	98	89	27	140	\$1,304,104
OH	127	15	59	53	16	80	\$458,818
OK	51	12	22	17	13	35	\$151,600
OR	60	10	23	27	11	36	\$313,584
PA	70	6	43	21	7	58	\$232,987
RI	34	1	8	25	2	23	\$680,300
SC	102	25	44	33	27	67	\$261,325
SD	18	2	8	8	4	13	\$110,670
TN	116	17	64	35	19	93	\$535,404
TX	163	27	84	52	28	142	\$694,014
UT	103	10	51	42	10	63	\$689,920
VA	102	14	55	33	14	82	\$1,918,460
VT	2	0	2	0	0	2	\$5,000
WA	72	14	26	32	18	41	\$537,994
WI	104	17	59	28	18	74	\$756,553
WV	23	7	9	7	8	11	\$410,000
WY	15	1	7	7	1	12	\$75,970
GU	1	0	0	1	0	0	\$25,000
CNMI	1	0	1	0	0	1	\$5,000
PR	12	2	8	2	3	15	\$69,500
VI	2	2	0	0	3	0	\$0
Atlantic Ocean*	18	2	7	9	3	14	\$2,816,505
Gulf of Mexico*	2	0	0	2	0	0	\$63,900
Pacific Ocean*	6	1	3	2	1	5	\$37,755

\*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 or more miles in the Gulf of Mexico. NJ did not submit property damage estimates to boats in 2009. However, NJ noted that accidents submitted to the Coast Guard that did not have an injury or death were considered to have \$2000 or more in damages. The Coast Guard adjusted NJ's property damages to boats such that each accident without an injury or death had \$2000 damages.

Figure 9 DISTRIBUTION OF 2010 DEATHS BY STATE  
EXPRESSED AS A PERCENTAGE





**Figure 10 ANNUAL RECREATIONAL BOATING FATALITY RATES 1996-2010**

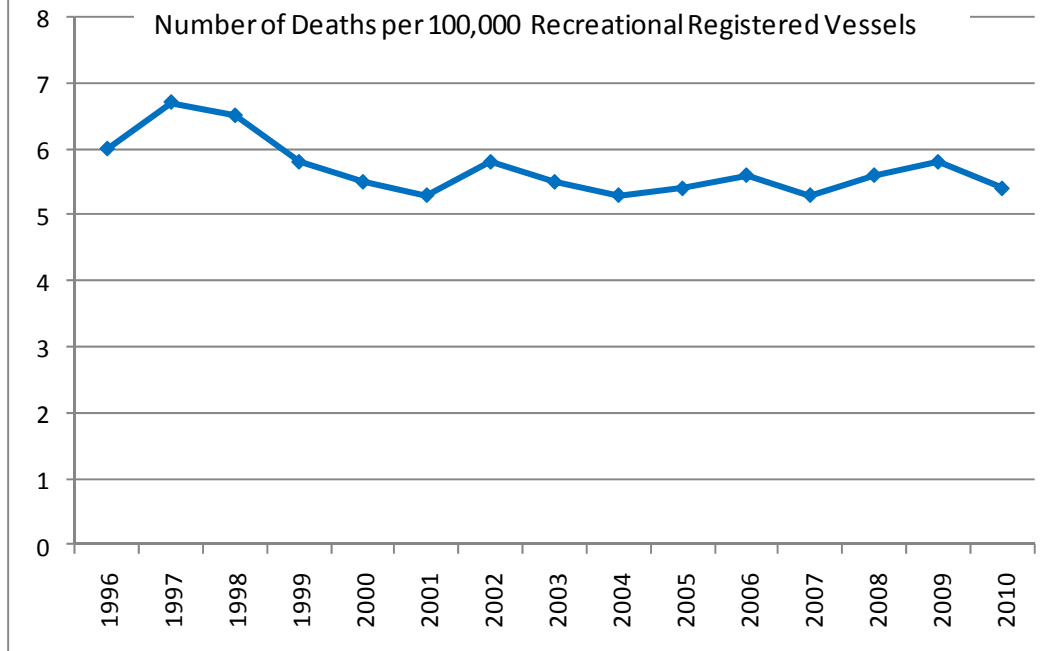
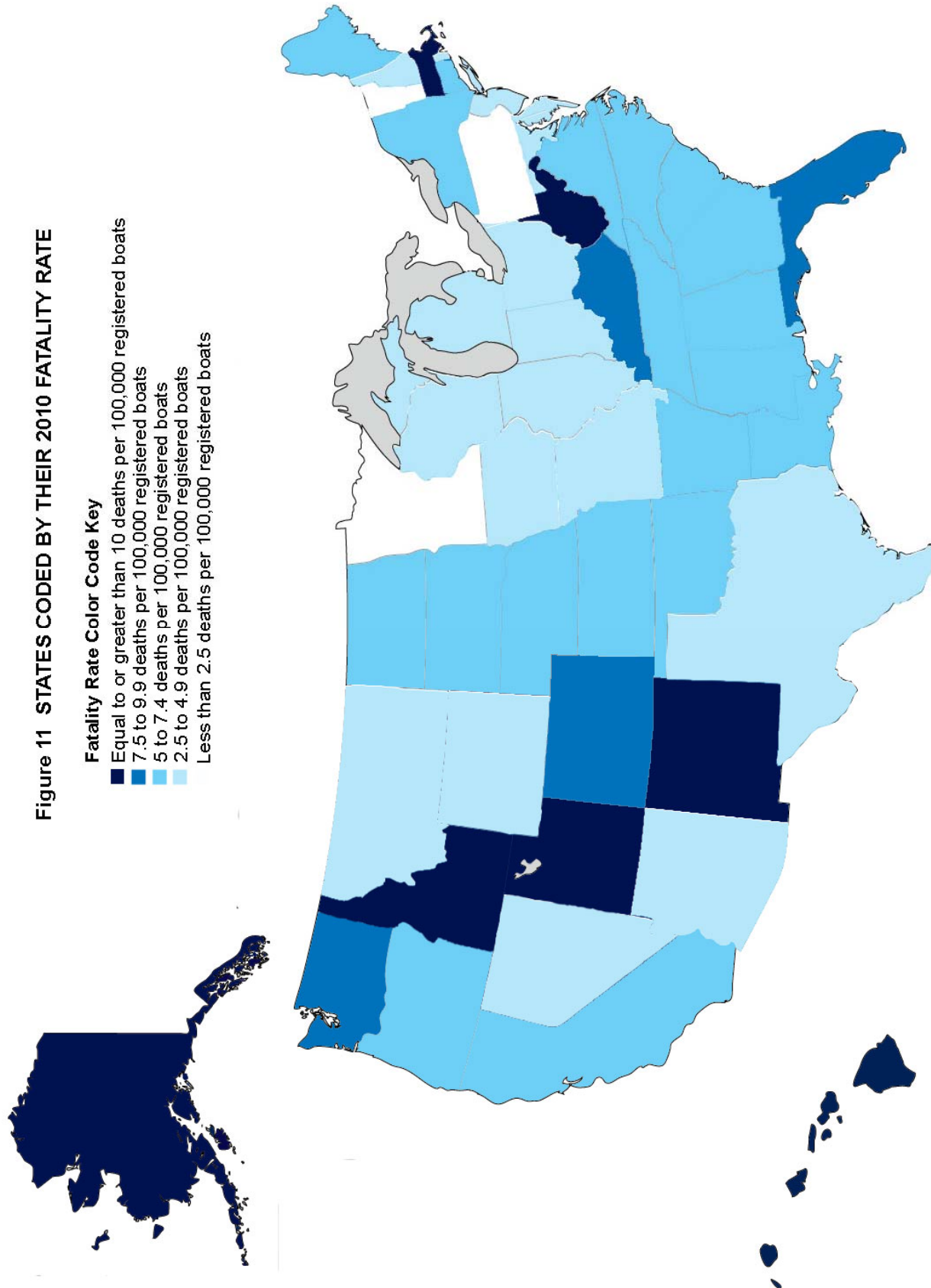


Table 30 - ANNUAL RECREATIONAL BOATING FATALITY RATES 1996-2010			
Year	Total Deaths	Total Registered Vessels	Number of Deaths Per 100,000 Registered Vessels
1996	709	11,877,938	6.0
1997	821	12,312,982	6.7
1998	815	12,565,930	6.5
1999	734	12,738,271	5.8
2000	701	12,782,143	5.5
2001	681	12,876,346	5.3
2002	750	12,854,054	5.8
2003	703	12,794,616	5.5
2004	676	12,781,476	5.3
2005	697	12,942,414	5.4
2006	710	12,746,126	5.6
2007	685	12,875,568	5.3
2008	709	12,692,892	5.6
2009	736	12,721,541	5.8
2010	672	12,438,926	5.4

Figure 11 STATES CODED BY THEIR 2010 FATALITY RATE



Note: This fatality rate is calculated using the number deaths in each state and the number of registered boats in each state. Please be aware that, for some states, the fatality rate includes deaths that occurred on vessels that were not registered. Further, only the contiguous jurisdictions and Hawaii and Alaska are represented.



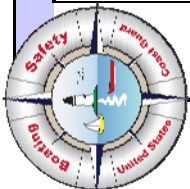
Table 31 • FIVE YEAR SUMMARY OF SELECTED ACCIDENT DATA BY STATE 2006-2010															
	Total Number of Accidents					Fatal Accidents					Deaths				
	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
<b>Totals</b>	4967	5191	4789	4730	4604	633	605	619	646	605	710	685	709	736	672
Alabama	87	96	76	75	90	19	10	11	11	20	24	11	16	14	20
Alaska	48	48	44	19	24	11	11	11	13	8	13	17	14	14	11
Arizona	209	167	158	151	113	14	8	5	3	3	14	8	6	3	6
Arkansas	55	81	66	78	60	6	15	13	16	12	8	18	14	17	14
California	569	601	520	478	412	39	48	39	42	44	42	55	45	47	48
Colorado	44	54	39	60	53	11	7	7	12	6	11	7	7	13	7
Connecticut	42	61	53	56	52	5	7	9	8	6	5	8	11	8	7
Delaware	9	15	11	16	21	2	2	3	1	1	2	2	3	1	2
DC	1	4	2	0	1	1	0	0	0	0	1	0	0	0	0
Florida	633	663	616	610	608	60	67	50	53	65	68	75	55	67	69
Georgia	149	139	150	145	135	18	14	16	11	18	18	18	18	12	19
Hawaii	4	10	21	19	15	4	2	5	7	4	4	2	5	7	4
Idaho	74	63	65	74	67	7	7	15	13	9	10	8	15	15	13
Illinois	70	107	119	96	97	15	11	14	15	14	18	13	19	16	15
Indiana	51	32	55	42	43	6	5	7	13	6	6	7	8	13	8
Iowa	40	47	38	37	54	4	7	0	3	6	5	9	0	3	6
Kansas	39	24	38	27	30	5	5	4	5	4	5	6	5	6	6
Kentucky	65	59	46	62	75	13	13	5	17	14	15	13	6	21	14
Louisiana	119	119	110	120	105	21	28	31	26	16	24	30	38	33	21
Maine	56	90	32	44	34	12	13	8	8	6	12	15	9	8	8
Maryland	138	170	159	174	196	8	8	8	16	9	8	10	9	17	9
Massachusetts	46	36	64	51	60	9	9	11	10	16	10	9	11	10	16
Michigan	185	185	187	131	132	24	30	30	32	25	30	34	34	36	27
Minnesota	113	123	86	82	82	11	12	12	14	11	14	15	12	15	12
Mississippi	31	31	24	39	17	7	7	4	15	7	7	7	5	16	8
Missouri	175	168	135	150	161	16	7	19	16	13	17	7	20	17	14
Montana	16	24	31	20	11	6	4	12	6	2	6	4	14	6	2
Nebraska	33	31	20	31	24	4	6	2	5	5	6	7	2	6	5
Nevada	82	76	80	67	59	4	5	6	6	2	4	5	6	7	2
New Hampshire	79	54	28	60	46	5	5	2	6	3	5	6	2	7	3
New Jersey	84	136	140	126	116	10	8	7	6	8	11	8	10	6	8
New Mexico	34	38	30	34	37	0	1	2	3	7	0	1	3	3	8
New York	152	180	160	148	211	14	18	17	19	24	14	21	24	23	27
North Carolina	175	158	148	144	148	20	19	16	19	23	24	19	18	19	24
North Dakota	7	10	15	7	11	0	0	0	0	3	0	0	0	0	3
Ohio	111	121	125	105	127	12	11	12	9	15	12	14	15	9	16
Oklahoma	71	56	54	55	51	13	11	10	10	12	17	12	11	14	13
Oregon	47	60	53	67	60	17	9	11	11	10	20	9	13	13	11
Pennsylvania	56	64	59	58	70	19	10	8	11	6	25	11	8	11	7
Rhode Island	37	44	35	50	34	3	4	4	1	1	5	4	4	1	2
South Carolina	93	104	107	95	102	13	15	25	7	25	14	16	29	11	27
South Dakota	16	12	16	21	18	3	2	3	3	2	3	2	3	3	4
Tennessee	149	146	130	117	116	15	16	18	19	17	16	17	20	22	19
Texas	195	197	218	168	163	44	40	55	34	27	45	46	61	38	28
Utah	85	71	80	87	103	11	5	5	8	10	12	5	5	11	10
Vermont	1	3	8	4	2	1	1	5	2	0	1	1	5	2	0
Virginia	137	145	95	137	102	20	11	15	23	14	23	12	17	27	14
Washington	96	97	98	111	72	20	22	18	17	14	21	26	22	22	18
West Virginia	21	26	11	32	23	8	5	1	13	7	8	7	1	15	8
Wisconsin	99	119	110	102	104	10	18	19	15	17	10	18	20	16	18
Wyoming	19	8	11	18	15	3	3	2	4	1	3	4	2	4	1
Guam	2	1	1	1	1	1	0	1	0	0	1	0	1	0	0
Puerto Rico	10	7	1	9	12	4	1	0	3	2	5	2	0	4	3
Virgin Islands	0	3	0	1	2	0	0	0	1	2	0	0	0	1	3
AS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CNMI	3	0	1	2	1	0	0	0	0	0	0	0	0	0	0
*AT	2	2	6	4	18	2	1	3	1	2	5	3	3	1	3
*GL	1	5	1	4	2	1	1	1	2	0	1	1	1	2	0
*PC	2	0	3	8	6	2	0	2	1	1	2	0	4	1	1

\*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 or more miles in the Gulf of Mexico.



Table 32 Continued - NUMBER OF ACCIDENTS BY PRIMARY ACCIDENT TYPE & STATE 2010

Injuries		3	27
Total Deaths		3	8
Other Deaths		0	3
Drownings		3	7
Unknown		0	16
Other		1	20
Skier Mishap		9	1
Sinking		1	0
Person Struck by Vessel		1	0
Person Struck by Propeller		0	0
Grounding		9	3
Flooding/Swamping		3	18
Fire/Explosion (unknown origin)		1	6
Fire/Explosion (non-fuel)		0	1
Fire/Explosion (fuel)		0	0
Falls Overboard		4	2
Fall in Vessel		2	6
Electrocution		0	0
Ejected From Vessel		0	5
Departed Vessel		1	3
Collision with Submerged Object		2	8
Collision with Recreational		6	42
Collision with Governmental		0	4
Collision with Commercial		1	0
Collision with Floating Object		1	1
Collision with Fixed Object		0	13
Carbon Monoxide		0	3
Capsizing		4	9
Total Accidents		46	60
NH		0	7
NJ		18	5
NM		2	0
NY		18	3
NC		17	3
ND		1	0
OH		13	1
OK		4	0
OR		9	0
PA		8	0
RI		4	0
SC		8	0
SD		3	0
TN		5	1
TX		6	0
UT		11	0
VT		0	0
VA		11	1
WA		7	0
WV		7	0
WI		6	1
WY		0	3
GU		0	0
PR		1	0
VI		0	0
AS		0	0
CNMI		1	0
AT		0	0
GL		0	0
PC		6	1





**Table 33 - NUMBER OF INJURED VICTIMS BY PRIMARY INJURY & VESSEL TYPE**

Primary Injury	# of Injuries	Airboat	Auxiliary Sailboat	Motorboat	Cabin	Canoe	Houseboat	Inflatable	Kayak	Open Motorboat	Personal Watercraft	Pontoon Boat	Rowboat	Sailboat	Other	Unknown
Amputation	39	0	2	6	0	1	0	0	0	22	4	3	0	0	0	1
Broken Bone	565	11	7	38	2	4	5	1	258	211	15	1	0	4	8	
Burns	79	0	3	35	0	1	0	0	33	4	1	0	0	0	2	
Carbon Monoxide	23	0	1	13	0	5	0	0	4	0	0	0	0	0	0	
Concussion	353	3	1	26	1	2	5	1	190	107	12	1	1	1	2	
Dislocation	70	0	2	4	0	0	1	1	37	20	3	0	2	0	0	
Electric Shock	6	0	0	0	0	6	0	0	0	0	0	0	0	0	0	
Hypothermia	279	0	8	25	44	0	6	19	125	5	7	13	10	6	11	
Internal organ injury	139	0	1	13	5	0	1	3	73	39	3	0	0	0	1	
Laceration	676	6	8	46	1	3	2	2	414	151	34	2	5	0	2	
Scrape/bruise	442	3	8	45	7	5	4	3	207	126	29	2	1	1	1	
Spinal cord injury	31	0	0	4	0	0	0	1	21	4	1	0	0	0	0	
Sprain/Strain	358	3	5	31	1	1	1	2	214	89	9	1	0	0	1	
Other	17	0	0	3	0	1	0	0	7	2	2	0	0	0	2	
Unknown	76	0	2	9	1	0	0	1	39	14	2	0	1	1	6	
<b>All Injuries</b>	<b>3153</b>	<b>26</b>	<b>48</b>	<b>298</b>	<b>62</b>	<b>29</b>	<b>25</b>	<b>34</b>	<b>1644</b>	<b>776</b>	<b>121</b>	<b>20</b>	<b>20</b>	<b>13</b>	<b>37</b>	

**Table 34 - NUMBER OF FATAL VICTIMS BY LIFE JACKET WEAR, CAUSE OF DEATH & VESSEL TYPE 2010**

Cause of Death	Life Jacket Worn?	Number of Deaths	Airboat	Auxiliary Sailboat	Motorboat	Cabin	Canoe	Houseboat	Inflatable	Kayak	Open Motorboat	Personal Watercraft	Pontoon Boat	Rowboat	Sailboat	Other	Unknown
Carbon Monoxide	No	5	0	0	2	0	3	0	0	0	0	0	0	0	0	0	0
Carbon Monoxide	Unknown	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Cardiac Arrest	Yes	8	0	0	0	0	0	0	0	1	4	3	0	0	0	0	0
Cardiac Arrest	No	6	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0
Cardiac Arrest	Unknown	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Drowning	Yes	57	0	1	0	9	0	7	16	18	2	0	3	1	0	0	0
Drowning	No	395	0	10	18	72	1	13	24	184	7	22	26	5	8	5	5
Drowning	Unknown	32	0	2	1	5	0	2	2	11	0	3	4	0	1	1	1
Hypothermia	Yes	5	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0
Hypothermia	No	6	0	0	0	0	1	0	0	2	0	0	1	2	0	0	0
Other	No	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Trauma	Yes	49	1	0	0	0	0	0	0	1	24	22	0	0	0	1	0
Trauma	No	59	1	1	7	0	0	0	0	46	0	2	0	0	0	0	2
Trauma	Unknown	15	0	0	1	0	0	0	0	11	0	1	0	0	0	0	2
Unknown	Yes	3	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0
Unknown	No	13	0	0	0	1	0	0	3	5	2	1	1	0	0	0	0
Unknown	Unknown	16	0	0	2	2	0	0	3	8	0	0	0	0	1	0	0
<b>All Causes</b>		<b>672</b>	<b>2</b>	<b>15</b>	<b>31</b>	<b>89</b>	<b>5</b>	<b>22</b>	<b>52</b>	<b>325</b>	<b>38</b>	<b>29</b>	<b>35</b>	<b>8</b>	<b>11</b>	<b>10</b>	

# REGISTRATION DATA



### Explanation of Registration Data Section

The following section contains five tables and figures that examine boat registration information. Registered vessels are those vessels that are required to be recorded by a state, which includes numbered vessels and other forms of registration. Without a record, a vessel cannot be legally operated. Not all states have the same registration requirements. While some states may only register vessels with a motor, others may register sailboats, canoes, kayaks, and rowboats in addition to those vessels with a motor.

#### **Recreational Vessel Registration by Year, 1980-2010 (Table 35 & Figure 12, Page 63)**

This table provides information about recreational vessel registration for each year from 1980-2010. The accompanying figure displays a trend line from 1980-2010.

#### **Recreational Vessel Registration by Length & Means of Propulsion (Table 36, Page 64)**

The top section of the table provides tallies for the number of mechanically-propelled vessels, the number of manually-propelled vessels, and a summation of these two categories. The middle section of the table documents mechanically-propelled vessel registration by length category and engine type. The bottom section of the table focuses on mechanically propelled vessels.

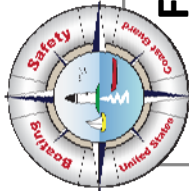
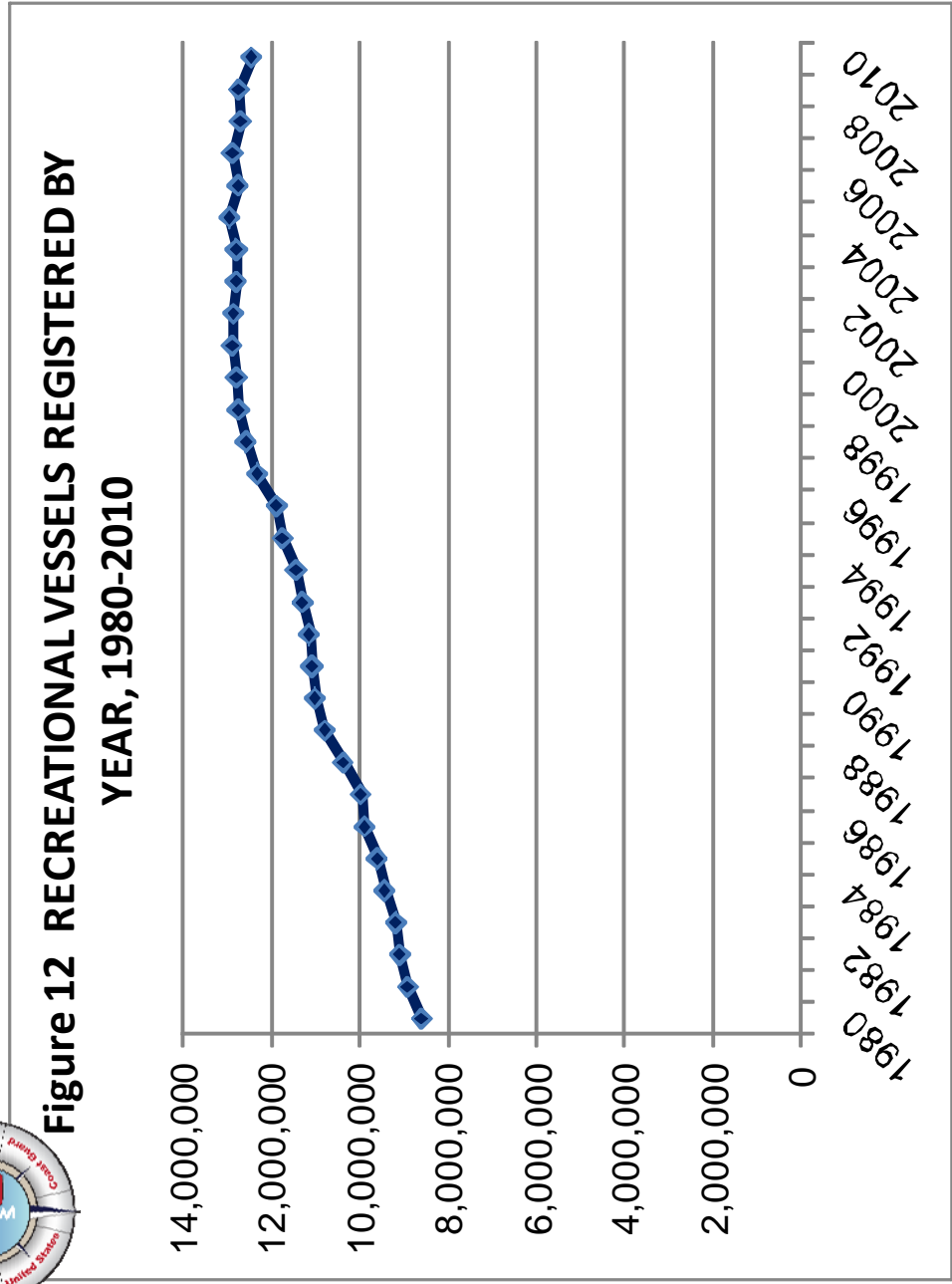
#### **Registration Data by State (Table 37, Page 65)**

This table examines recreational vessel registration by state. It provides a ranking of states by vessel registration, specifies the scope of the state's registration program, and provides a two-year comparison of registration information.

#### **Distribution of 2009 Recreational Vessel Registration by State (Figure 13, Page 66)**

This figure provides the percentage that each state contributed to national registration. So, for instance, California registered 810,008 vessels. Out of the total national registration of 12,438,926, California contributed 6.5%  $((810,008/12,438,926) * 100)$  of registered vessels to the national count.

Table 35 - RECREATIONAL VESSELS REGISTERED BY YEAR, 1980-2010	
Year	Registered
1980	8,577,857
1981	8,905,097
1982	9,073,972
1983	9,165,094
1984	9,420,011
1985	9,589,483
1986	9,876,197
1987	9,963,696
1988	10,362,613
1989	10,777,370
1990	10,996,253
1991	11,068,440
1992	11,132,386
1993	11,282,736
1994	11,429,585
1995	11,734,710
1996	11,877,938
1997	12,312,982
1998	12,565,930
1999	12,738,271
2000	12,782,143
2001	12,876,346
2002	12,854,054
2003	12,794,616
2004	12,781,476
2005	12,942,414
2006	12,746,126
2007	12,873,091
2008	12,692,892
2009	12,721,541
2010	12,438,926





**Table 36 • RECREATIONAL VESSEL REGISTRATION BY LENGTH AND MEANS OF PROPULSION 2010**

Mechanically Propelled	Not Mechanically Propelled			Total		
11,597,326	841,600			12,438,926		
<b>STATE REGISTERED BOATS THAT ARE MECHANICALLY PROPELLED</b>						
	Means of Mechanical Propulsion			Auxiliary Sail		Total
	Inboard	Outboard	Stern drive	Inboard	Outboard	
Under 16 feet	1,370,660	3,262,122	159,276	9,790	17,872	4,819,720
16 to less than 26 feet	726,979	4,206,305	1,227,313	13,357	39,471	6,213,425
26 to less than 40 feet	167,429	115,954	151,859	38,529	10,908	484,679
40 to 65 feet	42,425	7,274	12,150	5,563	807	68,219
Over 65 feet	5,900	2,313	2,953	97	20	11,283
<b>Total</b>	<b>2,313,393</b>	<b>7,593,968</b>	<b>1,553,551</b>	<b>67,336</b>	<b>69,078</b>	<b>11,597,326</b>
<b>STATE REGISTERED BOATS NOT MECHANICALLY PROPELLED</b>						
Rowboats	Sailboats	Canoes/Kayaks		Other Boats	Total	
106,017	123,289	396,009		216,285	841,600	

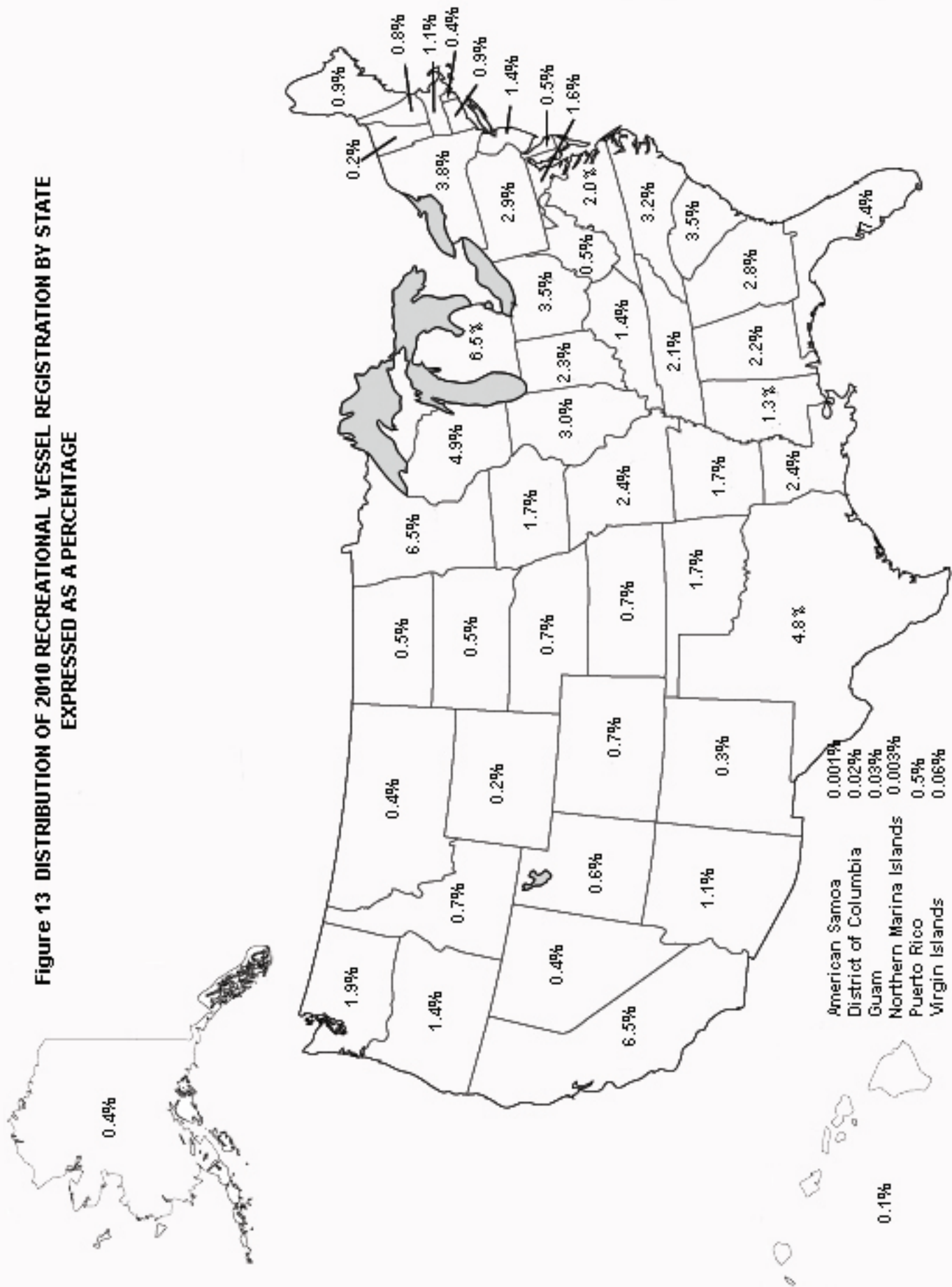


**Table 37 - RECREATIONAL VESSEL REGISTRATION DATA BY STATE 2009-2010**

		2010	2009	Scope of Current Boat Registration System
<b>Nationally</b>		<b>12,438,926</b>	<b>12,721,541</b>	
AL	17	271,377	270,726	All motorboats, sailboats and rental boats
AK	46	48,891	48,892	All undocumented powerboats
AS	56	66	107	All watercraft
AZ	30	135,326	136,463	All watercraft, except inflatables 12 feet in length or less
AR	23	205,925	198,805	All motorboats and sailboats
CA	4	810,008	906,988	All motorboats; sailboats over 8 feet in length
CO	34	91,424	95,822	All watercraft powered by motor or sail - sailboards exempt
CT	32	108,078	109,213	All motorboats; sailboats 19.5 feet or more in length
DE	40	62,983	61,523	All motorboats
DC	54	3,017	2,798	All watercraft
FL	1	914,535	949,030	All motorboats
GA	13	353,950	352,054	All motorboats; sailboats 12 feet or more in length
GU	53	4,039	3,197	All watercraft (estimated)
HI	51	14,835	15,709	All motorboats; sailboats over 8 feet in length
ID	36	87,662	90,501	All motorboats and sailboats
IL	11	370,522	373,530	All watercraft, except non-profit org. owned canoes and kayaks
IN	16	281,908	268,424	All motorboats
IA	21	209,660	247,190	All watercraft with exceptions (a)
KS	35	89,315	90,522	All motorboats and sailboats
KY	26	175,863	176,535	All motorboats, except electric motors 1 hp or less
LA	14	302,141	303,111	All motorboats; sailboats more than 12 feet in length
ME	31	111,873	109,169	All motorboats
MD	24	193,259	196,806	All motorboats
MA	29	141,959	142,625	All motorboats
MI	3	812,066	811,670	All watercraft with exceptions (b)
MN	2	813,976	811,775	All motorboats with exceptions (c)
MS	28	156,216	194,016	All motorboats and sailboats
MO	15	297,194	314,131	All motorboats; sailboats over 12 feet in length
MT	45	52,105	83,394	All motorboats; sailboats 12 feet or more in length
NE	37	83,832	80,089	All motorboats
NV	44	53,464	56,053	All motorboats, sailboats, rowboats
NH	33	94,773	95,402	All motorboats; sailboats 20 feet or more in length
NJ	27	169,750	173,994	All watercraft with exceptions (d)
NM	48	37,340	36,544	All motorboats and sailboats
NY	7	475,689	479,161	All motorboats
NC	10	400,846	405,663	All motorboats; sailboats more than 14 feet in length
ND	43	56,128	51,609	All watercraft
CNMI	55	324	314	All motorboats
OH	9	430,710	424,877	All watercraft; *5576 livery vessels included in '08; 5522 livery vessels not included in '07
OK	22	209,457	205,079	All watercraft
OR	25	177,634	180,522	All motorboats; sailboats 12 feet or more in length
PA	12	365,872	337,747	All motorboats and certain non-powered craft (e)
PR	41	61,578	60,627	All motorboats; vessels adapted to hold a motor
RI	47	45,930	42,519	All watercraft except canoes, kayaks & rowboats < 12 feet
SC	8	435,491	435,528	All watercraft
SD	42	56,624	60,094	All motorboats; all other boats over 12 feet in length
TN	18	266,185	269,361	All motorboats and sailboats
TX	6	596,830	622,184	All motorboats and sailboats 14 feet or more in length
UT	38	70,321	72,419	All motorboats and sailboats
VT	49	30,315	30,480	All motorboats
VI	52	7,705	5,765	All watercraft
VA	19	245,940	249,235	All motorboats
WA	20	237,921	269,845	All motorboats with exceptions (f); sailboats >16 ft in length
WV	39	64,510	57,415	All motorboats
WI	5	615,335	626,304	All motorboats; sailboats over 12 feet in length
WY	50	28,249	27,955	All motorboats and sailboats

(a) Iowa excludes inflatables under 7 feet in length and canoes/kayaks under 13 feet in length. (b) Michigan excludes manually propelled boats 16 feet or less in length, and nonmotorized rafts, canoes, and kayaks. (c) Minnesota excludes nonmotorized boats nine feet or less in length, duckboats during duckhunting season, and riceboats during harvest season and seaplanes. (d) New Jersey excludes non-motorized boats 12 feet or less in length and canoes, kayaks, racing shells and rowing sculls. (e) Pennsylvania registers non-powered craft using lakes or access areas owned by the State Fish & Boat Commission. (f) Washington excludes motorboats < 16 feet with motors 10 horsepower or less used solely on exclusive state waters.

**Figure 13 DISTRIBUTION OF 2010 RECREATIONAL VESSEL REGISTRATION BY STATE  
EXPRESSED AS A PERCENTAGE**



U.S. Dept. of Homeland Security U.S. Coast Guard CG-3865 (Rev. 07-08)	<b>Recreational Boating Accident Report</b>	OMB No: 1625-0003 Expires: 7/31/2011
--	---	---

NOTE: each boat operator/owner involved in an accident should submit a separate report.  
 Estimated report form completion time: 30 min  
 For each question below, please provide answers IF APPLICABLE AND IF KNOWN, otherwise leave blank.

**REPORT SUBMISSION**

**Report required because** (select all that apply):

At least one person in this accident *died*:  
 If so, how many?

At least one injured person in this accident *required or was in need of treatment beyond first aid*:  
 If so, how many?

At least one person in this accident *disappeared* and has not yet been recovered:  
 If so, how many?

All boat and other property *damage* (e.g., fishing/hunting gear) caused by this accident *totaled* (or likely totaled) \$2,000 or more:  
 Approximate value of damage to *your* boat: \$   
 Approximate value of damage to *your* other property: \$

Your or another *boat* in this accident was (or likely was) a *total loss*

**Report submitted by** (select all that apply):

Boat Operator (required if possible)

Boat Owner (if operator unable, or same as operator)

Other (describe):

First name:  Last name:

Phone:  -  -

**To be submitted within:**  
 48 hours (if injury, disappearance or death)  
 10 days (if boat/property *damage only*)

**To be submitted to:**  
 (Local State Reporting Authority)

Phone: ( )

You may submit any comments concerning the the accuracy of the burden estimate or any suggestions for reducing the burden to: Commandant (CG-5422), U.S. Coast Guard, Washington, DC 20593-0001 or Office of Management and Budget, Paperwork Reduction Project (1625-0003), Washington, DC 20503.

**For State Agency Use Only**

First name:

Last name:

Phone:

Primary cause of accident:

**ACCIDENT SUMMARY**

**WHEN**

Date:  /  /  mm/dd/yy

Time:  :   am  pm (select one)

**WHERE**

Body of water name:

Location (on water) description:

Nearest city/town:

County:

State:

**YOUR BOAT - PEOPLE**

# people <i>on board</i> (including operator):	<input style="width: 90%;" type="text"/>
# people <i>being towed</i> (e.g., on tubes, skis):	<input style="width: 90%;" type="text"/>
# people <i>wearing lifejackets</i> (on board or towed):	<input style="width: 90%;" type="text"/>

**OTHER BOATS INVOLVED IN ACCIDENT**

# of *other* boats involved?

**ACCIDENT DESCRIPTION**

*Briefly* describe this accident (attach extra pages if necessary):

**DAMAGE TO YOUR BOAT**

*Briefly* summarize any damage to *your* boat:

**DAMAGE TO YOUR OTHER PROPERTY (NOT BOAT)**

*Briefly* summarize any damage to *your* other property (not boat):

USCG Boating Accident Report Form

For each question below, please provide answers IF APPLICABLE AND IF KNOWN, otherwise leave blank.

**YOUR BOAT**

<b>BOAT IDENTIFICATION</b>													
Your boat name:	<input type="text"/>	Manufacturer:	<input type="text"/>										
Model name:	<input type="text"/>	Model year:	<input type="text"/>										
Registration #:	<input type="text"/>	Documentation #:	<input type="text"/>										
Hull Identification # (HIN):	<table border="1"><tr><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td></tr></table>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Rented:	<input type="radio"/> Yes <input type="radio"/> No
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>				

<b>SIZE ESTIMATES</b>			
Length:	<input type="text"/> ft.	Depth from transom (stern) to keel (bottommost point):	<input type="text"/> ft. <input type="text"/> in.
Beam width at widest point:		<input type="text"/> ft.	

<b>HULL MATERIAL</b>			
<b>Type of hull material</b> (select one):			
<input type="radio"/> Fiberglass	<input type="radio"/> Wood	<input type="radio"/> Rubber/vinyl/canvas	<input type="radio"/> Other (describe): <input type="text"/>
<input type="radio"/> Aluminum	<input type="radio"/> Steel	<input type="radio"/> Plastic	

<b>BOAT TYPE</b>			
<b>Boat type</b> (select one):		<b>Available propulsion</b> (select all that apply):	
<input type="radio"/> Cabin motorboat	<input type="radio"/> Inflatable	<input type="radio"/> Canoe	<input type="radio"/> Personal watercraft (PWC)
<input type="radio"/> Open motorboat	<input type="radio"/> Houseboat	<input type="radio"/> Rowboat	(e.g., Wave Runner™, Jet Ski™, Sea-Doo™)
<input type="radio"/> Auxiliary sail	<input type="radio"/> Sail (only)	<input type="radio"/> Air boat	
<input type="radio"/> Pontoon boat	<input type="radio"/> Kayak	<input type="radio"/> Other (describe): <input type="text"/>	
		<input type="checkbox"/> Propeller	<input type="checkbox"/> Air thrust
		<input type="checkbox"/> Sail	<input type="checkbox"/> Other (describe): <input type="text"/>
		<input type="checkbox"/> Manual	
		<input type="checkbox"/> Water jet	

<b>ENGINE</b>			
<b># engines:</b> <input type="text"/>	<b>Engine type and horsepower</b> (select one):		<b>Fuel type</b> (select all that apply):
<b>Manufacturer:</b> <input type="text"/>	<input type="radio"/> Outboard	<input type="radio"/> Sterndrive (I/O)	<input type="radio"/> Inboard <input type="radio"/> None
	Total horsepower: <input type="text"/> hp		<input type="checkbox"/> Gasoline <input type="checkbox"/> Electric
			<input type="checkbox"/> Diesel

<b>SAFETY MEASURES</b>			
Organizations that have conducted a vessel safety check (VSC) on board your boat within the past year (including carriage of safety equipment, e.g., lifejackets, anchor and line, fire extinguishers):			
<input type="checkbox"/> Federal Agency (Name): <input type="text"/>		<input type="checkbox"/> State Agency (Name): <input type="text"/>	
<input type="checkbox"/> US Coast Guard Auxiliary: VSC Decal? <input type="radio"/> Yes <input type="radio"/> No		<input type="checkbox"/> Other Agency (Name): <input type="text"/>	
<input type="checkbox"/> US Power Squadrons: VSC Decal? <input type="radio"/> Yes <input type="radio"/> No			
<b># Life jackets on board:</b> <input type="text"/>	<b># Fire extinguishers on board:</b> <input type="text"/>	<b>Type of fire extinguishers</b> (e.g., ABC): <input type="text"/>	
	<b># Fire extinguishers used:</b> <input type="text"/>	<b>Amount of fire extinguisher used:</b> <input type="text"/>	

**ACCIDENT DETAILS - EXTERNAL CONDITIONS**

<b>WEATHER</b>			
<b>Overall weather was</b> (select one):	<b>It was</b>	<b>Visibility was</b>	<b>Wind was</b> (select one):
<input type="radio"/> Clear	(select one):	(select one):	<input type="radio"/> 0 mph (none)
<input type="radio"/> Raining	<input type="radio"/> Day	<input type="radio"/> Good	<input type="radio"/> Over 0, up to 12 mph (light)
<input type="radio"/> Cloudy	<input type="radio"/> Night	<input type="radio"/> Fair	<input type="radio"/> Over 12, up to 25 mph (moderate)
<input type="radio"/> Snowing		<input type="radio"/> Poor	<input type="radio"/> Over 25, up to 55 mph (strong)
<input type="radio"/> Foggy			<input type="radio"/> Over 55 mph (stormy)
<input type="radio"/> Hazy			
<input type="radio"/> Other (describe): <input type="text"/>			
	Approximate air temperature: <input type="text"/> °F		

<b>WATER</b>			
<b>Overall water conditions</b> (select one):		<b>Other water conditions:</b>	
<input type="radio"/> Up to 6 in. waves (calm)		Approximate water temperature: <input type="text"/> °F	
<input type="radio"/> Over 6 in., up to 2 ft. waves (choppy)		Strong current? <input type="radio"/> Yes <input type="radio"/> No	
<input type="radio"/> Over 2 ft., up to 6 ft waves (rough)		Hazardous waters?(e.g., rapid tidal flow, currents) <input type="radio"/> Yes <input type="radio"/> No	
<input type="radio"/> Over 6 ft. waves (very rough)		Congested waters? <input type="radio"/> Yes <input type="radio"/> No	

For each question below, please provide answers IF APPLICABLE AND IF KNOWN, otherwise leave blank.

**ACCIDENT DETAILS - ACTIVITIES AND OPERATIONS ON YOUR BOAT**

**OPERATOR/PASSENGER ACTIVITIES**

Operator/passenger activities on *your* boat at time of accident :

Activities were (select one):

- Recreational
- Commercial

Operator/passenger activities (select all that apply):

- Fishing
- Hunting
- White water activity (e.g., rafting)
- Tubing
- Water Skiing
- Starting engine
- Making repairs
- Relaxing

Other (list):

**BOAT OPERATIONS**

Your boat operations at time of accident (select all that apply):

- Cruising (underway under power)
- Changing direction
- Changing speed
- Sailing
- Drifting
- At anchor
- Being towed
- Other (list):
- Racing
- Rowing/paddling
- Tied to dock/mooring
- Towing another vessel
- Launching
- Docking/undocking

**ACCIDENT DETAILS - CONTRIBUTING FACTORS ON YOUR BOAT**

**CONTRIBUTING FACTORS**

Indicate factors on *your* boat which may have contributed to this accident (select all that apply):

- Alcohol use
- Drug use
- Excessive speed
- Improper anchoring
- Improper loading
- Overloading
- Improper lookout
- Other (describe):
- Operator inattention
- Operator inexperience
- Language barrier
- Navigation rules violation
- Failure to vent
- Dam/lock
- Force of wake/wave
- Hazardous waters
- Heavy weather
- Hull failure
- Ignition of fuel or vapor
- Starting in gear
- Sharp turn
- Restricted vision (e.g., fog)
- Missing/inadequate aids to navigation (e.g., buoy, daymarker)
- Inadequate on-board navigation lights
- People on gunwale, bow or transom

**ACCIDENT DETAILS - YOUR BOAT**

**MACHINERY/EQUIPMENT FAILURE**

Failure of the following machinery/equipment on *your* boat contributed to this accident (select all that apply):

- Engine
- Electrical system
- Fuel system
- Onboard navigation aids (e.g., GPS, Loran)
- Sail/mast
- Onboard lights
- Seats
- Steering
- Throttle
- Shift
- Radio
- Auxiliary equipment
- Sound equipment (e.g., horn, whistle)
- Fire extinguisher
- Ventilation
- Other (list):

**ACCIDENT DETAILS - EVENTS ON YOUR BOAT**

**ACCIDENT EVENTS**

Types of events occurring to/on *your* boat during accident (select all that apply):

- Collision with recreational boat
- Collision with commercial boat (e.g., tug, barge)
- Collision with fixed object (e.g., dock, bridge)
- Collision with submerged object (e.g., stump, cable)
- Collision with floating object (e.g., log, buoy)
- Capsizing
- Grounding
- Sinking
- Other (describe):
- Flooding/swamping
- Fire/explosion - fuel
- Fire/explosion - non-fuel
- Carbon monoxide exposure
- Mishap of skier, tuber, wakeboarder, etc.
- Person left boat voluntarily
- Person ejected from boat (caused by collision or maneuver)
- Person fell overboard
- Person fell on/within boat
- Sudden medical condition
- Person struck by boat
- Person struck by propeller or propulsion unit
- Person electrocuted

USCG Boating Accident Report Form

For each question below, please provide answers IF APPLICABLE AND IF KNOWN, otherwise leave blank.

**ACCIDENT DETAILS - YOUR BOAT -  
INJURED PEOPLE RECEIVING OR IN NEED OF TREATMENT BEYOND FIRST AID**

Report only injured people on, struck by, or being towed by *your boat*, receiving or in need of treatment beyond first aid. Do not report injured people on, struck by, or being towed by *another boat or no boat* (e.g., swimmers, people on a dock). If more than one injured person to report, attach additional copies of this page. If none, SKIP INJURED PEOPLE section.

**INJURED PERSON**

First:  MI:  Last:

Street:

City:  State:  Zip:  -

Phone:  -  -  Age:

**INJURY DETAILS**

<p><b>Injury caused when person</b> (select all that apply):</p> <p><input type="checkbox"/> Struck the: <input type="text"/> (e.g., boat, water)</p> <p><input type="checkbox"/> Was struck by a: <input type="text"/> (e.g., boat, propeller)</p> <p><input type="checkbox"/> Was exposed to carbon monoxide poisoning</p> <p><input type="checkbox"/> Received an electric shock</p> <p><input type="checkbox"/> Other (describe): <input type="text"/></p> <p>Person was wearing lifejacket? <input type="radio"/> Yes <input type="radio"/> No</p> <p>Person received treatment beyond first aid? <input type="radio"/> Yes <input type="radio"/> No</p> <p>Person was admitted to a hospital? <input type="radio"/> Yes <input type="radio"/> No</p>	<p><b>Nature of most serious injury</b> (select one):</p> <p><input type="radio"/> Scrape/bruise <input type="radio"/> Dislocation</p> <p><input type="radio"/> Cut <input type="radio"/> Internal organ injury</p> <p><input type="radio"/> Sprain/strain <input type="radio"/> Amputation</p> <p><input type="radio"/> Concussion/brain injury <input type="radio"/> Burn</p> <p><input type="radio"/> Spinal cord injury <input type="radio"/> Other (describe): <input type="text"/></p> <p><input type="radio"/> Broken/fractured bone</p> <p>Body part of most serious injury (e.g., head, hip, knee): <input type="text"/></p>
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**ACCIDENT DETAILS - YOUR BOAT - DEATHS/DISAPPEARANCES**

Only report deaths/disappearances of people on, struck by, or being towed by *your boat*. If more than one death/disappearance to report, attach additional copies of this page. If none, SKIP DEATHS/DISAPPEARANCES section.

**PERSON WHO DIED/DISAPPEARED**

First:  MI:  Last:

Street:

City:  State:  Zip:  -

Phone:  -  -  Age:

**DETAILS OF DEATH/DISAPPEARANCE**

<p><b>Injury caused when person</b> (select all that apply):</p> <p><input type="checkbox"/> Struck the: <input type="text"/> (e.g., boat, water)</p> <p><input type="checkbox"/> Was struck by a: <input type="text"/> (e.g., boat, propeller)</p> <p><input type="checkbox"/> Was exposed to carbon monoxide poisoning</p> <p><input type="checkbox"/> Received an electric shock</p> <p><input type="checkbox"/> Other (describe): <input type="text"/></p>	<p><b>Nature of death/disappearance</b> (select one):</p> <p><input type="radio"/> Death - by drowning</p> <p><input type="radio"/> Death - other likely cause (describe): <input type="text"/></p> <p><input type="radio"/> Disappeared and not yet recovered</p> <p>Person was wearing lifejacket? <input type="radio"/> Yes <input type="radio"/> No</p>
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For each question below, please provide answers IF APPLICABLE AND IF KNOWN, otherwise leave blank.

**ACCIDENT DETAILS - YOUR BOAT OPERATOR**

**OPERATOR INSTRUCTION**

Boating safety instruction completed (select all that apply):

None

State course

USCG Auxiliary course

US Power Squadrons course

Internet (name of sponsoring organization):

Other (describe):

**OPERATOR SAFETY MEASURES**

On board, prior to accident, was operator wearing:

A lifejacket?

Yes  No

An engine cut-off switch (Lanyard or wireless device) if equipped?

Yes  No

On board, prior to accident, was operator using:

Alcohol?

Yes  No

Drugs?

Yes  No

Operator arrested for Boating Under the Influence?

Yes  No

Weather reports consulted prior to accident?

Yes  No

**OPERATOR EXPERIENCE**

Experience operating this type of boat (select one):

0 to 10 hours  Over 100, up to 500 hours

Over 10, up to 100 hours  Over 500 hours

**ACCIDENT DETAILS - OTHER KEY PEOPLE**

Only report other key people not already documented as injured, died, disappeared or operator/owner of your boat. If more than two other key people to report, attach additional copies of this page.

**NAME/ADDRESS**

This other key person was a(n) (select all that apply):

Other boat operator  Other boat owner  Owner of other damaged property  Passenger on your boat  Witness

First:  MI:  Last:

Street:

City:  State:  Zip:  -

Other boat name (if any):  Phone:  -  -

Other boat registration # (if any):

**NAME/ADDRESS**

This other key person was a(n) (select all that apply):

Other boat operator  Other boat owner  Owner of other damaged property  Passenger on your boat  Witness

First:  MI:  Last:

Street:

City:  State:  Zip:  -

Other boat name (if any):  Phone:  -  -

Other boat registration # (if any):

USCG Boating Accident Report Form

For each question below, please provide answers IF APPLICABLE AND IF KNOWN, otherwise leave blank.

**YOUR BOAT OPERATOR**

**NAME/ADDRESS**

First:  MI:  Last:   
 Street:   
 City:  State:  Zip:  -

**AGE/GENDER/PHONE**

Age:  Gender:  Male  Female Phone:  -  -

**YOUR BOAT OWNER**

If same as *your* boat operator SKIP rest of YOUR BOAT OWNER section.

**NAME/ADDRESS/PHONE**

First:  MI:  Last:   
 Street:   
 City:  State:  Zip:  -   
 Phone:  -  -

**PERSON SUBMITTING THIS REPORT**

If same as *your* boat operator OR owner, SKIP rest of PERSON SUBMITTING THIS REPORT section.

**NAME/ADDRESS/PHONE/ROLE**

First:  MI:  Last:   
 Street:   
 City:  State:  Zip:  -   
 Phone:  -  -

I was a(n) (select one):

- Other person on board *this* boat
- Accident witness *not* on board *this* boat
- Other (describe):

**SIGNATURE OF PERSON SUBMITTING THIS REPORT**

Your signature:  Date:     mm/dd/yy

An Agency may not conduct or sponsor and a person is not required to respond to an information collection, unless it displays a currently valid OMB Control Number.  
 The Coast Guard estimates that the average burden for this report form is 30 minutes. You may submit any comments concerning the accuracy of this burden estimate or any suggestions for reducing the burden to: Commandant (CG-5422), U.S. Coast Guard, Washington, DC 20593-0001 or Office of Management and Budget, Paperwork Reduction Project (1625-0003), Washington, DC 20503.



## Glossary

**Airboat** - A boat propelled by an engine producing air thrust. This type of boat does not include ground effect vessels or air cushion vehicles (hovercraft).

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

**Auxiliary Sailboat** - A sailboat also equipped with an engine.

**Cabin Motorboat** - A motorboat equipped with accommodation spaces, i.e., bunks or berths.

**Canoe** - A small narrow boat, propelled by paddles. Canoes usually are pointed at both bow and stern and are normally open on top, but can be covered.

**Capsizing** - Overturning of a vessel.

**Carbon Monoxide Poisoning** - Death or injury resulting from an odorless, colorless gas generated from auxiliary boat equipment (stoves, heaters, refrigerators, generators, hot water heaters, etc.), another boat’s exhaust, or the exhaust of the vessel on which persons were either aboard or in close proximity.

**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.

**Collision with Commercial/Governmental/Recreational Vessel** - Any striking together of two or more vessels, regardless of operation at the time of the accident, is a collision.

**Collision with Submerged Object** - A boat’s collision with any waterborne or fixed object that is below the surface of the water.

**Congested Waters** - Where the body of water is either too small or narrow to safely accommodate the number of boats on it.

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

**Documented Vessel** - 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.

**Electrocution** - Death or injury resulting from an electrical current that comes in contact with water causing electrocution of the victim.

**Excessive Speed** - Speed above that which a reasonable and prudent person would have operated under the conditions that existed. It is not necessarily a speed in excess of a posted limit.

**Failure to Vent** - Prior to starting the engine, failure to turn on the powered ventilation system that brings in “fresh air” and expels gasoline vapors from the engine compartment.

**Fall in Vessel** - Any operator or passenger who slips, trips, or falls on board or within the vessel.

**Falls Overboard** - Any operator or passenger who falls off of the vessel.

**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.

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

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

**Force of Wave/Wake** - The track in the water of a moving boat; commonly used for the disturbance of the water (waves) resulting from the passage of the boat's hull.

**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.

**Hazardous Waters** - Rapid tidal flows (the vertical movement of water) and/or currents (the horizontal flow of water) resulting in hazardous conditions in which to operate a boat.

**Houseboat** - A motorized vessel designed primarily with accommodation spaces with little or no fore-deck or cockpit, with low freeboard and with a low length to beam ratio.

**Hull Failure** - Defect or failure of the structural body of a vessel (i.e., hull material, design, or construction) not including superstructure, masts, or rigging.

**Ignition of Spilled Fuel or Vapor** - Accidental combustion of vessel fuel, liquids, and/or their vapors.

**Improper Anchoring** - Where a boat is either in the process of being anchored incorrectly or incorrectly held in place in the water by an anchor.

**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. Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

**Inflatable** - A vessel constructed with its sides and bow made of flexible tubes containing pressurized gas. On smaller inflatables, the floor and hull beneath it is often flexible. On larger inflatables, the boat often has a rigid floor and solid hull capable of supporting a more powerful transom mounted outboard engine or even an inboard engine.

**Kayak** - A small boat with a cockpit that is propelled by a double-bladed paddle by a sitting paddler.

**Inadequate On-board Navigation Lights** - Insufficient and/or improper lights shown by a boat that indicate course, position, and occupation, such as fishing or towing.

**Machinery Failure** - Defect and/or failure in the machinery or material, design or construction, or components installed by the manufacturer involved in the mechanical propulsion of the boat (e.g., engine, transmission, fuel system, electric system, and steering system).

**Missing or Inadequate Navigation Aids** - The absence of or ineffective presence of navigation aids.

**Motorboat** - Any vessel equipped with propulsion machinery.

**Numbered vessel** - An undocumented vessel numbered by a state with an approved numbering system 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.

**Operator Inattention** - Failure on the part of the operator to pay attention to the vessel, its occupants, or the environment in which the vessel is operating.

**Operator Inexperience** - Lack of practical experience or knowledge in operating a vessel or, more particularly, the vessel involved in the accident.

**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.

**People on Gunwale, Bow or Transom** - Standing/Sitting on the upper edge of the side of a boat, usually on a small projection above the deck; and/or standing/sitting on the most forward part of the boat; and/or standing/sitting on the back of the boat.

**Person Struck by Vessel** - A person is struck by a boat.

**Person Struck by Propeller** - A person is struck by the propeller, propulsion unit, or steering machinery.

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

**Pontoon Boat** - A boat consisting of a rigid structure connecting at least two parallel fore (front) and aft (back) rigid sealed buoyancy chambers.

**Restricted Vision** - A vessel operator's vision is said to be restricted when it is limited by a vessel's bow high trim, or by glare, sunlight, bright lights, a dirty windshield, spray, a canopy top, etc.

**Rowboat** - A open boat propelled by one or more persons using oars.

**Rules of the Road Infraction** - Violation of the statutory and regulatory rules governing the navigation of vessels.

**Sailboat (only)** - Any boat whose sole source of propulsion is the natural element (i.e., wind) or a boat designed or intended to be propelled primarily by sail, regardless of size or type.

**Sharp Turn** - An immediate or abrupt change in the boat's course of direction.

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

**Skier Mishap** - Skier mishap is defined by persons (1) falling off their water-skis, (2) striking a fixed or submerged object, or by (3) becoming entangled or struck by the tow line. Also includes mishaps involving inner-tubes and other devices on which a person can be towed behind a boat.

**Starting in Gear** - The boat's engine is started with the transmission in forward or reverse.

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

**Sterndrive** - An inboard/outboard engine system, with the engine inside the hull connected to an external lower unit containing a propeller. Steering is achieved by turning the lower unit.

**Sudden Medical Condition** - An incident where a person on a vessel experiences an unexpected medical condition.

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

**Weather** - As a contributing factor of an accident, "Weather" is supposed to signify a stormy or windy condition, usually connoting rough or high seas and dangerous operating conditions.

**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.

## Glossary of State Codes

AL	Alabama	NJ	New Jersey
AK	Alaska	NM	New Mexico
AZ	Arizona	NY	New York
AR	Arkansas	NC	North Carolina
CA	California	ND	North Dakota
CO	Colorado	OH	Ohio
CT	Connecticut	OK	Oklahoma
DE	Delaware	OR	Oregon
DC	District of Columbia	PA	Pennsylvania
FL	Florida	RI	Rhode Island
GA	Georgia	SC	South Carolina
HI	Hawaii	SD	South Dakota
ID	Idaho	TN	Tennessee
IL	Illinois	TX	Texas
IN	Indiana	UT	Utah
IA	Iowa	VT	Vermont
KS	Kansas	VA	Virginia
KY	Kentucky	WA	Washington
LA	Louisiana	WV	West Virginia
ME	Maine	WI	Wisconsin
MD	Maryland	WY	Wyoming
MA	Massachusetts	GU	Guam
MI	Michigan	PR	Puerto Rico
MN	Minnesota	VI	Virgin Islands
MS	Mississippi	AS	American Samoa
MO	Missouri	CNMI	Northern Mariana Islands
MT	Montana	AT	Atlantic Ocean
NE	Nebraska	GL	Gulf of Mexico
NV	Nevada	PC	Pacific Ocean
NH	New Hampshire		