

2016 RECREATIONAL BOATING STATISTICS

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U.S Department of Homeland Security
U.S. Coast Guard
Office of Auxiliary and Boating Safety





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FOREWORD

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

Recreational Boating Statistics 2016, the 58th 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 2016 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.

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

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2016 EXECUTIVE SUMMARY

- In 2016, the Coast Guard counted 4,463 accidents that involved 701 deaths, 2,903 injuries and approximately \$49 million dollars of damage to property as a result of recreational boating accidents.
 - The fatality rate was 5.9 deaths per 100,000 registered recreational vessels. This rate represents a 11.3% increase from last year's fatality rate of 5.3 deaths per 100,000 registered recreational vessels.
 - Compared to 2015, the number of accidents increased 7.3%, the number of deaths increased 12%, and the number of injuries increased 11.1%.
- Where cause of death was known, 80% of fatal boating accident victims drowned. Of those drowning victims with reported life jacket usage, 83% were not wearing a life jacket.
- 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 15% of deaths.
- Where instruction was known, 77% of deaths occurred on boats where the operator did not receive boating safety instruction. Only 13% percent of deaths occurred on vessels where the operator had received a nationally-approved boating safety education certificate.
- There were 171 accidents in which at least one person was struck by a propeller. Collectively, these accidents resulted in 24 deaths and 175 injuries.
- Operator inattention, operator inexperience, improper lookout, excessive speed, and machinery failure 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 (47%), personal watercraft (18%), and cabin motorboats (15%).
- Where data was known, the vessel types with the highest percentage of deaths were open motorboats (47%), kayaks (13%), and canoes (9%).
- The 11,861,811 recreational vessels registered by the states in 2016 represent a 0.04% decrease from last year when 11,867,049 recreational vessels were registered.



Table 1 • 2016 EXECUTIVE SUMMARY

TOP FIVE PRIMARY ACCIDENT TYPES						
Accident Rank	Accident Type	Number of Accidents		Number of Deaths	Number of Injuries	
1	Collision with recreational vessel	1051		38	708	
2	Collision with fixed object	565		63	432	
3	Flooding/swamping	470		90	156	
4	Grounding	413		13	246	
5	Capsizing	305		175	200	
VESSEL TYPES WITH THE TOP CASUALTY NUMBERS						
Casualty Rank	Type of Boat	Drownings	Other Deaths	Total Deaths	Total Injuries	Total Casualties
1	Open motorboat	228	95	323	1537	1860
2	Personal watercraft	13	33	46	675	721
3	Cabin motorboat	28	13	41	263	304
4	Canoe/kayak	130	22	152	124	276
5	Pontoon	38	9	47	120	167
LIFE JACKET WEAR BY TOP FIVE KNOWN CAUSES OF DEATH						
Known Cause of Death Rank	Cause of Death	Number of Deaths	Life Jacket			
			Worn	Not Worn	Unknown if worn	
1	Drowning	509	82	404	23	
2	Trauma	99	51	41	7	
3	Cardiac arrest	12	4	8	0	
4	Hypothermia	7	5	2	0	
5	Other	6	2	3	1	
TOP TEN KNOWN PRIMARY CONTRIBUTING FACTORS OF ACCIDENTS						
Accident Rank	Contributing Factor	Number of Accidents		Number of Deaths	Number of Injuries	
1	Operator inattention	597		45	373	
2	Operator inexperience	480		62	301	
3	Improper lookout	475		20	380	
4	Excessive Speed	360		39	275	
5	Machinery failure	323		9	117	
6	Alcohol use	282		87	264	
7	Weather	214		41	103	
8	Navigation rules violation	213		10	157	
9	Hazardous waters	205		80	97	
10	Force of wave/wake	160		7	137	

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 2016. 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 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.

Table 2 - NEWS MEDIA AND FEDERALLY-SOURCED ACCIDENTS AND CASUALTIES						
	Accidents	Deaths	Injuries	Vessel losses	Damages	Notes
AK	7	3	8	2	\$481,340.00	2 accidents on federal jurisdiction
AL	6	2	4	4	\$13,400.00	
AT	8	2	9	4	\$974,302.00	8 accidents offshore in the Atlantic Ocean
CA	9	1	18	5	\$930,755.00	
DC	1	0	0	0	\$3,000.00	
FL	8	3	5	2	\$0.00	1 accident on private waters
GA	6	4	5	2	\$4,795.00	
GM	8	1	4	3	\$419,611.00	8 accidents offshore in the Gulf of Mexico
IA	1	1	0	0	\$0.00	1 accident on private waters
IN	1	0	1	0	\$0.00	
LA	1	1	0	0	\$0.00	1 accident on private waters
MS	2	3	0	0	\$0.00	2 accidents on private waters
NC	1	0	1	0	\$0.00	
NH	1	0	0	1	\$129,684.00	
NJ	1	0	1	0	\$0.00	
NV	3	1	2	0	\$0.00	1 accident on private waters
NY	1	0	6	0	\$0.00	
OK	1	0	1	0	\$0.00	
PC	6	0	0	4	\$720,850.00	6 accidents offshore in the Pacific Ocean
PR	1	0	1	0	\$6,000.00	
TN	2	0	5	0	\$0.00	
TX	21	14	5	2	\$114,975.00	5 accidents on private waters
VT	1	0	3	0	\$3,895.00	
WA	1	1	1	0	\$0.00	
WY	2	2	0	0	\$0.00	2 accidents on federal jurisdiction
Nation	100	39	80	29	\$3,802,607.00	

Major Changes to the Publication

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

The sections "Overview of Statistics" and "Use of Statistics" have been updated to reflect additional detail.

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

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

Accident Reporting as Required by Federal Law

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

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

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

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

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

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

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

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

Casualty and Accident Reporting Guidelines

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

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

“Reportable” Boating Accidents

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

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

- Grounding, capsizing, sinking, or flooding/swamping.
- Falls in or overboard a vessel.
- Persons ejected from a vessel.
- Fire or explosions that occur while underway and while anchored, moored or docked if the fire resulted from the vessel or vessel equipment.
- Water-skiing or other mishap involving a towable device.
- Collision with another vessel or object.
- Striking a submerged object.
- A person struck by a vessel, propeller, propulsion unit, or steering machinery.
- Carbon monoxide exposure.
- Electrocutation due to stray current related to a vessel.

- Casualties while swimming from a vessel that is not anchored, moored or docked.
- Casualties where natural causes served as a contributing factor in the death of an individual but the determined cause of death was drowning.
- Casualties from natural phenomena such as interaction with marine life (i.e. carp causes casualty to person) and interaction with nature (i.e. mountain side falls onto vessel causing casualties).
- Casualties where a person falls off an anchored vessel.
- Casualties that result when a person departs an anchored, disabled vessel to make repairs, such as unfouling an anchor or cleaning out the intake of a jet-propelled vessel.

“Non-Reportable” Boating Accidents

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

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

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

Table 3 • NON-REPORTABLE SCENARIOS WITH THEIR CASUALTY COUNT					
	Accidents	Deaths	Injuries	Vessels Losses	Damages
Does not meet Coast Guard policy					
A person dies or is injured from natural causes while aboard a vessel where the vessel did not contribute to the casualty.	5	5	0	0	\$5,500.00
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.	10	7	4	0	\$0.00
A person dies, is injured, or is missing as a result of self-inflicted wounds, alcohol poisoning, gunshot wounds, or the ingestion of drugs, controlled substances or poison.	2	2	0	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.	3	3	0	0	\$0.00
Casualties or damage that occur during accidents that only involve seaplanes.	1	0	1	1	\$125,000.00
Casualties or damage that occur during accidents that only involve unmodified inner tubes.	4	3	1	1	\$25.00
Casualties or damage that occur when the only vessel(s) involved are being used solely for governmental, commercial or criminal activity.	161	13	112	11	\$1,037,274.74
Casualties or damage that occur when the only vessel(s) involved are foreign vessels and thus not subject to U.S. federal reporting requirements.	2	0	1	0	\$42,000.00
Casualties or damage that occur when the only vessel(s) involved are not numbered and are being used exclusively for racing.	2	2	2	3	\$15,000.00
Casualties that result from a person climbing aboard an anchored vessel from the water or swimming near an anchored vessel.	1	0	1	0	\$0.00
Casualties that result from falls from or on docked vessels or vessels that are moored to a permanent structure.	7	2	5	0	\$0.00
Casualty or damage that results when the vehicle used for trailering the vessel fails.	1	0	0	0	\$17,000.00
Fire or explosions on anchored, docked or moored boats where the cause of the fire was not attributed to the vessel or vessel equipment.	4	0	1	1	\$217,150.00
Property damage occurs or a person dies, is injured, or is missing as a result of a fire on shore or a pier that spreads to a vessel or vessels.	1	0	0	0	\$2,000.00
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.	6	0	1	2	\$21,500.00
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.	17	0	0	8	\$361,970.00
Property damage occurs to a docked or moored vessel due to theft or vandalism.	2	0	0	1	\$52,451.86
Property damage occurs to a docked or moored vessel or a person dies, is injured, or is missing from such a vessel as a result of storms, or unusual tidal or sea conditions; or when a vessel gets underway in those conditions in an attempt to rescue person.	33	0	2	10	\$284,988.99
Property damage occurs to, a person dies or is injured on, or a person is missing from a non-propelled houseboat or other vessel used primarily as a residence when such a vessel is not underway.	2	0	1	1	\$55,000.00
Does not meet federal reporting requirements	499	0	50	0	\$380,232.85
Total	763	37	182	39	\$2,617,093.44

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 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. Exposure data was most recently collected by the Coast Guard as part of a survey from 2011-2012.

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.

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

3) Comparisons with other sources.

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

- a. Time period. The statistics in this publication are based on calendar year 2016 accident data submitted by states as of 6 March 2017 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.

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 2012-2016 (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 2016. 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.

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

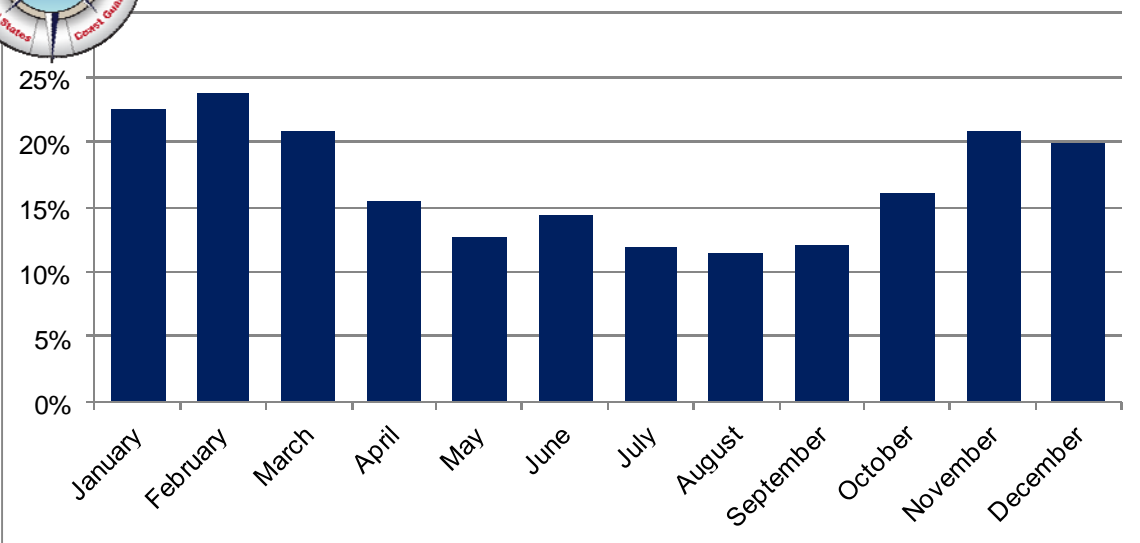


Table 4 • PERCENT OF ACCIDENTS THAT ARE FATAL BY MONTH

Month	Fatal Accidents	Non-Fatal Accidents	Total Accidents	Accidents Resulting in Deaths	Total Deaths
January	19	65	84	23%	25
February	21	67	88	24%	28
March	35	133	168	21%	39
April	40	219	259	15%	48
May	66	451	517	13%	70
June	105	623	728	14%	111
July	129	952	1081	12%	143
August	79	612	691	11%	84
September	50	361	411	12%	59
October	35	182	217	16%	40
November	30	114	144	21%	36
December	15	60	75	20%	18
Total	624	3839	4463	14%	701

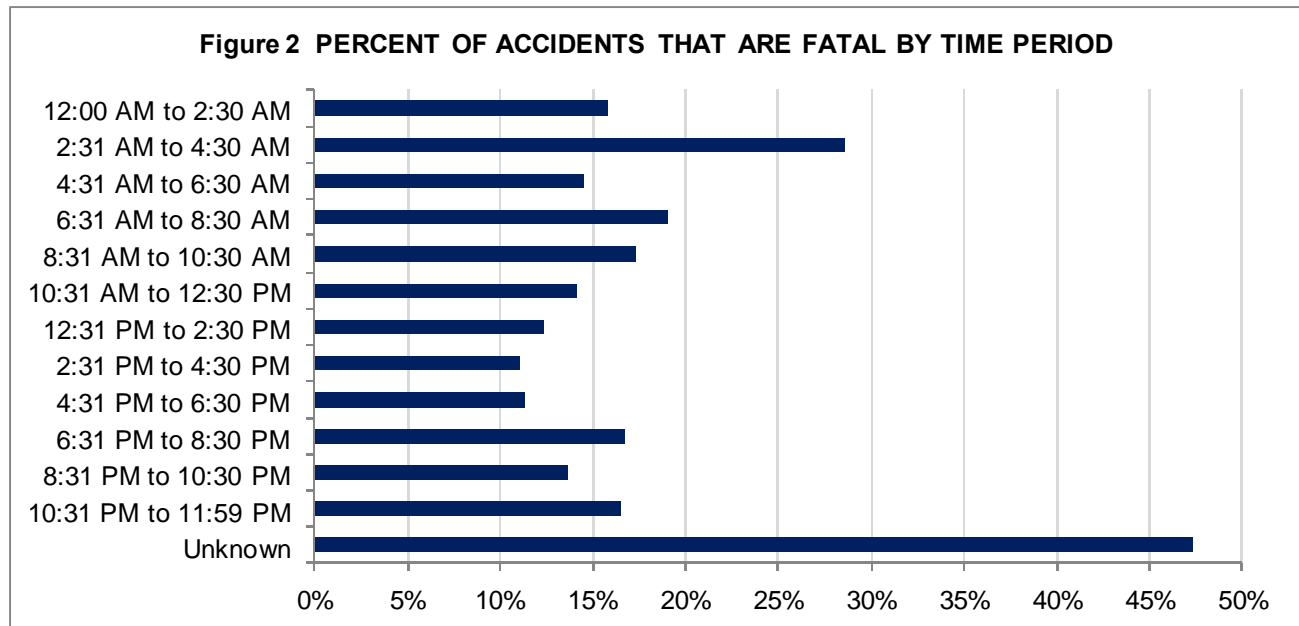




Table 5 • PRIMARY CONTRIBUTING FACTOR OF ACCIDENTS & CASUALTIES 2016

		Accidents	Deaths	Injuries
Operation of Vessel 2600 Accidents 285 Deaths 1908 Injuries	Alcohol use	282	87	264
	Drug use	10	9	2
	Excessive speed	360	39	275
	Failure to vent	33	0	38
	Improper lookout	475	20	380
	Inadequate onboard navigation lights	17	1	7
	Navigation rules violation	213	10	157
	Operator inattention	597	45	373
	Operator inexperience	480	62	301
	Restricted vision	71	5	54
	Sharp turn	59	7	54
	Starting in gear	3	0	3
Loading of Passengers or Gear 145 Accidents 60 Deaths 94 Injuries	Improper anchoring	30	2	13
	Improper loading	51	17	25
	Overloading	37	27	42
	People on gunwale, bow or transom	27	14	14
Failure of Boat or Boat Equipment 419 Accidents 20 Deaths 149 Injuries	Equipment failure	52	9	27
	Hull failure	44	2	5
	Machinery failure	323	9	117
Environment 660 Accidents 139 Deaths 381 Injuries	Congested waters	38	0	31
	Dam/lock	9	8	4
	Force of wave/wake	160	7	137
	Hazardous waters	205	80	97
	Missing/inadequate navigation aid	34	3	9
	Weather	214	41	103
Miscellaneous 639 Accidents 197 Deaths 371 Injuries	Carbon monoxide exposure	2	2	5
	Ignition of fuel or vapor	56	1	56
	Sudden medical condition	27	19	9
	Other	352	54	248
	Unknown	202	121	53
All categories combined		4463	701	2903



Table 6 • MACHINERY & EQUIPMENT PRIMARY CONTRIBUTING FACTOR OF ACCIDENTS & CASUALTIES 2016

		Accidents	Deaths	Injuries
Machinery Failure	Electrical system failure	52	0	6
	Engine failure	153	4	48
	Exhaust system failure	3	0	0
	Fuel system failure	30	1	24
	Shift failure	27	0	9
	Steering system failure	39	4	25
	Throttle failure	9	0	2
	Ventilation system failure	3	0	3
	Not specified	7	0	0
Equipment Failure	Auxiliary equipment failure	30	5	12
	Onboard navigation aid	0	0	0
	Sail dismasting	1	0	0
	Seat broke loose	8	2	9
	Other	11	2	6
	Not specified	2	0	0



Figure 3 PRIMARY CONTRIBUTING FACTOR OF ACCIDENTS 2016

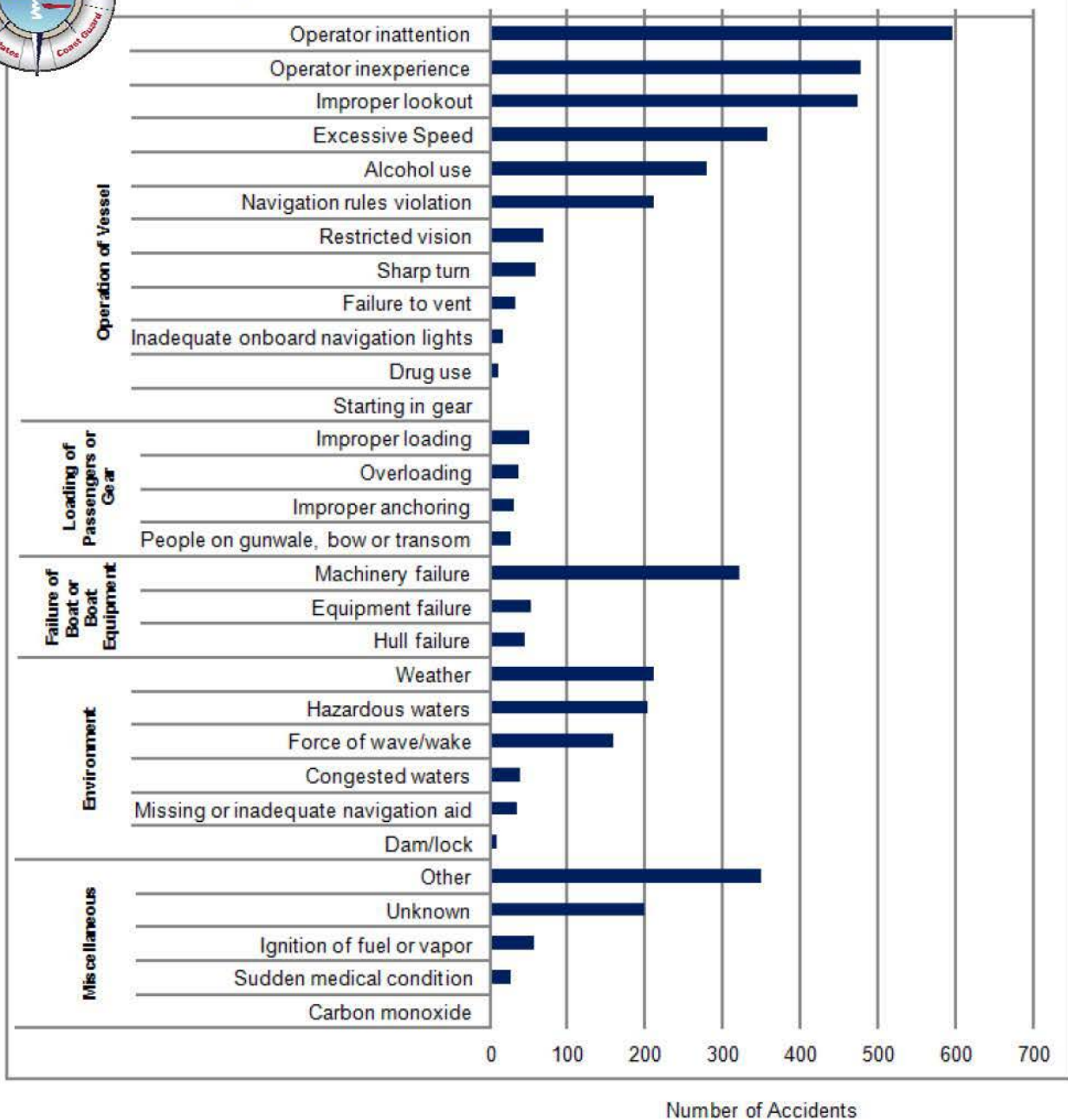




Figure 4 PRIMARY CONTRIBUTING FACTOR OF DEATHS 2016

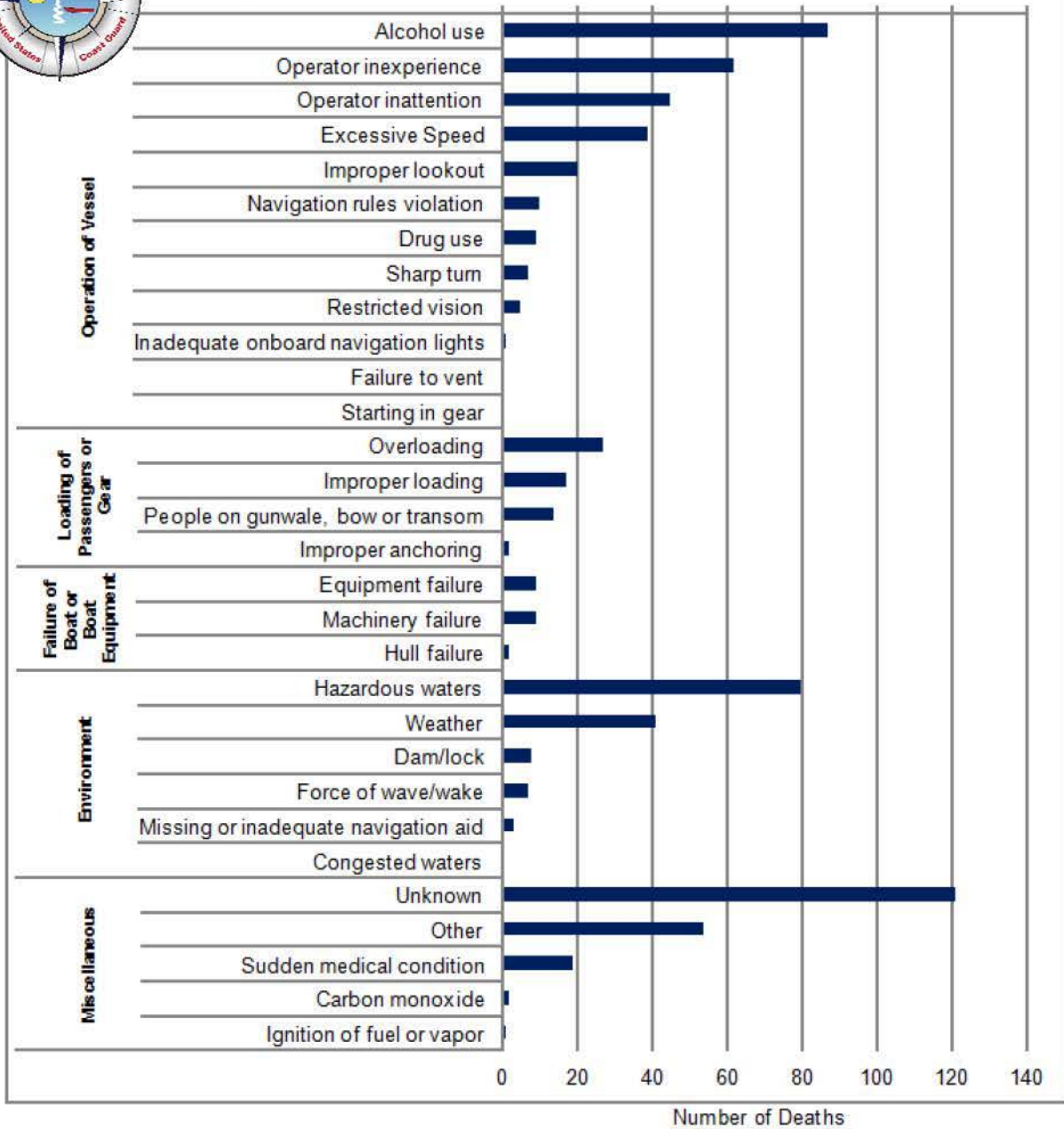




Figure 5 PRIMARY CONTRIBUTING FACTOR OF INJURIES 2016

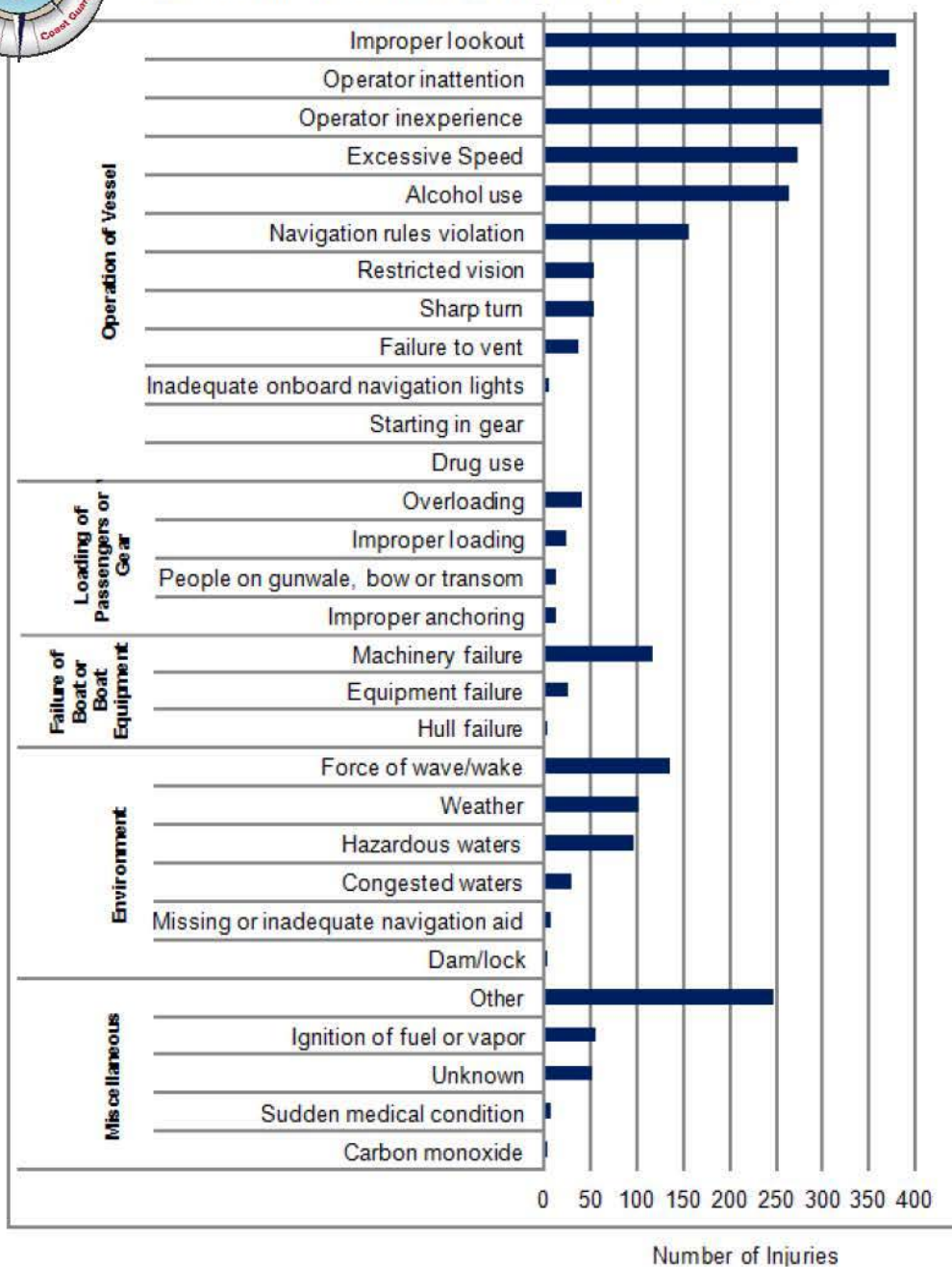



Table 7 - NUMBER OF VESSELS IN ACCIDENTS BY VESSEL TYPE & PRIMARY CONTRIBUTING FACTOR 2016



All vessels	5967	375	2	54	9	12	66	569	35	176	212	45	67	37	51	748	34	403	35	368	857	680	37	27	100	74	4	29	279	359	223	
Airboat	34	2	0	1	0	0	0	5	0	1	0	0	0	0	1	2	0	3	0	1	5	5	0	0	1	1	0	0	3	2	1	
Auxiliary sailboat	274	13	0	4	0	0	4	11	0	1	9	2	1	5	0	35	1	22	1	34	50	17	0	0	3	4	0	0	32	12	13	
Cabin motorboat	890	40	2	5	1	1	15	81	13	15	12	8	22	10	1	93	2	167	11	36	146	79	1	2	10	1	2	35	33	44		
Canoe	93	12	0	0	0	1	0	2	0	3	14	0	0	0	10	1	0	0	0	1	5	17	4	1	0	0	0	0	7	5	10	
Houseboat	87	3	0	0	0	0	6	2	0	0	0	1	0	0	0	1	1	12	0	3	14	13	0	1	1	0	0	0	21	5	3	
Inflatable	30	0	0	0	0	0	0	0	0	1	18	0	0	0	0	0	0	0	1	0	2	2	0	0	0	0	0	1	1	2	2	
Kayak	182	7	0	0	2	3	0	0	0	2	45	0	0	0	3	6	0	0	0	5	18	33	4	0	1	0	0	5	16	2	30	
Open motorboat	2719	199	0	25	6	32	267	14	108	95	25	30	21	30	388	29	148	19	126	360	209	25	16	63	34	2	14	119	237	72		
Personal watercraft	1072	41	0	13	0	0	5	157	5	30	4	2	9	0	1	162	0	24	2	117	176	252	0	0	10	28	0	3	6	18	7	
Pontoon	300	47	0	4	0	0	3	24	0	9	6	4	0	0	1	40	0	17	0	14	38	33	1	7	6	2	0	2	8	31	3	
Rowboat	43	2	0	0	0	1	1	1	0	1	3	1	0	1	3	8	0	0	0	1	6	1	1	0	1	0	0	1	3	2	6	
Sail (only)	64	4	0	1	0	0	1	0	0	2	0	0	5	0	0	4	0	4	0	2	14	6	0	0	1	4	0	0	13	0	3	
Sail (unknown)	6	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	
Standup paddleboard	20	2	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2	2	0	0	0	0	0	0	1	2	1	8
Other	28	3	0	0	0	0	0	1	0	0	2	0	0	0	0	4	0	2	1	0	5	6	1	0	1	0	0	0	0	1	1	
Unknown	125	0	0	1	0	1	0	14	3	5	1	2	0	0	0	4	1	4	0	28	15	5	0	0	2	0	0	0	12	7	20	



Table 8 - ALCOHOL USE AS A CONTRIBUTING FACTOR IN ACCIDENTS & CASUALTIES BY STATE 2012-2016

	Accidents					Deaths					Injuries				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
USA	368	305	345	306	350	139	94	137	122	133	313	251	302	258	335
AK	2	2	3	3	1	2	4	3	3	1	0	0	0	0	0
AL	11	7	7	9	7	1	4	5	5	6	13	5	9	4	5
AR	8	5	7	4	2	2	2	2	2	2	10	3	6	5	0
AZ	7	7	7	8	11	3	2	1	2	3	7	9	8	9	12
CA	14	17	14	16	11	6	2	5	3	3	13	15	11	13	20
CO	10	4	2	2	3	4	0	0	1	1	8	5	2	2	1
CT	6	2	2	3	3	4	0	1	0	1	4	1	3	4	5
DE	2	1	2	0	1	1	0	0	0	0	1	2	2	0	0
DC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FL	30	32	30	30	31	9	10	12	11	14	30	22	29	21	25
GA	8	11	7	8	12	4	4	2	4	7	8	7	7	3	7
HI	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0
IA	7	4	6	2	7	7	2	2	1	2	7	0	3	1	4
ID	10	8	4	4	3	2	2	2	2	3	12	8	0	5	5
IL	13	6	17	9	10	5	1	8	5	1	10	3	15	8	4
IN	4	2	10	4	4	0	0	5	1	2	3	2	2	2	3
KS	3	2	1	2	6	1	1	0	1	2	0	1	3	3	5
KY	6	5	11	7	6	2	0	5	2	2	2	6	16	5	6
LA	16	9	20	12	7	6	3	6	4	3	11	12	28	10	6
MA	10	8	5	6	7	5	3	0	3	2	8	6	9	4	2
MD	11	10	7	17	12	4	1	1	8	3	16	5	5	22	13
ME	3	3	5	1	6	1	0	2	1	2	3	2	1	0	7
MI	8	6	8	6	10	1	1	4	4	7	4	4	4	8	6
MN	9	8	8	10	18	3	3	4	7	8	7	5	11	7	11
MO	12	15	16	6	14	2	6	5	2	3	8	20	16	11	15
MS	4	7	2	1	8	1	3	2	0	3	5	5	1	1	6
MT	0	1	3	2	3	0	0	2	2	1	0	0	1	0	6
NC	11	12	13	20	12	3	4	5	4	1	10	8	11	14	13
ND	2	2	5	2	0	1	1	3	1	0	0	1	3	4	0
NE	4	1	1	1	1	1	0	0	0	0	14	2	1	1	0
NH	3	1	2	1	2	2	0	0	1	0	0	4	4	0	2
NJ	6	6	2	3	4	2	0	0	0	0	6	3	3	3	6
NM	3	2	1	0	0	1	0	0	0	0	1	3	1	0	0
NV	3	2	6	3	3	0	1	2	2	0	7	1	6	1	3
NY	16	14	13	14	18	11	6	7	3	6	9	12	7	7	24
OH	10	7	7	8	9	4	1	6	4	4	12	3	0	6	11
OK	8	3	5	7	4	3	3	2	3	0	8	4	5	3	6
OR	1	3	4	7	3	1	3	1	4	1	0	2	5	3	6
PA	9	4	10	3	7	5	1	6	1	5	4	3	9	2	8
RI	1	1	2	3	3	1	0	1	0	0	0	6	0	6	1
SC	14	6	7	7	9	5	4	3	3	4	12	4	5	6	9
SD	1	3	3	4	3	1	0	1	3	2	0	3	1	2	1
TN	6	7	6	10	11	1	3	2	3	5	3	5	7	3	10
TX	21	19	17	7	21	6	5	5	1	6	16	17	12	6	28
UT	1	2	2	2	5	0	1	1	0	1	0	0	1	5	10
VA	3	3	6	4	5	1	0	3	1	4	0	3	3	4	2
VT	0	0	1	1	0	0	0	1	0	0	0	0	0	1	0
WA	14	14	9	11	10	6	5	4	5	3	7	8	7	12	8
WI	14	9	12	11	9	8	2	3	8	8	9	9	12	5	7
WV	1	0	5	4	6	0	0	1	0	0	1	0	5	14	5
WY	2	0	2	0	1	0	0	1	0	1	4	0	2	0	0
AS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CNMI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PR	0	0	0	1	1	0	0	0	1	0	0	0	0	2	1
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 2016

	Vessels Involved	Deaths	Injuries
Totals	5967	701	2903
At anchor	239	40	85
Being towed	40	0	12
Changing direction	519	43	289
Changing speed	588	20	342
Cruising	2565	207	1554
Docking/undocking	144	5	30
Drifting	556	155	275
Idling	42	6	17
Launching/loading	30	0	9
Rowing/paddling	236	122	112
Sailing	108	6	46
Tied to dock/moored	626	2	61
Towing	24	3	8
Trolling	23	7	12
Other	26	1	2
Unknown	201	84	49

Table 10 • VESSEL ACTIVITY AT THE TIME OF ACCIDENT 2016

	Vessels Involved	Deaths	Injuries
Totals	5967	701	2903
Boating/relaxation	3751	382	1953
Commercial	58	0	8
Fishing	709	197	320
Fueling	28	1	26
Government	8	0	2
Hunting	39	17	19
Racing	33	4	9
Repairs	38	6	23
Starting engine	54	4	41
Swimming/snorkeling	102	39	53
Towed watersports	416	17	383
Towing	70	1	13
Whitewater	25	11	12
Other	20	3	6
None; not in operation	564	13	23
Unknown	52	6	12



Table 11 • WEATHER AND WATER CONDITIONS 2016

		Accidents	Deaths	Injuries
		4463	701	2903
TYPE OF BODY OF WATER	Lakes, Ponds, Reservoirs, Dams, Gravel Pits	2017	351	1360
	Rivers, Streams, Creeks, Swamps, Bayous	993	189	645
	Bays, Inlets, Marinas, Sounds, Harbors, Channels, Canals, Sloughs, Coves	970	91	610
	Ocean/Gulf	371	47	242
	Great Lakes (not tributaries)	112	23	46
WATER CONDITIONS	Calm (waves less than 6")	2528	312	1736
	Choppy (waves 6" to 2')	1196	183	775
	Rough (waves 2' to 6')	425	84	219
	Very Rough (waves larger than 6')	83	29	50
	Unknown	231	93	123
WIND	None	380	49	267
	Light (0 - 6 mph)	2474	354	1761
	Moderate (7 - 14 mph)	1045	148	587
	Strong (15 - 25 mph)	344	74	193
	Storm (over 25 mph)	62	15	17
	Unknown	158	61	78
VISIBILITY	Poor - Day	52	12	18
	Poor - Night	118	24	108
	Poor - Unknown if day or night	0	0	0
	Fair - Day	173	37	88
	Fair - Night	158	31	126
	Fair- Unknown if day or night	2	0	3
	Good - Day	3366	455	2219
	Good - Night	387	78	235
	Good- Unknown if day or night	4	2	0
	Unknown - Day	148	37	76
	Unknown - Night	40	15	27
	Unknown - Unknown if day or night	15	10	3
WATER TEMPERATURE	39 degrees F and below	28	24	13
	40 - 49 degrees F	116	35	76
	50 - 59 degrees F	339	81	207
	60 - 69 degrees F	699	93	470
	70 - 79 degrees F	1374	171	835
	80 - 89 degrees F	1091	140	763
	90 degrees F and above	44	8	25
	Unknown	772	149	514




Table 12 • TIME RELATED DATA 2016

	Accidents	Deaths	Injuries	
	4463	701	2903	
Time of Day	12:00 am to 2:30 am	121	24	99
	2:31 am to 4:30 am	42	14	16
	4:31 am to 6:30 am	69	11	46
	6:31 am to 8:30 am	137	31	73
	8:31 am to 10:30 am	278	54	143
	10:31 am 12:30 pm	497	80	299
	12:31 pm to 2:30 pm	745	97	479
	2:31 pm to 4:30 pm	873	104	576
	4:31 pm to 6:30 pm	768	102	535
	6:31 pm to 8:30 pm	490	86	327
	8:31 pm to 10:30 pm	273	46	208
	10:31 pm to 11:59 pm	115	24	89
	Unknown	55	28	13
	Month of Year	January	84	25
February		88	28	48
March		168	39	98
April		259	48	182
May		517	70	335
June		728	111	440
July		1081	143	764
August		691	84	440
September		411	59	288
October		217	40	139
November		144	36	106
December		75	18	24
Day of Week	Sunday	1169	158	828
	Monday	450	70	257
	Tuesday	341	75	180
	Wednesday	317	63	178
	Thursday	352	54	204
	Friday	549	89	362
	Saturday	1285	192	894



Table 13 - VESSEL INFORMATION 2016

		Vessels Involved	Deaths	Injuries
		5967	701	2903
Hull Material	Aluminum	918	191	465
	Fiberglass	4486	339	2224
	Plastic	160	90	74
	Rubber/Vinyl/Canvas	54	27	28
	Steel	55	3	9
	Wood	68	3	35
	Other	21	4	15
	Unknown	205	44	53
	Horsepower	No Engine	428	202
10 hp or less		122	29	69
11 - 25 hp		161	35	69
26 - 75 hp		508	71	245
76 - 150 hp		1224	100	721
151 - 250 hp		807	51	449
Over 250 hp		1124	63	433
Unknown		1593	150	717
Year Built	2016	314	38	152
	2015	322	26	179
	2013 - 2014	363	36	205
	2011 - 2012	241	17	136
	2009 - 2010	187	16	90
	2003 - 2008	1073	93	536
	Prior to 2003	2790	280	1332
	Unknown	677	195	273
Length	Less than 16 feet	1641	297	983
	16 feet to <26 feet	2711	283	1506
	26 feet to <40 feet	849	56	262
	40 feet to 65 feet	374	6	53
	More than 65 feet	87	0	2
	Unknown	305	59	97

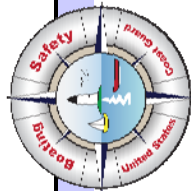


Table 14 - RENTAL STATUS OF VESSELS INVOLVED IN ACCIDENTS

	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	
													Rented
All Vessels	5967	583	4862	522	701	67	549	85	2903	329	2362	212	
Airboat	34	0	32	2	3	0	3	0	32	0	29	3	
Auxiliary sailboat	274	4	244	26	11	0	11	0	39	1	33	5	
Cabin motorboat	890	9	800	81	41	1	34	6	263	2	240	21	
Canoe	93	13	68	12	63	8	45	10	45	7	33	5	
Houseboat	87	13	70	4	2	1	1	0	5	2	3	0	
Inflatable	30	4	16	10	18	3	9	6	16	2	9	5	
Kayak	182	15	133	34	89	5	69	15	79	10	55	14	
Open motorboat	2719	150	2430	139	323	15	288	20	1537	93	1346	98	
Personal watercraft	1072	282	733	57	46	10	35	1	675	182	463	30	
Pontoon	300	80	199	21	47	16	27	4	120	26	90	4	
Rowboat	43	2	36	5	17	2	15	0	27	0	24	3	
Sailboat (only)	64	2	53	9	3	0	2	1	36	2	31	3	
Sailboat (unknown)	6	0	0	6	1	0	0	1	1	0	0	1	
Standup paddleboard	20	5	11	4	15	4	8	3	5	1	3	1	
Other	28	3	21	4	6	1	2	3	4	1	2	1	
Unknown	125	1	16	108	16	1	0	15	19	0	1	18	

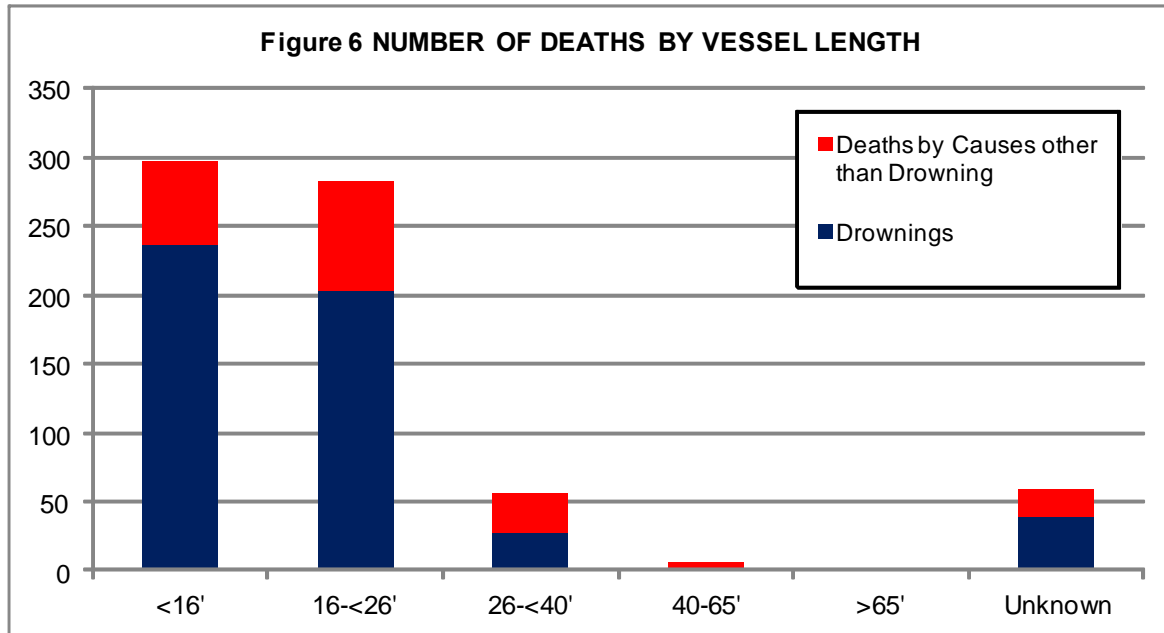


Table 15 • NUMBER & PERCENT OF DEATHS BY VESSEL LENGTH

Length	Drownings	Deaths by Causes other than Drowning	Total Deaths	Percent of Deaths from Drowning
<16'	236	61	297	79%
16-<26'	204	79	283	72%
26-<40'	28	28	56	50%
40-65'	2	4	6	33%
>65'	0	0	0	0%
Unknown	39	20	59	66%
Total	509	192	701	73%

ACCIDENT TYPES

Explanation of Accident Types Section

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

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

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

Accident, Vessel & Casualty Numbers by Primary Accident Type (Table 16, Page 36)

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

Five-year Summary of Frequency of Events in Accidents & Casualties Nationwide (Table 17, Pages 37-40)

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

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

This table focuses on the frequency that these events occurred nationally and the total number of deaths that were associated with each accident type. If we turn back to our example and focus on deaths as a result of flooding/swamping, we see that there were 470 accidents where flooding/swamping was the first event in the boating accident. There were 90 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 258 accidents and 13 deaths associated with flooding/swamping as a second event and 82 accidents and 8 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 810 accidents and 111 deaths associated with flooding/swamping as a first, second, or third event.

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

Number of Vessels in Accidents by Vessel Length & Primary Accident Type (Table 18, Page 41)

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

Number of Vessels in Accidents by Vessel Type & Primary Accident Type (Table 19, Page 42)

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

Number of Vessels in Accidents by Primary Accident Type & Propulsion Type (Table 20, Page 43)

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

Number of Vessels in Accidents by Primary Accident Type & Engine Type (Table 21, Page 43)

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



Table 16 - ACCIDENT, VESSEL & CASUALTY NUMBERS BY PRIMARY ACCIDENT TYPE 2016

	Accidents	Vessels Involved	Drowning Deaths	Other Deaths	Total Deaths	Total Injuries	Damages
All Accident Types	4463	5967	509	192	701	2903	\$49,124,633.91
Capsizing	305	317	146	29	175	200	\$2,073,321.00
Carbon monoxide poisoning	8	8	1	3	4	11	\$5,000.00
Collision with fixed object	565	677	25	38	63	432	\$6,333,757.25
Collision with floating object	53	53	5	0	5	18	\$474,363.83
Collision with commercial vessel	31	69	2	2	4	22	\$648,784.58
Collision with governmental vessel	4	8	0	0	0	3	\$12,300.00
Collision with recreational vessel	1051	2195	7	31	38	708	\$7,999,877.42
Collision with submerged object	143	149	8	0	8	52	\$2,576,612.20
Departed vessel	121	124	72	7	79	48	\$27,500.00
Ejected from vessel	160	176	26	4	30	145	\$224,882.00
Electrocution	2	2	0	2	2	1	\$0.00
Fall in vessel	170	184	0	1	1	178	\$71,803.30
Falls overboard	284	309	126	35	161	125	\$103,495.00
Fire/explosion (fuel)	158	172	1	1	2	133	\$2,937,056.00
Fire/explosion (non-fuel)	81	112	0	0	0	8	\$7,204,495.00
Fire/explosion (unknown origin)	34	48	0	1	1	10	\$5,198,480.00
Flooding/swamping	470	502	72	18	90	156	\$6,550,448.70
Grounding	413	427	9	4	13	246	\$5,954,587.54
Person struck by propeller	42	45	0	0	0	43	\$690.00
Person struck by vessel	32	45	1	1	2	35	\$16,000.00
Sinking	0	0	0	0	0	0	\$0.00
Skier mishap	278	285	4	7	11	289	\$13,250.00
Sudden medical condition	10	10	3	6	9	1	\$200.00
Other	48	50	1	2	3	39	\$697,730.09


Table 17 • FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
 2016	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	305	262	60	627	263	356
Carbon monoxide poisoning	8	2	1	11	6	13	\$5,000.00
Collision with fixed object	565	82	9	656	74	475	\$8,189,699.35
Collision with floating object	53	4	0	57	5	19	\$489,063.83
Collision with commercial vessel	31	3	0	34	5	23	\$696,484.58
Collision with governmental vessel	4	0	1	5	0	3	\$15,100.00
Collision with recreational vessel	1051	67	9	1127	42	747	\$9,587,374.22
Collision with submerged object	143	5	0	148	9	56	\$2,772,112.20
Departed vessel	121	58	16	195	96	88	\$1,018,112.00
Ejected from vessel	160	609	311	1080	319	969	\$7,122,482.55
Electrocution	2	0	0	2	2	1	\$0.00
Fall in vessel	170	284	52	506	25	693	\$3,956,127.78
Falls overboard	284	58	9	351	183	177	\$227,195.00
Fire/explosion (fuel)	158	10	2	170	2	138	\$3,054,056.00
Fire/explosion (non-fuel)	81	2	1	84	0	8	\$7,265,495.00
Fire/explosion (unknown origin)	34	0	0	34	1	10	\$5,198,480.00
Flooding/swamping	470	258	82	810	111	285	\$15,154,400.50
Grounding	413	55	23	491	16	299	\$7,128,476.37
Person struck by propeller	42	101	28	171	24	175	\$124,740.00
Person struck by vessel	32	220	31	283	24	367	\$889,104.49
Sinking	0	119	83	202	23	46	\$8,122,022.00
Skier mishap	278	19	3	300	11	316	\$47,490.00
Sudden medical condition	10	1	0	11	9	2	\$700.00
Other	48	28	5	81	6	66	\$759,150.09
Unknown	0	0	0	0	0	0	\$0.00
2015							
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


Table 17 Continued • FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
 2015 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	86	39	13	138	70	57
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
2014							
Capsizing	280	223	47	550	209	287	\$3,438,083
Carbon monoxide poisoning	6	0	0	6	0	8	\$0
Collision with fixed object	452	59	10	521	53	402	\$4,570,680
Collision with floating object	54	4	1	59	4	37	\$882,413
Collision with commercial vessel	18	1	0	19	7	9	\$357,130
Collision with governmental vessel	5	0	0	5	0	0	\$28,700
Collision with recreational vessel	937	45	6	988	42	677	\$7,779,435
Collision with submerged object	118	0	0	118	10	55	\$1,549,583
Departed vessel	99	77	17	193	90	102	\$893,380
Ejected from vessel	151	565	298	1014	279	936	\$6,455,578
Electrocution	1	1	0	2	1	1	\$6,300
Fall in vessel	147	251	63	461	25	668	\$3,392,811
Falls overboard	281	29	1	311	168	159	\$97,302
Fire/explosion (fuel)	152	6	2	160	3	117	\$4,333,956
Fire/explosion (non-fuel)	75	5	1	81	2	10	\$5,187,286
Fire/explosion (unknown origin)	36	0	0	36	0	8	\$3,277,185
Flooding/swamping	463	223	56	742	104	259	\$15,724,140


Table 17 Continued • FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
	First Event in an Accident	Second Event in an Accident	Third Event in an Accident	Total Times Event Occurred in all Accidents	Deaths Associated with Event in all Accidents	Injuries Associated with Event in all Accidents	Damages Associated with Event in all Accidents
	2014 continued						
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
2013							
Capsizing	256	262	41	559	175	333	\$4,568,312
Carbon monoxide poisoning	11	0	0	11	4	31	\$0
Collision with fixed object	427	64	4	495	60	291	\$4,778,809
Collision with floating object	43	2	0	45	2	17	\$455,023
Collision with commercial vessel	19	1	0	20	5	6	\$270,470
Collision with governmental vessel	9	1	0	10	0	10	\$86,128
Collision with recreational vessel	947	52	3	1002	37	656	\$6,495,709
Collision with submerged object	145	1	0	146	10	60	\$3,022,991
Departed vessel	85	34	11	130	66	61	\$326,635
Ejected from vessel	167	541	319	1027	268	925	\$6,463,758
Electrocution	4	0	0	4	2	2	\$5,000
Fall in vessel	136	286	48	470	22	655	\$4,069,745
Falls overboard	281	31	1	313	156	158	\$89,135
Fire/explosion (fuel)	137	6	0	143	0	101	\$6,309,934
Fire/explosion (non-fuel)	73	1	0	74	0	3	\$5,905,767
Fire/explosion (unknown origin)	9	0	0	9	0	3	\$370,900
Flooding/swamping	430	228	54	712	94	249	\$12,762,290
Grounding	399	50	12	461	21	278	\$5,771,281
Person struck by propeller	58	85	31	174	23	162	\$160,560
Person struck by vessel	26	207	18	251	24	309	\$653,828
Sinking	0	90	56	146	20	23	\$5,077,352
Skier mishap	332	9	0	341	12	365	\$1,110
Sudden medical condition	4	3	1	8	5	3	\$0
Other	57	9	0	66	1	59	\$436,500
Unknown	7	0	0	7	7	1	\$3,000


Table 17 Continued • FREQUENCY OF EVENTS IN ACCIDENTS & CASUALTIES NATIONWIDE							
 2012	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	289	295	38	622	194	385
Carbon monoxide poisoning	13	0	0	13	3	25	\$0
Collision with fixed object	475	53	3	531	51	367	\$4,110,405
Collision with floating object	33	0	0	33	2	19	\$182,267
Collision with commercial vessel	20	2	0	22	1	16	\$296,968
Collision with governmental vessel	7	1	0	8	0	7	\$26,900
Collision with recreational vessel	1010	33	5	1048	47	727	\$6,787,720
Collision with submerged object	161	1	1	163	12	56	\$1,019,215
Departed vessel	104	40	5	149	96	77	\$113,749
Ejected from vessel	151	618	316	1085	269	1018	\$5,120,544
Electrocution	1	0	0	1	2	6	\$0
Fall in vessel	190	295	61	546	34	776	\$2,588,780
Falls overboard	331	28	1	360	210	183	\$201,491
Fire/explosion (fuel)	157	9	1	167	5	99	\$2,979,827
Fire/explosion (non-fuel)	96	3	0	99	0	7	\$9,929,520
Fire/explosion (unknown origin)	11	0	0	11	2	0	\$940,500
Flooding/swamping	509	220	50	779	101	301	\$11,888,553
Grounding	422	58	16	496	26	286	\$7,811,552
Person struck by propeller	55	99	27	181	19	187	\$125,099
Person struck by vessel	37	215	18	270	30	319	\$741,967
Sinking	0	130	61	191	28	64	\$5,622,918
Skier mishap	387	19	0	406	20	414	\$6,773
Sudden medical condition	2	0	0	2	1	1	\$0
Other	53	4	0	57	4	48	\$71,775
Unknown	1	0	0	1	1	0	\$0

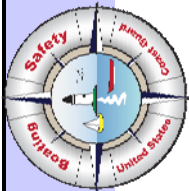


Table 18 • NUMBER OF VESSELS IN ACCIDENTS BY VESSEL LENGTH & PRIMARY ACCIDENT TYPE

	Total vessels involved	Capsize	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
All lengths	5967	317	8	677	53	69	8	2195	149	124	176	2	184	309	172	112	48	502	427	45	45	0	285	10	50	0	509	192	701	2903
3 feet	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4 feet	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5 feet	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
6 feet	14	2	0	1	0	0	0	0	0	2	2	0	2	2	0	0	0	2	0	0	0	0	0	0	1	0	5	0	5	11
7 feet	22	2	0	0	0	0	0	9	0	2	2	0	0	4	0	1	0	1	1	0	0	0	0	0	0	0	3	0	3	14
8 feet	94	16	0	7	0	0	0	39	0	1	7	0	2	13	1	1	0	3	1	0	3	0	0	0	0	0	20	4	24	56
9 feet	164	10	0	16	1	0	0	90	1	1	8	0	8	5	2	0	0	8	3	0	6	0	3	1	1	0	13	6	19	97
10 feet	565	41	0	46	2	2	0	308	3	3	31	1	15	44	16	2	0	18	14	0	5	0	10	2	2	0	53	20	73	326
11 feet	297	7	0	23	1	1	1	158	1	2	31	1	15	22	1	1	0	6	8	0	4	0	9	1	4	0	17	7	24	180
12 feet	124	24	0	10	0	0	0	34	3	1	10	0	3	15	1	1	0	17	1	0	1	0	1	1	1	0	36	7	43	82
13 feet	52	8	0	5	0	0	0	9	2	1	5	0	2	5	0	2	0	8	3	0	1	0	1	0	0	0	8	0	8	36
14 feet	164	34	0	10	0	0	0	26	8	2	12	0	3	22	1	0	0	35	5	0	3	0	1	1	1	0	54	10	64	92
15 feet	142	24	0	16	2	1	0	29	9	2	5	0	2	6	1	0	0	30	10	0	0	0	4	0	1	0	26	7	33	87
Under 16 ft	1641	168	0	134	6	4	1	703	27	17	113	2	52	139	23	8	0	128	47	0	23	0	29	6	11	0	236	61	297	983
16 feet	255	27	0	44	8	2	0	58	11	3	7	0	5	16	3	0	0	49	13	2	0	0	4	0	3	0	46	11	57	145
17 feet	258	17	0	24	6	3	0	65	11	6	5	0	7	23	5	0	1	38	19	2	2	0	21	0	3	0	42	8	50	150
18 feet	360	13	0	49	3	2	0	111	9	6	9	0	21	12	7	2	0	45	35	5	1	0	26	2	2	0	22	11	33	227
19 feet	253	9	0	25	5	1	0	65	7	10	9	0	2	13	12	4	2	16	28	5	2	0	34	1	3	0	16	8	24	148
20 feet	413	7	1	56	6	4	0	130	22	12	7	0	5	15	15	2	2	42	27	6	4	0	46	0	4	0	21	13	34	238
21 feet	345	12	1	43	1	1	3	111	9	8	6	0	12	12	19	2	1	31	34	5	2	0	31	0	1	0	19	7	26	187
22 feet	231	2	0	22	0	3	0	96	8	5	3	0	11	7	7	2	1	16	23	1	0	0	24	0	0	0	12	7	19	104
23 feet	197	1	0	28	1	2	0	66	3	9	0	0	8	4	12	2	0	14	21	2	1	0	22	0	1	0	6	7	13	109
24 feet	238	0	0	25	3	7	0	84	4	10	0	0	9	14	13	2	1	16	21	5	0	0	22	0	2	0	17	3	20	122
25 feet	161	2	1	16	4	1	2	68	4	5	0	0	6	5	10	4	3	3	18	2	1	0	5	0	1	0	3	4	7	76
16 ft to less than 26 ft	2711	90	3	332	37	26	5	854	88	74	46	0	86	121	103	20	11	270	239	35	13	0	235	3	20	0	204	79	283	1506
26 feet	131	1	1	15	1	1	0	48	5	6	0	0	11	2	4	7	0	8	11	3	0	0	6	0	1	0	4	2	6	44
27 feet	70	3	0	8	0	0	0	27	4	1	0	0	3	2	3	6	1	6	4	0	0	0	2	0	0	0	5	2	7	20
28 feet	93	2	0	19	1	1	0	26	2	3	0	0	5	0	7	6	0	7	11	0	0	0	1	0	2	0	4	3	7	38
29 feet	54	1	0	6	1	0	0	23	3	0	0	0	2	0	1	4	1	3	6	0	0	0	2	0	1	0	2	4	6	15
30 feet	88	2	0	6	1	4	0	35	1	1	1	0	3	5	4	3	2	10	8	0	1	0	0	0	1	0	4	3	7	38
31 feet	45	0	0	7	1	1	0	22	1	1	0	0	0	1	1	2	1	1	5	0	0	0	0	0	1	0	0	0	0	13
32 feet	68	0	1	7	0	0	0	37	0	1	1	0	2	1	2	2	0	5	7	0	1	0	0	0	1	0	2	3	5	23
33 feet	40	0	0	3	1	0	0	11	2	1	0	0	2	3	2	2	2	3	8	0	0	0	0	0	0	0	2	2	4	9
34 feet	46	1	1	8	0	0	0	13	3	0	1	0	0	1	2	4	2	3	5	0	1	0	0	0	1	0	3	2	5	10
35 feet	49	0	0	5	0	1	0	22	3	0	0	0	0	1	1	4	1	1	10	0	0	0	0	0	0	0	0	0	0	5
36 feet	65	1	0	10	0	3	1	28	1	0	0	0	2	1	5	4	3	1	3	0	1	0	0	0	1	0	1	3	4	23
37 feet	39	0	0	10	0	2	0	12	0	0	0	0	2	0	0	0	4	3	5	0	0	0	0	0	1	0	0	0	0	8
38 feet	39	2	1	5	0	1	0	18	0	0	0	0	3	1	1	2	1	0	3	0	1	0	0	0	0	0	0	4	4	8
39 feet	22	0	0	3	0	0	0	10	0	0	2	0	0	1	0	2	0	1	3	0	0	0	0	0	0	0	1	0	1	8
26 ft to less than 40 ft	849	13	4	112	6	14	1	332	25	14	5	0	35	19	33	48	18	52	89	3	5	0	11	0	10	0	28	28	56	262
40 ft to 65 ft	374	1	1	67	2	9	1	154	6	3	2	0	2	1	7	32	15	25	38	0	2	0	0	0	6	0	2	4	6	53
Over 65 ft	87	0	0	12	0	9	0	47	2	1	0	0	0	0	1	3	2	4	6	0	0	0	0	0	0	0	0	0	0	2
Unknown	305	45	0	20	2	7	0	105	1	15	10	0	9	29	5	1	2	23	8	7	2	0	10	1	3	0	39	20	59	97

Table 19 - NUMBER OF VESSELS IN ACCIDENTS BY VESSEL TYPE & PRIMARY ACCIDENT TYPE WITH NUMBER OF CASUALTIES BY CASUALTY TYPE & VESSEL TYPE 2016

All vessels	5967	317	8677	53	69	8	2195	149	124	176	2	184	309	172	112	48	502	427	45	45	0	285	10	50	0	509	192	701	2903	
Airboat	34	1	0	10	0	1	0	8	1	0	0	1	0	0	0	0	6	5	0	0	0	0	0	1	0	2	1	3	32	
Auxiliary sailboat	274	6	0	28	0	5	2	155	3	2	1	0	6	7	1	4	5	31	0	0	0	0	0	13	0	5	6	11	39	
Cabin motorboat	890	8	5	131	10	15	1	290	26	16	2	0	18	11	59	69	33	65	113	2	4	0	8	1	3	0	28	13	41	263
Canoe	93	57	0	5	0	0	0	6	2	1	1	0	1	8	0	0	0	10	2	0	0	0	0	0	0	0	56	7	63	45
Houseboat	87	0	1	9	0	0	0	45	1	2	0	0	1	1	7	3	11	5	0	1	0	0	0	0	0	2	0	2	5	
Inflatable	30	5	0	9	1	0	0	0	2	4	3	0	6	0	0	0	0	0	0	0	0	0	0	0	0	14	4	18	16	
Kayak	182	92	0	8	1	5	0	13	0	4	6	0	27	0	0	0	22	1	0	0	0	0	0	3	0	74	15	89	79	
Open motorboat	2719	96	2	353	34	22	4	805	103	46	68	0	102	120	77	24	5	328	223	33	13	0	232	4	25	0	228	95	323	1537
Personal watercraft	1072	17	0	82	4	2	1	647	5	3	89	2	43	56	23	3	0	13	25	1	22	0	25	2	7	0	13	33	46	675
Pontoon	300	3	0	29	3	2	0	131	4	36	2	0	6	33	3	2	0	9	16	4	2	0	15	0	0	38	9	47	120	
Rowboat	43	11	0	3	0	0	0	9	2	2	0	0	5	0	0	0	0	8	0	0	0	1	0	0	0	14	3	17	27	
Sailboat (only)	64	14	0	1	0	0	0	22	0	0	0	0	7	5	2	1	6	4	0	1	0	0	0	1	0	3	0	3	36	
Sailboat (unknown)	6	0	0	0	0	0	0	3	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	1	
Standup paddleboard	20	0	0	0	0	0	0	0	0	2	1	0	17	0	0	0	0	0	0	0	0	0	0	0	0	12	3	15	5	
Other	28	1	0	1	0	14	0	3	0	2	0	0	1	0	0	0	5	0	0	1	0	0	0	0	0	6	0	6	4	
Unknown	125	6	0	8	0	3	0	58	0	4	3	0	9	3	1	1	13	2	5	1	0	4	0	0	0	13	3	16	19	



**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, 2004-2016 (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 2016 (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, 2016 (Figure 10, Page 52)

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

 Table 22 • OPERATOR INFORMATION 2016				
		Vessels Involved	Deaths	Injuries
		5967	701	2903
Age of Operator	12 years and under	26	4	19
	13 to 18 years	296	16	217
	19 to 25 years	581	66	340
	26 to 35 years	850	105	516
	36 to 55 years	1853	245	1055
	Over 55 years	1236	207	588
	Unknown	405	49	124
	No operator	720	9	44
Operator's Experience	No Experience	43	6	44
	Under 10 hours	506	59	283
	10 to 100 hours	1017	94	651
	101 to 500 hours	1653	154	907
	Over 500 Hours	631	44	306
	Unknown	1397	335	668
	No Operator	720	9	44
Number of Persons on Board	None	308	0	2
	One	1666	244	592
	Two	1620	219	840
	Three	618	87	375
	Four	499	66	373
	Five	270	18	205
	Six	206	20	165
	Seven	124	11	79
	Eight	105	8	86
	Nine	44	4	26
	Ten	36	3	21
	More than 10	71	9	75
	Unknown	400	12	64
Education of Operator	American Red Cross	6	0	1
	Informal	160	16	97
	Internet Course	86	5	52
	State Course	790	37	444
	US Power Squadrons	59	0	23
	USCG Auxiliary	154	9	82
	Other	280	13	124
	No Education	2242	271	1300
	Unknown	1470	341	736
	No Operator	720	9	44

BOATING SAFETY INSTRUCTION


 Table 23 • NUMBER OF DEATHS BY TYPE OF OPERATOR BOATING INSTRUCTION 2016	
Type of Boating Instruction	Deaths
American Red Cross	0
Informal	16
Internet Course	5
State Course	37
USCG Auxiliary	0
US Power Squadrons	9
Other	13
No Education	271
Total Deaths - Known Operator Instruction	351
Total Deaths - Unknown Operator Instruction	341
Total Deaths - No Operator	9
Total Deaths - Known & Unknown Operator Instruction	701

Figure 7 PERCENT OF DEATHS BY KNOWN OPERATOR INSTRUCTION, 2016

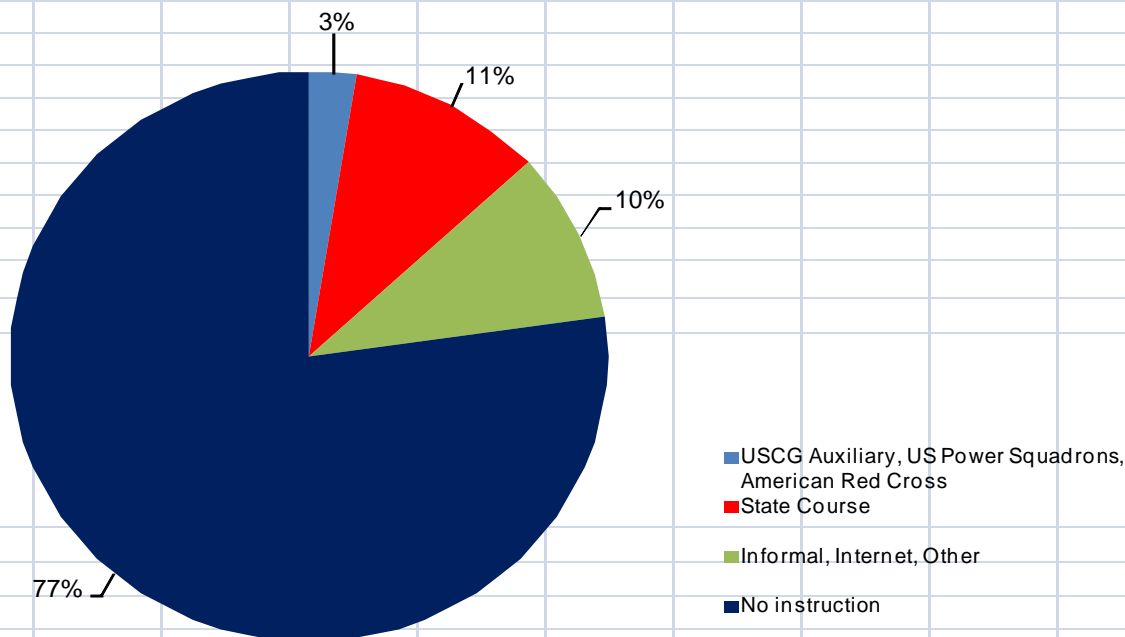




Table 24 • NUMBER OF DEATHS BY VESSEL TYPE 2016

Vessel type	Drownings	Deaths by Causes other than Drowning	Total Deaths	Percentage of Deaths from Drowning
Airboat	2	1	3	67%
Auxiliary Sailboat	5	6	11	45%
Cabin Motorboat	28	13	41	68%
Canoe	56	7	63	89%
Houseboat	2	0	2	100%
Inflatable	14	4	18	78%
Kayak	74	15	89	83%
Open Motorboat	228	95	323	71%
Personal Watercraft	13	33	46	28%
Pontoon	38	9	47	81%
Rowboat	14	3	17	82%
Sailboat (only)	3	0	3	100%
Sailboat (unknown)	1	0	1	100%
Standup paddleboard	12	3	15	80%
Other	6	0	6	100%
Unknown	13	3	16	81%
Total	509	192	701	73%

Figure 8 NUMBER OF DEATHS BY VESSEL TYPE 2016

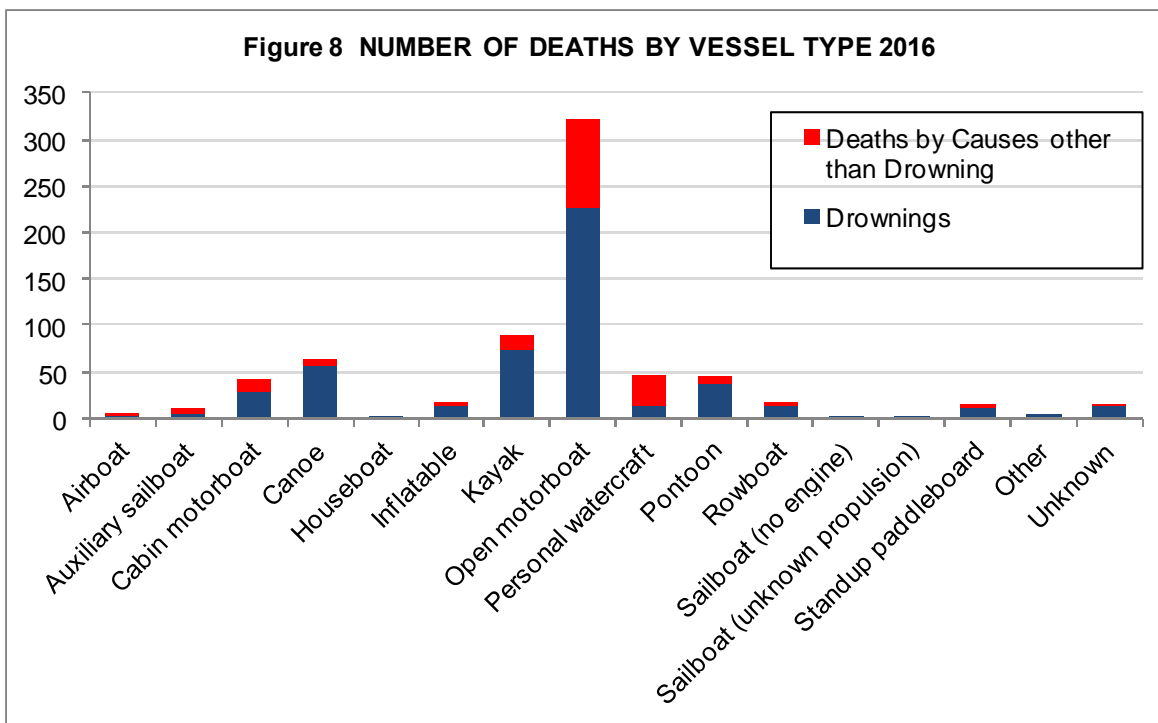


Figure 9 PERCENT OF DEATHS BY VESSEL TYPE, 2004-2016

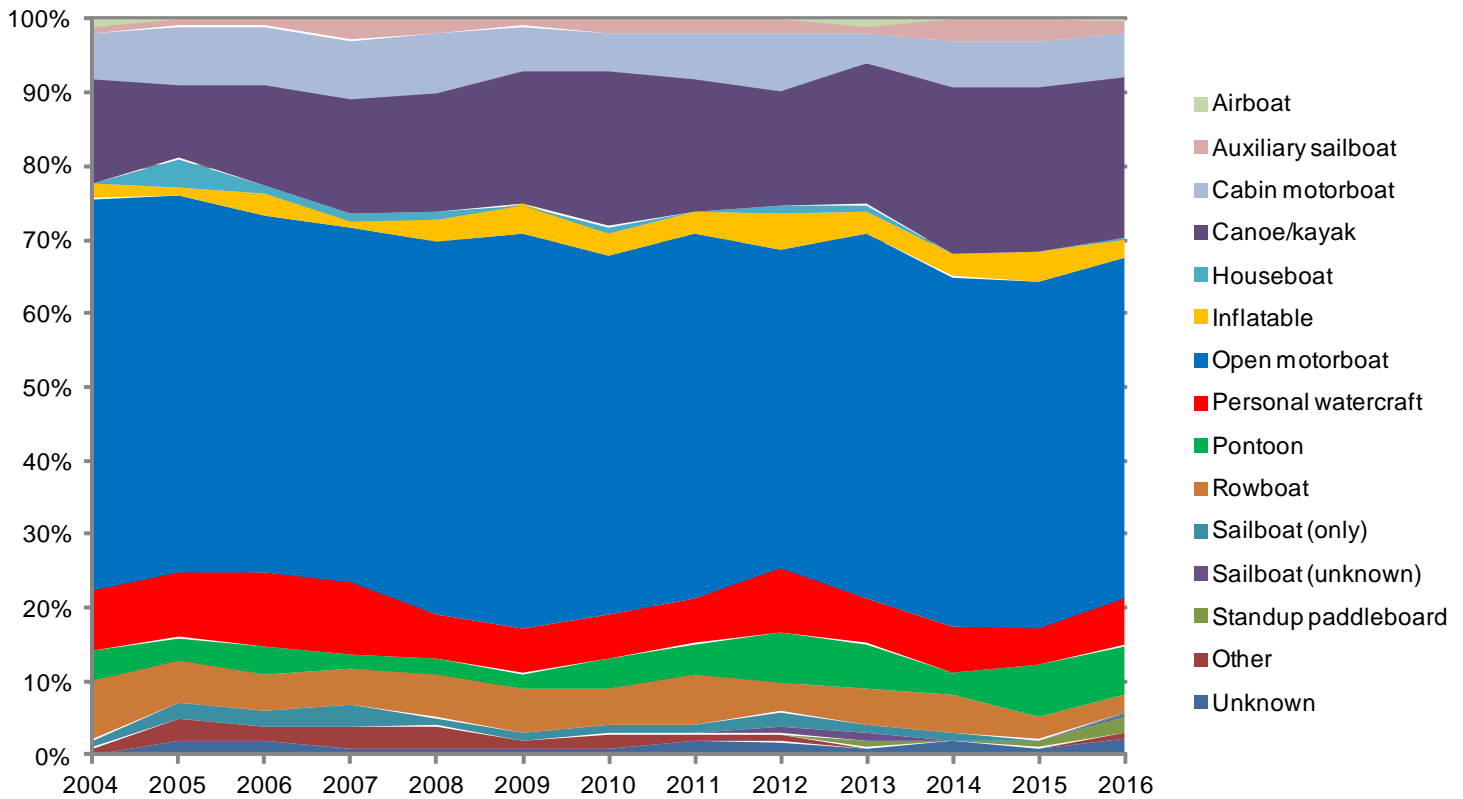


Table 25 - PERCENT OF DEATHS BY VESSEL TYPE, 2004-2016

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




Table 26 - NUMBER OF DECEASED VICTIMS BY AGE AND VESSEL TYPE 2016

Age of Deceased Victim	Type of Vessel															Drownings	Other deaths	Total deaths	
	Airboat	Auxiliary sailboat	Cabin motorboat	Canoe	Houseboat	Inflatable	Kayak	Open motorboat	Personal watercraft	Pontoon	Rowboat	Sailboat (only)	Sailboat (unknown)	Standup paddleboard	Other				Unknown
Total	3	11	41	63	2	18	89	323	46	47	17	3	1	15	6	16	509	192	701
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	1	3	1	4
5	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
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	0	0	2	0	0	0	0	0	0	0	0	0	2	2
8	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
9	0	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	3	2	5
10	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	2
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1
12	0	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	9	2	2	1	0	0	0	1	1	8	8	16
13 - 19	0	3	2	5	0	1	5	21	6	5	0	0	0	0	0	1	32	17	49
20 - 29	0	0	8	18	0	2	23	41	10	6	0	0	0	3	3	6	92	28	120
30 - 39	0	0	10	14	1	0	16	38	7	9	2	0	0	3	0	3	77	26	103
40 - 49	1	2	4	8	0	6	17	61	9	3	1	1	1	3	0	2	77	42	119
50 - 59	0	3	6	10	1	5	12	68	9	8	3	0	0	4	1	1	100	31	131
60 - 69	1	0	11	6	0	4	12	47	1	9	5	0	0	2	1	0	74	25	99
70 - 79	1	3	0	2	0	0	2	32	2	5	3	2	0	0	0	1	40	13	53
80 and Over	0	0	0	0	0	0	2	6	0	0	2	0	0	0	0	0	9	1	10
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1




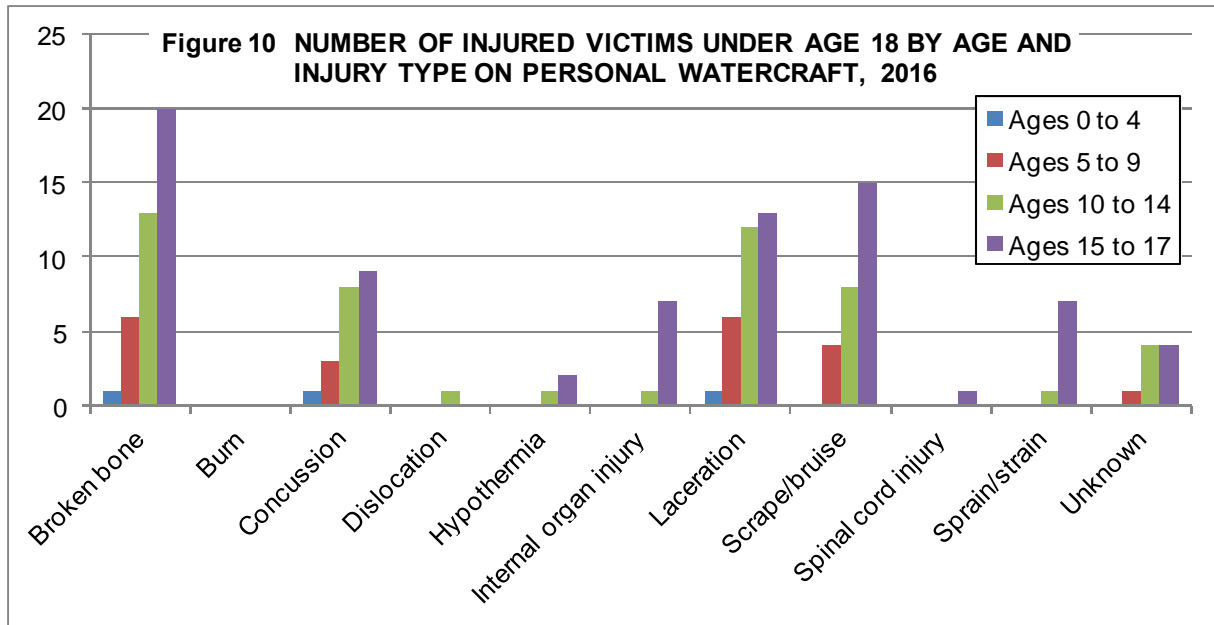
Table 27 • NUMBER OF INJURED VICTIMS BY AGE AND VESSEL TYPE 2016

Age of Injured Victim	Total injuries	Airboat	Auxiliary sailboat	Cabin motorboat	Canoe	Houseboat	Inflatable	Kayak	Open motorboat	Personal watercraft	Pontoon	Rowboat	Sailboat (only)	Sailboat (unknown)	Standup paddleboard	Other	Unknown
Total	2903	32	39	263	45	5	16	79	1537	675	120	27	36	1	5	4	19
0	3	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0
1	4	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
2	6	0	0	0	1	1	0	0	2	0	1	0	0	0	0	0	1
3	5	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	0
4	12	0	0	3	0	0	0	0	6	2	1	0	0	0	0	0	0
5	8	0	0	0	1	0	0	0	5	1	1	0	0	0	0	0	0
6	9	0	0	3	0	0	0	0	3	2	1	0	0	0	0	0	0
7	24	0	0	1	2	0	0	0	16	4	0	0	1	0	0	0	0
8	20	0	0	0	0	0	1	1	9	9	0	0	0	0	0	0	0
9	20	0	1	4	0	1	0	0	7	4	2	0	0	0	0	0	1
10	18	0	0	1	0	0	1	0	12	4	0	0	0	0	0	0	0
11	24	0	1	0	0	0	0	0	16	7	0	0	0	0	0	0	0
12	37	0	0	1	1	1	0	1	22	8	2	0	1	0	0	0	0
0 - 12	190	0	2	14	6	3	2	3	105	42	9	0	2	0	0	0	2
13 - 19	421	2	0	16	3	0	0	7	193	157	12	9	18	0	2	0	2
20 - 29	572	3	3	38	6	0	5	21	277	193	21	1	2	0	0	0	2
30 - 39	419	13	2	37	12	1	2	14	214	101	19	1	1	0	0	2	0
40 - 49	366	7	3	46	3	1	4	9	194	74	19	1	1	1	0	1	2
50 - 59	428	3	8	43	6	0	1	13	266	61	17	2	5	0	2	0	1
60 - 69	202	1	10	25	5	0	1	1	110	19	14	8	4	0	1	1	2
70 - 79	103	0	4	16	1	0	0	2	69	3	3	4	1	0	0	0	0
80 and Over	11	0	0	0	0	0	1	0	9	0	1	0	0	0	0	0	0
Unknown	191	3	7	28	3	0	0	9	100	25	5	1	2	0	0	0	8



Table 28 • NATURE OF PRIMARY INJURY TYPE BY AREA OF INJURY 2016

	All Areas	Arm	Body	Foot	Hand	Head	Leg	Neck	Trunk	Other	Unknown
All primary injury types	2903	276	345	117	100	681	527	75	528	1	253
Amputation	31	5	0	4	14	0	7	0	0	1	0
Broken bone	552	62	0	38	34	94	163	9	125	0	27
Burn	127	14	11	2	8	11	26	1	12	0	42
Carbon monoxide	13	0	13	0	0	0	0	0	0	0	0
Concussion	256	0	0	0	0	256	0	0	0	0	0
Dislocation	49	31	0	0	0	0	17	0	0	0	1
Electric shock	1	0	1	0	0	0	0	0	0	0	0
Hypothermia	249	0	249	0	0	0	0	0	0	0	0
Internal organ injury	150	0	11	0	0	8	0	0	119	0	12
Laceration	626	73	8	35	26	228	176	3	27	0	50
Scrape/bruise	364	53	19	12	10	51	77	7	81	0	54
Shock	13	0	13	0	0	0	0	0	0	0	0
Spinal cord Injury	59	0	0	0	0	0	0	11	48	0	0
Sprain/strain	212	26	17	18	5	1	42	36	54	0	13
Other	5	0	2	1	0	0	0	0	0	0	2
Unknown	196	12	1	7	3	32	19	8	62	0	52



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, 1997-2016 (Figure 11 & Table 29, Page 55)

This figure and table document the number of accidents and casualties from 1997-2016.

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

This table provides accident, casualty, and damage information by state for the year 2016. 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 38 deaths. Out of the total national death count of 701, Michigan contributed 5.4% ($(38/701) \times 100$) 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, 1997-2016 (Figure 13 & Table 31, Page 61)

This table and accompanying figure provide two fatality rates for years 1997-2016. 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 2016 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 2015-2016 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, 2012-2016 (Table 32, Page 63)

This table examines the number of accidents, fatal accidents, and fatalities by state for years 2012-2016.

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, 1997-2016

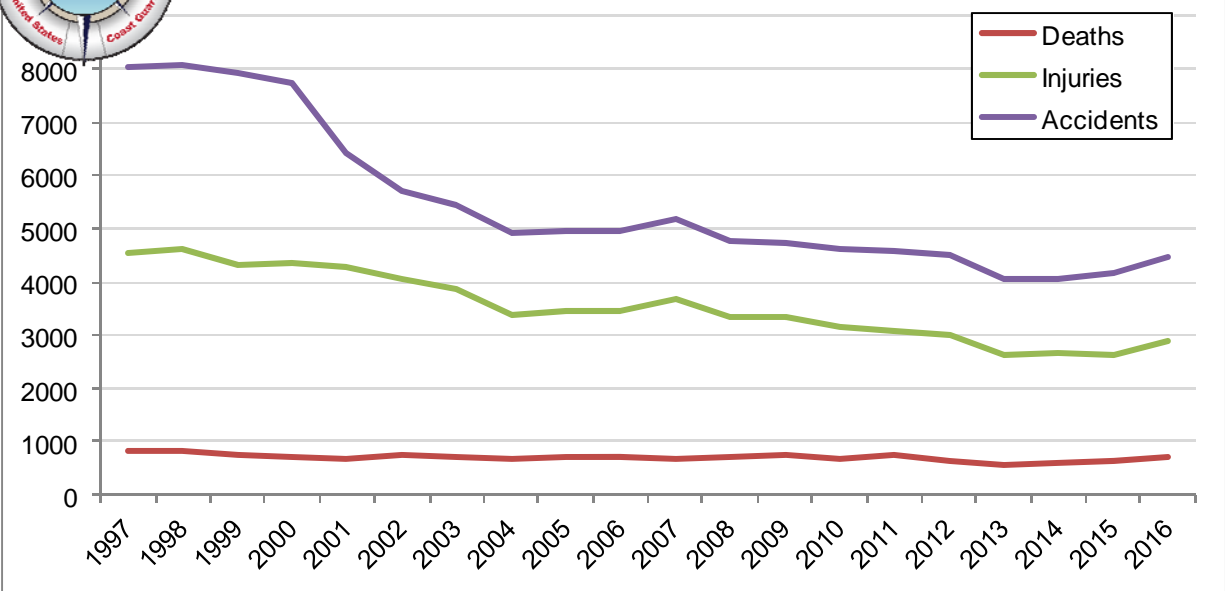


Table 29 • DEATHS, INJURIES, & ACCIDENTS BY YEAR, 1997-2016

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

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

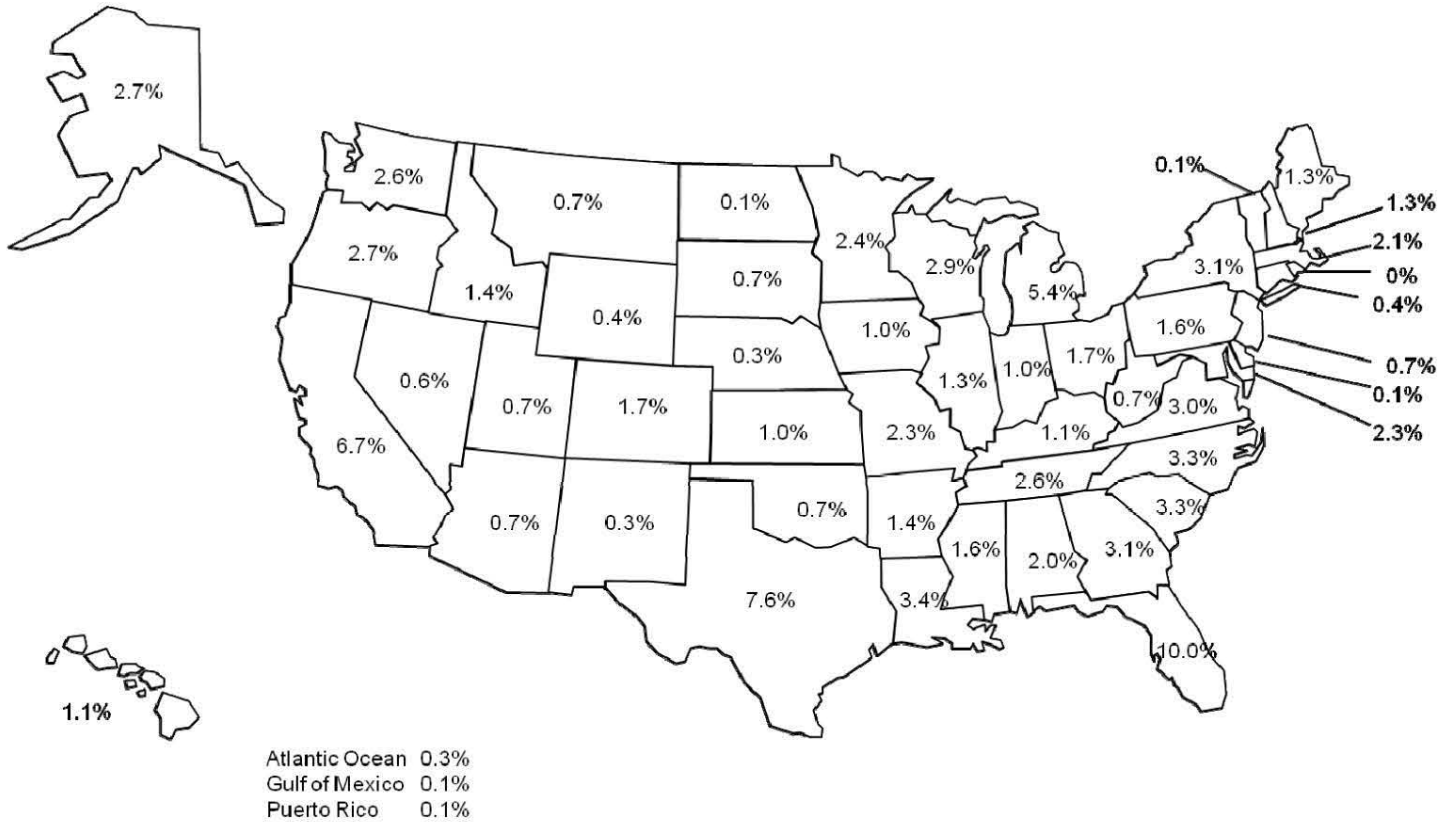
Table 30 • ACCIDENT, CASUALTY & DAMAGE DATA BY STATE 2016

	Number of Accidents				Persons Involved		Damages
	Total	Fatal	Non-Fatal Injury	Property Damage	Deaths	Injured	
Totals	4463	624	2015	1824	701	2903	\$49,124,633.91
AK	26	14	8	4	19	19	\$774,245.00
AL	46	12	17	17	14	30	\$560,610.00
AR	47	9	15	23	10	23	\$344,300.00
AZ	90	5	46	39	5	66	\$506,661.00
CA	386	43	173	170	47	277	\$4,409,065.01
CO	43	11	19	13	12	21	\$173,080.00
CT	47	3	27	17	3	42	\$1,177,728.79
DC	2	0	1	1	0	1	\$15,000.00
DE	23	1	5	17	1	9	\$708,864.00
FL	684	59	287	338	70	411	\$9,655,738.00
GA	112	15	61	36	22	80	\$652,228.63
HI	14	6	3	5	8	4	\$150,435.00
IA	37	7	17	13	7	20	\$79,154.19
ID	50	8	25	17	10	36	\$275,200.00
IL	74	9	28	37	9	40	\$351,091.00
IN	40	6	21	13	7	27	\$152,698.13
KS	32	7	17	8	7	21	\$130,000.00
KY	46	8	27	11	8	37	\$137,065.00
LA	112	23	53	36	24	92	\$1,597,799.10
MA	92	13	31	48	15	38	\$1,395,402.00
MD	150	11	97	42	16	116	\$3,738,326.74
ME	49	9	17	23	9	23	\$737,222.58
MI	125	33	55	37	38	65	\$550,170.74
MN	96	17	50	29	17	72	\$228,474.47
MO	137	14	89	34	16	107	\$1,178,494.09
MS	43	10	15	18	11	21	\$257,750.00
MT	23	5	12	6	5	26	\$131,050.00
NC	143	22	63	58	23	84	\$3,347,940.00
ND	15	1	9	5	1	12	\$88,500.00
NE	22	2	10	10	2	15	\$121,601.00
NH	76	8	31	37	9	44	\$664,937.92
NJ	109	4	42	63	5	70	\$136,000.00
NM	16	2	9	5	2	11	\$21,200.00
NV	48	4	26	18	4	36	\$168,307.00
NY	188	20	86	82	22	149	\$1,308,095.34
OH	113	12	41	60	12	55	\$893,172.46
OK	44	5	24	15	5	39	\$1,350,020.00
OR	82	17	32	33	19	59	\$672,131.00
PA	55	9	22	24	11	33	\$204,479.54
RI	36	0	10	26	0	14	\$875,688.00
SC	136	20	50	66	23	84	\$985,859.00
SD	20	4	10	6	5	15	\$114,100.00
TN	116	17	49	50	18	66	\$1,188,740.00
TX	176	48	83	45	53	124	\$985,087.00
UT	94	5	41	48	5	58	\$407,987.99
VA	83	19	39	25	21	48	\$488,747.00
VT	4	1	1	2	1	3	\$35,995.00
WA	98	18	42	38	18	53	\$1,761,740.75
WI	103	16	57	30	20	72	\$871,790.90
WV	24	5	11	8	5	14	\$211,097.54
WY	8	3	2	3	3	3	\$15,500.00
AS	0	0	0	0	0	0	\$0.00
CNMI	0	0	0	0	0	0	\$0.00
GU	0	0	0	0	0	0	\$0.00
PR	6	1	2	3	1	5	\$23,300.00
VI	0	0	0	0	0	0	\$0.00
Atlantic Ocean*	8	2	5	1	2	9	\$974,302.00
Gulf of Mexico*	8	1	2	5	1	4	\$419,611.00
Pacific Ocean*	6	0	0	6	0	0	\$720,850.00

*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 2016 DEATHS BY STATE



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

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

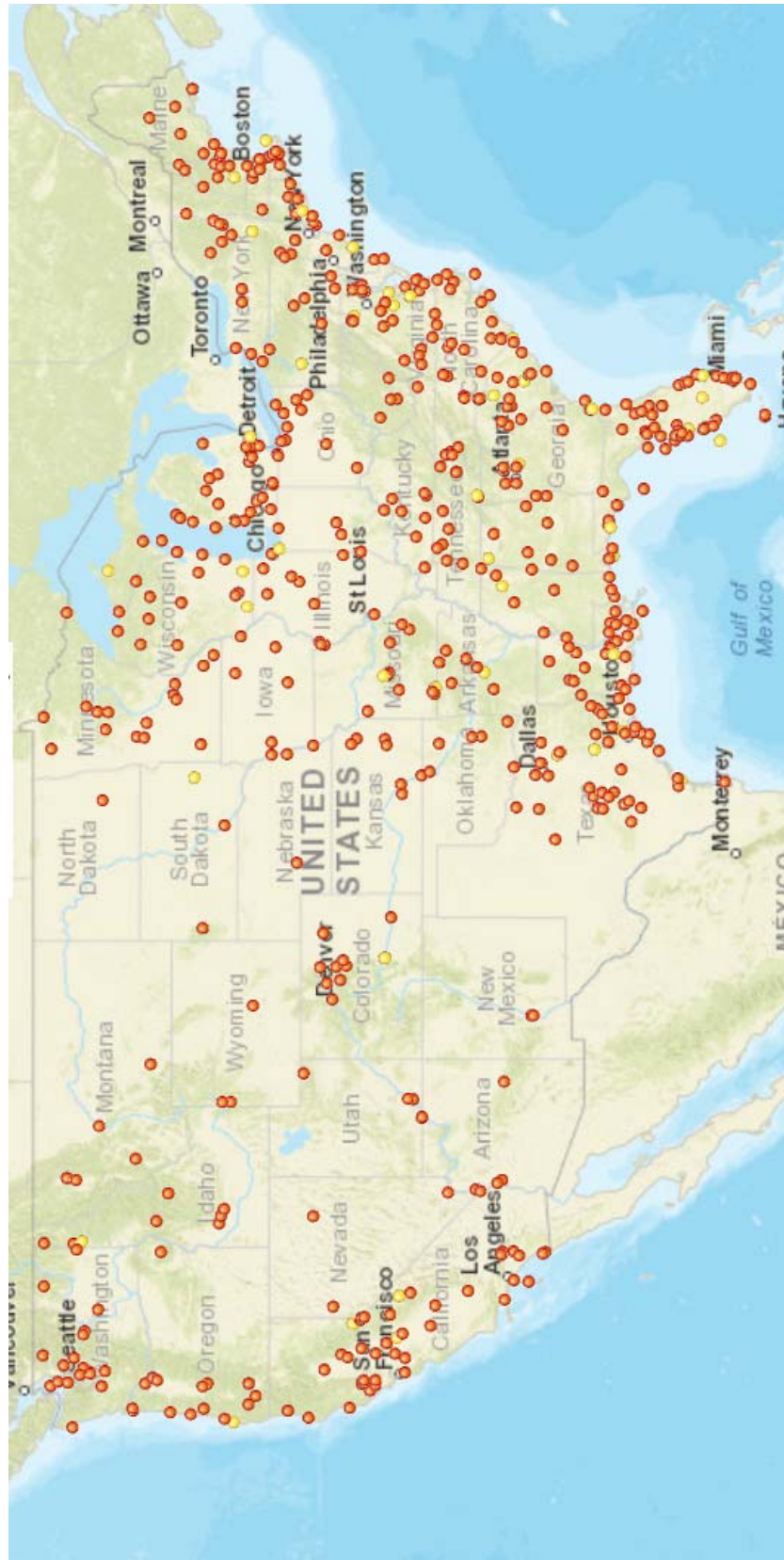


Figure 12b • FATAL ACCIDENTS BY LOCATION– ALASKA

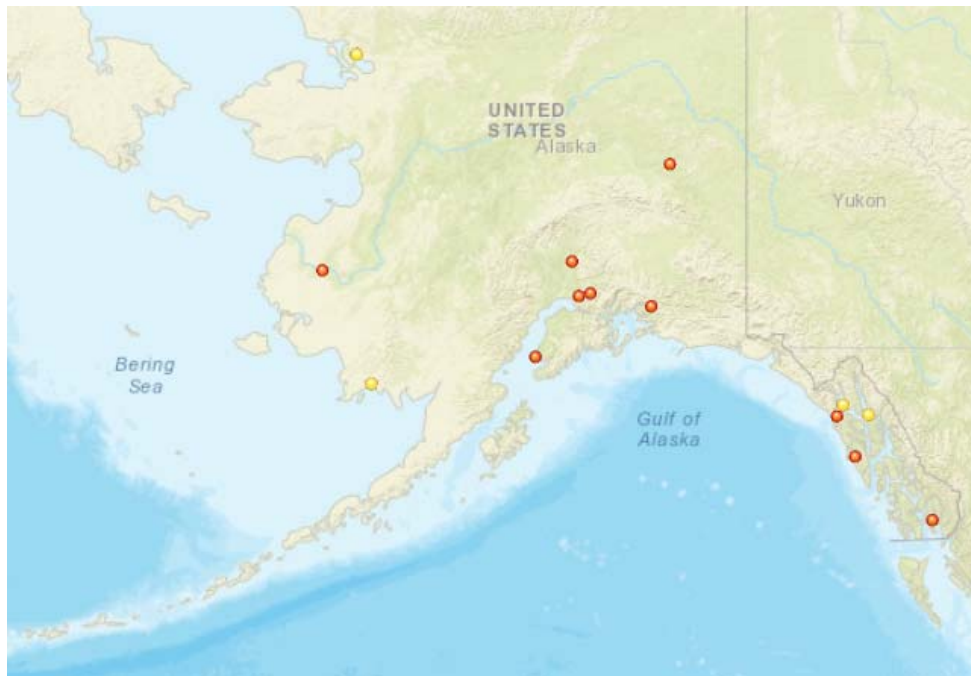


Figure 12c • FATAL ACCIDENTS BY LOCATION– HAWAII

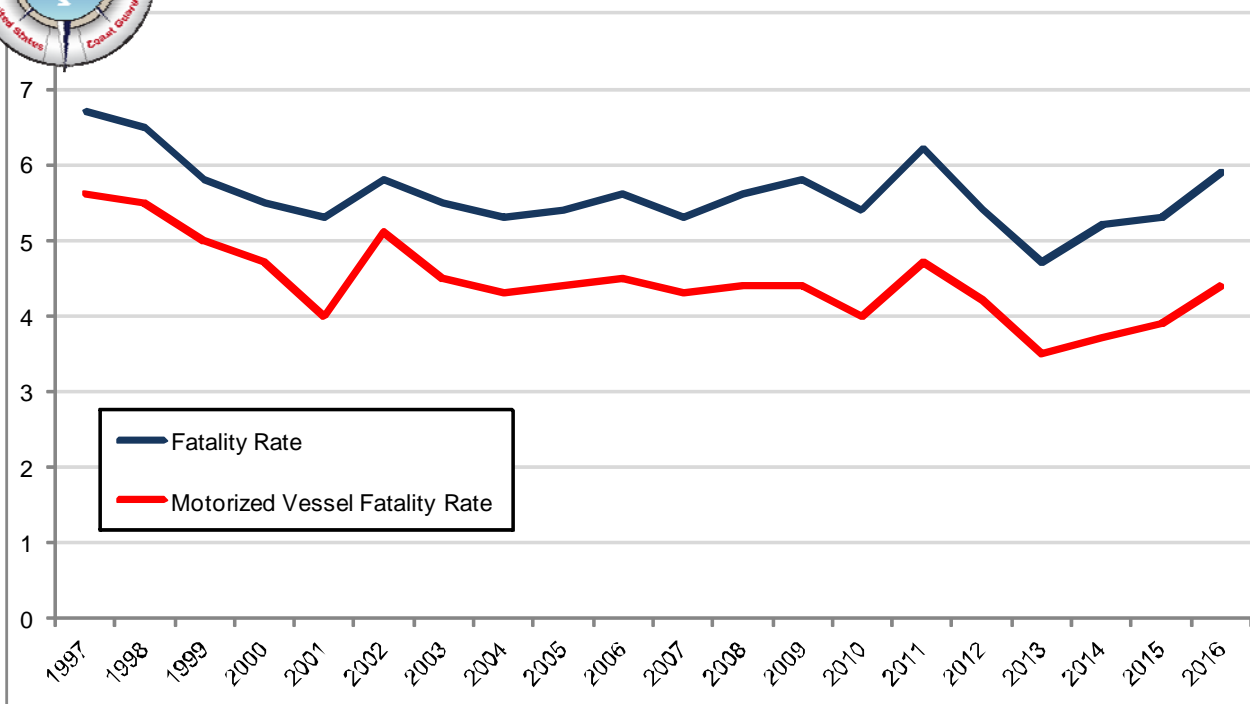


Figure 12d • FATAL ACCIDENTS BY LOCATION– PUERTO RICO



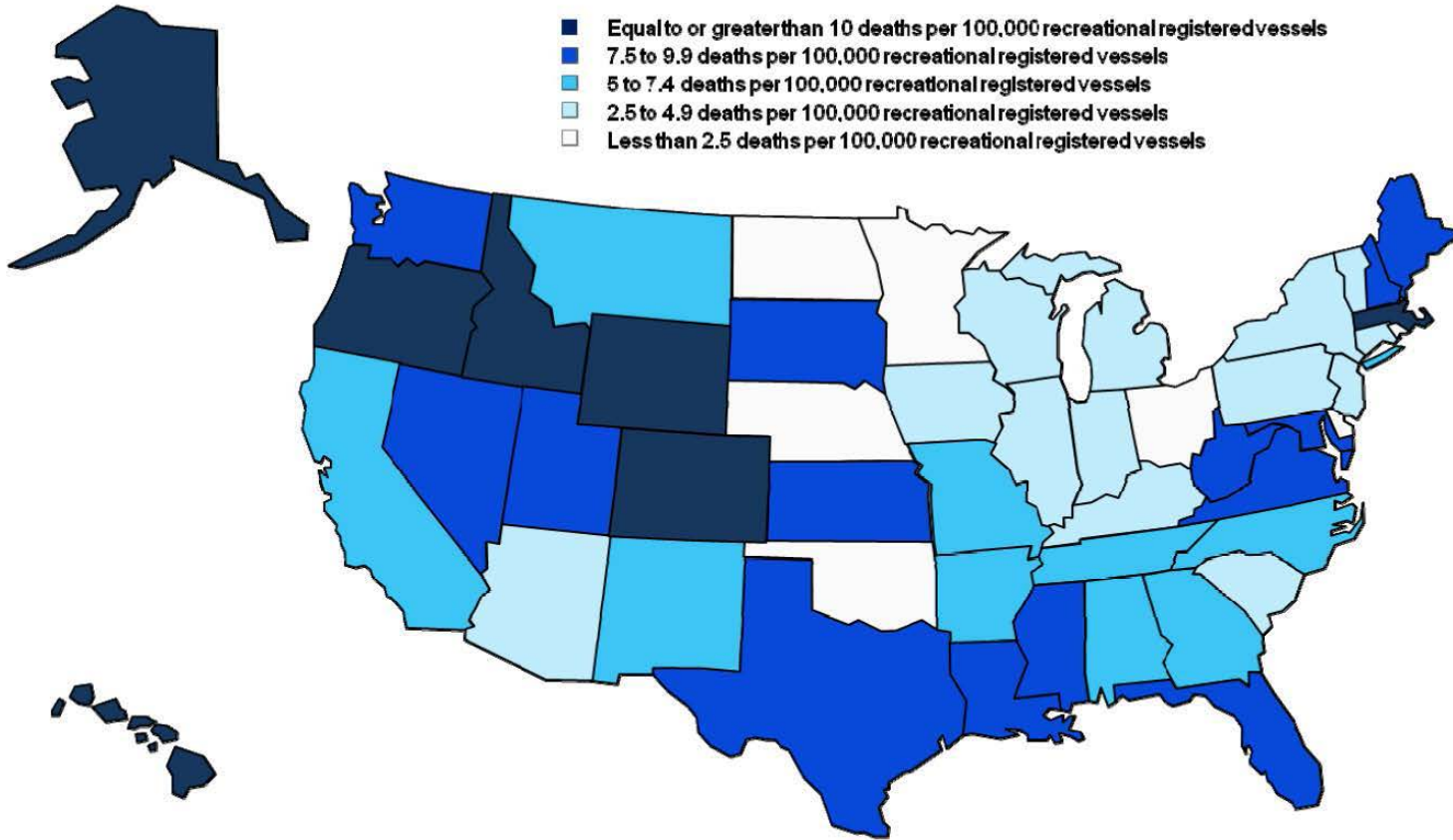


Figure 13 ANNUAL RECREATIONAL BOATING FATALITY RATES, 1997-2016



	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

Figure 14 STATES CODED BY THEIR 2016 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 2012-2016															
	Total Number of Accidents					Fatal Accidents					Deaths				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Totals	4515	4062	4064	4158	4463	578	510	548	569	624	651	560	610	626	701
Alabama	71	62	71	79	46	16	10	12	17	12	17	10	13	21	14
Alaska	23	18	18	25	26	15	7	10	7	14	22	10	11	7	19
Arizona	99	95	87	97	90	3	9	7	6	5	4	9	7	6	5
Arkansas	68	56	54	49	47	8	13	7	9	9	8	15	8	9	10
California	365	426	379	369	386	37	34	29	41	43	49	37	38	48	47
Colorado	46	32	57	36	43	8	2	12	8	11	9	2	12	8	12
Connecticut	49	35	40	58	47	6	1	5	6	3	6	1	5	6	3
Delaware	13	8	15	13	23	2	0	1	0	1	2	0	1	0	1
DC	2	5	2	0	2	0	0	0	0	0	0	0	0	0	0
Florida	662	685	581	671	684	48	51	62	49	59	50	58	70	52	70
Georgia	111	92	92	85	112	11	15	12	19	15	13	16	13	22	22
Hawaii	28	14	9	12	14	5	4	3	5	6	5	4	3	5	8
Idaho	66	42	43	39	50	11	5	10	9	8	11	5	10	13	10
Illinois	101	59	84	66	74	15	8	17	11	9	17	9	22	11	9
Indiana	43	44	40	43	40	2	4	9	5	6	2	5	9	5	7
Iowa	33	24	33	36	37	8	3	6	3	7	11	3	7	3	7
Kansas	27	24	17	25	32	2	5	6	2	7	2	5	6	2	7
Kentucky	47	31	46	41	46	7	4	8	12	8	8	5	9	20	8
Louisiana	116	96	113	87	112	23	15	18	20	23	25	15	18	22	24
Maine	48	54	35	32	49	6	3	5	7	9	6	4	5	8	9
Maryland	145	110	130	146	150	11	13	10	20	11	11	14	12	21	16
Massachusetts	68	83	82	89	92	16	12	5	5	13	17	12	6	5	15
Michigan	103	92	97	90	125	14	19	18	22	33	16	21	19	24	38
Minnesota	84	75	50	87	96	12	10	14	16	17	15	12	14	18	17
Mississippi	57	41	25	30	43	11	12	2	7	10	12	13	3	10	11
Missouri	141	111	142	109	137	10	16	13	17	14	12	16	14	17	16
Montana	17	16	14	14	23	9	6	3	6	5	10	6	3	6	5
Nebraska	45	25	26	32	22	8	0	1	4	2	8	0	1	4	2
Nevada	57	48	47	38	48	3	5	7	5	4	4	5	11	5	4
New Hampshire	40	40	44	53	76	4	1	1	4	8	4	1	1	4	9
New Jersey	115	123	111	122	109	7	8	3	7	4	7	8	3	8	5
New Mexico	18	16	13	10	16	1	2	0	0	2	1	2	0	0	2
New York	197	180	175	174	188	21	15	27	15	20	27	18	27	16	22
North Carolina	145	139	124	162	143	22	14	22	18	22	23	16	26	20	23
North Dakota	10	5	11	11	15	1	2	4	2	1	1	2	5	2	1
Ohio	136	108	100	100	113	11	13	15	13	12	11	13	22	13	12
Oklahoma	71	42	50	58	44	12	8	6	11	5	15	9	6	13	5
Oregon	70	59	61	65	82	17	12	7	15	17	19	12	7	15	19
Pennsylvania	59	71	66	52	55	9	16	20	4	9	11	17	21	4	11
Rhode Island	31	42	40	37	36	3	1	3	1	0	3	1	3	1	0
South Carolina	108	104	124	123	136	13	26	13	15	20	14	27	14	17	23
South Dakota	18	10	8	15	20	3	1	1	4	4	4	1	1	4	5
Tennessee	147	119	111	107	116	16	17	13	13	17	21	20	14	13	18
Texas	162	146	167	154	176	32	28	34	39	48	32	31	39	44	53
Utah	99	76	80	79	94	6	10	5	5	5	8	12	5	5	5
Vermont	3	2	5	4	4	0	1	1	0	1	0	1	1	0	1
Virginia	89	64	60	70	83	13	10	15	9	19	15	11	17	9	21
Washington	105	94	122	107	98	28	17	22	28	18	30	17	22	29	18
West Virginia	19	16	24	11	24	4	3	3	2	5	4	3	3	2	5
Wisconsin	110	79	102	103	103	23	12	9	19	16	23	12	9	20	20
Wyoming	9	6	11	8	8	1	0	4	0	3	1	0	4	0	3
AS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CNMI	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Guam	1	1	2	4	0	0	1	2	0	0	0	1	3	0	0
Puerto Rico	1	2	3	5	6	1	2	2	4	1	2	2	2	5	1
Virgin Islands	2	0	2	2	0	1	0	0	1	0	1	0	0	2	0
*AT	4	10	10	16	8	0	3	1	0	2	0	4	1	0	2
*GM	6	3	4	5	8	1	0	0	2	1	1	0	0	2	1
*PC	4	2	5	3	6	1	1	3	0	0	1	7	4	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 33 - NUMBER OF ACCIDENTS BY PRIMARY ACCIDENT TYPE & STATE 2016

Injuries	2903
Total deaths	701
Other deaths	192
Drownings	509
Unknown	0
Other	48
Sudden medical condition	10
Skier mishap	278
Sinking	0
Person struck by vessel	32
Person struck by propeller	42
Grounding	413
Flooding/swamping	470
Fire/explosion (unknown origin)	34
Fire/explosion (non-fuel)	81
Fire/explosion (fuel)	158
Falls overboard	284
Fall in vessel	170
Electrocution	2
Ejected from vessel	160
Departed vessel	121
Collision with submerged object	143
Collision with recreational vessel	1051
Collision with governmental vessel	4
Collision with commercial vessel	31
Collision with floating object	53
Collision with fixed object	565
Carbon monoxide	8
Capsizing	305
Total accidents	4463
Totals	4463
AK	26
AL	46
AR	47
AZ	90
CA	386
CO	43
CT	47
DC	2
DE	23
FL	684
GA	112
HI	14
IA	37
ID	50
IL	74
IN	40
KS	32
KY	46
LA	112
MA	92
MD	150
ME	49
MI	125
MN	96
MO	137
MS	43
MT	23
NC	143
ND	15

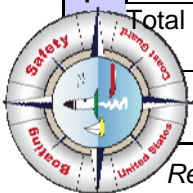


Table 33 Continued - NUMBER OF ACCIDENTS BY PRIMARY ACCIDENT TYPE & STATE 2016

Injuries	15
Total deaths	9
Other deaths	1
Drownings	8
Unknown	1
Other	4
Sudden medical condition	5
Skier mishap	7
Sinking	2
Person struck by vessel	2
Person struck by propeller	4
Grounding	14
Flooding/swamping	6
Fire/explosion (unknown origin)	13
Fire/explosion (non-fuel)	7
Fire/explosion (fuel)	5
Falls overboard	10
Fall in vessel	8
Electrocution	5
Ejected from vessel	2
Departed vessel	2
Collision with submerged object	6
Collision with recreational vessel	7
Collision with governmental vessel	3
Collision with commercial vessel	2
Collision with floating object	15
Collision with fixed object	13
Carbon monoxide	1
Capsizing	9
Total accidents	22

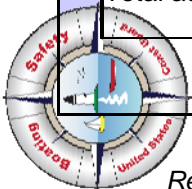




Table 34 - NUMBER OF INJURED VICTIMS BY PRIMARY INJURY & VESSEL TYPE

Primary Injury	Number of Injuries	Airboat	Auxiliary sailboat	Cabin motorboat	Canoe	Houseboat	Inflatable	Kayak	Open motorboat	Personal watercraft	Pontoon	Rowboat	Sailboat (only)	Sailboat	Standup	Other	Unknown
Amputation	31	2	1	1	0	0	0	1	20	2	4	0	0	0	0	0	0
Broken bone	552	6	4	37	2	1	2	4	267	207	17	0	3	0	0	0	2
Burns	127	2	4	50	0	1	0	0	61	2	1	0	1	0	0	0	5
Carbon monoxide	13	0	0	11	0	1	0	0	1	0	0	0	0	0	0	0	0
Concussion	256	2	8	21	0	0	1	4	127	75	11	2	5	0	0	0	0
Dislocation	49	1	1	4	0	0	1	3	27	10	0	0	0	0	2	0	0
Electric shock	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Hypothermia	249	0	2	7	29	0	3	41	125	6	3	14	16	0	0	1	2
Internal organ injury	150	4	3	11	5	1	1	6	68	43	7	1	0	0	0	0	0
Laceration	626	9	6	45	1	1	1	6	379	124	37	3	4	0	2	1	7
Scrape/bruise	364	4	9	29	5	0	1	3	179	110	18	3	2	0	0	1	0
Shock	13	0	0	0	0	0	1	1	9	1	0	0	0	0	0	0	1
Spinal cord injury	59	0	0	1	1	0	0	1	40	12	3	0	0	1	0	0	0
Sprain/strain	212	2	0	20	1	0	4	3	123	43	9	2	4	0	1	0	0
Other	5	0	0	2	0	0	0	1	2	0	0	0	0	0	0	0	0
Unknown	196	0	1	24	1	0	1	5	109	39	10	2	1	0	0	1	2
All Injuries	2903	32	39	263	45	5	16	79	1537	675	120	27	36	1	5	4	19

Table 35 - NUMBER OF FATAL VICTIMS BY LIFE JACKET WEAR, CAUSE OF DEATH & VESSEL TYPE 2016

Cause of Death	Life jacket worn?	Number of deaths	Airboat	Auxiliary sailboat	Cabin motorboat	Canoe	Houseboat	Inflatable	Kayak	Open motorboat	Personal watercraft	Pontoon	Rowboat	Sailboat (only)	Sailboat (unknown)	Standup paddleboard	Other	Unknown
Carbon monoxide	Yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	No	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
Cardiac arrest	Yes	4	0	0	1	0	0	1	0	1	1	0	0	0	0	0	0	0
	No	8	0	1	0	1	0	0	1	3	0	1	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	82	0	1	2	4	0	7	22	33	7	2	1	1	0	1	1	0
	No	404	2	4	23	52	2	7	50	185	6	36	13	2	0	11	5	6
	Unknown	23	0	0	3	0	0	0	2	10	0	0	0	0	1	0	0	7
Hypothermia	Yes	5	0	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0
	No	2	0	0	0	0	0	0	0	1	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
Other	Yes	2	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
	No	3	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0
	Unknown	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Trauma	Yes	51	0	0	0	0	0	0	0	24	26	1	0	0	0	0	0	0
	No	41	1	0	3	0	0	0	0	32	1	4	0	0	0	0	0	0
	Unknown	7	0	0	0	0	0	0	0	6	1	0	0	0	0	0	0	0
Unknown	Yes	10	0	0	0	1	0	2	2	3	2	0	0	0	0	0	0	0
	No	29	0	1	0	2	0	1	2	16	1	2	1	0	0	3	0	0
	Unknown	28	0	3	8	2	0	0	4	7	0	1	0	0	0	0	0	3
All Causes		701	3	11	41	63	2	18	89	323	46	47	17	3	1	15	6	16

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, 1980-2016 (Table 36 & Figure 15, Page 69)

This table provides information about recreational vessel registration for each year from 1980-2016. The accompanying figure displays a trend line from 1980-2016.

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 2015 and 2016. 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 2016 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 697,412 vessels. Out of the total national registration of 11,861,811 California contributed 5.9% $((697,412/11,861,811) \times 100)$ of registered vessels. Please note that percentages have been rounded.

Table 36 - RECREATIONAL VESSELS REGISTERED BY YEAR, 1980-2016	
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

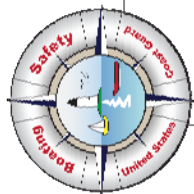
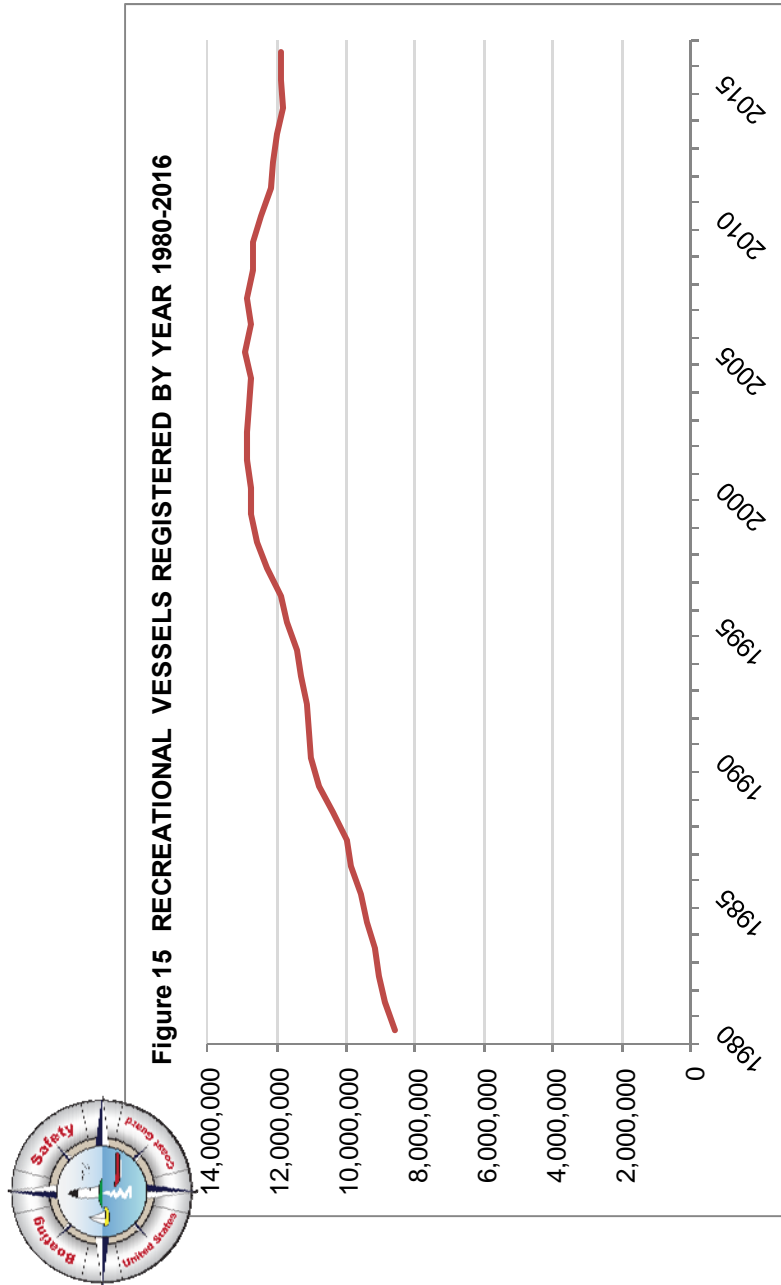




Table 37 - RECREATIONAL VESSEL REGISTRATION BY LENGTH AND MEANS OF PROPULSION 2016

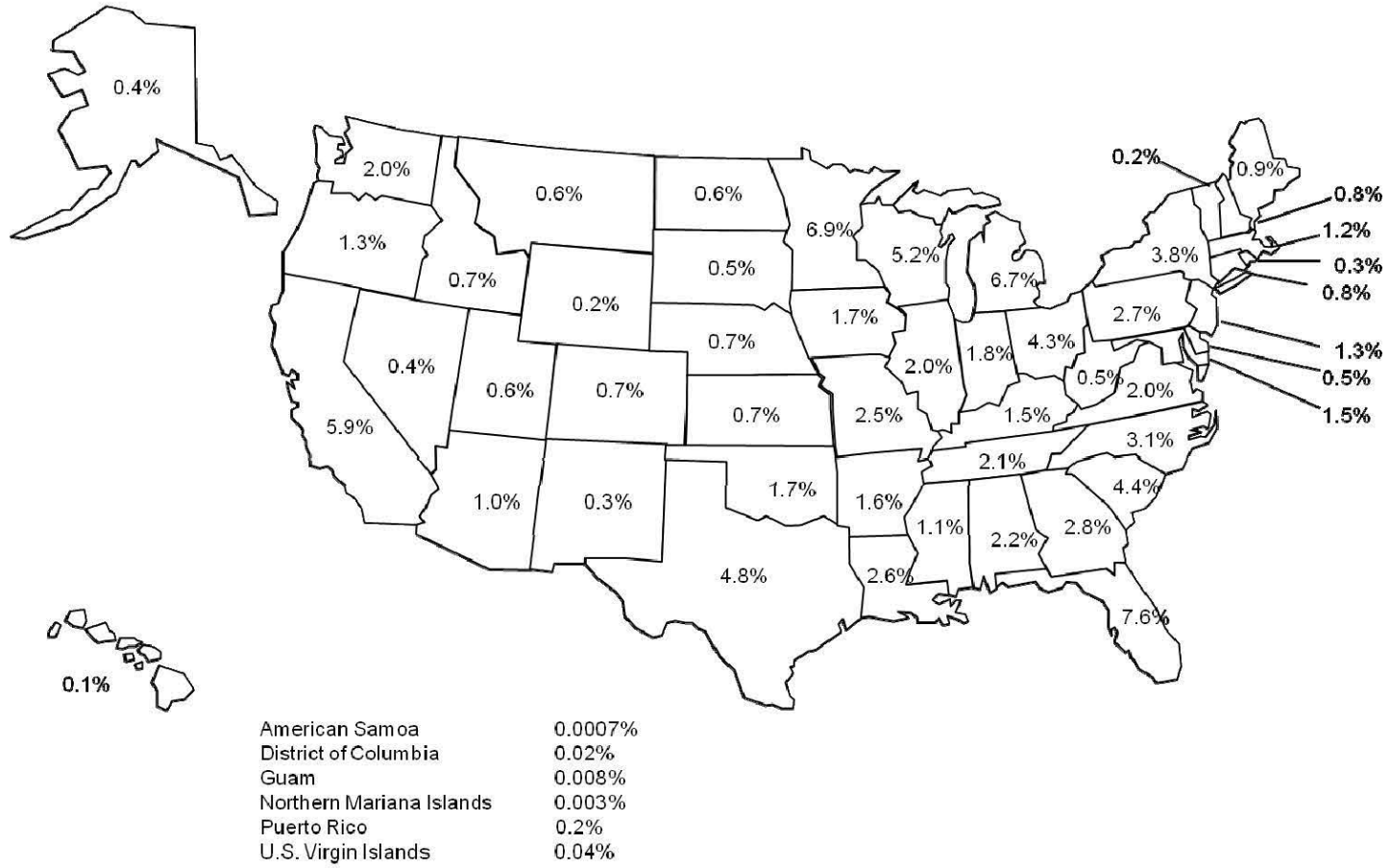
MECHANICALLY PROPELLED		11,005,841
Under 16 feet		4,182,114
16 to less than 26 feet		6,244,590
26 to less than 40 feet		492,564
40 to 65 feet		75,311
Over 65 feet		11,262
NOT MECHANICALLY PROPELLED		855,970
Rowboats		96,696
Sailboats		107,807
Paddlecraft		449,279
Other		202,188
TOTAL		11,861,811

Table 38 - RECREATIONAL VESSEL REGISTRATION DATA BY STATE 2015-2016

	2016			2015			Scope of Current Boat Registration System
	Registration	Deaths	Fatality Rate	Registration	Deaths	Fatality Rate	
	11,861,811	701	5.9	11,867,049	626	5.3	
AK	51,144	19	37.2	50,781	7	13.8	All undocumented powerboats
AL	261,741	14	5.3	261,183	21	8.0	All motorboats, sailboats and rental boats
AR	189,514	10	5.3	171,268	9	5.3	All watercraft
AZ	123,263	5	4.1	124,076	6	4.8	All motorized watercraft
CA	697,412	47	6.7	772,542	48	6.2	All motorboats; sailboats over 8 feet in length
CO	84,676	12	14.2	84,111	8	9.5	All watercraft powered by motor or sail - sailboards exempt
CT	93,364	3	3.2	95,527	6	6.3	All motorboats; sailboats 19.5 feet or more in length
DC	2,115	0	0.0	2,120	0	0	All watercraft
DE	61,901	1	1.6	59,467	0	0	All motorboats
FL	905,298	70	7.7	889,350	52	5.8	All motorboats
GA	335,723	22	6.6	327,657	22	6.7	All motorboats; sailboats 12 feet or more in length
HI	11,238	8	71.2	10,807	5	46.3	All motorboats; sailboats over 8 feet in length
IA	205,145	7	3.4	236,466	3	1.3	All watercraft with exceptions (a)
ID	87,211	10	11.5	86,969	13	14.9	All motorboats and sailboats
IL	242,275	9	3.7	236,513	11	4.7	All watercraft, except non-powered vessels on private waters
IN	209,622	7	3.3	209,867	5	2.4	All motorboats on public waterways
KS	81,243	7	8.6	80,979	2	2.5	All motorboats and sailboats
KY	173,881	8	4.6	172,315	20	11.6	All motorboats, except electric motors 1 hp or less
LA	306,689	24	7.8	306,731	22	7.2	All motorboats; sailboats more than 12 feet in length
MA	140,008	15	10.7	134,678	5	3.7	All motorboats
MD	176,207	16	9.1	178,798	21	11.7	All motorboats
ME	111,116	9	8.1	107,475	8	7.4	All motorboats
MI	794,137	38	4.8	787,637	24	3.0	All watercraft with exceptions (b)
MN	817,560	17	2.1	808,627	18	2.2	All watercraft with exceptions (c)
MO	293,185	16	5.5	293,660	17	5.8	All motorboats; sailboats over 12 feet in length
MS	132,441	11	8.3	134,991	10	7.4	All motorboats and sailboats
MT	68,229	5	7.3	60,087	6	10.0	All motorboats; sailboats 12 feet or more in length
NC	367,225	23	6.3	374,823	20	5.3	All motorboats; sailboats more than 14 feet in length
ND	67,022	1	1.5	69,581	2	2.9	All watercraft
NE	87,596	2	2.3	86,853	4	4.6	All motorboats
NH	94,806	9	9.5	92,979	4	4.3	All motorboats; sailboats 12 feet or more in length
NJ	150,968	5	3.3	151,450	8	5.3	All watercraft with exceptions (d)
NM	33,780	2	5.9	33,933	0	0	All motorboats and sailboats
NV	42,426	4	9.4	41,794	5	12.0	All motorboats
NY	448,480	22	4.9	446,582	16	3.6	All motorboats
OH	505,082	12	2.4	474,185	13	2.7	All watercraft
OK	202,388	5	2.5	203,829	13	6.4	All watercraft
OR	156,168	19	12.2	168,175	15	8.9	All motorboats; sailboats 12 feet or more in length
PA	315,503	11	3.5	318,873	4	1.3	All motorboats and certain non-powered craft (e)
RI	40,178	0	0.0	40,075	1	2.5	All motorboats and rowboats over 12 feet
SC	518,269	23	4.4	502,210	17	3.4	All watercraft
SD	59,485	5	8.4	58,972	4	6.8	All motorboats; all other boats over 12 feet in length
TN	254,091	18	7.1	257,172	13	5.1	All motorboats and sailboats
TX	573,425	53	9.2	572,666	44	7.7	All motorboats and sailboats 14 feet or more in length
UT	65,873	5	7.6	66,497	5	7.5	All motorboats and sailboats
VA	233,236	21	9.0	234,052	9	3.8	All motorboats
VT	29,353	1	3.4	28,179	0	0	All motorboats
WA	234,035	18	7.7	228,528	29	12.7	All motorboats with exceptions (f); sailboats >16 ft in length
WI	611,240	20	3.3	623,217	20	3.2	All motorboats; sailboats over 12 feet in length
WV	57,305	5	8.7	50,324	2	4.0	All motorboats
WY	27,288	3	11.0	27,711	0	0	All motorboats and sailboats
AS	82	0	0.0	91	0	0	All watercraft
CNMI	392	0	0.0	310	0	0	All motorboats
GU	998	0	0.0	948	0	0	All motorboats 7 feet or more, personal watercraft, and sailboats
PR	24,224	1	4.1	23,746	5	21.1	All motorboats; vessels adapted to hold a motor
VI	4,555	0	0.0	4,612	2	43.4	All watercraft
Offshore		3			2		

(a) IA excludes inflatables under 7 feet in length and canoes/kayaks under 13 feet in length. (b) MI excludes manually propelled boats 16 feet or less in length, and privately-owned non-motorized rafts, canoes, and kayaks. (c) MN excludes non-motorized boats 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 2016 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*

Report submitted by (select all that apply):

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

To be submitted within:

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

To be submitted to: (Local State Reporting Authority)

Phone:

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

For State Agency Use Only

First Name	Last Name
Phone:	

First Name	Last Name	Phone	Primary Cause of Accident
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ACCIDENT SUMMARY

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

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

YOUR BOAT

BOAT IDENTIFICATION

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

SIZE ESTIMATES

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

Type of Hull Material (select one)

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

BOAT TYPE

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

ENGINE

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

SAFETY MEASURES

Organizations that have conducted a vessel safety check (VSC) on board your boat within the past year (including carriage of safety equipment, e.g., lifejackets, anchor and line, fire extinguishers):

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

ACCIDENT DETAILS – EXTERNAL CONDITIONS

WEATHER

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

WATER

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

USCG Boating Accident Report Form

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

ACCIDENT DETAILS – ACTIVITIES AND OPERATIONS ON YOUR BOAT

OPERATOR/PASSENGER ACTIVITIES

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

Activities were (select one) Operator/Passenger activities (select all that apply)

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

BOAT OPERATIONS

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

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

ACCIDENT DETAILS – CONTRIBUTING FACTORS ON YOUR BOAT

CONTRIBUTING FACTORS

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

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

ACCIDENT DETAILS – YOUR BOAT

MACHINERY/EQUIPMENT FAILURE

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

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

ACCIDENT DETAILS – EVENTS ON YOUR BOAT

ACCIDENT EVENTS

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

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

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

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

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

INJURED PERSON

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

INJURY DETAILS

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

ACCIDENT DETAILS – YOUR BOAT – DEATHS/DISAPPEARANCES

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

PERSON WHO DIED/DISAPPEARED

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

DETAILS OF DEATH/DISAPPEARANCE

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

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

ACCIDENT DETAILS – YOUR BOAT OPERATOR

OPERATOR INSTRUCTION		OPERATOR SAFETY MEASURES			
Boating safety instruction completed <i>(select all that apply)</i>		On board, prior to accident, was operator wearing:			
<input type="checkbox"/> None		A lifejacket?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
<input type="checkbox"/> State course		An engine cut-off switch <i>(Lanyard or wireless device)</i> if equipped?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
<input type="checkbox"/> USCG Auxiliary course		On board, prior to accident, was operator using:			
<input type="checkbox"/> US Power Squadrons course			Alcohol?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Internet <i>(name of sponsoring organization)</i>		Drugs?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
<input type="checkbox"/> Other <i>(describe)</i>		Operator arrested for Boating Under the Influence?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
		Weather reports consulted prior to accident?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

OPERATOR EXPERIENCE

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

<input type="checkbox"/> 0 to 10 hours	<input type="checkbox"/> Over 10, up to 100 hours	<input type="checkbox"/> Over 100, up to 500 hours	<input type="checkbox"/> Over 500 hours
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ACCIDENT DETAILS – OTHER KEY PEOPLE

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

NAME/ADDRESS

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

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

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

NAME/ADDRESS

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

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

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

USCG Boating Accident Report Form

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

YOUR BOAT OPERATOR

NAME/ADDRESS

First Name	MI	Last Name
Street		
City	State	Zip

AGE/GENDER/PHONE

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

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

NAME/ADDRESS/PHONE

First Name	MI	Last Name	
Street			
City	State	Zip	Phone

PERSON SUBMITTING THIS REPORT

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

NAME/ADDRESS/PHONE/ROLE

First Name	MI	Last Name	
Street			
City	State	Zip	Phone

I was a(n) (select one)

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

SIGNATURE OF PERSON SUBMITTING THIS REPORT

Your signature	Date (mm/dd/yyyy)
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An Agency may not conduct or sponsor and a person is not required to respond to an information collection, unless it displays a currently valid OMB Control Number.

The Coast Guard estimated that the average burden for this report form is 30 minutes. You may submit any comments concerning the accuracy of this burden estimate or any suggestions for reducing the burden to: Commandant (CG-BSX-21), U.S. Coast Guard, Washington, DC 20593-0001 or Office of Management and Budget, Paperwork Reduction Project (1625-0003), Washington, DC 20503.

Glossary

Airboat - A vessel that is typically flat-bottomed and propelled by an aircraft-type propeller powered by an engine.

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

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

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

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

Capsizing - Overturning of a vessel.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Houseboat - A motorized vessel 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.

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		