

# 2018 RECREATIONAL BOATING STATISTICS

COMDTPUB P16754.32  
U.S DEPARTMENT OF HOMELAND SECURITY  
U.S. COAST GUARD  
OFFICE OF AUXILIARY AND BOATING SAFETY



U.S. Department of  
Homeland Security



United States  
Coast Guard

Commandant  
United States Coast Guard

2703 Martin Luther King Jr Ave SE  
Washington, DC 20593-7501  
Staff Symbol: CG-BSX-21  
Phone: (202) 372-1062  
Email: Susan.M.Weber@uscg.mil

COMDTPUB P16754.32  
19 August 2019

COMMANDANT PUBLICATION P16754.32

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 2018, the 60th 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 2018 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

DISTRIBUTION --- SDL No. 170

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	
A																											
B		X	X											X													
C					X				X																X	X	
D				X			X																				
E										X	X	X		X													
F																											
G																											
H																											

NON-STANDARD DISTRIBUTION:

## Table of Contents

<b>Introduction</b>		
2018 Executive Summary		6-7
Mission and Strategic Plan of the National Recreational Boating Safety Program		8
Overview of Statistics		8-9
Major Changes to the Publication		9
Accident Reporting as Required by Federal Law		9-10
Casualty and Accident Reporting Guidelines		10
“Reportable” Boating Accidents		10
“Non-Reportable” Boating Accidents		10-12
Use of Statistics		13-14
<b>Accident Causes and Conditions Section with Explanation</b>		<b>16-17</b>
Figure 1	Percent of Accidents that are Fatal by Month (graph)	18
Table 4	Percent of Accidents that are Fatal by Month	18
Figure 2	Percent of Accidents that are Fatal by Time Period	19
Table 5	Primary Contributing Factor of Accidents & Casualties	20
Table 6	Machinery & Equipment Primary Contributing Factor of Accidents & Casualties	21
Figure 3	Primary Contributing Factor of Accidents	22
Figure 4	Primary Contributing Factor of Deaths	23
Figure 5	Primary Contributing Factor of Injuries	24
Table 7	Number of Vessels in Accidents by Vessel Type & Primary Contributing Factor	25
Table 8	Alcohol Use as a Contributing Factor in Accidents & Casualties by State 14-18	26
Table 9	Vessel Operation at the Time of Accident	27
Table 10	Vessel Activity at the Time of Accident	27
Table 11	Weather & Water Conditions	28
Table 12	Time Related Data	29
Table 13	Vessel Information	30
Table 14	Rental Status of Vessels Involved in Accidents	31
Figure 6	Number of Deaths by Vessel Length	32
Table 15	Number & Percent of Deaths by Vessel Length	32
<b>Accident Types Section with Explanation</b>		<b>34-35</b>
Table 16	Accident, Vessel & Casualty Numbers by Primary Accident Type	36
Table 17	Frequency of Accident Types in Accidents & Casualties Nationwide	37-40
Table 18	Number of Vessels in Accidents by Vessel Length & Primary Accident Type	41
Table 19	Number of Vessels in Accidents by Vessel Type & Primary Accident Type	42
Table 20	Number of Vessels in Accidents by Primary Accident Type & Propulsion Type	43
Table 21	Number of Vessels in Accidents by Primary Accident Type & Engine Type	43
<b>Operator/Passenger Information Section with Explanation</b>		<b>45</b>
Table 22	Operator Information	46
Table 23	Number of Deaths by Type of Operator Boating Instruction	47
Figure 7	Percent of Deaths by Known Operator Instruction	47
Table 24	Number of Deaths by Vessel Type	48
Figure 8	Number of Deaths by Vessel Type (graph)	48
Figure 9	Percent of Deaths by Vessel Type, 2004-2018 (graph)	49
Table 25	Percent of Deaths by Vessel Type, 2004-2018	49
Table 26	Number of Deceased Victims by Age & Vessel Type	50
Table 27	Number of Injured Victims by Age & Vessel Type	51
Table 28	Nature of Primary Injury Type by Area of Injury	52
Figure 10	Number of Injured Victims under Age 18 by Age Group & Injury Type on PWCs	52
<b>Casualty Summary Data Section with Explanation</b>		<b>54</b>
Figure 11	Deaths, Injuries & Accidents by Year, 1997-2018 (graph)	55
Table 29	Deaths, Injuries, & Accidents by Year, 1997-2018	55
Table 30	Accident, Casualty & Damage Data by State	56
Figure 12	Distribution of 2018 Deaths by State	57
Figure 12a	Fatal Accidents by Location– Continental U.S.	58

Figure 12b	Fatal Accidents by Location– Alaska	59
Figure 12c	Fatal Accidents by Location– Hawaii	59
Figure 12d	Fatal Accidents by Location– Puerto Rico	60
Figure 13	Annual Recreational Boating Fatality Rates 1997-2018 (graph)	61
Table 31	Annual Recreational Boating Fatality Rates 1997-2018	61
Figure 14	States Coded by their 2018 Fatality Rate	62
Table 32	Five-year Summary of Selected Accident Data by State	63
Table 33	Number of Accidents by Primary Accident Type & State	64-65
Table 34	Number of Injured Victims by Primary Injury & Vessel Type	66
Table 35	Number of Fatal Victims by Life Jacket Wear, Cause of Death, & Vessel Type	66
<b>Registration Data Section with Explanation</b>		68
Table 36	Recreational Vessels Registered by Year, 1980-2018	69
Figure 15	Recreational Vessels Registered by Year, 1980-2018 (graph)	69
Table 37	Recreational Vessel Registration by Length & Means of Propulsion	70
Table 38	Recreational Vessel Registration Data by State	71
Figure 16	Distribution of 2018 Recreational Vessel Registration by State	72
Boating Accident Report Form		73-78
Glossary of Terms		79-82
Glossary of State Codes		83

**List of Tables**

Table 1	2018 Executive Summary	7
Table 2	News Media and Federally-sourced Accidents and Casualties	8
Table 3	Non-Reportable Scenarios with their Casualty Count	12
Table 4	Percent of Accidents that are Fatal by Month	18
Table 5	Primary Contributing Factor of Accidents & Casualties	20
Table 6	Machinery & Equipment Primary Contributing Factor of Accidents & Casualties	21
Table 7	Number of Vessels in Accidents by Vessel Type & Primary Contributing Factor	25
Table 8	Alcohol Use as a Contributing Factor in Accidents & Casualties by State 14-18	26
Table 9	Vessel Operation at the Time of Accident	27
Table 10	Vessel Activity at the Time of Accident	27
Table 11	Weather & Water Conditions	28
Table 12	Time Related Data	29
Table 13	Vessel Information	30
Table 14	Rental Status of Vessels Involved in Accidents	31
Table 15	Number and Percent of Deaths by Vessel Length	32
Table 16	Accident, Vessel & Casualty Numbers by Primary Accident Type	36
Table 17	Frequency of Accident Types in Accidents & Casualties Nationwide	37-40
Table 18	Number of Vessels in Accidents by Vessel Length & Primary Accident Type	41
Table 19	Number of Vessels in Accidents by Vessel Type & Primary Accident Type	42
Table 20	Number of Vessels in Accidents by Primary Accident Type & Propulsion Type	43
Table 21	Number of Vessels in Accidents by Primary Accident Type & Engine Type	43
Table 22	Operator Information	46
Table 23	Number of Deaths by Type of Operator Boating Instruction	47
Table 24	Number of Deaths by Vessel Type	48
Table 25	Percent of Deaths by Vessel Type, 2004-2018	49
Table 26	Number of Deceased Victims by Age & Vessel Type	50
Table 27	Number of Injured Victims by Age & Vessel Type	51
Table 28	Nature of Primary Injury Type by Area of Injury	52
Table 29	Deaths, Injuries, & Accidents by Year, 1997-2018	55
Table 30	Accident, Casualty & Damage Data by State	56
Table 31	Annual Recreational Boating Fatality Rates 1997-2018	61
Table 32	Five-year Summary of Selected Accident Data by State	63
Table 33	Number of Accidents by Primary Accident Type & State	64-65
Table 34	Number of Injured Victims by Primary Injury & Vessel Type	66
Table 35	Number of Fatal Victims by Life Jacket Wear, Cause of Death & Vessel Type	66
Table 36	Recreational Vessels Registered by Year, 1980-2018	69
Table 37	Recreational Vessel Registration by Length & Means of Propulsion	70
Table 38	Recreational Vessel Registration Data by State	71

**List of Figures**

Figure 1	Percent of Accidents that are Fatal by Month	18
Figure 2	Percent of Accidents that are Fatal by Time Period	19
Figure 3	Primary Contributing Factor of Accidents	22
Figure 4	Primary Contributing Factor of Deaths	23
Figure 5	Primary Contributing Factor of Injuries	24
Figure 6	Number of Deaths by Vessel Length	32
Figure 7	Percent of Deaths by Known Operator Instruction	47
Figure 8	Number of Deaths by Vessel Type	48
Figure 9	Percent of Deaths by Vessel Type, 2004-2018	49
Figure 10	Number of Injured Victims under Age 18 by Age Group & Injury Type on PWCs	52
Figure 11	Deaths, Injuries & Accidents by Year, 1997-2018	55
Figure 12	Distribution of 2018 Deaths by State	57
Figure 12a	Fatal Accidents by Location– Continental U.S.	58
Figure 12b	Fatal Accidents by Location– Alaska	59
Figure 12c	Fatal Accidents by Location– Hawaii	59
Figure 12d	Fatal Accidents by Location– Puerto Rico	60
Figure 13	Annual Recreational Boating Fatality Rates 1997-2018	61
Figure 14	States Coded by their 2018 Fatality Rate	62
Figure 15	Recreational Vessels Registered by Year, 1980-2018	69
Figure 16	Distribution of 2018 Recreational Vessel Registration by State	72



## 2018 EXECUTIVE SUMMARY

- In 2018, the Coast Guard counted 4,145 accidents that involved 633 deaths, 2,511 injuries and approximately \$46 million dollars of damage to property as a result of recreational boating accidents.
  - The fatality rate was 5.3 deaths per 100,000 registered recreational vessels. This rate represents a 3.6% decrease from the 2017 fatality rate of 5.5 deaths per 100,000 registered recreational vessels.
  - Compared to 2017, the number of accidents decreased 3.4%, the number of deaths decreased 3.8%, and the number of injuries decreased 4.5%.
- Where cause of death was known, 77% of fatal boating accident victims drowned. Of those drowning victims with reported life jacket usage, 84% were not wearing a life jacket.
- Where length was known, eight out of every ten boaters who drowned were using vessels less than 21 feet in length.
- Alcohol use is the leading known contributing factor in fatal boating accidents; where the primary cause was known, it was listed as the leading factor in 19% of deaths.
- Where instruction was known, 74% of deaths occurred on boats where the operator did not receive boating safety instruction. Only 18% percent of deaths occurred on vessels where the operator had received a nationally-approved boating safety education certificate.
- There were 177 accidents in which at least one person was struck by a propeller. Collectively, these accidents resulted in 25 deaths and 177 injuries.
- Operator inattention, improper lookout, operator inexperience, machinery failure, and excessive speed rank as the top five primary contributing factors in accidents.
- Where data was known, the most common vessel types involved in reported accidents were open motorboats (46%), personal watercraft (19%), and cabin motorboats (15%).
- Where data was known, the vessel types with the highest percentage of deaths were open motorboats (50%), kayaks (13.5%), and canoes (7%).
- The 11,852,969 recreational vessels registered by the states in 2018 represent a 0.91% decrease from last year when 11,961,568 recreational vessels were registered.



Table 1 • 2018 EXECUTIVE SUMMARY

<b>TOP FIVE PRIMARY ACCIDENT TYPES</b>						
Accident Rank	Accident Type	Number of Accidents		Number of Deaths	Number of Injuries	
1	Collision with recreational vessel	1028		40	661	
2	Collision with fixed object	470		62	296	
3	Flooding/swamping	443		68	97	
4	Grounding	367		16	236	
5	Falls overboard	274		159	120	
<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	218	93	311	1277	1588
2	Personal watercraft	11	31	42	634	676
3	Canoe/kayak	109	19	128	120	248
4	Cabin motorboat	13	20	33	193	226
5	Pontoon	30	5	35	129	164
<b>LIFE JACKET WEAR BY TOP FIVE KNOWN CAUSES OF DEATH</b>						
Known Cause of Death Rank	Cause of Death	Number of Deaths	Life Jacket			
			Worn	Not Worn	Unknown if worn	
1	Drowning	449	69	356	24	
2	Trauma	97	37	55	5	
3	Cardiac arrest	16	6	10	0	
4	Hypothermia	13	8	5	0	
5	Carbon monoxide poisoning	8	3	4	1	
<b>TOP TEN KNOWN PRIMARY CONTRIBUTING FACTORS OF ACCIDENTS</b>						
Accident Rank	Contributing Factor	Number of Accidents		Number of Deaths	Number of Injuries	
1	Operator inattention	654		50	437	
2	Improper lookout	440		27	316	
3	Operator inexperience	387		40	213	
4	Machinery failure	321		9	86	
5	Excessive speed	276		25	231	
6	Alcohol use	254		101	204	
7	Force of wake/wave	209		10	153	
8	Weather	205		40	96	
9	Navigation rules violation	184		19	144	
10	Hazardous waters	169		61	70	

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

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

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

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

**Overview of Statistics**

This report contains statistics on registered recreational vessels and boating accidents during calendar year 2018. Data used to compile the recreational boating accident statistics come from four main sources:

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

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

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

<b>Table 2 - NEWS MEDIA AND FEDERALLY-SOURCED ACCIDENTS AND CASUALTIES</b>						
	Accidents	Deaths	Injuries	Vessel losses	Damages	Notes
AK	2	2	0	0	\$0.00	2 accidents on federal waters within a state boundary
AL	3	3	3	0	\$20,500.00	1 accident on private waters
AT	10	1	6	2	\$1,492,720.00	10 accidents offshore in the Atlantic Ocean
CA	4	1	3	1	\$5,000.00	
FL	3	0	2	1	\$17,000.00	
GA	3	2	1	0	\$21,470.00	1 accident on private waters
GM	7	1	8	3	\$880,895.00	7 accidents offshore in the Gulf of Mexico
IL	1	0	1	0	\$0.00	
IN	5	3	2	0	\$0.00	
ME	1	0	1	0	\$2,535.00	
MS	1	0	1	0	\$0.00	
NC	2	1	1	0	\$351,285.00	1 accident on private waters
NJ	1	0	0	0	\$15,000.00	
PA	1	0	1	0	\$0.00	1 accident on private waters
PC	5	0	4	2	\$1,048,850.00	5 accidents offshore in the Pacific Ocean
PR	1	1	2	0	\$0.00	
TN	2	1	1	0	\$255,000.00	
TX	10	9	2	1	\$95,965.00	3 accidents on private waters
VA	1	0	1	0	\$0.00	
WA	1	0	0	1	\$180,790.00	
<b>Nation</b>	<b>64</b>	<b>25</b>	<b>40</b>	<b>11</b>	<b>\$4,387,010.00</b>	



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

This publication reflects watercraft that have been deemed a “vessel.” Terms used to describe the various types of watercraft are: airboat, auxiliary sailboat, cabin motorboat, canoe, houseboat, inflatable boat, kayak, open motorboat, personal watercraft, pontoon, raft, rowboat, sailboat, and standup paddleboard. Reports received involving watercraft that have not been determined to be “vessels” to date, such as single unmodified innertubes, have not been included in the statistics in the main body of this report.

### **“Reportable” Boating Accidents**

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

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

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

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

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

- A person dies, is injured, or is missing as a result of self-inflicted wounds, alcohol poisoning, gunshot wounds, or the ingestion of drugs, controlled substances or poison.
- A person dies, is injured, or is missing as a result of assault by another person or persons while aboard a vessel.
- A person dies or is injured from natural causes while aboard a vessel where the vessel did not contribute to the casualty.
- A person dies, is injured, or is missing as a result of jumping, diving, or swimming for pleasure from an anchored, moored or docked vessel.
- A person dies, is injured, or is missing as a result of swimming to retrieve an object or a vessel that is adrift from its mooring or dock, having departed from a place of inherent safety, such as the shore

- or pier.
- Property damage occurs or a person dies, is injured, or is missing while preparing a vessel for launching or retrieving and the vessel is not on the water and capable / ready for its intended use.
- Property damage occurs or a person dies, is injured, or is missing as a result of a fire on shore or a pier that spreads to a vessel or vessels.
- Property damage occurs to a docked or moored vessel or a person dies, is injured, or is missing from such a vessel as a result of storms, or unusual tidal or sea conditions; or when a vessel gets underway in those conditions in an attempt to rescue persons or vessels.
- Property damage occurs to a docked or moored vessel due to lack of maintenance on the vessel or the structure to which it was moored.
- Property damage occurs to a docked or moored vessel due to theft or vandalism.
- Property damage occurs to, a person dies or is injured on, or a person is missing from a non-propelled residential platform or other watercraft used primarily as a residence that is not underway.
- Casualties that result from falls from or on docked vessels or vessels that are moored to a permanent structure.
- Casualties that result from a person climbing aboard an anchored vessel from the water or swimming near an anchored vessel (unless the casualty was related to carbon monoxide exposure or stray electric current).
- Fire or explosions on anchored, docked or moored boats where the cause of the fire was not attributed to the vessel or vessel equipment.
- Casualty or damage that results when the vehicle used for trailering the vessel fails.
- Casualties or damage that occur during accidents that only involve watercraft that have not been deemed a vessel.
- Casualties or damage that occur when the only vessel(s) involved are being used solely for governmental, commercial or criminal activity.
- Casualties or damage that occur when the only vessel(s) involved are not required to be numbered and are being used exclusively for racing (exclusion in 33 CFR 173.13(a)).
- Casualties or damage that occur when the only vessel(s) involved are foreign vessels and thus not subject to U.S. federal reporting requirements.

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

<b>Table 3 - NON-REPORTABLE SCENARIOS WITH THEIR CASUALTY COUNT</b>					
	Accidents	Deaths	Injuries	Vessels Losses	Damages
<b>Does not meet Coast Guard policy</b>					
A person dies or is injured from natural causes while aboard a vessel where the vessel did not contribute to the casualty.	2	1	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.	2	0	2	0	\$2,500.00
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.	11	5	6	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.	12	13	0	0	\$0.00
Casualties or damage that occur during accidents that only involve watercraft that have not been deemed a vessel.	5	3	1	1	\$5,050.00
Casualties or damage that occur when the only vessel(s) involved are being used solely for governmental, commercial or criminal activity.	96	14	57	12	\$1,341,339.40
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)).	1	0	2	0	\$0.00
Casualties that result from a person climbing aboard an anchored vessel from the water or swimming near an anchored vessel.	3	0	3	0	\$0.00
Casualties that result from falls from or on docked vessels or vessels that are moored to a permanent structure.	6	2	4	0	\$0.00
Casualty or damage that results when the vehicle used for trailering the vessel fails.	1	0	0	0	\$25,000.00
Fires 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	1	0	\$7,000.00
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.	5	1	1	2	\$9,700.00
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.	12	0	0	5	\$196,500.00
Property damage occurs to a docked or moored vessel due to theft or vandalism.	1	0	0	1	\$199,000.00
Property damage occurs to a docked or moored vessel or a person dies, is injured, or is missing from such a vessel as a result of storms, or unusual tidal or sea conditions; or when a vessel gets underway in those conditions in an attempt to rescue persons.	23	0	0	7	\$612,299.00
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	0	0	1	\$10,000.00
<b>Does not meet federal reporting requirements</b>	474	0	81	0	\$328,092.40
<b>Total</b>	657	39	159	29	\$2,736,480.80

## 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 late 2019.

### 2) Limitations on collection.

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

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

There has been discussion about adjusting numbers to account for non-reporting, but attempts have not been undertaken yet. 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 2018 accident data submitted by states as of 6 June 2019 with subsequent updates as information is reviewed and standardized. This publication covers only accidents meeting the aforementioned reporting requirements.
- b. Geographic location. This publication reflects accidents that occurred on waters subject to the jurisdiction of the United States and on the high seas.

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

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

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

4) Fatal accidents are accidents that involve at least one death.

For example, a fatal accident could be a capsizing that resulted in three deaths. It was an accident that had at least one death.

5) Disappearances.

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

# **ACCIDENT CAUSES & CONDITIONS**

### Explanation of Accident Causes and Conditions Section

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

#### **Percent of Accidents that are Fatal by Month (Figure 1 & Table 4, Page 18)**

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

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

This table reflects the percentage of accidents that are fatal by time period. The category in which accidents are more frequently fatal span the hours between 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 2014-2018 (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 2018. Furthermore, the month with the highest number of accidents was July. Finally, the two days of the week with the greatest number of accidents were Saturday and Sunday.

**Vessel Information (Table 13, Page 30)**

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

**Rental Status of Vessels Involved in Accidents (Table 14, Page 31)**

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

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

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



Figure 1 PERCENT OF ACCIDENTS THAT ARE FATAL BY MONTH

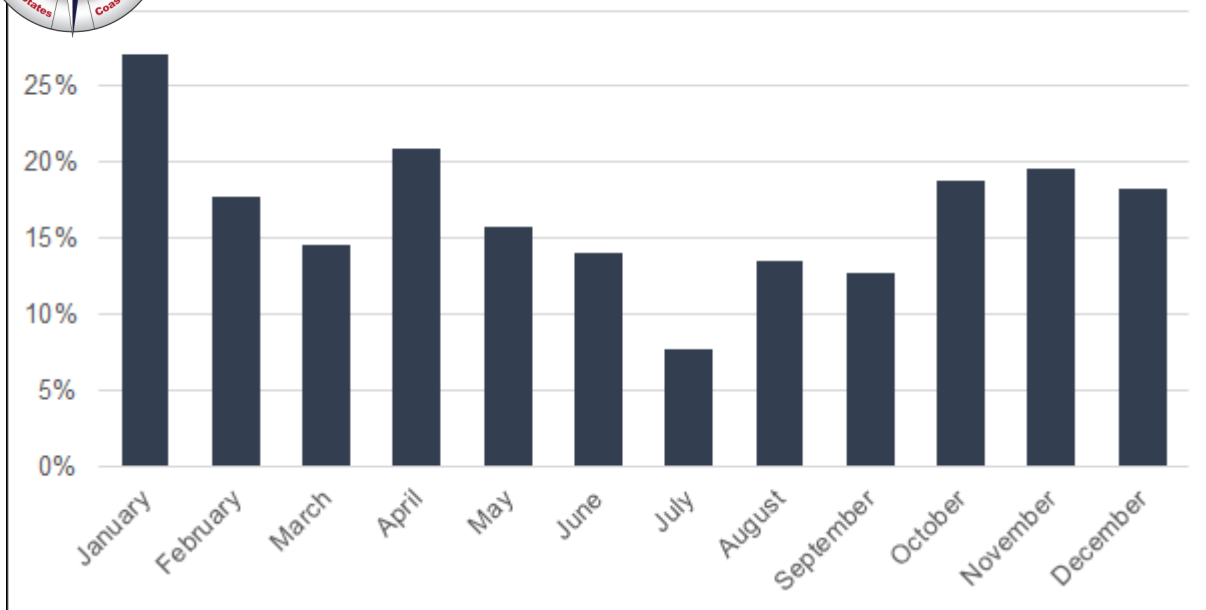
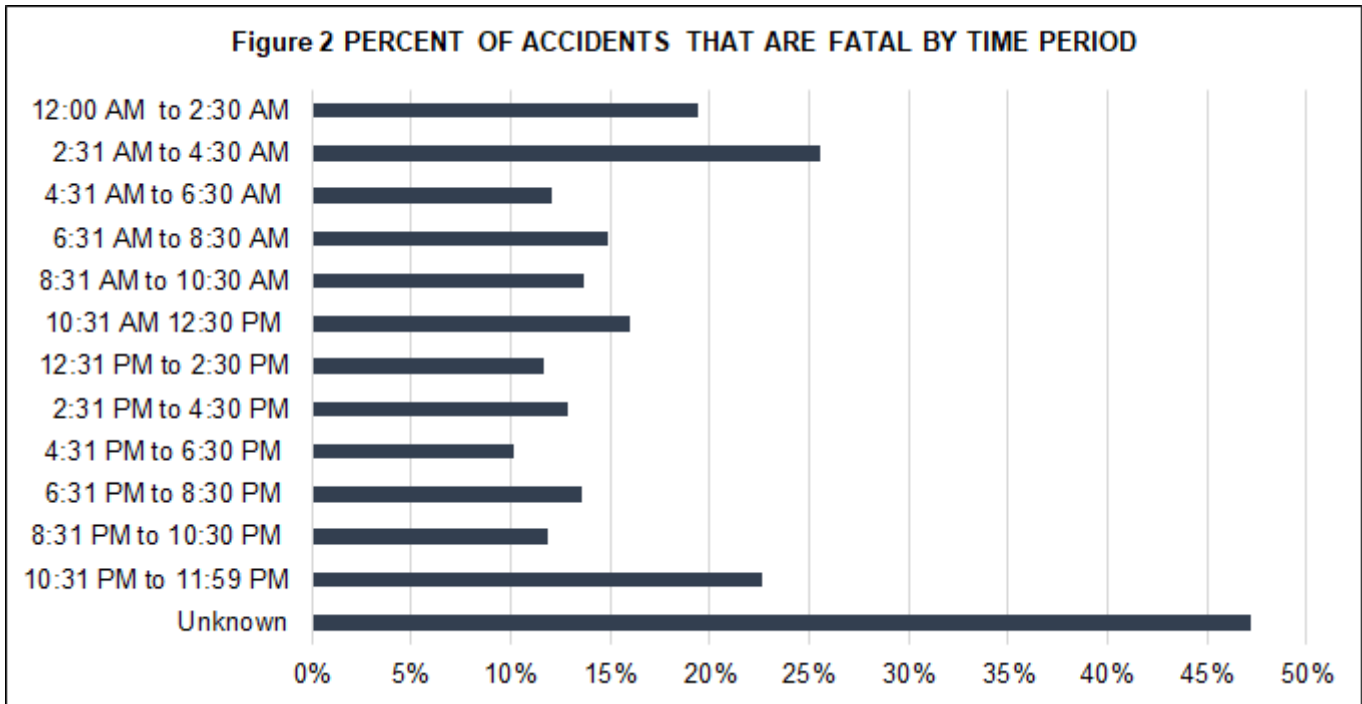


Table 4 • PERCENT OF ACCIDENTS THAT ARE FATAL BY MONTH

Month	Fatal Accidents	Non-Fatal Accidents	Total Accidents	Accidents Resulting in Deaths	Total Deaths
January	22	59	81	27%	26
February	19	88	107	18%	20
March	21	123	144	15%	22
April	43	163	206	21%	51
May	79	420	499	16%	89
June	97	590	687	14%	102
July	78	938	1016	8%	88
August	88	563	651	14%	100
September	50	344	394	13%	57
October	33	143	176	19%	36
November	20	82	102	20%	24
December	15	67	82	18%	18
Total	565	3580	4145	14%	633





**Table 5 • PRIMARY CONTRIBUTING FACTOR OF ACCIDENTS & CASUALTIES 2018**

		Accidents	Deaths	Injuries
<b>Operation of Vessel</b> <b>2362 Accidents</b> <b>280 Deaths</b> <b>1657 Injuries</b>	Alcohol use	254	101	204
	Drug use	5	6	3
	Excessive speed	276	25	231
	Failure to vent	30	2	24
	Improper lookout	440	27	316
	Inadequate onboard navigation lights	11	0	9
	Navigation rules violation	184	19	144
	Operator inattention	654	50	437
	Operator inexperience	387	40	213
	Restricted vision	62	2	34
	Sharp turn	57	7	41
	Starting in gear	2	1	1
<b>Loading of Passengers or Gear</b> <b>150 Accidents</b> <b>56 Deaths</b> <b>72 Injuries</b>	Improper anchoring	28	2	8
	Improper loading	51	19	30
	Overloading	36	23	11
	People on gunwale, bow or transom	35	12	23
<b>Failure of Boat or Boat Equipment</b> <b>405 Accidents</b> <b>21 Deaths</b> <b>102 Injuries</b>	Equipment failure	47	7	11
	Hull failure	37	5	5
	Machinery failure	321	9	86
<b>Environment</b> <b>632 Accidents</b> <b>118 Deaths</b> <b>340 Injuries</b>	Congested waters	19	0	7
	Dam/lock	7	6	5
	Force of wave/wake	209	10	153
	Hazardous waters	169	61	70
	Missing/inadequate navigation aid	23	1	9
	Weather	205	40	96
<b>Miscellaneous</b> <b>596 Accidents</b> <b>158 Deaths</b> <b>340 Injuries</b>	Carbon monoxide exposure	1	0	2
	Ignition of fuel or vapor	59	4	49
	Sudden medical condition	25	16	8
	Other	305	39	221
	Unknown	206	99	60
<b>All categories combined</b>		<b>4145</b>	<b>633</b>	<b>2511</b>



**Table 6 • MACHINERY & EQUIPMENT PRIMARY CONTRIBUTING FACTOR OF ACCIDENTS & CASUALTIES 2018**

		Accidents	Deaths	Injuries
Machinery Failure	Electrical system failure	50	0	3
	Engine failure	175	8	46
	Exhaust system failure	3	0	0
	Fuel system failure	15	1	6
	Shift failure	20	0	4
	Steering system failure	25	0	15
	Throttle failure	26	0	9
	Ventilation system failure	1	0	2
	Not specified	6	0	1
Equipment Failure	Auxiliary equipment failure	29	3	6
	Onboard navigation aid	0	0	0
	Sail dismasting	2	0	1
	Seat broke loose	4	4	0
	Other	7	0	4
	Not specified	5	0	0



**Figure 3 PRIMARY CONTRIBUTING FACTOR OF ACCIDENTS 2018**

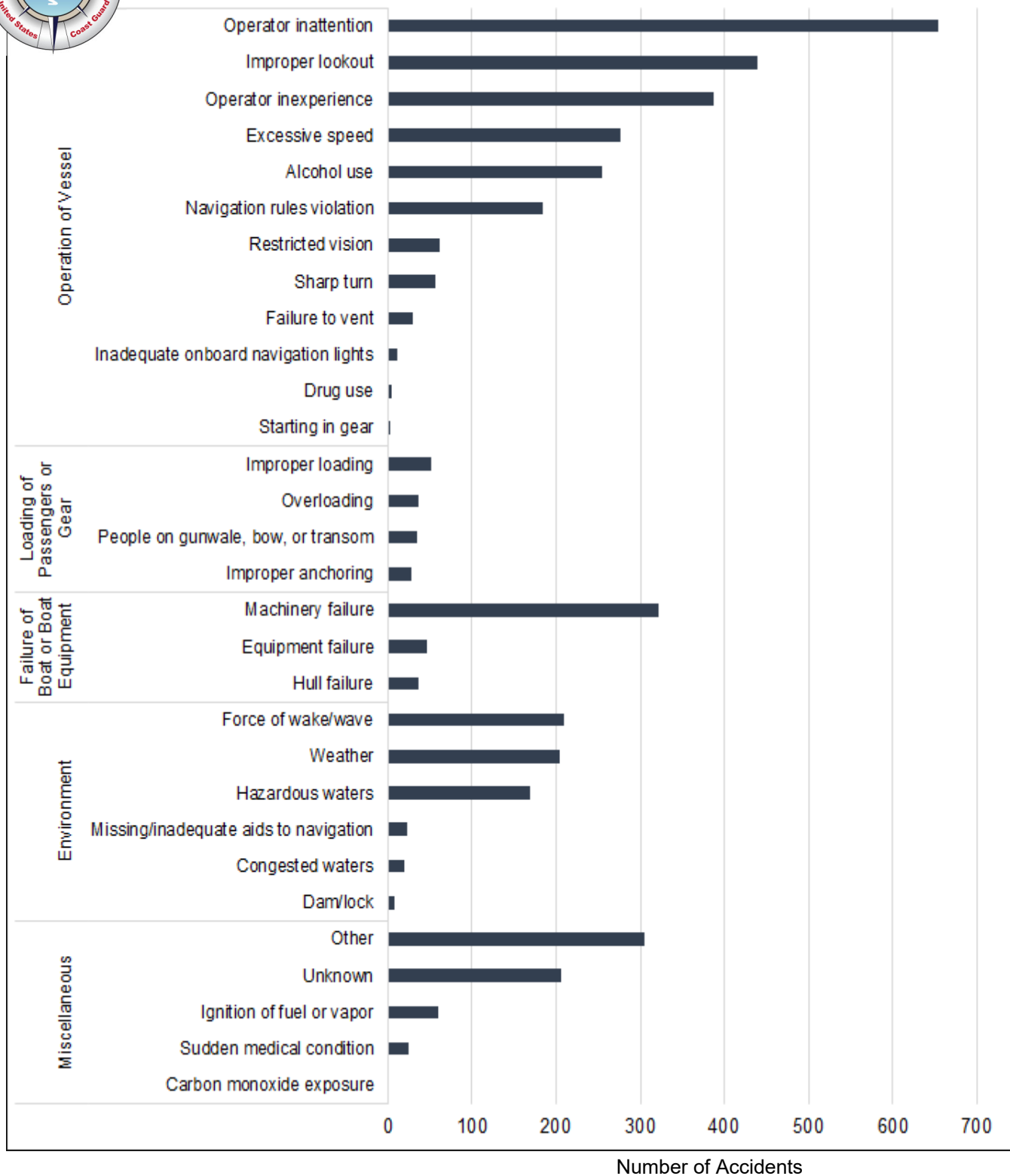




Figure 4 PRIMARY CONTRIBUTING FACTOR OF DEATHS 2018

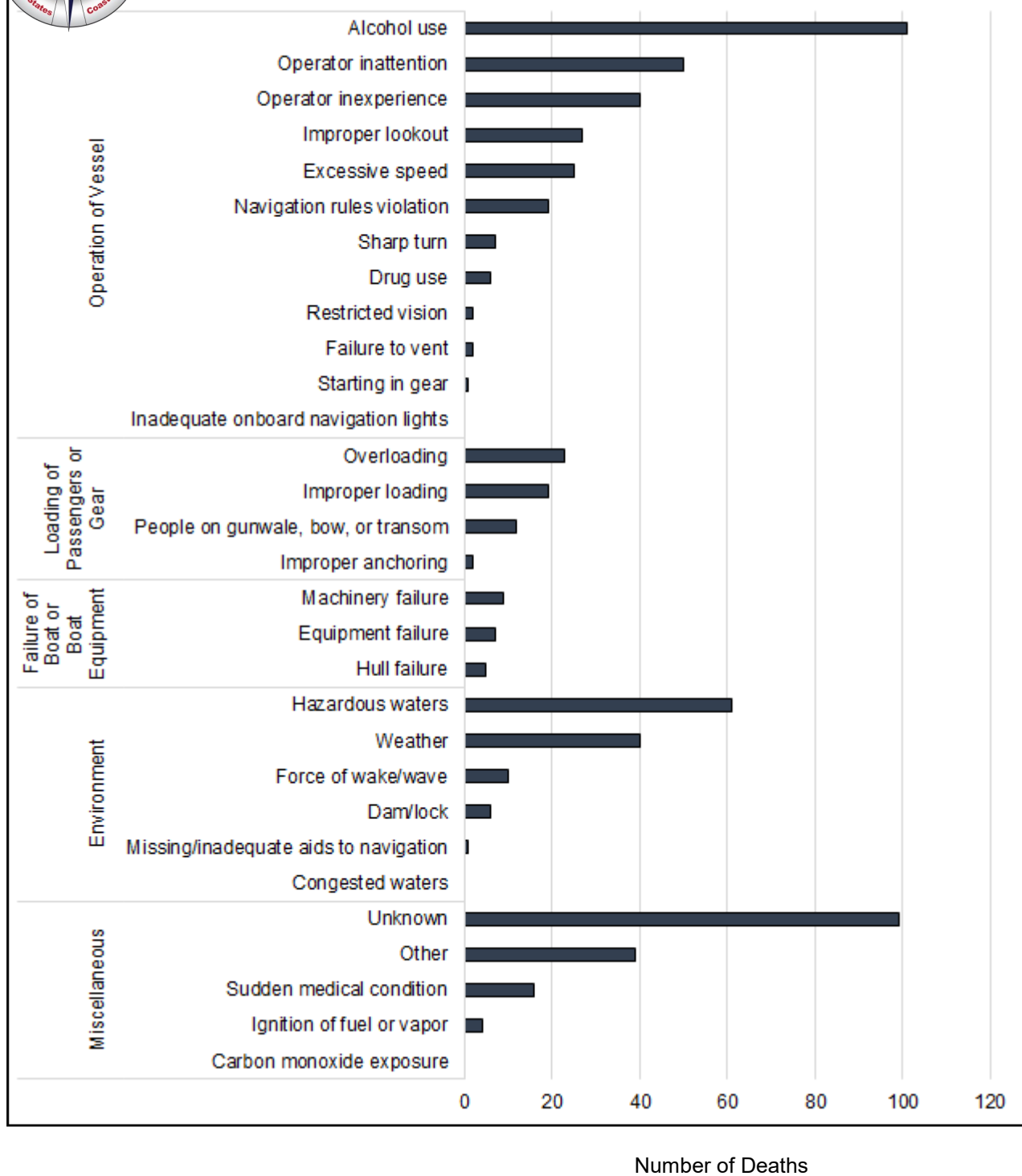
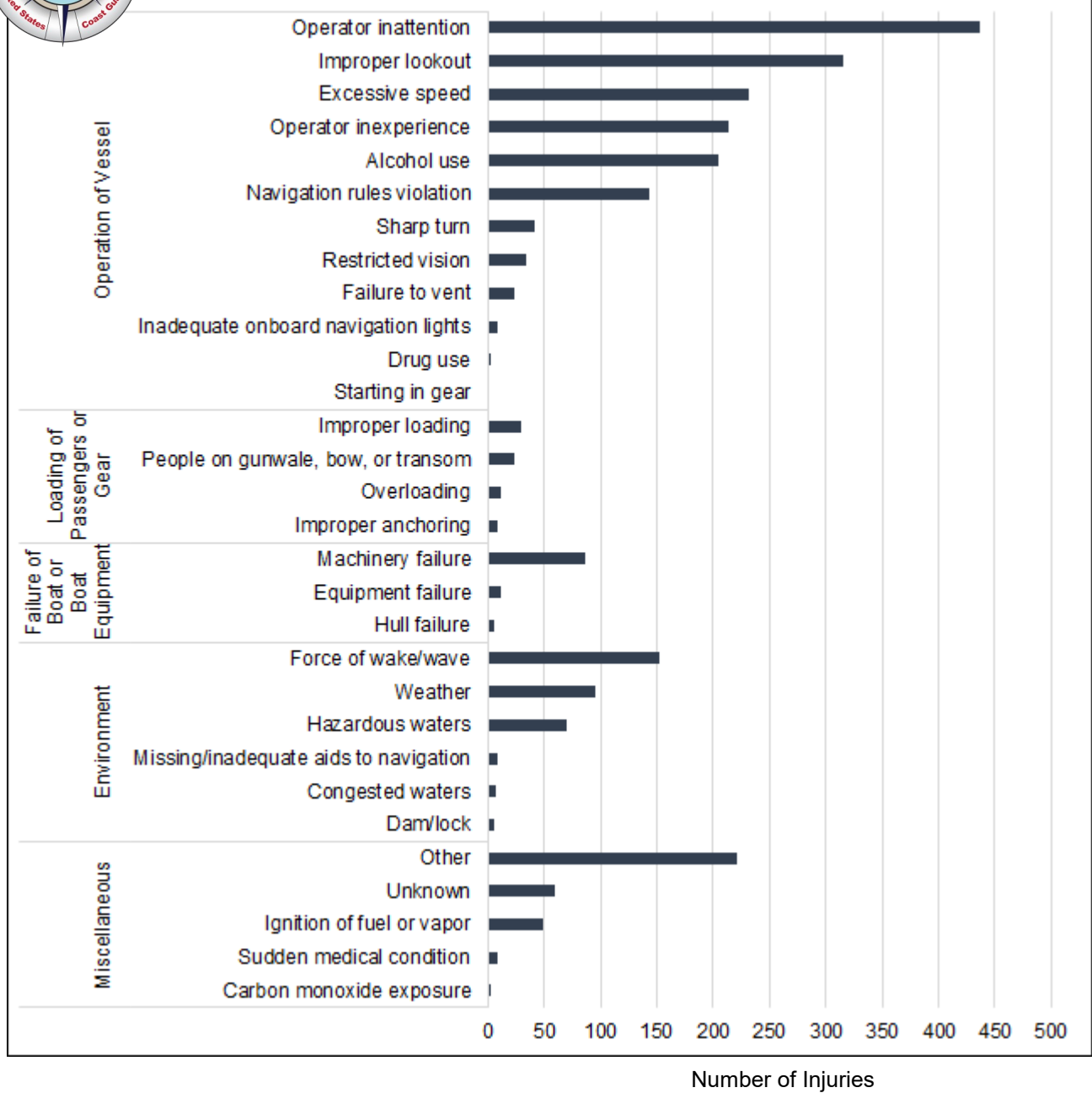


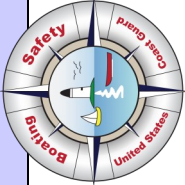


Figure 5 PRIMARY CONTRIBUTING FACTOR OF INJURIES 2018

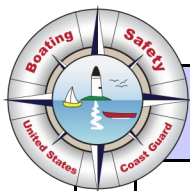




**Table 7 - NUMBER OF VESSELS IN ACCIDENTS BY VESSEL TYPE & PRIMARY CONTRIBUTING FACTOR 2018**



All vessels	5594	349	1	29	7	5	67	417	31	243	184	37	66	35	52	698	22	436	24	327	952	548	36	36	79	74	2	25	263	312	237
Airboat	35	1	0	2	0	0	0	5	0	1	0	0	0	0	0	1	0	2	0	0	3	4	1	0	3	1	1	1	4	1	0
Auxiliary sailboat	233	7	0	0	0	0	3	3	0	2	3	0	2	4	0	28	2	34	1	11	54	24	0	0	5	0	0	0	29	10	11
Cabin motorboat	813	46	1	5	0	2	22	56	11	24	16	4	21	4	1	81	0	150	5	36	148	58	0	1	14	1	0	1	37	20	48
Canoe	72	7	0	0	1	0	0	0	0	0	14	1	0	0	9	1	0	0	0	2	1	13	1	1	0	1	0	1	4	1	14
Houseboat	77	5	0	1	0	0	0	0	0	0	0	0	2	3	0	7	0	18	0	0	4	13	0	1	0	0	0	0	12	2	9
Inflatable	38	2	0	0	0	0	0	0	0	1	10	0	0	0	0	5	0	0	0	5	4	3	0	1	0	0	0	0	0	4	3
Kayak	177	15	0	0	0	4	1	0	0	4	41	1	0	1	5	1	0	0	0	3	13	33	3	0	1	2	0	28	1	20	
Open motorboat	2565	198	0	17	2	2	36	148	15	142	77	29	32	20	31	337	18	175	14	119	438	170	26	21	46	31	0	16	109	219	77
Personal watercraft	1055	23	0	3	0	0	0	179	4	48	10	1	8	0	0	175	0	25	0	116	193	191	1	0	4	34	0	1	9	17	13
Pontoon	315	31	0	1	0	0	3	10	0	9	1	1	1	1	3	45	1	22	4	17	60	31	1	9	2	1	1	15	32	12	
Rowboat	32	3	0	0	0	0	0	0	0	1	6	0	0	0	2	3	0	0	0	0	7	0	2	1	0	0	0	2	3	0	2
Sail (only)	35	0	0	0	0	0	2	1	0	1	2	0	0	0	0	3	0	0	0	1	6	1	0	0	0	2	0	0	7	1	8
Sail (unknown)	10	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	3	0	3	
Standup paddleboard	14	1	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	0	0	0	2	2	0	0	1	0	0	2	0	0	1
Other	33	4	0	0	0	0	0	2	0	2	0	0	0	0	1	4	0	4	0	0	7	3	1	1	2	0	0	1	1	0	
Unknown	90	6	0	0	0	0	1	11	1	8	1	0	0	2	0	5	0	6	0	16	8	2	0	0	1	1	0	2	3	16	



**Table 8 - ALCOHOL USE AS A CONTRIBUTING FACTOR IN ACCIDENTS & CASUALTIES BY STATE 2014-2018**

	Accidents					Deaths					Injuries				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
USA	345	306	350	323	309	137	122	133	118	119	302	258	335	255	275
AK	3	3	1	1	7	3	3	1	1	10	0	0	0	0	5
AL	7	9	7	8	9	5	5	6	2	7	9	4	5	10	7
AR	7	4	2	4	1	2	2	2	1	0	6	5	0	7	1
AZ	7	8	11	2	9	1	2	3	2	4	8	9	12	0	17
CA	14	16	11	14	11	5	3	3	4	5	11	13	20	17	13
CO	2	2	3	5	2	0	1	1	1	1	2	2	1	3	1
CT	2	3	3	4	2	1	0	1	5	0	3	4	5	1	2
DE	2	0	1	3	1	0	0	0	1	0	2	0	0	2	0
DC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FL	30	30	31	39	29	12	11	14	14	6	29	21	25	35	20
GA	7	8	12	11	8	2	4	7	2	2	7	3	7	9	8
HI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IA	6	2	7	4	6	2	1	2	1	2	3	1	4	3	6
ID	4	4	3	5	3	2	2	3	1	1	0	5	5	4	3
IL	17	9	10	7	7	8	5	1	3	4	15	8	4	1	2
IN	10	4	4	6	7	5	1	2	2	2	2	2	3	7	10
KS	1	2	6	4	1	0	1	2	0	0	3	3	5	5	4
KY	11	7	6	7	5	5	2	2	5	4	16	5	6	2	1
LA	20	12	7	11	12	6	4	3	3	3	28	10	6	11	11
MA	5	6	7	3	6	0	3	2	3	1	9	4	2	1	6
MD	7	17	12	16	10	1	8	3	3	5	5	22	13	17	5
ME	5	1	6	6	4	2	1	2	4	1	1	0	7	2	1
MI	8	6	10	9	8	4	4	7	4	3	4	8	6	3	4
MN	8	10	18	14	8	4	7	8	4	2	11	7	11	12	10
MO	16	6	14	13	19	5	2	3	1	3	16	11	15	8	33
MS	2	1	8	1	5	2	0	3	1	1	1	1	6	0	7
MT	3	2	3	1	4	2	2	1	0	4	1	0	6	0	4
NC	13	20	12	13	18	5	4	1	1	4	11	14	13	13	18
ND	5	2	0	4	1	3	1	0	3	1	3	4	0	1	1
NE	1	1	1	3	2	0	0	0	1	0	1	1	0	2	0
NH	2	1	2	3	3	0	1	0	0	1	4	0	2	1	0
NJ	2	3	4	1	4	0	0	0	0	0	3	3	6	1	2
NM	1	0	0	0	2	0	0	0	0	1	1	0	0	0	1
NV	6	3	3	2	3	2	2	0	1	1	6	1	3	1	4
NY	13	14	18	12	15	7	3	6	1	3	7	7	24	16	13
OH	7	8	9	10	6	6	4	4	4	2	0	6	11	8	3
OK	5	7	4	5	7	2	3	0	3	3	5	3	6	6	7
OR	4	7	3	1	4	1	4	1	1	2	5	3	6	0	7
PA	10	3	7	5	1	6	1	5	3	1	9	2	8	4	0
RI	2	3	3	2	0	1	0	0	2	0	0	6	1	1	0
SC	7	7	9	12	4	3	3	4	2	1	5	6	9	8	3
SD	3	4	3	0	4	1	3	2	0	1	1	2	1	0	3
TN	6	10	11	9	8	2	3	5	2	3	7	3	10	3	6
TX	17	7	21	10	12	5	1	6	7	6	12	6	28	5	6
UT	2	2	5	1	4	1	0	1	0	3	1	5	10	1	3
VA	6	4	5	3	6	3	1	4	2	2	3	4	2	0	1
VT	1	1	0	1	0	1	0	0	1	0	0	1	0	0	0
WA	9	11	10	9	8	4	5	3	5	5	7	12	8	3	4
WI	12	11	9	16	10	3	8	8	9	6	12	5	7	20	10
WV	5	4	6	2	2	1	0	0	1	2	5	14	5	1	1
WY	2	0	1	1	1	1	0	1	1	0	2	0	0	0	1
AS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CNMI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PR	0	1	1	0	0	0	1	0	0	0	0	2	1	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



**Table 9 • VESSEL OPERATION AT THE TIME OF ACCIDENT 2018**

	Vessels Involved	Deaths	Injuries
<b>Totals</b>	5594	633	2511
At anchor	211	27	71
Being towed	27	1	4
Changing direction	566	32	350
Changing speed	512	31	251
Cruising	2313	182	1261
Docking/undocking	163	7	34
Drifting	509	140	218
Idling	45	5	19
Launching/loading	42	1	13
Rowing/paddling	238	119	126
Sailing	69	6	29
Tied to dock/moored	605	9	37
Towing	31	0	7
Trolling	35	11	18
Other	37	1	5
Unknown	191	61	68


**Table 10 • VESSEL ACTIVITY AT THE TIME OF ACCIDENT 2018**

	Vessels Involved	Deaths				Injuries			
		Total	Operator	Occupant	Other/unknown role	Total	Operator	Occupant	Other/unknown role
<b>Totals</b>	5594	<b>633</b>	364	226	43	<b>2511</b>	976	1152	383
Boating/relaxation	3601	<b>330</b>	200	112	18	<b>1694</b>	773	858	63
Commercial	53	<b>0</b>	0	0	0	<b>9</b>	6	3	0
Fishing	659	<b>196</b>	125	61	10	<b>266</b>	118	141	7
Fueling	26	<b>1</b>	1	0	0	<b>15</b>	5	9	1
Government	16	<b>0</b>	0	0	0	<b>2</b>	1	1	0
Hunting	48	<b>16</b>	7	9	0	<b>25</b>	13	12	0
Racing	22	<b>2</b>	1	1	0	<b>12</b>	9	3	0
Repairs	57	<b>11</b>	7	4	0	<b>24</b>	9	15	0
Starting engine	58	<b>3</b>	2	1	0	<b>38</b>	18	16	4
Swimming/snorkeling	82	<b>38</b>	11	27	0	<b>43</b>	6	31	6
Towed watersports	371	<b>15</b>	1	1	13	<b>352</b>	5	47	300
Towing	45	<b>1</b>	1	0	0	<b>10</b>	3	7	0
Whitewater	32	<b>16</b>	6	8	2	<b>14</b>	6	8	0
Other	12	<b>4</b>	2	2	0	<b>5</b>	4	1	0
None; not in operation	488	<b>0</b>	0	0	0	<b>2</b>	0	0	2
Unknown	24	<b>0</b>	0	0	0	<b>0</b>	0	0	0




**Table 11 • WEATHER AND WATER CONDITIONS 2018**

		<b>Accidents</b>	<b>Deaths</b>	<b>Injuries</b>
		4145	633	2511
<b>TYPE OF BODY OF WATER</b>	Lakes, Ponds, Reservoirs, Dams, Gravel Pits	1903	299	1277
	Rivers, Streams, Creeks, Swamps, Bayous	966	204	592
	Bays, Inlets, Marinas, Sounds, Harbors, Channels, Canals, Sloughs, Coves	829	78	428
	Ocean/Gulf	347	30	172
	Great Lakes (not tributaries)	100	22	42
<b>WATER CONDITIONS</b>	Calm (waves less than 6")	2385	312	1503
	Choppy (waves >6" to 2')	1142	168	718
	Rough (waves >2' to 6')	354	72	155
	Very Rough (waves larger than 6')	62	10	29
	Unknown	202	71	106
<b>WIND</b>	None	379	73	254
	Light (0 - 6 mph)	2312	316	1504
	Moderate (7 - 14 mph)	980	135	536
	Strong (15 - 25 mph)	265	48	108
	Storm (over 25 mph)	47	9	16
	Unknown	162	52	93
<b>VISIBILITY</b>	Poor - Day	46	7	23
	Poor - Night	116	16	65
	Poor - Unknown if day or night	2	2	0
	Fair - Day	204	35	105
	Fair - Night	136	30	101
	Fair- Unknown if day or night	2	5	0
	Good - Day	3044	397	1856
	Good - Night	362	70	225
	Good- Unknown if day or night	4	2	0
	Unknown - Day	155	38	100
	Unknown - Night	57	18	29
	Unknown - Unknown if day or night	17	13	7
<b>WATER TEMPERATURE</b>	39 degrees F and below	24	17	11
	40 - 49 degrees F	108	39	68
	50 - 59 degrees F	308	78	156
	60 - 69 degrees F	579	97	304
	70 - 79 degrees F	1278	147	821
	80 - 89 degrees F	1093	130	708
	90 degrees F and above	33	2	19
	Unknown	722	123	424



**Table 12 • TIME RELATED DATA 2018**

	<b>Accidents</b>	<b>Deaths</b>	<b>Injuries</b>	
	<b>4145</b>	<b>633</b>	<b>2511</b>	
<b>Time of Day</b>	12:00 am to 2:30 am	108	26	61
	2:31 am to 4:30 am	43	13	14
	4:31 am to 6:30 am	58	9	25
	6:31 am to 8:30 am	121	22	67
	8:31 am to 10:30 am	219	34	94
	10:31 am 12:30 pm	470	84	265
	12:31 pm to 2:30 pm	693	86	424
	2:31 pm to 4:30 pm	817	113	477
	4:31 pm to 6:30 pm	757	80	511
	6:31 pm to 8:30 pm	456	71	294
	8:31 pm to 10:30 pm	244	32	164
	10:31 pm to 11:59 pm	106	29	98
	Unknown	53	34	17
	<b>Month of Year</b>	January	81	26
February		107	20	54
March		144	22	85
April		206	51	132
May		499	89	307
June		687	102	439
July		1016	88	682
August		651	100	385
September		394	57	228
October		176	36	75
November		102	24	37
December		82	18	47
<b>Day of Week</b>	Sunday	1030	135	671
	Monday	356	71	210
	Tuesday	325	54	194
	Wednesday	397	61	202
	Thursday	313	64	161
	Friday	484	69	290
	Saturday	1240	179	783



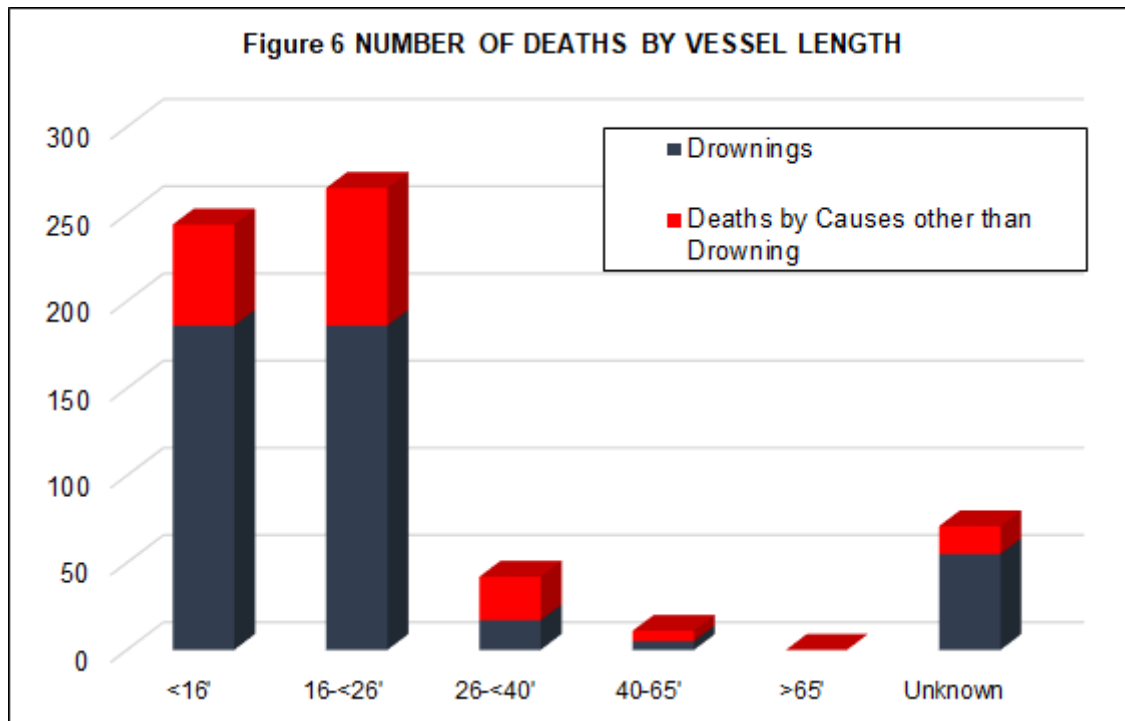
**Table 13 • VESSEL INFORMATION 2018**

		<b>Vessels Involved</b>	<b>Deaths</b>	<b>Injuries</b>
		5594	633	2511
<b>Hull Material</b>	Aluminum	856	180	352
	Fiberglass	4224	297	1974
	Plastic	175	88	75
	Rubber/Vinyl/Canvas	57	24	26
	Steel	46	1	6
	Wood	59	6	21
	Other	3	1	1
	Unknown	174	36	56
<b>Horsepower</b>	No Engine	376	184	194
	10 hp or less	101	21	48
	11 - 25 hp	129	44	48
	26 - 75 hp	437	62	183
	76 - 150 hp	1096	93	576
	151 - 250 hp	732	52	347
	Over 250 hp	1125	52	428
	Unknown	1598	125	687
<b>Year Built</b>	2018	418	36	191
	2017	355	31	191
	2015 - 2016	474	44	238
	2013 - 2014	255	18	136
	2011 - 2012	180	20	84
	2005 - 2010	757	51	367
	Prior to 2005	2530	249	1044
	Unknown	625	184	260
<b>Length</b>	Less than 16 feet	1537	244	871
	16 feet to <26 feet	2521	265	1245
	26 feet to <40 feet	784	42	250
	40 feet to 65 feet	369	11	33
	More than 65 feet	74	0	5
	Unknown	309	71	107



**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>	5594	593	3679	1322	633	52	419	162	2511	289	1709	513
Airboat	35	0	33	2	5	0	4	1	17	0	17	0
Auxiliary sailboat	233	7	175	51	11	0	7	4	40	2	25	13
Cabin motorboat	813	5	617	191	33	0	23	10	193	3	145	45
Canoe	72	16	39	17	44	9	24	11	43	8	24	11
Houseboat	77	15	36	26	3	1	1	1	5	1	3	1
Inflatable	38	12	16	10	19	6	4	9	16	7	8	1
Kayak	177	12	114	51	84	5	51	28	77	8	49	20
Open motorboat	2565	122	1867	576	311	12	239	60	1277	54	980	243
Personal watercraft	1055	327	532	196	42	6	24	12	634	166	347	121
Pontoon	315	69	161	85	35	10	16	9	129	32	71	26
Rowboat	32	2	22	8	21	1	14	6	20	4	7	9
Sailboat (only)	35	1	27	7	4	0	4	0	21	1	14	6
Sailboat (unknown)	10	0	1	9	0	0	0	0	7	0	2	5
Standup paddleboard	14	3	10	1	5	1	4	0	10	2	8	0
Other	33	2	21	10	7	1	4	2	7	1	5	1
Unknown	90	0	8	82	9	0	0	9	15	0	4	11



**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'	186	58	244	76%
16-26'	186	79	265	70%
26-40'	17	25	42	40%
40-65'	5	6	11	45%
>65'	0	0	0	0%
Unknown	55	16	71	77%
<b>Total</b>	<b>449</b>	<b>184</b>	<b>633</b>	<b>71%</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 443 accidents where flooding/swamping was the first event in the boating accident. There were 68 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 244 accidents and 21 deaths associated with flooding/swamping as a second event and 78 accidents and 16 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 765 accidents and 105 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)**

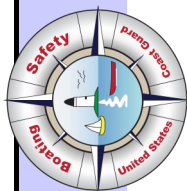
This table examines the first event of a boating accident for all vessels involved in an accident. It also provides information about the casualties associated with each vessel type.

**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 in Accidents by Primary Accident Type & Engine Type (Table 21, Page 43)**

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



**Table 16 - ACCIDENT, VESSEL & CASUALTY NUMBERS BY PRIMARY ACCIDENT TYPE 2018**

Accident Types	Accidents	Vessels Involved	Drowning Deaths	Other Deaths	Total Deaths	Total Injuries	Damages
<b>All Accident Types</b>	4145	5594	449	184	633	2511	\$45,902,204.15
Capsizing	266	280	119	18	137	153	\$1,624,209.00
Carbon monoxide poisoning	8	8	0	7	7	7	\$0.00
Collision with fixed object	470	561	36	26	62	296	\$5,758,267.58
Collision with floating object	59	64	9	0	9	25	\$485,178.49
Collision with commercial vessel	25	50	0	0	0	16	\$745,495.00
Collision with governmental vessel	6	12	0	1	1	4	\$38,001.00
Collision with recreational vessel	1028	2137	6	34	40	661	\$10,018,138.41
Collision with submerged object	151	153	7	3	10	45	\$1,269,000.69
Departed vessel	119	124	56	10	66	61	\$16,150.00
Ejected from vessel	197	218	15	13	28	173	\$2,077,150.00
Electrocution	0	0	0	0	0	0	\$0.00
Fall in vessel	128	144	5	5	10	131	\$137,350.00
Falls overboard	274	289	122	37	159	120	\$138,337.70
Fire/explosion (fuel)	145	174	0	4	4	99	\$3,616,954.54
Fire/explosion (non-fuel)	70	104	0	0	0	11	\$5,616,377.37
Fire/explosion (unknown origin)	41	59	0	0	0	7	\$3,291,006.75
Flooding/swamping	443	471	58	10	68	97	\$5,087,963.78
Grounding	367	375	9	7	16	236	\$5,579,505.84
Person struck by propeller	45	46	0	2	2	45	\$0.00
Person struck by vessel	31	36	1	2	3	38	\$2,000.00
Sinking	0	0	0	0	0	0	\$0.00
Skier mishap	230	242	4	5	9	248	\$2,600.00
Sudden medical condition	0	0	0	0	0	0	\$0.00
Other	42	47	2	0	2	38	\$398,518.00

Table 17 • FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
 <b>2018</b>	First Event in an Accident	Second Event in an Accident	Third Event in an Accident	Total Times Event Occurred in all Accidents	Deaths Associated with Event in all Accidents	Injuries Associated with Event in all Accidents	Damages Associated with Event in all Accidents
	Capsizing	266	223	62	551	214	269
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
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


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



Table 17 Continued ▪ FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
 <b>2016</b> continued	First Event in an Accident	Second Event in an Accident	Third Event in an Accident	Total Times Event Occurred in all Accidents	Deaths Associated with Event in all Accidents	Injuries Associated with Event in all Accidents	Damages Associated with Event in all Accidents
	Grounding	413	55	23	491	16	299
Person struck by propeller	42	101	28	171	24	175	\$124,740.00
Person struck by vessel	32	220	31	283	24	367	\$889,104.49
Sinking	0	119	83	202	23	46	\$8,122,022.00
Skier mishap	278	19	3	300	11	316	\$47,490.00
Sudden medical condition	10	1	0	11	9	2	\$700.00
Other	48	28	5	81	6	66	\$759,150.09
Unknown	0	0	0	0	0	0	\$0.00
<b>2015</b>							
Capsizing	299	241	56	596	226	293	\$3,078,884
Carbon monoxide poisoning	12	0	1	13	8	14	\$21,500
Collision with fixed object	470	73	10	553	62	385	\$5,195,040
Collision with floating object	61	5	1	67	11	29	\$578,821
Collision with commercial vessel	29	4	0	33	4	13	\$954,100
Collision with governmental vessel	4	0	0	4	0	1	\$47,000
Collision with recreational vessel	990	59	6	1055	37	650	\$6,575,775
Collision with submerged object	127	2	0	129	8	56	\$1,973,274
Departed vessel	86	39	13	138	70	57	\$308,765
Ejected from vessel	172	576	369	1117	316	931	\$5,696,172
Electrocution	1	1	0	2	0	3	\$44,000
Fall in vessel	146	268	43	457	22	682	\$3,837,367
Falls overboard	259	33	4	296	169	125	\$234,191
Fire/explosion (fuel)	174	4	0	178	3	136	\$3,878,941
Fire/explosion (non-fuel)	67	4	0	71	0	7	\$6,007,411
Fire/explosion (unknown origin)	24	1	0	25	0	6	\$5,875,925
Flooding/swamping	449	231	56	736	82	216	\$13,574,146
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 17 Continued • FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
 <b>2014</b>	First Event in an Accident	Second Event in an Accident	Third Event in an Accident	Total Times Event Occurred in all Accidents	Deaths Associated with Event in all Accidents	Injuries Associated with Event in all Accidents	Damages Associated with Event in all Accidents
	Capsizing	280	223	47	550	209	287
Carbon monoxide poisoning	6	0	0	6	0	8	\$0
Collision with fixed object	452	59	10	521	53	402	\$4,570,680
Collision with floating object	54	4	1	59	4	37	\$882,413
Collision with commercial vessel	18	1	0	19	7	9	\$357,130
Collision with governmental vessel	5	0	0	5	0	0	\$28,700
Collision with recreational vessel	937	45	6	988	42	677	\$7,779,435
Collision with submerged object	118	0	0	118	10	55	\$1,549,583
Departed vessel	99	77	17	193	90	102	\$893,380
Ejected from vessel	151	565	298	1014	279	936	\$6,455,578
Electrocution	1	1	0	2	1	1	\$6,300
Fall in vessel	147	251	63	461	25	668	\$3,392,811
Falls overboard	281	29	1	311	168	159	\$97,302
Fire/explosion (fuel)	152	6	2	160	3	117	\$4,333,956
Fire/explosion (non-fuel)	75	5	1	81	2	10	\$5,187,286
Fire/explosion (unknown origin)	36	0	0	36	0	8	\$3,277,185
Flooding/swamping	463	223	56	742	104	259	\$15,724,140
Grounding	359	57	20	436	20	292	\$6,267,509
Person struck by propeller	47	83	23	153	22	148	\$112,345
Person struck by vessel	31	192	22	245	23	313	\$891,727
Sinking	0	100	59	159	25	32	\$4,993,021
Skier mishap	292	21	0	313	8	337	\$11,280
Sudden medical condition	1	3	0	4	3	1	\$10,000
Other	55	14	4	73	2	69	\$1,167,171
Unknown	4	0	0	4	8	0	\$17,500

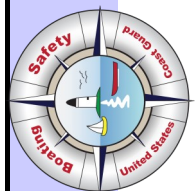




**Table 18 - NUMBER OF VESSELS IN ACCIDENTS BY VESSEL LENGTH & PRIMARY ACCIDENT TYPE**

	Total vessels involved	Carbon monoxide poisoning	Collision with fixed object	Collision with floating object	Collision with commercial vessel	Collision with governmental vessel	Collision with recreational vessel	Collision with submerged object	Departed vessel	Ejected from vessel	Electrocution	Fall in vessel	Falls overboard	Fire/explosion (fuel)	Fire/explosion (non-fuel)	Fire/explosion (unknown)	Flooding/ swamping	Grounding	Person struck by propeller	Person struck by vessel	Sinking	Skier mishap	Sudden medical condition	Other	Unknown	Drownings	Other Deaths	Total Deaths	Injuries	
<b>All lengths</b>	<b>5594</b>	<b>280</b>	<b>8</b>	<b>561</b>	<b>64</b>	<b>50</b>	<b>12</b>	<b>2137</b>	<b>153</b>	<b>124</b>	<b>218</b>	<b>0</b>	<b>144</b>	<b>289</b>	<b>174</b>	<b>104</b>	<b>59</b>	<b>471</b>	<b>375</b>	<b>46</b>	<b>36</b>	<b>0</b>	<b>242</b>	<b>0</b>	<b>47</b>	<b>0</b>	<b>449</b>	<b>184</b>	<b>633</b>	<b>2511</b>
5 feet	1	1	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	1
6 feet	18	2	0	6	0	0	0	2	0	0	1	0	4	0	0	0	1	0	0	0	0	2	0	0	0	0	6	0	6	6
7 feet	19	1	0	0	0	0	5	0	0	3	0	2	3	0	0	0	5	0	0	0	0	0	0	0	0	3	0	3	12	
8 feet	60	16	0	6	1	0	14	0	2	7	0	1	7	2	0	0	3	1	0	0	0	0	0	0	0	18	1	19	31	
9 feet	141	13	0	11	0	1	77	0	1	12	0	2	12	2	0	0	2	4	0	1	0	3	0	0	0	13	4	17	76	
10 feet	512	40	0	30	3	2	281	2	9	48	0	11	33	10	2	2	13	12	0	5	0	8	0	1	0	32	15	47	323	
11 feet	366	9	0	22	2	1	232	2	1	36	0	16	12	3	1	3	8	5	0	4	0	8	0	1	0	11	13	24	202	
12 feet	129	12	0	8	2	1	43	5	2	10	0	1	17	2	1	0	17	5	0	2	0	0	0	1	0	26	4	30	72	
13 feet	53	9	0	7	0	0	8	1	1	5	0	1	3	0	0	0	13	3	0	1	0	1	0	0	0	14	5	19	32	
14 feet	126	18	0	12	4	0	16	6	1	6	0	1	24	0	0	0	31	6	0	0	0	0	0	1	0	35	7	42	65	
15 feet	112	20	0	10	6	1	10	10	1	6	0	2	10	0	1	0	27	5	0	0	0	3	0	0	0	28	9	37	51	
<b>Under 16 ft</b>	<b>1537</b>	<b>141</b>	<b>0</b>	<b>112</b>	<b>18</b>	<b>6</b>	<b>688</b>	<b>26</b>	<b>18</b>	<b>134</b>	<b>0</b>	<b>37</b>	<b>125</b>	<b>19</b>	<b>5</b>	<b>5</b>	<b>120</b>	<b>41</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>186</b>	<b>58</b>	<b>244</b>	<b>871</b>	
16 feet	218	14	0	27	5	0	51	16	3	12	0	2	23	3	1	2	41	12	1	1	0	3	0	1	0	46	9	55	91	
17 feet	232	22	0	28	2	2	68	8	8	8	0	3	13	4	0	0	35	12	4	3	0	9	0	1	0	27	11	38	118	
18 feet	301	2	0	28	4	3	94	9	4	10	0	9	11	12	2	2	45	27	3	6	0	26	0	3	0	18	13	31	181	
19 feet	255	3	0	29	3	0	76	8	12	6	0	4	9	12	4	1	30	21	7	1	0	28	0	1	0	17	9	26	142	
20 feet	346	5	0	30	6	1	106	14	21	5	0	4	17	10	4	2	48	21	5	0	0	42	0	3	0	29	14	43	157	
21 feet	309	3	0	30	3	3	99	14	12	4	0	8	12	8	3	1	36	29	3	1	0	35	0	4	0	14	5	19	172	
22 feet	272	5	1	26	5	2	88	8	10	3	0	7	8	14	6	4	19	25	4	4	0	28	0	4	0	13	3	16	121	
23 feet	219	1	0	24	2	3	68	10	9	2	0	7	8	13	4	1	18	21	8	1	0	15	0	3	0	4	4	8	104	
24 feet	226	5	1	21	4	3	83	10	6	4	0	8	9	8	9	1	10	25	4	1	0	12	0	2	0	12	8	20	104	
25 feet	143	2	0	20	1	1	54	4	6	4	0	6	3	9	3	1	6	19	1	0	0	2	0	0	0	6	3	9	55	
<b>16 ft to less than 26 ft</b>	<b>2521</b>	<b>62</b>	<b>2</b>	<b>263</b>	<b>35</b>	<b>18</b>	<b>9</b>	<b>787</b>	<b>101</b>	<b>91</b>	<b>58</b>	<b>0</b>	<b>58</b>	<b>113</b>	<b>93</b>	<b>36</b>	<b>15</b>	<b>288</b>	<b>212</b>	<b>40</b>	<b>18</b>	<b>0</b>	<b>200</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>186</b>	<b>79</b>	<b>265</b>	<b>1245</b>
26 feet	116	4	0	15	2	0	53	3	2	2	0	3	2	5	1	1	4	12	2	0	0	5	0	0	0	5	3	8	52	
27 feet	81	0	0	7	0	4	36	2	0	2	0	4	0	5	7	1	1	11	1	0	0	0	0	0	0	1	3	4	39	
28 feet	84	1	0	10	1	1	37	2	3	1	0	0	1	9	3	5	5	1	1	0	0	2	0	1	0	3	6	9	32	
29 feet	48	0	0	6	2	1	21	0	1	0	0	3	1	4	3	0	0	4	1	0	0	0	0	1	0	2	1	3	14	
30 feet	49	0	0	7	0	2	21	1	0	1	0	2	1	1	1	3	2	4	0	1	0	0	0	2	0	0	0	0	19	
31 feet	41	0	0	8	1	0	11	0	1	0	0	2	1	3	3	3	3	5	0	0	0	0	0	0	0	1	1	2	8	
32 feet	56	6	0	5	0	0	27	3	0	0	0	3	3	3	3	0	1	2	0	0	0	0	0	0	0	2	4	6	14	
33 feet	58	0	1	8	1	1	25	0	0	0	0	1	0	5	1	1	3	10	0	0	0	0	0	1	0	0	0	0	23	
34 feet	45	1	0	6	0	0	20	0	1	0	0	2	2	3	3	0	1	6	0	0	0	0	0	0	0	2	0	2	10	
35 feet	49	0	2	4	1	0	28	0	0	1	0	2	2	4	0	0	0	5	0	0	0	0	0	0	0	0	6	6	10	
36 feet	51	1	0	6	0	0	22	2	0	0	0	0	0	5	5	4	2	4	0	0	0	0	0	0	0	0	0	0	5	
37 feet	34	0	0	2	0	1	21	0	0	1	0	1	0	0	1	0	0	4	0	0	0	0	0	3	0	0	0	0	11	
38 feet	48	1	0	9	0	1	16	1	0	0	0	5	0	2	2	2	1	8	0	0	0	0	0	0	0	0	1	1	10	
39 feet	24	1	0	6	0	0	5	1	0	1	0	1	1	1	2	2	0	2	0	1	0	0	0	0	0	1	0	1	3	
<b>26 ft to less than 40 ft</b>	<b>784</b>	<b>15</b>	<b>3</b>	<b>99</b>	<b>8</b>	<b>11</b>	<b>0</b>	<b>343</b>	<b>15</b>	<b>8</b>	<b>9</b>	<b>0</b>	<b>29</b>	<b>14</b>	<b>50</b>	<b>35</b>	<b>22</b>	<b>23</b>	<b>78</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>17</b>	<b>25</b>	<b>42</b>	<b>250</b>
40 ft to 65 ft	369	0	1	60	3	11	0	171	5	3	1	0	6	9	7	24	13	14	35	0	1	0	0	0	5	0	5	6	11	33
Over 65 ft	74	0	0	8	0	2	2	50	1	0	1	0	4	1	0	1	1	1	1	0	0	0	0	1	0	0	0	0	5	
Unknown	309	62	2	19	0	2	1	98	5	4	15	0	10	27	5	3	3	25	8	1	2	0	10	0	7	0	55	16	71	107

		Table 19 - NUMBER OF VESSELS IN ACCIDENTS BY VESSEL TYPE & PRIMARY ACCIDENT TYPE WITH NUMBER OF CASUALTIES BY CASUALTY TYPE & VESSEL TYPE 2018	
		Number of Vessels	Number of Casualties
	Injuries	5594	2511
	Total deaths	633	17
	Deaths by causes other than drowning	184	4
	Drownings	449	13
	Unknown	0	0
	Other	47	0
	Sudden medical condition	0	0
	Skier mishap	242	0
	Sinking	0	0
	Person struck by vessel	36	0
	Person struck by propeller	46	0
	Grounding	375	4
	Flooding/swamping	471	3
	Fire/explosion (unknown origin)	59	2
	Fire/explosion (non-fuel)	104	50
	Fire/explosion (fuel)	174	64
	Falls overboard	289	13
	Fall in vessel	144	22
	Electrocution	0	0
	Ejected from vessel	218	3
	Departed vessel	124	8
	Collision with submerged object	153	15
	Collision with recreational vessel	2137	337
	Collision with governmental vessel	12	1
	Collision with commercial vessel	50	10
	Collision with floating object	64	10
	Collision with fixed object	561	7
	Carbon monoxide exposure	8	0
	Capsizing	280	48
	All accident types	5594	2511
All vessels		5594	2511
Airboat		35	5
Auxiliary sailboat		233	11
Cabin motorboat		813	20
Canoe		72	6
Houseboat		77	3
Inflatable		38	0
Kayak		177	13
Open motorboat		2565	311
Personal watercraft		1055	42
Pontoon		315	35
Rowboat		32	1
Sailboat (only)		35	4
Sailboat (unknown)		10	0
Standup paddleboard		14	5
Other		33	7
Unknown		90	15





**OPERATOR &  
PASSENGER  
INFORMATION**

## Explanation of Operator/Passenger Information Section

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

### **Operator Information (Table 22, Page 46)**

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

Examples of "other" boating safety instruction include licenses issued by the Coast Guard, military training, police academy training, rental operator training, commercially-available courses, and camp training. Informal training signifies that the operator did not receive formal instruction, but rather learned from experience.

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

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

### **Number of Deaths by Vessel Type (Table 24 & Figure 8, Page 48)**

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

### **Percentage of Deaths by Vessel Type, 2004-2018 (Figure 9 & Table 25, Page 49)**

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

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

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

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

### **Number of Injured Victims by Age & Vessel Type (Table 27, Page 51)**


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

### **Nature of Primary Injury Type by Area of Injury 2018 (Table 28, Page 52)**


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

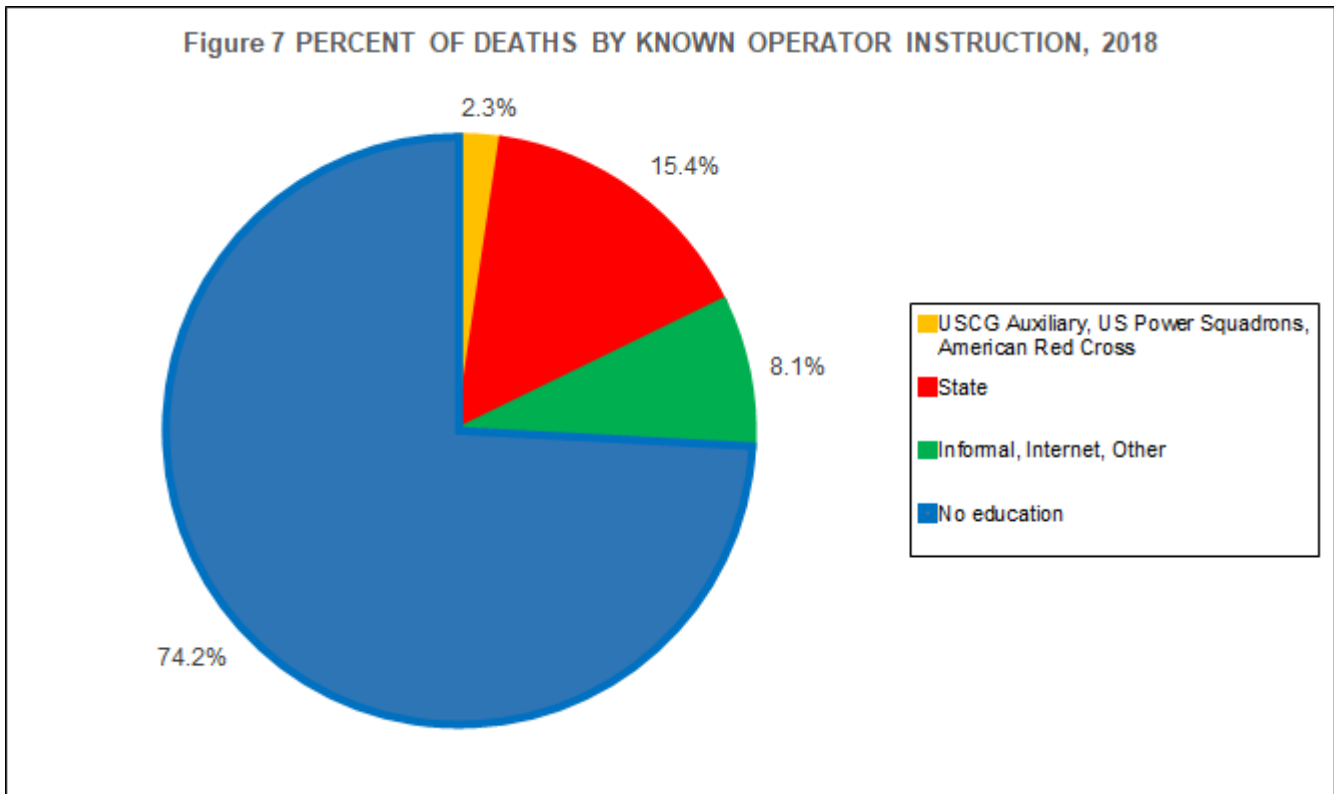
### **Number of Injured Victims under Age 18 by Age Group and Injury Type on Personal Watercraft, 2018 (Figure 10, Page 52)**

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 2018</b>				
		Vessels Involved	Deaths	Injuries
		5594	633	2511
<b>Age of Operator</b>	12 years and under	16	0	14
	13 to 18 years	267	12	172
	19 to 25 years	505	40	307
	26 to 35 years	771	89	426
	36 to 55 years	1714	215	895
	Over 55 years	1224	216	529
	Unknown	395	44	128
	No operator	702	17	40
<b>Operator's Experience</b>	No Experience	36	3	20
	Under 10 hours	488	50	261
	10 to 100 hours	979	80	543
	101 to 500 hours	1604	152	793
	Over 500 Hours	535	40	286
	Unknown	1250	291	568
	No Operator	702	17	40
<b>Number of Persons on Board</b>	None	414	0	6
	One	1721	233	573
	Two	1430	209	735
	Three	556	76	342
	Four	441	31	275
	Five	235	23	159
	Six	195	20	129
	Seven	121	8	93
	Eight	100	8	59
	Nine	60	2	43
	Ten	37	7	36
	More than 10	65	8	35
	Unknown	219	8	26
<b>Education of Operator</b>	American Red Cross	3	0	1
	Informal	115	9	63
	Internet Course	175	8	98
	State Course	784	46	431
	US Power Squadrons	62	4	22
	USCG Auxiliary	117	3	63
	Other	107	7	21
	No Education	1977	221	1082
	Unknown	1552	318	690
	No Operator	702	17	40

**BOATING SAFETY INSTRUCTION**

 <b>Table 23 • NUMBER OF DEATHS BY TYPE OF OPERATOR BOATING INSTRUCTION 2018</b>	
Type of Boating Instruction	Deaths
American Red Cross	0
Informal	9
Internet Course	8
State Course	46
US Power Squadrons	4
USCG Auxiliary	3
Other	7
No Education	221
<b>Total Deaths - Known Operator Instruction</b>	<b>298</b>
<b>Total Deaths - Unknown Operator Instruction</b>	<b>318</b>
<b>Total Deaths - No Operator</b>	<b>17</b>
<b>Total Deaths - Known &amp; Unknown Operator Instruction</b>	<b>633</b>





**Table 24 • NUMBER OF DEATHS BY VESSEL TYPE 2018**

Vessel type	Drownings	Deaths by Causes other than Drowning	Total Deaths	Percentage of Deaths from Drowning
Airboat	4	1	5	80%
Auxiliary Sailboat	7	4	11	64%
Cabin Motorboat	13	20	33	39%
Canoe	38	6	44	86%
Houseboat	2	1	3	67%
Inflatable	16	3	19	84%
Kayak	71	13	84	85%
Open Motorboat	218	93	311	70%
Personal Watercraft	11	31	42	26%
Pontoon	30	5	35	86%
Rowboat	20	1	21	95%
Sailboat (only)	4	0	4	100%
Sailboat (unknown)	0	0	0	0%
Standup paddleboard	5	0	5	100%
Other	6	1	7	86%
Unknown	4	5	9	44%
<b>Total</b>	<b>449</b>	<b>184</b>	<b>633</b>	<b>71%</b>

**Figure 8 NUMBER OF DEATHS BY VESSEL TYPE 2018**

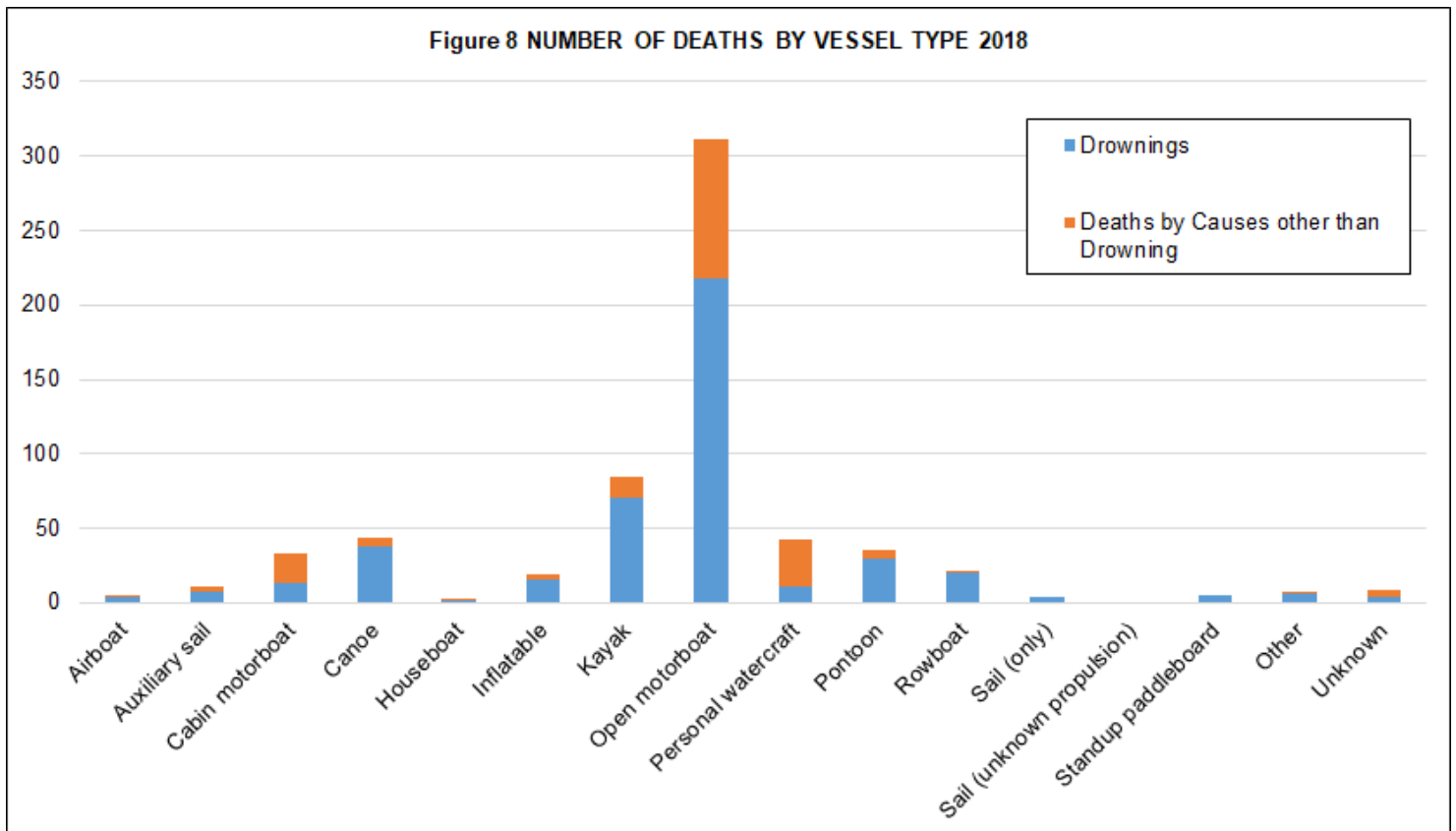




Figure 9 PERCENT OF DEATHS BY VESSEL TYPE, 2004-2018

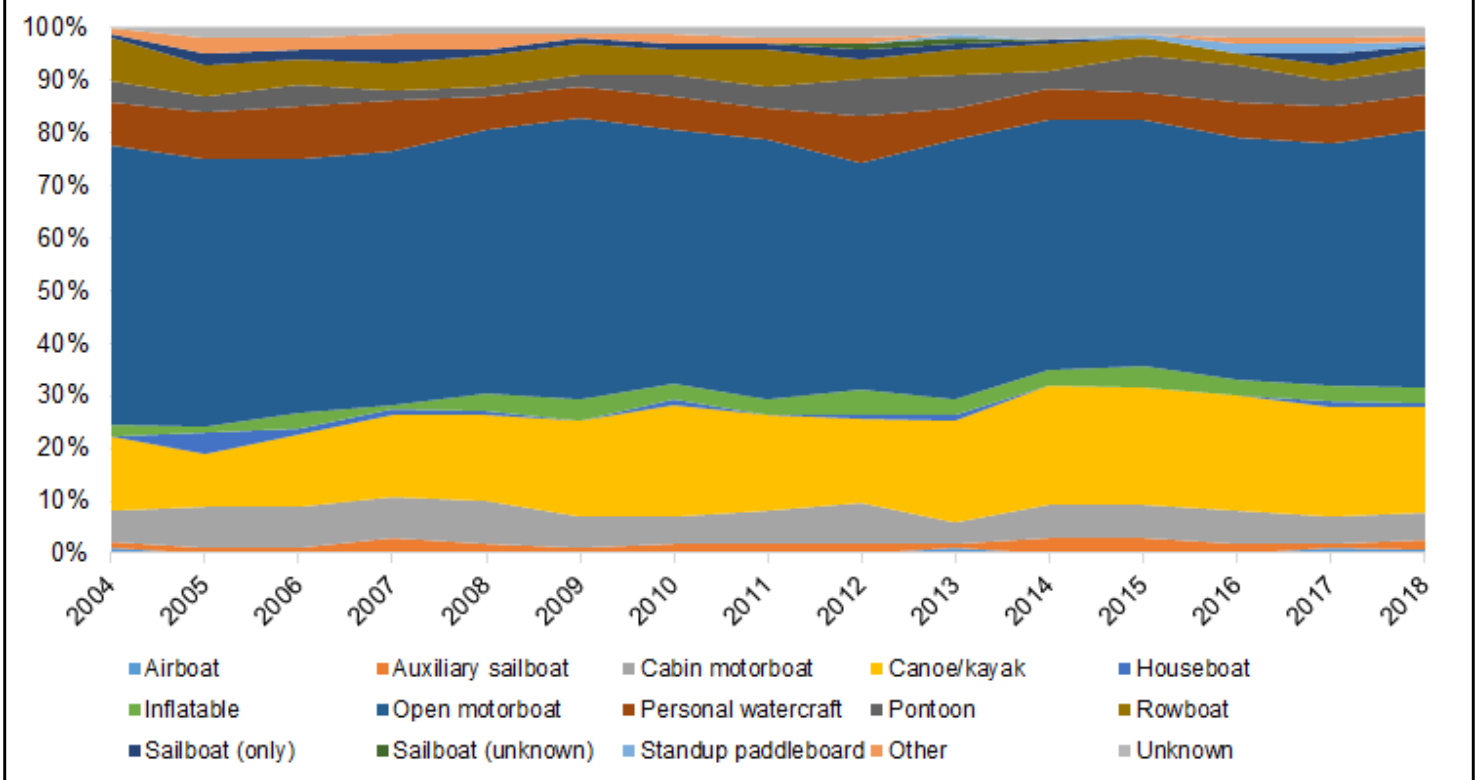



Table 25 • PERCENT OF DEATHS BY VESSEL TYPE, 2004-2018

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Airboat	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	1%	1%
Auxiliary sailboat	1%	1%	1%	3%	2%	1%	2%	2%	2%	1%	3%	3%	2%	1%	2%
Cabin motorboat	6%	8%	8%	8%	8%	6%	5%	6%	8%	4%	6%	6%	6%	5%	5%
Canoe/kayak	14%	10%	14%	16%	16%	18%	21%	18%	16%	19%	22%	22%	22%	21%	20%
Houseboat	0%	4%	1%	1%	1%	0%	1%	0%	1%	1%	0%	0%	0%	1%	0%
Inflatable	2%	1%	3%	1%	3%	4%	3%	3%	5%	3%	3%	4%	3%	3%	3%
Open motorboat	52%	51%	49%	49%	50%	53%	48%	49%	44%	49%	46%	46%	46%	46%	49%
Personal watercraft	8%	9%	10%	10%	6%	6%	6%	6%	9%	6%	6%	5%	7%	7%	7%
Pontoon	4%	3%	4%	2%	2%	2%	4%	4%	7%	6%	3%	7%	7%	5%	6%
Rowboat	8%	6%	5%	5%	6%	6%	5%	7%	4%	5%	5%	3%	2%	3%	3%
Sailboat (only)	1%	2%	2%	3%	1%	1%	1%	1%	2%	1%	1%	0%	0%	2%	1%
Sailboat (unknown)	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%
Standup paddleboard	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%	2%	2%	1%
Other	1%	3%	2%	3%	3%	1%	2%	1%	1%	0%	0%	0%	1%	1%	1%
Unknown	0%	2%	2%	1%	1%	1%	1%	2%	2%	1%	2%	1%	2%	2%	1%



**Table 26 • NUMBER OF DECEASED VICTIMS BY AGE AND VESSEL TYPE  
2018**

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>	5	11	33	44	3	19	84	311	42	35	21	4	0	5	7	9	449	184	633
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2
4	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
5	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1	2
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	1	0	2	0	1	0	0	0	0	0	0	3	1	4
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	2	1	3
10	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	1	2
<b>0-12</b>	0	0	0	1	0	3	4	6	1	1	0	0	0	0	0	0	10	6	16
<b>13 - 19</b>	1	1	0	1	0	0	5	5	3	0	1	0	0	1	1	0	13	6	19
<b>20 - 29</b>	0	0	1	8	0	2	25	36	7	7	3	0	0	1	2	0	63	29	92
<b>30 - 39</b>	0	2	3	11	0	2	16	31	8	6	2	1	0	0	2	0	55	29	84
<b>40 - 49</b>	3	0	11	6	1	2	15	51	9	4	5	0	0	2	1	0	86	24	110
<b>50 - 59</b>	0	1	9	8	2	2	7	62	10	8	2	0	0	0	0	4	79	36	115
<b>60 - 69</b>	0	5	6	4	0	3	9	59	3	4	3	0	0	1	1	1	68	31	99
<b>70 - 79</b>	1	1	1	3	0	4	3	43	1	1	4	3	0	0	0	2	57	10	67
<b>80 and Over</b>	0	1	0	1	0	1	0	15	0	4	1	0	0	0	0	0	16	7	23
<b>Unknown</b>	0	0	2	1	0	0	0	3	0	0	0	0	0	0	0	2	2	6	8



**Table 27 • NUMBER OF INJURED VICTIMS BY AGE AND VESSEL TYPE 2018**

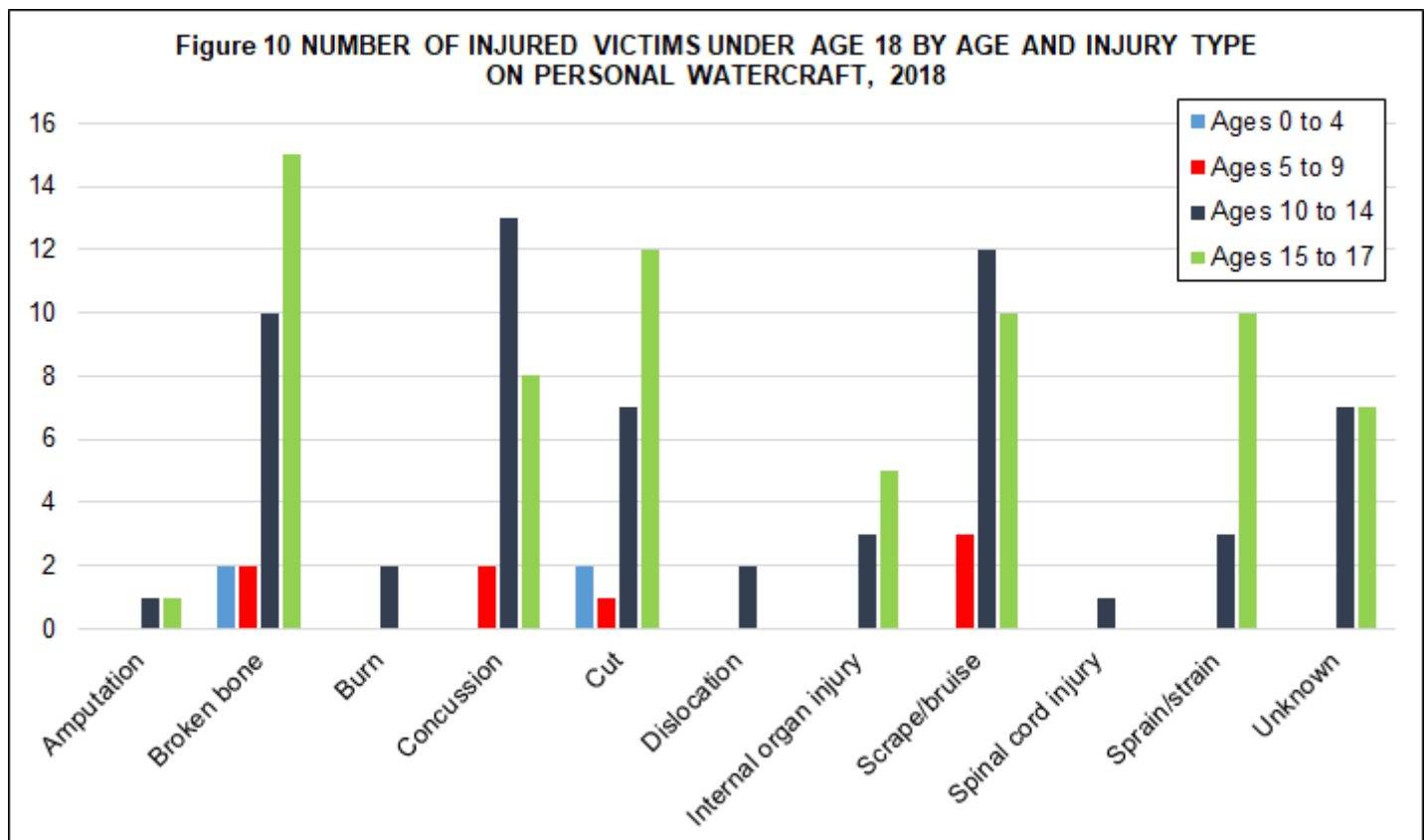
Age of Injured Victim	Total injuries	Airboat	Auxiliary sailboat	Cabin motorboat	Canoe	Houseboat	Inflatable	Kayak	Open motorboat	Personal watercraft	Pontoon	Rowboat	Sailboat (only)	Sailboat (unknown)	Standup paddleboard	Other	Unknown
<b>Total</b>	<b>2511</b>	<b>17</b>	<b>40</b>	<b>193</b>	<b>43</b>	<b>5</b>	<b>16</b>	<b>77</b>	<b>1277</b>	<b>634</b>	<b>129</b>	<b>20</b>	<b>21</b>	<b>7</b>	<b>10</b>	<b>7</b>	<b>15</b>
0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
1	6	0	0	2	0	0	0	1	3	0	0	0	0	0	0	0	0
2	7	0	0	2	0	0	0	0	3	1	1	0	0	0	0	0	0
3	8	0	0	0	0	0	0	0	6	2	0	0	0	0	0	0	0
4	7	0	0	0	0	0	0	0	5	1	0	1	0	0	0	0	0
5	8	0	0	0	1	0	0	0	4	2	1	0	0	0	0	0	0
6	13	0	0	0	1	0	0	0	7	2	3	0	0	0	0	0	0
7	11	0	0	1	0	0	0	0	8	1	1	0	0	0	0	0	0
8	7	0	0	0	2	0	0	0	2	2	1	0	0	0	0	0	0
9	10	0	0	2	0	0	0	0	6	1	1	0	0	0	0	0	0
10	24	0	0	2	0	0	0	0	15	6	1	0	0	0	0	0	0
11	22	0	0	0	2	0	1	1	8	9	1	0	0	0	0	0	0
12	41	0	0	1	0	0	0	0	25	14	1	0	0	0	0	0	0
0 - 12	166	0	0	10	6	0	1	2	94	41	11	1	0	0	0	0	0
13 - 19	389	2	1	9	1	0	1	6	188	155	9	8	3	0	1	4	1
20 - 29	508	4	1	17	6	2	0	20	239	187	24	1	1	0	4	2	0
30 - 39	355	1	1	33	6	0	2	12	188	91	18	1	0	0	2	0	0
40 - 49	318	4	4	33	4	0	1	8	168	72	20	0	1	1	1	1	0
50 - 59	318	1	10	39	10	0	4	11	171	48	20	0	2	0	2	0	0
60 - 69	197	4	12	23	4	1	1	7	110	13	10	4	5	1	0	0	2
70 - 79	80	1	3	10	1	0	0	0	49	4	8	0	4	0	0	0	0
80 and Over	13	0	2	1	0	0	1	0	6	1	1	0	0	0	0	0	1
Unknown	167	0	6	18	5	2	5	11	64	22	8	5	5	5	0	0	11



**Table 28 • NATURE OF PRIMARY INJURY TYPE BY AREA OF INJURY 2018**

	All Areas	Arm	Body	Foot	Hand	Head	Leg	Neck	Trunk	Unknown
<b>All primary injury types</b>	2511	196	242	110	99	619	519	61	503	162
Amputation	25	1	0	3	16	0	4	0	0	1
Broken bone	463	41	1	25	24	69	145	8	136	14
Burn	83	11	6	2	2	6	33	0	7	16
Carbon monoxide	8	0	8	0	0	0	0	0	0	0
Concussion	243	0	0	0	0	243	0	0	0	0
Dislocation	52	32	0	2	1	0	16	0	0	1
Electric shock	0	0	0	0	0	0	0	0	0	0
Hypothermia	191	0	191	0	0	0	0	0	0	0
Internal organ injury	123	0	0	0	0	8	0	0	110	5
Laceration	571	47	2	52	33	213	160	12	33	19
Scrape/bruise	333	30	11	7	13	64	98	5	64	41
Shock	9	0	9	0	0	0	0	0	0	0
Spinal cord Injury	40	0	0	0	0	0	0	5	35	0
Sprain/strain	126	17	8	14	7	0	30	15	29	6
Other	7	1	2	0	0	0	3	0	1	0
Unknown	237	16	4	5	3	16	30	16	88	59

**Figure 10 NUMBER OF INJURED VICTIMS UNDER AGE 18 BY AGE AND INJURY TYPE ON PERSONAL WATERCRAFT, 2018**



# **CASUALTY DATA**

## Explanation of Casualty Data Section

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

### **Deaths, Injuries & Accidents by Year, 1997-2018 (Figure 11 & Table 29, Page 55)**

This figure and table document the number of accidents and casualties from 1997-2018.

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

This table provides accident, casualty, and damage information by state for the year 2018. Accidents are broken down into three levels of severity— fatal accidents, non-fatal injury accidents, and property damage only accidents. This table also provides the number of casualties and property damage by state.

### **Distribution of Recreational Boating Deaths by State (Figure 12, Page 57)**

This figure provides the percentage that each state contributed to the national death count. So, for instance, Michigan had 22 deaths. Out of the total national death count of 633, Michigan contributed 3.5% ( $(22/633) \times 100$ ) of deaths to the national count. Please note that percentages have been rounded.

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

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

### **Annual Recreational Boating Fatality Rates, 1997-2018 (Figure 13 & Table 31, Page 61)**

This table and accompanying figure provide two fatality rates for years 1997-2018. 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 2018 Fatality Rate (Figure 14, Page 62)**

This figure displays states that are color-coded depending on their fatality rate which is expressed as the number of deaths that occurred in that state per 100,000 vessels that that state registered. It is important to note that not all states register the same types of vessels which could skew the fatality rates provided. Please see Table 38, Recreational Registration Data by State 2017-2018 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, 2014-2018 (Table 32, Page 63)**

This table examines the number of accidents, fatal accidents, and fatalities by state for years 2014-2018.

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

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

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

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

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

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



Figure 11 DEATHS, INJURIES, & ACCIDENTS BY YEAR, 1997-2018

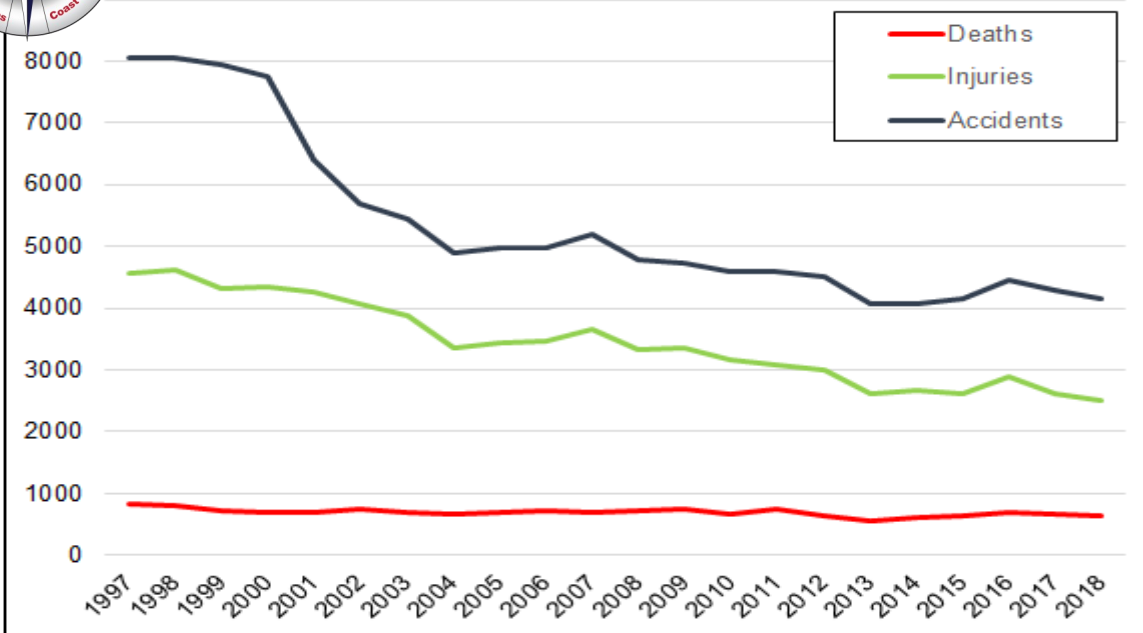


Table 29 • DEATHS, INJURIES, & ACCIDENTS BY YEAR, 1997-2018

Year	Deaths	Injuries	Accidents
1997	821	4555	8047
1998	815	4612	8061
1999	734	4315	7931
2000	701	4355	7740
2001*	681	4274	6419
2002	750	4062	5705
2003	703	3888	5438
2004	676	3363	4904
2005	697	3451	4969
2006	710	3474	4967
2007	685	3673	5191
2008	709	3331	4789
2009	736	3358	4730
2010	672	3153	4604
2011	758	3081	4588
2012	651	3000	4515
2013	560	2620	4062
2014	610	2678	4064
2015	626	2613	4158
2016	701	2903	4463
2017	658	2629	4291
2018	633	2511	4145

\* 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 2018

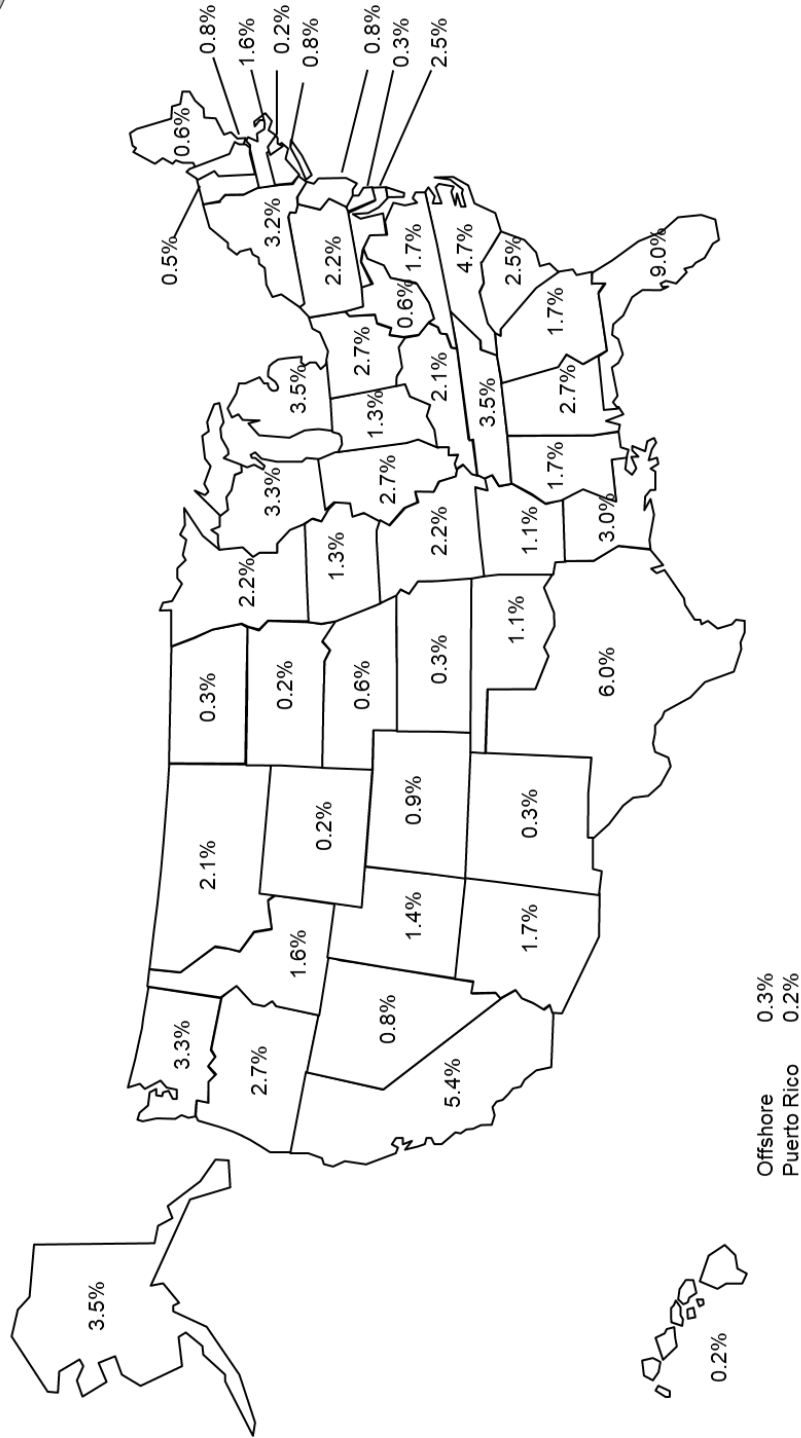
	Number of Accidents				Persons Involved		Damages
	Total	Fatal	Non-Fatal Injury	Property Damage	Deaths	Injured	
<b>Totals</b>	4145	565	1646	1934	633	2511	\$45,902,204.15
AK	22	17	2	3	22	7	\$36,500.00
AL	66	13	17	36	17	34	\$855,500.00
AR	60	7	24	29	7	34	\$454,720.00
AZ	129	6	40	83	11	74	\$2,276,795.00
CA	322	33	156	133	34	207	\$1,970,082.30
CO	28	6	15	7	6	16	\$50,071.00
CT	39	4	16	19	5	25	\$572,751.10
DC	2	0	1	1	0	1	\$410,000.00
DE	23	2	8	13	2	13	\$781,689.00
FL	607	54	193	360	57	297	\$7,136,932.29
GA	104	9	55	40	11	77	\$340,790.73
HI	8	1	3	4	1	5	\$378,380.00
IA	31	8	15	8	8	19	\$41,146.35
ID	44	9	22	13	10	25	\$510,935.00
IL	67	16	24	27	17	37	\$1,070,661.54
IN	43	8	23	12	8	31	\$151,908.00
KS	22	2	10	10	2	13	\$69,500.00
KY	41	13	12	16	13	21	\$257,966.38
LA	95	17	47	31	19	77	\$457,225.28
MA	77	10	26	41	10	45	\$767,403.51
MD	122	13	69	40	16	85	\$1,122,921.54
ME	43	4	15	24	4	17	\$280,670.00
MI	119	20	48	51	22	80	\$1,103,041.00
MN	77	13	36	28	14	56	\$432,460.46
MO	122	12	64	46	14	99	\$1,273,910.23
MS	31	9	13	9	11	21	\$136,050.00
MT	19	9	6	4	13	9	\$144,900.00
NC	182	27	72	83	30	108	\$4,128,181.00
ND	13	2	2	9	2	4	\$78,360.00
NE	20	4	10	6	4	17	\$72,300.00
NH	39	4	12	23	5	16	\$1,296,159.44
NJ	116	5	32	79	5	65	\$162,999.00
NM	24	2	8	14	2	14	\$232,444.00
NV	53	5	28	20	5	41	\$622,332.00
NY	143	17	58	68	20	93	\$974,380.36
OH	126	15	39	72	17	55	\$2,920,776.30
OK	36	5	14	17	7	25	\$449,150.00
OR	65	16	23	26	17	46	\$540,041.00
PA	63	13	29	21	14	35	\$212,609.57
RI	26	1	6	19	1	13	\$311,200.00
SC	130	15	56	59	16	80	\$1,088,926.00
SD	12	1	3	8	1	7	\$201,512.00
TN	109	22	43	44	22	74	\$1,388,802.00
TX	204	35	85	84	38	123	\$1,800,266.47
UT	81	8	32	41	9	57	\$454,401.00
VA	80	9	31	40	11	46	\$458,962.00
VT	6	3	1	2	3	3	\$52,000.00
WA	94	19	33	42	21	47	\$1,229,463.00
WI	106	15	48	43	21	78	\$608,769.30
WV	16	3	6	7	4	7	\$31,394.00
WY	8	1	5	2	1	10	\$42,300.00
AS	0	0	0	0	0	0	\$0.00
CNMI	0	0	0	0	0	0	\$0.00
GU	4	0	0	4	0	0	\$36,100.00
PR	4	1	2	1	1	4	\$1,000.00
VI	0	0	0	0	0	0	\$0.00
Atlantic Ocean*	10	1	3	6	1	6	\$1,492,720.00
Gulf of Mexico*	7	1	3	3	1	8	\$880,895.00
Pacific Ocean*	5	0	2	3	0	4	\$1,048,850.00

\*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.



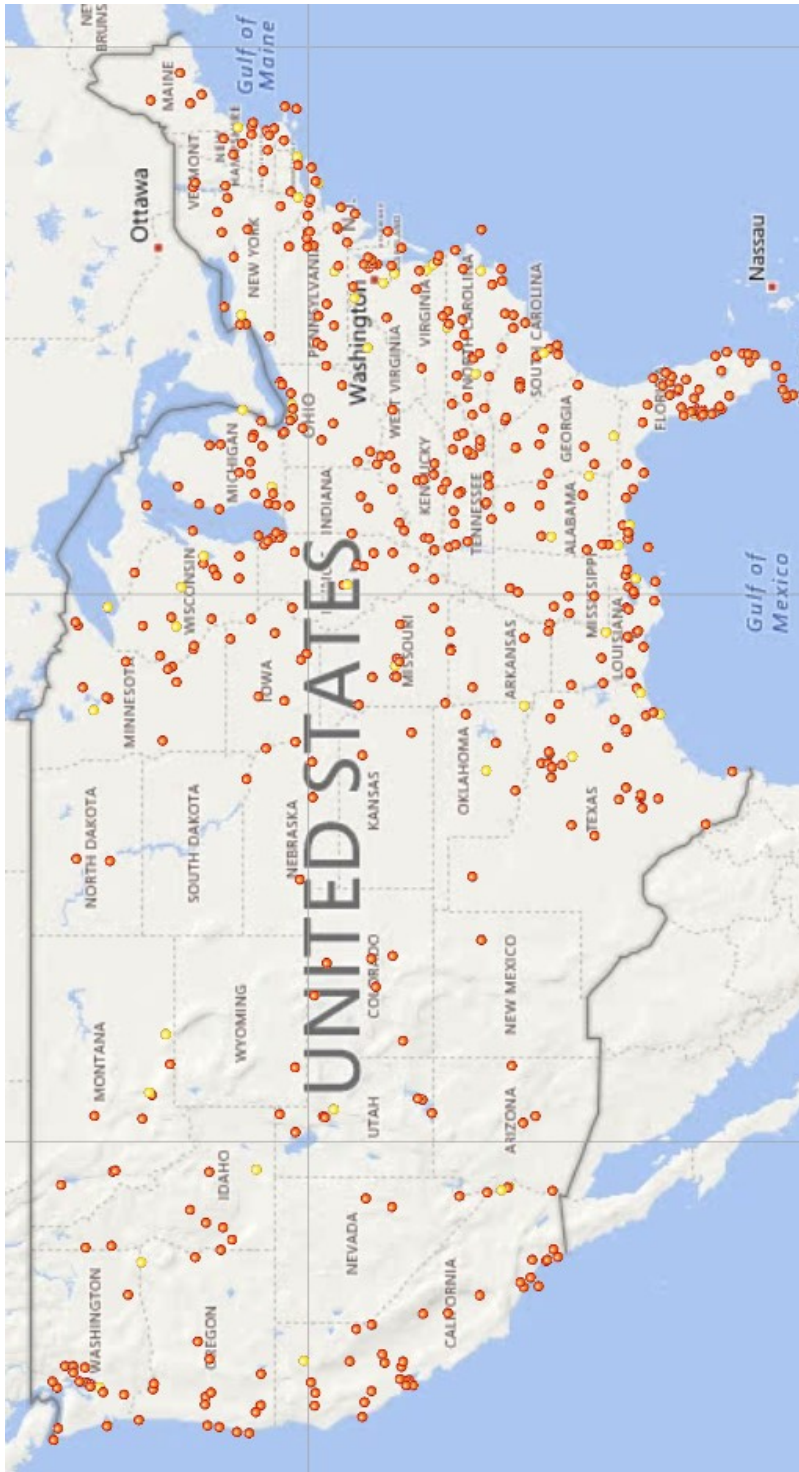


Figure 12 DISTRIBUTION OF 2018 DEATHS BY STATE



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

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



Plots are color-coded whereby red dots indicate a single-fatality accident and yellow dots indicate an accident in which more than one person died.

Figure 12b • FATAL ACCIDENTS BY LOCATION– ALASKA



Figure 12c • FATAL ACCIDENTS BY LOCATION– HAWAII



Plots are color-coded whereby red dots indicate a single-fatality accident and yellow dots indicate an accident in which more than one person died.

Figure 12d • FATAL ACCIDENTS BY LOCATION- PUERTO RICO



Plots are color-coded whereby red dots indicate a single-fatality accident and yellow dots indicate an accident in which more than one person died.



Figure 13 ANNUAL RECREATIONAL BOATING FATALITY RATES, 1997-2018

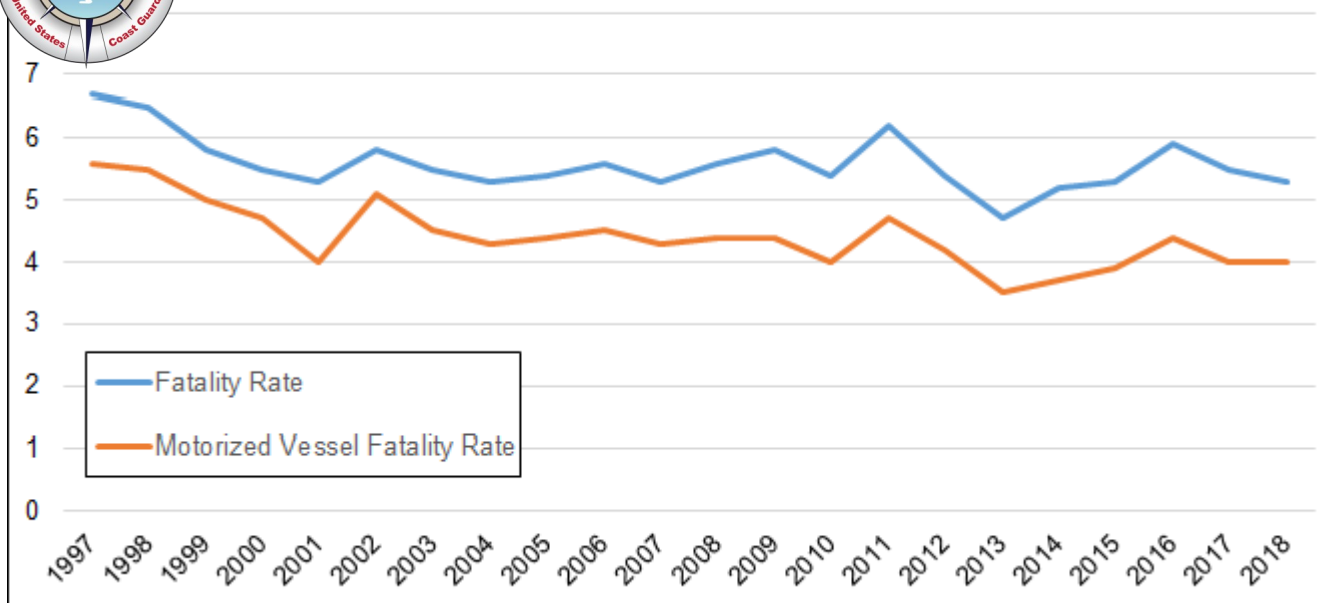
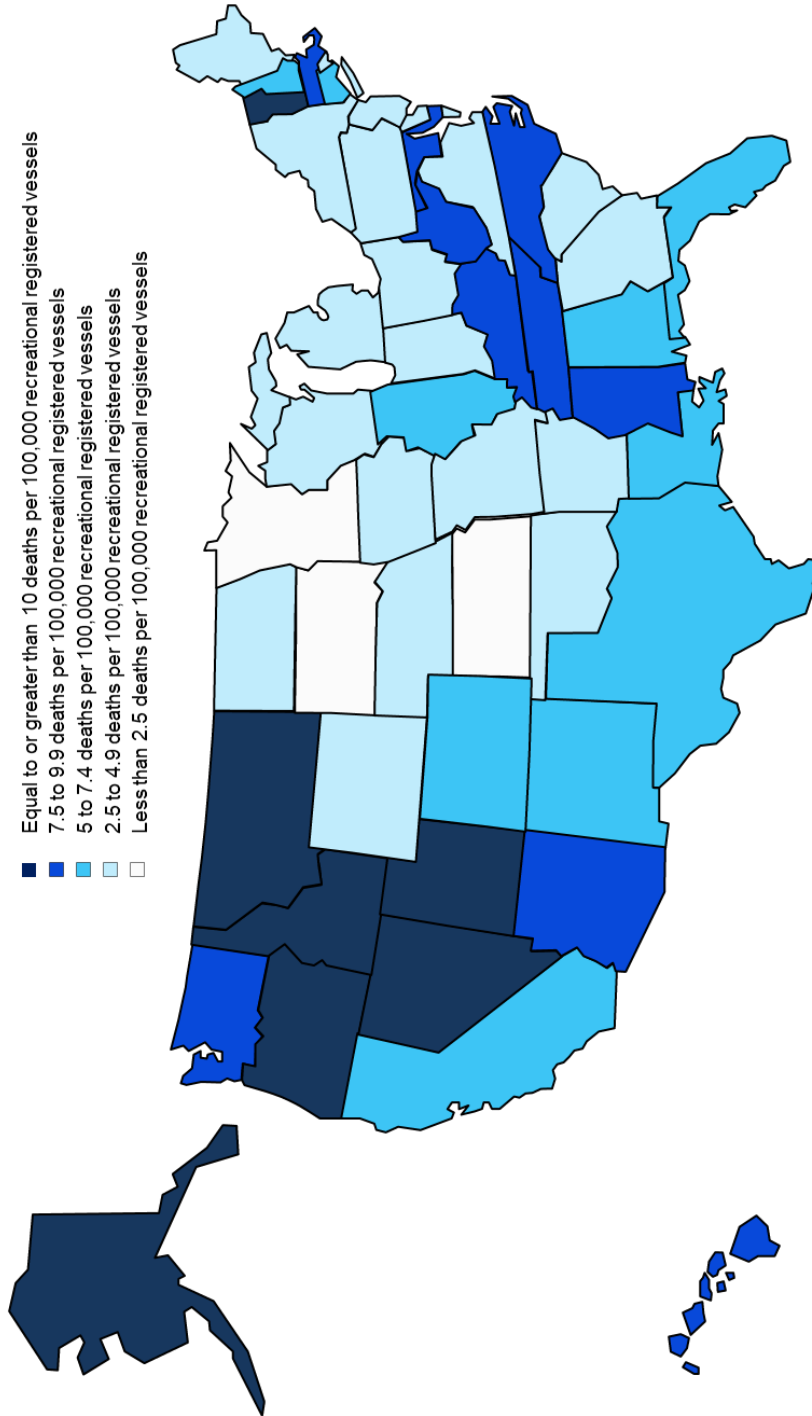


Table 31 • ANNUAL RECREATIONAL BOATING FATALITY RATES 1997-2018						
	All Deaths	All Registered Vessels	Fatality Rate	Motorized Vessel Deaths	Registered Motorized Vessels	Motorized Vessel Fatality Rate
1997	821	12,312,982	6.7	645	11,591,194	5.6
1998	815	12,565,930	6.5	637	11,637,361	5.5
1999	734	12,738,271	5.8	586	11,811,562	5.0
2000	701	12,782,143	5.5	543	11,648,769	4.7
2001	681	12,876,346	5.3	484	12,100,439	4.0
2002	750	12,854,054	5.8	612	11,918,688	5.1
2003	703	12,794,616	5.5	536	11,946,576	4.5
2004	676	12,781,476	5.3	515	11,878,783	4.3
2005	697	12,942,414	5.4	528	11,998,728	4.4
2006	710	12,746,126	5.6	535	11,802,419	4.5
2007	685	12,875,568	5.3	515	11,966,627	4.3
2008	709	12,692,892	5.6	518	11,841,281	4.4
2009	736	12,721,541	5.8	522	11,834,872	4.4
2010	672	12,438,926	5.4	469	11,597,326	4.0
2011	758	12,173,935	6.2	527	11,326,848	4.7
2012	651	12,101,936	5.4	476	11,226,268	4.2
2013	560	12,013,496	4.7	391	11,128,052	3.5
2014	610	11,804,002	5.2	411	10,960,861	3.7
2015	626	11,867,049	5.3	434	11,034,479	3.9
2016	701	11,861,811	5.9	481	11,005,841	4.4
2017	658	11,961,568	5.5	440	11,090,600	4.0
2018	633	11,852,969	5.3	441	10,994,900	4.0

**Figure 14 STATES CODED BY THEIR 2018 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 2014-2018															
	Total Number of Accidents					Fatal Accidents					Deaths				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
<b>Totals</b>	4064	4158	4463	4291	4145	548	569	624	599	565	610	626	701	658	633
Alabama	71	79	46	70	66	12	17	12	18	13	13	21	14	21	17
Alaska	18	25	26	15	22	10	7	14	13	17	11	7	19	20	22
Arizona	87	97	90	123	129	7	6	5	11	6	7	6	5	13	11
Arkansas	54	49	47	64	60	7	9	9	11	7	8	9	10	11	7
California	379	369	386	350	322	29	41	43	49	33	38	48	47	50	34
Colorado	57	36	43	32	28	12	8	11	6	6	12	8	12	6	6
Connecticut	40	58	47	49	39	5	6	3	8	4	5	6	3	9	5
Delaware	15	13	23	23	23	1	0	1	3	2	1	0	1	3	2
DC	2	0	2	1	2	0	0	0		0	0	0	0	0	0
Florida	581	671	684	723	607	62	49	59	60	54	70	52	70	66	57
Georgia	92	85	112	102	104	12	19	15	12	9	13	22	22	14	11
Hawaii	9	12	14	15	8	3	5	6	3	1	3	5	8	3	1
Idaho	43	39	50	46	44	10	9	8	13	9	10	13	10	16	10
Illinois	84	66	74	84	67	17	11	9	15	16	22	11	9	15	17
Indiana	40	43	40	57	43	9	5	6	7	8	9	5	7	8	8
Iowa	33	36	37	40	31	6	3	7	4	8	7	3	7	4	8
Kansas	17	25	32	29	22	6	2	7	2	2	6	2	7	2	2
Kentucky	46	41	46	41	41	8	12	8	12	13	9	20	8	13	13
Louisiana	113	87	112	106	95	18	20	23	19	17	18	22	24	19	19
Maine	35	32	49	49	43	5	7	9	11	4	5	8	9	13	4
Maryland	130	146	150	147	122	10	20	11	6	13	12	21	16	6	16
Massachusetts	82	89	92	66	77	5	5	13	10	10	6	5	15	10	10
Michigan	97	90	125	116	119	18	22	33	19	20	19	24	38	20	22
Minnesota	50	87	96	105	77	14	16	17	13	13	14	18	17	14	14
Mississippi	25	30	43	34	31	2	7	10	6	9	3	10	11	6	11
Missouri	142	109	137	124	122	13	17	14	10	12	14	17	16	10	14
Montana	14	14	23	9	19	3	6	5	2	9	3	6	5	2	13
Nebraska	26	32	22	27	20	1	4	2	4	4	1	4	2	4	4
Nevada	47	38	48	35	53	7	5	4	4	5	11	5	4	4	5
New Hampshire	44	53	76	49	39	1	4	8	5	4	1	4	9	5	5
New Jersey	111	122	109	106	116	3	7	4	4	5	3	8	5	4	5
New Mexico	13	10	16	18	24	0	0	2	5	2	0	0	2	5	2
New York	175	174	188	167	143	27	15	20	19	17	27	16	22	22	20
North Carolina	124	162	143	117	182	22	18	22	15	27	26	20	23	15	30
North Dakota	11	11	15	15	13	4	2	1	4	2	5	2	1	4	2
Ohio	100	100	113	117	126	15	13	12	20	15	22	13	12	20	17
Oklahoma	50	58	44	38	36	6	11	5	7	5	6	13	5	10	7
Oregon	61	65	82	60	65	7	15	17	11	16	7	15	19	12	17
Pennsylvania	66	52	55	69	63	20	4	9	15	13	21	4	11	15	14
Rhode Island	40	37	36	31	26	3	1	0	3	1	3	1	0	4	1
South Carolina	124	123	136	151	130	13	15	20	12	15	14	17	23	13	16
South Dakota	8	15	20	17	12	1	4	4		1	1	4	5	0	1
Tennessee	111	107	116	93	109	13	13	17	14	22	14	13	18	16	22
Texas	167	154	176	170	204	34	39	48	51	35	39	44	53	63	38
Utah	80	79	94	58	81	5	5	5	3	8	5	5	5	3	9
Vermont	5	4	4	3	6	1	0	1	3	3	1	0	1	3	3
Virginia	60	70	83	72	80	15	9	19	10	9	17	9	21	10	11
Washington	122	107	98	109	94	22	28	18	15	19	22	29	18	15	21
West Virginia	24	11	24	12	16	3	2	5	3	3	3	2	5	3	4
Wisconsin	102	103	103	105	106	9	19	16	22	15	9	20	20	25	21
Wyoming	11	8	8	10	8	4	0	3	5	1	4	0	3	5	1
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	2	4	0	2	4	2	0	0	0	0	3	0	0	0	0
Puerto Rico	3	5	6	3	4	2	4	1	1	1	2	5	1	3	1
Virgin Islands	2	2	0	0	0	0	1	0	0	0	0	2	0	0	0
*AT	10	16	8	8	10	1	0	2	1	1	1	0	2	1	1
*GM	4	5	8	2	7	0	2	1	0	1	0	2	1	0	1
*PC	5	3	6	7	5	3	0	0	0	0	4	0	0	0	0

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











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

Primary Injury	Number of Injuries	Airboat	Auxiliary sailboat	Cabin motorboat	Canoe	Houseboat	Inflatable	Kayak	Open motorboat	Personal watercraft	Pontoon	Rowboat	Sailboat (only)	Sailboat (unknown)	Standup paddleboard	Other	Unknown
Amputation	25	0	2	2	0	0	0	0	14	3	4	0	0	0	0	0	0
Broken bone	463	9	8	21	4	0	1	4	221	176	15	0	2	0	2	0	0
Burns	83	0	2	34	0	0	0	0	38	7	0	0	0	0	0	0	2
Carbon monoxide	8	0	0	6	0	0	0	0	2	0	0	0	0	0	0	0	0
Concussion	243	2	7	18	2	0	1	3	130	68	8	0	1	1	0	0	2
Dislocation	52	0	0	0	3	0	3	1	21	17	6	0	1	0	0	0	0
Electric shock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hypothermia	191	0	3	8	23	1	1	45	66	6	0	13	10	3	3	5	4
Internal organ injury	123	1	1	7	5	0	1	6	54	36	7	1	2	0	1	1	0
Laceration	571	3	7	36	0	3	3	7	335	113	57	0	2	0	3	1	1
Scrape/bruise	333	2	6	22	4	0	3	4	161	109	14	6	0	1	1	0	0
Shock	9	0	0	3	0	0	0	1	5	0	0	0	0	0	0	0	0
Spinal cord injury	40	0	1	0	0	0	0	0	26	12	0	0	0	0	0	0	1
Sprain/strain	126	0	1	13	0	0	3	0	64	34	9	0	2	0	0	0	0
Other	7	0	2	1	1	0	0	1	2	0	0	0	0	0	0	0	0
Unknown	237	0	0	22	1	1	0	5	138	53	9	0	1	2	0	0	5
<b>All Injuries</b>	<b>2511</b>	<b>17</b>	<b>40</b>	<b>193</b>	<b>43</b>	<b>5</b>	<b>16</b>	<b>77</b>	<b>1277</b>	<b>634</b>	<b>129</b>	<b>20</b>	<b>21</b>	<b>7</b>	<b>10</b>	<b>7</b>	<b>15</b>



**Table 35 - NUMBER OF FATAL VICTIMS BY LIFE JACKET WEAR, CAUSE OF DEATH & VESSEL TYPE 2018**

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	3	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0
	No	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unknown	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Cardiac arrest	Yes	6	0	0	0	1	0	0	0	3	2	0	0	0	0	0	0	0
	No	10	0	0	0	0	0	0	0	9	0	0	1	0	0	0	0	0
	Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Drowning	Yes	69	0	1	0	6	0	11	18	26	3	0	2	1	0	1	0	0
	No	356	4	6	11	31	2	5	46	185	8	29	16	3	0	4	6	0
	Unknown	24	0	0	2	1	0	0	7	7	0	1	2	0	0	0	0	4
Hypothermia	Yes	8	0	0	0	0	0	0	5	2	1	0	0	0	0	0	0	0
	No	5	0	0	0	0	0	0	2	1	0	1	0	0	0	0	1	0
	Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	Yes	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	No	1	0	0	0	0	0	0	0	1	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	37	0	0	0	0	0	1	0	12	24	0	0	0	0	0	0	0
	No	55	1	1	8	1	0	0	0	41	0	3	0	0	0	0	0	0
	Unknown	5	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	1
Unknown	Yes	6	0	1	0	0	0	0	1	2	2	0	0	0	0	0	0	0
	No	30	0	2	1	3	1	2	2	17	0	1	0	0	0	0	0	1
	Unknown	12	0	0	3	1	0	0	2	3	0	0	0	0	0	0	0	3
<b>All Causes</b>		<b>633</b>	<b>5</b>	<b>11</b>	<b>33</b>	<b>44</b>	<b>3</b>	<b>19</b>	<b>84</b>	<b>311</b>	<b>42</b>	<b>35</b>	<b>21</b>	<b>4</b>	<b>0</b>	<b>5</b>	<b>7</b>	<b>9</b>

# **REGISTRATION DATA**

### Explanation of Registration Data Section

The following section contains five tables and figures that examine boat registration information. Registered vessels are those vessels that are required to be recorded by a state, which includes numbered vessels and other forms of registration. Not all states have the same registration requirements. While some states may only register vessels with a motor, others may register sailboats, canoes, kayaks, and rowboats in addition to those vessels with a motor.

#### **Recreational Vessel Registration by Year, 1980-2018 (Table 36 & Figure 15, Page 69)**

This table provides information about recreational vessel registration for each year from 1980-2018. The accompanying figure displays a trend line from 1980-2018.

#### **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.

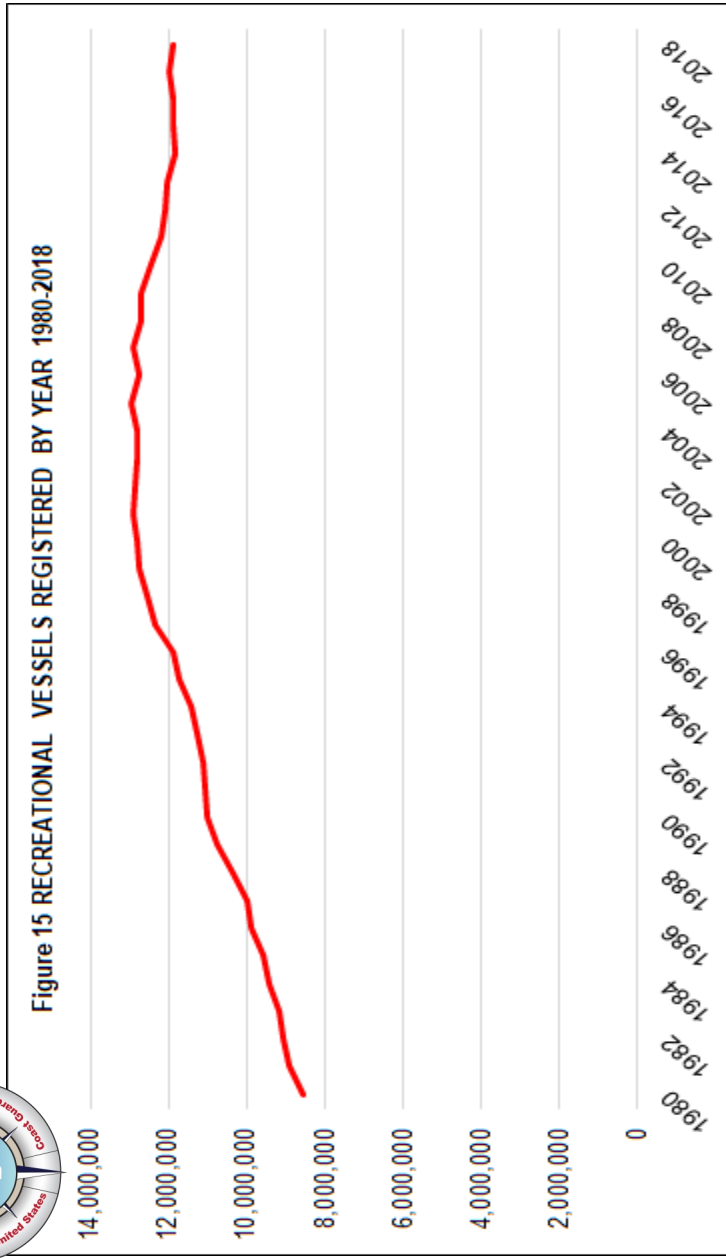
#### **Registration Data by State (Table 38, Page 71)**

This table examines recreational vessel registration, deaths, and fatality rates by state for years 2017 and 2018. 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 2018 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 670,102 vessels. Out of the total national registration of 11,852,969 California contributed 5.7%  $((670,102/11,852,969) \times 100)$  of registered vessels. Please note that percentages have been rounded.

Table 36 - RECREATIONAL VESSELS REGISTERED BY YEAR, 1980-2018	
Year	Registered Vessels
1980	8,577,857
1981	8,905,097
1982	9,073,972
1983	9,165,094
1984	9,420,011
1985	9,589,483
1986	9,876,197
1987	9,963,696
1988	10,362,613
1989	10,777,370
1990	10,996,253
1991	11,068,440
1992	11,132,386
1993	11,282,736
1994	11,429,585
1995	11,734,710
1996	11,877,938
1997	12,312,982
1998	12,565,930
1999	12,738,271
2000	12,782,143
2001	12,876,346
2002	12,854,054
2003	12,794,616
2004	12,781,476
2005	12,942,414
2006	12,746,126
2007	12,875,568
2008	12,692,892
2009	12,721,541
2010	12,438,926
2011	12,173,935
2012	12,101,936
2013	12,013,496
2014	11,804,002
2015	11,867,049
2016	11,861,811
2017	11,961,568
2018	11,852,969





**Table 37 • RECREATIONAL VESSEL REGISTRATION BY LENGTH AND MEANS OF PROPULSION 2018**

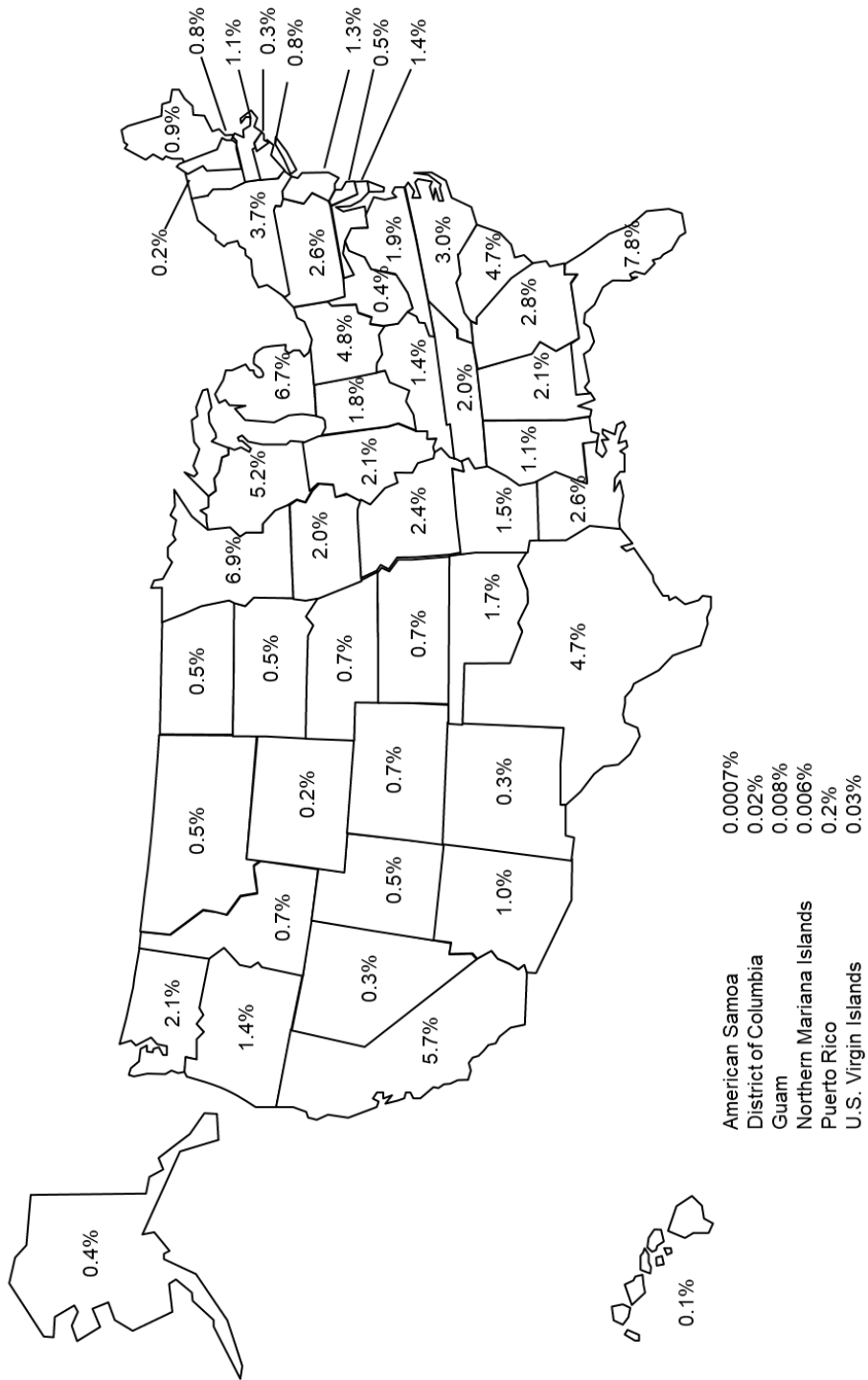
<b>MECHANICALLY PROPELLED</b>	<b>10,994,900</b>
Under 16 feet	4,084,558
16 to less than 26 feet	6,334,612
26 to less than 40 feet	492,944
40 to 65 feet	71,378
Over 65 feet	11,408
<b>NOT MECHANICALLY PROPELLED</b>	<b>858,069</b>
Rowboats	100,633
Sailboats	102,360
Paddlecraft	531,879
Other	123,197
<b>TOTAL</b>	<b>11,852,969</b>

**Table 38 • RECREATIONAL VESSEL REGISTRATION DATA BY STATE 2017-2018**

	2018			2017			Scope of Current Boat Registration System
	Registration	Deaths	Fatality Rate	Registration	Deaths	Fatality Rate	
	11,852,969	633	5.3	11,961,568	658	5.5	
AK	48,829	22	45.1	50,044	20	40.0	All undocumented powerboats
AL	244,619	17	6.9	266,157	21	7.9	All motorboats, sailboats and rental boats
AR	172,112	7	4.1	189,695	11	5.8	All watercraft
AZ	123,223	11	8.9	123,177	13	10.6	All motorized watercraft
CA	670,102	34	5.1	745,641	50	6.7	All motorboats; sailboats over 8 feet in length
CO	84,083	6	7.1	84,936	6	7.1	All watercraft powered by motor or sail - sailboards exempt
CT	90,728	5	5.5	92,058	9	9.8	All motorboats; sailboats 19.5 feet or more in length
DC	2,433	0	0.0	2,512	0	0.0	All watercraft
DE	55,047	2	3.6	58,557	3	5.1	All motorboats
FL	925,141	57	6.2	918,255	66	7.2	All motorboats
GA	330,853	11	3.3	338,210	14	4.1	All motorboats; sailboats 12 feet or more in length
HI	12,371	1	8.1	11,658	3	25.7	All motorboats; sailboats over 8 feet in length
IA	231,346	8	3.5	220,466	4	1.8	All watercraft with exceptions (a)
ID	86,801	10	11.5	84,015	16	19.0	All motorboats and sailboats
IL	245,621	17	6.9	250,776	15	6.0	All watercraft, except non-powered vessels on private waters
IN	211,287	8	3.8	219,870	8	3.6	All motorboats on public waterways
KS	82,700	2	2.4	83,775	2	2.4	All motorboats and sailboats
KY	165,987	13	7.8	173,344	13	7.5	All motorboats, except electric motors 1 hp or less
LA	303,966	19	6.3	305,783	19	6.2	All motorboats; sailboats more than 12 feet in length
MA	132,440	10	7.6	134,538	10	7.4	All motorboats
MD	170,365	16	9.4	172,304	6	3.5	All motorboats
ME	111,681	4	3.6	109,774	13	11.8	All motorboats
MI	795,374	22	2.8	798,544	20	2.5	All watercraft with exceptions (b)
MN	819,317	14	1.7	825,658	14	1.7	All watercraft with exceptions (c)
MO	289,854	14	4.8	290,376	10	3.4	All motorboats; sailboats over 12 feet in length
MS	127,029	11	8.7	131,873	6	4.5	All motorboats and sailboats
MT	63,063	13	20.6	51,373	2	3.9	All motorboats; sailboats 12 feet or more in length
NC	359,361	30	8.3	358,171	15	4.2	All motorboats; sailboats more than 14 feet in length
ND	62,740	2	3.2	56,933	4	7.0	All watercraft
NE	88,622	4	4.5	87,865	4	4.6	All motorboats
NH	95,444	5	5.2	94,810	5	5.3	All motorboats; sailboats 12 feet or more in length
NJ	149,971	5	3.3	153,372	4	2.6	All watercraft with exceptions (d)
NM	32,505	2	6.2	33,340	5	15.0	All motorboats and sailboats
NV	40,930	5	12.2	43,129	4	9.3	All motorboats
NY	444,103	20	4.5	444,710	22	4.9	All motorboats; includes commercial vessel registrations.
OH	573,050	17	3.0	541,898	20	3.7	All watercraft
OK	198,478	7	3.5	202,594	10	4.9	All watercraft
OR	168,100	17	10.1	168,933	12	7.1	All motorboats; sailboats 12 feet or more in length
PA	306,781	14	4.6	313,478	15	4.8	All motorboats and certain non-powered craft (e)
RI	39,230	1	2.5	39,685	4	10.1	All motorboats and rowboats over 12 feet
SC	551,477	16	2.9	534,726	13	2.4	All watercraft
SD	58,896	1	1.7	59,525	0	0.0	All motorboats; all other boats over 12 feet in length
TN	239,313	22	9.2	248,599	16	6.4	All motorboats and sailboats
TX	562,424	38	6.8	565,422	63	11.1	All motorboats and sailboats 14 feet or more in length
UT	64,208	9	14.0	66,136	3	4.5	All motorboats and sailboats
VA	225,732	11	4.9	224,031	10	4.5	All motorboats
VT	28,690	3	10.5	28,852	3	10.4	All motorboats
WA	244,618	21	8.6	239,316	15	6.3	All motorboats with exceptions (f); sailboats >16 ft in length
WI	614,750	21	3.4	624,353	25	4.0	All motorboats; sailboats over 12 feet in length
WV	51,239	4	7.8	43,839	3	6.8	All motorboats
WY	26,656	1	3.8	26,963	5	18.5	All motorboats
AS	81	0	0.0	67	0	0.0	All watercraft
CNMI	705	0	0.0	400	0	0.0	All motorboats
GU	950	0	0.0	891	0	0.0	All motorboats 7 feet or more, personal watercraft, and sailboats
PR	24,489	1	4.1	21,682	3	13.8	All motorboats; vessels adapted to hold a motor
VI	3,054	0	0.0	4,479	0	0.0	All watercraft
Offshore		2			1		

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

Figure 16 DISTRIBUTION OF 2018 RECREATIONAL VESSEL REGISTRATION BY STATE





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

OMB Control Number: 1625-0003

Expires: 03/31/2019

**INSTRUCTIONS:** Use "Report required because" section below to determine if a report is required for your accident. If required, please have each vessel owner or operator involved in the accident submit a report to their state reporting authority. Each boat operator/owner involved in an accident should submit a separate report. For each question below, please provide answers if applicable and if known; otherwise leave blank.

**Privacy Act Notice**

**Authority:** 46 U.S.C. 6102 and 33 CFR 173 & 174 authorize the collection of information on boating accidents.  
**Purpose:** The Coast Guard uses this information for statistical purposes, chiefly to inform the public, to measure the Program's efforts, and to regulate issues relating to boating safety.  
**Routine Uses:** The Coast Guard shares this information within the agency, and if state and federal law permit it, to the public.

**REPORT SUBMISSION**

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

- At least one person in this accident *died*: If so, how many? \_\_\_\_\_
- At least one injured person in this accident *required or was in need of treatment beyond first aid*: If so, how many? \_\_\_\_\_
- At least one person in this accident *disappeared* and has not yet been recovered: If so, how many? \_\_\_\_\_
- All boat and other property *damage* (e.g., fishing/hunting gear) caused by this accident *totaled* (or likely totaled) \$2,000 or more:  
 Approximate value of damage to *your* boat: \$ \_\_\_\_\_  
 Approximate value of damage to *your* other property: \$ \_\_\_\_\_
- Your or another *boat* in this accident was (or likely was) a *total loss*

**To be submitted within:**

48 hours (if injury, disappearance or death)  
 10 days (if boat/property damage only)

To be submitted to: (Local State Reporting Authority)

**Phone:**

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

**For State Agency Use Only**

First Name	Last Name
------------	-----------

**Phone:**

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

- Boat Operator (required if possible)
- Boat Owner (if operator unable, or same as operator)
- Other (describe): \_\_\_\_\_

First Name	Last Name	Phone	<i>Primary Cause of Accident</i>
------------	-----------	-------	----------------------------------

**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	<b>DAMAGE TO YOUR BOAT:</b> Briefly summarize any damage to your boat
Nearest city/town	
County:      State:	

<b>YOUR BOAT – PEOPLE</b>	<b>DAMAGE TO YOUR OTHER PROPERTY: (NOT BOAT)</b> Briefly summarize any damage to your other property (not boat)
# people on board (including operator):	
# people being towed (e.g., on tubes, skis):	
# people wearing lifejackets (on board or towed):	
<b>OTHER BOATS INVOLVED IN ACCIDENT</b>	
# of other boats involved:	

USCG Boating Accident Report Form

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.					
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		Other (describe)			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.*

**INJURED PERSON**

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

**INJURY DETAILS**

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

**ACCIDENT DETAILS – YOUR BOAT – DEATHS/DISAPPEARANCES**

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

**PERSON WHO DIED/DISAPPEARED**

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

**DETAILS OF DEATH/DISAPPEARANCE**

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

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

**ACCIDENT DETAILS – YOUR BOAT OPERATOR**

OPERATOR INSTRUCTION		OPERATOR SAFETY MEASURES			
Boating safety instruction completed <i>(select all that apply)</i>		On board, prior to accident, was operator wearing:			
<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
--	---	--	---

**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/GENDER/PHONE**

Date of Birth <i>(mm/dd/yyyy)</i>	Age	Gender	<input type="checkbox"/> Male	<input type="checkbox"/> Female	Phone
--------------------------------------	-----	--------	-------------------------------	---------------------------------	-------

**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**

<b>Your signature</b>	<b>Date (mm/dd/yyyy)</b>
-----------------------	--------------------------

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.

**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		