



New York State
Parks, Recreation and
Historic Preservation



2021 Recreational Boating Report

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Executive Summary

This recreational boating report has been organized to help us better understand how accidents happen, while affording possible insights as to how to prevent them.



Recreational boating is a multi-billion dollar a year industry enjoyed by residents and visitors alike. 2021 had an increase of 6051 registrations to a total of 439,508 registered vessels. 431,229 were registered for recreational purposes. In 2021, New York had 18 reported fatal boating accidents. This is a significant decrease compared to last year. Many of these fatalities were individuals between the ages of 21-60. The phase in of

Brianna's Law continues in 2022 culminating in 2025 with all ages being required to take a Safe Boating Course. We are bringing these numbers back down with the hope that New York residents can continue to have a fun and safe experience on the water. New York's fatality rate was 4.10 deaths per each 100,000-registered watercraft in 2021. The long-term average is 4.60 as calculated since the year 2000. New York had fewer total reported accidents (192) and injuries (118) in 2021, compared to 2020.

There are almost 120,000 more registered boats and vastly more unregistered paddle craft than in 1981, 40 years ago. From 2012 to 2021, recreational boating deaths have averaged 21 deaths per year. From 1972 to 1981, recreational boating deaths averaged 74 deaths per year. Today's average is less than a third of what it was 40 years ago. This decrease can largely be contributed to a few key factors. The federal government created many important safety standards for boat manufacturers, most notably, the Federal Boat Safety Act of 1971. Improvements in technology, such as the cell phone have allowed for faster response and increased availability of communication with boaters in need. Improvements in lifejackets have made them far more comfortable to wear. Specific lifejackets have been developed to maximize safety for specific on water activities such as wake boarding and personal watercraft operation, as well as a new labeling system



rolling out on future lifejackets making it easier for users to know the effectiveness of the lifejackets being used. Legislation has strengthened BWI laws and changed the perception of drinking alcohol on the water. Changes to boater education laws have expanded from the first mandatory requirements for youths which started in 1959, to requirements for personal watercraft operators which started in 2000, and

now to Brianna's Law which includes all boat operators born after January 1, 1993, and by 2025, all ages. Online education has further made boating education accessible to all. Availability of equipment, training, and funding through grant programs have led to an enhanced marine law enforcement capability.

What causes recreational boating accidents and fatalities on the water in New York? The leading cause is drowning. During the period 2005 - 2021, 82% of all drowning victims did not wear a lifejacket. It is impossible to tell how many people have been saved by wearing a lifejacket but the potential consequences of not wearing one are clear. We also know how deadly of an impact unexpected cold-water immersion can be in both the early and late boating seasons. There are far fewer reported accidents during the cold weather months, but a much higher percentage of them result in a fatality. Cold water immersion can overcome a victim quickly. This is because the physiology of cold-water immersion involves uncontrollable physical reactions such as a gasp reflex, hyperventilation, unconsciousness, elevated heart rate, and vasoconstriction; all of which can quickly overcome a boater in distress. A properly fastened lifejacket, along with proper cold weather clothing, is the surest way to ensure survival in cold water longer. The lack of a lifejacket, coupled with the fact that most boating deaths involve boats less than 21 feet in length, led to legislation that requires everyone on watercraft less than 21 feet to wear a lifejacket between November 1st and May 1st. Following the passage of this legislation New York has seen a decrease in the percentage of fatalities occurring during that time.

Alcohol and drug use is a significant cause of fatal boating accidents in New York. Between 2005 and 2021, intoxication was found to be the primary contributing factor in 76 fatalities (21.8%), of all boating deaths. In 2021 alcohol or drugs are known to have been present in four of the total fatalities for the year. These substances can impair both judgment and reaction time. Alcohol also causes blood vessels to dilate which accelerates to heat loss and can cause hypothermia to set in more quickly.

Non-motorized watercraft represented nine of the fatalities (50%) in 2021. The size of the non-motorized segment of the boating population is difficult to determine since a registration is not required in New York State. Most of these accidents involve the victim exiting the craft unexpectedly either by capsizing or falling overboard. Once in the water the wearing of a lifejacket may have assisted them in surviving. Paddlers should also consider the weather conditions and water temperature they are heading into. Even an experienced paddler may have difficulty out in the elements engaging with uneven, cold waters.

In summary, we may now better understand that by taking some simple proactive steps, we can reasonably assure a safe day on the water. We recommend that all passengers always wear a lifejacket when operating paddle-craft or outside the cabin of the motorboat. Be prepared, accidents happen quickly. Never mix alcohol or drugs with boating. Impairment is detectable in persons with a blood alcohol concentration far below



0.08 percent. Alcohol use by passengers can be dangerous, too. Add in the environmental stressors from being on the water and it greatly impairs one's ability to stay alert and react. Of course, it's essential to understand as much as possible about boating before heading out so consider taking a boating safety course. Always equip your boat with the required safety equipment, file a float plan, keep a copy of a boating accident report in a dry compartment and don't forget to bring a cellphone or marine radio, in the event you need to summon assistance.

Lastly, congratulations to our New York State Educator and Officer nominations for 2021. With the NYS Educator recipient going to Mr. Robert Crafa who is the Waterfront Director at the State University of New York (SUNY) Maritime College (Fort Schuyler). Since coming to SUNY Maritime in 2004, Rob has developed SUNY Maritime's facilities into a Community Waterfront Center providing programs for all ages that would not otherwise have access to the water. In his 15-plus years of teaching Rob and his team have certified over 2,800 students in more than 250 classes through NYS Boating Safety Classes and Maritime Adventure Boat Camp. Also, congratulations to the Officer of the Year, Stewart Wilson. Officer Wilson assigned to the Thousand Islands Zone at Alexandria Bay, NY, has spent a large portion of the last 15 years of his career dedicated to the Marine Law Enforcement mission, mainly on the St. Lawrence River in Jefferson County. Through both enforcement and education, Officer Wilson has routinely supported the boating

safety mission for New York State waterways. This includes investigating navigation complaints and providing emergency response services to citizens in need. Officer Wilson has arrested 30 subjects for Boating While Intoxicated, and assisted on several others, while working to keep the waterways of Northern New York safer.

The New York State Office of Parks, Recreation and Historic Preservation (OPRHP)'s goal is to provide the public with a safe and enjoyable boating environment. This is accomplished by developing safe boating habits through education combined with enforcement of the Navigation Law.

*New Regulations / Updates:

Fire Extinguishers:

The United States Coast Guard has changed regulations regarding disposable fire extinguisher requirements. Starting **April 20th, 2022**, if your disposable (non-rechargeable) fire extinguisher has a date of manufacture stamped on the bottom of the bottle (example: "05" means 2005), and it is **older than 12 years**, the extinguisher is considered expired and must be removed from service. This rule relieves owners of recreational vessels from certain inspection, maintenance, and recordkeeping requirements that are more suited for commercial vessels.

These regulations were passed as "B-I" and "B-II" label are being phased out in lieu of new "5-B", "10-B" and "20-B" regulations. Depending on your vessel's model year, you may continue to carry the extinguishers you have now. Vessels in the water that are **less than 26 feet and have a model year of 2017 or older** may continue to carry "B-I" or "B-II" disposable extinguishers. However, once the extinguishing agent is used, the extinguisher is no longer serviceable, or has reached 12 years of age, the extinguisher must be replaced. Boats **less than 26 feet and are a 2018 model or newer** must carry unexpired "5-B", "10-B" or "20-B" fire extinguishers beginning April 20.

No changes were made to rechargeable or fixed-mount fire extinguisher regulations. They will continue to require regular maintenance servicing.

Brianna's Law:

2022 continues with another year of phase in for Brianna's Law, where all motorboat operators born on or after January 1st, 1988, will need a boating safety certificate. You can go to wearitnewyork.com to check out all the classroom and online course options available so you can acquire a life-long boating safety certificate for yourself.

Law Enforcement Activity

Law Enforcement Agency	Total Vessel Hours	Total MLE Hours	Searches and Assists	Total Vessel Inspections	OUI Arrests	Total Arrests
County						
ALLEGANY	320	609	5	26	0	0
CATTARAUGUS	69	483	4	47	0	0
CAYUGA	437	972	5	53	0	16
CHAUTAUQUA	2034	5223	182	402	0	40
CLINTON	171	525	17	29	0	0
COLUMBIA	46	204	7	13	0	0
CORTLAND	59	279	2	85	0	6
DUTCHESS	549	1223	36	3	0	0
ERIE			71	37	0	11
ESSEX	158	320	5	10	0	0
FULTON	160	400	10	12	1	2
GREENE	335	451	15	0	0	3
HAMILTON	843	1730	10	184	0	31
HERKIMER	441	1106	41	5	0	55
JEFFERSON	26		4	2	0	0
LEWIS		180	5	43	0	1
LIVINGSTON	910	2684	84	64	1	13
MADISON	90	140	9	23	0	24
MONROE	624	5142	119	159	2	31
MONTGOMERY	121	417	2	2	0	0
NASSAU	13757	51957	380	450	2	704
NIAGARA	488	1296	18	58	0	19
ONEIDA	653	2267	23	97	0	73
ONONDAGA	305	2162	23	286	4	38
ONTARIO	542	1262	63	5	0	4
ORANGE	345	2020	8	6	0	3
ORLEANS	238	1104	24	69	0	1
OSWEGO	524	1311	15	171	0	2
OTSEGO	42	140	0	1	0	0
PUTNAM	253	758	7	11	0	0
ROCKLAND	475	2882	28	27	0	15
ST. LAWRENCE	149	388	0	223	0	0
SARATOGA	943	1661	67	126	2	25
SCHENECTADY	299	838	6	35	0	0
SCHUYLER	91	197	8	63	0	0
SENECA			0			
STEUBEN	294	1321	20	80	0	2
SUFFOLK COUNTY POLICE DEPARTMENT	8300	20500	1170	450	3	1328
SULLIVAN	113	437	13	0	0	0
ULSTER	936	1354	32	90	0	24
County (Continued)						
WARREN		1177	91	1674	1	5
WASHINGTON	32	304	1	2	0	1

Law Enforcement Agency	Total Vessel Hours	Total MLE Hours	Searches and Assists	Total Vessel Inspections	OUI Arrests	Total Arrests
WAYNE	353	2188	52	7	0	0
WESTCHESTER	742	5898	116	119	0	86
WYOMING	213	237	6	35	0	0
YATES	690	1912	21	713	0	33
NEW YORK CITY	123800	525600	413	1406	0	0
Municipalities						
ASHAROKEN	32	240	3	5	0	0
BABYLON	1800	5000	40	61	0	15
BUFFALO	28	38	4	0	0	0
CAZENOVIA	124	160	2	18	0	0
EAST HAMPTON	494	11721	69	255	1	25
GREENWOOD LAKE	272	992	29	34	0	59
HEMPSTEAD	1435	21541	72	471	0	88
IRVINGTON	28	52	2	5	0	0
ISLIP	446	6319	10	189	0	0
MAMARONECK	1012	3490	37	229	2	25
NEW ROCHELLE	1119	5860	56	24	0	1
NORTH HEMPSTEAD	2710	7200	66	320	0	1
OYSTER BAY	3850	32240	180	600	0	338
PHOENIX	12	23	1	3	0	0
POUGHKEEPSIE	135	353	14	14	0	1
QUOGUE		328	5	37	0	5
RIVERHEAD	721	1800	53	118	0	93
RYE	579	4572	53	109	0	10
SHELTER ISLAND	523	2055	27	54	0	26
SMITHTOWN	1235	6848	90	57	0	53
SOUTHAMPTON	3700	3925	318	625	2	1120
YONKERS	120	136	9	0	0	0
State Agencies						
LAKE GEORGE PARK COMMISSION	2545	6645	377	780	2	128
Totals	184885	774793	4755	11411	23	4584



2021 Vessel Registrations by County and Length

County	Total	Uncoded	Class A <16'	Class 1 16-25'	Class 2 26-39'	Class 3 40-64'	Class 4 ≥ 65'
ALBANY	8154	12	3133	4421	540	36	12
ALLEGANY	1820	5	647	1143	24	1	0
BRONX	2322	3	953	826	473	43	24
BROOME	6422	10	2870	3230	285	22	5
CATTARAUGUS	2893	6	995	1781	105	5	1
CAYUGA	5384	18	1858	3214	279	15	0
CHAUTAUQUA	6423	25	2039	3985	350	19	5
CHEMUNG	3430	4	1268	1988	159	9	2
CHENANGO	2157	0	1076	1020	56	4	1
CLINTON	5791	9	2643	2894	233	10	2
COLUMBIA	2730	2	1106	1508	107	6	1
CORTLAND	2135	7	921	1153	51	3	0
DELAWARE	1144	0	553	549	39	3	0
DUTCHESS	5900	7	2555	2753	531	48	6
ERIE	23653	65	8066	12963	2348	184	27
ESSEX	4349	9	1671	2508	151	8	2
FRANKLIN	4567	4	2049	2446	63	2	3
FULTON	4543	7	1885	2443	202	4	2
GENESEE	2114	4	779	1258	61	7	5
GREENE	2192	5	809	1221	142	11	4
HAMILTON	1802	8	768	1003	18	3	2
HERKIMER	3513	9	1464	1950	84	4	2
JEFFERSON	11057	42	4262	5958	751	41	3
KINGS	4161	0	1668	1445	915	101	32
LEWIS	2260	0	1064	1149	46	1	0
LIVINGSTON	3825	9	1535	2195	78	7	1
MADISON	4453	10	1681	2581	173	7	1
MONROE	25919	52	10244	13790	1702	122	9
MONTGOMERY	1987	8	851	1052	75	1	0
NASSAU	28020	60	9565	12359	5250	715	71
NEW YORK	4088	2	1221	1653	995	192	25
NIAGARA	7789	30	2540	4519	651	45	4
ONEIDA	10777	33	4326	6000	399	15	4
ONONDAGA	20456	39	7711	11482	1131	84	9

County	Total	Uncoded	Class A <16'	Class 1 16-25'	Class 2 26-39'	Class 3 40-64'	Class 4 ≥ 65'
ONTARIO	7586	28	2420	4816	298	22	2
ORANGE	7717	17	3641	3494	510	47	8
ORLEANS	1977	0	798	1067	108	3	1
OSWEGO	8863	13	3611	4703	512	23	1
OTSEGO	2492	6	937	1500	46	2	1
PUTNAM	3010	7	1180	1582	217	22	2
QUEENS	5453	9	2206	2268	857	76	37
RENSSELAER	5672	0	2369	2995	281	25	2
RICHMOND	3415	6	1415	1318	598	61	17
ROCKLAND	3648	3	1775	1282	520	56	12
ST LAWRENCE	10503	18	4352	5806	309	13	5
SARATOGA	14323	17	5189	8314	762	35	6
SCHENECTADY	5216	8	2132	2768	290	13	5
SCHOHARIE	1059	0	475	530	49	3	2
SCHUYLER	1618	3	564	977	72	2	0
SENECA	2620	2	864	1603	136	13	2
STEUBEN	4755	1	1648	2978	122	4	2
SUFFOLK	62791	214	18855	30770	11514	1368	70
SULLIVAN	2857	4	1399	1364	76	9	5
TIOGA	2200	1	957	1167	69	4	2
TOMPKINS	3270	3	1015	2004	233	14	1
ULSTER	4992	6	2101	2430	423	31	1
WARREN	7431	36	2188	4600	582	16	9
WASHINGTON	3228	7	1292	1808	117	3	1
WAYNE	6342	22	2261	3620	409	29	1
WESTCHESTER	10632	12	3429	4634	2161	345	51
WYOMING	1720	1	582	1099	33	4	1
YATES	2587	4	796	1723	63	0	1
Out of State	13301	1	4413	7585	1129	155	18
TOTAL	439508	953	161640	231245	40963	4176	531

Registered Vessels: By Length and Hull Material

< 16 FT	O/B	I/B	I/O	SAIL	OTHER	TOTAL
WOOD	1397	66	4	24	33	1524
METAL	19663	28	22	0	317	20030
PLASTIC	6570	3100	222	21	1304	11217
FIBERGLASS	15847	57002	3528	326	5567	82270
INFLATABLE	8212	61	67	6	289	8635
STEEL	564	14	7	0	38	623
ALUMINUM	33219	201	202	14	1900	35536
OTHER	1276	300	36	5	188	1805
TOTAL	86748	60772	4088	396	9636	161640
16-25 FT	O/B	I/B	I/O	SAIL	OTHER	TOTAL
WOOD	1038	1723	105	48	16	2930
METAL	11787	84	572	0	26	12469
PLASTIC	2603	442	735	91	80	3951
FIBERGLASS	65230	13960	67312	2189	829	149520
INFLATABLE	270	9	12	2	0	293
STEEL	590	35	35	1	9	670
ALUMINUM	58793	268	1284	12	237	60594
OTHER	736	16	39	7	20	818
TOTAL	141047	16537	70094	2350	1217	231245
26-39 ft	O/B	I/B	I/O	SAIL	OTHER	TOTAL
WOOD	51	604	18	29	3	705
METAL	155	76	21	1	1	254
PLASTIC	91	296	158	55	4	604
FIBERGLASS	7130	13466	15043	2184	105	37928
INFLATABLE	10	6	3	0	0	19
STEEL	33	42	11	1	6	93
ALUMINUM	1038	125	129	8	7	1307
OTHER	17	22	5	5	4	53
TOTAL	8525	14637	15388	2283	130	40963
40-64 FT	O/B	I/B	I/O	SAIL	OTHER	TOTAL
WOOD	1	88	1	7	1	98
METAL	2	9	5	1	1	18
PLASTIC	1	42	6	7	2	58
FIBERGLASS	174	3178	282	234	9	3877
INFLATABLE	0	2	0	0	0	2
STEEL	9	33	5	5	2	54
ALUMINUM	18	29	8	2	1	58
OTHER	2	5	0	1	3	11
TOTAL	207	3386	307	257	19	4176
>65 FT	O/B	I/B	I/O	SAIL	OTHER	TOTAL
WOOD	2	5	1	0	0	8
METAL	6	3	1	0	2	12
PLASTIC	14	6	2	0	0	22
FIBERGLASS	70	227	50	4	24	375
INFLATABLE	22	0	2	0	3	27
STEEL	1	6	0	0	1	8
ALUMINUM	61	6	1	0	2	70
OTHER	2	2	1	0	4	9
TOTAL	178	255	58	4	36	531
Uncoded	O/B	I/B	I/O	SAIL	OTHER	TOTAL
METAL	2	0	0	0	0	2
OTHER	2	2	2	0	945	951
TOTAL	4	2	2	0	945	953
TOTAL OVERALL	236709	95589	89937	5290	11983	439508

ACCIDENTS

The chart below illustrates registration and accident figures for the 1970s through 2021. During that period, while vessel registrations have generally risen to its height in the early 2000s. While fatalities have steadily decreased during that time.

The most common type of boating accident which results in the most injuries is collision between two or more. Boaters must recognize that the waterways are increasingly more crowded, and that vessel operation must be adjusted accordingly. Operators must be constantly aware of what is happening around them. Mixing alcohol or drugs increases the level of danger when boating. Not only is it illegal while operating a vessel under the influence, but the lessening of one's judgment and balance can have deadly consequences. Alcohol and drugs have been shown to be important contributing factors in many fatal incidents.

A reduction of collisions and fatalities can also be achieved by showing consideration to other boaters. Boating education classes are also important, but boaters must be willing to apply what they have learned. Tougher laws are making it possible to remove dangerous boaters from our waterways. Education and enforcement must be combined with, and complemented by, fair and enforceable laws.

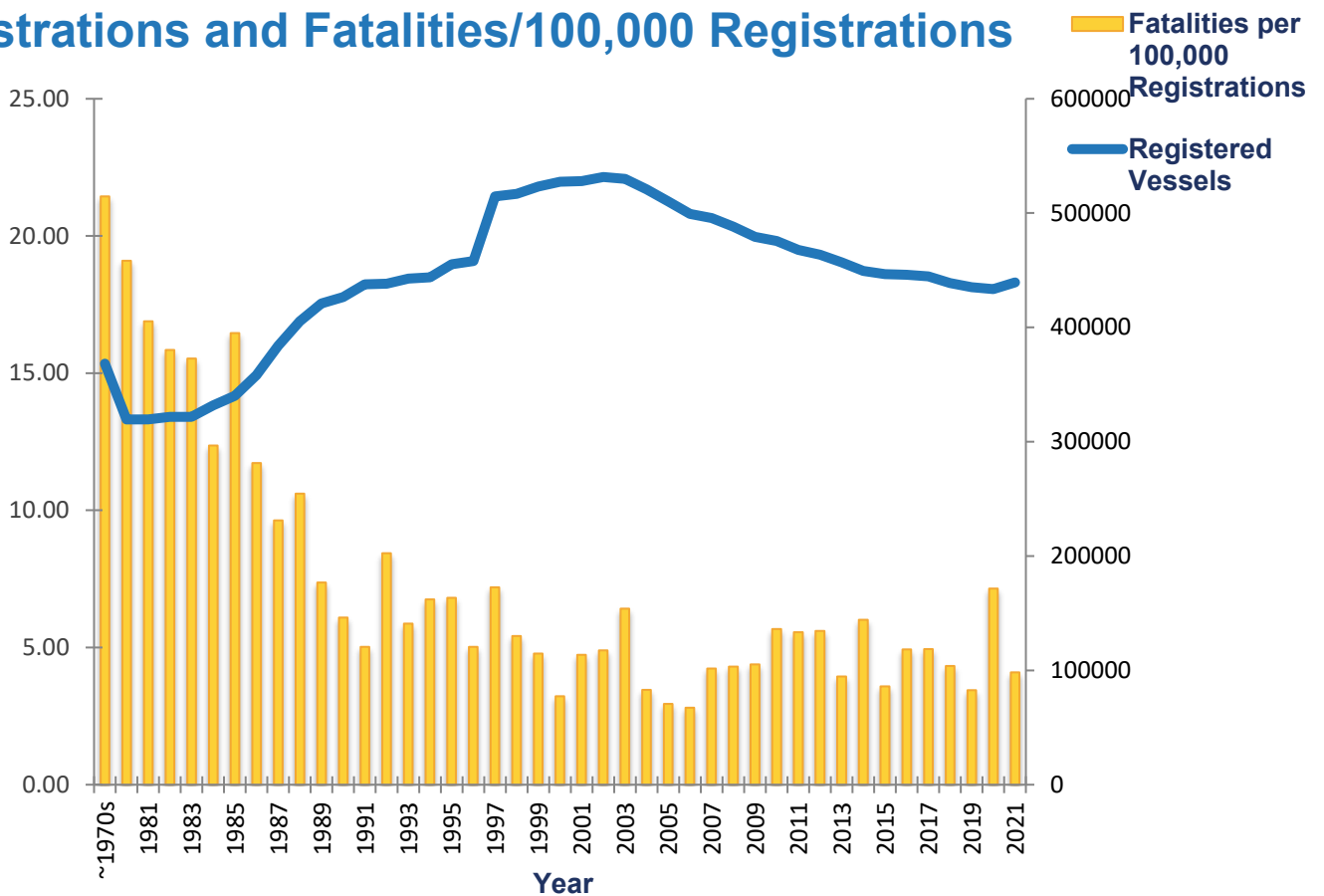
It is also extremely important to increase the use of lifejackets or personal flotation devices (PFDs), especially in the off-season when the water is cold and when help may not be able to respond quickly. While legislation mandates that lifejackets be worn in those instances, it is still incumbent upon the boater to use their best judgment; if the water is cold, wear a lifejacket, and dress for the weather.

Reportable Accidents

For Recreational Vessels:

- Loss of Life or Disappearance
- Injury Involving More Than Basic First Aid
- Total Property Damage to any one party in Excess of \$1000

Registrations and Fatalities/100,000 Registrations



Accident Data: 1970s - 2021

Year	Fatalities per 100,000 Registrations	Registered Vessels	Accidents	Injuries	Fatalities
~1970s	21.44	368439	356	101	79
1980	19.09	319492	322	196	61
1981	16.89	319641	308	197	54
1982	15.84	321881	309	180	51
1983	15.53	321881	390	248	50
1984	12.36	331742	271	153	41
1985	16.46	340300	319	182	56
1986	11.72	358400	298	157	42
1987	9.64	383868	310	163	37
1988	10.61	405331	362	120	43
1989	7.37	420885	333	109	31
1990	6.09	426617	323	119	26
1991	5.03	437579	265	119	22
1992	8.44	438342	228	130	37
1993	5.87	442745	226	138	26
1994	6.76	443856	222	90	30
1995	6.81	455189	291	130	31
1996	5.02	458092	325	168	23
1997	7.19	514538	322	182	37
1998	5.42	516738	326	181	28
1999	4.78	523321	315	193	25
2000	3.22	527426	288	127	17
2001	4.73	528113	288	140	25
2002	4.89	531579	284	152	26

Year	Fatalities per 100,000 Registrations	Registered Vessels	Accidents	Injuries	Fatalities
2003	6.42	529844	303	137	34
2004	3.46	520758	204	93	18
2005	2.94	510185	219	143	15
2006	2.80	499301	183	101	14
2007	4.24	495623	206	133	21
2008	4.30	488167	215	104	21
2009	4.38	479161	191	78	21
2010	5.68	475688	243	128	27
2011	5.56	467828	226	190	26
2012	5.61	463539	241	126	26
2013	3.94	456909	195	112	18
2014	6.01	449489	194	103	27
2015	3.58	446582	187	98	16
2016	4.93	446117	208	141	22
2017	4.95	444710	181	72	22
2018	4.33	438891	203	108	19
2019	3.45	435213	251	129	15
2020	7.15	433457	240	127	31
2021	4.10	439508	192	118	18



Accidents by County and Waterway

County / Waterway	Accidents	Injures	Fatalities
ALBANY	0	0	0
BRONX	2	10	0
LONG ISLAND SOUND	2	10	0
BROOME	1	0	1
WHITNEY POINT RESERVOIR	1	0	1
CAYUGA	1	1	0
CAYUGA LAKE	1	1	0
CROSS LAKE	1	0	0
OWASCO LAKE	1	0	0
CHAUTAUQUA	4	3	0
CHAUTAUQUA LAKE	4	3	0
CLINTON	0	0	0
COLUMBIA	1	0	0
HUDSON RIVER	1	0	0
DUTCHESS	2	0	0
HUDSON RIVER	2	0	0
ERIE	8	10	0
BUFFALO RIVER	1	2	0
LAKE ERIE	3	4	0
NIAGARA RIVER	4	4	0
ESSEX	0	0	0
LAKE CHAMPLAIN	2	1	2
LAKE PLACID	2	2	0
FRANKLIN	2	0	0
CHATEAUGAY LAKE	1	0	0
TUPPER LAKE	1	0	0
FULTON	1	0	0
SACANDAGA RESERVOIR	1	0	0
GREENE	0	0	0
HAMILTON	0	0	0
FOURTH LAKE	1	0	0
HERKIMER	2	1	0
FULTON CHAIN	2	1	0
JEFFERSON	8	7	1
ST. LAWRENCE RIVER	8	7	1

County / Waterway	Accidents	Injures	Fatalities
KINGS	3	5	1
ATLANTIC OCEAN	1	0	0
EAST RIVER	1	0	1
SHEEPSHEAD BAY	1	5	0
LEWIS	0	0	0
LIVINGSTON	1	2	0
CONESUS LAKE	1	2	0
MADISON	0	0	0
MONROE	8	1	1
ERIE BARGE CANAL	1	0	0
GENESEE RIVER	1	0	0
IRONDEQUOIT BAY	3	1	0
LAKE ONTARIO	3	0	1
MONTGOMERY	1	0	0
MOHAWK RIVER	1	0	0
NASSAU	12	5	1
COLD SPRING HARBOR	1	1	0
HEMPSTEAD HARBOR	1	0	1
ISLAND CREEK	1	1	0
LONG ISLAND SOUND	2	0	0
MANHASSET BAY	2	0	0
OYSTER BAY	3	3	0
REYNOLD'S CHANNEL	1	0	0
SLOOP CHANNEL	1	0	0
NEW YORK	3	1	0
EAST RIVER	1	0	0
HARLEM RIVER	1	1	0
HUDSON RIVER	1	0	0

County / Waterway	Accidents	Injures	Fatalities
NIAGARA	0	0	0
ONEIDA	0	0	0
ONONDAGA	3	3	0
ONEIDA RIVER	2	3	0
SKANEATELES RIVER	1	0	0
ONTARIO	1	0	0
ORANGE	3	1	0
GREENWOOD LAKE	2	1	0
HUDSON RIVER	1	0	0
ORLEANS	0	0	0
OSWEGO	1	2	0
ONEIDA LAKE	1	2	0
OTSEGO	0	0	0
QUEENS	1	0	0
BEACH CHANNEL	1	0	0
RICHMOND	1	1	0
LOWER NEW YORK BAY	1	1	0
ROCKLAND	0	0	0
SARATOGA	5	1	1
SACANDAGA RESEVOIR	3	0	0
SARATOGA LAKE	2	1	1
SCHENECTADY	3	0	0
MOHAWK RIVER	3	0	0
SCHUYLER	0	0	0
SENECA	2	2	0
SENECA LAKE	2	2	0
ST. LAWRENCE	1	0	0
BLACK LAKE	1	0	0
RAQUETTE LAKE	1	0	1
ST. LAWRENCE RIVER	2	2	0
STEUBEN	3	4	0
KEUKA LAKE	3	4	0
SUFFOLK	52	35	5
DERING HARBOR	1	0	0
GARDINER'S BAY	2	5	0
GREAT SOUTH BAY	19	17	1
HUNTINGTON HARBOR	2	0	0
JONES BAY	1	0	0
LONG ISLAND SOUND	3	1	2
MORICHES BAY	1	0	0
MT. SINAI HARBOR	1	2	0
NORTHPORT BAY	2	0	1
NOYAC BAY	1	1	0
PECONIC BAY	2	0	1
PORT JEFFERSON HARBOR	1	0	0
SAG HARBOR BAY	2	0	0

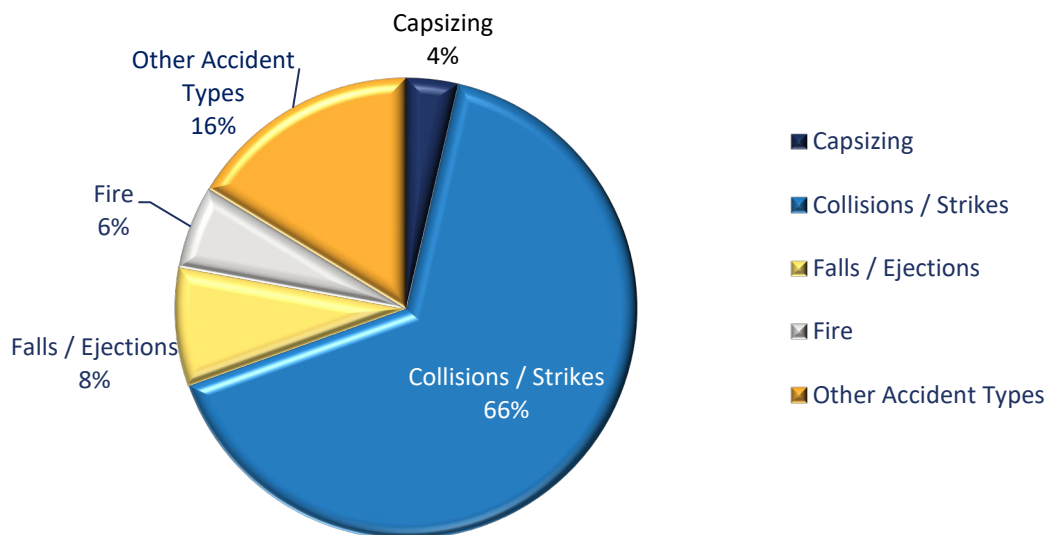
County / Waterway	Accidents	Injures	Fatalities
SHELTER ISLAND SOUND	2	0	0
SHINNECOCK BAY	1	0	0
SHINNECOCK CANAL	3	0	0
SMITHTOWN BAY	2	6	0
STERLING BASIN	4	2	0
THREE MILE HARBOR	1	0	0
WEST NECK HARBOR	1	1	0
SULLIVAN	0	0	0
TOMPKINS	2	2	0
CAYUGA LAKE	2	2	0
ULSTER	0	0	0
WARREN	1	1	0
HUDSON RIVER	1	1	0
LAKE GEORGE	11	2	0
SCHROON LAKE	1	0	0
WASHINGTON	0	0	0
WAYNE	1	1	0
LAKE ONTARIO	1	1	0
WESTCHESTER	27	4	3
HUDSON RIVER	8	0	2
LONG ISLAND SOUND	18	4	0
MAMARONECK HARBOR	1	0	1
YATES	1	5	1
KEUKA LAKE	3	3	0
SENECA LAKE	1	5	1



Accident Types

Accident Type	Vessels	Injuries	Fatalities
Capsizing	10	5	4
Carbon Monoxide Poisoning	1	0	1
Collision with Fixed Object	27	24	1
Collision with Floating Object	5	1	0
Collision with Commercial Boat (e.g., tug, barge)	1	0	0
Collision With Recreational Boat	121	26	0
Falls Onboard Boat	5	7	0
Falls Overboard	7	2	5
Fire/Explosion (Fuel)	10	21	0
Fire/Explosion (Other)	6	0	1
Flooding/Swamping	17	4	0
Grounding	7	4	0
Other	10	1	0
Person Left Or Ejected From Vessel	11	9	6
Sinking	1	0	0
Skier Mishap	3	3	0
Struck by Boat	11	3	0
Struck by Propeller or Propulsion Unit	2	2	0
Struck Submerged Object	15	4	0
Sudden Medical Condition	1	1	0
Unknown	5	1	0

Summary of Accident Types

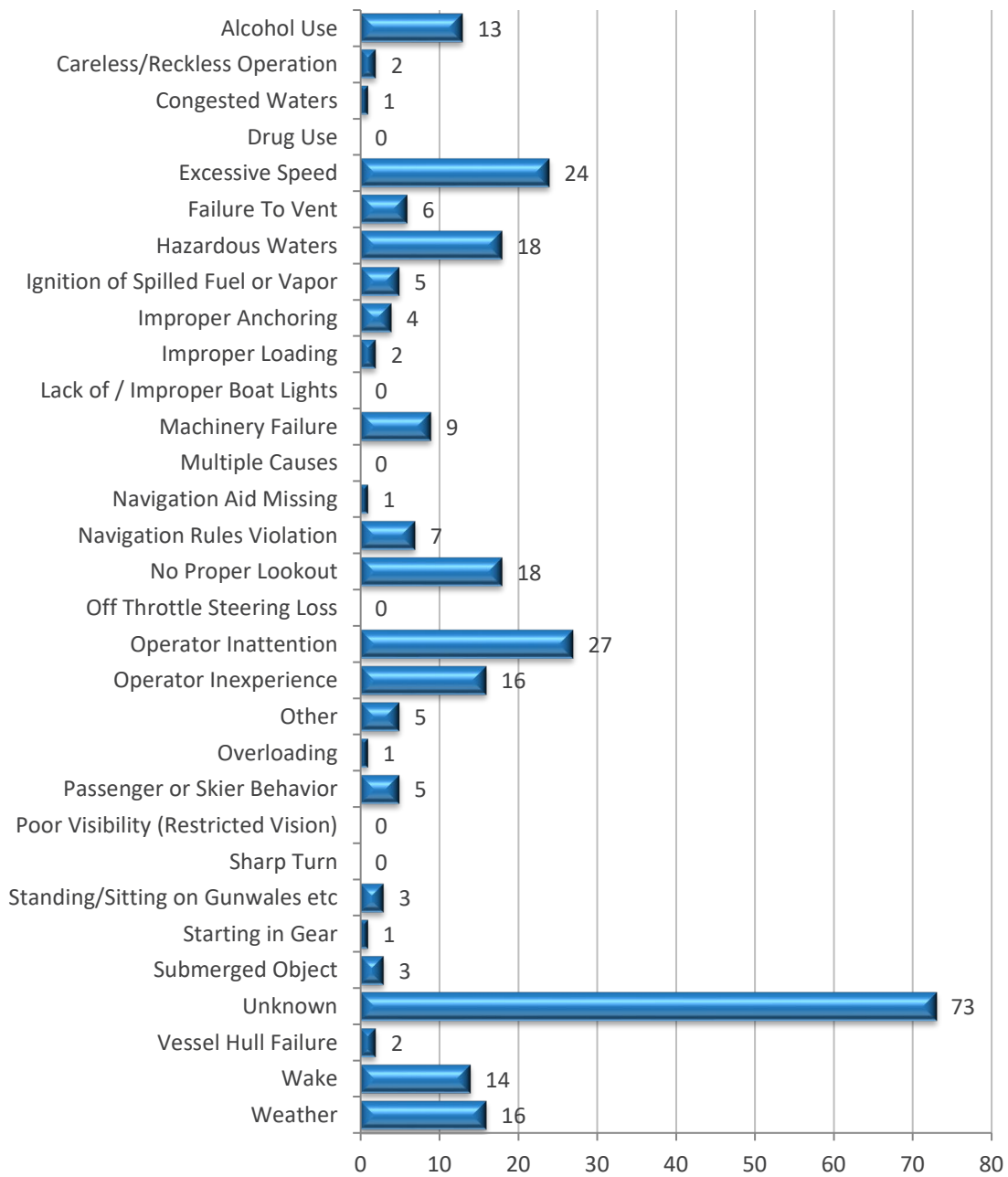


Accident Type and Vessel Operation

Accident Type	Operation	Vessels	Injuries	Fatalities
Capsizing	Changing Speed, Changing Direction	1	0	0
	Cruising	1	0	0
	Drifting	2	2	0
	Rowing or Paddling	5	2	4
	Sailing	1	1	0
Carbon Monoxide Poisoning	Tied to Dock/ Mooring	1	0	1
Collision With Fixed Object	Changing Direction	2	1	0
	Changing Speed	1	0	0
	Changing Speed, Changing Direction	1	1	0
	Cruising	17	21	1
	Docking/Undocking	2	1	0
	Other - Loading onto Trailer	1	0	0
	Sailing	1	0	0
	Tied to Dock / Mooring	2	0	0
Collision With Floating Object	Changing Direction	1	1	0
	Cruising	2	0	0
	Docking / Undocking	1	0	0
	Tied to Dock / Mooring	1	0	0
Collision With Commercial Boat (e.g., tug, barge)	Cruising	1	0	0
Collision With Recreational Boat	At Anchor	4	0	0
	Being Towed	1	0	0
	Changing Direction	10	4	0
	Changing Speed	3	1	0
	Changing Speed, Changing Direction	1	0	0
	Cruising	25	14	0
	Docking/Undocking	18	0	0
	Drifting	10	2	0
	Other - On Boat Lift	1	0	0
	Other - Trolling	1	1	0
	Sailing	5	3	0
	Sailing, Changing Direction	1	0	0
	Tied to Dock/ Mooring	35	0	0
Unknown	5	1	0	

Accident Type	Operation	Vessels	Injuries	Fatalities
Falls In/ On Boat	Changing Speed	1	1	0
	Cruising	4	6	0
Falls Overboard	At Anchor	1	1	0
	Cruising	1	1	0
	Drifting	1	0	1
	Rowing or Paddling	3	0	4
	Sailing	1	0	0
Fire/Explosion (Fuel)	Cruising	2	1	0
	Docking/ Undocking	1	0	0
	Drifting	1	1	0
	Launching	5	14	0
	Tied to Dock/Mooring	1	5	0
Fire/Explosion (Other)	Cruising	1	0	0
	Tied to Dock/Mooring	5	1	0
Flooding/Swamping	Changing Direction	1	0	0
	Cruising	9	4	0
	Drifting	3	0	0
	Other - Getting Underway	1	0	0
	Tied to Dock / Mooring	3	0	0
Other	Cruising	7	1	0
	Changing Direction	1	0	0
	Tied to Dock / Mooring	1	0	0
	Unknown	1	0	0
Person Leaves/ Ejected From Boat	Changing Direction	1	5	1
	Changing Speed	1	1	0
	Cruising	5	3	2
	Drifting	2	0	1
	Rowing or Paddling	1	0	1
	Tied to Dock / Mooring	1	0	1
Sinking	Tied to Dock/ Mooring	1	0	0
Skier Mishap	Cruising	3	3	0
Struck By Boat	At Anchor	1	0	0
	Changing Direction	1	0	0
	Changing Speed, Cruising	1	1	0
	Drifting	3	2	0
	Tied to Dock / Mooring	5	0	0
Struck by Propeller or Propulsion Unit	At Anchor	1	1	0
	Drifting	1	1	0
Struck Submerged Object	Changing Speed	1	0	0
	Cruising	12	4	0
	Cruising, Changing Direction	1	0	0
	Docking / Undocking	1	0	0
Sudden Medical	Cruising	1	1	0
Unknown	Cruising	1	0	0
	Drifting	1	1	0
	Tied to Dock / Mooring	2	0	0
	Unknown	1	0	0

Cause of Accident by Vessel



Accident Type and Cause

Accident Type	Cause	Vessels	Injures	Fatalities
Capsizing	Hazardous Waters	4	2	2
	Operator Inexperience	1	0	1
	Standing/ Sitting on Gunwales, etc.	1	2	0
	Unknown	2	1	1
	Weather	2	0	0
Carbon Monoxide Poisoning	Failure to Vent	1	0	1
Collision With Fixed Object	Alcohol Use	4	6	1
	Excessive Speed	6	7	0
	Hazardous Waters	2	6	0
	Improper Loading	1	0	0
	Machinery Failure	2	0	0
	No Proper Lookout	2	0	0
	Operator Inattention	2	1	0
	Operator Inexperience	4	1	0
	Wake	1	0	0
	Weather	3	3	0
Collision With Floating Object	No Proper Lookout	1	0	0
	Operator Inattention	1	0	0
	Operator Inexperience	1	1	0
	Unknown	2	0	0
Collision With Commercial Boat (e.g., Tug, Barge)	No Proper Lookout	1	0	0
Collision With Recreational Boat	Alcohol Use	2	0	0
	Careless/ Reckless Operation	1	0	0
	Congested Waters	1	0	0
	Excessive Speed	13	7	0
	Hazardous Waters	4	0	0
	Improper Anchoring	2	0	0
	Machinery Failure	1	0	0
	Navigation Rules Violation	6	2	0
	No Proper Lookout	11	5	0
	Operator Inattention	16	1	0
	Operator Inexperience	4	0	0
	Other	3	0	0
	Unknown	51	11	0
	Wake	3	0	0
	Weather	3	0	0
Fall In/ On Boat	Other	1	2	0
	Passenger or Skier Behavior	1	1	0
	Wake	3	6	0
	Careless/ Reckless Operation	1	1	0
	Hazardous Waters	2	0	3

Accident Type	Cause	Vessels	Injures	Fatalities
Falls Overboard	Passenger or Skier Behavior	1	1	0
	Sitting/ Standing on Gunwales, etc.	1	0	1
	Unknown	1	0	1
	Weather	1	0	0
Fire/Explosion (Fuel)	Failure To Vent	4	13	0
	Ignition of Spilled Fuel or Vapor	4	7	0
	Machinery Failure	2	1	0
Fire/Explosion (Other)	Failure to Vent	1	0	0
	Ignition of Spilled Fuel or Vapor	1	0	0
	Machinery Failure	1	0	0
	Other	1	0	1
	Unknown	2	0	0
Flooding/ Swamping	Hazardous Waters	2	2	0
	Improper Loading	1	2	0
	Machinery Failure	3	0	0
	Overloading	1	0	0
	Vessel Hull Failure	2	0	0
	Wake	3	0	0
	Weather	5	0	0
Grounding	Alcohol Use	1	1	0
	Hazardous Waters	1	0	0
	Operator Inattention	2	3	0
	Operator Inexperience	1	0	0
	Submerged Object	1	0	0
	Weather	1	0	0
Other	Alcohol Use	1	0	0
	Excessive Speed	3	0	0
	Operator Inattention	1	0	0
	No Proper Lookout	1	1	0
	Operator Inattention	1	0	0
	Unknown	1	0	0
	Wake	3	0	0

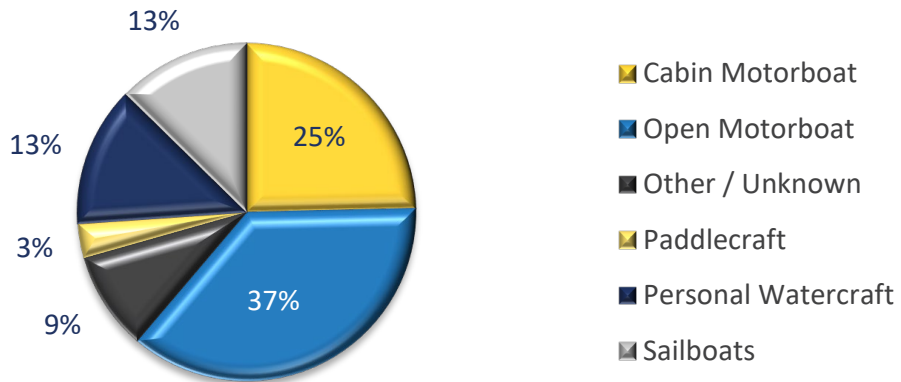
Accident Type	Cause	Vessels	Injures	Fatalities
Person Leaves Or Is Ejected From Vessel	Alcohol Use	3	5	3
	Excessive Speed	1	1	0
	Hazardous Waters	1	0	1
	Operator Inexperience	1	1	0
	Passenger or Skier Behavior	1	0	1
	Standing/ Sitting on Gunwales, etc.	1	0	1
	Unknown	2	1	0
	Wake	1	1	0
Sinking	Weather	1	0	0
Skier Mishap	Passenger or Skier Behavior	2	2	0
	Unknown	1	1	0
Struck by Boat	Improper Anchoring	1	0	0
	Navigation Rules Violation	1	1	0
	No Proper Lookout	1	0	0
	Unknown	8	2	0
Struck by Propeller or Propulsion Unit	Starting in Gear	1	1	0
	Unknown	1	1	0
Struck Submerged Object	Alcohol Use	1	1	0
	Hazardous Waters	2	2	0
	Navigation Aid Missing	1	0	0
	No Proper Lookout	1	0	0
	Operator Inattention	5	0	0
	Operator Inexperience	3	1	0
	Submerged Object	2	0	0

Vessel Type and Accident Type

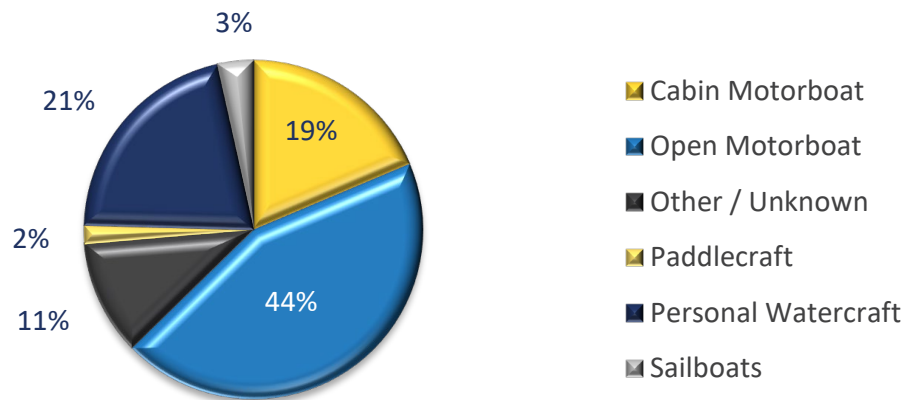
Vessel Type	Accident Type	Vessels	Injuries	Fatalities
Auxiliary Sail	Capsizing	1	1	0
	Collision With Fixed Object	2	0	0
	Collision With Commercial Boat (e.g., Tug, Barge)	1	0	0
	Collision With Recreational Boat	13	0	0
	Falls Overboard	1	0	0
	Other	1	0	0
	Struck by Boat	1	0	0
	Struck Submerged Object	1	0	0
Cabin Motorboat	Carbon Monoxide Poisoning	1	0	1
	Collision With Fixed Object	6	3	0
	Collision With Floating Object	1	0	0
	Collision With Recreational Boat	37	3	0
	Fall on Boat	1	1	0
	Falls Overboard	1	1	0
	Fire/Explosion (Fuel)	3	12	0
	Fire/Explosion (Other)	3	0	1
	Flooding/ Swamping	1	1	0
	Grounding	2	1	0
	Other	4	0	0
	Person Leaves Or Is Ejected From Vessel	3	0	3
	Struck by Boat	2	0	0
	Struck Submerged Object	1	0	0
	Unknown	1	0	0
Canoe	Falls Overboard	1	0	2
	Person Leaves Or Is Ejected From Vessel	1	0	1
Kayak	Capsizing	5	2	4
	Falls Overboard	1	0	1
Open Motorboat	Capsizing	3	2	0
	Collision With Fixed Object	10	16	0
	Collision With Floating Object	3	0	0
	Collision With Recreational Boat	40	12	0
	Falls In Boat	1	2	0
	Falls Overboard	1	0	1
	Fire/Explosion (Fuel)	4	2	0
	Fire/Explosion (Other)	2	0	0
	Flooding/ Swamping	12	2	0
	Grounding	4	3	0
	Other	2	0	0
	Person Leaves Or Is Ejected From Vessel	2	6	1
	Sinking	1	0	0
	Skier Mishap	2	2	0
	Struck by Boat	3	0	0

Vessel Type	Accident Type	Vessels	Injuries	Fatalities
Open Motorboat	Struck by Propeller or Propulsion Unit	1	1	0
	Struck Submerged Object	8	3	0
	Sudden Medical Condition	1	1	0
	Unknown	1	0	0
Personal Watercraft	Capsizing	1	0	0
	Collision With Fixed Object	6	4	0
	Collision With Floating Object	1	1	0
	Collision With Recreational Boat	9	8	0
	Fall on Boat	1	1	0
	Falls in Boat	1	1	0
	Fire/ Explosion (Fuel)	2	2	0
	Flooding/ Swamping	3	1	0
	Grounding	1	0	0
	Other	1	0	0
	Person Leaves Or Is Ejected From Vessel	4	3	0
	Struck by Boat	3	3	0
	Struck Submerged Object	3	1	0
	Unknown	1	0	0
Pontoon Boat	Collision With Fixed Object	1	1	0
	Collison With Recreational Boat	9	0	0
	Falls In Boat	1	2	0
	Falls Overboard	1	1	0
	Flooding/ Swamping	1	0	0
	Other	1	1	0
	Person Leaves Or Is Ejected From Vessel	1	0	1
	Skier Mishap	1	1	0
	Struck by Propeller or Propulsion Unit	1	1	0
	Struck Submerged Object	2	0	0
Sail Only	Collison With Fixed Object	2	0	0
	Collision With Recreational Boat	10	3	0
	Struck by Boat	2	0	0
Standup Paddleboard	Falls Overboard	1	0	1
Unknown	Collision With Recreational Boat	3	0	0
	Fire/Explosion (Fuel)	1	5	0
	Fire/Explosion (Other)	1	0	0
	Unknown	1	0	0

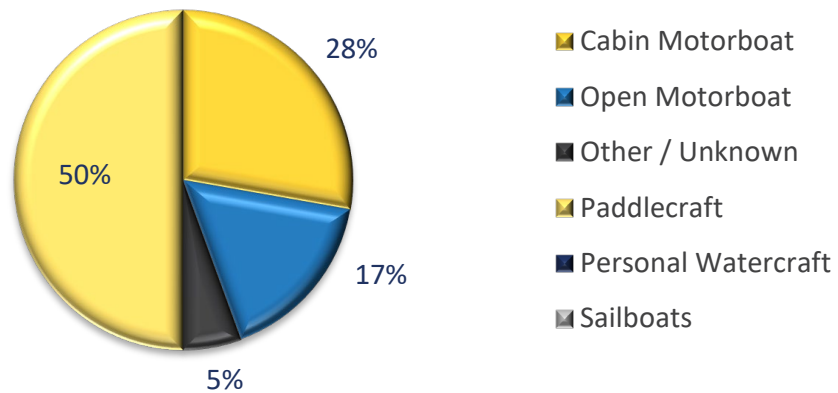
Accidents



Injuries



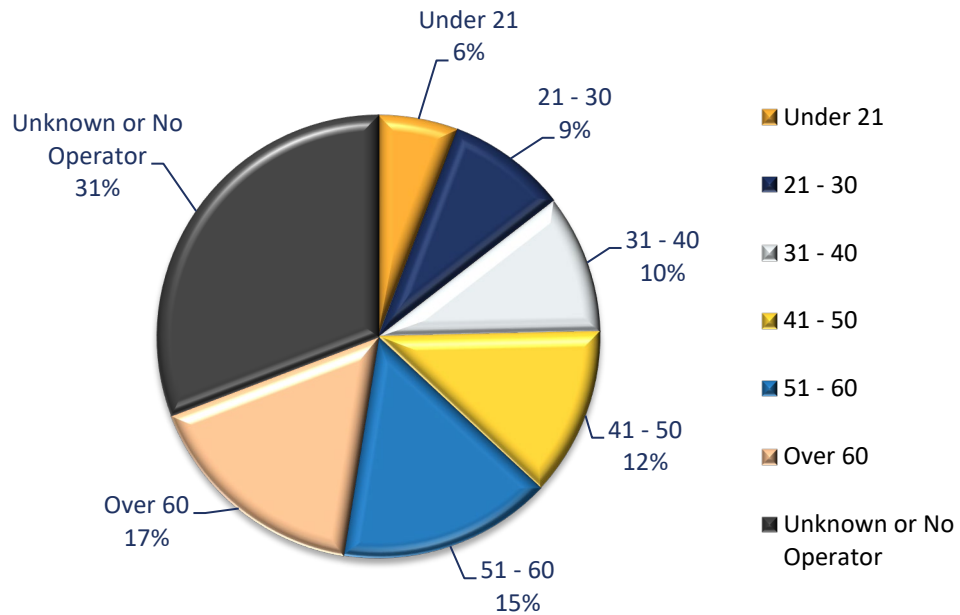
Fatalities



Operator Age

Age Group	Vessels	Injures	Fatalities
Under 21	16	13	2
21 - 30	24	24	4
31 - 40	28	21	3
41 - 50	34	16	3
51 - 60	43	17	2
Over 60	46	17	4
Unknown or No Operator	85	10	0

Vessels by Operator Age



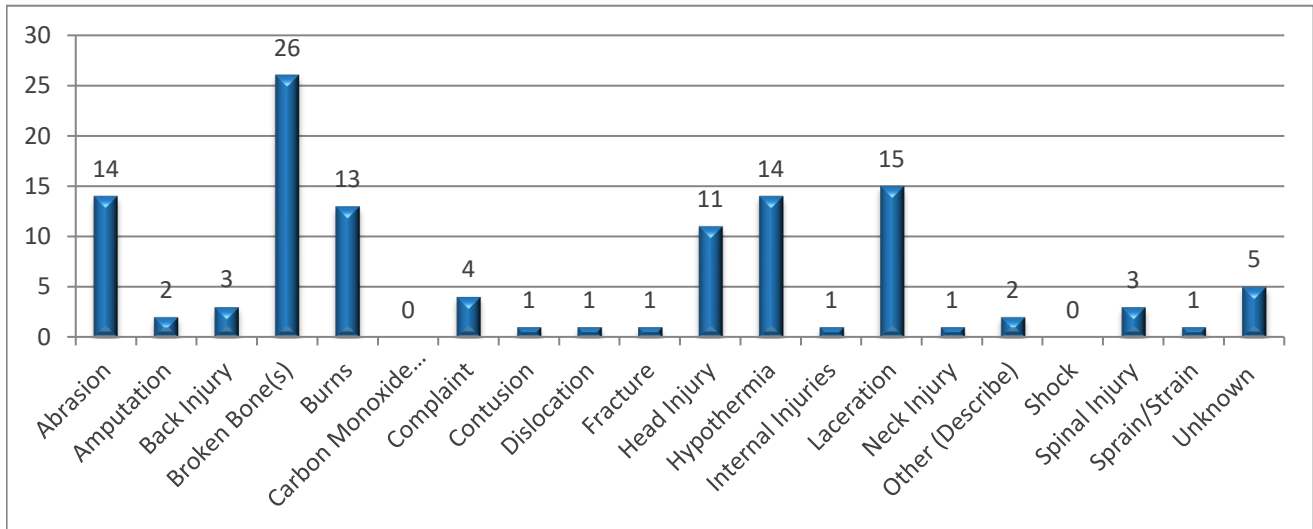
Age of Operator and Boating Education

Age Group	Education	Vessels	Injuries	Fatalities
Under 21	Internet Course	1	1	0
	None	2	2	1
	State Course	10	8	0
	Unknown	3	2	1
21 - 30	Internet Course	3	2	0
	None	6	5	0
	State Course	9	14	1
	Unknown	6	3	3
31 - 40	None	12	6	0
	State Course	5	4	0
	Unknown	10	9	3
	USCG Auxiliary	1	2	0
41 - 50	None	9	2	0
	State Course	9	4	0
	Unknown	14	5	2
	US Power Squadron	1	0	0
	USCG Auxiliary	1	5	1
51 - 60	Internet Course	2	0	0
	None	12	2	0
	State Course	14	8	1
	Unknown	14	7	1
	USCG Auxiliary	1	0	0
Over 60	Internet Course	3	0	0
	None	8	5	1
	State Course	11	2	0
	Unknown	18	9	3
	USCG Auxiliary	6	1	0
Unknown	None	1	0	0
	State Course	24	5	0
	Unknown	56	5	0

Age of Operator and Boating Experience

Operator Age	Experience	Vessels	Injuries	Fatalities
Under 21	Under 10 Hours	3	3	1
	10 to 100 Hours	9	7	0
	100-500 Hrs.	1	1	0
	Over 500 Hrs.	0	0	0
	Unknown	3	2	1
21 - 30	Under 10 Hours	7	3	1
	10 to 100 Hours	8	7	0
	100-500 Hrs.	1	0	0
	Over 500 Hrs.	3	2	0
	Unknown	5	12	3
31 - 40	Under 10 Hours	3	0	0
	10 to 100 Hours	3	0	0
	100-500 Hrs.	6	4	0
	Over 500 Hrs.	4	5	0
	Unknown	8	7	3
41 - 50	Under 10 Hours	4	1	1
	10 to 100 Hours	8	2	1
	100-500 Hrs.	5	2	0
	Over 500 Hrs.	10	6	1
	Unknown	7	5	0
51 - 60	Under 10 Hours	5	4	0
	10 to 100 Hours	14	5	0
	100-500 Hrs.	7	0	1
	Over 500 Hrs.	6	0	0
	Unknown	11	8	1
Over 60	Under 10 Hours	3	0	0
	10 to 100 Hours	4	1	0
	100-500 Hrs.	12	5	2
	Over 500 Hrs.	16	7	0
	Unknown	11	4	2
Unknown	Under 10 Hours	1	0	0
	10 to 100 Hours	1	0	0
	100-500 Hrs.	1	0	0
	Over 500 Hrs.	2	0	0
	Unknown	80	10	0

Injuries



Type of Injury, Type of Vessel

Vessel	Injury Type	Injuries	Vessel	Injury Type	Injuries
Auxiliary Sail	Hypothermia	1	Personal Watercraft	Abrasion	5
Cabin Motorboat	Amputation	1		Amputation	1
	Broken Bone(s)	5		Broken Bone(s)	7
	Burns	10		Burns	1
	Complaint	1		Complaint	1
	Head Injury	1		Fracture	1
	Laceration	2		Head Injury	5
	Neck Injury	1		Hypothermia	1
	Spinal Injury	1		Laceration	2
Kayak	Hypothermia	2		Spinal Injury	1
Open Motorboat	Abrasion	6	Pontoon Boat	Abrasion	2
	Back Injury	3		Broken Bone(s)	1
	Broken Bone(s)	13		Contusion	1
	Burns	1		Head Injury	1
	Complaint	2		Laceration	1
	Dislocation	1		Other	1
	Head Injury	3		Unknown	1
	Hypothermia	10	Sail (Only)	Abrasion	1
	Internal Injuries	1		Head Injury	1
	Laceration	9		Laceration	1
	Other	1	Unknown	Burns	1
	Spinal Injury	1		Unknown	1
	Sprain/Strain	1			

2021 Summary of Fatal Accidents

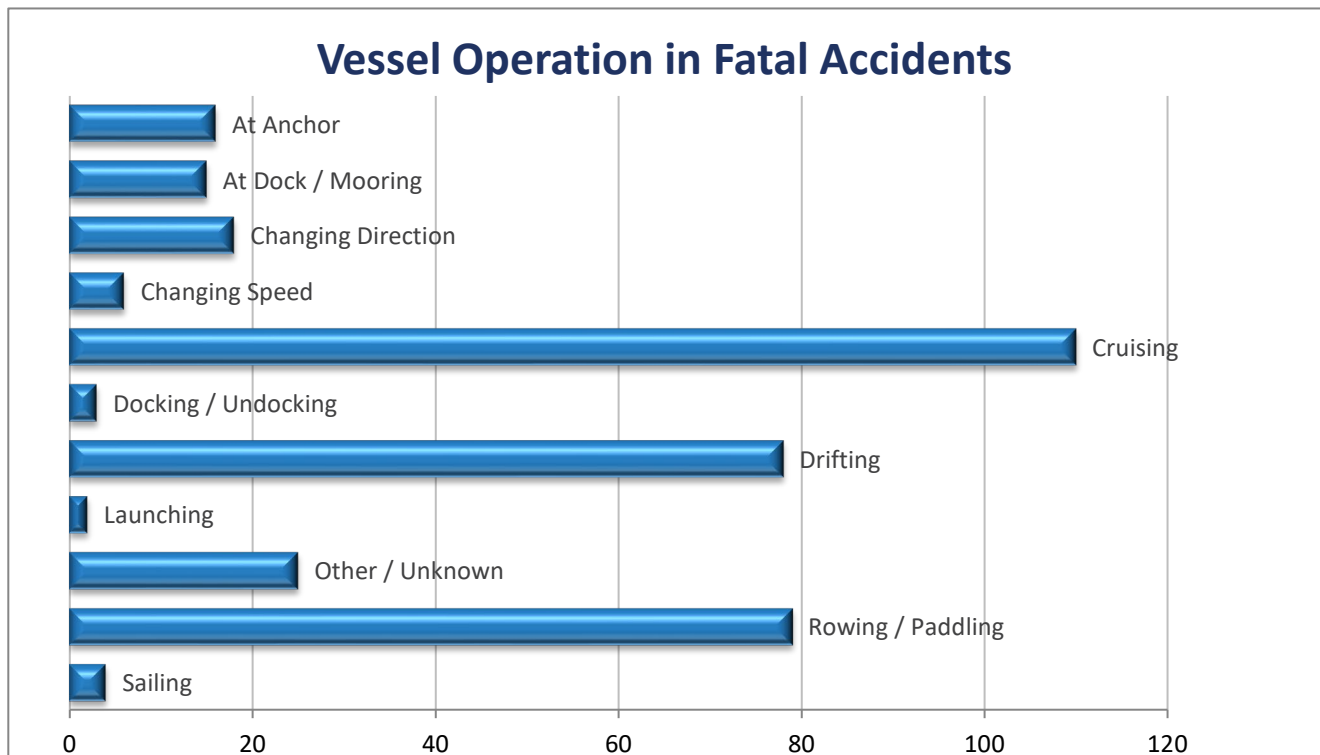
Date	County	Waterway	Cause	Vessel	Accident Type	Fatalities
1/2/2021	Suffolk	Peconic Bay	Hazardous Waters	Kayak	Falls Overboard	1
<p>A report of an overdue kayaker was found by a Southold Town Police Department search boat. The kayaker, had shoved off about 8 a.m. from West Street in South Jamesport and was reported overdue to return to the Riverhead Town police about 4 p.m. A search was commenced a short time later that ultimately drew in emergency crews from multiple East End fire and police departments, as well as helicopters from the Suffolk County Police Department, U.S. Coast Guard station on Cape Cod. Shortly before 9 p.m. the Coast Guard helicopter located the missing man's kayak in eastern Peconic Bay. A short time later a Southold Town police search boat located the body of the man, who was wearing a life jacket.</p>						
1/9/2021	Kings	East River	Boat Fire	Cabin Motorboat	Fire/Explosion (Other)	1
<p>Received report of a boat fire at Brooklyn Marina. NYPD, FDNY, Park Police on scene. Upon arrival, firefighters doused the flames on the 52-foot Jefferson Recreational boat, but upon closer look an 86-year-old man was found "unconscious and not responsive" in the hull, police said. He was later pronounced dead at Kings County Hospital.</p>						
5/7/2021	Essex	Lake Champlain	Hazardous Waters	Kayak	Capsizing	2
<p>Essex county sheriffs responded the Willsboro boat launch for the report of an overturned vessel with boaters (1 adult male & 1 child) in distress. The child was removed from the water first and CPR was started by Willsboro Fire personnel. The child was sent to the University of Vermont Medical Center. A search continued for the father and law enforcement found the victim 100ft from the boat launch. Victim was pulled into the boat and CPR was started law enforcement. AED was also used to no success. Deceased was lifted out of the boat and taken to CVPH. The child passed away a day later at the hospital.</p>						
5/23/2021	Nassau	Hempstead Harbor	Unknown	Stand-Up Paddleboard	Falls Overboard	1
<p>State police found a Queens man who died in a drowning accident in Hempstead Lake Sunday evening. Police say the 39-year old was out on the water with his two young children when their paddleboard capsized. Deceased was found shortly after going under and was taken to the hospital, where he was pronounced dead. The kids were found safe by a nearby kayaker.</p>						
6/1/2021	Suffolk	Long Island Sound	Hazardous Waters	Canoe	Falls Overboard	2
<p>The bodies of two men were discovered in the Long Island Sound about 12 hours after they launched a canoe. The men took the canoe out from Makamah Beach to go fishing. Both individuals were reported to have been wearing red PFDs and were last seen headed into the Long Island Sound. They were reported missing around 9:20 p.m. that night when they failed to return from their excursion. Suffolk County Police Marine Bureau, Aviation Section and patrol officers, along with representatives from the Huntington Harbormaster, U.S. Coast Guard and multiple fire departments launched an all-out search. OGAs received report of a vessel adrift near Crane Neck Point. Shortly after, both Suffolk County Marine Bravo and CG 29269 recovered 2 bodies in the vicinity of the capsized canoe and transported them to the Sound View Marina.</p>						

Date	County	Waterway	Cause	Vessel	Accident Type	Fatalities
6/5/2021	Monroe	Lake Ontario	Passenger or Skier Behavior	Cabin Motorboat	Person Leaves or Is Ejected from Vessel	1
<p>Prior to the incident, Vessel 1 was cruising northbound from Irondequoit Bay inlet out on to Lake Ontario, then west bound towards the Port of Rochester. There came a point in time when the victim jumped off the stern of the vessel. The operator of the vessel did not know at that time the victim had jumped from the boat. When it was discovered that the victim was missing attempts were made to locate him without success. Operator admitted to having a couple of beers during the course of the day and was given a Field Sobriety Test by law enforcement and passed. On June 6th, 2021 at 1600hrs the victims body was recovered by the Monroe County Sheriffs Scuba Team.</p>						
6/6/2021	St. Lawrence	Raquette River	Alcohol Use	Canoe	Person Leaves or Is Ejected from Vessel	1
<p>Law enforcement responded to a report of an unattended death, at Norfolk Raquette River Campground. Upon inspection, the body appeared to be a male, wearing a shirt and pants. Based on interviews with family, it was made known that deceased was diagnosed with schizophrenia and bipolar disorder and allegedly self medicates with alcohol and marijuana most of his life. It was also revealed that the deceased built a homemade canoe on his own and told his sister a couple days prior to the incident his canoe did not float and he needed to fix it. Cause of death determined to be asphyxiation due to or as a consequence of warm water drowning, with other significant conditions contributing to death being alcohol intoxication, Schizophrenia, Bipolar Affective Disorder and possibly a leak in the hull of the canoe.</p>						
7/3/2021	Suffolk	Northport Bay	Standing/ Sitting on Gunwales, etc.	Open Motorboat	Falls Overboard	1
<p>Operator was fishing with his son on a rented 2020 22-foot Sea Fox Commander on Northport Bay when he fell into the water at approximately 9:30 a.m. and is missing. Suffolk County PD Marine Bureau officers were assisted in the search by Aviation Section, United States Coast Guard, multiple fire departments, Nassau County Police, and the Huntington Harbor Master. Operator was not wearing a lifejacket. Operator not found.</p>						
7/4/2021	Saratoga	Saratoga Lake	Alcohol Use	Pontoon Boat	Person Leaves or Is Ejected from Vessel	1
<p>Vessel 1 (V1) was traveling south from Sandy Bay at a cruising speed. A male passenger voluntarily jumped off mid-ship of vessel 1. Vessel 1 turned to the boat away from the victim which in turn brought the propeller closer to the swimmer, striking him. Vessel 2 (V2) was initially traveling south, closer to the middle of the lake at a faster speed than cruising. Vessel 2 made a turn to the starboard side in an attempt to return to the NYS boat launch an the north end of the lake. While turning, vessel 2 passed vessel 1 port side to port side and observed what he believed to be a log in the water. V2 made an evasive maneuver to the starboard side and accidentally struck the object on the underside of V2. It was determined that the object was the passenger from V1 and that he had been struck a second time. Victim had BAC of 0.214 as well as THC and Amphetamines in his body. Vessel 1 operator (19 years of age) had a BAC of 0.04 and was arrested for Boating Under the Influence.</p>						
7/5/2021	Suffolk	Great South Bay	Alcohol Use	Open Motorboat	Collision with Fixed Object	1
<p>Vessel struck rock jetty at I/L injuring 2 persons that required treatment at the hospital and one who was unable to be found. Three other persons sustained minor injuries. Operator arrested for boating while intoxicated. The body of the missing man was recovered by Suffolk Marine Bureau at approximately 1:45 pm the next day.</p>						

Date	County	Waterway	Cause	Vessel	Accident Type	Fatalities
7/10/2021	Yates	Seneca Lake	Alcohol Use	Open Motorboat	Person Leaves or Is Ejected from Vessel	1
<p>Vessel with six people aboard was traveling southbound on Seneca Lake at a high rate of speed and took a sharp left turn. Three passengers ejected from vessel, five injured requiring medical care. One of the ejected passengers struck by prop and received fatal injuries. Operator refused medical attention at the scene.</p>						
8/7/2021	Broome	Whitney Point Reservoir	Unknown	Kayak	Capsizing	1
<p>State police recovered a kayakers body, near Dorchester Park. This was a couple days after a kayaker was reported missing Saturday evening at Whitney Point Reservoir. The man, was kayaking with another person when his kayak tipped over. It is unknown if the kayakers were wearing a PFD.</p>						
8/14/2021	Westchester	Hudson River	Hazardous Waters	Cabin Motorboat	Person Leaves or Is Ejected from Vessel	1
<p>Vessel 1 was adrift w/o motors running. Deceased on vessel voluntarily went for a swim off of vessel. Deceased was not wearing a PFD. Deceased was swept under vessel by current while trying to re-enter the boat from the water via transom ladder. Deceased was under vessel for several moments before being brought on board unconscious, unresponsive with no pulse. CPR immediately started by vessel occupants to no success. Deceased transferred to PD Marine Unit and transported to awaiting EMS units on shore.</p>						
8/20/2021	Westchester	Hudson River	Failure to Vent	Cabin Motorboat	Carbon Monoxide Poisoning	1
<p>Vessel 1 docked with lines secured within Cortlandt Yacht Club with engines running and owner down in the galley. Carbon monoxide alarms going off alerted near by patrons on the marina. Upon their arrival to the vessel they observed the owner unresponsive on the floor within the galley. EMS notified, responded and subsequently pronounced owner deceased. Further inspection / investigation by WCPD Marine Unit and investigative personnel revealed that the vessel exhaust vent was not functioning properly.</p>						
10/2/2021	Jefferson	St. Lawrence River	Standing/ Sitting on Gunwales, etc.	Cabin Motorboat	Person Leaves or Is Ejected from Vessel	1
<p>The deceased was attempting to board or exit his docked vessel when he fell, struck his head and fell into the water.</p>						
10/25/2021	Westchester	Mamaroneck Harbor	Operator Inexperience	Kayak	Capsizing	1
<p>Victim went kayaking during a period of inclement weather/heavy rain and wind. During the trip the kayak capsized and the victim entered the water and drowned. The kayak was recovered at Glen Island Beach in New Rochelle. The victim was wearing a lifejacket and the body was recovered near Orchard Bay.</p>						

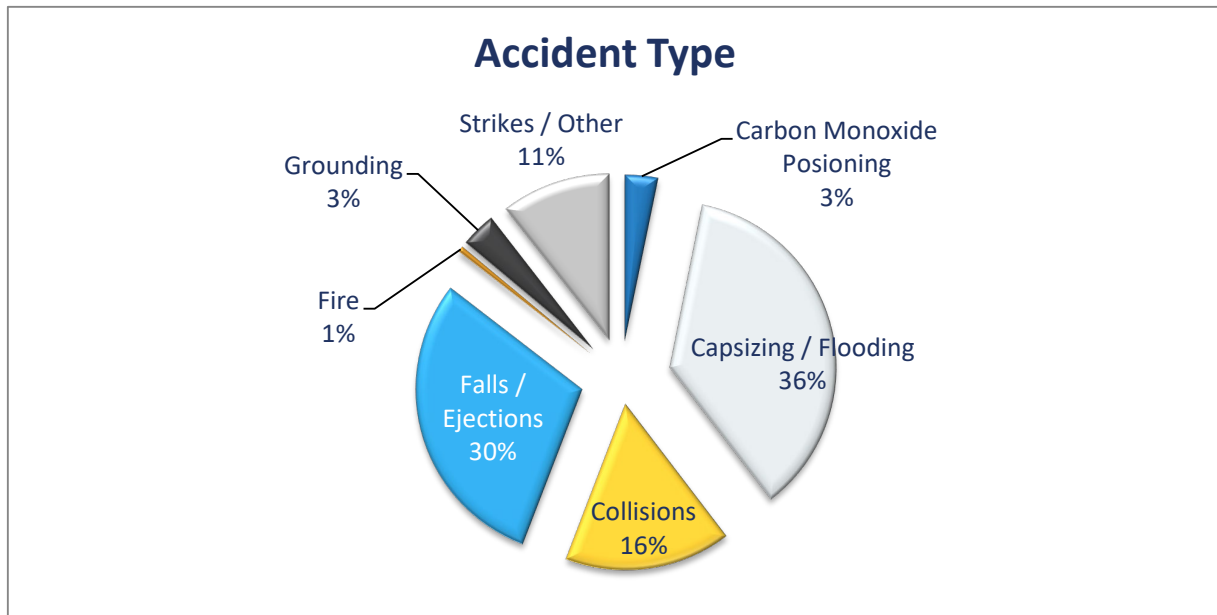
Vessel Operation in Fatal Boating Accidents 2005-2021

Operation	Fatalities
At Anchor	16
Changing Direction	12
Changing Speed	5
Changing Speed, Changing Direction	1
Cruising	105
Cruising, Changing Direction	5
Docking/Undocking	3
Drifting	77
Drifting, Launching	1
Launching	2
Other	11
Rowing or Paddling	79
Sailing	4
Tied to Dock/Mooring	15
Unknown	14



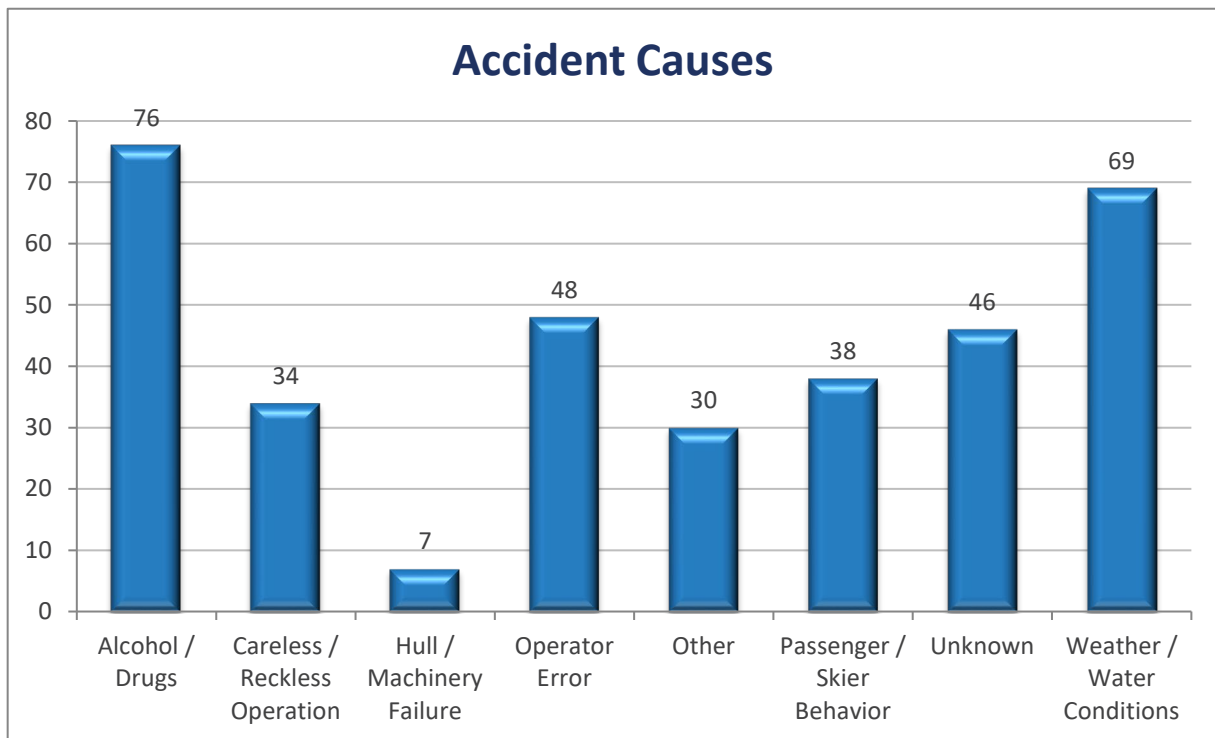
Fatal Accident Type 2005-2021

Accident Type	Fatalities
Capsizing	106
Carbon Monoxide Poisoning	11
Collision w/ Fixed Object	30
Collision w/ Floating Object	4
Collision w/ Vessel	10
Collision With Recreational Boat	13
Falls in Boat	2
Falls Overboard	50
Fire/Explosion (Fuel)	1
Fire/Explosion (Other)	1
Flooding/Swamping	17
Grounding	12
Other	4
Person Leaves Or Is Ejected From Vessel	52
Sinking	5
Skier Mishap	7
Struck by Boat	3
Struck by Propeller or Propulsion Unit	3
Struck Submerged Object	3
Sudden Medical Condition	4
Unknown	13

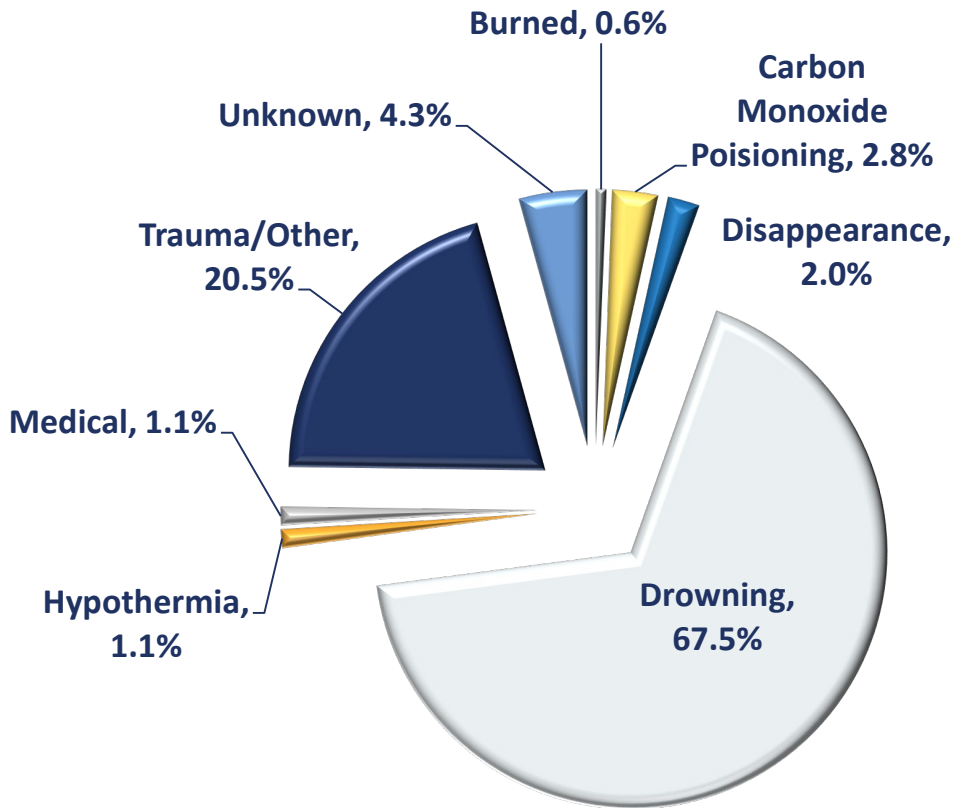


Fatal Accident Causes 2005-2021

Accident Causes	Fatalities	Accident Causes	Fatalities
Alcohol Use	68	No Proper Lookout	17
Careless/Reckless Operation	4	Operator Inattention	11
Dam/Lock	2	Operator Inexperience	13
Drug Use	8	Other	17
Excessive Speed	15	Overloading	10
Hazardous Waters	43	Passenger or Skier Behavior	31
Ignition of Spilled Fuel or Vapor	1	Poor Visibility (Restricted Vision)	1
Improper Anchoring	4	Sharp Turn	5
Improper Loading	5	Standing/Sitting on Gunwales etc..	7
Lack of / Improper Boat Lights	2	Unknown	46
Machinery Failure	6	Vessel Hull Failure	1
Navigation Rules Violation	3	Wake	3
		Weather	25



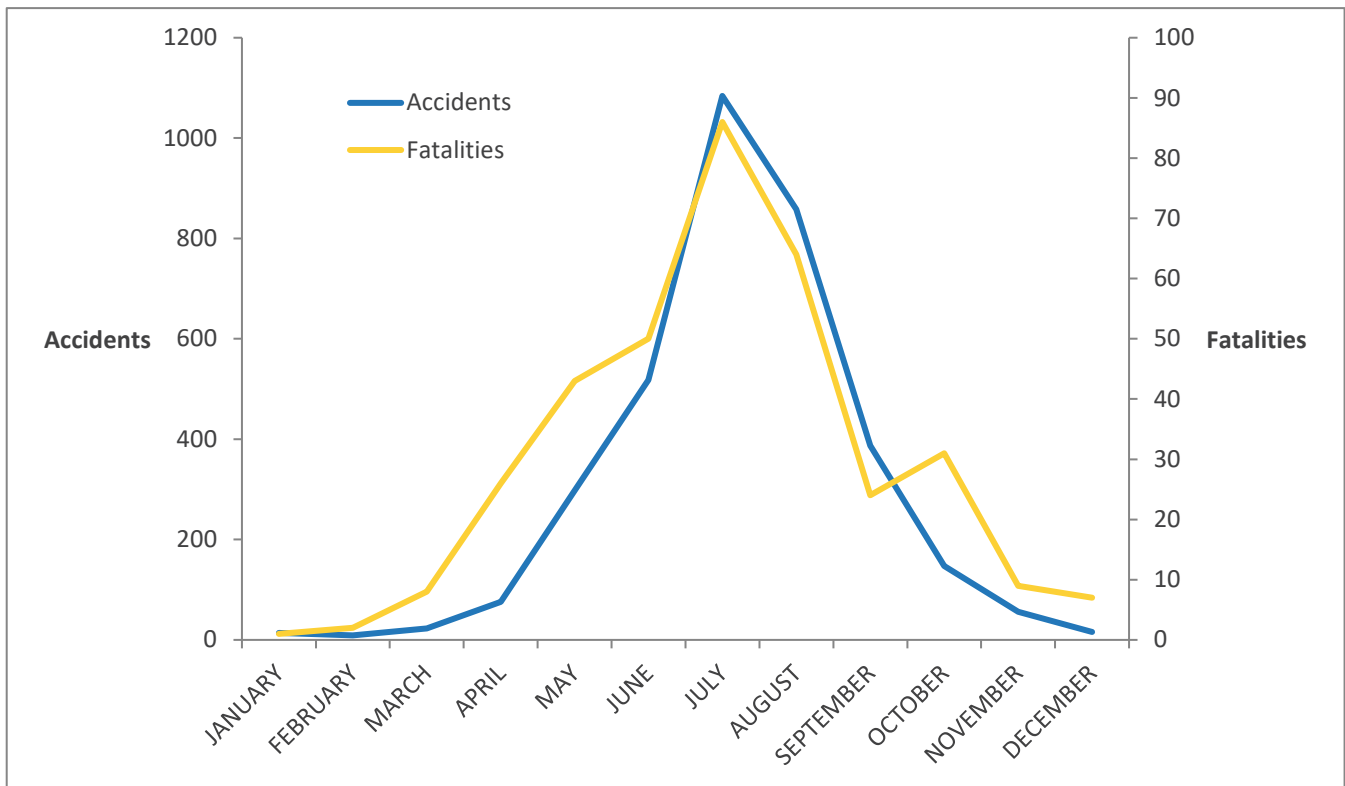
Cause of Fatality 2005-2021



Cause of Fatality	Fatalities
Burned	2
Carbon Monoxide Poisoning	10
Disappearance	7
Drowning	237
Hypothermia	4
Medical	4
Trauma/Other	72
Unknown	15

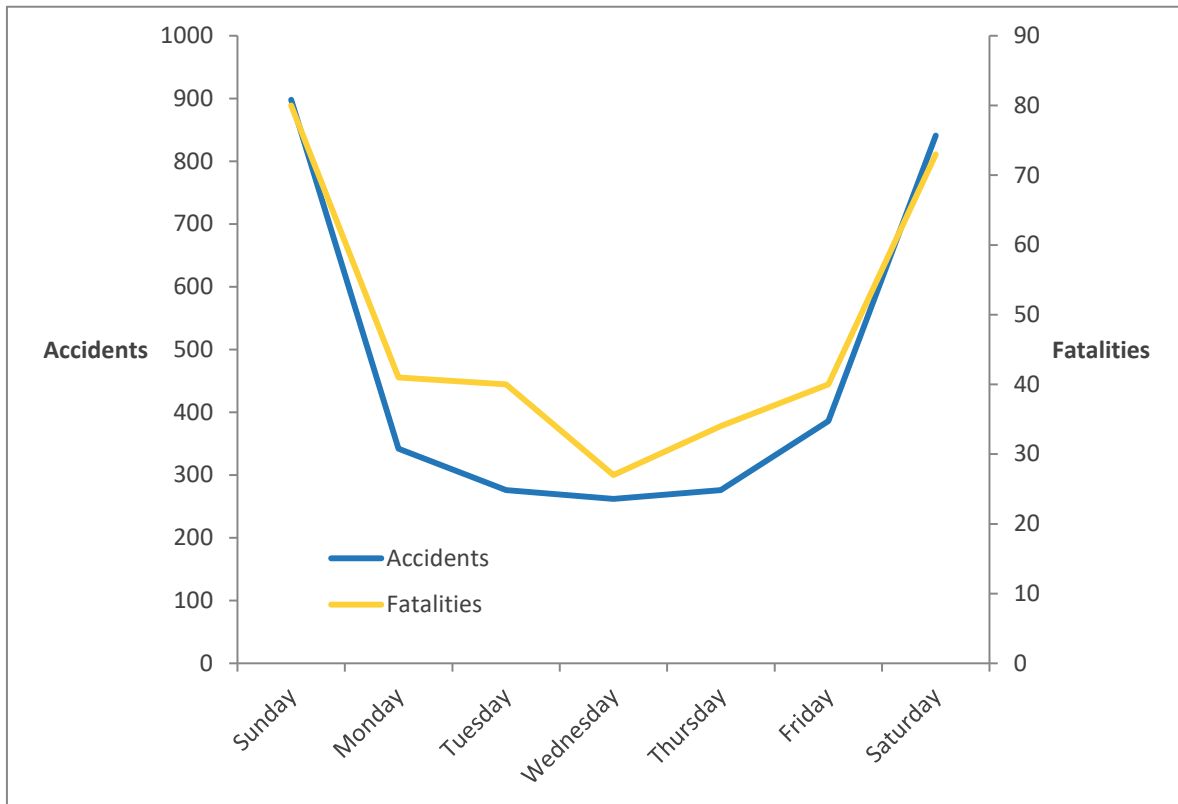
Accident Occurrence by Month 2005-2021

Month	Accidents	Fatalities
JANUARY	14	1
FEBRUARY	9	2
MARCH	23	8
APRIL	76	26
MAY	298	43
JUNE	518	50
JULY	1084	86
AUGUST	858	64
SEPTEMBER	387	24
OCTOBER	147	31
NOVEMBER	56	9
DECEMBER	16	7



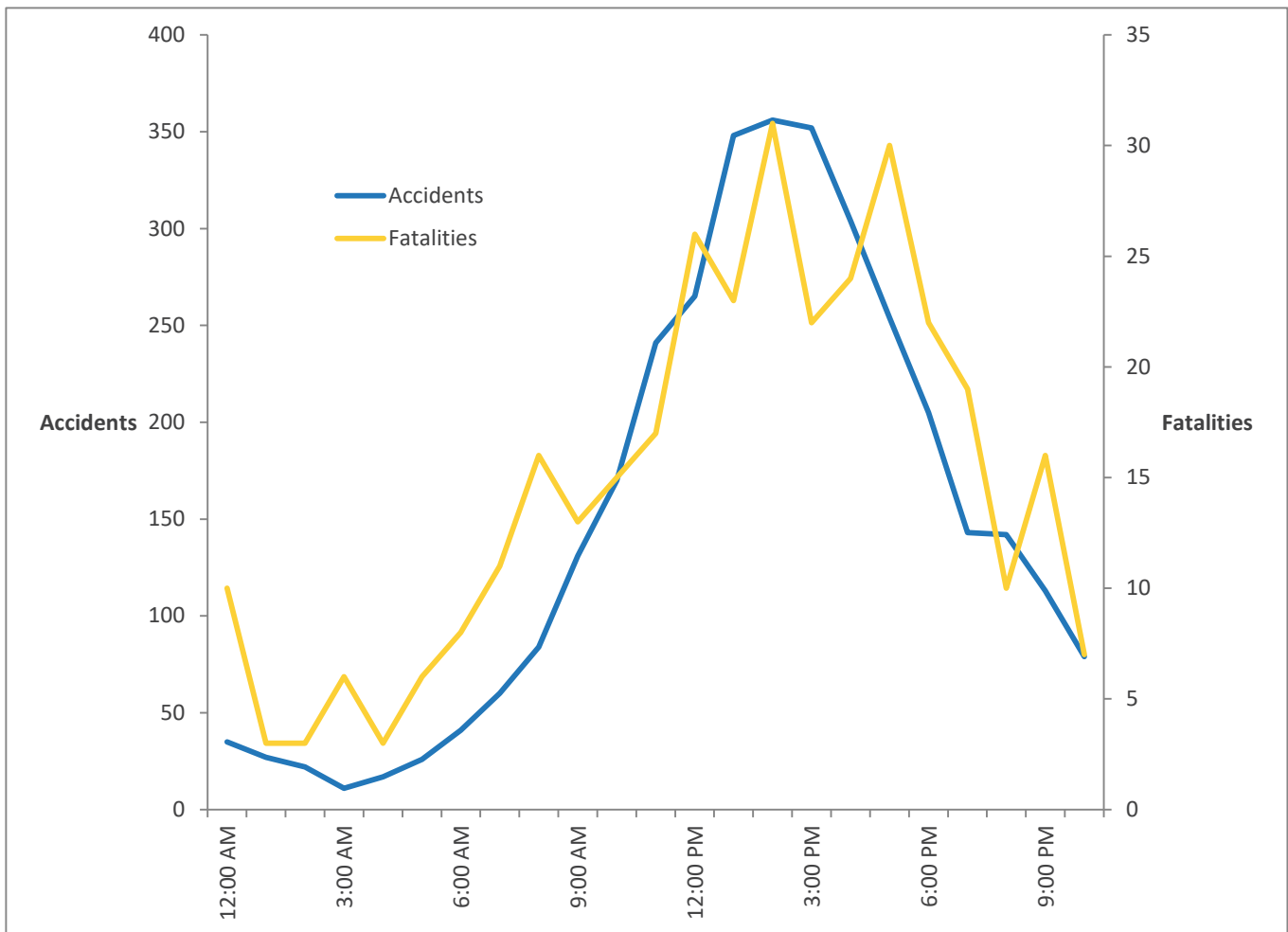
Accident Occurrence by Day 2005-2021

DAY	Accidents	Fatalities
Sunday	898	80
Monday	342	41
Tuesday	276	40
Wednesday	262	27
Thursday	276	34
Friday	386	40
Saturday	841	73



Accident Occurrence by Time 2005-2021

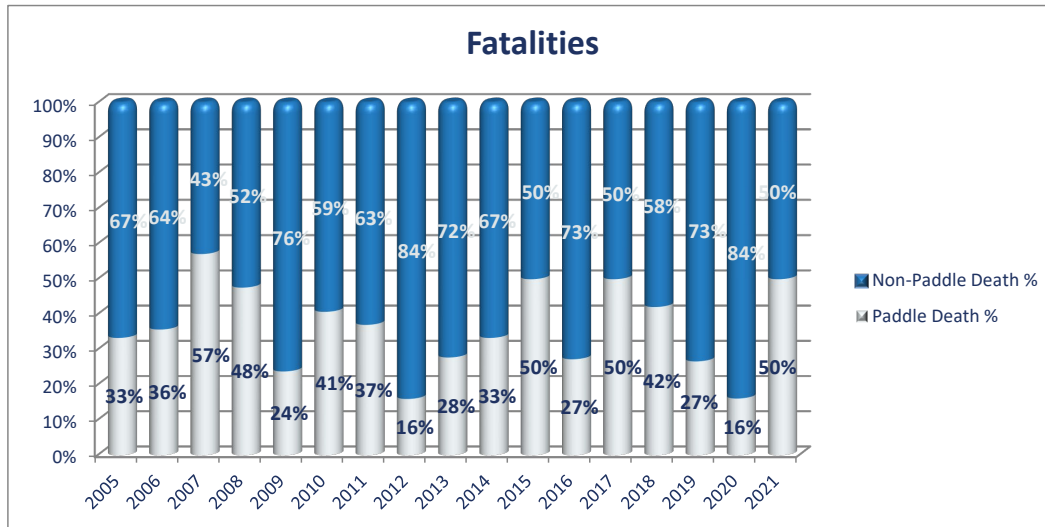
AM			PM		
Time	Accidents	Fatalities	Time	Accidents	Fatalities
12 to 1	60	10	12 to 1	241	17
1 to 2	35	10	1 to 2	265	26
2 to 3	27	3	2 to 3	348	23
3 to 4	22	3	3 to 4	356	31
4 to 5	11	6	4 to 5	352	22
5 to 6	17	3	5 to 6	304	24
6 to 7	26	6	6 to 7	254	30
7 to 8	41	8	7 to 8	205	22
8 to 9	60	11	8 to 9	143	19
9 to 10	84	16	9 to 10	142	10
10 to 11	131	13	10 to 11	113	16
11 to 12	170	15	11 to 12	79	7



Paddle Craft Accidents 2005-2021

Year	Paddle Craft	Injuries	Fatals
2005	8	4	5
2006	6	0	5
2007	16	4	12
2008	11	10	10
2009	8	3	5
2010	17	8	11
2011	15	10	10
2012	10	8	4
2013	13	9	5
2014	15	8	9
2015	19	8	8
2016	16	16	6
2017	19	10	11
2018	19	13	8
2019	8	4	4
2020	11	7	5
2021	9	2	9

Paddlecraft: Rowboats, Canoes, Kayaks, Paddleboards and Crew Shells



Paddle Craft represented 3.0% of the total vessels involved in accidents for 2021.
This contributed to 50% of all fatalities.

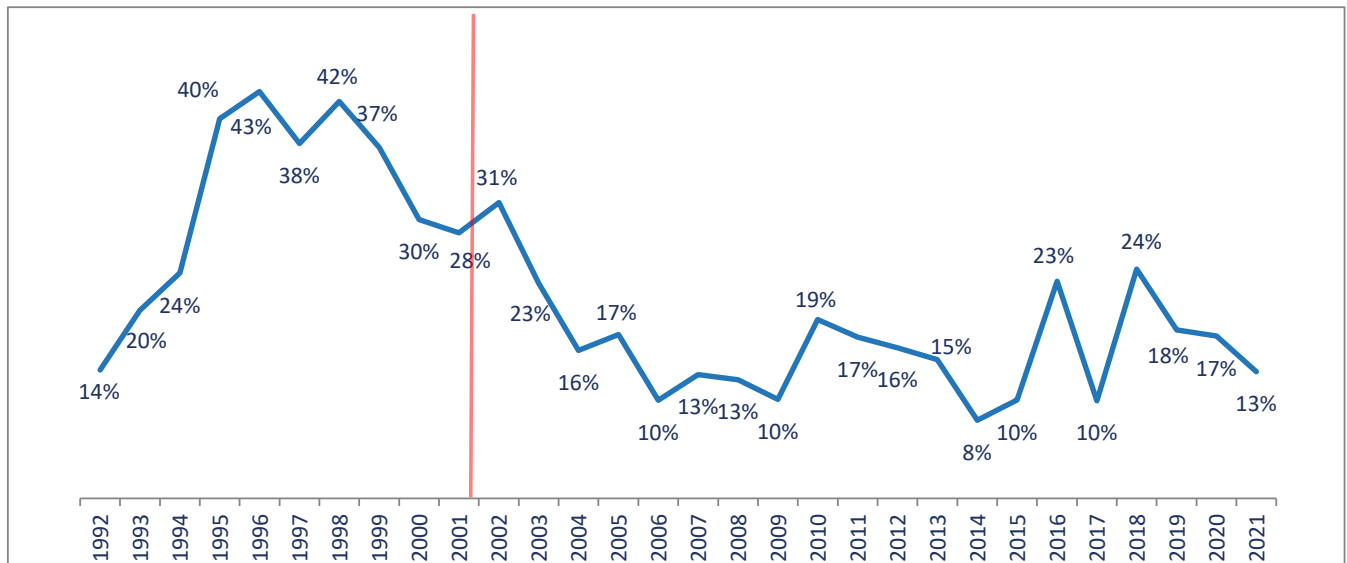
PWC Accidents

Year	# of PWC	Injuries	Fatalities
1992	31	1	21
1993	45	32	1
1994	53	33	3
1995	117	48	3
1996	140	62	2
1997	121	65	6
1998	137	66	3
1999	117	70	4
2000	85	35	1
2001	81	43	0
2002	89	47	2
2003	69	37	1
2004	32	17	1
2005	38	29	3
2006	19	16	1
2007	31	18	1
2008	27	21	0
2009	20	14	3
2010	46	25	1
2011	43	25	0
2012	51	25	3
2013	40	26	3
2014	23	16	1
2015	28	20	0
2016	66	43	0
2017	28	15	2
2018	67	41	6
2019	61	28	1
2020	60	33	6
2021	37	25	0



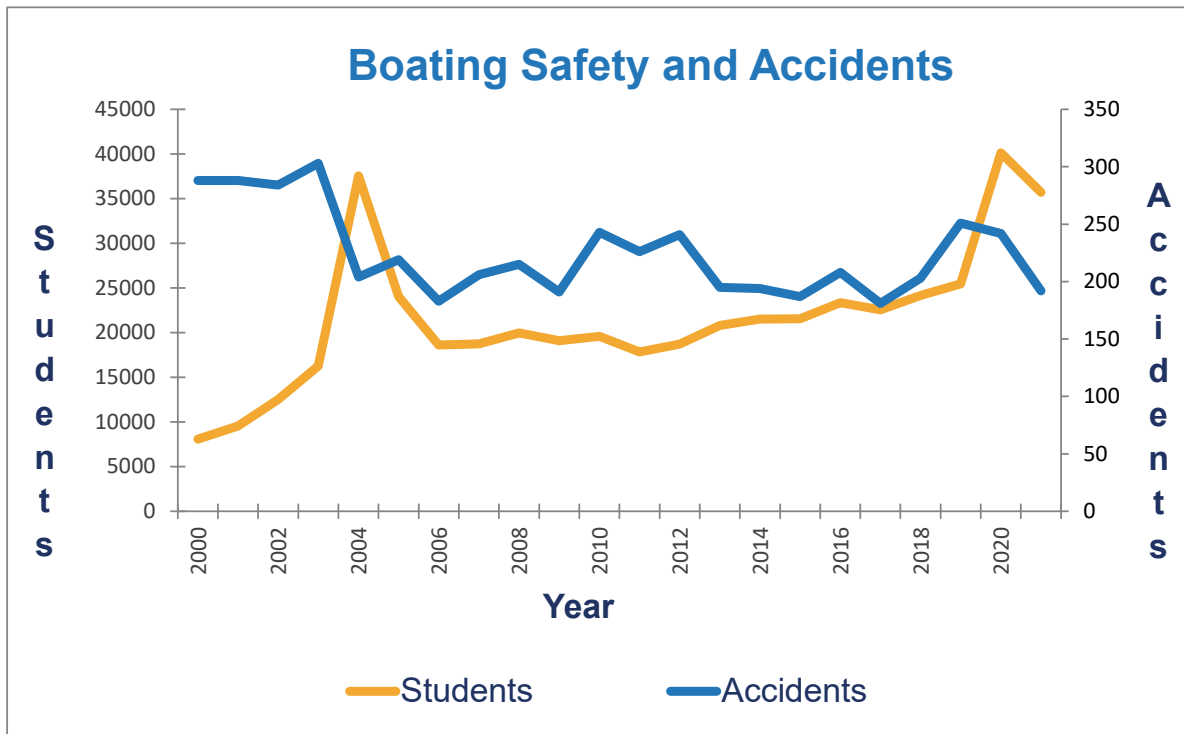
* Mandatory education for PWC operators begins

Percentage of PWC Vessels Involved in Accidents



Boating Safety Education History

Year	Students	Classroom Students	Online Students	Accidents
2000	8076	8076	N/A	288
2001	9558	9558	N/A	288
2002	12512	12512	N/A	284
2003	16260	16260	N/A	303
2004	37560	37560	N/A	204
2005	24044	24044	N/A	219
2006	18624	18624	N/A	183
2007	18738	18738	N/A	206
2008	19967	19967	N/A	215
2009	19093	19093	N/A	191
2010	19567	19567	N/A	243
2011	17826	17826	N/A	226
2012	18705	18705	N/A	241
2013	20806	20806	N/A	195
2014	21507	21507	N/A	194
2015	21559	12655	8904	187
2016	23373	8332	15041	208
2017	22540	7111	15429	181
2018	24168	6413	17755	203
2019	25467	5715	19752	251
2020	40129	2113	38016	242
2021	35707	4243	31464	192



Student Age

Age Group	Online	Classroom
Under 19	5815	1400
19 - 25	4248	327
26 - 35	4010	456
36 - 55	6804	1221
Over 55	2770	839

