

# 2019 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 2019, the 61<sup>st</sup> 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 2019 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).

DAVID C. BARATA /s/  
Captain, U.S. Coast Guard  
Director of Inspections & Compliance

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## 2019 EXECUTIVE SUMMARY

- In 2019, the Coast Guard counted 4,168 accidents that involved 613 deaths, 2,559 injuries and approximately \$55 million dollars of damage to property as a result of recreational boating accidents.
  - The fatality rate was 5.2 deaths per 100,000 registered recreational vessels. This rate represents a 1.9% decrease from the 2018 fatality rate of 5.3 deaths per 100,000 registered recreational vessels.
  - Compared to 2018, the number of accidents increased 0.6%, the number of deaths decreased 3.2%, and the number of injuries increased 1.9%.
- Where cause of death was known, 79% of fatal boating accident victims drowned. Of those drowning victims with reported life jacket usage, 86% 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 23% of deaths.
- Where instruction was known, 70% of deaths occurred on boats where the operator did not receive boating safety instruction. Only 20% percent of deaths occurred on vessels where the operator had received a nationally-approved boating safety education certificate.
- There were 171 accidents in which at least one person was struck by a propeller. Collectively, these accidents resulted in 35 deaths and 155 injuries.
- Operator inattention, improper lookout, operator inexperience, excessive speed, 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 (45%), personal watercraft (19%), and cabin motorboats (16%).
- Where data was known, the vessel types with the highest percentage of deaths were open motorboats (48%), kayaks (14%), and personal watercraft (8%).
- The 11,878,542 recreational vessels registered by the states in 2019 represent a 0.22% increase from last year when 11,852,969 recreational vessels were registered.

<b>Table 1 • 2019 EXECUTIVE SUMMARY</b>						
<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	1071		47	650	
2	Collision with fixed object	493		44	326	
3	Grounding	413		16	253	
4	Flooding/swamping	399		45	124	
5	Falls overboard	299		189	122	
<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	201	87	288	1246	1534
2	Personal watercraft	24	22	46	614	660
3	Cabin motorboat	14	20	34	248	282
4	Canoe/kayak	107	18	125	121	246
5	Pontoon	32	8	40	153	193
<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	439	57	362	20	
2	Trauma	92	35	49	8	
3	Cardiac arrest	17	5	12	0	
4	Carbon monoxide poisoning	5	0	3	2	
5	Hypothermia	4	2	2	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	546		36	296	
2	Improper lookout	506		26	425	
3	Operator inexperience	458		39	273	
4	Excessive speed	358		22	325	
5	Alcohol use	282		113	221	
6	Machinery failure	274		18	93	
7	Navigation rules violation	235		21	141	
8	Weather	184		31	58	
9	Hazardous waters	170		48	87	
10	Force of wave/wake	140		12	117	



### 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 Division’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 2019. Data used to compile the recreational boating accident statistics come from four main sources: State marine agencies; Federal agencies, including the Coast Guard, National Park Service, Army Corps of Engineers, and Forest Service; the public, on a CG-3865 Recreational Boating Accident Report (BAR) form; and 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.

Table 2 - NEWS MEDIA AND FEDERALLY-SOURCED ACCIDENTS AND CASUALTIES						
	Accidents	Deaths	Injuries	Vessel losses	Damages	Notes
AL	1	1	5	0	\$0.00	
AT	5	2	3	4	\$907,095.00	5 accidents offshore in the Atlantic Ocean
CA	1	0	1	0	\$0.00	
CO	3	3	0	0	\$0.00	
FL	13	0	7	7	\$329,635.00	
GA	8	7	5	0	\$0.00	
GM	3	0	0	0	\$404,175.00	3 accidents offshore in the Gulf of Mexico
IL	1	1	0	0	\$0.00	
KY	1	1	0	0	\$0.00	
ME	1	0	0	0	\$85,000.00	
MI	2	1	1	1	\$0.00	
MS	1	2	0	0	\$0.00	1 accident on private waters
MT	2	2	0	0	\$0.00	
NC	1	2	0	0	\$0.00	1 accident on private waters
NH	1	0	1	0	\$0.00	
NY	1	1	0	0	\$0.00	
PA	1	0	3	0	\$0.00	
PC	4	3	0	3	\$95,000.00	4 accidents offshore in the Pacific Ocean
PR	2	2	0	1	\$206,000.00	
SC	1	1	0	0	\$0.00	
TN	1	1	0	0	\$0.00	1 accident on private waters
TX	15	7	13	3	\$25,885.00	2 accidents on private waters
UT	2	0	2	0	\$0.00	
VA	2	0	0	1	\$859,370.00	
<b>Nation</b>	<b>73</b>	<b>37</b>	<b>41</b>	<b>20</b>	<b>\$2,912,160.00</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.

Table 4a has been added to provide detail related to Figure 2. Figures 9a and 9b have been added to provide a graphical depiction of information in Tables 26 and 27. Figures 12 and 16 have been color-coded.

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.
- Electrocutation due to stray current related to a vessel.
- Casualties while swimming from a vessel that is not anchored, moored or docked.
- Casualties where natural causes served as a contributing factor in the death of an individual but the determined cause of death was drowning.
- Casualties from natural phenomena such as interaction with marine life (i.e. 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.	1	0	1	0	\$0.00
A person dies, is injured, or is missing as a result of assault by another person or persons while aboard a vessel.	4	0	1	0	\$44,000.00
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.	6	3	3	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.	2	1	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.	10	7	4	0	\$500.00
Casualties or damage that occur during accidents that only involve watercraft that have not been deemed a vessel.	5	3	5	0	\$100.00
Casualties or damage that occur when the only vessel(s) involved are being used solely for governmental, commercial or criminal activity.	85	17	45	9	\$1,809,929.77
Casualties or damage that occur when the only vessel(s) involved are foreign vessels and thus not subject to U.S. federal reporting requirements.	1	0	0	0	\$6,300,000.00
Casualties or damage that occur when the only vessel(s) involved are not required to be numbered and are being used exclusively for racing.	2	0	3	0	\$1,000.00
Casualties that result from falls from or on docked vessels or vessels that are moored to a permanent structure.	7	0	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.	2	0	0	2	\$200,000.00
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.	3	0	2	1	\$4,400.00
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.	33	0	1	4	\$621,900.00
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.	35	0	1	6	\$1,423,625.00
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.	1	1	0	1	\$40,000.00
<b>Does not meet federal reporting requirements</b>	<b>415</b>	<b>0</b>	<b>63</b>	<b>0</b>	<b>\$310,128.62</b>
<b>Total</b>	<b>612</b>	<b>32</b>	<b>137</b>	<b>23</b>	<b>\$10,755,583.39</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 2020 based upon a survey conducted in calendar year 2018.

### 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. The Coast Guard is planning to study insurance data to better gauge the gap between reported and unreported accidents.

### 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 2019 accident data submitted by states as of 19 March 2020 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 & Table 4a, Page 19)**

This table and figure reflect the percent of accidents that are fatal by time period. The category in which accidents are more frequently fatal span the hours between 2:31am and 4:30am.

### **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 2015-2019 (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 2019. 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)**

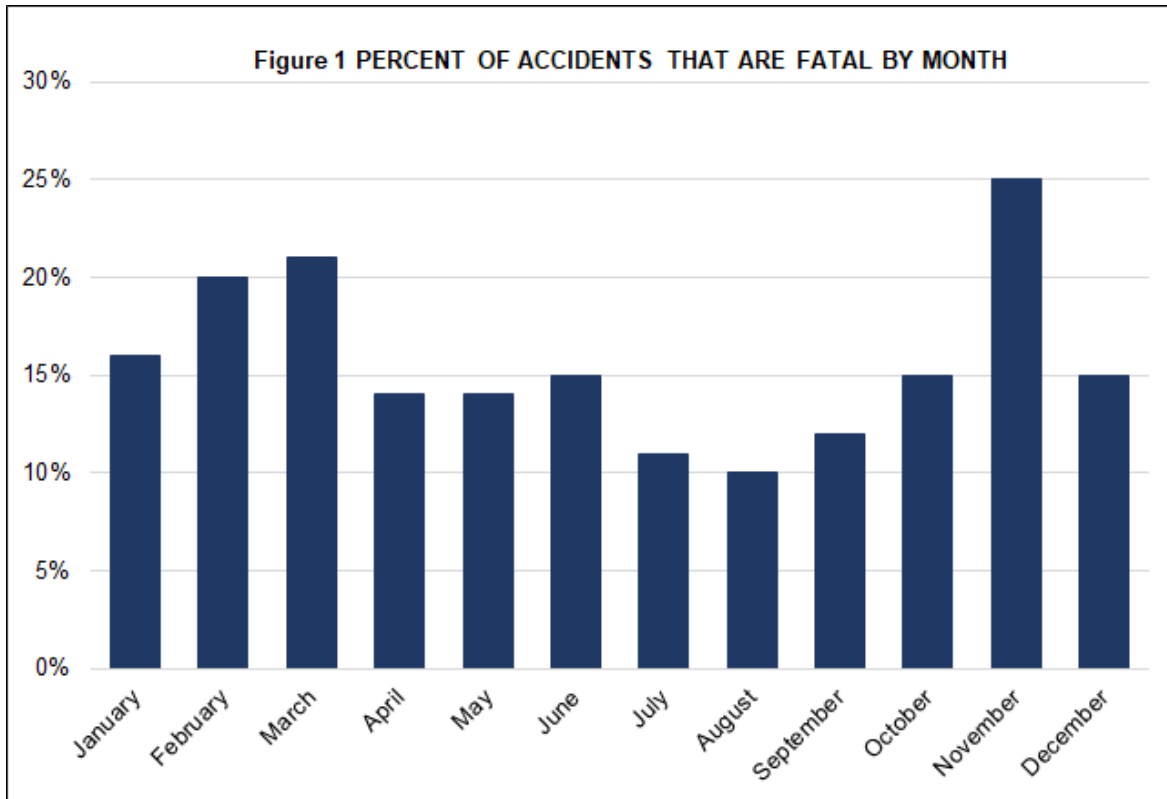
This table documents some of the characteristics of vessels involved in accidents. It provides information about the number of accidents, deaths, and injuries by horsepower, year built, length, and hull material.

**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”.

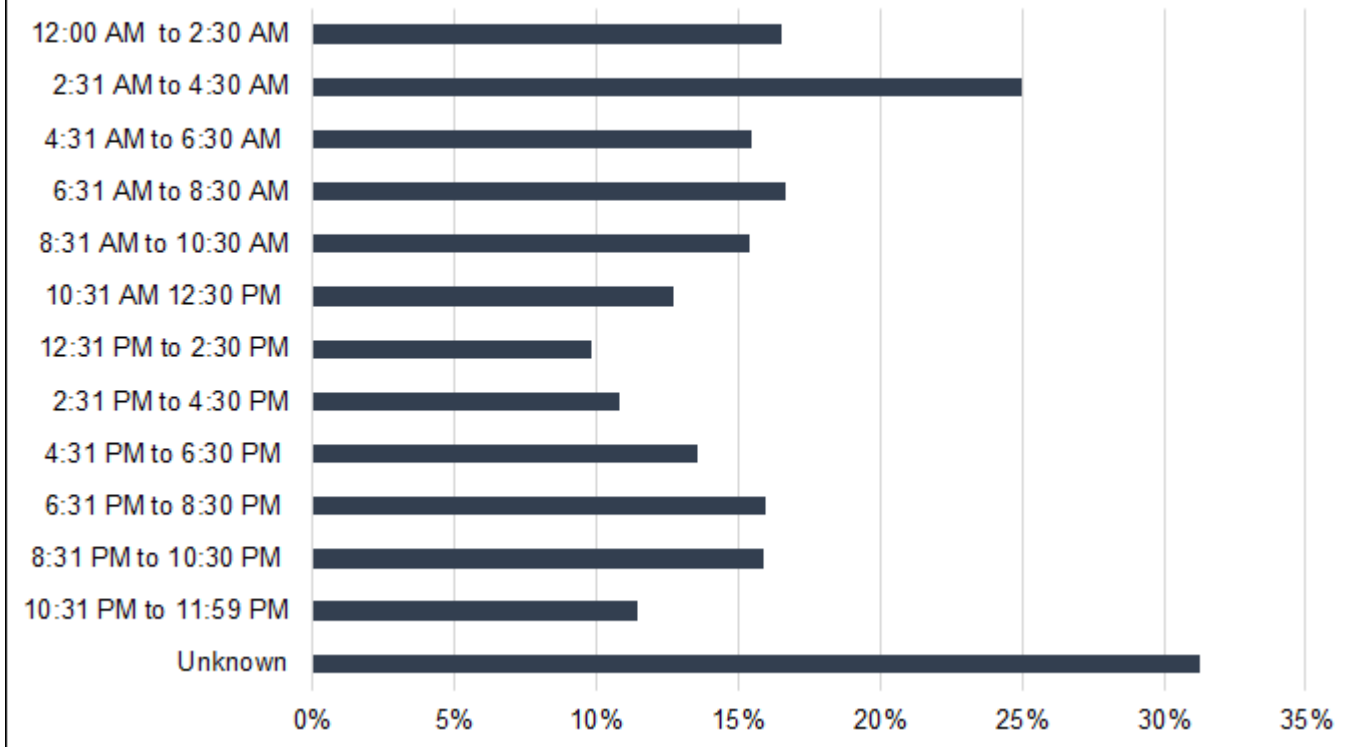
**Number & Percent of Deaths by Vessel Length (Figure 6 & Table 15, Page 32)**

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.



Month	Fatal Accidents	Non-Fatal Accidents	Total Accidents	Accidents Resulting in Deaths	Total Deaths
January	14	73	87	16%	16
February	17	70	87	20%	17
March	32	122	154	21%	33
April	33	205	238	14%	37
May	64	408	472	14%	68
June	103	579	682	15%	119
July	110	892	1002	11%	119
August	66	584	650	10%	70
September	48	362	410	12%	58
October	27	158	185	15%	30
November	29	86	115	25%	32
December	13	73	86	15%	14
<b>Total</b>	<b>556</b>	<b>3612</b>	<b>4168</b>	<b>13%</b>	<b>613</b>

**Figure 2 PERCENT OF ACCIDENTS THAT ARE FATAL BY TIME PERIOD**

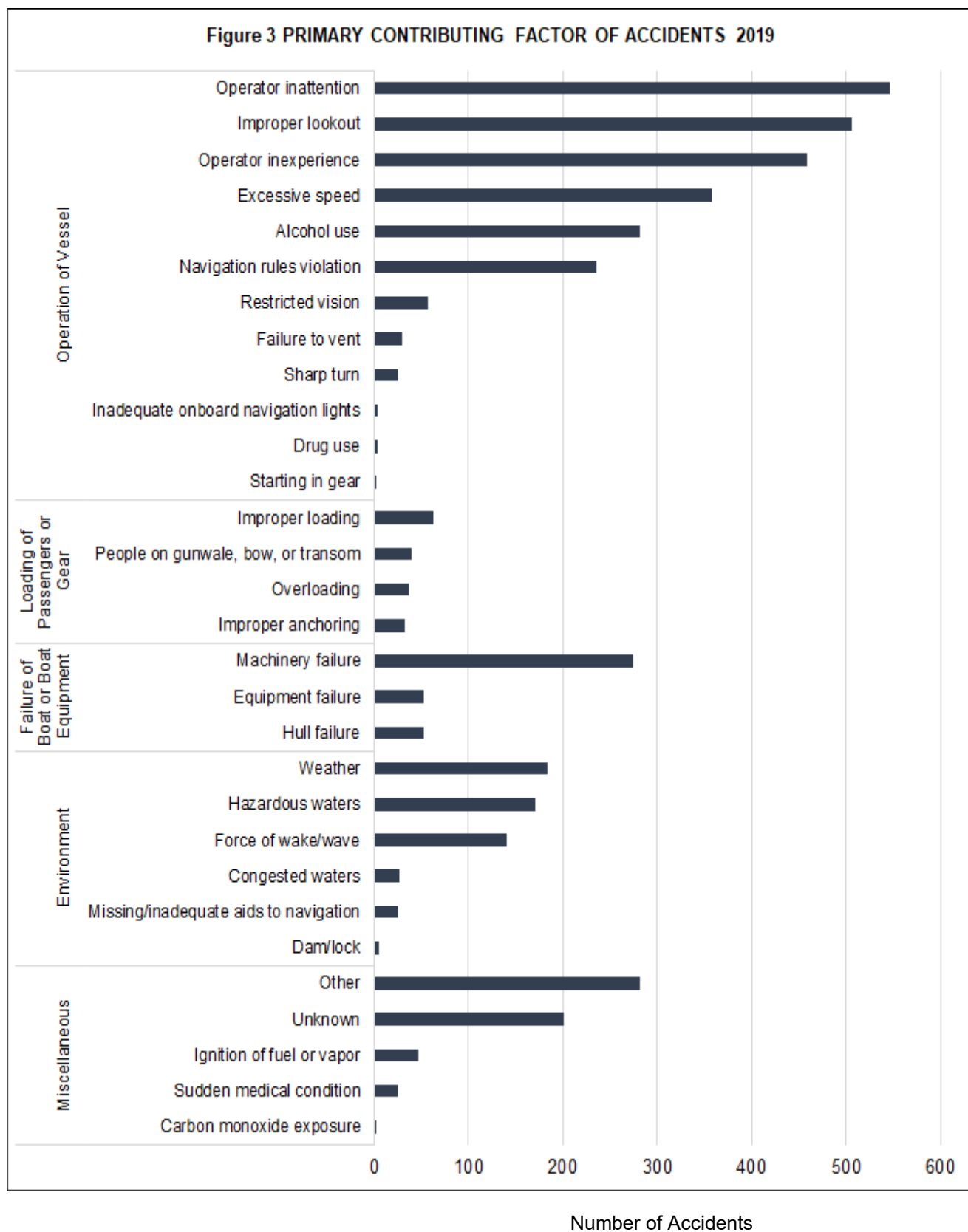


**Table 4a - PERCENT OF ACCIDENTS THAT ARE FATAL BY TIME PERIOD**

Time period	Fatal Accidents	Non-Fatal Accidents	Total Accidents	Accidents Resulting in Deaths	Total Deaths
12:00 AM to 2:30 AM	17	86	103	17%	20
2:31 AM to 4:30 AM	8	24	32	25%	11
4:31 AM to 6:30 AM	11	60	71	15%	12
6:31 AM to 8:30 AM	16	80	96	17%	18
8:31 AM to 10:30 AM	39	214	253	15%	41
10:31 AM 12:30 PM	60	412	472	13%	63
12:31 PM to 2:30 PM	63	579	642	10%	64
2:31 PM to 4:30 PM	92	766	858	11%	96
4:31 PM to 6:30 PM	98	624	722	14%	106
6:31 PM to 8:30 PM	81	427	508	16%	96
8:31 PM to 10:30 PM	40	211	251	16%	48
10:31 PM to 11:59 PM	11	85	96	11%	13
Unknown	20	44	64	31%	25
<b>All time periods</b>	<b>556</b>	<b>3612</b>	<b>4168</b>	<b>13%</b>	<b>613</b>

<b>Table 5 - PRIMARY CONTRIBUTING FACTOR OF ACCIDENTS &amp; CASUALTIES 2019</b>				
		Accidents	Deaths	Injuries
<b>Operation of Vessel</b> <b>2508 Accidents</b> <b>263 Deaths</b> <b>1775 Injuries</b>	Alcohol use	282	113	221
	Drug use	4	2	2
	Excessive speed	358	22	325
	Failure to vent	30	0	30
	Improper lookout	506	26	425
	Inadequate onboard navigation lights	4	1	0
	Navigation rules violation	235	21	141
	Operator inattention	546	36	296
	Operator inexperience	458	39	273
	Restricted vision	57	0	35
	Sharp turn	26	3	26
	Starting in gear	2	0	1
<b>Loading of Passengers or Gear</b> <b>172 Accidents</b> <b>57 Deaths</b> <b>88 Injuries</b>	Improper anchoring	32	4	8
	Improper loading	63	24	34
	Overloading	37	17	18
	People on gunwale, bow or transom	40	12	28
<b>Failure of Boat or Boat Equipment</b> <b>379 Accidents</b> <b>28 Deaths</b> <b>117 Injuries</b>	Equipment failure	53	4	15
	Hull failure	52	6	9
	Machinery failure	274	18	93
<b>Environment</b> <b>552 Accidents</b> <b>96 Deaths</b> <b>279 Injuries</b>	Congested waters	27	0	11
	Dam/lock	5	5	3
	Force of wave/wake	140	12	117
	Hazardous waters	170	48	87
	Missing/inadequate navigation aid	26	0	3
	Weather	184	31	58
<b>Miscellaneous</b> <b>557 Accidents</b> <b>169 Deaths</b> <b>300 Injuries</b>	Carbon monoxide exposure	3	2	16
	Ignition of fuel or vapor	47	0	30
	Sudden medical condition	25	16	15
	Other	281	39	192
	Unknown	201	112	47
<b>All categories combined</b>		<b>4168</b>	<b>613</b>	<b>2559</b>

<b>Table 6 - MACHINERY &amp; EQUIPMENT PRIMARY CONTRIBUTING FACTOR OF ACCIDENTS &amp; CASUALTIES 2019</b>				
		Accidents	Deaths	Injuries
Machinery Failure	Electrical system failure	43	0	12
	Engine failure	140	14	25
	Exhaust system failure	2	0	0
	Fuel system failure	18	0	28
	Shift failure	14	0	1
	Steering system failure	31	4	19
	Throttle failure	12	0	0
	Ventilation system failure	1	0	0
	Not specified	13	0	8
Equipment Failure	Auxiliary equipment failure	35	2	5
	Onboard navigation aid	0	0	0
	Sail dismasting	2	0	2
	Seat broke loose	0	0	0
	Other	14	2	7
	Not specified	2	0	1



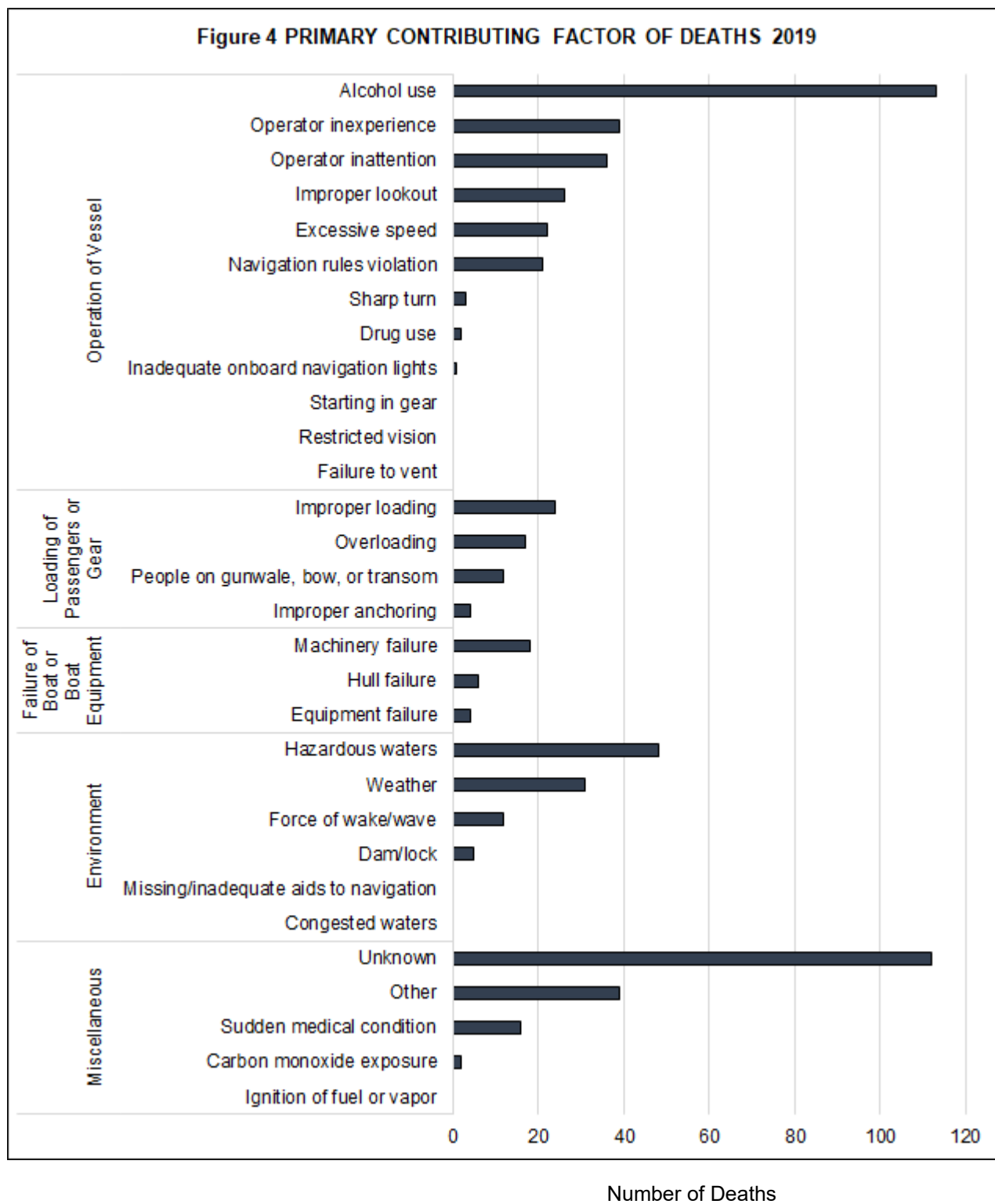




Figure 5 PRIMARY CONTRIBUTING FACTOR OF INJURIES 2019

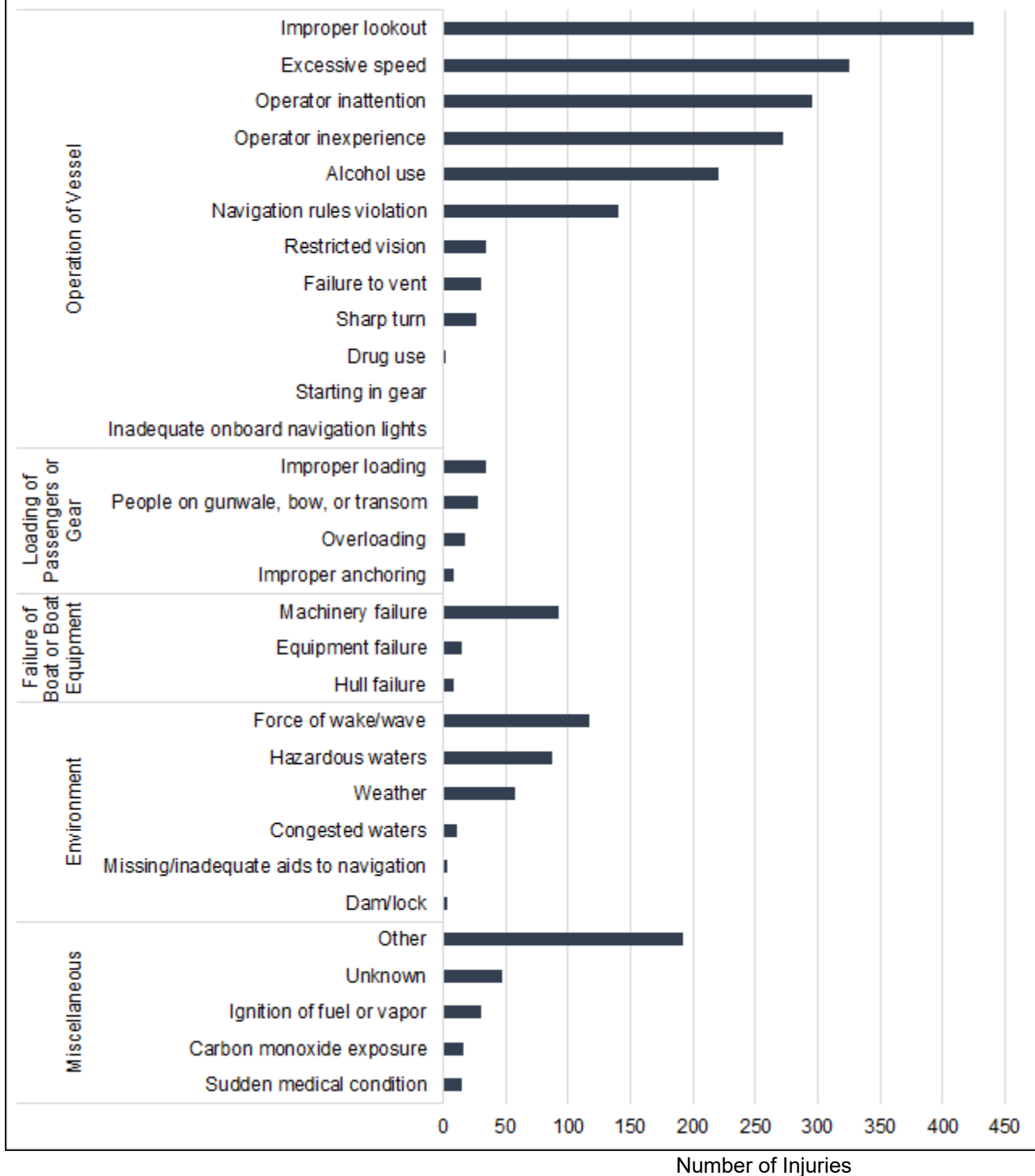




Table 8 • ALCOHOL USE AS A CONTRIBUTING FACTOR IN ACCIDENTS & CASUALTIES BY STATE 2015-2019															
	Accidents					Deaths					Injuries				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
USA	306	350	323	309	330	122	133	118	119	128	258	335	255	275	279
AK	3	1	1	7	1	3	1	1	10	1	0	0	0	5	0
AL	9	7	8	9	12	5	6	2	7	8	4	5	10	7	12
AR	4	2	4	1	3	2	2	1	0	1	5	0	7	1	0
AZ	8	11	2	9	8	2	3	2	4	0	9	12	0	17	6
CA	16	11	14	11	16	3	3	4	5	6	13	20	17	13	18
CO	2	3	5	2	1	1	1	1	1	0	2	1	3	1	1
CT	3	3	4	2	6	0	1	5	0	1	4	5	1	2	1
DE	0	1	3	1	0	0	0	1	0	0	0	0	2	0	0
DC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FL	30	31	39	29	40	11	14	14	6	18	21	25	35	20	26
GA	8	12	11	8	7	4	7	2	2	3	3	7	9	8	2
HI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IA	2	7	4	6	4	1	2	1	2	1	1	4	3	6	6
ID	4	3	5	3	4	2	3	1	1	1	5	5	4	3	3
IL	9	10	7	7	9	5	1	3	4	8	8	4	1	2	6
IN	4	4	6	7	5	1	2	2	2	4	2	3	7	10	2
KS	2	6	4	1	2	1	2	0	0	1	3	5	5	4	3
KY	7	6	7	5	8	2	2	5	4	1	5	6	2	1	6
LA	12	7	11	12	8	4	3	3	3	3	10	6	11	11	8
MA	6	7	3	6	6	3	2	3	1	0	4	2	1	6	8
MD	17	12	16	10	14	8	3	3	5	9	22	13	17	5	10
ME	1	6	6	4	3	1	2	4	1	2	0	7	2	1	0
MI	6	10	9	8	17	4	7	4	3	5	8	6	3	4	13
MN	10	18	14	8	10	7	8	4	2	2	7	11	12	10	4
MO	6	14	13	19	14	2	3	1	3	4	11	15	8	33	18
MS	1	8	1	5	0	0	3	1	1	0	1	6	0	7	0
MT	2	3	1	4	1	2	1	0	4	1	0	6	0	4	0
NC	20	12	13	18	11	4	1	1	4	4	14	13	13	18	9
ND	2	0	4	1	0	1	0	3	1	0	4	0	1	1	0
NE	1	1	3	2	3	0	0	1	0	0	1	0	2	0	3
NH	1	2	3	3	1	1	0	0	1	0	0	2	1	0	1
NJ	3	4	1	4	2	0	0	0	0	2	3	6	1	2	0
NM	0	0	0	2	0	0	0	0	1	0	0	0	0	1	0
NV	3	3	2	3	1	2	0	1	1	0	1	3	1	4	0
NY	14	18	12	15	11	3	6	1	3	2	7	24	16	13	17
OH	8	9	10	6	11	4	4	4	2	2	6	11	8	3	11
OK	7	4	5	7	4	3	0	3	3	2	3	6	6	7	2
OR	7	3	1	4	5	4	1	1	2	4	3	6	0	7	3
PA	3	7	5	1	3	1	5	3	1	1	2	8	4	0	4
RI	3	3	2	0	0	0	0	2	0	0	6	1	1	0	0
SC	7	9	12	4	9	3	4	2	1	2	6	9	8	3	9
SD	4	3	0	4	1	3	2	0	1	0	2	1	0	3	4
TN	10	11	9	8	9	3	5	2	3	1	3	10	3	6	7
TX	7	21	10	12	27	1	6	7	6	11	6	28	5	6	33
UT	2	5	1	4	5	0	1	0	3	2	5	10	1	3	6
VA	4	5	3	6	6	1	4	2	2	4	4	2	0	1	1
VT	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0
WA	11	10	9	8	17	5	3	5	5	9	12	8	3	4	14
WI	11	9	16	10	4	8	8	9	6	1	5	7	20	10	2
WV	4	6	2	2	1	0	0	1	2	1	14	5	1	1	0
WY	0	1	1	1	0	0	1	1	0	0	0	0	0	1	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	1	1	0	0	0	1	0	0	0	0	2	1	0	0	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

<b>Table 9 • VESSEL OPERATION AT THE TIME OF ACCIDENT 2019</b>			
	<b>Vessels Involved</b>	<b>Deaths</b>	<b>Injuries</b>
<b>Totals</b>	<b>5651</b>	<b>613</b>	<b>2559</b>
At anchor	197	17	49
Being towed	34	1	2
Changing direction	706	41	371
Changing speed	580	26	282
Cruising	2233	180	1285
Docking/undocking	88	2	18
Drifting	525	125	221
Idling	51	3	29
Launching/loading	34	1	11
Rowing/paddling	246	137	121
Sailing	54	6	26
Tied to dock/moored	610	1	48
Towing	31	1	6
Trolling	31	5	9
Other	35	4	6
Unknown	196	63	75

<b>Table 10 • VESSEL ACTIVITY AT THE TIME OF ACCIDENT 2019</b>									
	<b>Vessels Involved</b>	<b>Deaths</b>				<b>Injuries</b>			
		<b>Total</b>	<b>Operator</b>	<b>Occupant</b>	<b>Other/ unknown role</b>	<b>Total</b>	<b>Operator</b>	<b>Occupant</b>	<b>Other/ unknown role</b>
<b>Totals</b>	<b>5651</b>	<b>613</b>	<b>375</b>	<b>201</b>	<b>37</b>	<b>2559</b>	<b>952</b>	<b>1202</b>	<b>405</b>
Boating/relaxation	3628	323	203	110	10	1726	764	903	59
Commercial	52	0	0	0	0	5	3	2	0
Fishing	680	198	128	57	13	261	116	136	9
Fueling	19	0	0	0	0	22	7	15	0
Government	16	0	0	0	0	2	0	2	0
Hunting	38	8	6	2	0	33	14	16	3
Racing	29	3	2	1	0	18	9	9	0
Repairs	41	7	5	2	0	21	8	13	0
Starting engine	40	0	0	0	0	28	10	16	2
Swimming/snorkeling	80	34	11	21	2	41	1	34	6
Towed watersports	374	15	3	2	10	371	9	38	324
Towing	65	1	0	1	0	11	4	6	1
Whitewater	30	19	13	4	2	12	3	9	0
Other	31	5	4	1	0	7	4	2	1
None; not in operation	496	0	0	0	0	0	0	0	0
Unknown	32	0	0	0	0	1	0	1	0

<b>Table 11 • WEATHER AND WATER CONDITIONS 2019</b>				
		<b>Accidents</b>	<b>Deaths</b>	<b>Injuries</b>
		<b>4168</b>	<b>613</b>	<b>2559</b>
<b>TYPE OF BODY OF WATER</b>	Lakes, Ponds, Reservoirs, Dams, Gravel Pits	1953	294	1234
	Rivers, Streams, Creeks, Swamps, Bayous	884	188	583
	Bays, Inlets, Marinas, Sounds, Harbors, Channels, Canals, Sloughs, Coves	864	70	485
	Ocean/Gulf	341	46	188
	Great Lakes (not tributaries)	125	15	68
	Unknown	1	0	1
<b>WATER CONDITIONS</b>	Calm (waves less than 6")	2424	310	1556
	Choppy (waves >6" to 2')	1086	136	677
	Rough (waves >2' to 6')	358	54	162
	Very Rough (waves larger than 6')	69	21	29
	Unknown	231	92	135
<b>WIND</b>	None	347	46	247
	Light (0 - 6 mph)	2420	312	1565
	Moderate (7 - 14 mph)	903	114	538
	Strong (15 - 25 mph)	274	53	103
	Storm (over 25 mph)	46	14	7
	Unknown	178	74	99
<b>VISIBILITY</b>	Poor - Day	61	17	27
	Poor - Night	133	25	92
	Poor - Unknown if day or night	2	0	0
	Fair - Day	171	31	84
	Fair - Night	135	24	104
	Fair- Unknown if day or night	4	3	3
	Good - Day	3036	359	1880
	Good - Night	365	74	227
	Good- Unknown if day or night	3	2	0
	Unknown - Day	189	56	91
	Unknown - Night	51	15	42
Unknown - Unknown if day or night	18	7	9	
<b>WATER TEMPERATURE</b>	39 degrees F and below	34	15	16
	40 - 49 degrees F	107	39	82
	50 - 59 degrees F	313	65	174
	60 - 69 degrees F	662	87	352
	70 - 79 degrees F	1232	137	763
	80 - 89 degrees F	1002	125	687
	90 degrees F and above	22	3	16
	Unknown	796	142	469

<b>Table 12 • TIME RELATED DATA 2019</b>				
		<b>Accidents</b>	<b>Deaths</b>	<b>Injuries</b>
		<b>4168</b>	<b>613</b>	<b>2559</b>
<b>Time of Day</b>	12:00 am to 2:30 am	103	20	64
	2:31 am to 4:30 am	32	11	9
	4:31 am to 6:30 am	71	12	45
	6:31 am to 8:30 am	96	18	47
	8:31 am to 10:30 am	253	41	126
	10:31 am 12:30 pm	472	63	237
	12:31 pm to 2:30 pm	642	64	391
	2:31 pm to 4:30 pm	858	96	567
	4:31 pm to 6:30 pm	722	106	447
	6:31 pm to 8:30 pm	508	96	344
	8:31 pm to 10:30 pm	251	48	190
	10:31 pm to 11:59 pm	96	13	66
	Unknown	64	25	26
	<b>Month of Year</b>	January	87	16
February		87	17	44
March		154	33	91
April		238	37	136
May		472	68	270
June		682	119	357
July		1002	119	711
August		650	70	455
September		410	58	234
October		185	30	87
November		115	32	76
December		86	14	45
<b>Day of Week</b>	Sunday	979	121	618
	Monday	366	52	228
	Tuesday	270	55	133
	Wednesday	337	69	203
	Thursday	419	73	240
	Friday	549	85	293
	Saturday	1248	158	844

<b>Table 13 • VESSEL INFORMATION 2019</b>				
		<b>Vessels Involved</b>	<b>Deaths</b>	<b>Injuries</b>
		<b>5651</b>	<b>613</b>	<b>2559</b>
<b>Hull Material</b>	Aluminum	947	167	449
	Fiberglass	4161	291	1920
	Plastic	194	81	81
	Rubber/Vinyl/Canvas	60	29	32
	Steel	47	5	6
	Wood	55	4	15
	Other	5	0	3
	Unknown	182	36	53
	<b>Horsepower</b>	No Engine	354	180
10 hp or less		109	30	54
11 - 25 hp		127	32	54
26 - 75 hp		447	56	220
76 - 150 hp		1066	77	540
151 - 250 hp		747	56	354
Over 250 hp		1123	55	477
Unknown		1678	127	694
<b>Year Built</b>		2019	398	34
	2018	381	31	194
	2016 - 2017	459	34	248
	2014 - 2015	282	23	132
	2012 - 2013	190	8	83
	2006 - 2011	649	59	294
	Prior to 2006	2653	245	1161
	Unknown	639	179	252
	<b>Length</b>	Less than 16 feet	1508	252
16 feet to <26 feet		2528	243	1299
26 feet to <40 feet		833	46	251
40 feet to 65 feet		365	11	69
More than 65 feet		87	0	19
Unknown		330	61	115

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

	Vessels				Deaths				Injuries			
	# of Vessels	Rented	Not Rented	Unknown if rented	# of Deaths	Rented	Not rented	Unknown if rented	# of Injuries	Rented	Not rented	Unknown if rented
<b>All Vessels</b>	<b>5651</b>	<b>597</b>	<b>3949</b>	<b>1105</b>	<b>613</b>	<b>41</b>	<b>418</b>	<b>154</b>	<b>2559</b>	<b>305</b>	<b>1815</b>	<b>439</b>
Airboat	30	0	29	1	1	0	1	0	28	0	28	0
Auxiliary sailboat	237	7	192	38	14	0	11	3	61	5	47	9
Cabin motorboat	888	6	750	132	34	0	27	7	248	2	217	29
Canoe	66	8	42	16	39	5	23	11	45	4	31	10
Houseboat	73	13	37	23	3	1	2	0	26	3	21	2
Inflatable	25	5	8	12	12	1	5	6	15	3	2	10
Kayak	179	12	111	56	86	4	52	30	76	8	43	25
Open motorboat	2510	115	1904	491	288	6	213	69	1246	52	959	235
Personal watercraft	1062	337	575	150	46	12	26	8	614	184	357	73
Pontoon	372	90	197	85	40	12	23	5	153	41	82	30
Rowboat	32	2	27	3	18	0	18	0	13	2	10	1
Sailboat (only)	29	0	24	5	4	0	2	2	10	0	8	2
Sailboat (unknown)	7	1	0	6	0	0	0	0	3	0	0	3
Standup paddleboard	15	1	11	3	12	0	9	3	3	1	2	0
Other	28	0	20	8	8	0	4	4	5	0	3	2
Unknown	98	0	22	76	8	0	2	6	13	0	5	8



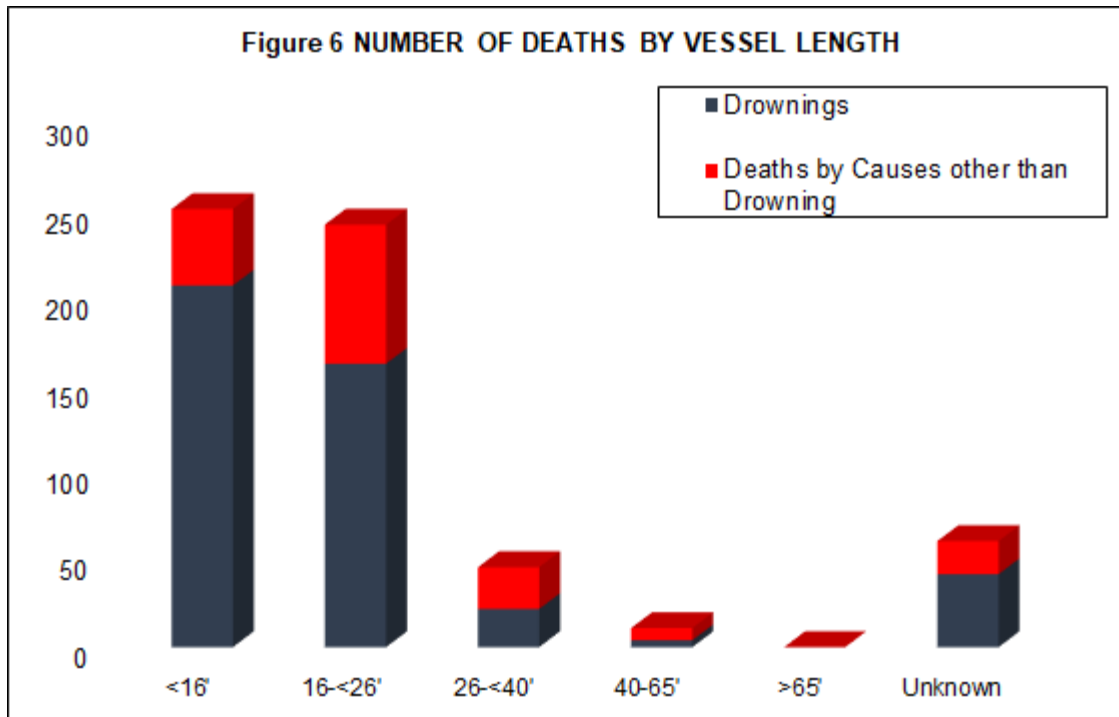


Table 15 • NUMBER & PERCENT OF DEATHS BY VESSEL LENGTH				
Length	Drownings	Deaths by Causes other than Drowning	Total Deaths	Percent of Deaths from Drowning
<16'	208	44	252	83%
16-<26'	163	80	243	67%
26-<40'	22	24	46	48%
40-65'	4	7	11	36%
>65'	0	0	0	0%
Unknown	42	19	61	69%
<b>Total</b>	<b>439</b>	<b>174</b>	<b>613</b>	<b>72%</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 break down information by state, vessel type, vessel length, engine type, and propulsion.

In the Coast Guard's national database, there are four fields that can be used to define the series of events in an accident. By events, we mean the series of occurrences 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 399 accidents where flooding/swamping was the first event in the boating accident. There were 45 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 246 accidents and 13 deaths associated with flooding/swamping as a second event and 58 accidents and 18 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 703 accidents and 76 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 and propulsion type.

**Number of Vessels with Propellers by Primary Accident Type & Engine Type (Table 21, Page 43)**

This table provides information about the number of casualties and vessels associated by primary accident type and engine type. This table is a subset of information from Table 20 and represents all vessels propelled by a propeller.

**Table 16 - ACCIDENT, VESSEL & CASUALTY NUMBERS BY PRIMARY ACCIDENT TYPE 2019**

	Accidents	Vessels Involved	Drowning Deaths	Other Deaths	Total Deaths	Total Injuries	Damages
<b>All Accident Types</b>	<b>4168</b>	<b>5651</b>	<b>439</b>	<b>174</b>	<b>613</b>	<b>2559</b>	<b>\$55,320,226.25</b>
Capsizing	242	256	112	17	129	107	\$1,004,103.00
Carbon monoxide poisoning	12	12	0	5	5	31	\$650.00
Collision with fixed object	493	610	32	12	44	326	\$10,415,847.56
Collision with floating object	68	77	8	2	10	25	\$604,554.75
Collision with commercial vessel	21	43	2	0	2	17	\$287,840.00
Collision with governmental vessel	8	18	0	0	0	4	\$56,200.00
Collision with recreational vessel	1071	2233	5	42	47	650	\$10,960,016.59
Collision with submerged object	134	139	9	0	9	59	\$1,674,834.20
Departed vessel	97	100	46	7	53	44	\$106,283.01
Ejected from vessel	181	191	24	9	33	153	\$288,618.00
Electrocution	0	0	0	0	0	0	\$0.00
Fall in vessel	131	139	1	4	5	136	\$27,601.00
Falls overboard	299	315	148	41	189	122	\$110,101.19
Fire/explosion (fuel)	134	154	0	0	0	107	\$4,096,791.71
Fire/explosion (non-fuel)	59	63	2	0	2	12	\$5,962,305.00
Fire/explosion (unknown origin)	46	60	0	3	3	9	\$6,499,679.00
Flooding/swamping	399	427	36	9	45	124	\$7,233,449.00
Grounding	413	429	3	13	16	253	\$5,930,027.24
Person struck by propeller	39	39	1	2	3	37	\$3,125.00
Person struck by vessel	19	22	0	0	0	22	\$0.00
Sinking	0	0	0	0	0	0	\$0.00
Skier mishap	259	273	8	5	13	279	\$9,650.00
Sudden medical condition	0	0	0	0	0	0	\$0.00
Other	43	51	2	3	5	42	\$48,550.00

Table 17 • FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
	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
<b>2019</b>							
Capsizing	242	240	50	532	185	234	\$6,672,595.09
Carbon monoxide poisoning	12	1	0	13	5	32	\$650.00
Collision with fixed object	493	101	13	607	53	380	\$11,611,781.57
Collision with floating object	68	7	3	78	14	30	\$1,124,094.75
Collision with commercial vessel	21	3	2	26	2	19	\$381,306.78
Collision with governmental vessel	8	0	0	8	0	4	\$56,200.00
Collision with recreational vessel	1071	83	15	1169	47	690	\$12,097,263.60
Collision with submerged object	134	1	0	135	9	59	\$1,675,134.20
Departed vessel	97	41	7	145	73	69	\$333,423.01
Ejected from vessel	181	555	347	1083	277	910	\$10,425,432.09
Electrocution	0	2	0	2	0	5	\$30,000.00
Fall in vessel	131	252	43	426	26	637	\$7,903,634.68
Falls overboard	299	27	7	333	194	151	\$143,451.19
Fire/explosion (fuel)	134	5	0	139	0	107	\$4,123,621.71
Fire/explosion (non-fuel)	59	3	2	64	2	16	\$6,496,195.00
Fire/explosion (unknown origin)	46	0	0	46	3	9	\$6,499,679.00
Flooding/swamping	399	246	58	703	76	206	\$16,930,794.83
Grounding	413	56	20	489	25	294	\$6,792,155.24
Person struck by propeller	39	101	31	171	35	155	\$100,402.19
Person struck by vessel	19	225	25	269	34	338	\$956,315.00
Sinking	0	86	70	156	18	37	\$7,901,198.44
Skier mishap	259	13	0	272	13	301	\$33,833.01
Sudden medical condition	0	2	0	2	1	1	\$0.00
Other	43	11	3	57	5	55	\$68,550.00
Unknown	0	0	0	0	0	0	\$0.00
<b>2018</b>							
Capsizing	266	223	62	551	214	269	\$4,245,361.27
Carbon monoxide poisoning	8	2	0	10	8	8	\$0.00
Collision with fixed object	470	84	17	571	71	348	\$8,793,679.73
Collision with floating object	59	5	0	64	11	26	\$499,957.49
Collision with commercial vessel	25	0	1	26	1	18	\$753,995.00
Collision with governmental vessel	6	3	0	9	1	4	\$71,501.00
Collision with recreational vessel	1028	65	10	1103	45	689	\$11,044,445.18
Collision with submerged object	151	1	0	152	10	45	\$1,274,500.69

<b>Table 17 Continued - FREQUENCY OF EVENTS IN ACCIDENTS &amp; CASUALTIES NATIONWIDE</b>							
<b>2018 continued</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
Departed vessel	119	69	20	208	86	100	\$857,197.37
Ejected from vessel	197	585	276	1058	305	983	\$7,858,064.03
Electrocution	0	0	0	0	0	0	\$0.00
Fall in vessel	128	191	57	376	39	535	\$4,205,491.69
Falls overboard	274	49	6	329	171	158	\$455,847.70
Fire/explosion (fuel)	145	2	1	148	4	99	\$3,906,954.54
Fire/explosion (non-fuel)	70	3	0	73	0	11	\$6,235,940.37
Fire/explosion (unknown origin)	41	0	0	41	0	7	\$3,291,006.75
Flooding/swamping	443	244	78	765	105	227	\$13,031,049.80
Grounding	367	64	33	464	26	298	\$6,901,793.84
Person struck by propeller	45	107	25	177	25	177	\$80,388.70
Person struck by vessel	31	204	34	269	23	348	\$837,487.82
Sinking	0	144	87	231	20	45	\$6,343,604.00
Skier mishap	230	8	1	239	10	264	\$2,600.00
Sudden medical condition	0	0	0	0	0	0	\$0.00
Other	42	17	1	60	2	53	\$498,108.00
Unknown	0	0	0	0	0	0	\$0.00
<b>2017</b>							
Capsizing	286	244	72	602	222	324	\$5,472,159.63
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

Table 17 Continued ▪ FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
	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
<b>2017 continued</b>							
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
Departed vessel	121	58	16	195	96	88	\$1,018,112.00
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



Table 17 Continued • FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
2015	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	299	241	56	596	226	293
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
Grounding	350	56	32	438	30	312	\$5,706,612
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

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

	Total vessels involved	Carbon monoxide poisoning	Capstanning	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>5651</b>	<b>256</b>	<b>12</b>	<b>610</b>	<b>77</b>	<b>43</b>	<b>18</b>	<b>2233</b>	<b>139</b>	<b>100</b>	<b>191</b>	<b>0</b>	<b>139</b>	<b>315</b>	<b>154</b>	<b>63</b>	<b>60</b>	<b>427</b>	<b>429</b>	<b>39</b>	<b>22</b>	<b>0</b>	<b>273</b>	<b>0</b>	<b>51</b>	<b>0</b>	<b>439</b>	<b>174</b>	<b>613</b>	<b>2559</b>
5 feet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 feet	12	4	0	1	0	0	0	4	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	0
7 feet	19	2	0	3	0	0	0	5	0	0	2	0	1	2	1	1	0	1	1	0	0	0	0	0	0	5	0	5	11	
8 feet	81	15	0	5	0	0	0	31	1	1	6	0	3	13	0	0	0	2	1	0	2	0	1	0	0	16	7	23	38	
9 feet	113	10	0	8	2	0	0	63	2	1	7	0	2	9	2	0	0	1	2	0	2	0	2	0	0	19	3	22	56	
10 feet	496	38	0	29	2	1	1	278	2	7	46	0	12	30	5	0	0	15	18	0	3	0	6	0	3	45	12	57	258	
11 feet	379	8	0	24	0	2	0	223	4	2	42	0	19	30	1	1	0	1	7	0	2	0	11	0	2	12	7	19	245	
12 feet	140	28	0	16	3	0	0	32	4	1	12	0	3	16	0	0	0	18	4	0	0	0	1	0	2	38	4	42	76	
13 feet	38	8	0	2	1	0	0	15	1	0	1	0	0	4	1	0	0	3	2	0	0	0	0	0	0	5	1	6	18	
14 feet	129	20	0	14	2	0	0	18	7	3	5	0	1	17	2	1	0	30	6	1	0	0	1	0	1	46	8	54	58	
15 feet	101	12	0	11	1	0	0	24	12	1	3	0	1	4	0	1	0	24	6	0	0	0	1	0	0	15	2	17	46	
<b>Under 16 ft</b>	<b>1508</b>	<b>145</b>	<b>0</b>	<b>113</b>	<b>11</b>	<b>3</b>	<b>1</b>	<b>693</b>	<b>33</b>	<b>16</b>	<b>125</b>	<b>0</b>	<b>42</b>	<b>127</b>	<b>12</b>	<b>4</b>	<b>0</b>	<b>95</b>	<b>47</b>	<b>1</b>	<b>9</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>208</b>	<b>44</b>	<b>252</b>	<b>806</b>
16 feet	202	16	0	21	3	2	0	47	6	3	10	0	0	19	5	0	1	42	18	1	2	0	5	0	1	0	30	6	36	124
17 feet	243	15	2	25	5	1	0	63	10	1	8	0	9	17	6	1	3	37	17	6	2	0	14	0	1	0	23	11	34	147
18 feet	305	11	0	40	5	2	0	98	12	5	5	0	9	16	13	3	1	30	26	1	0	0	26	0	2	0	13	12	25	135
19 feet	248	8	0	13	6	1	0	71	6	6	6	0	5	10	12	3	1	23	32	2	0	0	40	0	3	0	20	10	30	127
20 feet	379	3	0	42	7	0	0	129	18	10	5	0	14	23	9	3	2	39	29	10	2	0	32	0	2	0	26	14	40	181
21 feet	302	4	1	37	4	1	1	91	5	6	3	0	4	16	14	4	0	38	35	1	1	0	32	0	4	0	14	7	21	150
22 feet	258	4	0	31	4	1	1	113	6	5	5	0	9	7	5	2	2	16	15	3	0	0	24	0	5	0	17	2	19	114
23 feet	201	0	1	22	4	1	1	73	4	8	1	0	9	6	12	1	0	11	24	4	1	0	17	0	1	0	7	6	13	104
24 feet	255	0	1	31	6	1	1	84	8	8	2	0	7	14	10	2	2	18	29	4	1	0	24	0	2	0	10	10	20	129
25 feet	135	2	0	20	1	5	0	49	6	4	3	0	5	5	2	1	2	5	11	1	0	0	10	0	3	0	3	2	5	88
<b>16 ft to less than 26 ft</b>	<b>2528</b>	<b>63</b>	<b>5</b>	<b>282</b>	<b>45</b>	<b>15</b>	<b>4</b>	<b>818</b>	<b>81</b>	<b>56</b>	<b>48</b>	<b>0</b>	<b>71</b>	<b>133</b>	<b>88</b>	<b>20</b>	<b>14</b>	<b>259</b>	<b>236</b>	<b>33</b>	<b>9</b>	<b>0</b>	<b>224</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>163</b>	<b>80</b>	<b>243</b>	<b>1299</b>
26 feet	115	1	0	13	0	1	2	47	2	5	0	0	1	3	5	1	0	12	16	0	0	0	5	0	1	0	5	2	7	46
27 feet	84	3	0	11	2	0	0	33	4	1	1	0	0	2	7	4	1	5	6	0	0	0	2	0	2	0	2	2	4	19
28 feet	76	0	0	16	1	0	1	31	1	0	0	0	1	1	5	1	4	6	7	0	1	0	0	0	0	1	1	2	30	
29 feet	47	0	0	9	0	0	2	18	1	3	1	0	3	0	2	1	1	1	3	1	0	0	1	0	0	1	1	2	18	
30 feet	70	0	0	8	1	0	1	31	1	3	0	0	3	4	1	2	2	4	6	0	0	0	2	0	1	0	6	0	6	28
31 feet	49	1	0	5	0	1	0	28	0	0	0	0	2	0	1	0	1	1	7	0	0	0	0	0	2	0	0	1	1	7
32 feet	64	0	1	6	1	1	1	32	0	0	0	0	0	0	2	2	3	5	9	0	0	0	0	0	1	0	1	3	4	22
33 feet	53	0	0	4	1	0	0	32	0	0	1	0	0	1	3	1	2	1	6	0	0	0	1	0	0	0	0	1	1	11
34 feet	54	0	2	6	1	2	0	22	1	2	1	0	1	4	3	1	1	2	4	0	0	0	0	0	1	0	3	5	8	10
35 feet	52	0	1	7	0	0	0	19	0	1	1	0	5	1	0	2	4	3	7	0	0	0	0	0	1	0	1	3	4	19
36 feet	53	1	0	2	2	1	0	23	0	1	0	0	2	2	2	4	1	1	9	1	0	0	1	0	0	0	2	2	4	16
37 feet	42	0	0	5	1	0	1	23	4	0	0	0	0	0	2	0	0	0	6	0	0	0	0	0	0	0	0	0	0	11
38 feet	40	1	0	6	0	0	0	22	0	0	0	0	1	1	1	3	0	0	4	0	0	0	0	0	1	0	0	1	1	3
39 feet	34	1	0	10	0	0	0	16	1	0	0	0	0	0	0	1	0	0	4	1	0	0	0	0	0	0	0	2	2	11
<b>26 ft to less than 40 ft</b>	<b>833</b>	<b>8</b>	<b>4</b>	<b>108</b>	<b>10</b>	<b>6</b>	<b>8</b>	<b>377</b>	<b>15</b>	<b>16</b>	<b>5</b>	<b>0</b>	<b>19</b>	<b>19</b>	<b>34</b>	<b>23</b>	<b>20</b>	<b>41</b>	<b>94</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>22</b>	<b>24</b>	<b>46</b>	<b>251</b>
40 ft to 65 ft	365	2	1	60	7	10	3	162	7	3	0	0	3	4	16	13	21	7	42	0	0	0	0	0	4	0	4	7	11	69
Over 65 ft	87	1	2	20	0	7	1	47	0	1	0	0	0	0	1	1	1	3	2	0	0	0	0	0	0	0	0	0	0	19
Unknown	330	37	0	27	4	2	1	136	3	8	13	0	4	32	3	2	4	22	8	2	3	0	14	0	5	0	42	19	61	115

Table 19 - NUMBER OF VESSELS IN ACCIDENTS BY VESSEL TYPE & PRIMARY ACCIDENT TYPE WITH NUMBER OF CASUALTIES BY CASUALTY TYPE & VESSEL TYPE 2019			
Injuries			2559
Total deaths		613	2559
Deaths by causes other than drowning		174	613
Drownings		439	174
Unknown		0	439
Other		51	0
Sudden medical condition		0	51
Skier mishap		273	0
Sinking		0	273
Person struck by vessel		22	0
Person struck by propeller		39	22
Grounding		429	39
Flooding/swamping		427	429
Fire/explosion (unknown origin)		60	427
Fire/explosion (non-fuel)		63	60
Fire/explosion (fuel)		154	63
Falls overboard		315	154
Fall in vessel		139	315
Electrocution		0	139
Ejected from vessel		191	0
Departed vessel		100	191
Collision with submerged object		139	100
Collision with recreational vessel		2233	139
Collision with governmental vessel		18	2233
Collision with commercial vessel		43	18
Collision with floating object		77	43
Collision with fixed object		12610	77
Carbon monoxide exposure		3	12610
Capsizing		256	3
All accident types		5651	256
	<b>All vessels</b>		
	Airboat	30	
	Auxiliary sailboat	237	
	Cabin motorboat	888	
	Canoe	66	
	Houseboat	73	
	Inflatable	25	
	Kayak	179	
	Open motorboat	2510	
	Personal watercraft	1062	
	Pontoon	372	
	Rowboat	32	
	Sailboat (only)	29	
	Sailboat (unknown)	7	
	Standup paddleboard	15	
	Other	28	
	Unknown	98	



**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, 2005-2019 (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 and Figure 9a, Pages 50 and 51)**

This table documents the age of fatal accident victims by vessel type, and delineates the number of drownings, non-drownings, and total deaths by age. The accompanying figure charts the percent of deceased victims by age group and vessel type.

### **Percent of Injured Victims by Age & Vessel Type (Figure 9b and Table 27, Pages 51 and 52)**

This figure charts the percent of injured victims by age group and vessel type, and the accompanying table documents the age of injured victims by vessel type.

### **Nature of Primary Injury Type by Area of Injury 2019 (Table 28, Page 53)**

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, 2019 (Figure 10, Page 53)**

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

<b>Table 22 - OPERATOR INFORMATION 2019</b>				
		Vessels Involved	Deaths	Injuries
		<b>5651</b>	<b>613</b>	<b>2559</b>
<b>Age of Operator</b>	12 years and under	19	5	15
	13 to 18 years	219	13	123
	19 to 25 years	580	50	324
	26 to 35 years	766	99	411
	36 to 55 years	1701	196	902
	Over 55 years	1297	206	610
	Unknown	343	37	119
	No operator	726	7	55
<b>Operator's Experience</b>	No Experience	46	3	22
	Under 10 hours	483	46	231
	10 to 100 hours	1007	88	574
	101 to 500 hours	1537	144	788
	Over 500 Hours	537	39	278
	Unknown	1315	286	611
	No Operator	726	7	55
<b>Number of Persons on Board</b>	None	432	0	0
	One	1809	244	558
	Two	1438	193	726
	Three	540	58	358
	Four	430	46	275
	Five	242	16	165
	Six	194	11	149
	Seven	96	11	62
	Eight	90	13	102
	Nine	48	4	47
	Ten	41	5	26
	More than 10	74	8	66
	Unknown	217	4	25
	<b>Education of Operator</b>	American Red Cross	9	0
Informal		181	13	106
Internet Course		158	11	98
State Course		895	50	454
US Power Squadrons		42	1	13
USCG Auxiliary		126	8	67
Other		124	6	48
No Education		1928	205	1010
Unknown		1462	312	708
No Operator		726	7	55

**BOATING SAFETY INSTRUCTION**

Table 23 • NUMBER OF DEATHS BY TYPE OF OPERATOR BOATING INSTRUCTION 2019	
Type of Boating Instruction	Deaths
American Red Cross	0
Informal	13
Internet Course	11
State Course	50
US Power Squadrons	1
USCG Auxiliary	8
Other	6
No Education	205
Total Deaths - Known Operator Instruction	294
Total Deaths - Unknown Operator Instruction	312
Total Deaths - No Operator	7
Total Deaths - Known & Unknown Operator Instruction	613

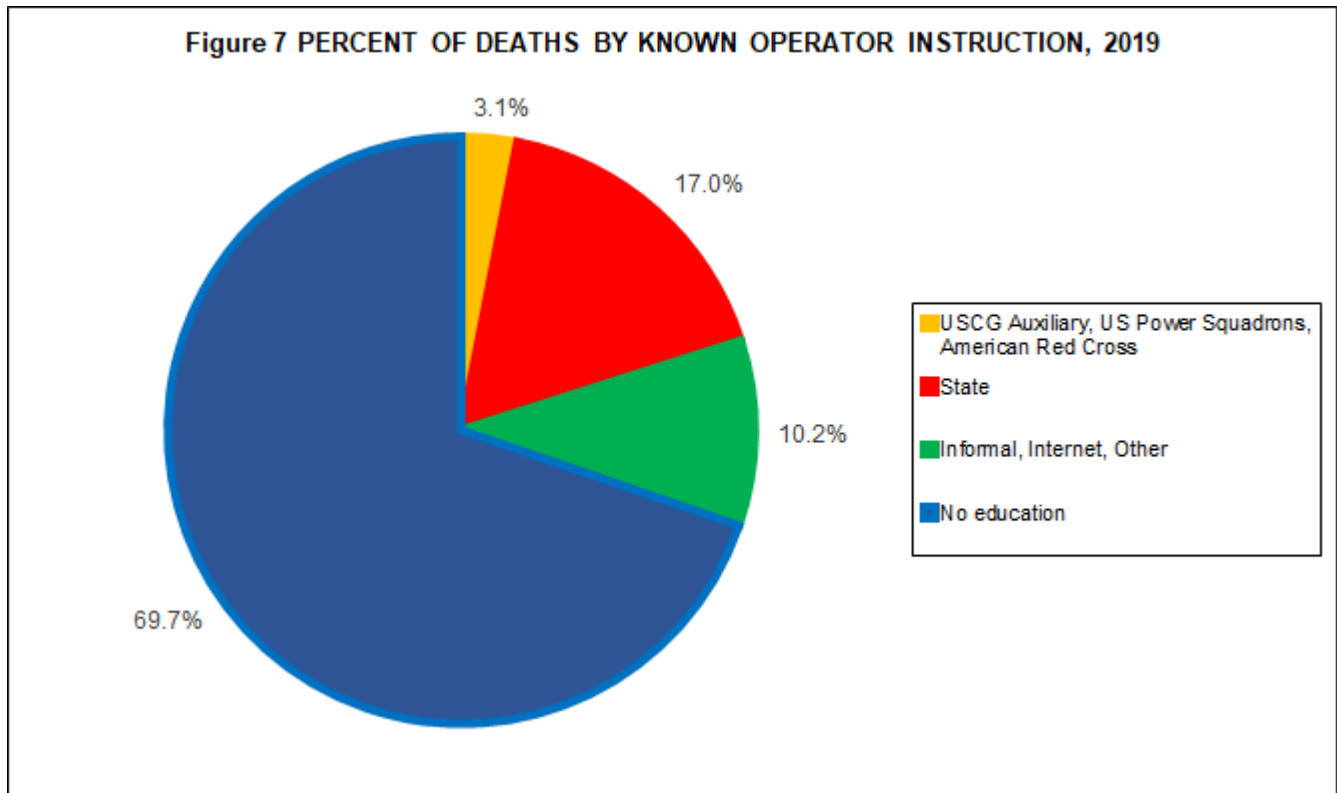




Table 24 • NUMBER OF DEATHS BY VESSEL TYPE 2019				
Vessel type	Drownings	Deaths by Causes other than Drowning	Total Deaths	Percentage of Deaths from Drowning
Airboat	1	0	1	100%
Auxiliary Sailboat	8	6	14	57%
Cabin Motorboat	14	20	34	41%
Canoe	34	5	39	87%
Houseboat	0	3	3	0%
Inflatable	11	1	12	92%
Kayak	73	13	86	85%
Open Motorboat	201	87	288	70%
Personal Watercraft	24	22	46	52%
Pontoon	32	8	40	80%
Rowboat	16	2	18	89%
Sailboat (only)	2	2	4	50%
Sailboat (unknown)	0	0	0	0%
Standup paddleboard	10	2	12	83%
Other	8	0	8	100%
Unknown	5	3	8	63%
<b>Total</b>	<b>439</b>	<b>174</b>	<b>613</b>	<b>72%</b>

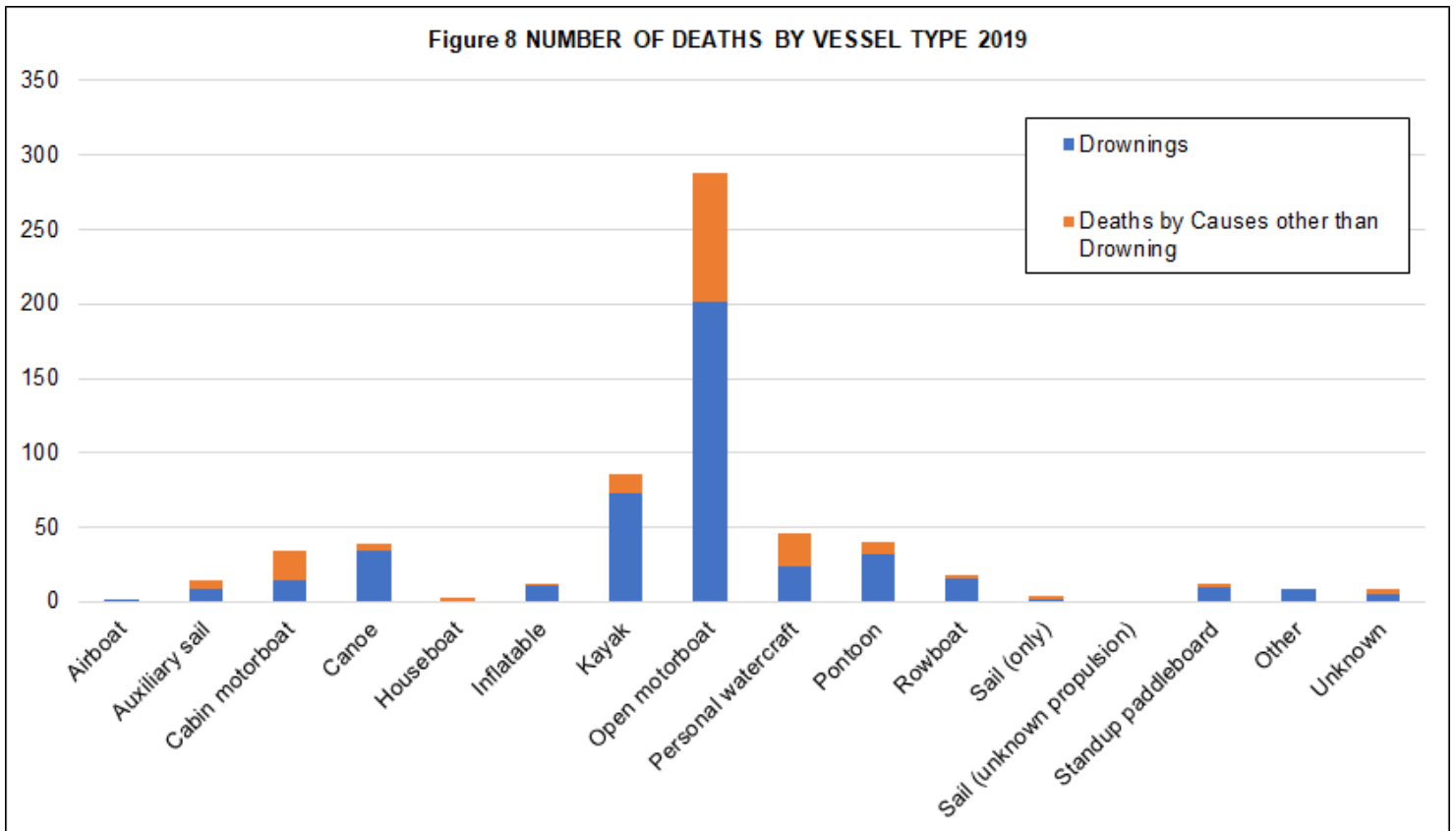


Figure 9 PERCENT OF DEATHS BY VESSEL TYPE, 2005-2019

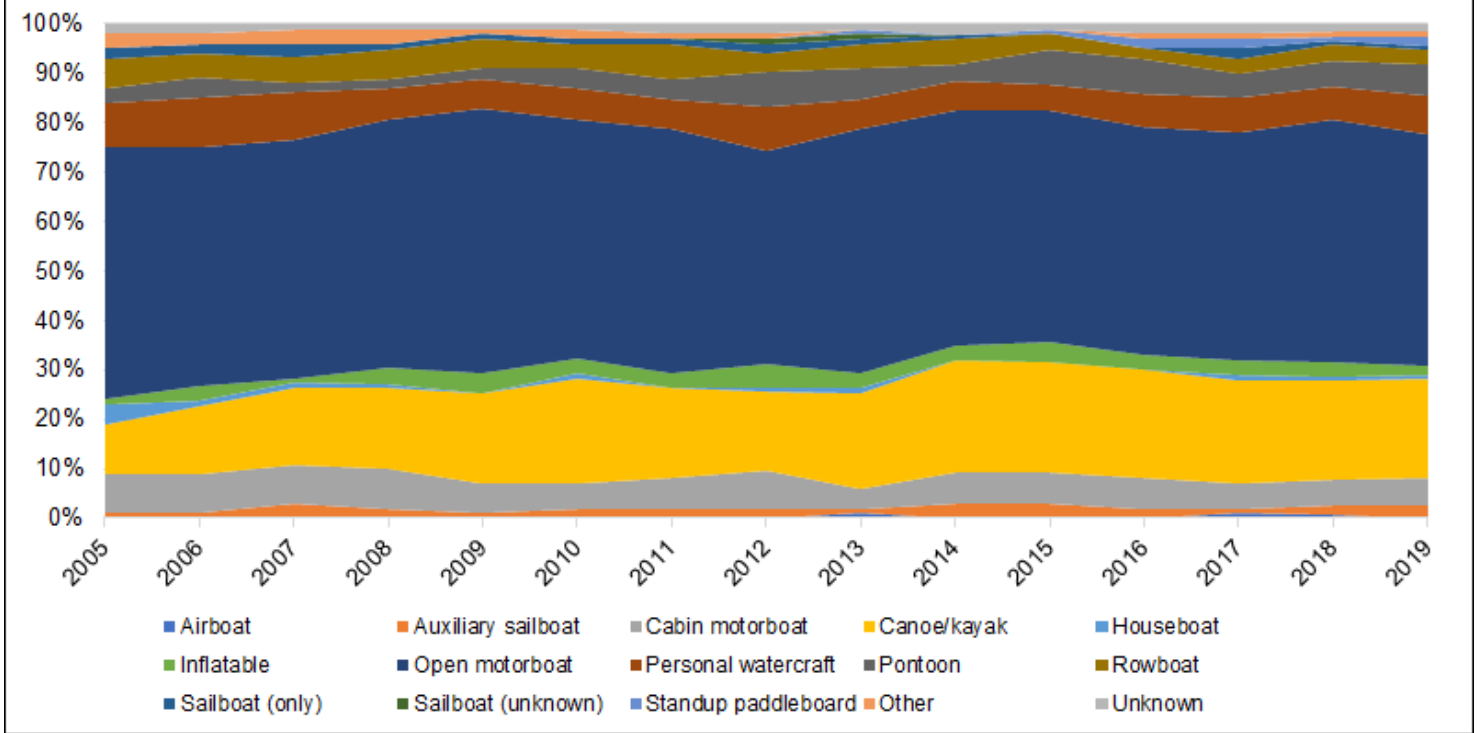
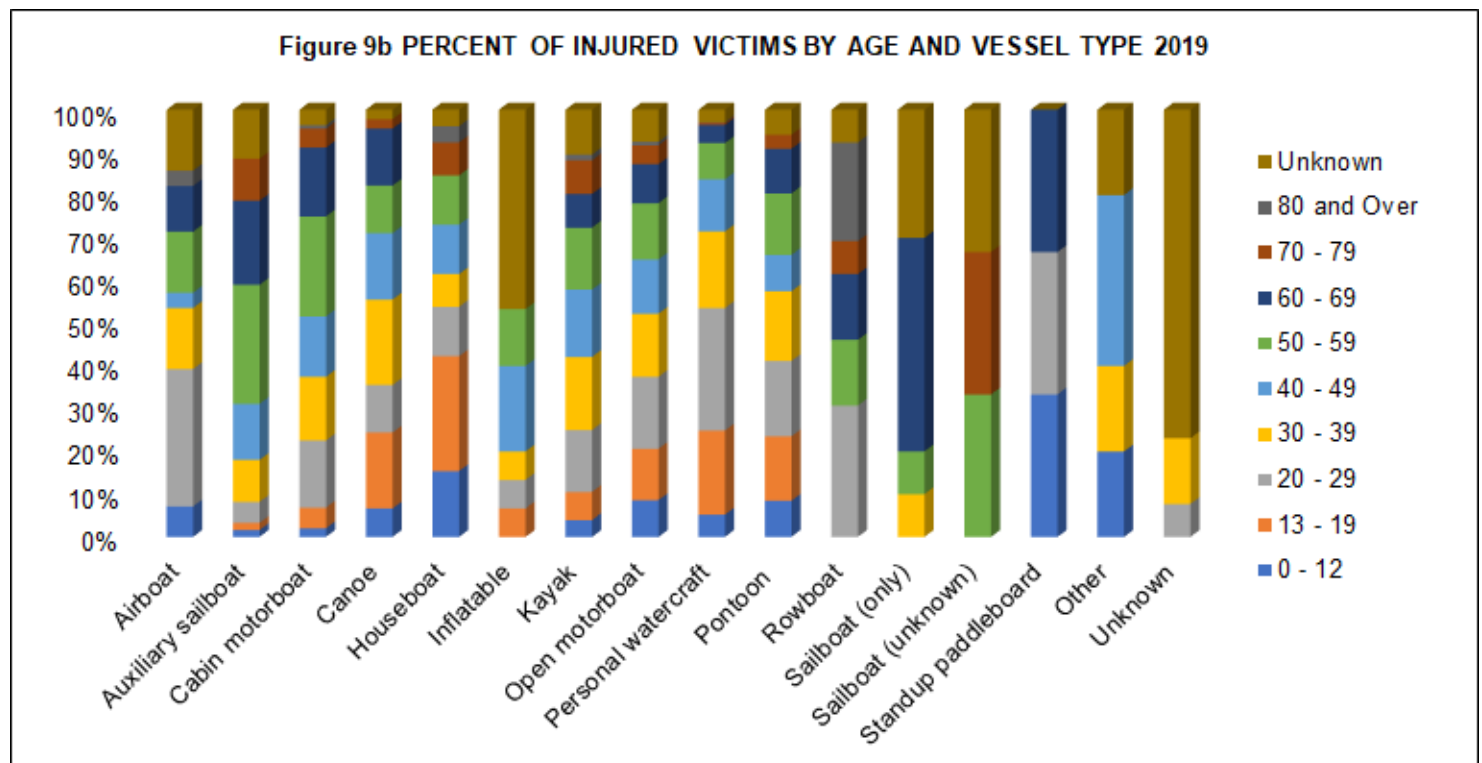
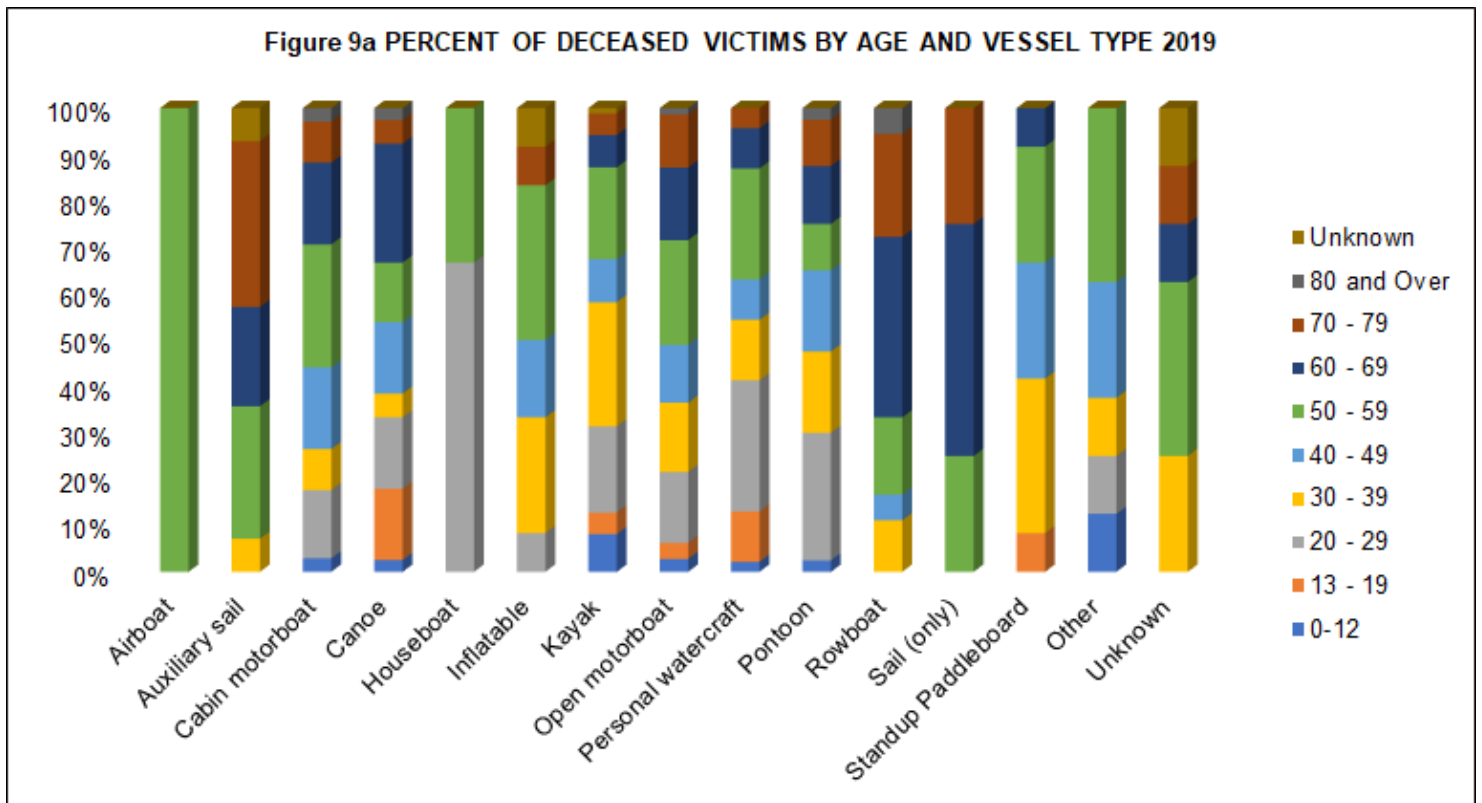


Table 25 - PERCENT OF DEATHS BY VESSEL TYPE, 2005-2019

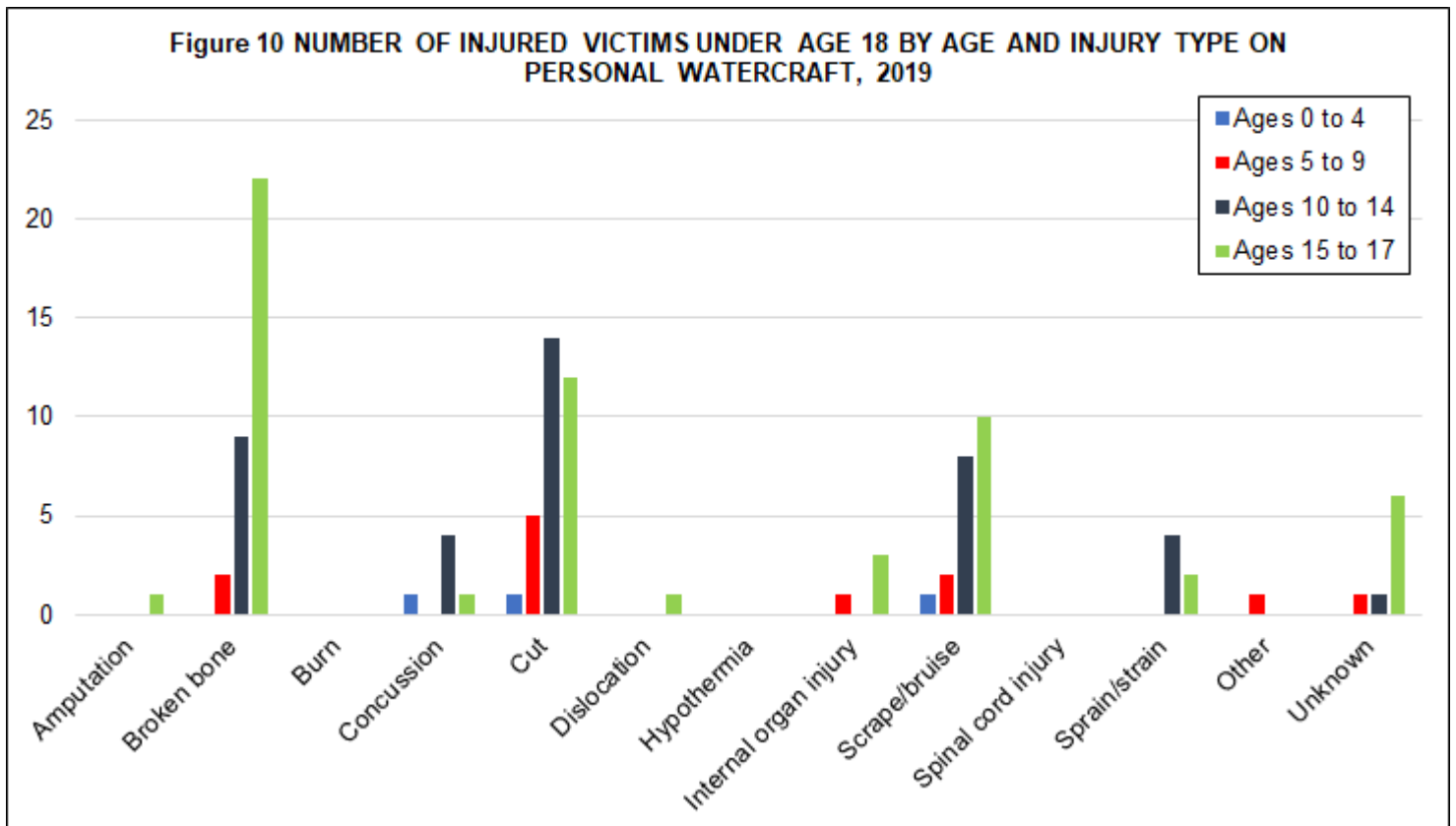
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Airboat	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	1%	1%	0%
Auxiliary sailboat	1%	1%	3%	2%	1%	2%	2%	2%	1%	3%	3%	2%	1%	2%	2%
Cabin motorboat	8%	8%	8%	8%	6%	5%	6%	8%	4%	6%	6%	6%	5%	5%	6%
Canoe/kayak	10%	14%	16%	16%	18%	21%	18%	16%	19%	22%	22%	22%	21%	20%	20%
Houseboat	4%	1%	1%	1%	0%	1%	0%	1%	1%	0%	0%	0%	1%	0%	0%
Inflatable	1%	3%	1%	3%	4%	3%	3%	5%	3%	3%	4%	3%	3%	3%	2%
Open motorboat	51%	49%	49%	50%	53%	48%	49%	44%	49%	46%	46%	46%	46%	49%	47%
Personal watercraft	9%	10%	10%	6%	6%	6%	6%	9%	6%	6%	5%	7%	7%	7%	8%
Pontoon	3%	4%	2%	2%	2%	4%	4%	7%	6%	3%	7%	7%	5%	6%	7%
Rowboat	6%	5%	5%	6%	6%	5%	7%	4%	5%	5%	3%	2%	3%	3%	3%
Sailboat (only)	2%	2%	3%	1%	1%	1%	1%	2%	1%	1%	0%	0%	2%	1%	1%
Sailboat (unknown)	0%	0%	0%	0%	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%
Standup paddleboard	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%	2%	2%	1%	2%
Other	3%	2%	3%	3%	1%	2%	1%	1%	0%	0%	0%	1%	1%	1%	1%
Unknown	2%	2%	1%	1%	1%	1%	2%	2%	1%	2%	1%	2%	2%	1%	1%

Table 26 • NUMBER OF DECEASED VICTIMS BY AGE AND VESSEL TYPE 2019																			
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
<b>Total</b>	<b>1</b>	<b>14</b>	<b>34</b>	<b>39</b>	<b>3</b>	<b>12</b>	<b>86</b>	<b>288</b>	<b>46</b>	<b>40</b>	<b>18</b>	<b>4</b>	<b>0</b>	<b>12</b>	<b>8</b>	<b>8</b>	<b>439</b>	<b>174</b>	<b>613</b>
1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	1	2
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
4	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
5	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	3	1	4
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	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
8	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
9	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1	2
10	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
11	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
12	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	1	3	4
0-12	0	0	1	1	0	0	7	8	1	1	0	0	0	0	1	0	11	9	20
13 - 19	0	0	0	6	0	0	4	10	5	0	0	0	0	1	0	0	16	10	26
20 - 29	0	0	5	6	2	1	16	44	13	11	0	0	0	0	1	0	69	30	99
30 - 39	0	1	3	2	0	3	23	43	6	7	2	0	0	4	1	2	71	26	97
40 - 49	0	0	6	6	0	2	8	36	4	7	1	0	0	3	2	0	61	14	75
50 - 59	1	4	9	5	1	4	17	65	11	4	3	1	0	3	3	3	93	41	134
60 - 69	0	3	6	10	0	0	6	45	4	5	7	2	0	1	0	1	66	24	90
70 - 79	0	5	3	2	0	1	4	33	2	4	4	1	0	0	0	1	46	14	60
80 and Over	0	0	1	1	0	0	0	4	0	1	1	0	0	0	0	0	4	4	8
Unknown	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	1	2	2	4



<b>Table 27 - NUMBER OF INJURED VICTIMS BY AGE AND VESSEL TYPE 2019</b>																	
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
<b>Total</b>	<b>2559</b>	<b>28</b>	<b>61</b>	<b>248</b>	<b>45</b>	<b>26</b>	<b>15</b>	<b>76</b>	<b>1246</b>	<b>614</b>	<b>153</b>	<b>13</b>	<b>10</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>13</b>
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	4	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
2	7	0	0	0	0	0	0	0	6	0	1	0	0	0	0	0	0
3	4	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0
4	15	0	0	2	1	0	0	0	9	1	2	0	0	0	0	0	0
5	13	1	0	0	0	0	0	0	9	3	0	0	0	0	0	0	0
6	13	0	0	1	0	1	0	0	9	2	0	0	0	0	0	0	0
7	14	0	0	0	0	1	0	0	11	2	0	0	0	0	0	0	0
8	10	0	0	0	0	0	0	0	8	1	1	0	0	0	0	0	0
9	12	0	0	0	0	0	0	0	6	4	2	0	0	0	0	0	0
10	22	0	0	0	1	0	0	0	12	7	2	0	0	0	0	0	0
11	29	0	1	2	1	0	0	1	16	4	3	0	0	0	0	1	0
12	29	1	0	0	0	2	0	2	15	6	2	0	0	0	1	0	0
0 - 12	172	2	1	5	3	4	0	3	107	32	13	0	0	0	1	1	0
13 - 19	328	0	1	12	8	7	1	5	150	121	23	0	0	0	0	0	0
20 - 29	490	9	3	39	5	3	1	11	210	176	27	4	0	0	1	0	1
30 - 39	395	4	6	37	9	2	1	13	184	110	25	0	1	0	0	1	2
40 - 49	317	1	8	35	7	3	3	12	158	75	13	0	0	0	0	2	0
50 - 59	342	4	17	58	5	3	2	11	164	52	22	2	1	1	0	0	0
60 - 69	231	3	12	40	6	0	0	6	114	26	16	2	5	0	1	0	0
70 - 79	91	0	6	11	1	2	0	6	55	3	5	1	0	1	0	0	0
80 and Over	19	1	0	2	0	1	0	1	10	1	0	3	0	0	0	0	0
Unknown	174	4	7	9	1	1	7	8	94	18	9	1	3	1	0	1	10

Table 28 - NATURE OF PRIMARY INJURY TYPE BY AREA OF INJURY 2019										
	All Areas	Arm	Body	Foot	Hand	Head	Leg	Neck	Trunk	Unknown
<b>All primary injury types</b>	<b>2559</b>	<b>227</b>	<b>286</b>	<b>108</b>	<b>86</b>	<b>578</b>	<b>522</b>	<b>63</b>	<b>505</b>	<b>184</b>
Amputation	14	1	0	1	7	0	5	0	0	0
Broken bone	472	57	0	34	20	69	159	2	118	13
Burn	101	10	11	7	4	8	33	3	9	16
Carbon monoxide	32	0	32	0	0	0	0	0	0	0
Concussion	205	0	0	0	0	205	0	0	0	0
Dislocation	41	25	0	5	2	0	9	0	0	0
Electric shock	3	0	3	0	0	0	0	0	0	0
Hypothermia	196	0	196	0	0	0	0	0	0	0
Internal organ injury	129	0	0	0	0	10	0	0	111	8
Laceration	593	55	8	39	36	219	171	4	39	22
Scrape/bruise	352	48	10	9	10	47	86	3	74	65
Shock	6	0	6	0	0	0	0	0	0	0
Spinal cord Injury	35	0	0	0	0	0	0	7	28	0
Sprain/strain	138	17	17	11	4	1	26	26	31	5
Other	8	0	1	0	0	1	0	0	6	0
Unknown	234	14	2	2	3	18	33	18	89	55



# **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, 2000-2019 (Figure 11 & Table 29, Page 56)**

This figure and table document the number of accidents and casualties from 2000-2019.

### **Accident, Casualty & Damage Data by State (Table 30, Page 57)**

This table provides accident, casualty, and damage information by state for the year 2019. Accidents are broken down into three levels of severity— fatal accidents, non-fatal injury accidents, and property damage only accidents. Please note that under this categorization, accidents are represented by their greatest severity. If an accident resulted in one death, two injured victims, and \$5,000 damages, the accident would be represented under the fatal accident column under the greater “Number of Accidents” heading. The death, injured victims, and damages would be represented in the totals under the “Persons Involved” and “Damages” headings.

### **Distribution of Recreational Boating Deaths by State (Figure 12, Page 58)**

This figure provides the percentage that each state contributed to the national death count. So, for instance, Michigan had 22 deaths. Out of the total national death count of 613, Michigan contributed 3.6% ( $(22/613) \times 100$ ) of deaths to the national count. Please note that percentages have been rounded.

### **Fatal Accidents by Location (Figures 12a-c, Pages 59-60)**

These figures plot the location of fatal accidents in four different regions. 12a represents the continental United States and Puerto Rico. 12b represents Alaska. 12c represents Hawaii. 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. The size of the plot correlates to the number of deaths in the fatal accident.

### **Annual Recreational Boating Fatality Rates, 2000-2019 (Figure 13 & Table 31, Page 61)**

This table and accompanying figure provide two fatality rates for years 2000-2019. 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 2019 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 the 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 2018-2019 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, 2015-2019 (Table 32, Page 63)**

This table examines the number of accidents, fatal accidents, and fatalities by state for years 2015-2019.

### **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.

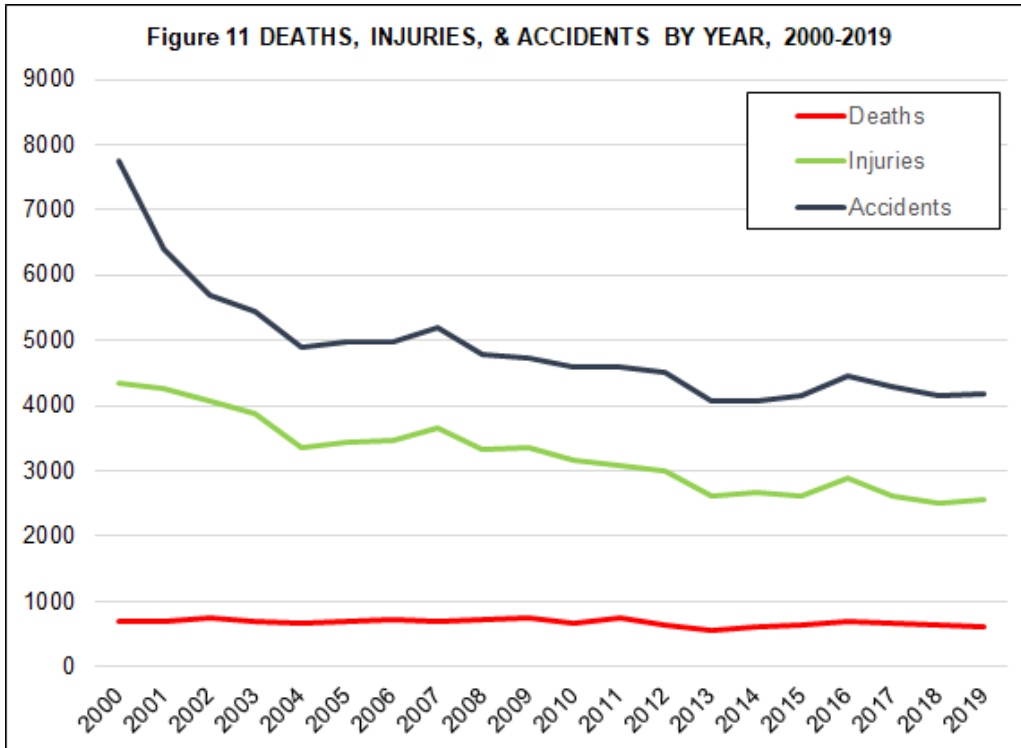
### **Number of Injured Victims by Primary Injury & Vessel Type (Table 34, Page 66)**

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.





Year	Deaths	Injuries	Accidents
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
2018	633	2511	4145
2019	613	2559	4168

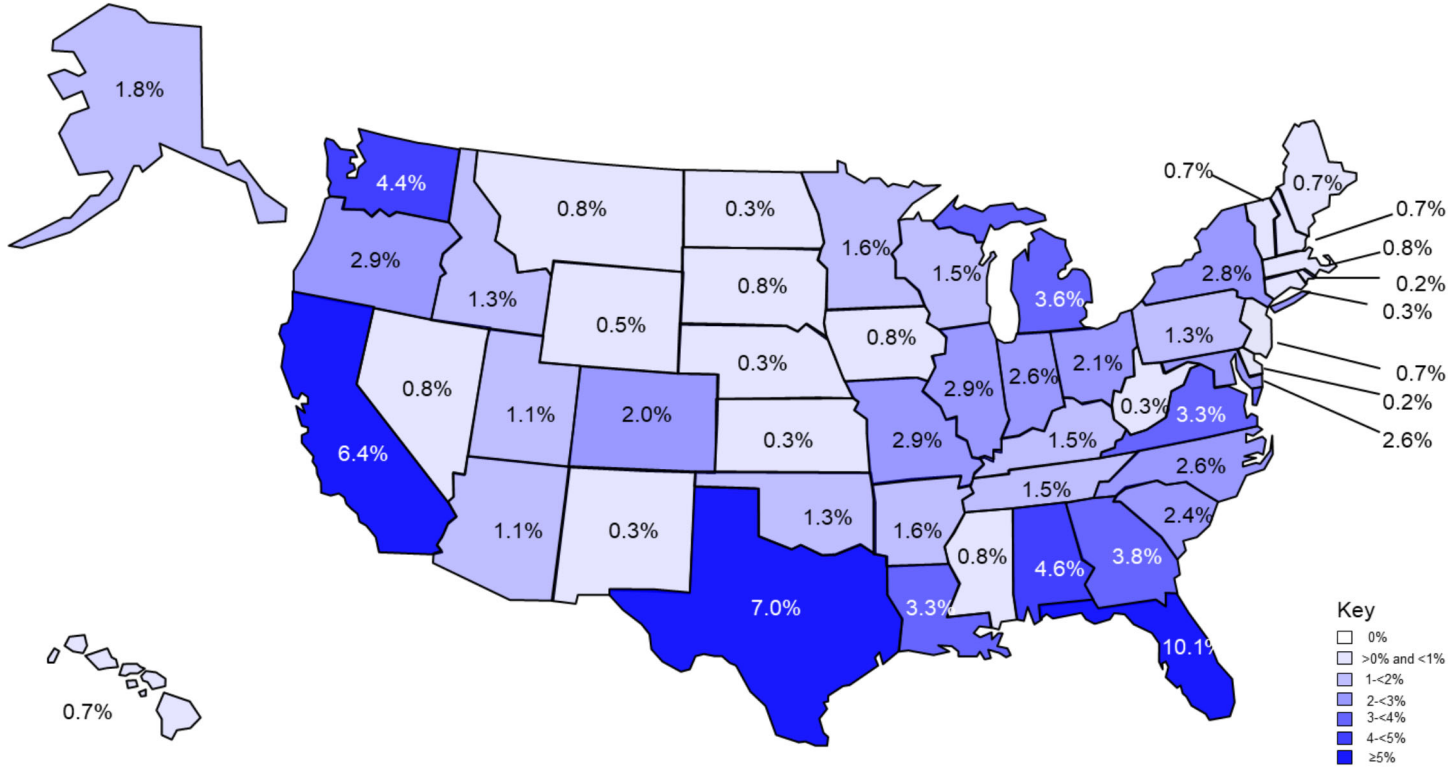
\* On July 2, 2001, the Federal threshold of property damage for reports of accidents involving recreational vessels changed from \$500 to \$2000.

Table 30 - ACCIDENT, CASUALTY &amp; DAMAGE DATA BY STATE 2019

	Number of Accidents				Persons Involved		Damages
	Total	Fatal	Non-Fatal Injury	Property Damage	Deaths	Injured	
<b>Totals</b>	<b>4168</b>	<b>556</b>	<b>1785</b>	<b>1827</b>	<b>613</b>	<b>2559</b>	<b>\$55,320,226.25</b>
AK	14	8	3	3	11	7	\$60,500.00
AL	101	25	31	45	28	58	\$766,208.00
AR	37	10	7	20	10	9	\$237,496.18
AZ	96	7	41	48	7	52	\$491,282.00
CA	324	37	130	157	39	199	\$7,300,523.32
CO	44	12	15	17	12	15	\$75,050.00
CT	40	2	17	21	2	20	\$780,434.62
DC	2	0	2	0	0	3	\$3,500.00
DE	13	1	2	10	1	2	\$283,500.00
FL	679	55	299	325	62	421	\$9,232,015.99
GA	109	22	42	45	23	57	\$480,200.00
HI	15	3	5	7	4	6	\$231,650.00
IA	21	5	9	7	5	15	\$49,261.09
ID	50	7	21	22	8	29	\$553,680.00
IL	75	13	23	39	18	41	\$1,170,268.56
IN	40	11	20	9	16	25	\$126,130.00
KS	13	2	7	4	2	10	\$23,250.00
KY	39	9	18	12	9	23	\$507,104.00
LA	105	18	52	35	20	96	\$552,135.92
MA	79	4	29	46	5	38	\$2,458,008.15
MD	130	12	78	40	16	101	\$865,977.88
ME	35	4	16	15	4	19	\$305,600.00
MI	128	21	54	53	22	74	\$526,661.94
MN	100	10	55	35	10	66	\$588,908.09
MO	145	18	71	56	18	103	\$1,260,848.01
MS	20	4	10	6	5	15	\$148,650.00
MT	13	4	6	3	5	8	\$59,275.95
NC	128	15	54	59	16	72	\$2,417,890.00
ND	16	2	4	10	2	5	\$76,242.90
NE	19	2	11	6	2	17	\$54,800.00
NH	37	3	20	14	4	21	\$463,757.60
NJ	110	4	46	60	4	65	\$1,188,042.00
NM	13	2	8	3	2	9	\$9,000.00
NV	44	4	22	18	5	28	\$143,595.00
NY	165	17	77	71	17	119	\$5,615,010.65
OH	128	12	42	74	13	61	\$2,516,256.00
OK	24	8	7	9	8	7	\$96,400.00
OR	62	16	20	26	18	31	\$813,534.88
PA	58	8	34	16	8	45	\$121,750.00
RI	42	1	9	32	1	14	\$1,142,256.00
SC	141	15	68	58	15	108	\$1,287,306.00
SD	23	4	8	11	5	16	\$84,159.78
TN	107	9	46	52	9	69	\$1,847,947.00
TX	184	38	81	65	43	122	\$2,012,209.38
UT	86	6	52	28	7	78	\$407,004.00
VA	84	18	28	38	20	33	\$1,399,326.00
VT	4	3	1	0	4	2	\$18,100.00
WA	106	26	33	47	27	55	\$2,329,133.00
WI	82	9	37	36	9	52	\$484,566.36
WV	9	2	3	4	2	5	\$23,150.00
WY	11	3	7	1	3	8	\$9,000.00
AS	0	0	0	0	0	0	\$0.00
CNMI	0	0	0	0	0	0	\$0.00
GU	2	0	1	1	0	1	\$7,400.00
PR	4	1	1	2	2	1	\$208,000.00
VI	0	0	0	0	0	0	\$0.00
Atlantic Ocean*	5	2	2	1	2	3	\$907,095.00
Gulf of Mexico*	3	0	0	3	0	0	\$404,175.00
Pacific Ocean*	4	2	0	2	3	0	\$95,000.00

\*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.

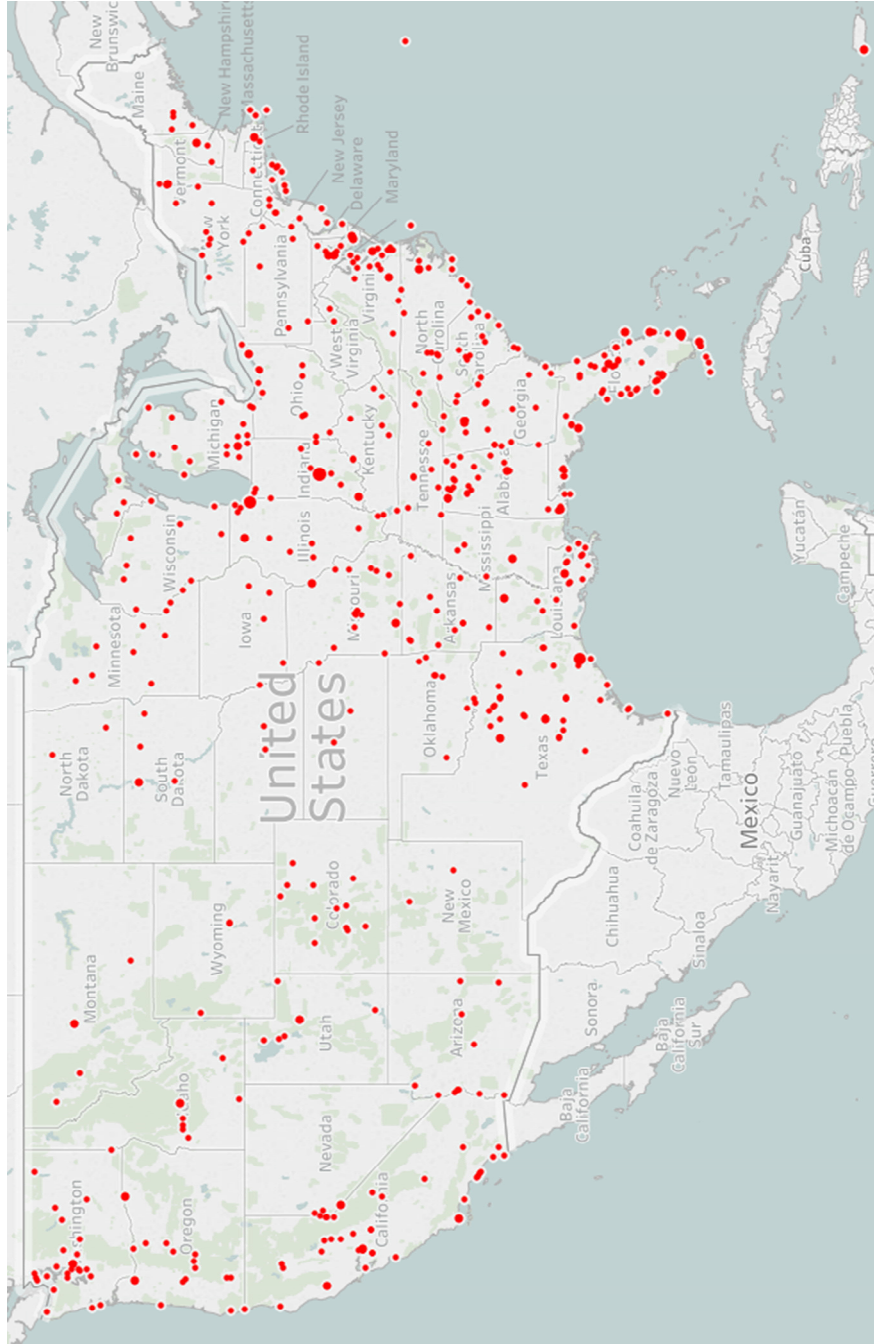
Figure 12 DISTRIBUTION OF 2019 DEATHS BY STATE



Offshore 0.8%  
 Puerto Rico 0.3%

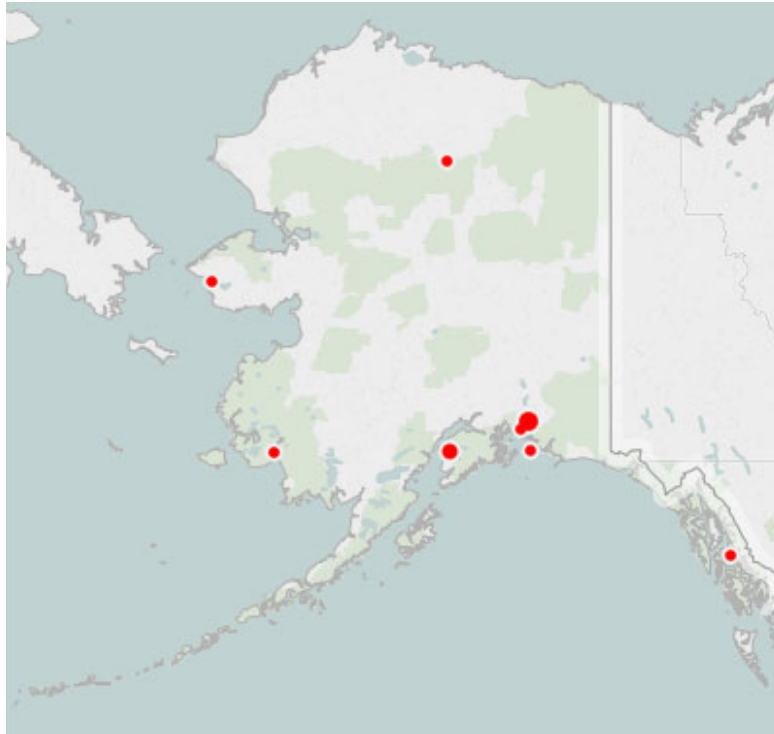
American Samoa, Guam, the Northern Mariana Islands, the U.S. Virgin Islands, and District of Columbia did not have deaths.

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



Plots represent fatal accidents; the size of the plot correlates to the number of deaths in a fatal accident. The largest plot represents five deaths.

**Figure 12b • FATAL ACCIDENTS BY LOCATION– ALASKA**

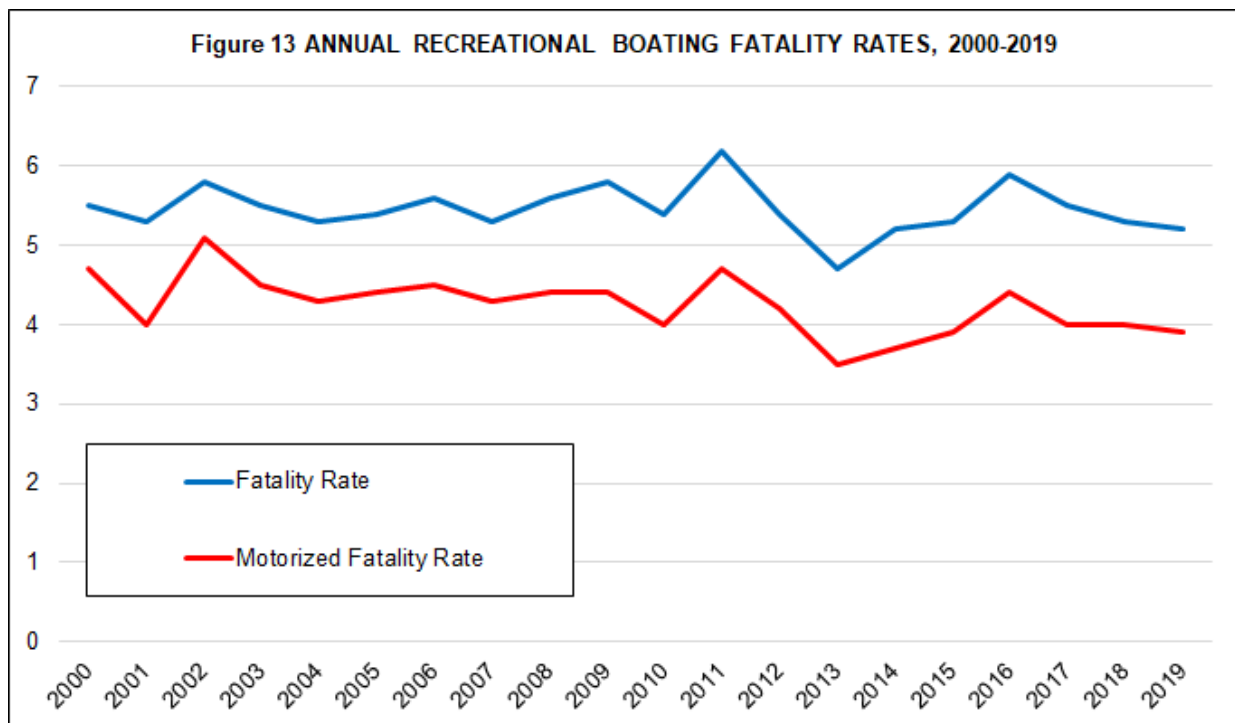


Plots represent fatal accidents; the size of the plot correlates to the number of deaths in a fatal accident. The largest plot represents three deaths.

**Figure 12c • FATAL ACCIDENTS BY LOCATION– HAWAII**

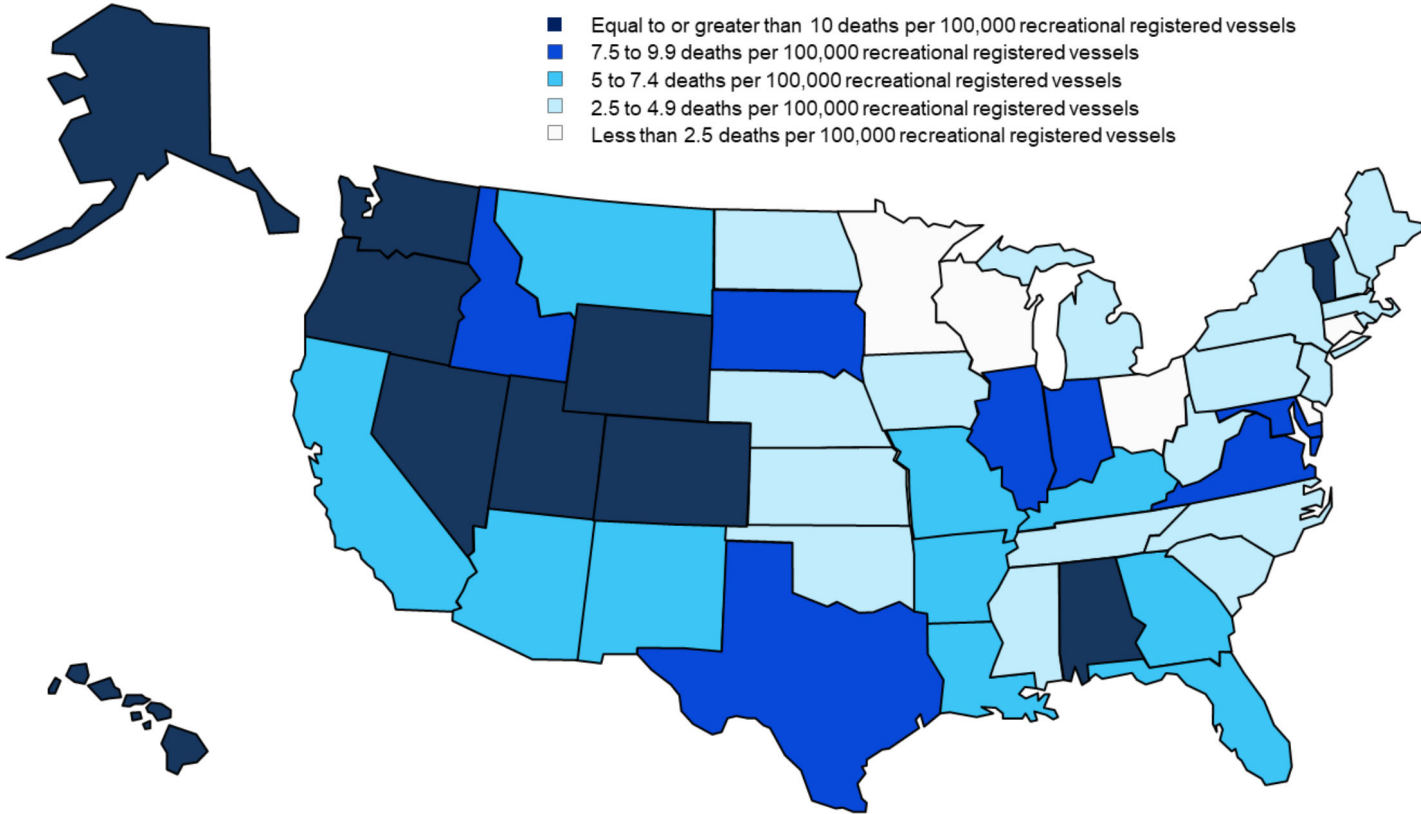


Plots represent fatal accidents; the size of the plot correlates to the number of deaths in a fatal accident. The largest plot represents two deaths.



	All Deaths	All Registered Vessels	Fatality Rate	Motorized Vessel Deaths	Registered Motorized Vessels	Motorized Vessel Fatality Rate
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
2018	633	11,852,969	5.3	441	10,994,900	4.0
2019	613	11,878,542	5.2	426	11,052,684	3.9

Figure 14 STATES CODED BY THEIR 2019 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 2015-2019															
	Total Number of Accidents					Fatal Accidents					Deaths				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Totals	4158	4463	4291	4145	4168	569	624	599	565	556	626	701	658	633	613
Alabama	79	46	70	66	101	17	12	18	13	25	21	14	21	17	28
Alaska	25	26	15	22	14	7	14	13	17	8	7	19	20	22	11
Arizona	97	90	123	129	96	6	5	11	6	7	6	5	13	11	7
Arkansas	49	47	64	60	37	9	9	11	7	10	9	10	11	7	10
California	369	386	350	322	324	41	43	49	33	37	48	47	50	34	39
Colorado	36	43	32	28	44	8	11	6	6	12	8	12	6	6	12
Connecticut	58	47	49	39	40	6	3	8	4	2	6	3	9	5	2
Delaware	13	23	23	23	13	0	1	3	2	1	0	1	3	2	1
DC	0	2	1	2	2	0	0			0	0	0	0	0	0
Florida	671	684	723	607	679	49	59	60	54	55	52	70	66	57	62
Georgia	85	112	102	104	109	19	15	12	9	22	22	22	14	11	23
Hawaii	12	14	15	8	15	5	6	3	1	3	5	8	3	1	4
Idaho	39	50	46	44	50	9	8	13	9	7	13	10	16	10	8
Illinois	66	74	84	67	75	11	9	15	16	13	11	9	15	17	18
Indiana	43	40	57	43	40	5	6	7	8	11	5	7	8	8	16
Iowa	36	37	40	31	21	3	7	4	8	5	3	7	4	8	5
Kansas	25	32	29	22	13	2	7	2	2	2	2	7	2	2	2
Kentucky	41	46	41	41	39	12	8	12	13	9	20	8	13	13	9
Louisiana	87	112	106	95	105	20	23	19	17	18	22	24	19	19	20
Maine	32	49	49	43	35	7	9	11	4	4	8	9	13	4	4
Maryland	146	150	147	122	130	20	11	6	13	12	21	16	6	16	16
Massachusetts	89	92	66	77	79	5	13	10	10	4	5	15	10	10	5
Michigan	90	125	116	119	128	22	33	19	20	21	24	38	20	22	22
Minnesota	87	96	105	77	100	16	17	13	13	10	18	17	14	14	10
Mississippi	30	43	34	31	20	7	10	6	9	4	10	11	6	11	5
Missouri	109	137	124	122	145	17	14	10	12	18	17	16	10	14	18
Montana	14	23	9	19	13	6	5	2	9	4	6	5	2	13	5
Nebraska	32	22	27	20	19	4	2	4	4	2	4	2	4	4	2
Nevada	38	48	35	53	44	5	4	4	5	4	5	4	4	5	5
New Hampshire	53	76	49	39	37	4	8	5	4	3	4	9	5	5	4
New Jersey	122	109	106	116	110	7	4	4	5	4	8	5	4	5	4
New Mexico	10	16	18	24	13	0	2	5	2	2	0	2	5	2	2
New York	174	188	167	143	165	15	20	19	17	17	16	22	22	20	17
North Carolina	162	143	117	182	128	18	22	15	27	15	20	23	15	30	16
North Dakota	11	15	15	13	16	2	1	4	2	2	2	1	4	2	2
Ohio	100	113	117	126	128	13	12	20	15	12	13	12	20	17	13
Oklahoma	58	44	38	36	24	11	5	7	5	8	13	5	10	7	8
Oregon	65	82	60	65	62	15	17	11	16	16	15	19	12	17	18
Pennsylvania	52	55	69	63	58	4	9	15	13	8	4	11	15	14	8
Rhode Island	37	36	31	26	42	1	0	3	1	1	1	0	4	1	1
South Carolina	123	136	151	130	141	15	20	12	15	15	17	23	13	16	15
South Dakota	15	20	17	12	23	4	4		1	4	4	5	0	1	5
Tennessee	107	116	93	109	107	13	17	14	22	9	13	18	16	22	9
Texas	154	176	170	204	184	39	48	51	35	38	44	53	63	38	43
Utah	79	94	58	81	86	5	5	3	8	6	5	5	3	9	7
Vermont	4	4	3	6	4	0	1	3	3	3	0	1	3	3	4
Virginia	70	83	72	80	84	9	19	10	9	18	9	21	10	11	20
Washington	107	98	109	94	106	28	18	15	19	26	29	18	15	21	27
West Virginia	11	24	12	16	9	2	5	3	3	2	2	5	3	4	2
Wisconsin	103	103	105	106	82	19	16	22	15	9	20	20	25	21	9
Wyoming	8	8	10	8	11	0	3	5	1	3	0	3	5	1	3
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	4	0	2	4	2	0	0	0	0	0	0	0	0	0	0
Puerto Rico	5	6	3	4	4	4	1	1	1	1	5	1	3	1	2
Virgin Islands	2	0	0	0	0	1	0	0	0	0	2	0	0	0	0
*AT	16	8	8	10	5	0	2	1	1	2	0	2	1	1	2
*GM	5	8	2	7	3	2	1	0	1	0	2	1	0	1	0
*PC	3	6	7	5	4	0	0	0	0	2	0	0	0	0	3

\*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 (unknown)	Standup paddleboard	Other	Unknown
Amputation	14	0	1	2	0	0	0	0	8	1	2	0	0	0	0	0	0
Broken bone	472	6	2	39	1	1	2	2	207	193	18	0	0	0	0	0	1
Burns	101	1	6	33	0	2	0	0	56	2	0	0	0	0	0	0	1
Carbon monoxide	32	0	1	8	0	18	0	0	2	0	0	0	0	0	0	0	3
Concussion	205	4	4	14	2	0	1	3	114	48	11	2	2	0	0	0	0
Dislocation	41	1	0	1	0	0	0	0	25	10	2	1	0	0	0	0	1
Electric shock	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hypothermia	196	0	11	8	26	0	6	35	96	3	0	4	1	2	0	4	0
Internal organ injury	129	1	2	8	1	0	2	12	49	42	11	0	0	0	0	0	1
Laceration	593	7	8	53	4	3	1	10	320	113	66	0	3	0	2	1	2
Scrape/bruise	352	6	8	34	7	1	1	5	159	101	22	5	3	0	0	0	0
Shock	6	0	1	1	0	0	0	1	3	0	0	0	0	0	0	0	0
Spinal cord injury	35	0	1	2	0	0	0	0	23	7	2	0	0	0	0	0	0
Sprain/strain	138	2	1	24	1	1	0	1	59	35	12	0	1	0	1	0	0
Other	8	0	0	1	0	0	0	0	4	2	0	1	0	0	0	0	0
Unknown	234	0	12	20	3	0	2	7	121	57	7	0	0	1	0	0	4
<b>All Injuries</b>	<b>2559</b>	<b>28</b>	<b>61</b>	<b>248</b>	<b>45</b>	<b>26</b>	<b>15</b>	<b>76</b>	<b>1246</b>	<b>614</b>	<b>153</b>	<b>13</b>	<b>10</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>13</b>

**Table 35 - NUMBER OF FATAL VICTIMS BY LIFE JACKET WEAR, CAUSE OF DEATH & VESSEL TYPE 2019**

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	3	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0
	Unknown	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Cardiac arrest	Yes	5	0	0	0	0	0	0	2	1	2	0	0	0	0	0	0	0
	No	12	0	0	2	1	0	0	1	5	0	1	1	0	0	1	0	0
	Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Drowning	Yes	57	0	2	0	5	0	7	18	13	7	1	1	0	0	3	0	0
	No	362	1	6	12	28	0	4	54	182	15	28	14	2	0	7	8	1
	Unknown	20	0	0	2	1	0	0	1	6	2	3	1	0	0	0	0	4
Hypothermia	Yes	2	0	0	0	0	0	0	1	0	1	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	No	1	0	1	0	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	35	0	0	3	1	1	0	0	11	17	1	0	1	0	0	0	0
	No	49	0	2	7	0	0	0	1	35	0	4	0	0	0	0	0	0
	Unknown	8	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0
Unknown	Yes	6	0	1	0	1	0	0	1	3	0	0	0	0	0	0	0	0
	No	27	0	2	3	2	0	0	2	11	1	2	1	1	0	1	0	1
	Unknown	22	0	0	3	0	0	1	5	10	1	0	0	0	0	0	0	2
<b>All Causes</b>		<b>613</b>	<b>1</b>	<b>14</b>	<b>34</b>	<b>39</b>	<b>3</b>	<b>12</b>	<b>86</b>	<b>288</b>	<b>46</b>	<b>40</b>	<b>18</b>	<b>4</b>	<b>0</b>	<b>12</b>	<b>8</b>	<b>8</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, 1985-2019 (Table 36 & Figure 15, Page 69)**

This table provides information about recreational vessel registration for each year from 1985-2019. The accompanying figure displays a trend line from 1985-2019.

#### **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 2018 and 2019. 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 2019 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 711,173 vessels. Out of the total national registration of 11,878,542 California contributed 6.0%  $((711,173/11,878,542) \times 100)$  of registered vessels. Please note that percentages have been rounded.

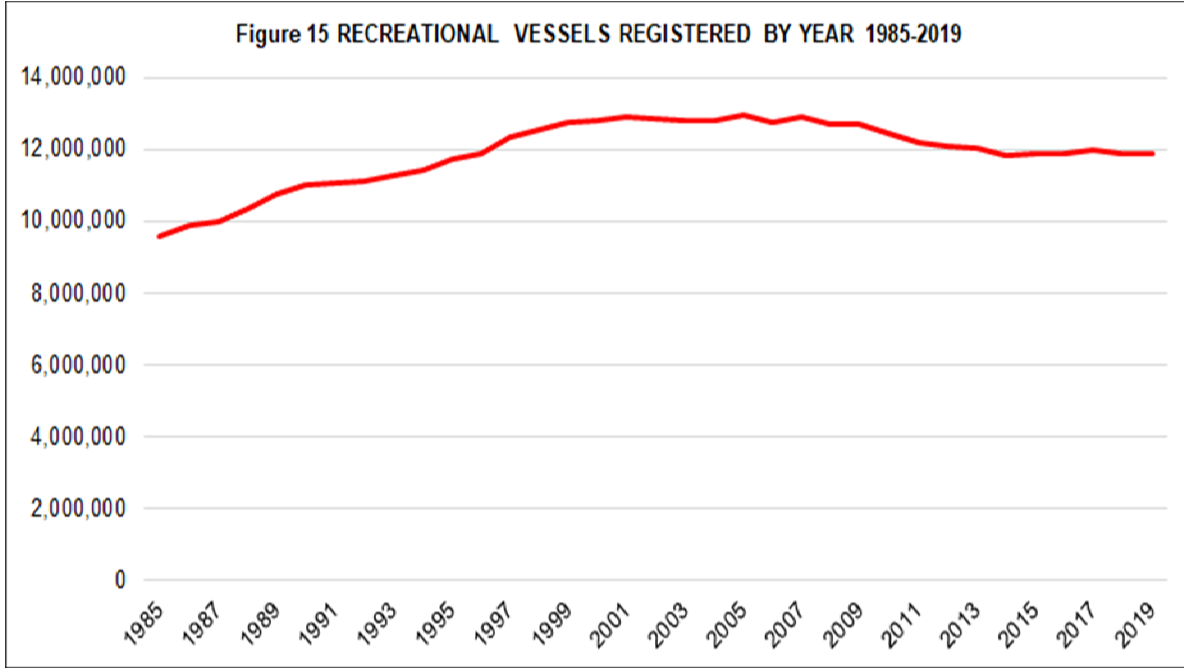


Table 36 • RECREATIONAL VESSELS REGISTERED BY YEAR, 1985-2019	
Year	Registered Vessels
1985	9,589,483
1986	9,876,197
1987	9,963,696
1988	10,362,613
1989	10,777,370
1990	10,996,253
1991	11,068,440
1992	11,132,386
1993	11,282,736
1994	11,429,585
1995	11,734,710
1996	11,877,938
1997	12,312,982
1998	12,565,930
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
2018	11,852,969
2019	11,878,542

<b>Table 37 • RECREATIONAL VESSEL REGISTRATION BY LENGTH AND MEANS OF PROPULSION 2019</b>	
<b>MECHANICALLY PROPELLED</b>	
	<b>11,052,684</b>
Under 16 feet	4,080,719
16 to less than 26 feet	6,386,993
26 to less than 40 feet	501,979
40 to 65 feet	71,867
Over 65 feet	11,126
<b>NOT MECHANICALLY PROPELLED</b>	
	<b>825,858</b>
Rowboats	69,249
Sailboats	100,284
Paddlecraft	553,773
Other	102,552
<b>TOTAL</b>	<b>11,878,542</b>

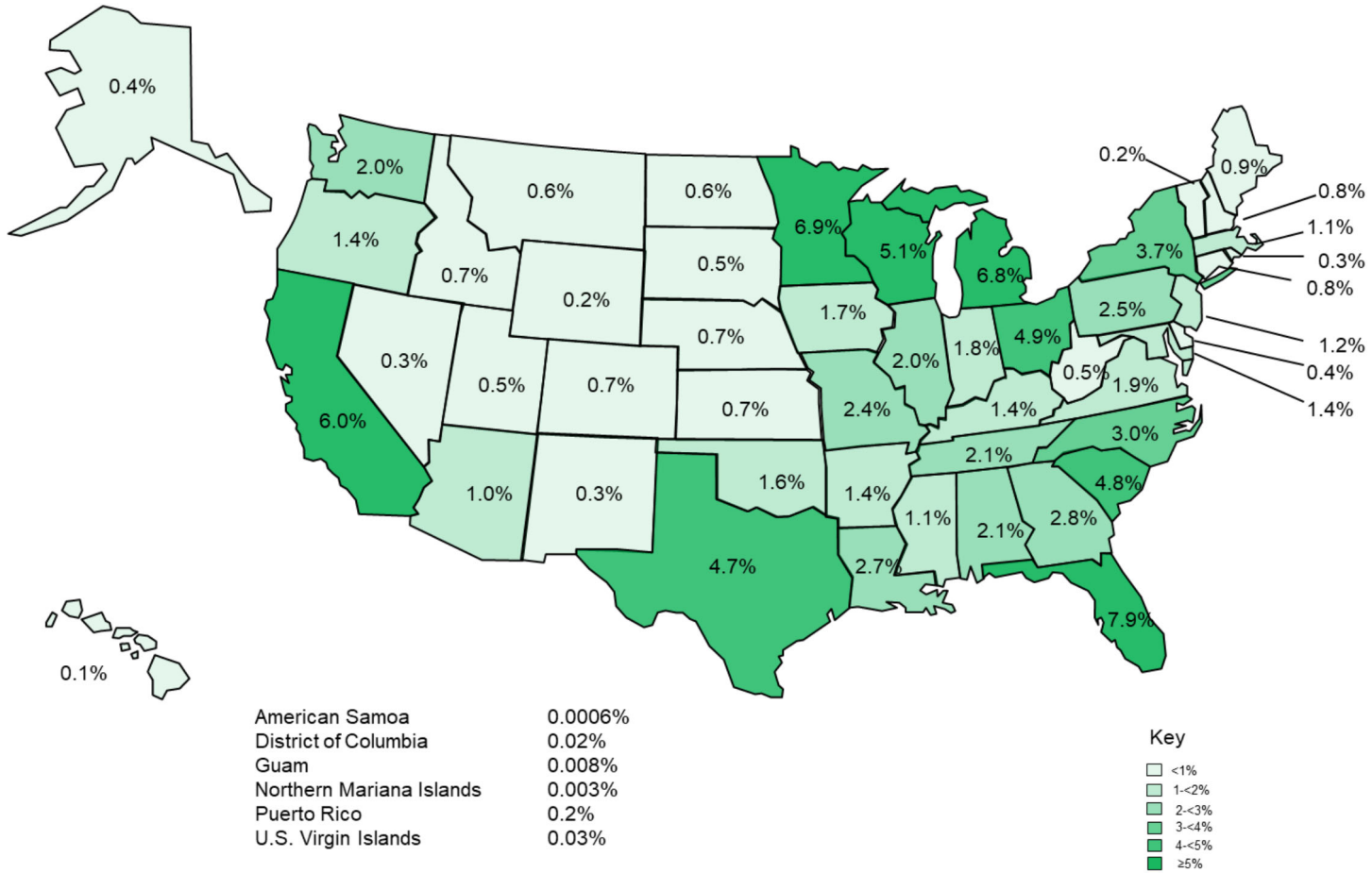
**Table 38 • RECREATIONAL VESSEL REGISTRATION DATA BY STATE 2018-2019**

	2019			2018			Scope of Current Boat Registration System
	Registration	Deaths	Fatality Rate	Registration	Deaths	Fatality Rate	
	11,878,542	613	5.2	11,852,969	633	5.3	
AK	50,788	11	21.7	48,829	22	45.1	All motorboats; non-motorized is voluntary
AL	245,636	28	11.4	244,619	17	6.9	All motorboats, sailboats and rental boats
AR	160,932	10	6.2	172,112	7	4.1	All watercraft
AZ	124,055	7	5.6	123,223	11	8.9	All motorized watercraft
CA	711,173	39	5.5	670,102	34	5.1	All motorboats; sailboats over 8 feet in length
CO	85,001	12	14.1	84,083	6	7.1	All watercraft powered by motor or sail - sailboards exempt
CT	91,791	2	2.2	90,728	5	5.5	All motorboats; sailboats 19.5 feet or more in length
DC	2,048	0	0.0	2,433	0	0.0	All watercraft
DE	52,740	1	1.9	55,047	2	3.6	All motorboats; non-motorized is voluntary
FL	935,742	62	6.6	925,141	57	6.2	All motorboats
GA	331,481	23	6.9	330,853	11	3.3	All motorboats; sailboats 12 feet or more in length
HI	12,100	4	33.1	12,371	1	8.1	All motorboats; sailboats over 8 feet in length
IA	196,965	5	2.5	231,346	8	3.5	All watercraft with exceptions (a)
ID	88,450	8	9.0	86,801	10	11.5	All motorboats and sailboats
IL	233,788	18	7.7	245,621	17	6.9	All watercraft, except non-powered vessels on private waters
IN	208,599	16	7.7	211,287	8	3.8	All motorboats on public waterways
KS	80,356	2	2.5	82,700	2	2.4	All motorboats and sailboats
KY	166,760	9	5.4	165,987	13	7.8	All motorboats, except electric motors 1 hp or less
LA	316,439	20	6.3	303,966	19	6.3	All motorboats; sailboats more than 12 feet in length
MA	132,106	5	3.8	132,440	10	7.6	All motorboats
MD	169,891	16	9.4	170,365	16	9.4	All motorboats
ME	112,396	4	3.6	111,681	4	3.6	All motorboats
MI	806,296	22	2.7	795,374	22	2.8	All watercraft with exceptions (b)
MN	813,955	10	1.2	819,317	14	1.7	All watercraft with exceptions (c)
MO	289,416	18	6.2	289,854	14	4.8	All motorboats; sailboats over 12 feet in length
MS	125,252	5	4.0	127,029	11	8.7	All motorboats and sailboats
MT	72,480	5	6.9	63,063	13	20.6	All motorboats; sailboats 12 feet or more in length
NC	361,970	16	4.4	359,361	30	8.3	All motorboats; sailboats more than 14 feet in length
ND	66,961	2	3.0	62,740	2	3.2	All motorboats; non-motorized is voluntary
NE	78,212	2	2.6	88,622	4	4.5	All motorboats
NH	96,006	4	4.2	95,444	5	5.2	All motorboats; sailboats 12 feet or more in length
NJ	147,618	4	2.7	149,971	5	3.3	All watercraft with exceptions (d)
NM	32,005	2	6.2	32,505	2	6.2	All motorboats and sailboats
NV	41,522	5	12.0	40,930	5	12.2	All motorboats; non-motorized is voluntary
NY	440,381	17	3.9	444,103	20	4.5	All motorboats
OH	586,159	13	2.2	573,050	17	3.0	All watercraft
OK	194,966	8	4.1	198,478	7	3.5	All watercraft
OR	165,253	18	10.9	168,100	17	10.1	All motorboats; sailboats 12 feet or more in length
PA	301,287	8	2.7	306,781	14	4.6	All motorboats and certain non-powered craft (e)
RI	38,836	1	2.6	39,230	1	2.5	All motorboats and rowboats over 12 feet
SC	567,443	15	2.6	551,477	16	2.9	All watercraft
SD	57,825	5	8.6	58,896	1	1.7	All motorboats; all other boats over 12 feet in length
TN	245,991	9	3.7	239,313	22	9.2	All motorboats and sailboats
TX	563,820	43	7.6	562,424	38	6.8	All motorboats and sailboats 14 feet or more in length
UT	64,949	7	10.8	64,208	9	14.0	All motorboats and sailboats
VA	221,629	20	9.0	225,732	11	4.9	All motorboats
VT	28,333	4	14.1	28,690	3	10.5	All motorboats
WA	241,760	27	11.2	244,618	21	8.6	All motorboats with exceptions (f); sailboats >16 ft in length
WI	607,211	9	1.5	614,750	21	3.4	All motorboats & sailboats over 12 feet in length
WV	56,297	2	3.6	51,239	4	7.8	All motorboats
WY	25,659	3	11.7	26,656	1	3.8	All motorboats
AS	75	0	0.0	81	0	0.0	All watercraft
CNMI	402	0	0.0	705	0	0.0	All motorboats
GU	911	0	0.0	950	0	0.0	All motorboats
PR	25,352	2	7.9	24,489	1	4.1	All motorboats; vessels adapted to hold a motor
VI	3,073	0	0.0	3,054	0	0.0	All watercraft
Offshore		5			2		

(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 10 feet or less in length, duckboats during duckhunting season, 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.



Figure 16 DISTRIBUTION OF 2019 RECREATIONAL VESSEL REGISTRATION BY STATE



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

OMB Control Number: 1625-0003

Expires: 07/31/2022

**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
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**Phone:**

*Primary Cause of Accident*

First Name	Last Name	Phone
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**ACCIDENT SUMMARY**

<b>WHEN</b>	<b>ACCIDENT DESCRIPTION:</b> Briefly describe this accident (attach extra pages if necessary)	
Date: (mm/dd/yyyy)      Time: am <input type="checkbox"/> pm <input type="checkbox"/> (select one)		
<b>WHERE</b>		
Body of Water Name		
Location (on water) description		
Nearest city/town	<b>DAMAGE TO YOUR BOAT:</b> Briefly summarize any damage to your boat	
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)

Fiberglass	Wood	Rubber/vinyl/canvas	Other describe):
Aluminum	Steel	Plastic	

**BOAT TYPE**

Boat Type (select one)				Available Propulsion (select all that apply)			
Cabin motorboat	Inflatable	Canoe	Personal watercraft (PWC) e.g., Wave Runner™, Jet Ski™, Sea-Doo™	Propeller	Air thrust		
Open motorboat	Houseboat	Rowboat		Sail	Other describe):		
Auxiliary sail	Sail (only)	Air boat		Manual			
Pontoon boat	Kayak			Water jet			

**ENGINE**

# Engines	Engine type and horsepower (select one)				Fuel type (select all that apply)			
Manufacturer	Outboard	Sterndrive (I/O)	Inboard	None	Gasoline	Diesel	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)	
Clear	Raining	Day	Good	0 mph (none)			
Cloudy	Snowing	Night	Fair	Over 0, up to 12 mph (light)			
Foggy	Hazy		Poor	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:		
Up to 6 in. waves (calm)	Approximate water temperature:		°F		
Over 6 in., up to 2 ft. waves (choppy)	Strong current?		Yes	No	
Over 2 ft., up to 6 ft. waves (rough)	Hazardous waters? (e.g., rapid tidal flow, currents)		Yes	No	
Over 6 ft. waves (very rough)	Congested waters?		Yes	No	

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

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

**OPERATOR/PASSENGER ACTIVITIES**

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

Activities were (select one)                      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.

First Name	MI	Last Name
Street		
City	State	Zip
Phone	Date of Birth <i>mm!dd!YYYY</i> )	Age

Injury caused when person <i>select all that apply</i> )	Nature of most serious injury <i>(select one)</i>
Struck the (e.g., boat, water):	Scrape/bruise
Was struck by a (e.g., boat, propeller):	Cut
Was exposed to carbon monoxide poisoning	Sprain/strain
Received an electric shock	Concussion/brain injury
Other <i>describe</i> ):	Spinal cord injury
Person was wearing lifejacket?	Broken/fractured bone
Person received treatment beyond first aid?	Body part of <i>most serious</i> injury (e.g., head, trunk, leg):
Person was admitted to a hospital?	

**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.

First Name	MI	Last Name
Street		
City	State	Zip
Phone	Date of Birth <i>mm!dd!YYYY</i> )	Age

Injury caused when person <i>select all that apply</i> )	Nature of death/disappearance <i>select one</i>
Struck the (e.g., boat, water):	Death - by drowning
Was struck by a (e.g., boat, propeller):	Death - other likely cause <i>describe</i> )
Was exposed to carbon monoxide poisoning	
Received an electric shock	Disappeared and not yet recovered
Other <i>describe</i> ):	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:			
<input type="checkbox"/> None		A lifejacket?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
<input type="checkbox"/> State course		An engine cut-off switch <i>(Lanyard or wireless device)</i> if equipped?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
<input type="checkbox"/> USCG Auxiliary course		On board, prior to accident, was operator using:			
<input type="checkbox"/> US Power Squadrons course		Alcohol?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
<input type="checkbox"/> Internet <i>(name of sponsoring organization)</i>		Drugs?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
<input type="checkbox"/> Other <i>describe)</i>		Operator arrested for Boating Under the Influence?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
		Weather reports consulted prior to accident?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

**OPERATOR EXPERIENCE**

Experience operating this type of boat *(select one)*

<input type="checkbox"/> 0 to 10 hours	<input type="checkbox"/> Over 10, up to 100 hours	<input type="checkbox"/> Over 100, up to 500 hours	<input type="checkbox"/> 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>	

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/ [REDACTED] /PHONE**

Date of Birth <i>mm/dd/yyyy</i>	Age	[REDACTED]	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 <i>describe</i> ):

**SIGNATURE OF PERSON SUBMITTING THIS REPORT**

Your signature	Date <i>mm/dd/yyyy</i>
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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 estimates that the average burden for this report form is 30 minutes. You may submit any comments concerning the accuracy of this burden estimate or any suggestions for reducing the burden to: Commandant (CG-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.

**Pod drive** - An engine mounted in front of the transom of a vessel and attached through the bottom of the hull to a steerable propulsion unit.

**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		