

2016

California Recreational Boating Accident Statistics

State of California
Natural Resources Agency

California State Parks
Division of Boating and Waterways

www.dbw.parks.ca.gov
1-888-326-2822

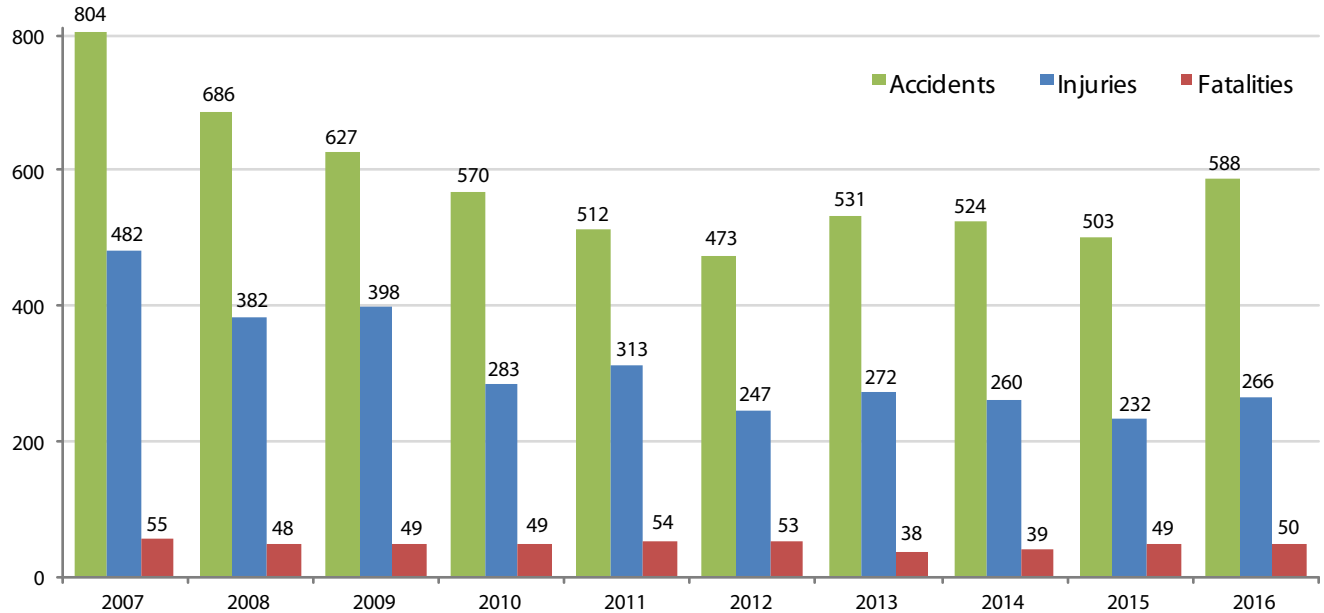




California

Boating Accident Statistics

Accidents, Injuries, Fatalities 2007-2016



California Boating Accidents by Location 2015-2016

Waterway Categories	Accidents		Injuries		Fatalities	
	2015	2016	2015	2016	2015	2016
Northern Lake	105	129	57	75	8	23
Southern Lake	58	61	36	32	7	6
Northern Coast	15	27	6	12	9	2
Southern Coast	195	231	51	58	10	6
Northern River	29	25	24	12	6	7
Southern River	2	3	6	2	0	2
SF Bay Area	18	26	3	19	3	2
Delta	54	59	21	32	4	2
Colorado River	27	27	28	24	2	0
Totals	503	588	232	266	49	50

Property Damage 2007-2016

Year	Property Damage
2007	\$10,643,800
2008	\$5,899,184
2009	\$4,484,105
2010	\$4,040,700
2011	\$2,142,655
2012	\$5,794,000
2013	\$2,407,635
2014	\$2,889,230
2015	\$3,398,027
2016	\$3,911,886



California

2016 Boating Accidents

Vessel Registration

County	Accidents	Injuries	Fatalities	Property Damage	Number of Personal Watercraft (PWC)	Number of Vessels (includes PWC)
Alameda	8	1	1	\$57,840	1,374	18,696
Alpine	0	0	0	\$0	0	90
Amador	2	1	0	\$8,700	127	2,782
Butte	12	9	2	\$38,400	629	14,514
Calaveras	3	2	0	\$4,050	334	5,442
Colusa	2	2	0	\$5,250	65	1,276
Contra Costa	24	11	0	\$260,200	2,687	28,865
Del Norte	0	0	0	\$0	30	1,322
El Dorado	12	6	4	\$10,025	618	12,579
Fresno	12	6	3	\$11,700	1,409	18,221
Glenn	0	0	0	\$0	81	1,646
Humboldt	4	3	2	\$7,100	227	6,689
Imperial	1	1	0	\$800	182	1,659
Inyo	0	0	0	\$0	54	886
Kern	2	0	1	\$2,000	1,563	12,629
Kings	0	0	0	\$0	293	2,295
Lake	10	6	4	\$27,000	825	9,946
Lassen	0	0	0	\$0	96	2,614
Los Angeles	64	20	2	\$450,596	13,308	80,815
Madera	12	8	0	\$31,375	457	5,285
Marin	3	1	0	\$5,550	172	6,710
Mariposa	1	0	0	\$700	68	1,357
Mendocino	2	3	1	\$40,000	126	4,099
Merced	1	0	0	\$2,000	292	5,393
Modoc	0	0	0	\$0	15	619
Mono	2	2	3	\$12,000	63	1,223
Monterey	4	4	0	\$550	399	6,373
Napa	18	10	0	\$22,150	203	4,752
Nevada	4	2	2	\$50,000	285	8,405
Orange	87	15	0	\$210,750	6,457	48,144
Placer	10	7	1	\$20,100	1,211	17,966
Plumas	2	0	0	\$37,000	171	3,199
Riverside	18	16	2	\$25,405	8,168	40,651
Sacramento	9	8	1	\$50,200	2,588	36,498
San Benito	0	0	0	\$0	110	1,517
San Bernardino	33	20	3	\$1,480,000	7,230	38,203

Boating Accident Statistics

2016 Boating Accidents

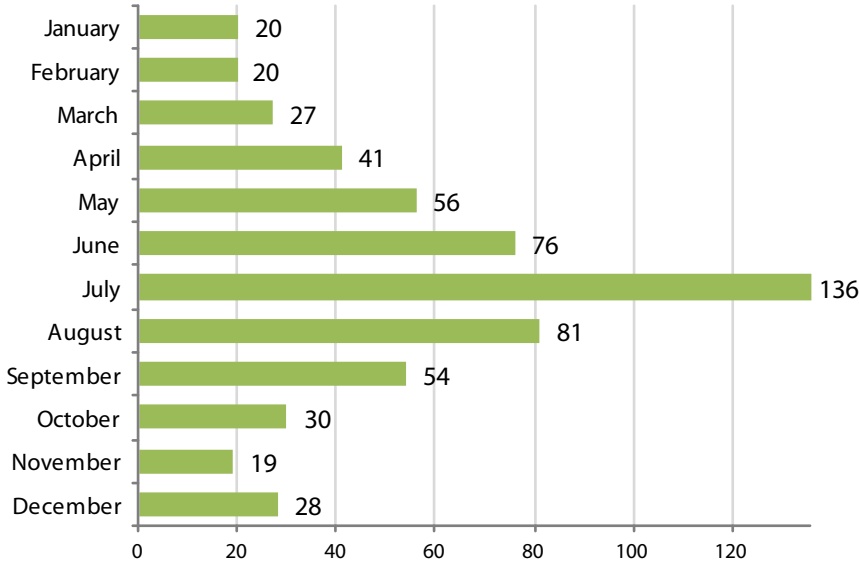
Vessel Registration

County	Accidents	Injuries	Fatalities	Property Damage	Number of Personal Watercraft (PWC)	Number of Vessels (includes PWC)
San Diego	50	14	3	\$235,750	5,267	51,185
San Francisco	8	15	0	\$69,896	108	3,253
San Joaquin	31	17	2	\$158,650	1,503	21,694
San Luis Obispo	8	6	0	\$18,600	869	10,775
San Mateo	6	1	2	\$3,550	633	8,926
Santa Barbara	14	0	0	\$26,000	474	7,448
Santa Clara	5	3	0	\$1,600	1,749	19,280
Santa Cruz	7	0	0	\$6,050	229	6,133
Shasta	23	8	0	\$77,250	806	17,140
Sierra	0	0	0	\$0	3	291
Siskiyou	0	0	0	\$0	68	3,575
Solano	8	4	1	\$10,800	743	12,239
Sonoma	23	5	3	\$187,150	656	14,607
Stanislaus	6	4	3	\$17,600	940	14,847
Sutter	1	0	0	\$15,020	283	4,681
Tehama	3	2	1	\$10,500	176	4,059
Trinity	0	0	0	\$0	56	1,838
Tulare	3	2	0	\$5,000	746	7,272
Tuolumne	6	6	1	\$3,629	189	5,083
Ventura	19	8	1	\$157,200	1,750	17,589
Yolo	1	1	0	\$5,000	282	5,117
Yuba	4	6	1	\$31,200	233	4,024
Out of State	0	0	0	\$0	377	2,996
Totals	588	266	50	\$3,911,886	70,057	697,412



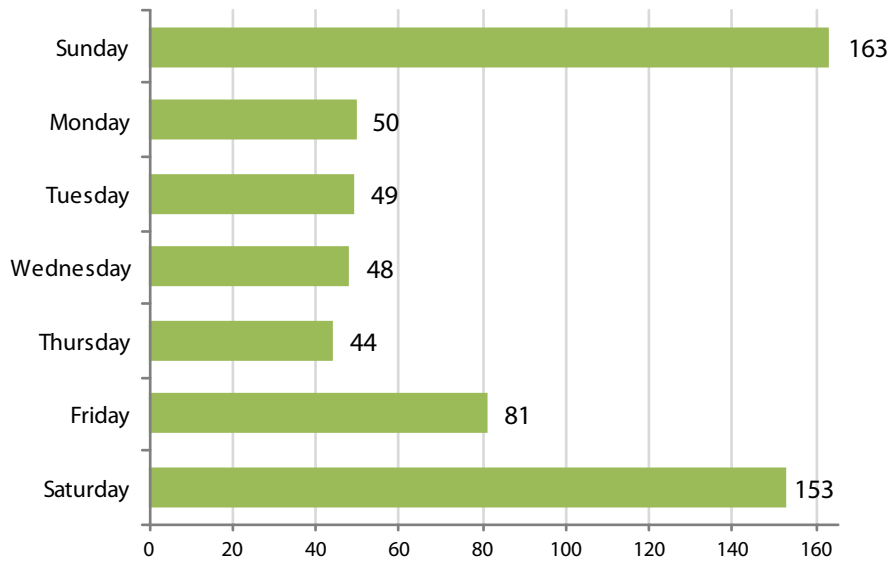
California

2016 Accidents by Month (Total Accidents 588)



2016 Accidents by Day of the Week (Total Accidents 588)

(Total Accidents 588)

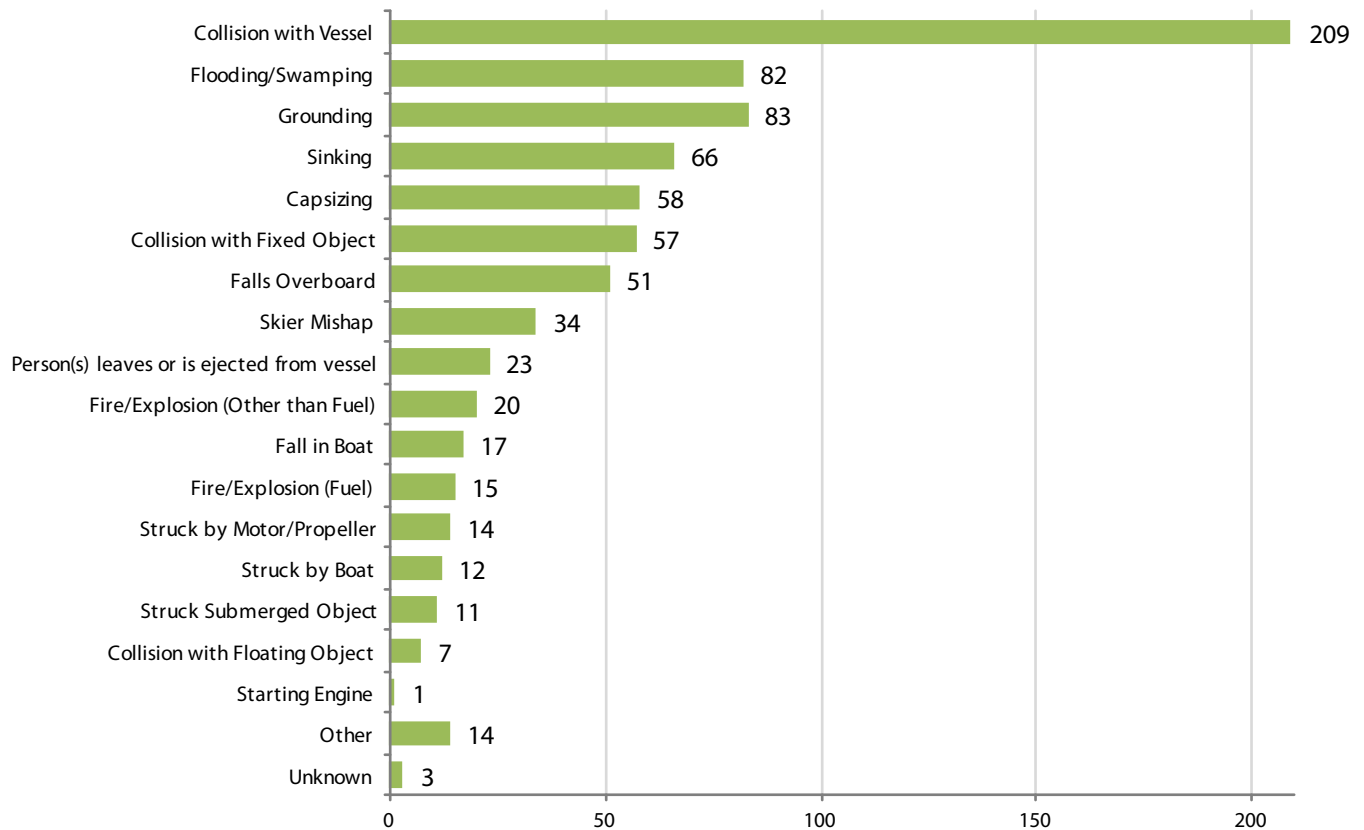


2016 Accidents by Time of Day

Time of Day	Number of Accidents
12:00-1:59 a.m.	14
2:00-3:59 a.m.	5
4:00-5:59 a.m.	6
6:00-7:59 a.m.	13
8:00-9:59 a.m.	37
10:00-11:59 a.m.	61
12:00-1:59 p.m.	84
2:00-3:59 p.m.	122
4:00-5:59 p.m.	127
6:00-7:59 p.m.	75
8:00-9:59 p.m.	25
10:00-11:59 p.m.	19
Time Unknown	0
Total Accidents	588

Boating Accident Statistics

2016 Type of Accidents (Total Types: 777* Total Accidents: 588)



*Some accidents are represented by more than one accident type, which accounts for the accident types exceeding the number of accidents.

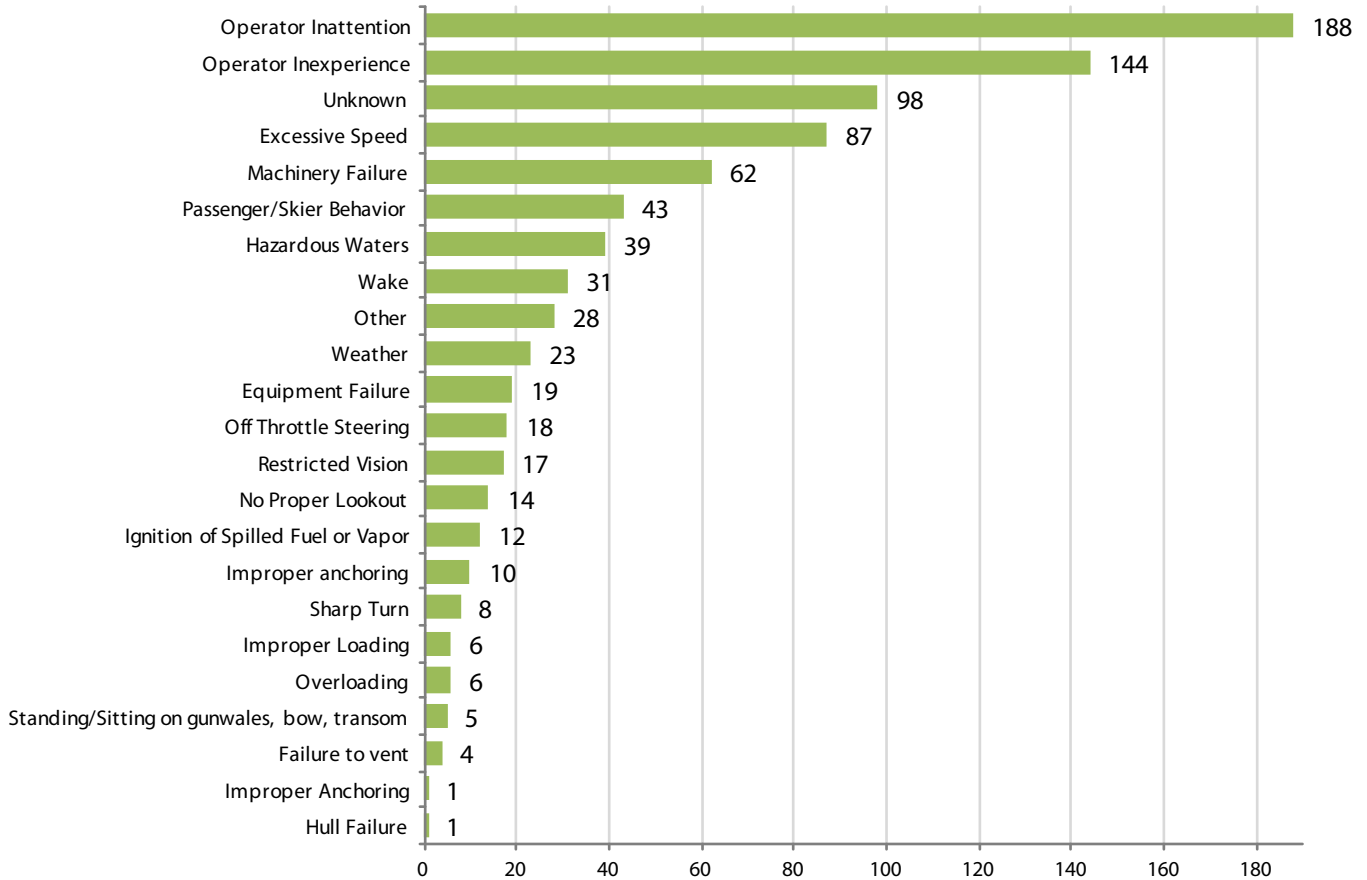
2016 Type of Accident by Vessel Type

Type of Accident	All Vessels	Open Motorboat	Cabin Motorboat	Personal Watercraft	All Sailboats	Houseboat/Pontoon	Canoe/Kayak
Collision with Vessel	36%	29%	58%	62%	57%	44%	17%
Flooding/Swamping	14%	20%	11%	3%	4%	16%	0%
Grounding	14%	13%	12%	5%	19%	8%	8%
Sinking	11%	15%	12%	1%	4%	12%	0%
Capsizing	10%	11%	2%	5%	3%	4%	50%
Collision with Fixed Object	10%	9%	10%	8%	10%	8%	8%
Falls Overboard	9%	8%	0%	12%	4%	12%	38%
Skier Mishap	6%	11%	0%	4%	0%	0%	0%
Person(s) leaves or is ejected from vessel	4%	3%	2%	9%	1%	0%	4%
Fire/Explosion (Other than Fuel)	3%	2%	7%	0%	4%	8%	0%
Total Accidents	588	263	123	100	114	25	24



California

2016 Cause of Accidents (Total Causes: 864* Total Accidents: 588)



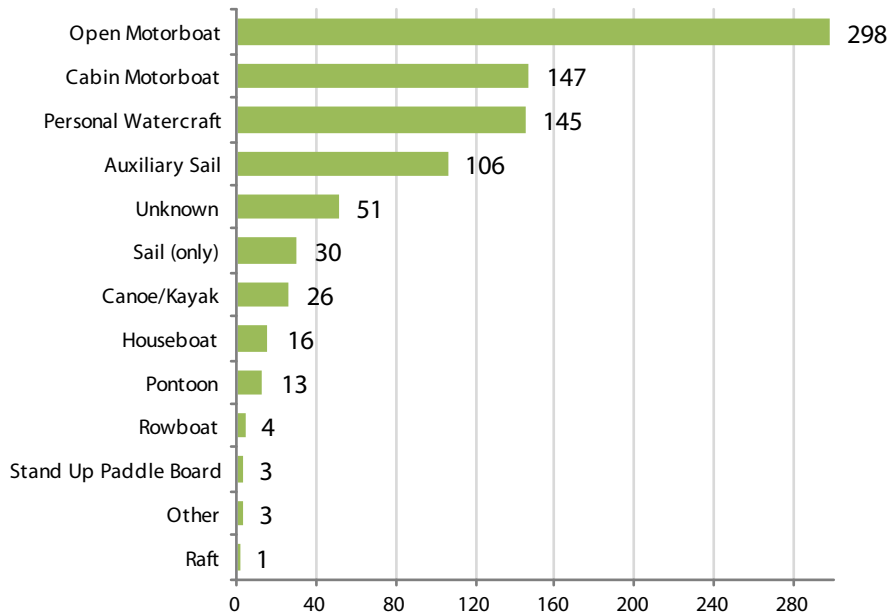
*Many accidents had more than one cause, which is reflected in this chart. The "Other" category includes causes that do not fit into any of the other categories listed above.

2016 Cause of Accident by Type of Vessel

Cause of Accident	All Vessels	Open Motorboat	Cabin Motorboat	Personal Watercraft	All Sailboats	Houseboat/Pontoon	Canoe/Kayak
Operator Inattention	32%	32%	36%	47%	31%	32%	29%
Operator Inexperience	25%	20%	23%	52%	25%	36%	25%
Excessive Speed	15%	17%	11%	35%	4%	0%	0%
Machinery Failure	11%	12%	14%	6%	9%	12%	0%
Passenger/Skier Behavior	7%	12%	3%	1%	1%	16%	0%
Hazardous Waters	7%	7%	4%	2%	6%	0%	13%
Wake	5%	8%	2%	7%	0%	0%	8%
Weather	4%	2%	7%	0%	11%	4%	0%
Equipment Failure	3%	3%	4%	1%	5%	4%	4%
Off-Throttle Steering	3%	4%	2%	12%	0%	12%	0%
Total Accidents	588	263	123	100	114	25	24

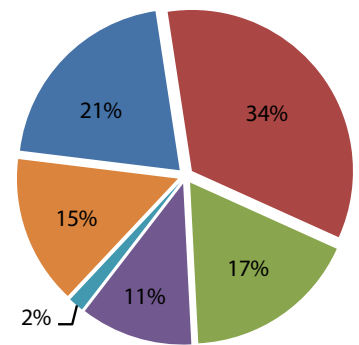
Boating Accident Statistics

2016 Vessels Involved in All Accidents by Type (Total Vessels 843)



2016 Vessels Involved in All Accidents by Length

Length of Vessels	Number of Vessels
Vessels <16 feet	174
Vessels 16-25 feet	288
Vessels 26-39 feet	147
Vessels 40-65 feet	95
Vessels over 65 feet	13
Unknown	126
Total	843



2016 Ownership Status of Vessels Involved in Accidents

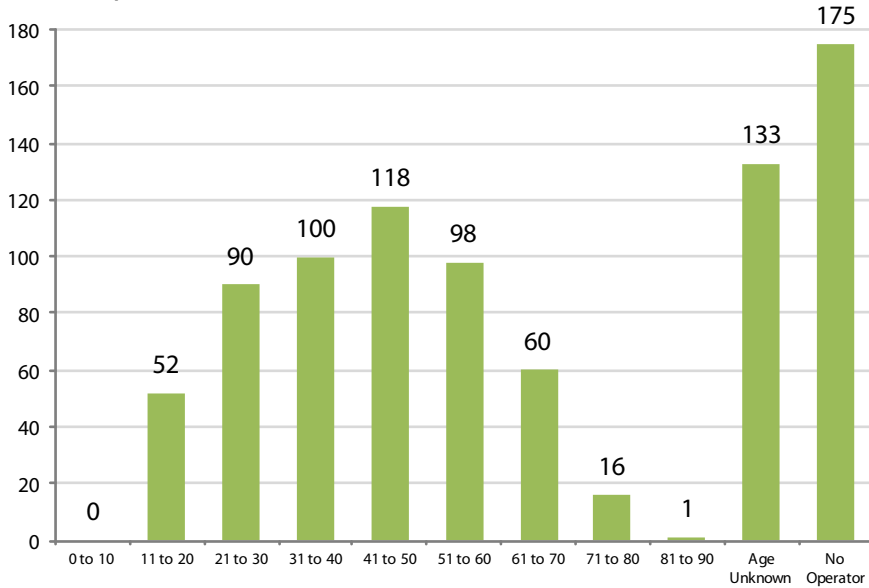
Operated By	All Vessels		Open Motorboats		Personal Watercraft	
	Number of Vessels	Percent of Vessels	Number of Vessels	Percent of Vessels	Number of Vessels	Percent of Vessels
Operated by Owner	302	36%	147	49%	28	19%
Operated by Borrower	184	22%	63	21%	64	44%
Operated by Renter	88	10%	22	7%	40	28%
Unknown	94	11%	21	7%	10	7%
No Operator	175	21%	45	15%	3	2%
Total Vessels	843	100%	298	100%	145	100%



California

2016 Operators Involved in All Accidents by Age

(Total Operators 668, Total Vessels 843)



The category No Operator reflects situations in which vessels were anchored or docked with no operator in command.

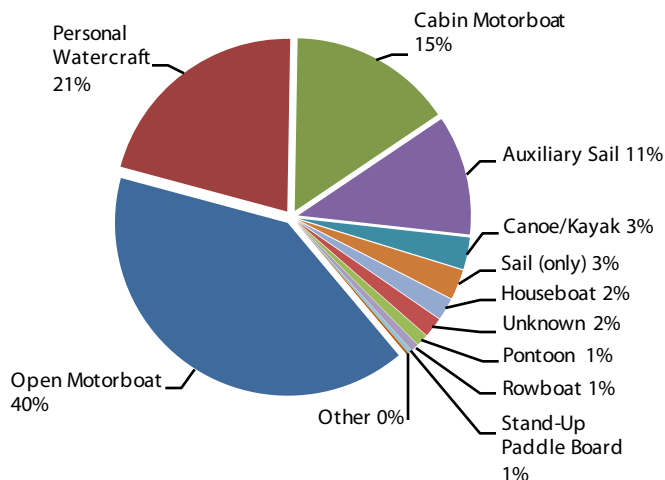
2016 Operator Education

Type of Education	Number of Operators
American Red Cross	1
State Course	23
U.S. Power Squadron	2
USCG Auxiliary	14
Other	12
Informal	206
None	202
Unknown	208
No Operator	175
Total	843

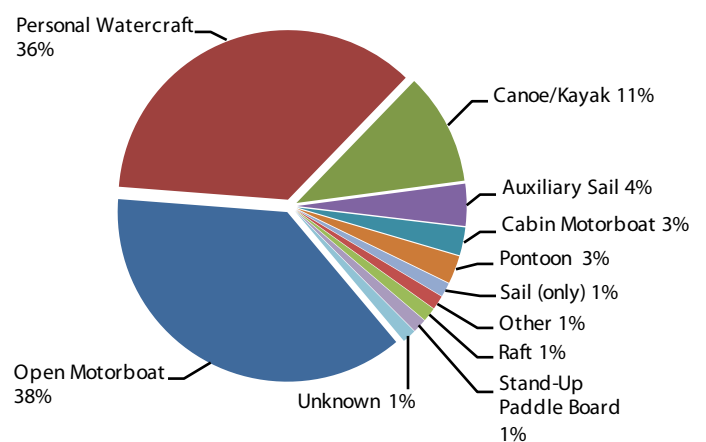
2016 Gender of Operators Involved in Accidents

Gender	Number of Operators
Male	536
Female	75
Gender Unknown	57
No Operator	175
Total	843

2016 Type of Vessels Operated by Men Involved in Accidents

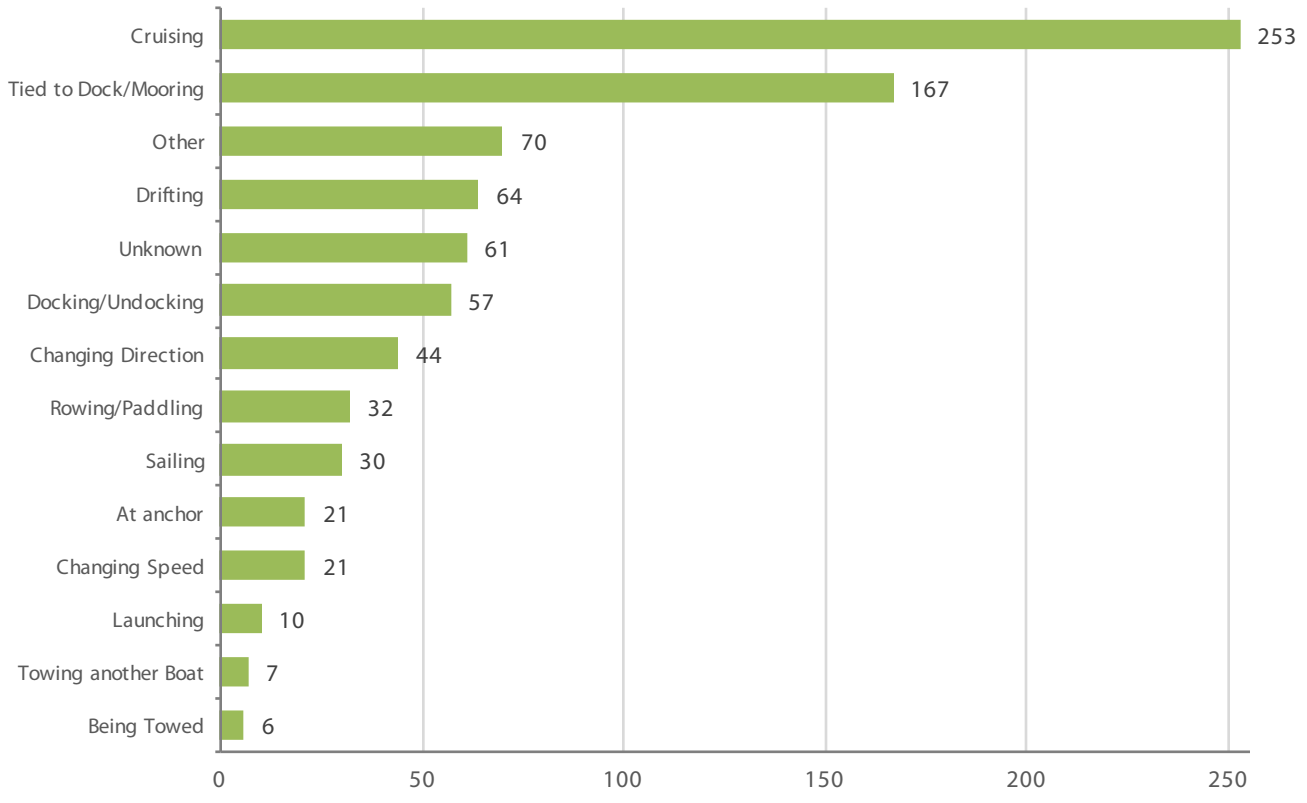


2016 Type of Vessels Operated by Women Involved in Accidents

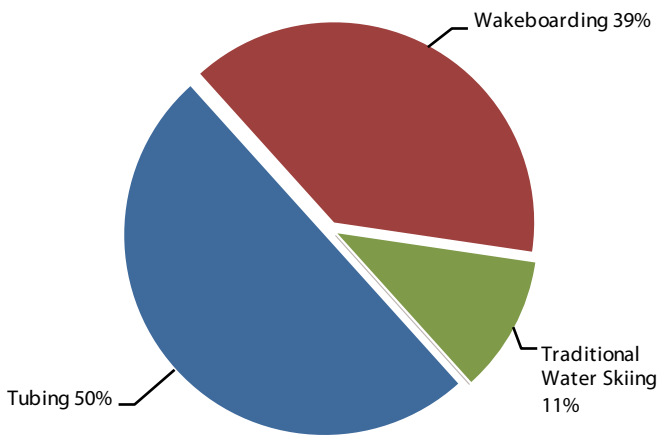


Boating Accident Statistics

2016 Operation at Time of Accident (Total Vessels 843)



2016 Accidents Involving Towing Sports*



Activity	Vessels Engaged in Activity
Tubing	21
Wakeboarding	17
Traditional Water Skiing	5
Total	43

*Towing sports include persons being towed on lines behind vessels on water skis, wakeboards, wake skates, kneeboards, skurf boards, tubes, and parasails.

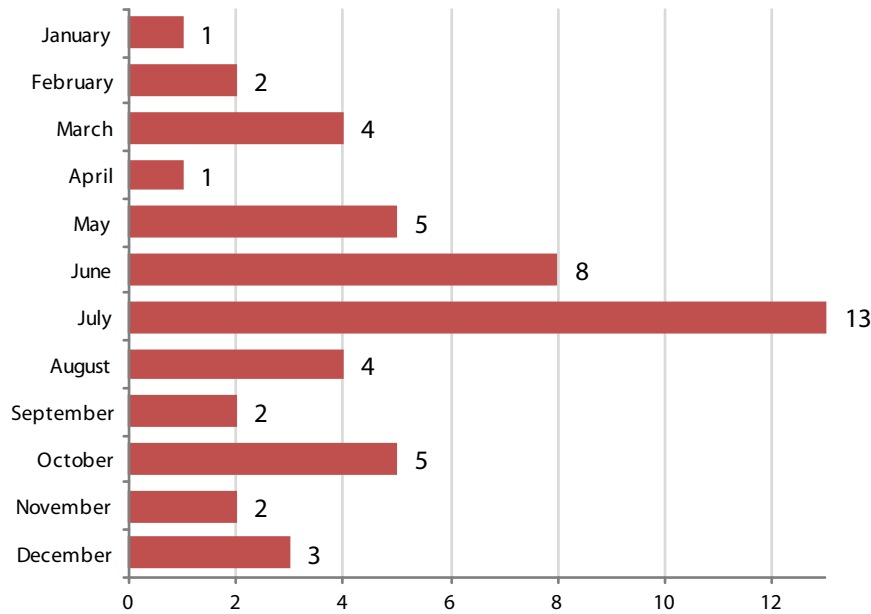
One of the accidents involved two vessels towing wakeboards. Consequently, 43 vessels involved in towing sports were involved in 42 accidents. Accident percentages are based on 42 accidents.



California

2016 Fatalities by Month

(Total Fatalities 50)

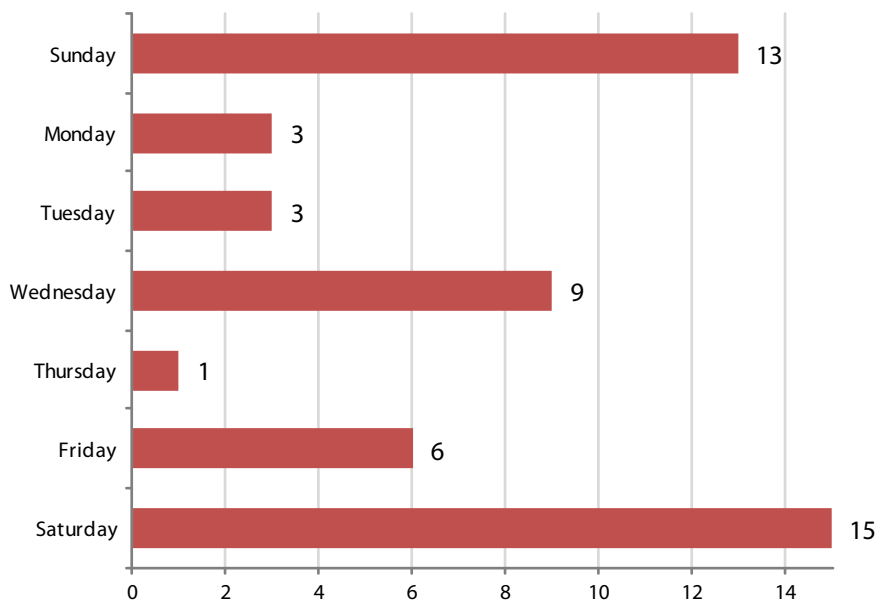


2016 Accidents by Time of Day

Time of Day	Number of Fatalities
12:00-1:59 a.m.	0
2:00-3:59 a.m.	0
4:00-5:59 a.m.	0
6:00-7:59 a.m.	2
8:00-9:59 a.m.	3
10:00-11:59 a.m.	11
12:00-1:59 p.m.	3
2:00-3:59 p.m.	9
4:00-5:59 p.m.	9
6:00-7:59 p.m.	8
8:00-9:59 p.m.	1
10:00-11:59 p.m.	4
Time Unknown	0
Total Accidents	50

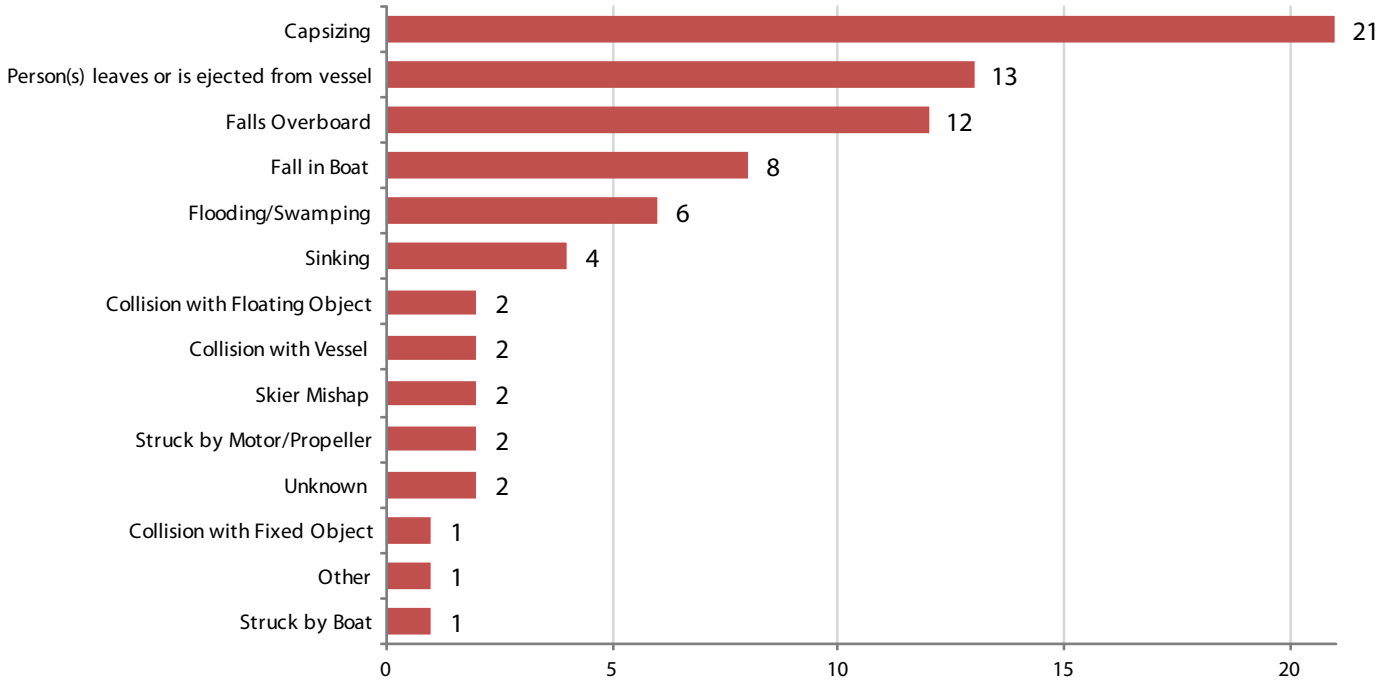
2016 Fatalities by Day of the Week

(Total Fatalities 50)



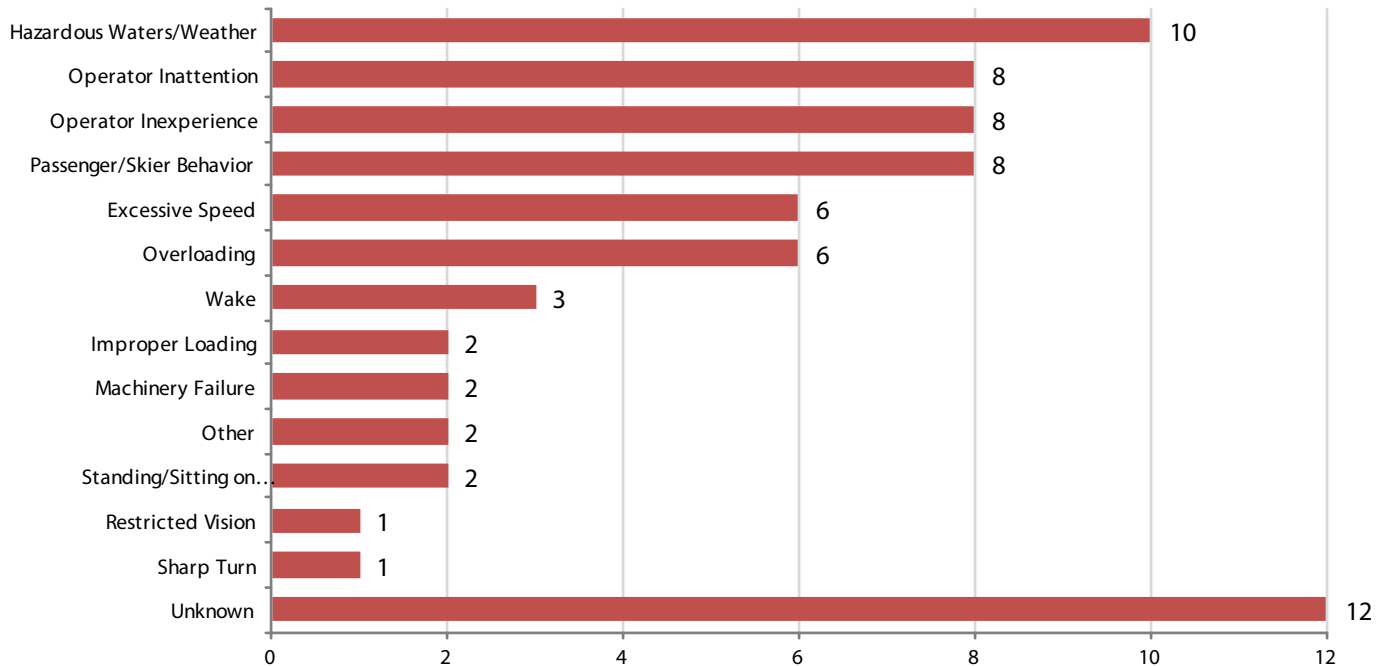
Boating Accident Statistics

2016 Fatalities by Type of Accident (Total Types: 77* Total Fatalities: 50)



*Some accidents are represented by more than one accident type, which accounts for the accident types exceeding the number of accidents.

2016 Fatalities by Cause of Accident (Total Causes: 71* Total Fatalities: 50)



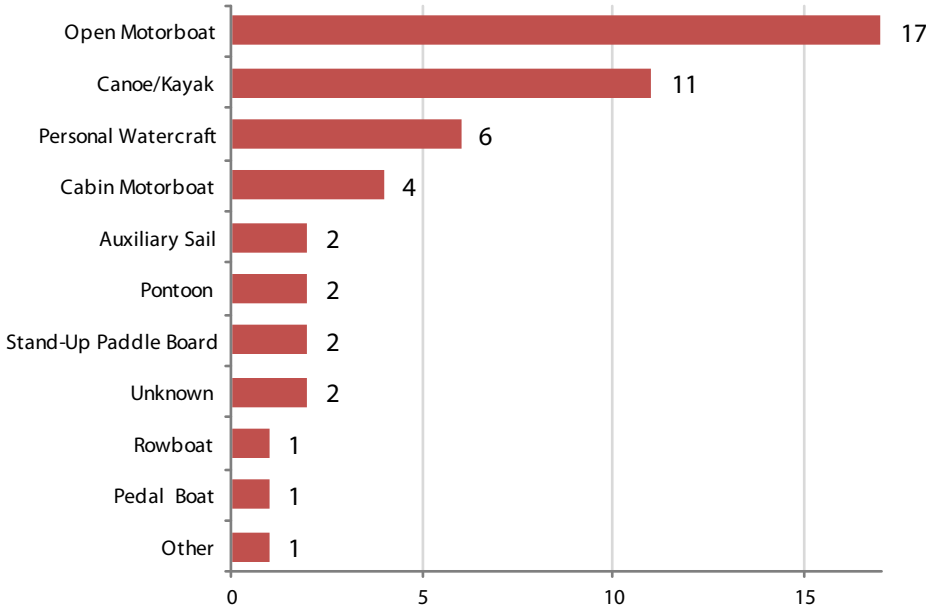
*Many accidents had more than one cause, which is reflected in this chart. The "Other" category includes causes that do not fit into any of the other categories listed left.



California

2016 Vessels Involved in Fatal Accidents

(Total Vessels: 49)

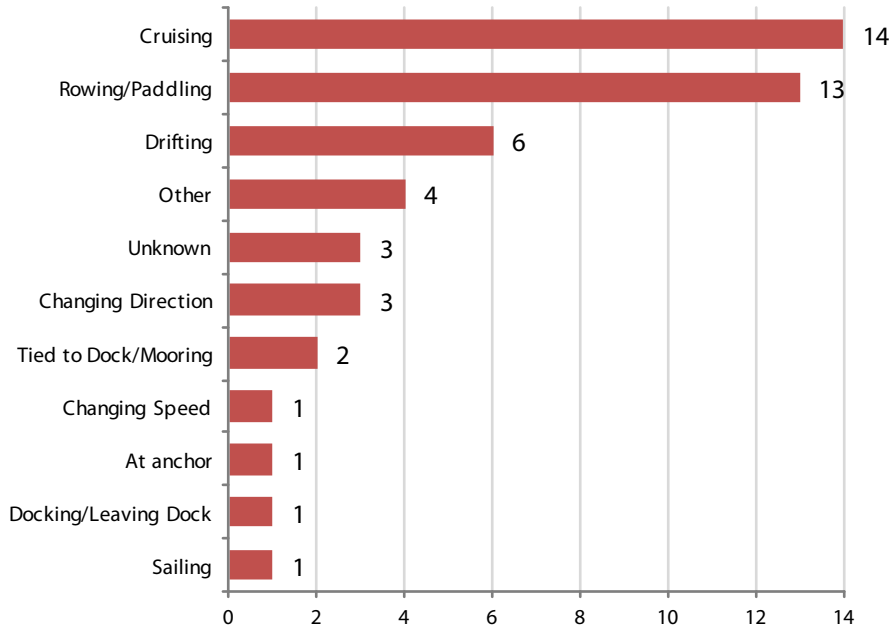


2016 Vessels Involved in Fatal Accidents by Length

Length of Vessels	Number of Vessels
<16 feet	18
16-25 feet	20
26-39 feet	3
40-65 feet	0
>65 feet	0
Unknown	8
Total Vessels	49

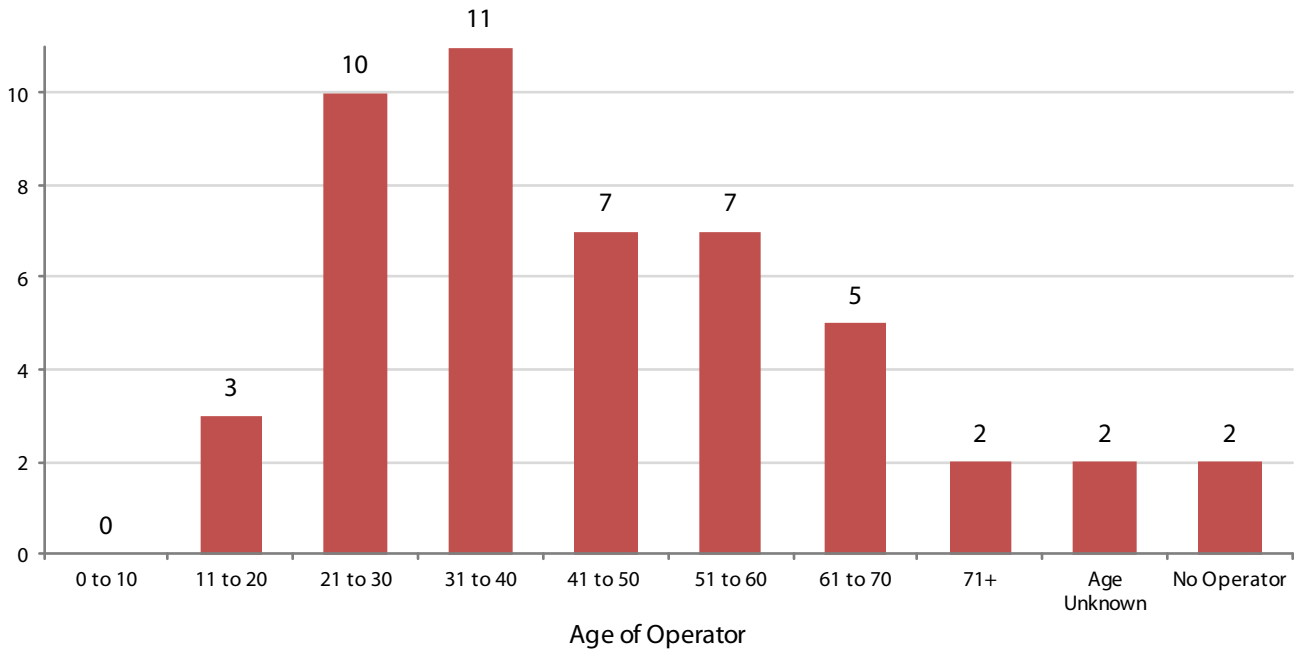
2016 Operation at Time of Fatal Accident

(Total Vessels: 49)



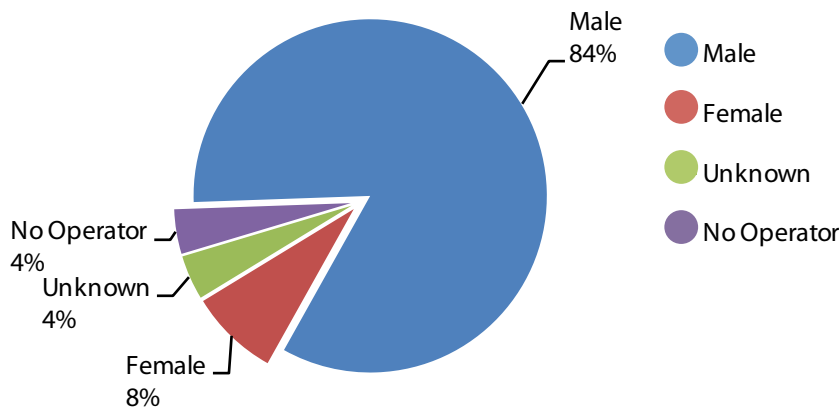
2016 Operators Involved in Fatal Accidents by Age

(Total Operators: 47, Total Vessels: 49)



The category No Operator reflects situations in which vessels were anchored or docked with no operator in command.

2016 Gender of Operators Involved in Fatal Accidents



2016 Operator Education

Type of Education	Number of Operators
American Red Cross	0
State Course	0
U.S. Power Squadron	0
USCG Auxiliary	1
Other	1
Informal	10
None	16
Unknown	19
No Operator	2
Total Vessels	49



California

2012-2016 Life Jacket Use by Cause of Death

Cause of Death	Wearing Life Jacket	Not Wearing Life Jacket	Life Jacket Use Unknown	Total
Drowning	25	116	2	143
Trauma	21	17	2	40
Carbon Dioxide	0	2	0	2
Hypothermia	3	1	0	4
Heart Attack	1	8	2	11
Other	0	1	0	1
Unknown Cause	6	14	8	28
Total Fatalities	56	159	14	229

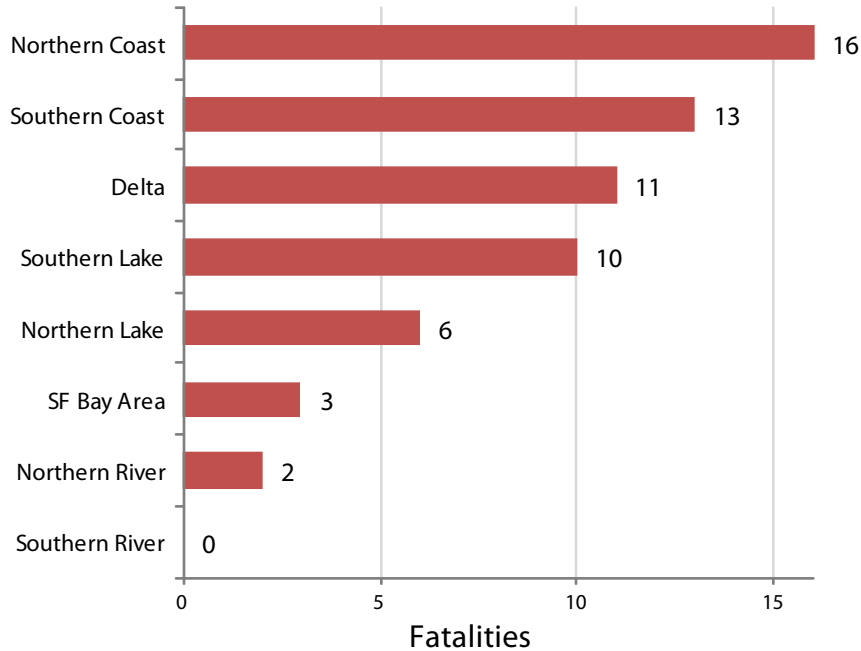
2012-2016 Life Jacket Use by Victim Activity

Activity	Wearing Life Jacket	Not Wearing Life Jacket	Life Jacket Use Unknown	Total
General Recreation	19	70	3	92
Fishing	7	47	7	61
Paddle Sports	14	22	1	37
Towing Sports	6	1	0	7
Swimming	0	12	0	12
Sailing/Windsurfing	7	6	2	15
Other	3	1	1	5
Total Fatalities	56	159	14	229

2012-2016 Life Jacket Use by Victim's Type of Vessel

Type of Vessel	Wearing Life Jacket	Not Wearing Life Jacket	Life Jacket Use Unknown	Total
Open Motorboat/Pontoon	17	76	8	101
Cabin Motorboat	2	22	0	24
Personal Watercraft	11	7	0	18
Canoe/Kayak/Raft/Row	18	39	2	59
Sailboats/Sailboards	7	8	2	17
Other	0	6	0	6
Unknown	1	1	2	4
Total Fatalities	56	159	14	229

2011-2016 Boating-Related Fishing Fatalities by Waterway Categories (Fatalities 61)



2012-2016 Alcohol Involvement in Boating-Related Fatalities

Year	Alcohol Involved	Alcohol not Involved	% Involving Alcohol Where Alcohol Testing was Conducted	Alcohol Testing not Conducted	Total Fatalities
2012	12	22	35%	19	53
2013	7	18	28%	13	38
2014	13	25	34%	1	39
2015	10	16	38%	23	49
2016	14	21	40%	15	50
Total Fatalities	56	102	35%	71	229



2016 California Recreational Boating Fatalities

2016 Fatalities by Location

Type of Waterbody	Number of Fatalities
Northern Lake	23
Northern River	7
Southern Lake	6
Southern Coast	6
Northern Coast	2
Southern River	2
SF Bay Area	2
Delta	2
Total Fatalities	50

