

# 2017 RECREATIONAL BOATING STATISTICS

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





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FOREWORD

Under the authority of Title 46, United States Code, the Inspections & Compliance 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 National Recreational Boating Safety Program responsibility.

Recreational Boating Statistics 2017, the 59th 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 2017 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).

JENNIFER WILLIAMS /s/  
Captain, U.S. Coast Guard  
Director of Inspections & Compliance

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## 2017 EXECUTIVE SUMMARY

- In 2017, the Coast Guard counted 4,291 accidents that involved 658 deaths, 2,629 injuries and approximately \$46 million dollars of damage to property as a result of recreational boating accidents.
  - The fatality rate was 5.5 deaths per 100,000 registered recreational vessels. This rate represents a 6.8% decrease from the 2016 fatality rate of 5.9 deaths per 100,000 registered recreational vessels.
  - Compared to 2016, the number of accidents decreased 3.9%, the number of deaths decreased 6.1%, and the number of injuries decreased 9.4%.
- Where cause of death was known, 76% of fatal boating accident victims drowned. Of those drowning victims with reported life jacket usage, 84.5% were not wearing a life jacket.
- Where length was known, eight out of every ten boaters who drowned were using vessels less than 21 feet in length.
- Alcohol use is the leading known contributing factor in fatal boating accidents; where the primary cause was known, it was listed as the leading factor in 19% of deaths.
- Where instruction was known, 81% of deaths occurred on boats where the operator did not receive boating safety instruction. Only 14% percent of deaths occurred on vessels where the operator had received a nationally-approved boating safety education certificate.
- There were 172 accidents in which at least one person was struck by a propeller. Collectively, these accidents resulted in 31 deaths and 162 injuries.
- Operator inattention, improper lookout, operator inexperience, machinery failure, and alcohol use rank as the top five primary contributing factors in accidents.
- Where data was known, the most common vessel types involved in reported accidents were open motorboats (46%), personal watercraft (18%), and cabin motorboats (16%).
- Where data was known, the vessel types with the highest percentage of deaths were open motorboats (47%), kayaks (15%), and personal watercraft (7%).
- The 11,961,568 recreational vessels registered by the states in 2017 represent a 0.84% increase from last year when 11,861,811 recreational vessels were registered.



**Table 1 • 2017 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	1145		49	721	
2	Collision with fixed object	470		63	327	
3	Flooding/swamping	435		76	132	
4	Grounding	368		17	224	
5	Falls overboard	306		179	126	
<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	198	107	305	1367	1672
2	Personal watercraft	17	29	46	624	670
3	Cabin motorboat	15	21	36	220	256
4	Canoe/kayak	122	16	138	107	245
5	Pontoon	28	5	33	133	166
<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	449	68	370	11	
2	Trauma	113	38	65	10	
3	Cardiac arrest	13	6	5	2	
4	Hypothermia	6	4	2	0	
5	Carbon monoxide	4	0	4	0	
<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	620		45	381	
2	Improper lookout	471		23	337	
3	Operator inexperience	436		63	249	
4	Machinery failure	305		9	80	
5	Alcohol use	275		102	227	
6	Excessive speed	269		11	247	
7	Navigation rules violation	257		22	165	
8	Weather	198		40	60	
9	Hazardous waters	187		64	124	
10	Force of wave/wake	169		17	148	

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

The mission of the National Recreational Boating Safety (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 Coast Guard has released the Strategic Plan of the National Recreational Boating Safety Program for 2017-2021 to address the following initiatives: 1) Improve and expand recreational boating education, training, and outreach; 2) Update, leverage, and enforce policies, regulations, and standards; and 3) Improve upon and expand recreational boating data collection and research.

To view the Strategic Plan of the Program, please visit the Office’s website at <http://www.uscgboating.org/content/strategic-plan.php>.

**Overview of Statistics**

This report contains statistics on registered recreational vessels and boating accidents during calendar year 2017. Data used to compile the recreational boating accident statistics come from four main sources:

- 1) State marine agencies;
- 2) Federal agencies, including the Coast Guard, National Park Service, Army Corps of Engineers, and Forest Service;
- 3) The public, on a CG-3865 Recreational Boating Accident Report (BAR) form; and
- 4) The news media.

The data in this publication reflects a collaboration of state and Coast Guard efforts. After reports are submitted, the Coast Guard reviews them and standardizes the data so that it can be used for national comparison. The data in this publication reflects Coast Guard standardized values, which may be different from the state’s original submission.

The following table reflects the number of accidents, deaths, injuries, and losses of vessels that were captured from federal and news media sources that met reporting requirements and are included in this report.

<b>Table 2 - NEWS MEDIA AND FEDERALLY-SOURCED ACCIDENTS AND CASUALTIES</b>						
	Accidents	Deaths	Injuries	Vessel losses	Damages	Notes
AL	7	3	1	22	\$89,380.00	
AT	8	1	4	2	\$306,335.00	8 accidents offshore in the Atlantic Ocean
CA	9	0	15	1	\$0.00	
FL	10	1	10	2	\$115,380.00	
GA	3	4	0	0	\$0.00	
GM	2	0	0	1	\$196,865.00	2 accidents offshore in the Gulf of Mexico
GU	1	0	1	0	\$0.00	
IN	2	0	5	1	\$0.00	
KY	1	1	1	0	\$0.00	
LA	1	0	0	0	\$75,000.00	
ME	1	0	1	0	\$0.00	
MI	1	1	0	0	\$0.00	
MN	1	2	1	0	\$0.00	1 accident on private waters
NJ	1	1	0	0	\$0.00	
NV	1	1	0	0	\$0.00	
OR	1	0	1	0	\$0.00	
PC	7	0	5	6	\$1,986,560.00	7 accidents offshore in the Pacific Ocean
PR	3	3	3	0	\$46,000.00	
TX	21	13	9	3	\$241,687.00	5 accidents on private waters
<b>Nation</b>	<b>81</b>	<b>31</b>	<b>57</b>	<b>38</b>	<b>\$3,057,207.00</b>	



### **Major Changes to the Publication**

As a result of changes in 33 CFR 174.19 that took effect 1 January 2017, a new term “paddlecraft” was introduced and defined as “a vessel powered only by its occupants, using a single or double bladed paddle as a lever without the aid of a fulcrum provided by oarlocks, thole pins, crutches, or similar arrangements”. As such, the definition limits the use of the term “paddlecraft” to non-motorized vessels. Consequently, any canoe or kayak with a motor has been classified as an “open motorboat” for accident reporting and registration purposes.

Though the term “paddlecraft” exists in regulation, for the purposes of this publication, the subcategories of canoe, kayak, and standup paddleboard have been retained; these represent non-motorized vessels, and data can be combined to represent paddlecraft.

Table 10 has been amended to provide a breakdown of the victim’s role (operator, occupant, other/unknown). Examples of “other” include tuber, wakeboarder, water skier, kneeboarder, bystander, and swimmer.

The glossary has been updated to reflect new definitions in the Code of Federal Regulations (CFR).

Table 37 has been rearranged due to a change in data collection. On 1 January 2017, changes in regulation (33 CFR 174.19) necessitated revision to the Coast Guard’s data collection on registration, which took place in early 2017. Due to delays in transitioning to a new form, the Coast Guard accepted registration data on the previous registration collection form used and the proposed form. Since the forms did not cover the same information, the publication table was amended.

Four of the statistics in the Executive Summary were changed to remove the records where values were unknown. To find information on the number of “unknown” cases excluded, please reference Tables 35 (on page 66), 22 (on page 46), 5 (on page 20), and 7 (on page 25).

### **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 operated 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 or its agent.

The statistics in this publication cover boating accidents reported on waters of joint federal and state jurisdiction and exclusive state jurisdiction. Most states use BAR forms that are similar to the Coast Guard form. A copy of the Coast Guard BAR form used for this report is on pages 73-78.

### **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.

This publication reflects watercraft that have been deemed a “vessel.” 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, raft, rowboat, sailboat, and standup paddleboard. Reports received involving watercraft that have not been determined to be “vessels” to date, such as single unmodified innertubes, have 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.
- Electrocution 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. carp 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.
- Casualties that result when a person departs an anchored, disabled vessel to make repairs, such as unfouling an anchor or cleaning out the intake of a jet-propelled 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 where the vessel did not contribute to the casualty.
- 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 residential platform or other watercraft used primarily as a residence that 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 (unless the casualty was related to carbon monoxide exposure or stray electric current).
- 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 watercraft that have not been deemed a vessel.
- 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 required to be numbered and are being used exclusively for racing (exclusion in 33 CFR 173.13(a)).
- Casualties or damage that occur when the only vessel(s) involved are foreign vessels and thus not subject to U.S. federal reporting requirements.

A list of “non-reportable” scenarios and their associated casualty counts can be found in Table 3.

<b>Table 3 - NON-REPORTABLE SCENARIOS WITH THEIR CASUALTY COUNT</b>					
	Accidents	Deaths	Injuries	Vessels Losses	Damages
<b>Does not meet Coast Guard policy</b>					
A person dies or is injured from natural causes while aboard a vessel where the vessel did not contribute to the casualty.	3	3	0	0	\$200.00
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.	8	3	5	0	\$0.00
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	0	1	0	\$0.00
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.	6	5	1	0	\$0.00
Casualties or damage that occur during accidents that only involve unmodified inner tubes.	4	2	1	4	\$117.00
Casualties or damage that occur when the only vessel(s) involved are being used solely for governmental, commercial or criminal activity.	96	12	66	9	\$1,483,139.06
Casualties or damage that occur when the only vessel(s) involved are foreign vessels and thus not subject to U.S. federal reporting requirements.	3	0	0	0	\$48,500.00
Casualties or damage that occur when the only vessel(s) involved are not numbered and are being used exclusively for racing.	3	2	5	1	\$250,000.00
Casualties that result from a person climbing aboard an anchored vessel from the water or swimming near an anchored vessel.	1	0	1	0	\$0.00
Casualties that result from falls from or on docked vessels or vessels that are moored to a permanent structure.	8	1	7	0	\$0.00
Fire or explosions on anchored, docked or moored boats where the cause of the fire was not attributed to the vessel or vessel equipment.	5	0	1	6	\$523,100.00
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.	1	0	0	0	\$135,000.00
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.	2	1	0	0	\$4,000.00
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.	13	0	0	4	\$163,840.00
Property damage occurs to a docked or moored vessel due to theft or vandalism.	1	0	0	0	\$2,000.00
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.	20	0	1	7	\$256,210.00
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.	1	0	1	0	\$0.00
<b>Does not meet federal reporting requirements</b>	<b>463</b>	<b>0</b>	<b>59</b>	<b>0</b>	<b>\$330,176.06</b>
<b>Total</b>	<b>639</b>	<b>29</b>	<b>149</b>	<b>31</b>	<b>\$3,196,282.12</b>

## Use of Statistics

The following are notes on using data on recreational boating accidents.

### 1) Normalizing data.

When analyzing recreational boating accident data, it is recommended that any researcher normalize it with a denominator.

The Coast Guard frequently uses recreational vessel registration as a denominator because of the availability of the data. The Coast Guard calculates a fatality rate expressed as the number of deaths per 100,000 registered recreational vessels. This measure is representative of the entire program (motorized and non-motorized activity) but necessitates a caveat that not all states register the same types of vessels (many do not register non-motorized vessels, which are represented in fatal accident data) and some states have longer boating seasons than others. Further, when examining a state fatality rate, it is important to note that the state fatality rate may include deaths from vessels that were registered by another state.

The Coast Guard also calculates a motorized fatality rate expressed as the number of deaths on motorized vessels per 100,000 registered motorized recreational vessels. While this measure is sound, it doesn't reflect all of recreational boating because it does not represent non-motorized activity.

It is worthwhile to note that the Coast Guard is pursuing a denominator on exposure, which would reflect the level of boating activity. The proposed measure would be a fatality rate expressed as the number of deaths per 100,000,000 exposure hours. The Coast Guard most recently published exposure data from a 2011-2012 survey, and expects to publish data again in 2019.

### 2) Limitations on collection.

It is recommended that any researcher focus on fatal data since the confidence of this data is very high. The Coast Guard works with state marine agencies, other federal agencies, and news media aggregating services to identify boating incidents. Despite best efforts to document incidents, the Coast Guard is only confident in its capture of deceased victims since fatal accidents undoubtedly involve state or government oversight, and garner more attention in the news media.

Data on non-fatal accidents have a much lower confidence level. Non-fatal accidents are severely under-reported because boaters are unaware of reporting requirements or are unwilling to report. A 2006 study "Recent Research on Recreational Boating Accidents and the Contribution of Boating Under the Influence" suggest that 20% of hospital-admitted injuries were not captured, and upwards of 93% of non-fatal, non-hospital admitted injuries were not captured in the data collection on boating accidents. The study is posted on the Coast Guard's website at [http://www.uscgboating.org/library/bui-study/BUI\\_Study\\_Final.pdf](http://www.uscgboating.org/library/bui-study/BUI_Study_Final.pdf).

There has been discussion about adjusting numbers to account for non-reporting, but attempts have not been undertaken yet.

### 3) Comparisons with other sources.

The data in this publication may differ from other sources due to a number of factors, including:

- a. Time period. The statistics in this publication are based on calendar year 2017 accident data submitted by states as of 16 March 2018 with subsequent updates as information is reviewed and standardized. This publication covers only accidents meeting the aforementioned reporting requirements.
- b. Geographic location. This publication reflects accidents that occurred on waters subject to the jurisdiction of the United States and on the high seas.

Although the reporting of accidents that occur on private waters (such as a pond on a

private property) are not required to be reported since states do not have jurisdiction, the Coast Guard includes data on private waters if the accidents satisfy the other requirements for inclusion. The rationale for doing so is that the National Recreational Boating Safety program could still impact individuals who boat on private waters. For those accidents that occur on private waters, the Coast Guard attributes the data to a state. For instance, if an accident occurred on a private pond in Texas, the Coast Guard attributes the accident to Texas.

Similarly, although the reporting of accidents that occur on federal waters within the boundaries of a state (for instance, Aberdeen Proving Grounds in Maryland), are not required to be reported by the states since state officials do not have jurisdiction, the Coast Guard includes data on federal waters if the accidents satisfy the other requirements for inclusion. The rationale for doing so is the same; the National Recreational Boating Safety program could still impact individuals who boat on federal waters. For those accidents that occur on federal waters, the Coast Guard attributes the data to a state. For instance, if an accident occurred on Aberdeen Proving Grounds, the Coast Guard attributes the accident to Maryland.

- c. Different reporting requirements. Some states have more stringent reporting requirements than the federal government. For instance, some states may require a person to report an accident that involved at least \$500 damage, whereas the federal threshold for reporting damage is \$2,000 or more.

4) 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.

5) Disappearances.

Victims who have disappeared and are presumed dead are represented in the tallies of deaths.

# **ACCIDENT CAUSES & CONDITIONS**

## Explanation of Accident Causes and Conditions Section

The following eighteen 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 (Figure 1 & Table 4, Page 18)**

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.

### **Percent of Accidents that are Fatal by Time Period (Figure 2, Page 19)**

This table reflects the percentage of accidents that are fatal by time period. The category in which accidents are more frequently fatal span the hours between 4:31am and 6:30am.

### **Primary Contributing Factor of Accidents & Casualties (Table 5, Page 20)**

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, failure of vessel or vessel equipment, environment, 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 21)**

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 3, Page 22)**

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

### **Primary Contributing Factor of Deaths (Figure 4, Page 23)**

This figure reflects the first cause listed for all deaths.

### **Primary Contributing Factor of Injuries (Figure 5, Page 24)**

This figure reflects the first cause listed for all injuries.

### **Number of Vessels in Accidents by Vessel Type & Primary Contributing Factor (Table 7, Page 25)**

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 2013-2017 (Table 8, Page 26)**

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 27)**

This table focuses on the vessel 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 27)**

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.

Please note that vessels used for commercial or government activity were included in this recreational boating statistics publication if they were involved in a multi-vessel accident that involved at least one recreational vessel.

Also note that racing was included as an activity because either the vessels involved in racing were not exempted from reporting requirements, or the vessels were involved in a multi-vessel accident that involved at least one recreational vessel.

**Weather & Water Conditions (Table 11, Page 28)**

This table documents some of the environmental characteristics of 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 29)**

These three sections independently examine time-related information for 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.

Each section examines 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 during which the highest number of accidents occurred in calendar year 2017. 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 30)**

This table documents some of the characteristics of vessels involved in accidents. 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 31)**

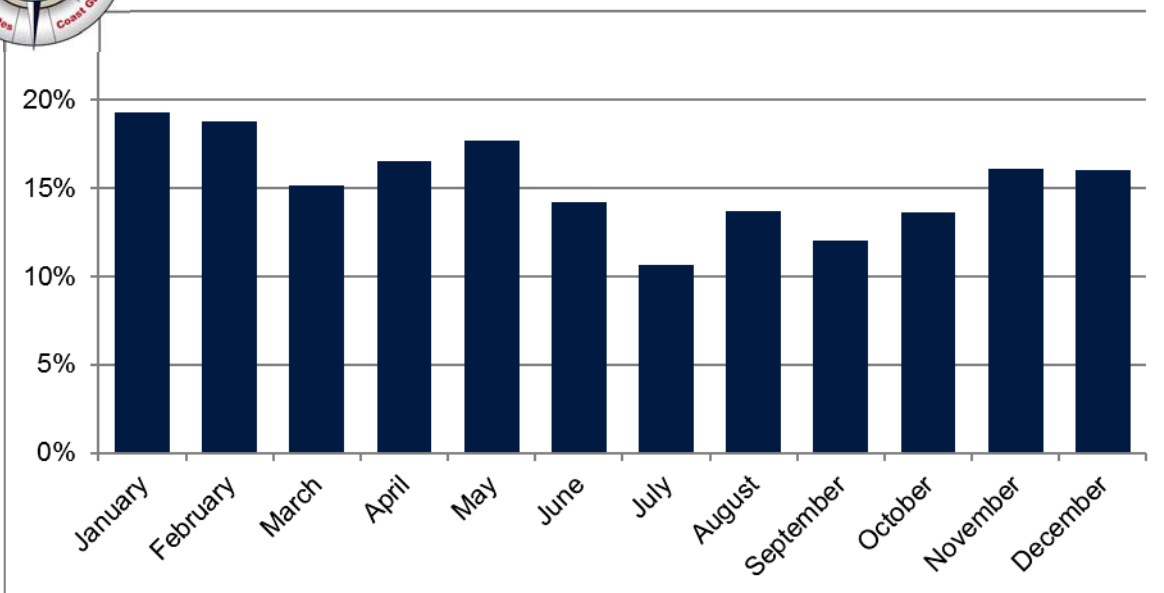
This table examines whether a vessel involved in an accident was rented. It also provides information on whether deaths and injuries occurred on rented vessels. Please note that some states only document if a vessel was rented; they do not indicate whether a vessel was "not rented". As a result, the rental status of many vessels is "unknown".

**Number & Percent of Deaths by Vessel Length (Figure 6 & Table 15, Page 32)**

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.

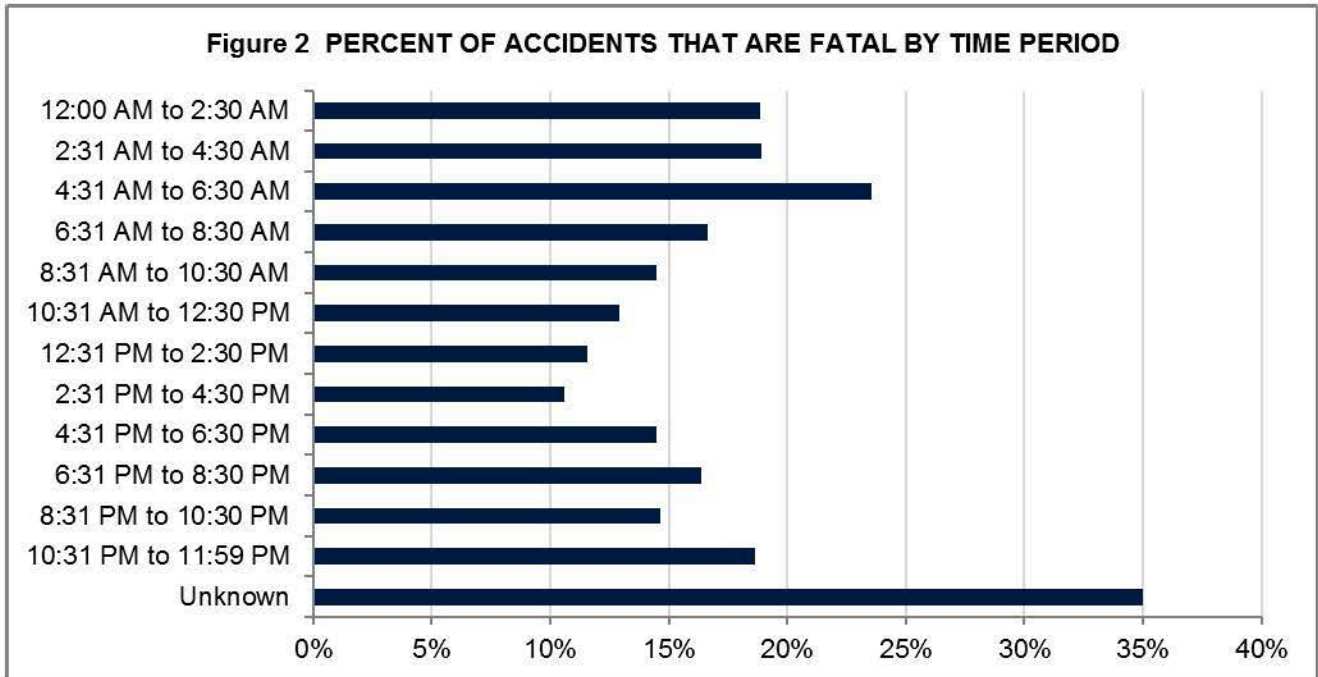


**Figure 1 PERCENT OF ACCIDENTS THAT ARE FATAL BY MONTH**



**Table 4 • PERCENT OF ACCIDENTS THAT ARE FATAL BY MONTH**

Month	Fatal Accidents	Non-Fatal Accidents	Total Accidents	Accidents Resulting in Deaths	Total Deaths
January	16	67	83	19%	20
February	24	104	128	19%	26
March	23	129	152	15%	26
April	51	258	309	17%	57
May	91	425	516	18%	99
June	93	561	654	14%	104
July	114	956	1070	11%	121
August	80	504	584	14%	88
September	47	345	392	12%	51
October	27	171	198	14%	27
November	18	94	112	16%	22
December	15	78	93	16%	17
Total	599	3692	4291	14%	658





**Table 5 - PRIMARY CONTRIBUTING FACTOR OF ACCIDENTS & CASUALTIES 2017**

		Accidents	Deaths	Injuries
<b>Operation of Vessel</b> <b>2480 Accidents</b> <b>295 Deaths</b> <b>1727 Injuries</b>	Alcohol use	275	102	227
	Drug use	10	10	2
	Excessive speed	269	11	247
	Failure to vent	31	0	34
	Improper lookout	471	23	337
	Inadequate onboard navigation lights	11	3	7
	Navigation rules violation	257	22	165
	Operator inattention	620	45	381
	Operator inexperience	436	63	249
	Restricted vision	45	4	36
	Sharp turn	51	12	41
	Starting in gear	4	0	1
<b>Loading of Passengers or Gear</b> <b>143 Accidents</b> <b>44 Deaths</b> <b>82 Injuries</b>	Improper anchoring	31	0	13
	Improper loading	38	13	27
	Overloading	39	19	17
	People on gunwale, bow or transom	35	12	25
<b>Failure of Boat or Boat Equipment</b> <b>414 Accidents</b> <b>17 Deaths</b> <b>114 Injuries</b>	Equipment failure	55	4	20
	Hull failure	54	4	14
	Machinery failure	305	9	80
<b>Environment</b> <b>622 Accidents</b> <b>135 Deaths</b> <b>358 Injuries</b>	Congested waters	25	0	10
	Dam/lock	15	11	8
	Force of wave/wake	169	17	148
	Hazardous waters	187	64	124
	Missing/inadequate navigation aid	28	3	8
	Weather	198	40	60
<b>Miscellaneous</b> <b>632 Accidents</b> <b>167 Deaths</b> <b>348 Injuries</b>	Carbon monoxide exposure	3	0	4
	Ignition of fuel or vapor	63	1	39
	Sudden medical condition	23	20	3
	Other	301	29	223
	Unknown	242	117	79
<b>All categories combined</b>		<b>4291</b>	<b>658</b>	<b>2629</b>

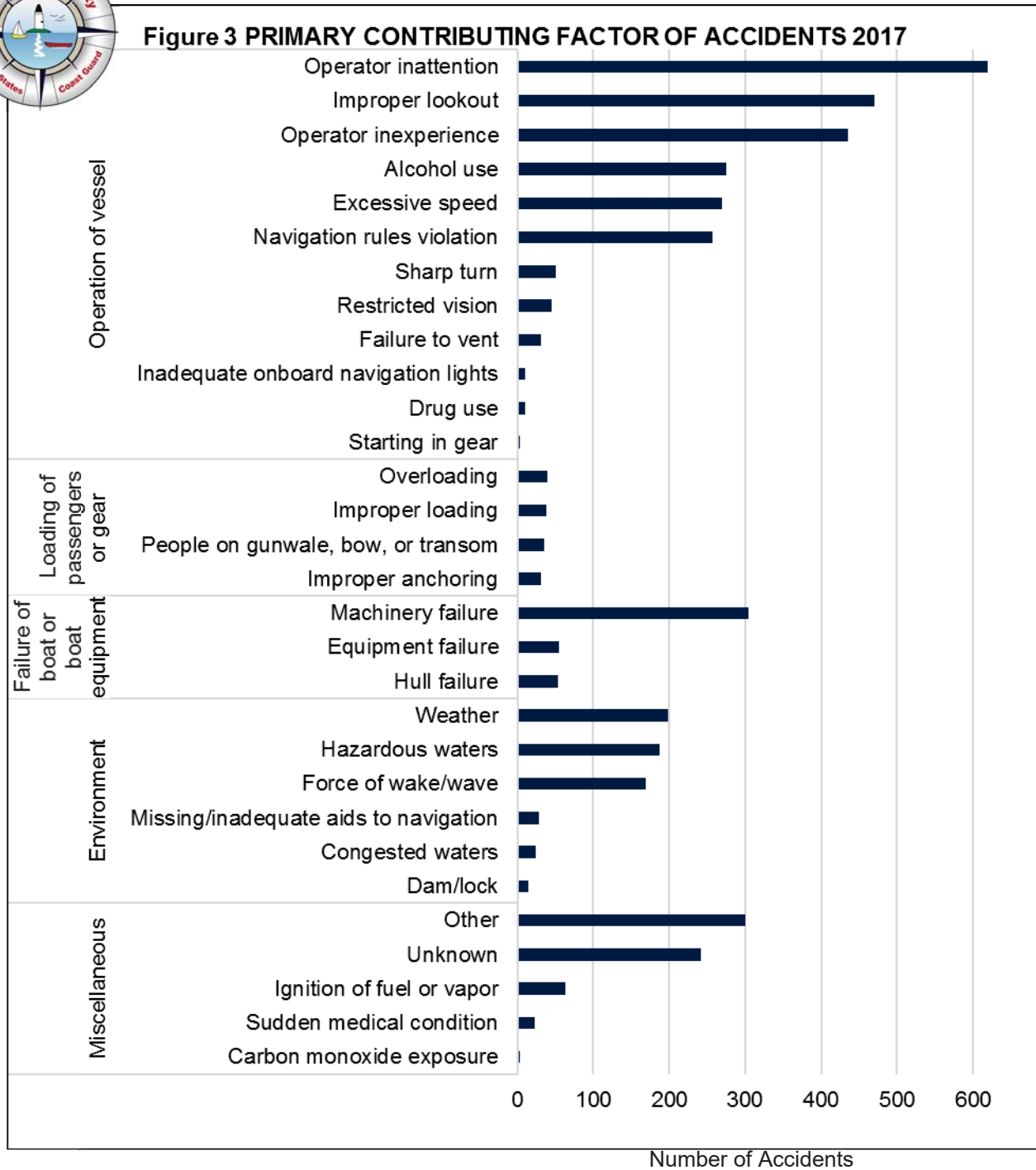


**Table 6 - MACHINERY & EQUIPMENT PRIMARY CONTRIBUTING FACTOR OF ACCIDENTS & CASUALTIES 2017**

		Accidents	Deaths	Injuries
Machinery Failure	Electrical system failure	45	0	4
	Engine failure	148	7	36
	Exhaust system failure	1	0	2
	Fuel system failure	19	0	11
	Shift failure	36	1	6
	Steering system failure	30	1	16
	Throttle failure	20	0	4
	Ventilation system failure	1	0	0
	Not specified	5	0	1
Equipment Failure	Auxiliary equipment failure	20	0	4
	Onboard navigation aid	0	0	0
	Sail dismasting	6	0	4
	Seat broke loose	3	2	1
	Other	17	2	6
	Not specified	9	0	5

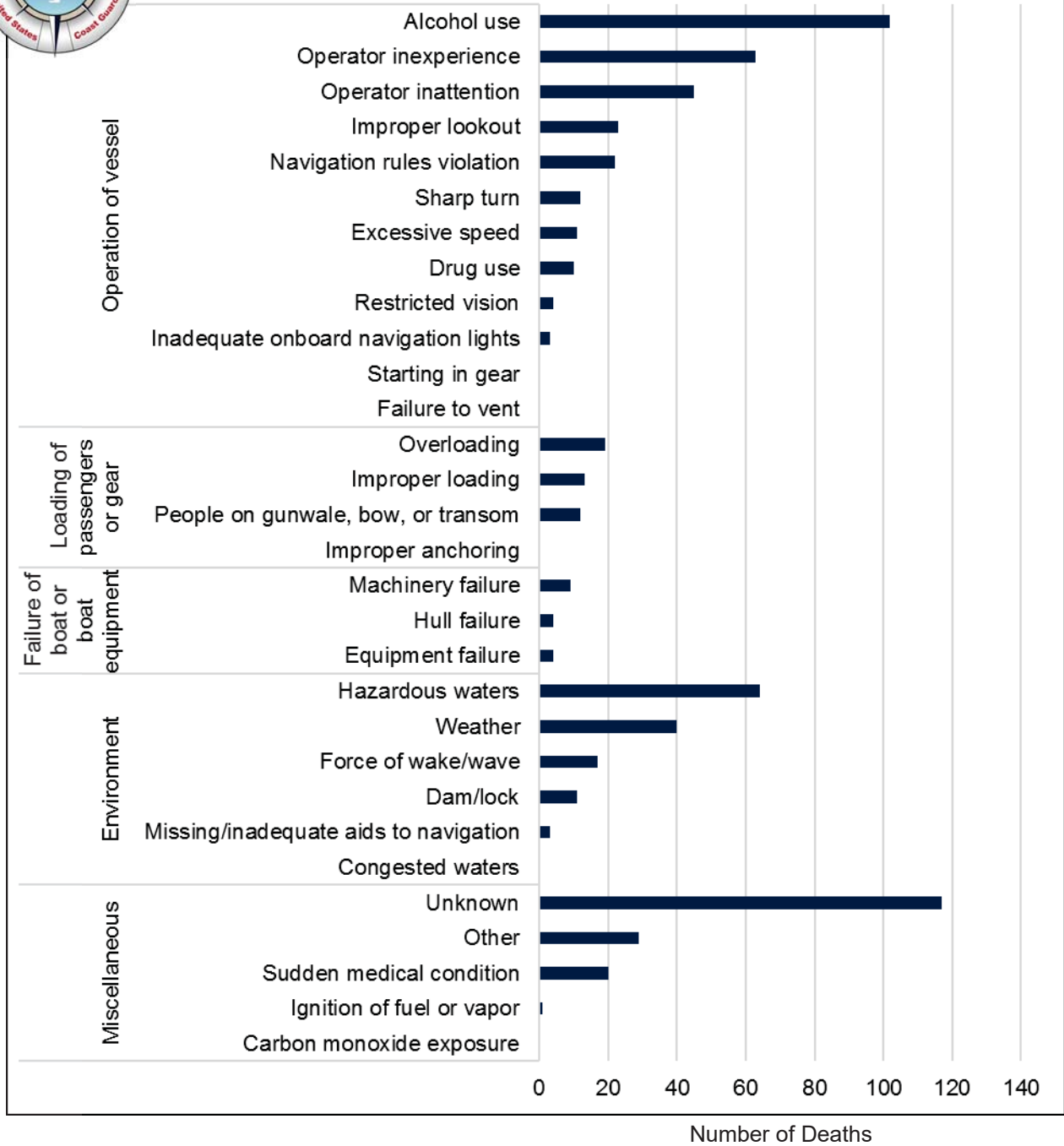


**Figure 3 PRIMARY CONTRIBUTING FACTOR OF ACCIDENTS 2017**





**Figure 4 PRIMARY CONTRIBUTING FACTOR OF DEATHS 2017**





**Figure 5 PRIMARY CONTRIBUTING FACTOR OF INJURIES 2017**





Table 7 - NUMBER OF VESSELS IN ACCIDENTS BY VESSEL TYPE & PRIMARY CONTRIBUTING FACTOR 2017

	All vessels	Airboat	Auxiliary sailboat	Cabin motorboat	Canoe	Houseboat	Inflatable	Kayak	Open motorboat	Personal watercraft	Pontoon	Rowboat	Sail (only)	Sail (unknown)	Standup paddleboard	Other	Unknown
All contributing factors	5876	37	275	918	74	71	27	182	2620	1028	343	38	57	11	16	28	161
Alcohol use	366	0	8	43	13	2	3	9	191	47	39	1	1	0	1	2	0
Carbon monoxide exposure	3	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0
Congested waters	41	0	0	12	0	0	0	0	17	3	2	0	2	0	1	0	4
Dam/lock	15	0	0	4	0	0	0	0	5	0	1	1	0	0	0	0	0
Drug use	12	0	0	4	0	0	0	1	4	0	1	1	0	0	1	0	0
Equipment failure	63	0	7	18	2	3	0	1	24	1	3	1	3	0	0	0	51
Excessive speed	425	5	5	66	0	2	0	1	181	136	19	0	0	0	0	4	0
Failure to vent	33	0	0	11	0	1	0	0	17	4	0	0	0	0	0	0	30
Force of wave/wake	193	0	2	17	10	3	0	0	123	29	13	2	1	0	0	1	0
Hazardous waters	208	0	13	17	1	1	0	39	85	7	4	7	1	0	2	0	0
Hull failure	57	1	2	8	0	2	0	1	30	4	5	1	0	0	1	0	0
Ignition of fuel or vapor	67	0	3	23	0	1	0	0	32	7	1	0	0	0	0	0	0
Improper anchoring	35	0	8	1	0	0	0	2	23	0	0	0	0	0	0	0	0
Improper loading	38	0	0	1	0	0	0	3	17	2	0	3	0	0	0	1	0
Improper lookout	762	3	38	100	2	6	0	7	361	176	43	4	0	0	0	2	13
Inadequate onboard navigation lights	22	0	1	0	0	0	0	0	16	0	4	0	0	0	0	0	0
Machinery failure	436	4	40	170	0	7	0	0	154	19	24	0	4	1	0	2	11
Missing/inadequate navigation aid	28	0	0	5	0	0	0	0	20	0	1	0	1	0	0	0	1
Navigation rules violation	453	2	27	32	3	2	1	5	166	151	25	0	4	1	0	2	92
Operator inattention	926	4	52	172	4	10	1	8	412	181	49	6	11	0	2	5	0
Operator inexperience	621	5	24	82	12	13	3	44	178	197	44	1	7	0	4	2	0
Overloading	40	0	0	1	0	0	0	3	32	26	0	1	0	0	0	0	1
People on gunwale, bow or transom	36	0	0	0	0	0	0	0	35	26	4	1	0	0	0	0	1
Restricted vision	68	4	1	11	0	1	0	0	29	6	4	0	0	0	0	0	2
Sharp turn	56	3	1	0	0	0	0	0	6	12	1	0	0	0	0	0	0
Starting in gear	6	0	0	0	0	0	0	0	6	1	0	0	0	0	0	0	0
Sudden medical condition	23	0	1	0	0	0	0	1	12	0	2	1	1	0	0	0	20
Weather	245	4	25	49	1	2	0	15	120	210	12	1	9	0	1	0	2
Other	312	0	4	32	0	0	0	2	2	0	32	0	0	0	0	0	0
Unknown	286	2	13	41	9	9	3	30	93	12	5	3	5	0	1	1	51





**Table 8 - ALCOHOL USE AS A CONTRIBUTING FACTOR IN ACCIDENTS & CASUALTIES BY STATE 2013-2017**

	Accidents					Deaths					Injuries				
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
<b>USA</b>	305	345	306	350	323	94	137	122	133	118	251	302	258	335	255
AK	2	3	3	1	1	4	3	3	1	1	0	0	0	0	0
AL	7	7	9	7	8	4	5	5	6	2	5	9	4	5	10
AR	5	7	4	2	4	2	2	2	2	1	3	6	5	0	7
AZ	7	7	8	11	2	2	1	2	3	2	9	8	9	12	0
CA	17	14	16	11	14	2	5	3	3	4	15	11	13	20	17
CO	4	2	2	3	5	0	0	1	1	1	5	2	2	1	3
CT	2	2	3	3	4	0	1	0	1	5	1	3	4	5	1
DE	1	2	0	1	3	0	0	0	0	1	2	2	0	0	2
DC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FL	32	30	30	31	39	10	12	11	14	14	22	29	21	25	35
GA	11	7	8	12	11	4	2	4	7	2	7	7	3	7	9
HI	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0
IA	4	6	2	7	4	2	2	1	2	1	0	3	1	4	3
ID	8	4	4	3	5	2	2	2	3	1	8	0	5	5	4
IL	6	17	9	10	7	1	8	5	1	3	3	15	8	4	1
IN	2	10	4	4	6	0	5	1	2	2	2	2	2	3	7
KS	2	1	2	6	4	1	0	1	2	0	1	3	3	5	5
KY	5	11	7	6	7	0	5	2	2	5	6	16	5	6	2
LA	9	20	12	7	11	3	6	4	3	3	12	28	10	6	11
MA	8	5	6	7	3	3	0	3	2	3	6	9	4	2	1
MD	10	7	17	12	16	1	1	8	3	3	5	5	22	13	17
ME	3	5	1	6	6	0	2	1	2	4	2	1	0	7	2
MI	6	8	6	10	9	1	4	4	7	4	4	4	8	6	3
MN	8	8	10	18	14	3	4	7	8	4	5	11	7	11	12
MO	15	16	6	14	13	6	5	2	3	1	20	16	11	15	8
MS	7	2	1	8	1	3	2	0	3	1	5	1	1	6	0
MT	1	3	2	3	1	0	2	2	1	0	0	1	0	6	0
NC	12	13	20	12	13	4	5	4	1	1	8	11	14	13	13
ND	2	5	2	0	4	1	3	1	0	3	1	3	4	0	1
NE	1	1	1	1	3	0	0	0	0	1	2	1	1	0	2
NH	1	2	1	2	3	0	0	1	0	0	4	4	0	2	1
NJ	6	2	3	4	1	0	0	0	0	0	3	3	3	6	1
NM	2	1	0	0	0	0	0	0	0	0	3	1	0	0	0
NV	2	6	3	3	2	1	2	2	0	1	1	6	1	3	1
NY	14	13	14	18	12	6	7	3	6	1	12	7	7	24	16
OH	7	7	8	9	10	1	6	4	4	4	3	0	6	11	8
OK	3	5	7	4	5	3	2	3	0	3	4	5	3	6	6
OR	3	4	7	3	1	3	1	4	1	1	2	5	3	6	0
PA	4	10	3	7	5	1	6	1	5	3	3	9	2	8	4
RI	1	2	3	3	2	0	1	0	0	2	6	0	6	1	1
SC	6	7	7	9	12	4	3	3	4	2	4	5	6	9	8
SD	3	3	4	3	0	0	1	3	2	0	3	1	2	1	0
TN	7	6	10	11	9	3	2	3	5	2	5	7	3	10	3
TX	19	17	7	21	10	5	5	1	6	7	17	12	6	28	5
UT	2	2	2	5	1	1	1	0	1	0	0	1	5	10	1
VA	3	6	4	5	3	0	3	1	4	2	3	3	4	2	0
VT	0	1	1	0	1	0	1	0	0	1	0	0	1	0	0
WA	14	9	11	10	9	5	4	5	3	5	8	7	12	8	3
WI	9	12	11	9	16	2	3	8	8	9	9	12	5	7	20
WV	0	5	4	6	2	0	1	0	0	1	0	5	14	5	1
WY	0	2	0	1	1	0	1	0	1	1	0	2	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
GU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PR	0	0	1	1	0	0	0	1	0	0	0	0	2	1	0
VI	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
GM	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 2017**

	Vessels Involved	Deaths	Injuries
<b>Totals</b>	5876	658	2629
At anchor	226	20	81
Being towed	31	1	8
Changing direction	632	49	362
Changing speed	582	28	284
Cruising	2333	188	1307
Docking/undocking	94	2	20
Drifting	572	140	252
Idling	34	5	15
Launching/loading	34	1	12
Rowing/paddling	219	128	86
Sailing	90	13	28
Tied to dock/moored	702	7	57
Towing	29	2	7
Trolling	27	7	19
Other	57	6	16
Unknown	214	61	75


**Table 10 • VESSEL ACTIVITY AT THE TIME OF ACCIDENT 2017**

	Vessels Involved	Deaths				Injuries			
		Total	Operator	Occupant	Other/unknown role	Total	Operator	Occupant	Other/unknown role
<b>Totals</b>	5876	<b>658</b>	402	213	43	<b>2629</b>	1006	1226	397
Boating/relaxation	3685	<b>358</b>	228	111	19	<b>1804</b>	813	917	74
Commercial	55	<b>0</b>	0	0	0	<b>5</b>	2	3	0
Fishing	677	<b>181</b>	112	63	6	<b>299</b>	126	169	4
Fueling	28	<b>0</b>	0	0	0	<b>19</b>	6	11	2
Government	11	<b>0</b>	0	0	0	<b>3</b>	1	2	0
Hunting	32	<b>13</b>	8	5	0	<b>21</b>	5	16	0
Racing	34	<b>3</b>	3	0	0	<b>12</b>	7	5	0
Repairs	63	<b>10</b>	6	4	0	<b>31</b>	10	21	0
Starting engine	46	<b>3</b>	1	1	1	<b>21</b>	12	9	0
Swimming/snorkeling	82	<b>27</b>	11	15	1	<b>40</b>	5	21	14
Towed watersports	374	<b>19</b>	3	1	15	<b>338</b>	8	29	301
Towing	56	<b>3</b>	1	2	0	<b>14</b>	1	13	0
Whitewater	36	<b>25</b>	16	8	1	<b>10</b>	6	3	1
Other	23	<b>5</b>	4	1	0	<b>7</b>	3	4	0
None; not in operation	621	<b>1</b>	1	0	0	<b>4</b>	1	2	1
Unknown	53	<b>10</b>	8	2	0	<b>1</b>	0	1	0



**Table 11 • WEATHER AND WATER CONDITIONS 2017**

		<b>Accidents</b>	<b>Deaths</b>	<b>Injuries</b>
		4291	658	2629
<b>TYPE OF BODY OF WATER</b>	Lakes, Ponds, Reservoirs, Dams, Gravel Pits	1902	331	1245
	Rivers, Streams, Creeks, Swamps, Bayous	987	171	614
	Bays, Inlets, Marinas, Sounds, Harbors, Channels, Canals, Sloughs, Coves	932	107	537
	Ocean/Gulf	337	32	180
	Great Lakes (not tributaries)	133	17	53
<b>WATER CONDITIONS</b>	Calm (waves less than 6")	2456	324	1550
	Choppy (waves 6" to 2')	1107	142	693
	Rough (waves 2' to 6')	406	87	215
	Very Rough (waves larger than 6')	75	21	36
	Unknown	247	84	135
<b>WIND</b>	None	375	47	248
	Light (0 - 6 mph)	2393	355	1544
	Moderate (7 - 14 mph)	987	121	561
	Strong (15 - 25 mph)	302	71	129
	Storm (over 25 mph)	52	6	40
	Unknown	182	58	107
<b>VISIBILITY</b>	Poor - Day	57	13	27
	Poor - Night	112	29	56
	Poor - Unknown if day or night	0	0	0
	Fair - Day	168	36	83
	Fair - Night	124	29	94
	Fair- Unknown if day or night	3	2	3
	Good - Day	3195	418	1973
	Good - Night	366	62	235
	Good- Unknown if day or night	3	1	0
	Unknown - Day	184	46	107
	Unknown - Night	56	13	41
	Unknown - Unknown if day or night	23	9	10
<b>WATER TEMPERATURE</b>	39 degrees F and below	24	14	9
	40 - 49 degrees F	110	50	58
	50 - 59 degrees F	294	68	167
	60 - 69 degrees F	772	106	440
	70 - 79 degrees F	1420	173	900
	80 - 89 degrees F	898	97	586
	90 degrees F and above	23	7	14
	Unknown	750	143	455



**Table 12 - TIME RELATED DATA 2017**

	Accidents	Deaths	Injuries	
	<b>4291</b>	<b>658</b>	<b>2629</b>	
<b>Time of Day</b>	12:00 am to 2:30 am	106	22	67
	2:31 am to 4:30 am	37	9	12
	4:31 am to 6:30 am	51	14	26
	6:31 am to 8:30 am	126	22	47
	8:31 am to 10:30 am	255	38	115
	10:31 am 12:30 pm	479	66	269
	12:31 pm to 2:30 pm	700	88	455
	2:31 pm to 4:30 pm	886	103	552
	4:31 pm to 6:30 pm	772	123	506
	6:31 pm to 8:30 pm	458	82	312
	8:31 pm to 10:30 pm	259	41	156
	10:31 pm to 11:59 pm	102	23	95
	Unknown	60	27	17
	<b>Month of Year</b>	January	83	20
February		128	26	75
March		152	26	83
April		309	57	195
May		516	99	292
June		654	104	402
July		1070	121	712
August		584	88	370
September		392	51	251
October		198	27	87
November		112	22	66
December		93	17	52
<b>Day of Week</b>	Sunday	1063	145	702
	Monday	440	73	263
	Tuesday	396	75	208
	Wednesday	339	63	190
	Thursday	334	63	194
	Friday	514	86	264
	Saturday	1205	153	808



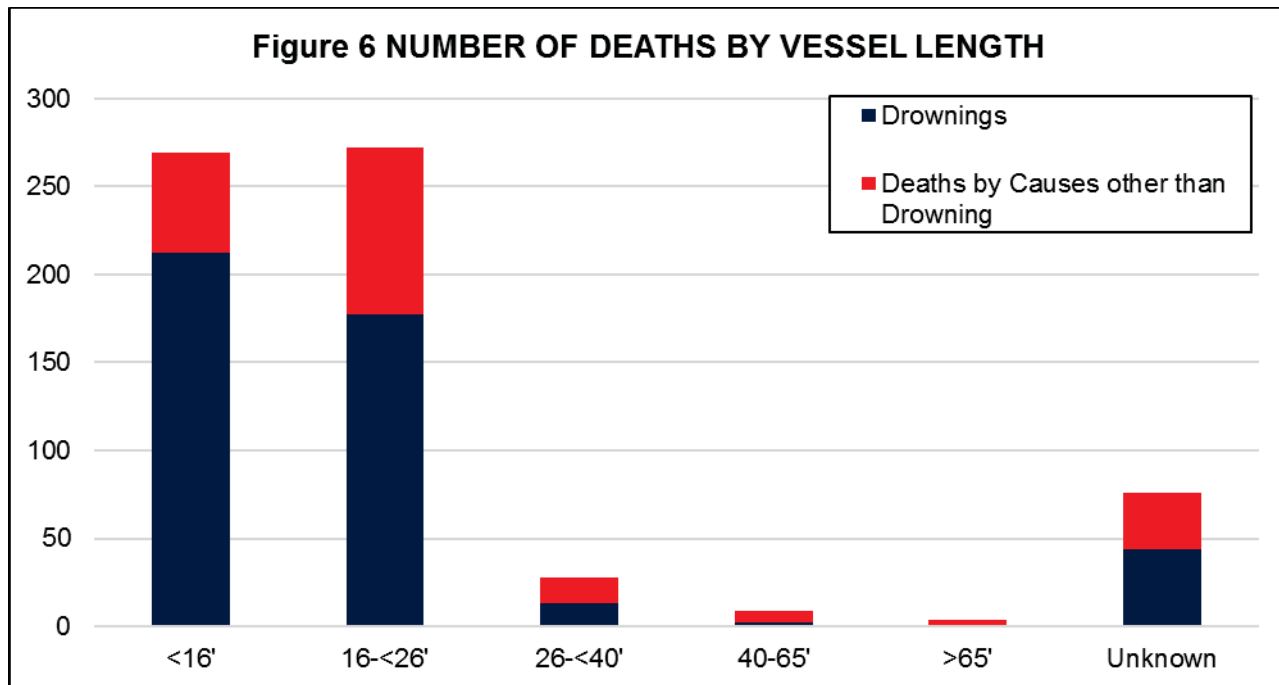
**Table 13 • VESSEL INFORMATION 2017**

		<b>Vessels Involved</b>	<b>Deaths</b>	<b>Injuries</b>
		5876	658	2629
<b>Hull Material</b>	Aluminum	919	164	439
	Fiberglass	4334	316	1981
	Plastic	193	86	67
	Rubber/Vinyl/Canvas	57	29	25
	Steel	34	0	22
	Wood	59	6	6
	Other	13	5	4
	Unknown	267	52	85
<b>Horsepower</b>	No Engine	397	207	146
	10 hp or less	137	30	58
	11 - 25 hp	147	29	65
	26 - 75 hp	448	66	173
	76 - 150 hp	1183	75	639
	151 - 250 hp	777	61	382
	Over 250 hp	1129	40	490
	Unknown	1658	150	676
<b>Year Built</b>	2017	372	38	170
	2016	354	25	185
	2014 - 2015	438	29	226
	2012 - 2013	265	31	108
	2010 - 2011	140	11	84
	2004 - 2009	965	71	476
	Prior to 2004	2654	251	1160
	Unknown	688	202	220
<b>Length</b>	Less than 16 feet	1559	269	868
	16 feet to <26 feet	2585	272	1340
	26 feet to <40 feet	865	28	241
	40 feet to 65 feet	418	9	61
	More than 65 feet	78	4	13
	Unknown	371	76	106



**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
		577	4138	1161		658	49	455		154	2629	294
<b>All Vessels</b>	5876	577	4138	1161	658	49	455	154	2629	294	1906	429
Airboat	37	0	36	1	4	0	3	1	28	0	27	1
Auxiliary sailboat	275	6	223	46	6	0	6	0	40	0	30	10
Cabin motorboat	918	7	752	159	36	0	27	9	220	1	181	38
Canoe	74	7	52	15	44	8	31	5	42	2	32	8
Houseboat	71	15	36	20	8	3	3	2	34	5	29	0
Inflatable	27	3	14	10	21	1	12	8	7	2	3	2
Kayak	182	8	118	56	94	5	58	31	65	2	37	26
Open motorboat	2620	114	2056	450	305	9	232	64	1367	69	1093	205
Personal watercraft	1028	323	546	159	46	6	34	6	624	180	354	90
Pontoon	343	83	187	73	33	11	15	7	133	29	87	17
Rowboat	38	2	27	9	20	1	16	3	11	1	10	0
Sailboat (only)	57	2	47	8	11	1	7	3	18	0	17	1
Sailboat (unknown)	11	0	0	11	1	0	0	1	5	0	0	5
Standup paddleboard	16	5	7	4	11	3	5	3	4	2	1	1
Other	28	2	19	7	6	1	5	0	3	1	1	1
Unknown	151	0	18	133	12	0	1	11	28	0	4	24



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

Length	Drownings	Deaths by Causes other than Drowning	Total Deaths	Percent of Deaths from Drowning
<16'	212	57	269	79%
16-26'	177	95	272	65%
26-40'	13	15	28	46%
40-65'	2	7	9	22%
>65'	1	3	4	25%
Unknown	44	32	76	58%
<b>Total</b>	<b>449</b>	<b>209</b>	<b>658</b>	<b>68%</b>



# **ACCIDENT TYPES**

### Explanation of Accident Types Section

The following section contains six tables that examine data related to the events in accidents (termed "accident types"). The tables focus on these events and breaks 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 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. Second, there was a capsizing. Third, there was an ejection.

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 36)**

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 37-40)**

As mentioned in the second 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 435 accidents where flooding/swamping was the first event in the boating accident. There were 76 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 269 accidents and 12 deaths associated with flooding/swamping as a second event and 74 accidents and 10 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. Please note that in this table deaths are not separated by first, second and third event. In the example, there were 778 accidents and 98 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 41)**

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 42)**

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 43)**

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 43)**

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 2017**

Accident Types	Accidents	Vessels Involved	Drowning Deaths	Other Deaths	Total Deaths	Total Injuries	Damages
<b>All Accident Types</b>	4291	5876	449	209	658	2629	\$45,992,120.93
Capsizing	286	305	117	21	138	175	\$2,002,303.00
Carbon monoxide poisoning	9	9	0	3	3	11	\$100.00
Collision with fixed object	470	562	33	30	63	327	\$5,126,302.95
Collision with floating object	55	59	5	0	5	26	\$529,200.00
Collision with commercial vessel	19	41	0	2	2	15	\$526,900.00
Collision with governmental vessel	6	12	0	0	0	5	\$56,200.00
Collision with recreational vessel	1145	2389	12	37	49	721	\$9,444,016.45
Collision with submerged object	141	149	1	2	3	45	\$1,234,996.31
Departed vessel	93	96	41	9	50	41	\$181,425.00
Ejected from vessel	173	198	32	11	43	140	\$451,957.00
Electrocution	1	1	0	1	1	0	\$4,000.00
Fall in vessel	154	166	2	1	3	163	\$177,302.00
Falls overboard	306	326	135	44	179	126	\$104,320.00
Fire/explosion (fuel)	157	175	0	2	2	103	\$5,202,892.00
Fire/explosion (non-fuel)	81	106	0	0	0	10	\$6,763,381.68
Fire/explosion (unknown origin)	33	68	0	1	1	5	\$2,752,227.00
Flooding/swamping	435	460	62	14	76	132	\$6,437,866.27
Grounding	368	379	6	11	17	224	\$4,625,363.27
Person struck by propeller	30	30	0	4	4	26	\$1,001.00
Person struck by vessel	23	28	0	3	3	27	\$0.00
Sinking	0	0	0	0	0	0	\$0.00
Skier mishap	259	267	3	10	13	268	\$8,930.00
Sudden medical condition	2	2	0	2	2	0	\$0.00
Other	45	48	0	1	1	39	\$361,437.00


Table 17 • FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
 <b>2017</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	286	244	72	602	222	324
Carbon monoxide poisoning	9	1	1	11	4	14	\$100.00
Collision with fixed object	470	103	11	584	68	384	\$7,133,312.41
Collision with floating object	55	5	0	60	5	29	\$665,200.00
Collision with commercial vessel	19	2	2	23	2	15	\$543,700.00
Collision with governmental vessel	6	0	0	6	0	5	\$56,200.00
Collision with recreational vessel	1145	65	2	1212	52	753	\$10,007,231.45
Collision with submerged object	141	1	0	142	3	47	\$1,236,846.31
Departed vessel	93	56	14	163	66	82	\$1,146,500.00
Ejected from vessel	173	610	348	1131	330	968	\$7,569,723.77
Electrocution	1	2	0	3	5	0	\$7,000.00
Fall in vessel	154	272	58	484	23	743	\$5,109,056.87
Falls overboard	306	39	4	349	190	158	\$135,458.00
Fire/explosion (fuel)	157	5	2	164	2	103	\$5,532,049.00
Fire/explosion (non-fuel)	81	2	1	84	0	12	\$6,793,581.68
Fire/explosion (unknown origin)	33	0	1	34	1	5	\$2,758,227.00
Flooding/swamping	435	269	74	778	98	251	\$17,383,750.97
Grounding	368	50	15	433	24	262	\$5,773,401.27
Person struck by propeller	30	118	24	172	31	162	\$170,980.00
Person struck by vessel	23	253	31	307	38	403	\$1,087,437.00
Sinking	0	113	100	213	19	50	\$10,377,829.59
Skier mishap	259	18	1	278	16	290	\$14,134.00
Sudden medical condition	2	1	0	3	3	0	\$0.00
Other	45	9	3	57	1	54	\$392,437.00
Unknown	0	0	0	0	0	0	\$0.00
<b>2016</b>							
Capsizing	305	262	60	627	263	356	\$4,262,346.53
Carbon monoxide poisoning	8	2	1	11	6	13	\$5,000.00
Collision with fixed object	565	82	9	656	74	475	\$8,189,699.35
Collision with floating object	53	4	0	57	5	19	\$489,063.83
Collision with commercial vessel	31	3	0	34	5	23	\$696,484.58
Collision with governmental vessel	4	0	1	5	0	3	\$15,100.00
Collision with recreational vessel	1051	67	9	1127	42	747	\$9,587,374.22
Collision with submerged object	143	5	0	148	9	56	\$2,772,112.20


Table 17 Continued - FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
 <b>2016</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
	Departed vessel	121	58	16	195	96	88
Ejected from vessel	160	609	311	1080	319	969	\$7,122,482.55
Electrocution	2	0	0	2	2	1	\$0.00
Fall in vessel	170	284	52	506	25	693	\$3,956,127.78
Falls overboard	284	58	9	351	183	177	\$227,195.00
Fire/explosion (fuel)	158	10	2	170	2	138	\$3,054,056.00
Fire/explosion (non-fuel)	81	2	1	84	0	8	\$7,265,495.00
Fire/explosion (unknown origin)	34	0	0	34	1	10	\$5,198,480.00
Flooding/swamping	470	258	82	810	111	285	\$15,154,400.50
Grounding	413	55	23	491	16	299	\$7,128,476.37
Person struck by propeller	42	101	28	171	24	175	\$124,740.00
Person struck by vessel	32	220	31	283	24	367	\$889,104.49
Sinking	0	119	83	202	23	46	\$8,122,022.00
Skier mishap	278	19	3	300	11	316	\$47,490.00
Sudden medical condition	10	1	0	11	9	2	\$700.00
Other	48	28	5	81	6	66	\$759,150.09
Unknown	0	0	0	0	0	0	\$0.00
<b>2015</b>							
Capsizing	299	241	56	596	226	293	\$3,078,884
Carbon monoxide poisoning	12	0	1	13	8	14	\$21,500
Collision with fixed object	470	73	10	553	62	385	\$5,195,040
Collision with floating object	61	5	1	67	11	29	\$578,821
Collision with commercial vessel	29	4	0	33	4	13	\$954,100
Collision with governmental vessel	4	0	0	4	0	1	\$47,000
Collision with recreational vessel	990	59	6	1055	37	650	\$6,575,775
Collision with submerged object	127	2	0	129	8	56	\$1,973,274
Departed vessel	86	39	13	138	70	57	\$308,765
Ejected from vessel	172	576	369	1117	316	931	\$5,696,172
Electrocution	1	1	0	2	0	3	\$44,000
Fall in vessel	146	268	43	457	22	682	\$3,837,367
Falls overboard	259	33	4	296	169	125	\$234,191
Fire/explosion (fuel)	174	4	0	178	3	136	\$3,878,941
Fire/explosion (non-fuel)	67	4	0	71	0	7	\$6,007,411
Fire/explosion (unknown origin)	24	1	0	25	0	6	\$5,875,925
Flooding/swamping	449	231	56	736	82	216	\$13,574,146



Table 17 Continued ▪ FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
 <b>2015</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	350	56	32	438	30	312
Person struck by propeller	42	94	22	158	27	150	\$106,485
Person struck by vessel	36	228	16	280	35	347	\$780,330
Sinking	0	109	75	184	27	35	\$5,798,853
Skier mishap	301	12	2	315	13	338	\$13,590
Sudden medical condition	2	0	0	2	0	2	\$0
Other	57	10	0	67	3	56	\$83,443
Unknown	0	0	0	0	0	0	\$0
<b>2014</b>							
Capsizing	280	223	47	550	209	287	\$3,438,083
Carbon monoxide poisoning	6	0	0	6	0	8	\$0
Collision with fixed object	452	59	10	521	53	402	\$4,570,680
Collision with floating object	54	4	1	59	4	37	\$882,413
Collision with commercial vessel	18	1	0	19	7	9	\$357,130
Collision with governmental vessel	5	0	0	5	0	0	\$28,700
Collision with recreational vessel	937	45	6	988	42	677	\$7,779,435
Collision with submerged object	118	0	0	118	10	55	\$1,549,583
Departed vessel	99	77	17	193	90	102	\$893,380
Ejected from vessel	151	565	298	1014	279	936	\$6,455,578
Electrocution	1	1	0	2	1	1	\$6,300
Fall in vessel	147	251	63	461	25	668	\$3,392,811
Falls overboard	281	29	1	311	168	159	\$97,302
Fire/explosion (fuel)	152	6	2	160	3	117	\$4,333,956
Fire/explosion (non-fuel)	75	5	1	81	2	10	\$5,187,286
Fire/explosion (unknown origin)	36	0	0	36	0	8	\$3,277,185
Flooding/swamping	463	223	56	742	104	259	\$15,724,140
Grounding	359	57	20	436	20	292	\$6,267,509
Person struck by propeller	47	83	23	153	22	148	\$112,345
Person struck by vessel	31	192	22	245	23	313	\$891,727
Sinking	0	100	59	159	25	32	\$4,993,021
Skier mishap	292	21	0	313	8	337	\$11,280
Sudden medical condition	1	3	0	4	3	1	\$10,000
Other	55	14	4	73	2	69	\$1,167,171
Unknown	4	0	0	4	8	0	\$17,500

Table 17 Continued • FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
 <b>2013</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	256	262	41	559	175	333
Carbon monoxide poisoning	11	0	0	11	4	31	\$0
Collision with fixed object	427	64	4	495	60	291	\$4,778,809
Collision with floating object	43	2	0	45	2	17	\$455,023
Collision with commercial vessel	19	1	0	20	5	6	\$270,470
Collision with governmental vessel	9	1	0	10	0	10	\$86,128
Collision with recreational vessel	947	52	3	1002	37	656	\$6,495,709
Collision with submerged object	145	1	0	146	10	60	\$3,022,991
Departed vessel	85	34	11	130	66	61	\$326,635
Ejected from vessel	167	541	319	1027	268	925	\$6,463,758
Electrocution	4	0	0	4	2	2	\$5,000
Fall in vessel	136	286	48	470	22	655	\$4,069,745
Falls overboard	281	31	1	313	156	158	\$89,135
Fire/explosion (fuel)	137	6	0	143	0	101	\$6,309,934
Fire/explosion (non-fuel)	73	1	0	74	0	3	\$5,905,767
Fire/explosion (unknown origin)	9	0	0	9	0	3	\$370,900
Flooding/swamping	430	228	54	712	94	249	\$12,762,290
Grounding	399	50	12	461	21	278	\$5,771,281
Person struck by propeller	58	85	31	174	23	162	\$160,560
Person struck by vessel	26	207	18	251	24	309	\$653,828
Sinking	0	90	56	146	20	23	\$5,077,352
Skier mishap	332	9	0	341	12	365	\$1,110
Sudden medical condition	4	3	1	8	5	3	\$0
Other	57	9	0	66	1	59	\$436,500
Unknown	7	0	0	7	7	1	\$3,000






**Table 18 - NUMBER OF VESSELS IN ACCIDENTS BY VESSEL LENGTH & PRIMARY ACCIDENT TYPE**

	Total vessels involved	Carbon monoxide poisoning	Collision with fixed object	Collision with floating object	Collision with commercial vessel	Collision with governmental vessel	Collision with recreational vessel	Collision with submerged object	Departed vessel	Ejected from vessel	Electrocution	Fall in vessel	Falls overboard	Fire/explosion (fuel)	Fire/explosion (non-fuel)	Fire/explosion (unknown)	Flooding/ swamping	Grounding	Person struck by propeller	Person struck by vessel	Sinking	Skier mishap	Sudden medical condition	Other	Unknown	Drownings	Other Deaths	Total Deaths	Injuries	
<b>All lengths</b>	<b>5876</b>	<b>305</b>	<b>9</b>	<b>562</b>	<b>59</b>	<b>41</b>	<b>12</b>	<b>2389</b>	<b>149</b>	<b>96</b>	<b>198</b>	<b>1</b>	<b>166</b>	<b>326</b>	<b>175</b>	<b>106</b>	<b>68</b>	<b>460</b>	<b>379</b>	<b>30</b>	<b>28</b>	<b>0</b>	<b>267</b>	<b>2</b>	<b>48</b>	<b>0</b>	<b>449</b>	<b>209</b>	<b>658</b>	<b>2629</b>
5 feet	3	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6 feet	4	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	1	
7 feet	14	3	0	0	0	0	8	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	12	
8 feet	74	12	0	3	0	0	29	0	1	6	0	2	12	4	0	0	4	1	0	0	0	0	0	0	0	18	3	21	35	
9 feet	144	18	0	2	0	1	85	1	1	13	0	4	4	4	0	0	2	6	0	1	0	1	0	0	0	6	5	11	82	
10 feet	552	43	0	39	3	1	312	4	6	35	0	17	33	8	2	0	11	14	0	11	0	10	0	1	0	52	21	73	320	
11 feet	307	9	0	16	2	2	170	4	2	40	0	10	21	2	0	0	6	13	0	1	0	8	0	0	0	19	8	27	186	
12 feet	133	19	0	10	0	0	38	4	1	13	0	5	18	0	0	0	22	2	0	1	0	0	0	0	0	31	7	38	72	
13 feet	57	11	0	5	0	0	15	1	0	6	0	1	5	1	1	1	8	0	1	0	0	0	0	1	0	13	2	15	20	
14 feet	127	22	0	13	1	0	20	10	2	6	0	2	20	0	0	0	25	3	0	0	0	1	0	2	0	43	4	47	72	
15 feet	144	16	0	11	4	1	27	7	3	7	0	3	15	0	1	0	33	10	0	0	0	5	0	0	0	27	5	32	66	
<b>Under 16 ft</b>	<b>1559</b>	<b>157</b>	<b>0</b>	<b>99</b>	<b>10</b>	<b>5</b>	<b>706</b>	<b>31</b>	<b>16</b>	<b>127</b>	<b>0</b>	<b>44</b>	<b>131</b>	<b>19</b>	<b>4</b>	<b>1</b>	<b>111</b>	<b>49</b>	<b>1</b>	<b>14</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>212</b>	<b>57</b>	<b>269</b>	<b>868</b>	
16 feet	223	24	0	26	4	0	60	11	3	7	0	4	18	2	0	0	39	15	0	0	0	8	0	2	0	44	10	54	96	
17 feet	250	14	0	31	4	0	61	10	4	11	0	9	15	4	1	0	42	21	2	2	0	19	0	0	0	34	15	49	149	
18 feet	322	8	0	31	5	1	111	8	12	7	0	6	12	12	2	4	43	22	2	3	0	28	0	4	0	12	21	33	182	
19 feet	271	12	0	17	0	1	102	11	5	0	0	12	10	13	3	0	31	22	4	2	0	23	0	3	0	11	8	19	146	
20 feet	385	10	1	29	7	1	136	20	6	13	0	10	16	11	6	2	30	36	3	1	0	44	0	3	0	18	13	31	166	
21 feet	289	6	0	30	5	2	104	8	4	6	0	3	18	10	4	0	27	26	2	0	0	31	0	2	0	17	6	23	165	
22 feet	242	3	0	26	4	2	94	7	6	1	0	7	11	11	3	0	19	18	2	1	0	22	1	4	0	18	7	25	116	
23 feet	213	5	0	20	2	5	70	2	6	5	0	10	9	14	4	0	10	22	1	0	0	23	1	3	0	9	5	14	132	
24 feet	238	3	1	21	4	2	89	8	8	5	1	9	11	13	3	3	12	24	4	0	0	15	0	2	0	7	7	14	129	
25 feet	152	2	0	16	2	0	66	5	4	1	0	4	6	5	3	1	9	14	4	1	0	8	0	1	0	7	3	10	59	
<b>16 ft to less than 26 ft</b>	<b>2585</b>	<b>87</b>	<b>2</b>	<b>247</b>	<b>37</b>	<b>14</b>	<b>893</b>	<b>90</b>	<b>58</b>	<b>56</b>	<b>1</b>	<b>74</b>	<b>126</b>	<b>95</b>	<b>29</b>	<b>10</b>	<b>262</b>	<b>220</b>	<b>24</b>	<b>10</b>	<b>0</b>	<b>221</b>	<b>2</b>	<b>24</b>	<b>0</b>	<b>177</b>	<b>95</b>	<b>272</b>	<b>1340</b>	
26 feet	94	2	1	13	2	1	30	3	1	0	0	6	5	1	3	1	13	6	0	1	0	4	0	1	0	1	1	2	37	
27 feet	108	1	0	8	0	0	50	2	1	1	0	4	2	8	4	0	11	11	0	1	0	1	0	3	0	2	1	3	37	
28 feet	96	5	0	10	1	0	43	1	0	1	0	7	1	5	4	0	3	13	0	0	0	1	0	1	0	1	3	4	39	
29 feet	48	0	0	4	2	0	21	1	0	0	0	2	0	3	2	0	4	7	0	0	0	0	0	2	0	0	0	0	18	
30 feet	81	0	0	9	1	1	34	2	0	1	0	2	1	12	1	1	5	9	0	0	0	2	0	0	0	0	1	1	17	
31 feet	54	0	0	8	1	1	26	1	3	0	0	1	5	1	1	1	1	2	0	0	0	1	0	2	0	1	1	2	11	
32 feet	72	0	1	9	0	0	29	0	0	1	0	2	3	2	5	1	9	8	0	0	0	0	0	2	0	2	4	6	24	
33 feet	45	0	2	5	0	0	18	1	2	0	0	3	0	5	4	2	0	3	0	0	0	0	0	0	0	0	2	2	9	
34 feet	54	0	0	9	0	0	27	2	0	1	0	3	0	2	2	0	3	5	0	0	0	0	0	0	0	0	2	2	9	
35 feet	36	0	0	3	0	0	21	1	1	1	0	1	0	2	1	1	2	2	0	0	0	0	0	0	0	2	0	2	12	
36 feet	55	1	0	10	1	0	24	0	1	1	0	1	1	4	2	1	1	5	0	0	0	0	0	2	0	1	0	1	7	
37 feet	44	0	0	5	0	0	25	1	1	0	0	1	0	1	4	0	0	5	0	0	0	0	0	1	0	1	0	1	11	
38 feet	49	2	1	6	0	1	24	2	0	0	0	1	1	0	3	5	1	2	0	0	0	0	0	0	0	1	0	1	5	
39 feet	29	0	0	3	0	0	13	1	0	1	0	0	2	0	5	0	1	3	0	0	0	0	0	0	0	1	0	1	5	
<b>26 ft to less than 40 ft</b>	<b>865</b>	<b>11</b>	<b>5</b>	<b>102</b>	<b>8</b>	<b>4</b>	<b>385</b>	<b>18</b>	<b>10</b>	<b>8</b>	<b>0</b>	<b>33</b>	<b>17</b>	<b>50</b>	<b>41</b>	<b>13</b>	<b>54</b>	<b>81</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>13</b>	<b>15</b>	<b>28</b>	<b>241</b>	
40 ft to 65 ft	418	5	1	71	4	13	218	10	1	1	0	3	8	8	30	15	6	17	1	1	0	1	0	2	0	2	7	9	61	
Over 65 ft	78	0	1	10	0	3	43	0	1	0	0	2	2	1	1	0	7	4	1	0	0	2	0	0	0	1	3	4	13	
Unknown	371	45	0	33	0	2	144	0	10	6	0	10	42	2	1	29	20	8	3	1	0	9	0	4	0	44	32	76	106	

**Table 19 - NUMBER OF VESSELS IN ACCIDENTS BY VESSEL TYPE & PRIMARY ACCIDENT TYPE WITH NUMBER OF CASUALTIES BY CASUALTY TYPE & VESSEL TYPE 2017**

	Injuries	2629
	Total deaths	658
	Deaths by causes other than drowning	209
	Drownings	449
	Unknown	48
	Other	0
	Sudden medical condition	2
	Skier mishap	267
	Sinking	0
	Person struck by vessel	28
	Person struck by propeller	30
	Grounding	379
	Flooding/swamping	460
	Fire/explosion (unknown origin)	68
	Fire/explosion (non-fuel)	106
	Fire/explosion (fuel)	175
	Falls overboard	326
	Fall in vessel	166
	Electrocution	1
	Ejected from vessel	198
	Departed vessel	96
	Collision with submerged object	149
	Collision with recreational vessel	2389
	Collision with governmental vessel	12
	Collision with commercial vessel	41
	Collision with floating object	59
	Collision with fixed object	562
	Carbon monoxide exposure	9
Capsizing	305	
All accident types	5876	
<b>All vessels</b>	<b>305</b>	
Airboat	37	
Auxiliary sailboat	275	
Cabin motorboat	918	
Canoe	74	
Houseboat	71	
Inflatable	27	
Kayak	182	
Open motorboat	2620	
Personal watercraft	1028	
Pontoon	343	
Rowboat	38	
Sailboat (only)	57	
Sailboat (unknown)	11	
Standup paddleboard	16	
Other	28	
Unknown	151	



**OPERATOR &  
PASSENGER  
INFORMATION**

## Explanation of Operator/Passenger Information Section

The following section contains eleven 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 46)**

This table provides information about the operator. Information covers a variety of topics including age, operator's 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 by the Coast Guard, military training, police academy training, rental operator training, commercially-available courses, and camp training. Informal training signifies that the operator did not receive formal instruction, but rather learned from experience.

### **Number of Deaths by Type of Operator Boating Instruction (Table 23 & Figure 7, Page 47)**

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 8, Page 48)**

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.

### **Percentage of Deaths by Vessel Type, 2004-2017 (Figure 9 & Table 25, Page 49)**

This table and accompanying figure focus on the percentage of deaths that occurred on each vessel type for the past ten years. The figure may be interpreted by measuring the upper and lower bounds of the color-coded vessel type to obtain the percentage of deaths attributed to that vessel type within the year.

Please note that the percentages in the table have been rounded up.

### **Number of Deceased Victims by Age & Vessel Type (Table 26, Page 50)**

This table documents the age of fatal accident 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 27, Page 51)**


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

### **Nature of Primary Injury Type by Area of Injury 2017 (Table 28, Page 52)**


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

### **Number of Injured Victims under Age 18 by Age Group and Injury Type on Personal Watercraft, 2017 (Figure 10, Page 52)**

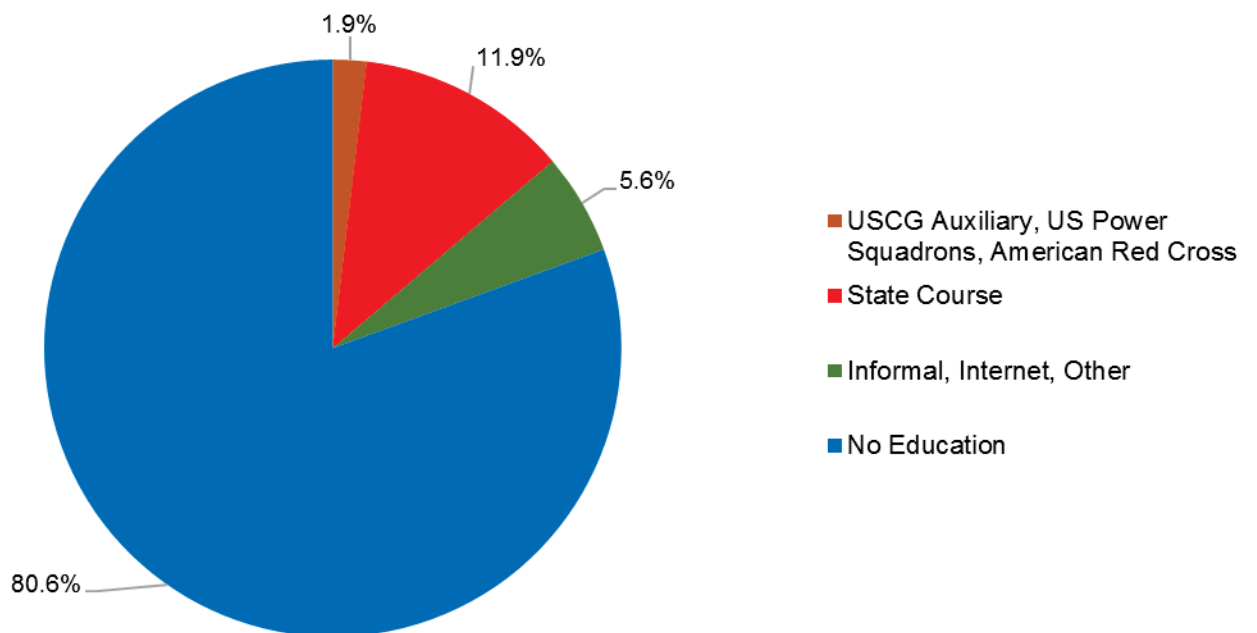
This table focuses on the number of injured victims from personal watercraft for specific age groups and by type of injury.

 <b>Table 22 - OPERATOR INFORMATION 2017</b>				
		Vessels Involved	Deaths	Injuries
		5876	658	2629
<b>Age of Operator</b>	12 years and under	20	2	12
	13 to 18 years	244	22	150
	19 to 25 years	563	72	310
	26 to 35 years	784	95	453
	36 to 55 years	1771	214	966
	Over 55 years	1263	207	550
	Unknown	380	38	119
	No operator	851	8	69
<b>Operator's Experience</b>	No Experience	36	6	21
	Under 10 hours	471	53	239
	10 to 100 hours	793	72	473
	101 to 500 hours	1397	123	737
	Over 500 Hours	567	34	282
	Unknown	1761	362	808
	No Operator	851	8	69
<b>Number of Persons on Board</b>	None	489	0	2
	One	1735	243	592
	Two	1466	204	736
	Three	646	81	416
	Four	429	51	268
	Five	256	18	165
	Six	182	14	112
	Seven	124	15	110
	Eight	97	6	67
	Nine	54	2	38
	Ten	34	6	27
	More than 10	64	8	74
	Unknown	300	10	22
<b>Education of Operator</b>	American Red Cross	6	0	4
	Informal	215	13	122
	Internet Course	125	3	70
	State Course	773	38	466
	US Power Squadrons	50	2	15
	USCG Auxiliary	141	4	72
	Other	101	2	32
	No Education	2049	257	1099
	Unknown	1565	331	680
	No Operator	851	8	69

**BOATING SAFETY INSTRUCTION**

 <b>Table 23 • NUMBER OF DEATHS BY TYPE OF OPERATOR BOATING INSTRUCTION 2017</b>	
Type of Boating Instruction	Deaths
American Red Cross	0
Informal	13
Internet Course	3
State Course	38
US Power Squadrons	2
USCG Auxiliary	4
Other	2
No Education	257
<b>Total Deaths - Known Operator Instruction</b>	<b>319</b>
<b>Total Deaths - Unknown Operator Instruction</b>	<b>331</b>
<b>Total Deaths - No Operator</b>	<b>8</b>
<b>Total Deaths - Known &amp; Unknown Operator Instruction</b>	<b>658</b>

**Figure 7 PERCENT OF DEATHS BY KNOWN OPERATOR INSTRUCTION, 2017**

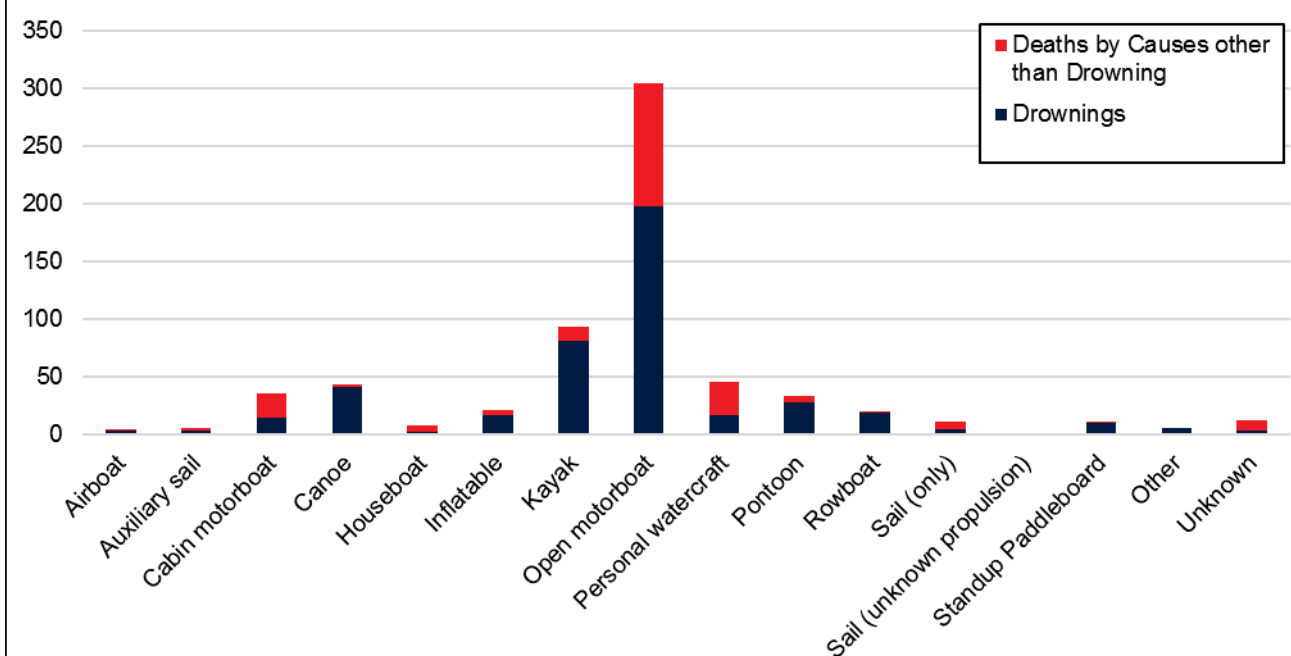




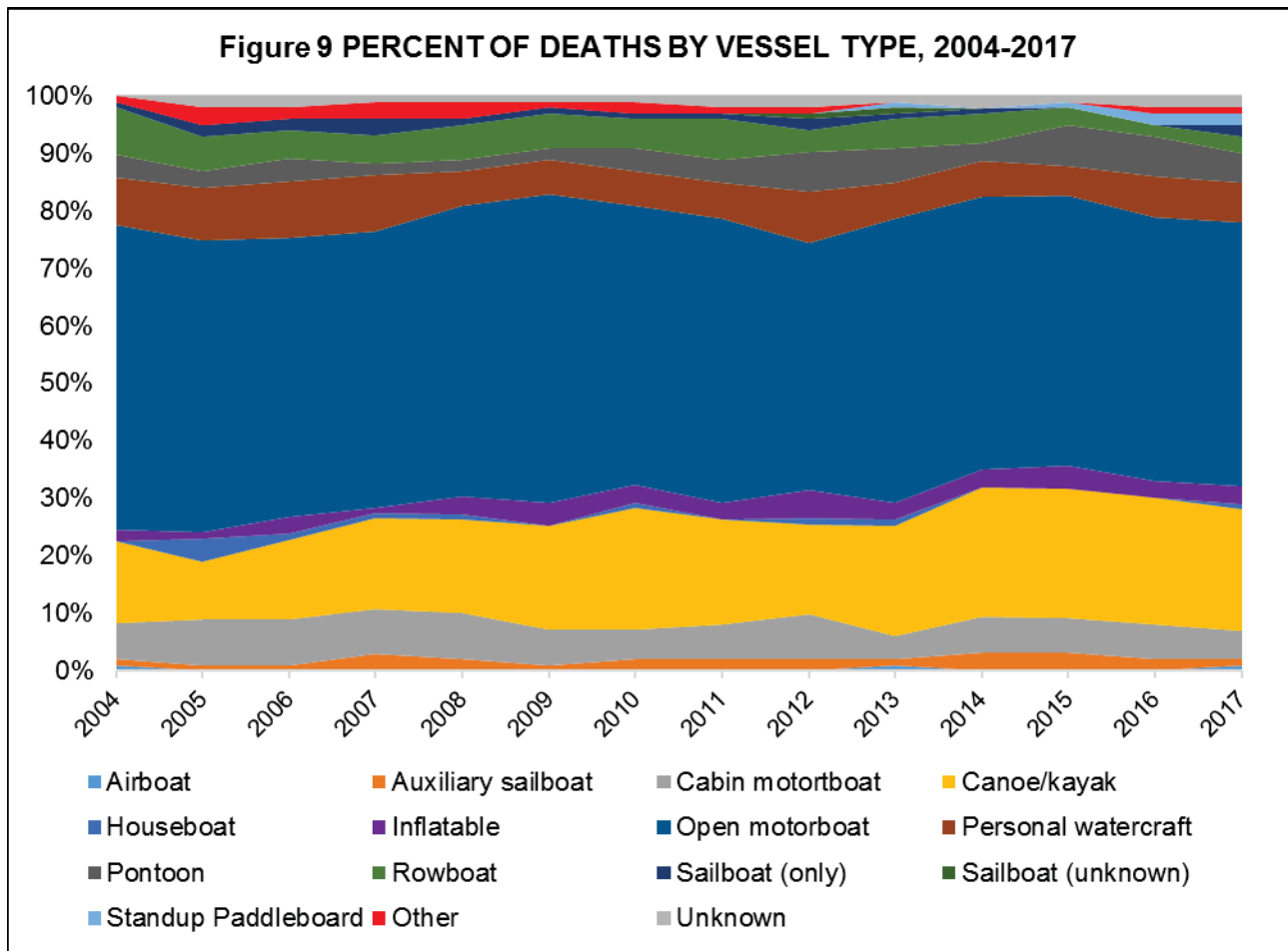
**Table 24 • NUMBER OF DEATHS BY VESSEL TYPE 2017**

Vessel type	Drownings	Deaths by Causes other than Drowning	Total Deaths	Percentage of Deaths from Drowning
Airboat	3	1	4	75%
Auxiliary Sailboat	4	2	6	67%
Cabin Motorboat	15	21	36	42%
Canoe	41	3	44	93%
Houseboat	2	6	8	25%
Inflatable	17	4	21	81%
Kayak	81	13	94	86%
Open Motorboat	198	107	305	65%
Personal Watercraft	17	29	46	37%
Pontoon	28	5	33	85%
Rowboat	19	1	20	95%
Sailboat (only)	5	6	11	45%
Sailboat (unknown)	0	1	1	0%
Standup paddleboard	10	1	11	91%
Other	6	0	6	100%
Unknown	3	9	12	25%
<b>Total</b>	<b>449</b>	<b>209</b>	<b>658</b>	<b>68%</b>

**Figure 8 NUMBER OF DEATHS BY VESSEL TYPE 2017**








**Table 25 - PERCENT OF DEATHS BY VESSEL TYPE, 2004-2017**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Airboat	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	1%
Auxiliary sailboat	1%	1%	1%	3%	2%	1%	2%	2%	2%	1%	3%	3%	2%	1%
Cabin motorboat	6%	8%	8%	8%	8%	6%	5%	6%	8%	4%	6%	6%	6%	5%
Canoe/kayak	14%	10%	14%	16%	16%	18%	21%	18%	16%	19%	22%	22%	22%	21%
Houseboat	0%	4%	1%	1%	1%	0%	1%	0%	1%	1%	0%	0%	0%	1%
Inflatable	2%	1%	3%	1%	3%	4%	3%	3%	5%	3%	3%	4%	3%	3%
Open motorboat	52%	51%	49%	49%	50%	53%	48%	49%	44%	49%	46%	46%	46%	46%
Personal watercraft	8%	9%	10%	10%	6%	6%	6%	6%	9%	6%	6%	5%	7%	7%
Pontoon	4%	3%	4%	2%	2%	2%	4%	4%	7%	6%	3%	7%	7%	5%
Rowboat	8%	6%	5%	5%	6%	6%	5%	7%	4%	5%	5%	3%	2%	3%
Sailboat (only)	1%	2%	2%	3%	1%	1%	1%	1%	2%	1%	1%	0%	0%	2%
Sailboat (unknown)	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	0%	0%	0%	0%
Standup paddleboard	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%	2%	2%
Other	1%	3%	2%	3%	3%	1%	2%	1%	1%	0%	0%	0%	1%	1%
Unknown	0%	2%	2%	1%	1%	1%	1%	2%	2%	1%	2%	1%	2%	2%



**Table 26 - NUMBER OF DECEASED VICTIMS BY AGE AND VESSEL TYPE  
2017**

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	Rowboat	Sailboat (only)	Sailboat (unknown)	Standup paddleboard	Other				Unknown
Total	4	6	36	44	8	21	94	305	46	33	20	11	1	11	6	12	449	209	658
1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0	2
4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
5	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2	0	2
6	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
7	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1	2
8	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1	2	3
9	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
10	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
11	0	0	0	0	0	0	1	0	2	0	0	1	0	0	0	0	2	2	4
12	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	4	4
0-12	0	0	1	1	3	0	2	11	3	0	0	1	0	0	0	1	11	12	23
13 - 19	0	0	2	3	0	0	4	12	7	1	3	2	0	0	1	1	18	18	36
20 - 29	0	0	3	10	0	5	25	27	14	3	1	0	0	3	2	2	66	29	95
30 - 39	0	0	7	8	3	4	15	36	9	3	2	0	0	3	0	3	64	29	93
40 - 49	0	0	4	3	1	4	16	54	7	9	6	3	0	3	1	2	82	31	113
50 - 59	1	1	7	6	1	3	10	74	3	8	3	1	1	0	0	1	86	34	120
60 - 69	1	3	8	10	0	5	14	47	3	6	2	4	0	1	1	1	73	33	106
70 - 79	1	1	3	2	0	0	8	33	0	3	3	0	0	1	1	1	40	17	57
80 and Over	1	1	1	1	0	0	0	10	0	0	0	0	0	0	0	0	9	5	14
Unknown	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1



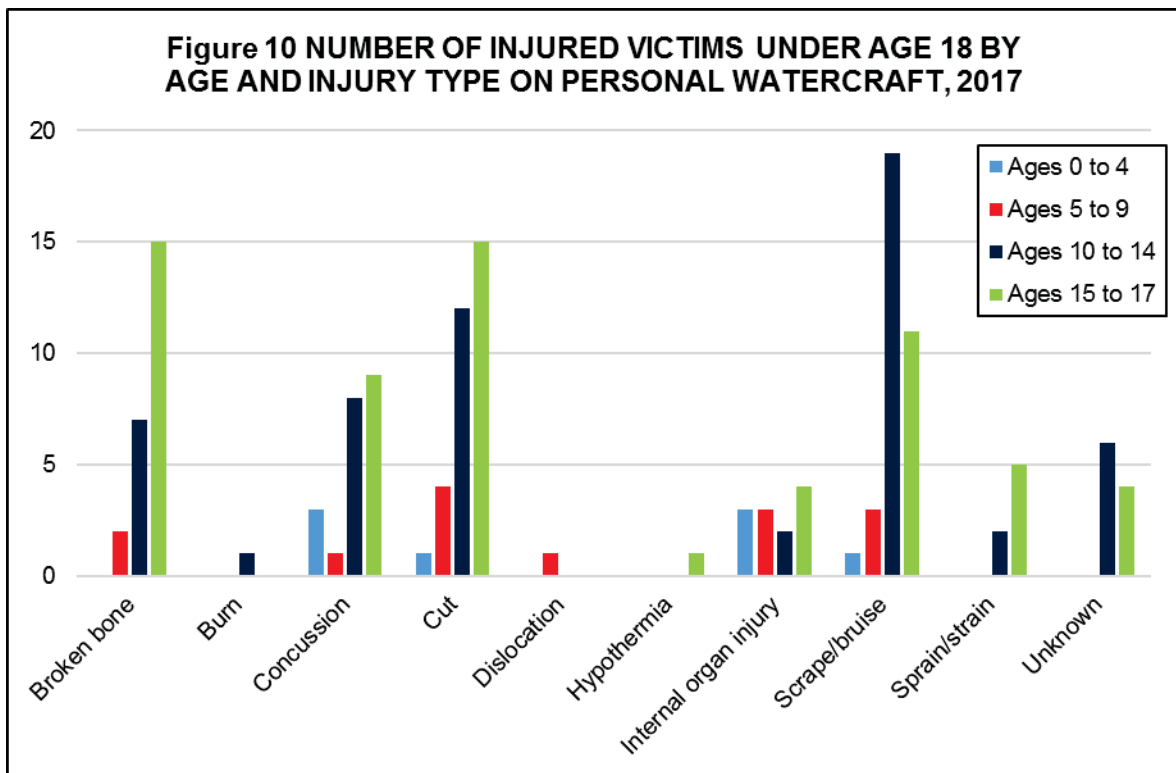
**Table 27 • NUMBER OF INJURED VICTIMS BY AGE AND VESSEL TYPE 2017**

Age of Injured Victim	Total injuries	Airboat	Auxiliary sailboat	Cabin motorboat	Canoe	Houseboat	Inflatable	Kayak	Open motorboat	Personal watercraft	Pontoon	Rowboat	Sailboat (only)	Sailboat (unknown)	Standup paddleboard	Other	Unknown
Total	2629	28	40	220	42	34	7	65	1367	624	133	11	18	5	4	3	28
0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
1	4	0	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0
2	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3	6	1	0	0	0	1	0	0	1	1	2	0	0	0	0	0	0
4	12	0	0	0	0	1	0	0	6	4	1	0	0	0	0	0	0
5	8	0	0	1	0	0	0	1	2	3	1	0	0	0	0	0	0
6	9	0	0	1	0	0	0	0	7	1	0	0	0	0	0	0	0
7	7	0	0	0	0	1	0	0	2	3	1	0	0	0	0	0	0
8	13	0	0	1	0	0	0	0	5	4	3	0	0	0	0	0	0
9	22	0	0	1	1	0	0	0	12	3	3	0	1	0	1	0	0
10	31	0	0	2	0	1	0	1	14	10	3	0	0	0	0	0	0
11	30	0	0	3	0	0	0	0	16	7	4	0	0	0	0	0	0
12	41	0	0	0	1	0	0	1	25	12	2	0	0	0	0	0	0
0 - 12	186	1	0	10	2	4	0	3	91	51	22	0	1	0	1	0	0
13 - 19	404	0	1	14	4	0	1	8	210	143	14	2	3	0	1	0	3
20 - 29	491	5	4	31	8	0	1	13	232	168	19	2	4	0	0	1	3
30 - 39	377	5	5	31	5	1	2	7	203	94	18	3	0	0	0	1	2
40 - 49	365	9	7	37	8	2	1	8	205	71	13	1	0	1	1	0	1
50 - 59	342	4	7	46	4	1	1	10	181	63	21	0	2	0	1	1	0
60 - 69	193	1	5	20	3	2	0	7	112	19	16	2	5	0	0	0	1
70 - 79	79	2	4	11	2	0	0	3	46	4	2	1	2	0	0	0	2
80 and Over	17	0	1	2	2	0	0	0	11	1	0	0	0	0	0	0	0
Unknown	175	1	6	18	4	24	1	6	76	10	8	0	1	4	0	0	16



**Table 28 • NATURE OF PRIMARY INJURY TYPE BY AREA OF INJURY 2017**

	All Areas	Arm	Body	Foot	Hand	Head	Leg	Neck	Trunk	Unknown
<b>All primary injury types</b>	2629	228	311	128	115	583	507	68	486	203
Amputation	29	3	0	3	17	0	6	0	0	0
Broken bone	479	47	0	38	33	47	170	6	121	17
Burn	93	12	17	3	7	6	23	2	7	16
Carbon monoxide	14	0	14	0	0	0	0	0	0	0
Concussion	251	0	0	0	0	251	0	0	0	0
Dislocation	52	31	0	0	2	0	18	0	0	1
Electric shock	0	0	0	0	0	0	0	0	0	0
Hypothermia	237	0	237	0	0	0	0	0	0	0
Internal organ injury	111	0	0	0	0	2	0	0	108	1
Laceration	569	52	10	48	38	204	149	2	33	33
Scrape/bruise	371	47	20	12	9	51	92	4	74	62
Shock	4	0	4	0	0	0	0	0	0	0
Spinal cord Injury	52	0	0	0	0	0	0	8	44	0
Sprain/strain	144	22	6	20	6	0	28	25	32	5
Other	6	3	2	0	0	1	0	0	0	0
Unknown	217	11	1	4	3	21	21	21	67	68



# **CASUALTY DATA**

## Explanation of Casualty Data Section

This section contains fifteen 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.

### **Deaths, Injuries & Accidents by Year, 1997-2017 (Figure 11 & Table 29, Page 55)**

This figure and table document the number of accidents and casualties from 1997-2017.

### **Accident, Casualty & Damage Data by State (Table 30, Page 56)**

This table provides accident, casualty, and damage information by state for the year 2017. 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 12, Page 57)**

This figure provides the percentage that each state contributed to the national death count. So, for instance, Michigan had 20 deaths. Out of the total national death count of 658, Michigan contributed 3.0% ( $(20/658) \times 100$ ) of deaths to the national count. Please note that percentages have been rounded.

### **Fatal Accidents by Location (Figures 12a-d, Pages 58-60)**

These figures plot the location of fatal accidents in four different regions. 12a represents the continental United States. 12b represents Alaska. 12c represents Hawaii. 12d represents Puerto Rico. In many cases, the location was plotted using coordinates. When coordinates were not available, other fields such as the name of body of water, nearest city or town, county, and the narrative were used to approximate the location. Plots are color-coded whereby red dots indicate a single-fatality accident and yellow dots indicate an accident in which more than one person died.

### **Annual Recreational Boating Fatality Rates, 1997-2017 (Figure 13 & Table 31, Page 61)**

This table and accompanying figure provide two fatality rates for years 1997-2017. 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 fatality rate takes into account all fatalities and all recreational registration data collected. The motorized fatality rate takes into account only fatalities that occurred on motorized vessels and only motorized recreational vessels registered.

### **States Coded by their 2017 Fatality Rate (Figure 14, Page 62)**

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 2016-2017 to view the Scope of each state's registration system. Further, when examining a state fatality rate, it is important to note that the state fatality rate may include deaths from vessels that were registered in another state.

### **Five-year Summary of Selected Accident Data by State, 2013-2017 (Table 32, Page 63)**

This table examines the number of accidents, fatal accidents, and fatalities by state for years 2013-2017.

### **Number of Accidents by Primary Accident Type & State (Table 33, Page 64-65)**

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 34, Page 66)**

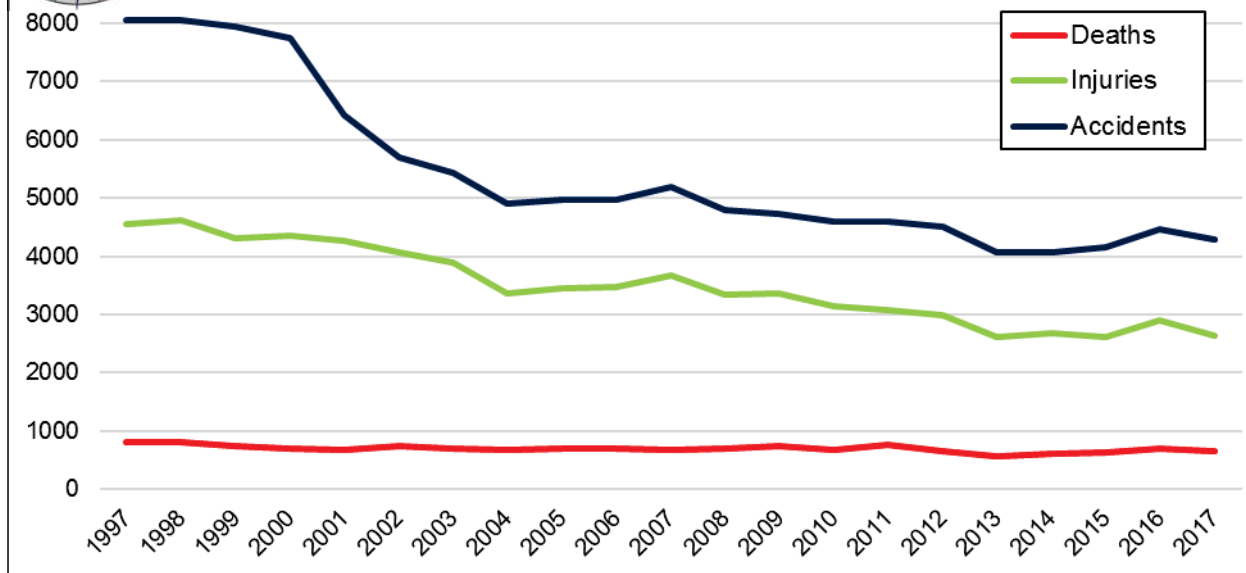
This table displays the number of injured victims by primary injury and vessel type.

### **Number of Fatal Victims by Life Jacket Wear, Cause of Death, & Vessel Type (Table 35, Page 66)**

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 11 DEATHS, INJURIES, & ACCIDENTS BY YEAR, 1997-2017**



**Table 29 • DEATHS, INJURIES, & ACCIDENTS BY YEAR, 1997-2017**

Year	Deaths	Injuries	Accidents
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
2011	758	3081	4588
2012	651	3000	4515
2013	560	2620	4062
2014	610	2678	4064
2015	626	2613	4158
2016	701	2903	4463
2017	658	2629	4291

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

Table 30 - ACCIDENT, CASUALTY &amp; DAMAGE DATA BY STATE 2017

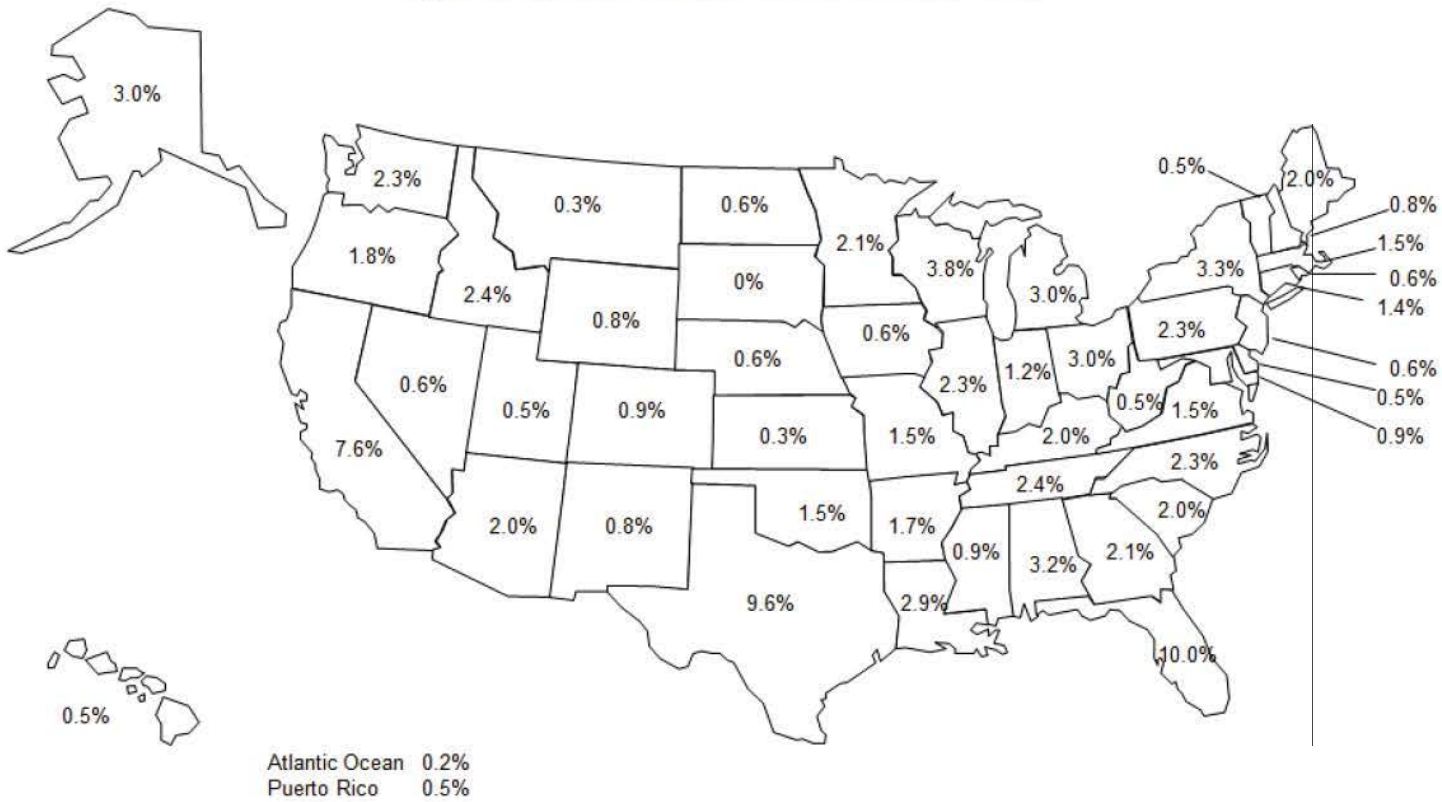
	Number of Accidents				Persons Involved		Damages
	Total	Fatal	Non-Fatal Injury	Property Damage	Deaths	Injured	
<b>Totals</b>	4291	599	1690	2002	658	2629	\$45,992,120.93
AK	15	13	1	1	20	2	\$13,000.00
AL	70	18	19	33	21	32	\$1,023,880.00
AR	64	11	22	31	11	32	\$196,038.41
AZ	123	11	58	54	13	77	\$962,397.00
CA	350	49	164	137	50	249	\$2,680,891.00
CO	32	6	17	9	6	20	\$131,300.00
CT	49	8	13	28	9	18	\$966,790.58
DC	1	0	0	1	0	0	\$3,000.00
DE	23	3	11	9	3	16	\$87,600.00
FL	723	60	267	396	66	429	\$8,327,262.00
GA	102	12	38	52	14	63	\$791,802.00
HI	15	3	2	10	3	2	\$809,544.00
IA	40	4	23	13	4	26	\$115,101.00
ID	46	13	18	15	16	24	\$519,664.00
IL	84	15	31	38	15	46	\$1,251,955.00
IN	57	7	30	20	8	45	\$341,160.00
KS	29	2	14	13	2	19	\$111,819.00
KY	41	12	14	15	13	23	\$244,740.00
LA	106	19	47	40	19	75	\$811,336.59
MA	66	10	23	33	10	44	\$3,619,965.76
MD	147	6	82	59	6	108	\$850,473.68
ME	49	11	18	20	13	33	\$251,384.00
MI	116	19	36	61	20	65	\$758,510.00
MN	105	13	48	44	14	69	\$844,706.65
MO	124	10	59	55	10	86	\$1,055,383.90
MS	34	6	13	15	6	20	\$163,800.00
MT	9	2	3	4	2	4	\$12,100.00
NC	117	15	46	56	15	71	\$2,789,860.00
ND	15	4	7	4	4	12	\$56,252.00
NE	27	4	13	10	4	16	\$54,597.00
NH	49	5	15	29	5	18	\$324,348.86
NJ	106	4	36	66	4	58	\$134,000.00
NM	18	5	6	7	5	12	\$32,186.43
NV	35	4	12	19	4	18	\$171,601.00
NY	167	19	49	99	22	75	\$2,336,324.94
OH	117	20	33	64	20	50	\$897,831.30
OK	38	7	23	8	10	45	\$256,500.00
OR	60	11	27	22	12	57	\$644,630.00
PA	69	15	36	18	15	48	\$177,476.55
RI	31	3	12	16	4	17	\$219,700.00
SC	151	12	52	87	13	85	\$2,987,759.00
SD	17	0	6	11	0	11	\$81,750.50
TN	93	14	33	46	16	44	\$566,396.00
TX	170	51	53	66	63	100	\$1,374,931.47
UT	58	3	31	24	3	64	\$693,367.00
VA	72	10	33	29	10	45	\$290,000.00
VT	3	3	0	0	3	0	\$0.00
WA	109	15	35	59	15	51	\$1,407,125.00
WI	105	22	46	37	25	78	\$965,836.00
WV	12	3	6	3	3	9	\$34,521.31
WY	10	5	3	2	5	4	\$13,562.00
AS	0	0	0	0	0	0	\$0.00
CNMI	0	0	0	0	0	0	\$0.00
GU	2	0	2	0	0	2	\$200.00
PR	3	1	1	1	3	3	\$46,000.00
VI	0	0	0	0	0	0	\$0.00
Atlantic Ocean*	8	1	1	6	1	4	\$306,335.00
Gulf of Mexico*	2	0	0	2	0	0	\$196,865.00
Pacific Ocean*	7	0	2	5	0	5	\$1,986,560.00

\*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. 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 12 DISTRIBUTION OF 2017 DEATHS BY STATE**



American Samoa, Guam, the Northern Mariana Islands, the U.S. Virgin Islands, and District of Columbia did not have deaths.

Figure 12a - FATAL ACCIDENTS BY LOCATION- CONTINENTAL U.S.

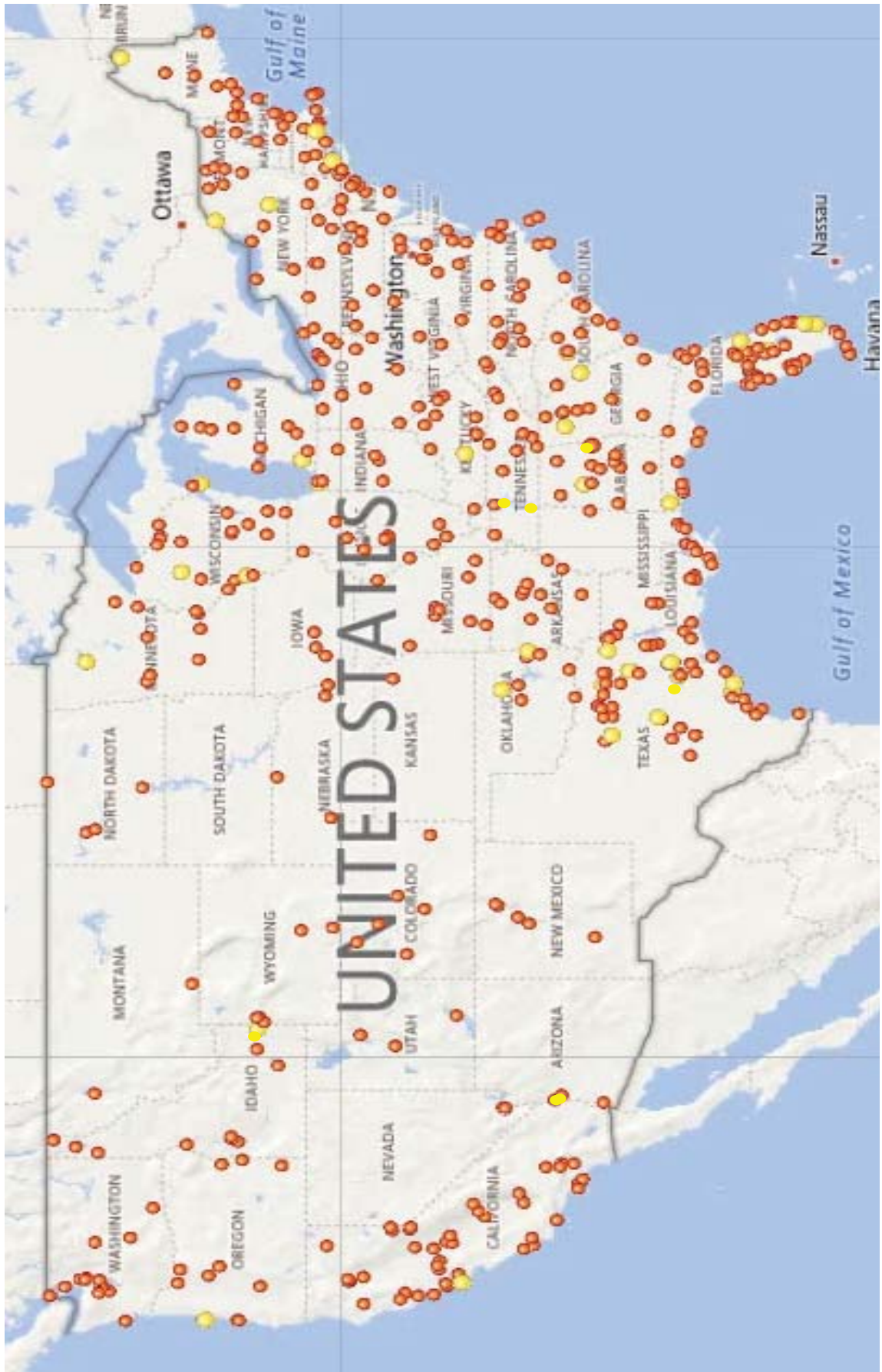


Figure 12b • FATAL ACCIDENTS BY LOCATION– ALASKA



Figure 12c • FATAL ACCIDENTS BY LOCATION– HAWAII



Figure 12d • FATAL ACCIDENTS BY LOCATION- PUERTO RICO





**Figure 13 ANNUAL RECREATIONAL BOATING FATALITY RATES, 1997-2017**

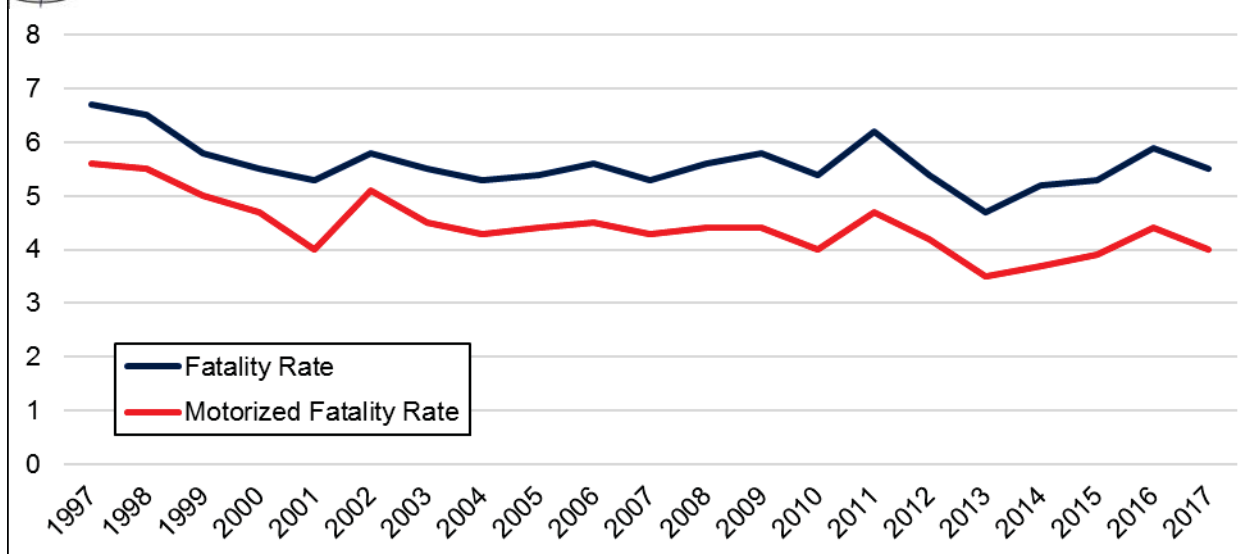
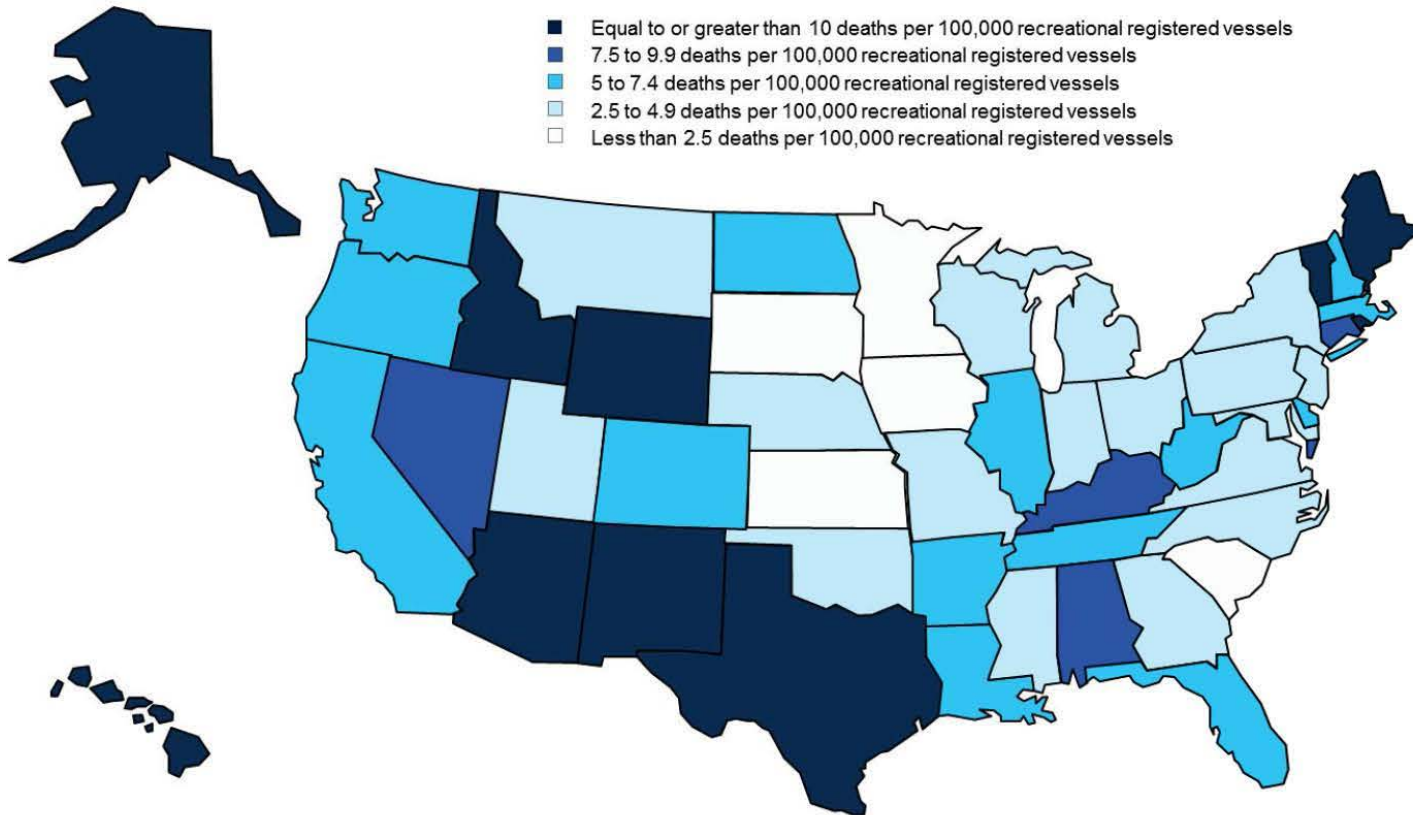


Table 31 • ANNUAL RECREATIONAL BOATING FATALITY RATES 1997-2017						
	All Deaths	All Registered Vessels	Fatality Rate	Motorized Vessel Deaths	Registered Motorized Vessels	Motorized Vessel Fatality Rate
1997	821	12,312,982	6.7	645	11,591,194	5.6
1998	815	12,565,930	6.5	637	11,637,361	5.5
1999	734	12,738,271	5.8	586	11,811,562	5.0
2000	701	12,782,143	5.5	543	11,648,769	4.7
2001	681	12,876,346	5.3	484	12,100,439	4.0
2002	750	12,854,054	5.8	612	11,918,688	5.1
2003	703	12,794,616	5.5	536	11,946,576	4.5
2004	676	12,781,476	5.3	515	11,878,783	4.3
2005	697	12,942,414	5.4	528	11,998,728	4.4
2006	710	12,746,126	5.6	535	11,802,419	4.5
2007	685	12,875,568	5.3	515	11,966,627	4.3
2008	709	12,692,892	5.6	518	11,841,281	4.4
2009	736	12,721,541	5.8	522	11,834,872	4.4
2010	672	12,438,926	5.4	469	11,597,326	4.0
2011	758	12,173,935	6.2	527	11,326,848	4.7
2012	651	12,101,936	5.4	476	11,226,268	4.2
2013	560	12,013,496	4.7	391	11,128,052	3.5
2014	610	11,804,002	5.2	411	10,960,861	3.7
2015	626	11,867,049	5.3	434	11,034,479	3.9
2016	701	11,861,811	5.9	481	11,005,841	4.4
2017	658	11,961,568	5.5	440	11,090,600	4.0

**Figure 14 STATES CODED BY THEIR 2017 FATALITY RATE**



Note: The fatality rate is calculated using the number of deaths in each state and the number of recreational registered vessels in each state. Please be aware that, for some states, the fatality rate includes deaths that occurred on vessels that were not registered. Further, it is important to note that the state fatality rate may include deaths from vessels that were registered in another state. Only the contiguous jurisdictions, Hawaii, and Alaska are represented on this map.

Table 32 - FIVE YEAR SUMMARY OF SELECTED ACCIDENT DATA BY STATE 2013-2017															
	Total Number of Accidents					Fatal Accidents					Deaths				
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
<b>Totals</b>	4062	4064	4158	4463	4291	510	548	569	624	599	560	610	626	701	658
Alabama	62	71	79	46	70	10	12	17	12	18	10	13	21	14	21
Alaska	18	18	25	26	15	7	10	7	14	13	10	11	7	19	20
Arizona	95	87	97	90	123	9	7	6	5	11	9	7	6	5	13
Arkansas	56	54	49	47	64	13	7	9	9	11	15	8	9	10	11
California	426	379	369	386	350	34	29	41	43	49	37	38	48	47	50
Colorado	32	57	36	43	32	2	12	8	11	6	2	12	8	12	6
Connecticut	35	40	58	47	49	1	5	6	3	8	1	5	6	3	9
Delaware	8	15	13	23	23	0	1	0	1	3	0	1	0	1	3
DC	5	2	0	2	1	0	0	0	0	0	0	0	0	0	0
Florida	685	581	671	684	723	51	62	49	59	60	58	70	52	70	66
Georgia	92	92	85	112	102	15	12	19	15	12	16	13	22	22	14
Hawaii	14	9	12	14	15	4	3	5	6	3	4	3	5	8	3
Idaho	42	43	39	50	46	5	10	9	8	13	5	10	13	10	16
Illinois	59	84	66	74	84	8	17	11	9	15	9	22	11	9	15
Indiana	44	40	43	40	57	4	9	5	6	7	5	9	5	7	8
Iowa	24	33	36	37	40	3	6	3	7	4	3	7	3	7	4
Kansas	24	17	25	32	29	5	6	2	7	2	5	6	2	7	2
Kentucky	31	46	41	46	41	4	8	12	8	12	5	9	20	8	13
Louisiana	96	113	87	112	106	15	18	20	23	19	15	18	22	24	19
Maine	54	35	32	49	49	3	5	7	9	11	4	5	8	9	13
Maryland	110	130	146	150	147	13	10	20	11	6	14	12	21	16	6
Massachusetts	83	82	89	92	66	12	5	5	13	10	12	6	5	15	10
Michigan	92	97	90	125	116	19	18	22	33	19	21	19	24	38	20
Minnesota	75	50	87	96	105	10	14	16	17	13	12	14	18	17	14
Mississippi	41	25	30	43	34	12	2	7	10	6	13	3	10	11	6
Missouri	111	142	109	137	124	16	13	17	14	10	16	14	17	16	10
Montana	16	14	14	23	9	6	3	6	5	2	6	3	6	5	2
Nebraska	25	26	32	22	27	0	1	4	2	4	0	1	4	2	4
Nevada	48	47	38	48	35	5	7	5	4	4	5	11	5	4	4
New Hampshire	40	44	53	76	49	1	1	4	8	5	1	1	4	9	5
New Jersey	123	111	122	109	106	8	3	7	4	4	8	3	8	5	4
New Mexico	16	13	10	16	18	2	0	0	2	5	2	0	0	2	5
New York	180	175	174	188	167	15	27	15	20	19	18	27	16	22	22
North Carolina	139	124	162	143	117	14	22	18	22	15	16	26	20	23	15
North Dakota	5	11	11	15	15	2	4	2	1	4	2	5	2	1	4
Ohio	108	100	100	113	117	13	15	13	12	20	13	22	13	12	20
Oklahoma	42	50	58	44	38	8	6	11	5	7	9	6	13	5	10
Oregon	59	61	65	82	60	12	7	15	17	11	12	7	15	19	12
Pennsylvania	71	66	52	55	69	16	20	4	9	15	17	21	4	11	15
Rhode Island	42	40	37	36	31	1	3	1	0	3	1	3	1	0	4
South Carolina	104	124	123	136	151	26	13	15	20	12	27	14	17	23	13
South Dakota	10	8	15	20	17	1	1	4	4		1	1	4	5	0
Tennessee	119	111	107	116	93	17	13	13	17	14	20	14	13	18	16
Texas	146	167	154	176	170	28	34	39	48	51	31	39	44	53	63
Utah	76	80	79	94	58	10	5	5	5	3	12	5	5	5	3
Vermont	2	5	4	4	3	1	1	0	1	3	1	1	0	1	3
Virginia	64	60	70	83	72	10	15	9	19	10	11	17	9	21	10
Washington	94	122	107	98	109	17	22	28	18	15	17	22	29	18	15
West Virginia	16	24	11	24	12	3	3	2	5	3	3	3	2	5	3
Wisconsin	79	102	103	103	105	12	9	19	16	22	12	9	20	20	25
Wyoming	6	11	8	8	10	0	4	0	3	5	0	4	0	3	5
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
Guam	1	2	4	0	2	1	2	0	0	0	1	3	0	0	0
Puerto Rico	2	3	5	6	3	2	2	4	1	1	2	2	5	1	3
Virgin Islands	0	2	2	0	0	0	0	1	0	0	0	0	2	0	0
*AT	10	10	16	8	8	3	1	0	2	1	4	1	0	2	1
*GM	3	4	5	8	2	0	0	2	1	0	0	0	2	1	0
*PC	2	5	3	6	7	1	3	0	0	0	7	4	0	0	0

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









**Table 34 - NUMBER OF INJURED VICTIMS BY PRIMARY INJURY & VESSEL TYPE**

Primary Injury	Number of Injuries	Airboat	Auxiliary sailboat	Cabin motorboat	Canoe	Houseboat	Inflatable	Kayak	Open motorboat	Personal watercraft	Pontoon	Rowboat	Sailboat (only)	Sailboat	Standup	Other	Unknown
Amputation	29	0	2	4	0	1	0	0	18	2	1	0	0	0	1	0	0
Broken bone	479	7	4	30	2	0	0	2	215	192	18	1	6	0	2	0	0
Burns	93	1	3	31	0	6	0	0	47	5	0	0	0	0	0	0	0
Carbon monoxide	14	0	0	9	0	2	0	0	3	0	0	0	0	0	0	0	0
Concussion	251	0	2	23	1	3	2	3	132	68	9	1	4	0	0	0	3
Dislocation	52	2	2	3	0	0	1	2	28	12	2	0	0	0	0	0	0
Electric shock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hypothermia	237	0	5	14	29	0	3	36	116	11	2	4	8	3	0	0	6
Internal organ injury	111	1	6	6	1	0	0	4	42	43	4	0	0	0	0	0	4
Laceration	569	7	6	41	2	4	0	2	344	110	48	1	0	0	0	1	3
Scrape/bruise	371	7	4	28	1	16	0	5	191	98	19	1	0	0	0	1	0
Shock	4	0	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0
Spinal cord injury	52	1	0	4	1	0	0	0	38	7	1	0	0	0	0	0	0
Sprain/strain	144	0	2	10	0	0	1	3	84	28	12	3	0	0	1	0	0
Other	6	1	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
Unknown	217	1	4	17	5	2	0	8	101	48	16	0	0	2	0	1	12
<b>All Injuries</b>	<b>2629</b>	<b>28</b>	<b>40</b>	<b>220</b>	<b>42</b>	<b>34</b>	<b>7</b>	<b>65</b>	<b>1367</b>	<b>624</b>	<b>133</b>	<b>11</b>	<b>18</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>28</b>



**Table 35 - NUMBER OF FATAL VICTIMS BY LIFE JACKET WEAR, CAUSE OF DEATH & VESSEL TYPE 2017**

Cause of Death	Life jacket worn?	Number of deaths	Airboat	Auxiliary sailboat	Cabin motorboat	Canoe	Houseboat	Inflatable	Kayak	Open motorboat	Personal watercraft	Pontoon	Rowboat	Sailboat (only)	Sailboat (unknown)	Standup paddleboard	Other	Unknown
Carbon monoxide	Yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	No	4	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0
	Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cardiac arrest	Yes	6	0	1	0	0	0	0	1	3	1	0	0	0	0	0	0	0
	No	5	0	0	1	0	0	0	0	2	1	0	1	0	0	0	0	0
	Unknown	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
Drowning	Yes	68	0	0	0	9	0	8	26	17	3	1	1	0	0	3	0	0
	No	370	3	4	15	32	2	9	50	176	13	27	18	5	0	7	6	3
	Unknown	11	0	0	0	0	0	0	5	5	1	0	0	0	0	0	0	0
Hypothermia	Yes	4	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0
	No	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
	Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	Yes	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	No	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trauma	Yes	38	0	0	2	0	1	0	0	12	19	0	0	4	0	0	0	0
	No	65	0	0	7	0	2	0	0	46	6	3	0	1	0	0	0	0
	Unknown	10	1	0	0	0	1	0	0	7	0	1	0	0	0	0	0	0
Unknown	Yes	8	0	0	0	0	0	0	0	6	0	0	0	0	1	0	0	1
	No	41	0	0	4	3	0	2	5	20	2	0	0	1	0	1	0	3
	Unknown	22	0	1	3	0	0	2	6	5	0	0	0	0	0	0	0	5
<b>All Causes</b>		<b>658</b>	<b>4</b>	<b>6</b>	<b>36</b>	<b>44</b>	<b>8</b>	<b>21</b>	<b>94</b>	<b>305</b>	<b>46</b>	<b>33</b>	<b>20</b>	<b>11</b>	<b>1</b>	<b>11</b>	<b>6</b>	<b>12</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. 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, 1980-2017 (Table 36 & Figure 15, Page 69)**

This table provides information about recreational vessel registration for each year from 1980-2017. The accompanying figure displays a trend line from 1980-2017.

#### **Recreational Vessel Registration by Length & Means of Propulsion (Table 37, Page 70)**

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. The bottom section of the table focuses on manually-propelled vessels.

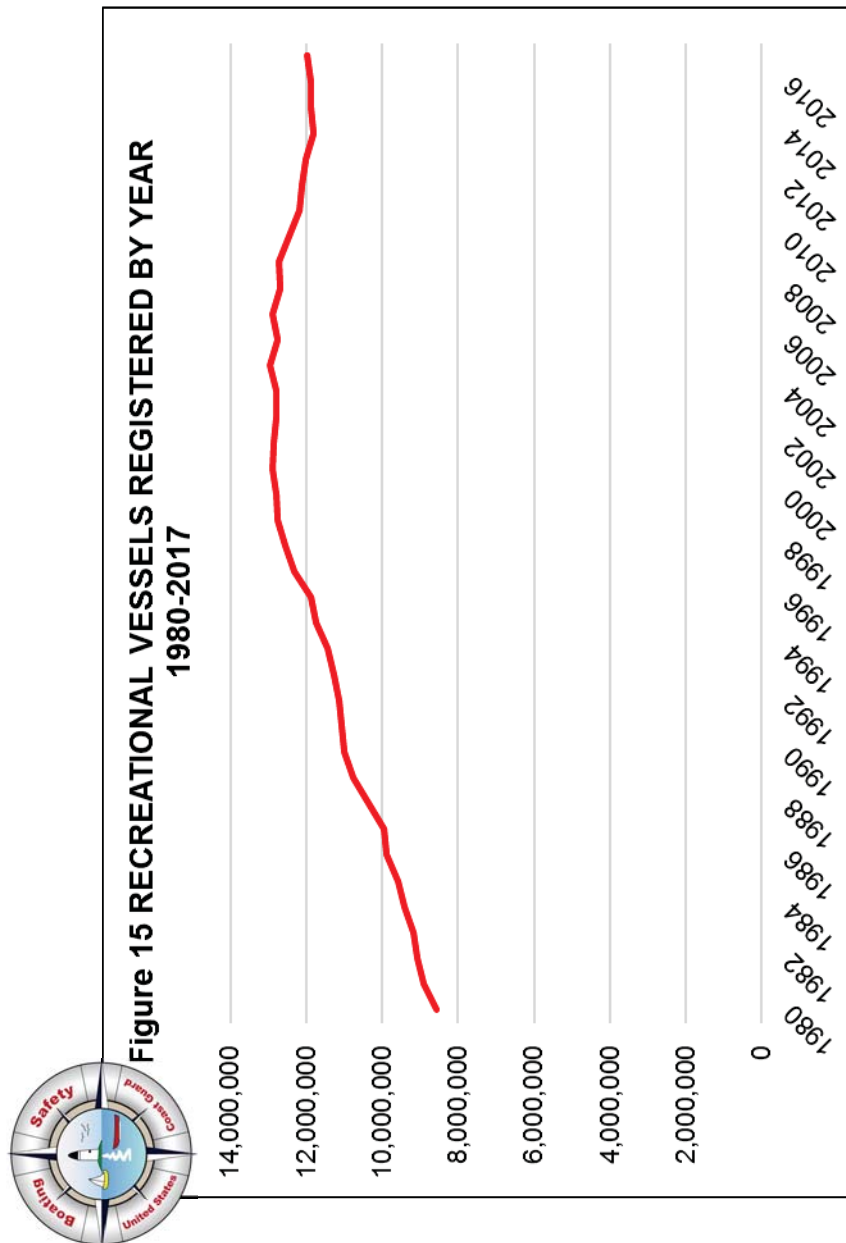
#### **Registration Data by State (Table 38, Page 71)**

This table examines recreational vessel registration, deaths, and fatality rates by state for years 2016 and 2017. The fatality rate is calculated by dividing the number of fatalities by the total 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. When examining a state fatality rate, it is important to note that the state fatality rate may include deaths from vessels that were registered in another state. This table also specifies the scope of the state's registration program.

#### **Distribution of 2017 Recreational Vessel Registration by State (Figure 16, Page 72)**

This figure provides the percentage that each state contributed to national registration figures. So, for instance, California registered 745,641 vessels. Out of the total national registration of 11,961,568 California contributed 6.2%  $((745,641/11,961,568) \times 100)$  of registered vessels. Please note that percentages have been rounded.

Table 36 - RECREATIONAL VESSELS REGISTERED BY YEAR, 1980-2017	
Year	Registered Vessels
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	12,875,568
2008	12,692,892
2009	12,721,541
2010	12,438,926
2011	12,173,935
2012	12,101,936
2013	12,013,496
2014	11,804,002
2015	11,867,049
2016	11,861,811
2017	11,961,568





**Table 37 • RECREATIONAL VESSEL REGISTRATION BY LENGTH AND MEANS OF PROPULSION 2017**

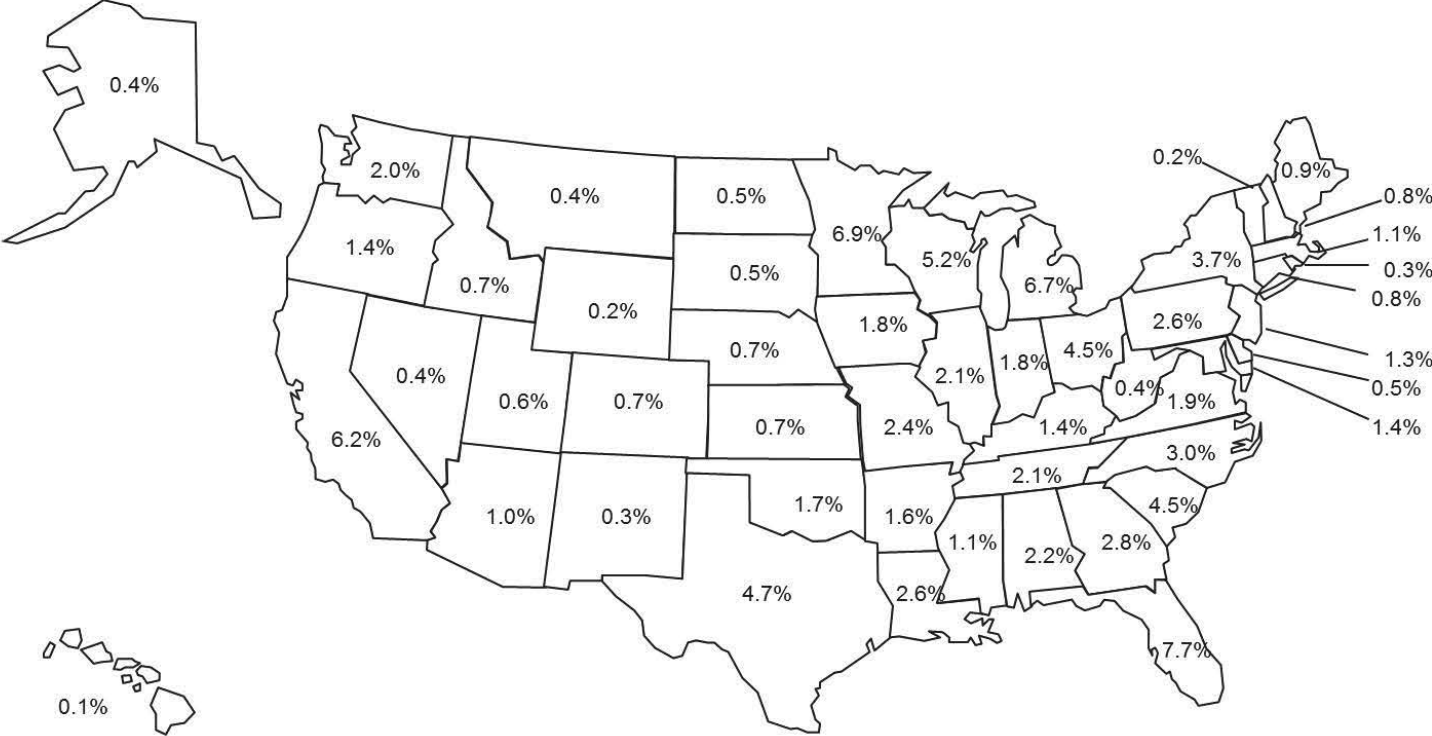
<b>MECHANICALLY PROPELLED</b>		<b>11,090,600</b>
Under 16 feet		4,193,365
16 to less than 26 feet		6,318,918
26 to less than 40 feet		495,460
40 to 65 feet		71,562
Over 65 feet		11,295
<b>NOT MECHANICALLY PROPELLED</b>		<b>870,968</b>
Rowboats		103,895
Sailboats		102,878
Paddlecraft		492,420
Other		171,775
<b>TOTAL</b>		<b>11,961,568</b>

**Table 38 - RECREATIONAL VESSEL REGISTRATION DATA BY STATE 2016-2017**

	2017			2016			Scope of Current Boat Registration System
	Registration	Deaths	Fatality Rate	Registration	Deaths	Fatality Rate	
	11,961,568	658	5.5	11,861,811	701	5.9	
AK	50,044	20	40.0	51,144	19	37.2	All undocumented powerboats
AL	266,157	21	7.9	261,741	14	5.3	All motorboats, sailboats and rental boats
AR	189,695	11	5.8	189,514	10	5.3	All watercraft
AZ	123,177	13	10.6	123,263	5	4.1	All motorized watercraft
CA	745,641	50	6.7	697,412	47	6.7	All motorboats; sailboats over 8 feet in length
CO	84,936	6	7.1	84,676	12	14.2	All watercraft powered by motor or sail - sailboards exempt
CT	92,058	9	9.8	93,364	3	3.2	All motorboats; sailboats 19.5 feet or more in length
DC	2,512	0	0.0	2,115	0	0.0	All watercraft
DE	58,557	3	5.1	61,901	1	1.6	All motorboats
FL	918,255	66	7.2	905,298	70	7.7	All motorboats
GA	338,210	14	4.1	335,723	22	6.6	All motorboats; sailboats 12 feet or more in length
HI	11,658	3	25.7	11,238	8	71.2	All motorboats; sailboats over 8 feet in length
IA	220,466	4	1.8	205,145	7	3.4	All watercraft with exceptions (a)
ID	84,015	16	19.0	87,211	10	11.5	All motorboats and sailboats
IL	250,776	15	6.0	242,275	9	3.7	All watercraft, except non-powered vessels on private waters
IN	219,870	8	3.6	209,622	7	3.3	All motorboats on public waterways
KS	83,775	2	2.4	81,243	7	8.6	All motorboats and sailboats
KY	173,344	13	7.5	173,881	8	4.6	All motorboats, except electric motors 1 hp or less
LA	305,783	19	6.2	306,689	24	7.8	All motorboats; sailboats more than 12 feet in length
MA	134,538	10	7.4	140,008	15	10.7	All motorboats
MD	172,304	6	3.5	176,207	16	9.1	All motorboats
ME	109,774	13	11.8	111,116	9	8.1	All motorboats
MI	798,544	20	2.5	794,137	38	4.8	All watercraft with exceptions (b)
MN	825,658	14	1.7	817,560	17	2.1	All watercraft with exceptions (c)
MO	290,376	10	3.4	293,185	16	5.5	All motorboats; sailboats over 12 feet in length
MS	131,873	6	4.5	132,441	11	8.3	All motorboats and sailboats
MT	51,373	2	3.9	68,229	5	7.3	All motorboats; sailboats 12 feet or more in length
NC	358,171	15	4.2	367,225	23	6.3	All motorboats; sailboats more than 14 feet in length
ND	56,933	4	7.0	67,022	1	1.5	All watercraft
NE	87,865	4	4.6	87,596	2	2.3	All motorboats
NH	94,810	5	5.3	94,806	9	9.5	All motorboats; sailboats 12 feet or more in length
NJ	153,372	4	2.6	150,968	5	3.3	All watercraft with exceptions (d)
NM	33,340	5	15.0	33,780	2	5.9	All motorboats and sailboats
NV	43,129	4	9.3	42,426	4	9.4	All motorboats
NY	444,710	22	4.9	448,480	22	4.9	All motorboats; includes commercial vessel registrations.
OH	541,898	20	3.7	505,082	12	2.4	All watercraft
OK	202,594	10	4.9	202,388	5	2.5	All watercraft
OR	168,933	12	7.1	156,168	19	12.2	All motorboats; sailboats 12 feet or more in length
PA	313,478	15	4.8	315,503	11	3.5	All motorboats and certain non-powered craft (e)
RI	39,685	4	10.1	40,178	0	0.0	All motorboats and rowboats over 12 feet
SC	534,726	13	2.4	518,269	23	4.4	All watercraft
SD	59,525	0	0.0	59,485	5	8.4	All motorboats; all other boats over 12 feet in length
TN	248,599	16	6.4	254,091	18	7.1	All motorboats and sailboats
TX	565,422	63	11.1	573,425	53	9.2	All motorboats and sailboats 14 feet or more in length
UT	66,136	3	4.5	65,873	5	7.6	All motorboats and sailboats
VA	224,031	10	4.5	233,236	21	9.0	All motorboats
VT	28,852	3	10.4	29,353	1	3.4	All motorboats
WA	239,316	15	6.3	234,035	18	7.7	All motorboats with exceptions (f); sailboats >16 ft in length
WI	624,353	25	4.0	611,240	20	3.3	All motorboats; sailboats over 12 feet in length
WV	43,839	3	6.8	57,305	5	8.7	All motorboats
WY	26,963	5	18.5	27,288	3	11.0	All motorboats
AS	67	0	0.0	82	0	0.0	All watercraft
CNMI	400	0	0.0	392	0	0.0	All motorboats
GU	891	0	0.0	998	0	0.0	All motorboats 7 feet or more, personal watercraft, and sailboats
PR	21,682	3	13.8	24,224	1	4.1	All motorboats; vessels adapted to hold a motor
VI	4,479	0	0.0	4,555	0	0.0	All watercraft
Offshore		1			3		

(a) IA excludes inflatables under 7 feet in length and canoes/kayaks under 13 feet in length. (b) MI excludes manually propelled boats 16 feet or less in length, and privately-owned non-motorized rafts, canoes, and kayaks. (c) MN excludes non-motorized boats ten feet or less in length, duckboats during duckhunting season, and riceboats during harvest season and seaplanes. (d) NJ excludes non-motorized boats less than 12 feet in length and canoes, kayaks, racing shells and rowing sculls. (e) PA registers non-powered craft using lakes or access areas owned by the State Fish & Boat Commission. (f) WA excludes motorboats < 16 feet with motors 10 horsepower or less used solely on exclusive state waters. Due to an invalid CY16 submission, WA's data reflects their CY15 submission.

Figure 16 DISTRIBUTION OF 2017 RECREATIONAL VESSEL REGISTRATION BY STATE



American Samoa	0.0006%
District of Columbia	0.02%
Guam	0.007%
Northern Mariana Islands	0.003%
Puerto Rico	0.2%
U.S. Virgin Islands	0.04%



DEPARTMENT OF HOMELAND SECURITY  
U.S. Coast Guard  
**RECREATIONAL BOATING ACCIDENT REPORT**

OMB Control Number: 1625-0003  
Expires: 03/31/2019

**INSTRUCTIONS:** Use "Report required because" section below to determine if a report is required for your accident. If required, please have each vessel owner or operator involved in the accident submit a report to their state reporting authority. Each boat operator/owner involved in an accident should submit a separate report. For each question below, please provide answers if applicable and if known; otherwise leave blank. Privacy Act Notice: Authority- 46 U.S.C. 6102 and 33 CFR 173 & 174 authorize the collection of information on boating accidents. Purpose-The Coast Guard uses this information for statistical purposes, chiefly to inform the public, to measure the Program's efforts, and to regulate issues relating to boating safety. Routine Uses-The Coast Guard shares this information within the agency, and if state and federal law permit it, to the public.

**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): \_\_\_\_\_

**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 accuracy of the burden estimate or any suggestions for reducing the burden to: Commandant (CG-BSX-21), U.S. Coast Guard, Washington, DC 20593-0001 or Office of Management and Budget, Paperwork Reduction Project (1625-0003), Washington, DC 20503. Questions relating to the collection of this data should be sent to the Coast Guard.

**For State Agency Use Only**

First Name	Last Name
Phone:	

First Name	Last Name	Phone	Primary Cause of Accident
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**ACCIDENT SUMMARY**

<b>WHEN</b> Date: _____ Time: _____ am <input type="checkbox"/> pm <input type="checkbox"/> (mm/dd/yyyy) (select one)	<b>ACCIDENT DESCRIPTION:</b> Briefly describe this accident (attach extra pages if necessary)
<b>WHERE</b> Body of Water Name _____	<b>DAMAGE TO YOUR BOAT:</b> Briefly summarize any damage to your boat
Location (on water) description _____	
Nearest city/town _____	
County: _____ State: _____	
<b>YOUR BOAT – PEOPLE</b>	<b>DAMAGE TO YOUR OTHER PROPERTY: (NOT BOAT)</b> Briefly summarize any damage to your other property (not boat)
# people on board (including operator): _____	
# people being towed (e.g., on tubes, skis): _____	
# people wearing lifejackets (on board or towed): _____	
<b>OTHER BOATS INVOLVED IN ACCIDENT</b>	
# of other boats involved: _____	

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

**YOUR BOAT**

**BOAT IDENTIFICATION**

Your Boat Name:					Manufacturer:				
Model Name:					Model Year:				
Registration #:					Documentation #:				
Hull Identification # (HIN)					Rented: <input type="checkbox"/> Yes <input type="checkbox"/> No				

**SIZE ESTIMATES**

Length:	ft.	Depth from transom (stern) to keel (bottommost point):	ft.	in.	Beam width at widest point:	ft.
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**HULL MATERIAL**

Type of Hull Material (select one)

<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Wood	<input type="checkbox"/> Rubber/vinyl/canvas	<input type="checkbox"/> Other (describe):
<input type="checkbox"/> Aluminum	<input type="checkbox"/> Steel	<input type="checkbox"/> Plastic	

**BOAT TYPE**

Boat Type (select one)

Available Propulsion (select all that apply)

<input type="checkbox"/> Cabin motorboat	<input type="checkbox"/> Inflatable	<input type="checkbox"/> Canoe	Personal watercraft (PWC) (e.g., Wave Runner™, Jet Ski™, Sea-Doo™)	<input type="checkbox"/> Propeller	<input type="checkbox"/> Air thrust
<input type="checkbox"/> Open motorboat	<input type="checkbox"/> Houseboat	<input type="checkbox"/> Rowboat		<input type="checkbox"/> Sail	<input type="checkbox"/> Other (describe):
<input type="checkbox"/> Auxiliary sail	<input type="checkbox"/> Sail (only)	<input type="checkbox"/> Air boat		<input type="checkbox"/> Manual	
<input type="checkbox"/> Pontoon boat	<input type="checkbox"/> Kayak			<input type="checkbox"/> Water jet	
			Other (describe)		

**ENGINE**

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

**SAFETY MEASURES**

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):

US Coast Guard Auxiliary: VSC Decal? <input type="checkbox"/> Yes <input type="checkbox"/> No	Federal Agency (Name)	
US Power Squadrons: VSC Decal? <input type="checkbox"/> Yes <input type="checkbox"/> No	State Agency (Name)	
	Other Agency (Name)	
# Life jackets on board:	# Fire extinguishers on board:	Type of fire extinguishers (e.g., ABC):
	# Fire extinguishers used:	Amount of fire extinguishers used:

**ACCIDENT DETAILS – EXTERNAL CONDITIONS**

**WEATHER**

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

**WATER**

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

USCG Boating Accident Report Form

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)

Operator/Passenger activities (select all that apply)

Recreational	Fishing	Tubing	Starting engine
Commercial	Hunting	Water Skiing	Making repairs
	White water activity (e.g., rafting)	Relaxing	Other (list):

**BOAT OPERATIONS**

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

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

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

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

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

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 Name	MI	Last Name
Street		
City	State	Zip
Phone	Date of Birth (mm/dd/yyyy)	Age

**INJURY DETAILS**

Injury caused when person (select all that apply)				Nature of most serious injury (select one)			
Struck the (e.g., boat, water):				Scrape/bruise		Dislocation	
Was struck by a (e.g., boat, propeller):				Cut		Internal organ injury	
Was exposed to carbon monoxide poisoning				Sprain/strain		Amputation	
Received an electric shock				Concussion/brain injury		Burn	
Other (describe):				Spinal cord injury		Other (describe):	
Person was wearing lifejacket?		Yes	No	Broken/fractured bone			
Person received treatment beyond first aid?		Yes	No	Body part of most serious injury (e.g., head, trunk, leg):			
Person was admitted to a hospital?		Yes	No				

**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 Name	MI	Last Name
Street		
City	State	Zip
Phone	Date of Birth (mm/dd/yyyy)	Age

**DETAILS OF DEATH/DISAPPEARANCE**

Injury caused when person (select all that apply)				Nature of death/disappearance (select one)			
Struck the (e.g., boat, water):				Death – by drowning			
Was struck by a (e.g., boat, propeller):				Death – other likely cause (describe)			
Was exposed to carbon monoxide poisoning							
Received an electric shock				Disappeared and not yet recovered			
Other (describe):				Person was wearing lifejacket?		Yes	No

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

**ACCIDENT DETAILS – YOUR BOAT OPERATOR**

OPERATOR INSTRUCTION		OPERATOR SAFETY MEASURES			
Boating safety instruction completed <i>(select all that apply)</i>		On board, prior to accident, was operator wearing:			
None		A lifejacket?	Yes	No	
State course		An engine cut-off switch <i>(Lanyard or wireless device) if equipped?</i>	Yes	No	
USCG Auxiliary course		On board, prior to accident, was operator using:			
US Power Squadrons course			Alcohol?	Yes	No
Internet <i>(name of sponsoring organization)</i>		Drugs?	Yes	No	
Other <i>(describe)</i>		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 10, up to 100 hours	Over 100, up to 500 hours	Over 500 hours
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**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 Name	MI	Last Name		
Street				
City	State	Zip	Phone	
Other boat name <i>(if any)</i>		Other boat registration # <i>(if any)</i>		

**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 Name	MI	Last Name		
Street				
City	State	Zip	Phone	
Other boat name <i>(if any)</i>		Other boat registration # <i>(if any)</i>		

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 Name	MI	Last Name
Street		
City	State	Zip

**AGE/GENDER/PHONE**

Date of Birth (mm/dd/yyyy)	Age	Gender	Male	Female	Phone
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**YOUR BOAT OWNER**

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

**NAME/ADDRESS/PHONE**

First Name	MI	Last Name	
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 Name	MI	Last Name	
Street			
City	State	Zip	Phone

I was a(n) (select one)

<input type="checkbox"/>	Other person on board <i>this</i> boat
<input type="checkbox"/>	Accident witness <i>not</i> on board <i>this</i> boat
<input type="checkbox"/>	Other (describe):

**SIGNATURE OF PERSON SUBMITTING THIS REPORT**

Your signature	Date (mm/dd/yyyy)
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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 estimated 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-BSX-21), 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 vessel that is typically flat-bottomed and propelled by an aircraft-type propeller powered by an engine.

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

**Auxiliary Sail** - A vessel with sail as its primary method of propulsion and mechanical propulsion as its secondary method.

**Cabin Motorboat** - A vessel propelled by propulsion machinery and providing enclosed spaces inside its structure.

**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.

**Departed Vessel** - An accident where a person voluntarily disembarks a vessel by his/her own will (i.e. by diving off, jumping in), as opposed to a case where the person is forcefully ejected by a change in the vessel speed and/or direction.

**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 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 that is usually non-planing and designed primarily for multi-purpose accommodation spaces with low freeboard and little or no foredeck or cockpit.

**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.

**Inboard**— An engine mounted inside the confines of a vessel which powers a drive shaft that turns a water jet impeller or that runs through the bottom of the hull and is attached to a propeller at the other end.

**Inflatable** - A vessel that uses air-filled flexible fabric for buoyancy.

**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.

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

**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** - A vessel equipped with propulsion machinery and having an open load carrying area that does not have a continuous deck to protect it from the entry of water.

**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 with propeller or water jet integrally attached, which is usually mounted at the stern of a vessel.

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

**Paddlecraft** - A vessel powered only by its occupants, using a single or double-bladed paddle as a lever without the aid of a fulcrum provided by oarlocks, thole pins, crutches, or similar arrangements.

**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** - A vessel propelled by a water-jet pump or other machinery as its primary source of motive power and designed to be operated by a person sitting, standing, or kneeling on the vessel, rather than sitting or standing within the vessel's hull.

**Pontoon Boat** - A vessel with a broad, flat deck that is affixed on top of closed cylinders which are used for buoyancy, the basic design of which is usually implemented with two rows of floats as a catamaran or with three rows of floats as a trimaran.

**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** - An open vessel manually propelled by oars.

**Sail (only)** - A vessel propelled only by sails.

**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.

**Standup Paddelboard** - A vessel, typically 7' – 15' in length with enough width and flotation to stay afloat without momentum while boarded, that is propelled by a standing operator with the use of a single or double-bladed paddle.

**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 engine, powering a propeller through a series of shafts and gears, mounted in front of the transom of a vessel and attached through the transom to a drive unit that is similar to the lower unit of an outboard; and may also be known as an inboard-outdrive or an inboard-outboard.

**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	GM	Gulf of Mexico
NV	Nevada	PC	Pacific Ocean
NH	New Hampshire		