

CALIFORNIA BOATING ACCIDENT REPORT FOR 1995

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF BOATING AND WATERWAYS

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Dear Boating Enthusiast:

The Department of Boating and Waterways' *California Boating Accident Report For 1995* is a comprehensive study of boating accidents in the state. The report provides information, analysis and recommendations based on boating accidents that occurred in the 1995 calendar year. Accident trends from previous years have also been used to identify critical problem areas. The Department has compiled this report with the goal of reducing the number of boating accidents and fatalities on California's waterways.

California has some of the most accessible, diverse waterways in the nation. One of the primary missions of the Department is to protect the public's right to safe and enjoyable boating. To accomplish this, the Department administers a variety of boating safety, education, and law enforcement programs for the benefit of California's boaters.

Through the successful efforts of the Department, local law enforcement agencies, and boating organizations, California's safety record has improved. Although we can be proud of this, even one fatality is one too many. The Department will continue to provide education to boaters, targeting specific problem areas.

One area of concern highlighted in this year's report deals with alcohol consumption. The 1993 and 1995 accident data does not support the "designated operator" concept which implies that it is safe to drink as long as you are not operating a vessel. This concept has its roots in automobile safety, where the possibility of drowning is not a factor. In 1995, 50% of victims involved in alcohol-related accidents were passengers who were completely responsible for, or contributed to, their own deaths because of poor judgment due to alcohol consumption. Because of these findings, the Department recommends that **no one** aboard a vessel consume alcoholic beverages.

For more information about this report or other accident statistics, please contact Amy Rigby at (916) 322-1824.

Department of Boating and Waterways

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EXECUTIVE SUMMARY

The Department of Boating and Waterways has compiled this report with the goal in mind of reducing the number of boating accidents and fatalities that occur on California's waterways.

Under existing law, boat operators who are involved in accidents are required to submit written accident reports to the Department under specific conditions. These reports are used to analyze boating accident trends and to identify areas of concern so that Department activities can be directed to promote boating safety, education, and law enforcement in those areas.

The California Boating Accident Report for 1995 provides information, analysis and recommendations based on boating accidents that occurred in the 1995 calendar year. Accident trends from previous years have also been used to identify critical problem areas.

SIGNIFICANT FINDINGS AND RECOMMENDATIONS

- In 1995, a total of 833 boating accidents, involving 490 injuries, 52 fatalities and \$2,536,500 in property damage, were reported to the Department. All of these figures are higher than the 1994 data. The number of accidents is the highest since 1987 and the number of injuries is at an all-time high.
- Eight of the 12 victims (66%) involved in fatal alcohol-related accidents were passengers. Of this group, 6 were completely responsible for or contributed to their deaths because of their poor judgment due to alcohol consumption. This trend also appears in the 1993 accident data.

Recommendation:

Accidents involving intoxicated passengers, who are responsible for or contribute to their own deaths, contradict the "designated driver" concept which is

popular in some boating safety literature. This concept is based on the assumption that it is safe for passengers to consume alcohol as long as the operator remains sober. In many cases, the 1993 and 1995 accident data does not support this assumption. The designated driver concept has its roots in automobile safety where the possibility of passengers drowning or swimming too close to a propeller is not a factor. Because of these hazards specific to the boating environment, the Department recommends that no one aboard a vessel consume alcoholic beverages.

- Alcohol played a role in 34% of all fatal accidents involving motorboats in 1995. This level is comparable to the 1993 findings in which 33% of fatal accidents involving motorboats were alcohol related. These levels show a marked decrease from the 1986 study in which 59% of motorboat fatalities were alcohol related.

Recommendation:

It is important to maintain a high level of education and enforcement on California's waterways in order to continue to decrease the number of alcohol-related boating fatalities. The Department has released a recent public safety announcement for television concerning the dangers of combining boating and alcohol. The Department also plans to support more "Boating While Intoxicated" checkpoints by local law enforcement agencies.

- More accidents occurred from 2:01 p.m. through 4:00 p.m. than during any other time period, accounting for nearly one quarter of all accidents.

Recommendation:

The period from 2:01 p.m. through 4:00 p.m. is typically the peak period for accidents. This is the time of day when two dangerous conditions exist: the highest congestion of boat traffic on waterways, and the intensity of stressors, e.g.: intense sun, heat, and fatigue. These stressors adversely affect a vessel

operator's concentration and judgment. This combination of boat traffic and stressor intensity may account for the high rate of accidents during this period. Because of this, the Department will encourage local law enforcement and boating organizations such as the U.S. Coast Guard Auxiliary to increase patrols on the water during this time period. Also, the Department will incorporate this safety information into its educational programs.

- Accidents involving personal watercraft (PWC) continued to escalate in 1995. Between the years 1993 to 1995, PWC registration totals rose from 90,977 to 113,639, increasing 25%. During the same period, accidents involving PWC went from 248 to 353, an increase of 42%. These figures show disproportionate increases. The 353 accidents involving PWC in 1995 resulted in 226 injuries and 6 fatalities.

The number of operators involved in accidents in the 11-20 age group is increasing; 84% of those riders involved in accidents were operating PWC.

Sixty-eight percent of PWC involved in accidents were being operated by someone other than the registered owner. Fifty-three percent were borrowed vessels and 15% were rented vessels.

Recommendation:

The Department plans to provide a comprehensive educational program to properly train boaters to operate PWC. This program will include written materials, a video component and a practical handling skills instruction manual. This PWC instruction package will be made available to boating safety instructors.

- Of the victims who drowned in boating accidents in 1995, 72% were not wearing their life jackets. This group included four people under the age of 18.

Recommendation:

The Department will continue its multi-media campaign to provide television public service announcements and a billboard campaign emphasizing the importance of wearing life jackets.

INTRODUCTION

California's rivers, lakes, bays, and coastal areas offer boating enthusiasts a wide variety of recreational opportunities, including 1,356,780 surface acres of water, 30 popular whitewater rivers with approximately 2,600 miles of waterways, and 3,427 miles of coastline and tidal shoreline.

Because of the popularity of boating in California, the variety of waterways, and the growth of California's population, the number of vessels registered in the state has increased from 421,000 in 1970 to 860,672 in 1995.

The mission of the Department of Boating and Waterways is to provide public access to California waterways and to provide leadership in promoting the public's right to safe and enjoyable boating. To accomplish this, the Department administers statewide boating safety, education, and law enforcement programs, and provides loans and grants for the construction of small craft harbors and boat launching facilities.

California's boating accident program is mandated by Section 175 of Title 33 of the U.S. Code of Federal Regulations. Accident information collected by the Department is forwarded to the U.S. Coast Guard in Washington D.C., and is made a part of the Coast Guard's annual publication, *Boating Statistics*. California accident statistics are compiled under state law, Section 656 of the Harbors and Navigation Code, which requires a boater who is involved in an accident to file a written accident report with the Department when:

- a person dies, disappears, or is injured requiring medical attention beyond first aid, or
- damage to a vessel or other property exceeds \$500, or there is complete loss of a vessel.

The purpose of this program is to provide a data base for accident analysis, which is then used as a tool for identifying areas of concern so that the Department's activities can be directed to promote boating safety, education, and law enforcement in those areas. Information contained in the accident reports is confidential and may not be used in prosecuting any violation which may have occurred, nor in any civil litigation. The details of each reported accident are analyzed to determine the cause, how the accident might have been prevented, and other specific safety-related problems.

The *California Boating Accident Report for 1995* does not include information on all boating accidents that occurred in California in 1995. The Coast Guard and the American Red Cross have estimated that less than 15% of the accidents that occur are reported to state programs nationwide due to ignorance of the reporting law or difficulty enforcing that law. The reporting of nonfatal and nonserious injury accidents is especially low. However, we believe that the vast majority of fatal and serious injury boating accidents in California are reported to the Department.

Based on accident trends in the past, the Department has made recommendations to the Legislature for changes in California boating law and has developed safety and educational campaigns for such activities as water-skiing, personal watercraft operation, hunting and fishing from boats, and boating and alcohol consumption. Accident report analysis has also contributed to the development of a whitewater boating course, conducted by the American Red Cross, a Kindergarten - 12th grade educational program developed by the Department in conjunction with the Department of Education, and other boating safety courses offered through schools and universities.

BOATING ACCIDENTS—GENERAL PERSPECTIVE

In 1995, a total of 833 accidents, involving 490 injuries, 52 fatalities, and \$2,536,500 in property damage, was reported to the Department. All of these numbers are higher than the 1994 totals: 709 total accidents, 386 injuries, 40 fatalities, and \$1,740,300 in property damage. Please see Tables 1, 2 and 3 for additional information.

General Findings From 1995

1. "Operator Inattention" was the primary cause of boating accidents.
2. Approximately 50% of all boating accidents involved a collision with another vessel.
3. Most boating accidents occurred during the summer months. The greatest number of accidents occurred in July.
4. The majority of accidents occurred on Saturday or Sunday.
5. The greatest number of fatalities occurred on Sunday.
6. The greatest number of boating accidents occurred from 2:01 p.m. through 4:00 p.m.
7. Approximately 77% of vessels involved in accidents were less than 26 feet in length.
8. Of the victims who drowned in boating accidents, 72% were not wearing their life jackets.
9. Operators in the 21-30 age group were involved in more accidents than any other age group, followed by the 31-40 age group.
10. Personal watercraft operators in the 21-30 age group were involved in more accidents than any other age group, followed by the 11-20 age group.
11. Single vessel accidents accounted for 83% of alcohol-related fatalities.
12. Of the 353 PWC accidents, 266 involved collisions with other vessels. Fifty-nine percent of these collisions involved a PWC colliding with a second PWC.
13. Eight percent of all vessels involved in accidents were known to be rented. Sixty-eight percent of PWC involved in accidents were operated by someone other than the registered owner; 53% were borrowed and 15% were rented.
14. Alcohol was a factor in 34% of all motorboat fatalities and 31% of all boating fatalities.

TABLE 1 1995 BOATING ACCIDENTS BY COUNTY

County	Accidents	Injuries	Fatalities	Property Damage
Alameda	3	1	1	\$ 8,400
Amador	5	4	0	4,050
Butte	2	0	0	12,500
Calaveras	5	5	0	16,600
Colusa	1	1	0	12,000
Contra Costa	40	23	2	199,550
Del Norte	1	2	0	7,400
El Dorado	6	4	0	16,400
Fresno	12	2	2	15,400
Humboldt	2	4	0	4,800
Imperial	17	22	2	40,850
Kern	34	21	3	39,800
Kings	1	1	0	12,900
Lake	14	9	1	41,600
Los Angeles	64	21	3	286,800
Madera	9	6	0	20,450
Marin	5	1	1	9,200
Mariposa	2	3	1	0
Mendocino	3	3	1	600
Merced	4	3	0	6,200
Mono	2	1	0	2,500
Monterey	13	4	1	27,950
Napa	16	9	2	34,900
Nevada	10	4	0	21,100
Orange	15	4	0	237,700
Placer	28	19	0	134,900
Plumas	4	2	0	3,850
Riverside	66	36	3	94,200
Sacramento	25	19	3	130,000
San Bernardino	84	60	2	192,600
San Diego	42	20	2	127,600
San Francisco	5	0	2	22,000
San Joaquin	44	33	5	204,150
San Luis Obispo	19	11	0	48,700
San Mateo	5	5	3	10,000
Santa Barbara	9	0	0	24,450
Santa Clara	32	16	0	41,800
Santa Cruz	7	2	1	26,450
Shasta	65	43	3	80,800
Sierra	1	0	1	0

TABLE 1 1995 BOATING ACCIDENTS BY COUNTY *continued*

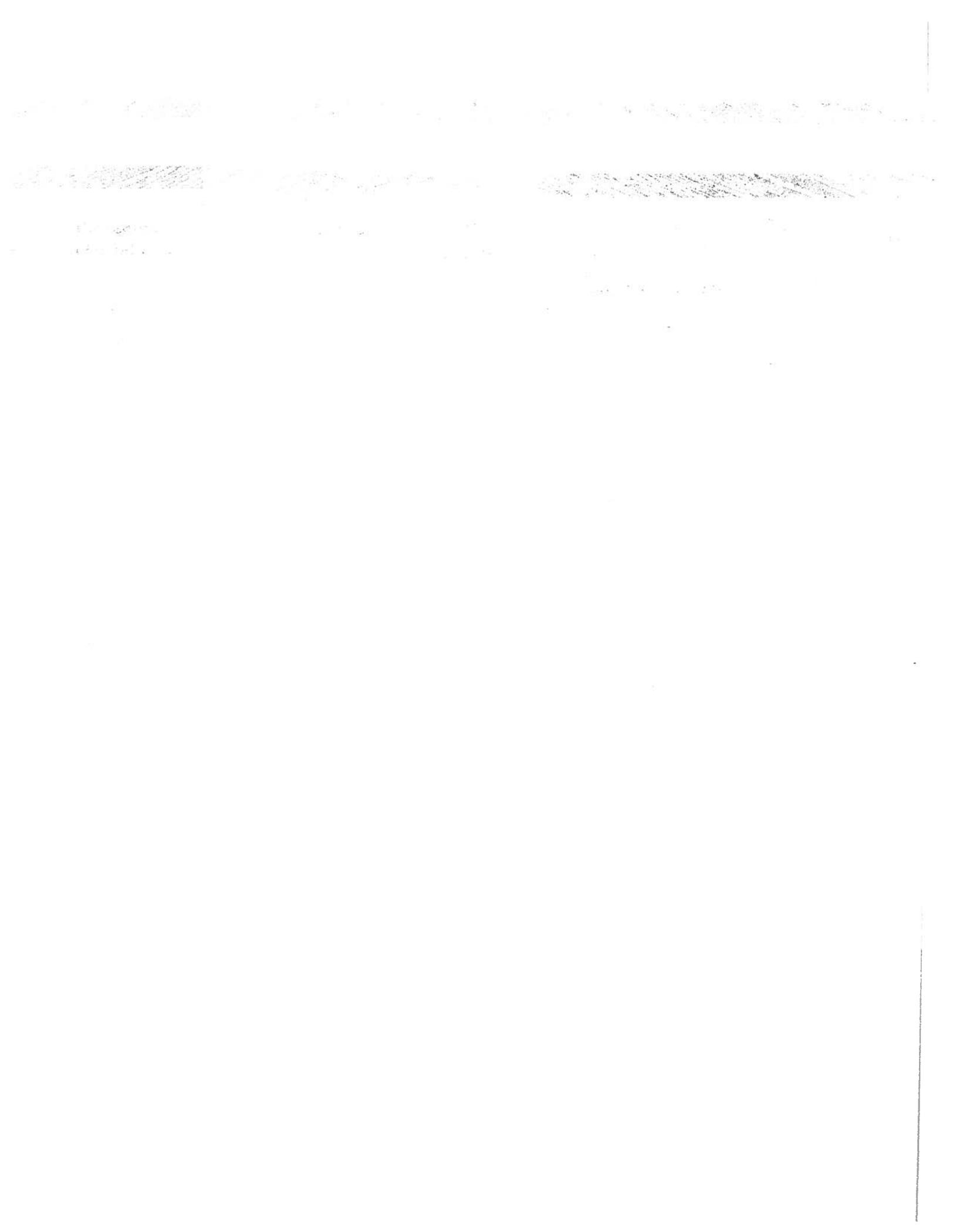
County	Accidents	Injuries	Fatalities	Property Damage
Siskiyou	1	0	1	\$ 0
Solano	5	2	0	9,150
Sonoma	9	6	0	5,750
Stanislaus	22	12	1	42,100
Sutter	2	3	0	15,500
Tehama	1	0	1	0
Trinity	17	15	2	1,500
Tulare	13	7	0	18,750
Tuolumne	19	13	2	54,750
Ventura	15	4	0	155,050
Yolo	2	2	0	0
Yuba	5	2	0	12,800
TOTALS	833	490	52	\$2,536,500

TABLE 2 1995 ACCIDENTS INVOLVING PWC BY COUNTY

County	Accidents	Injuries	Fatalities	Property Damage
Amador	4	3	0	\$ 4,050
Calaveras	3	4	0	12,000
Colusa	1	1	0	12,000
Contra Costa	11	5	0	16,000
El Dorado	1	1	0	0
Fresno	4	1	0	7,900
Humboldt	1	2	0	3,300
Imperial	11	10	0	7,350
Kern	22	16	0	27,800
Kings	1	1	0	12,900
Lake	7	4	0	12,000
Los Angeles	23	10	1	35,950
Madera	8	4	0	18,850
Mendocino	1	1	0	0
Merced	3	3	0	3,200
Monterey	3	2	0	11,950
Napa	8	7	0	32,700
Nevada	3	1	0	1,900
Orange	3	3	0	15,000
Placer	16	9	0	18,000
Plumas	3	1	0	3,850
Riverside	52	28	3	63,550
Sacramento	7	5	0	20,700
San Bernardino	46	35	0	78,800
San Diego	14	13	0	7,200
San Joaquin	13	8	1	34,400
San Luis Obispo	6	3	0	9,800
Santa Clara	25	9	0	36,700
Shasta	13	9	0	7,000
Solano	2	1	0	1,000
Sonoma	4	4	0	3,400
Stanislaus	13	6	0	17,650
Trinity	2	1	1	1,500
Tulare	6	5	0	7,600
Tuolumne	8	5	0	20,750
Ventura	1	1	0	0
Yuba	4	4	0	12,800
TOTALS	353	226	6	\$579,550

TABLE 3 BOATING ACCIDENTS IN CALIFORNIA 1980-1995

Year	Total Number of Accidents	Total Number of Injuries	Total Number of Deaths	Total Amount of Property Damage
1980	657	270	112	\$2,039,800
1981	728	319	87	\$3,655,630
1982	696	323	103	\$2,497,000
1983	648	333	95	\$3,713,100
1984	791	341	93	\$2,491,700
1985	869	403	76	\$4,246,400
1986	741	319	68	\$2,645,500
1987	905	325	54	\$3,381,600
1988	745	333	51	\$2,396,100
1989	632	371	43	\$3,669,800
1990	761	416	50	\$3,131,200
1991	750	421	58	\$2,653,800
1992	689	447	59	\$4,360,100
1993	743	434	67	\$2,052,800
1994	709	386	40	\$1,740,300
1995	833	490	52	\$2,536,500



ALCOHOL AND FATAL BOATING ACCIDENTS

OBSTACLES TO ACCURACY

The issue of accurate reporting and analysis of boating accidents where alcohol is a factor has been a problem for a variety of reasons, as described below:

Relying on Witness Accounts

Often, there is a delay between the occurrence of a fatal accident and the arrival of law enforcement officers at the scene. Reporting the accident may be delayed for 12 hours or more because persons involved want to wait until the next morning to report an accident or they are too distraught to notify authorities. In alcohol-related accidents, this delay can alter circumstances dramatically, due to alcohol burn-off, and the fact that operators are unlikely to report themselves as having been under the influence of alcohol at the time of the accident. Also, in some cases where victims are seriously injured, transporting them to treatment takes priority over blood alcohol testing, and alcohol information is lost.

Delayed Recovery

Delayed recovery is the largest obstacle to collecting reliable data on blood alcohol levels. It is often the case that the bodies of boating accident victims are not recovered or are recovered months later when the effects of putrefaction¹ render blood analysis invalid. Compounding the problem, several law enforcement agencies have reduced their on-the-water boating law enforcement patrols due to funding problems. Insufficient enforcement staffing can reduce the ability of the Department to collect accurate accident information. Authorities indicate that when there is a delay in the recovery of a body of more than two days, serious doubt develops as to the accuracy of any blood alcohol levels. Witness accounts and officers' reports, in addition to blood alcohol levels, can be used to document alcohol impairment in some cases.

RESULTS OF PREVIOUS ALCOHOL STUDIES

In January of 1986, the Department submitted a study to the California Legislature, *Boating Safety Report*, of alcohol-related motorboat accidents that occurred between November 1, 1983 and October 31, 1985. A significant finding of that report was that 59% of all motorboat fatalities were alcohol related, where testing could be conducted. The Department conducted a second two-year alcohol study between January 1, 1993 and December 31, 1994. This study found that 23% of all motorboat fatalities were alcohol related, where testing could be conducted. This finding was a substantial reduction from the results of the 1986 report. Several factors may have influenced this reduction. Since the 1986 report, new laws regarding boating under the influence have been passed. (Please refer to the following section for specific law changes.) Public awareness concerning alcohol use has increased as well. Furthermore, beginning in 1987, the Department began to provide specialized alcohol enforcement training for on-the-water peace officers. The Department also stresses the importance of avoiding alcohol while boating in a variety of public educational programs, posters, pamphlets and public service announcements. The new findings regarding alcohol and boating are encouraging. The Department will continue to monitor alcohol involvement in boating accidents on a yearly basis so that Department activities can be directed to promote boating safety, educational, and law enforcement endeavors.

STATE LAWS CONCERNING BOATING UNDER THE INFLUENCE OF ALCOHOL

In 1987, state law made it illegal to have a blood alcohol level of .10% or above while operating a vessel. In 1991, this level was lowered to .08%. Furthermore, a "boating under the influence" conviction now appears on Department of Motor Vehicles records and can be used to suspend or revoke a vehicular driver's license.

¹ Putrefaction is the decomposition of organic matter. Due to bacterial action and oxidation, a body may produce its own alcohol during this process, which then results in a false reading for alcohol use.

PARAMETERS FOR 1995 ALCOHOL DATA

A blood alcohol level of .035% was used to determine whether or not a person was "under the influence." The National Transportation Safety Board has determined that when the concentration of alcohol in a person's bloodstream reaches this level, noticeable changes in competence occur. The *California Boating Accident Report for 1995* analyzes only fatal boating accidents for alcohol-relatedness. Of the 52 fatalities, only 39 could be used in our examination of alcohol-relatedness due to the difficulties in determining alcohol use/nonuse, noted earlier. Each year, Department staff work closely with coroners' offices in order to ensure the most fair and accurate analysis of cases where there were delayed recoveries and/or decomposition of blood samples.

REPRESENTATIVE ACCIDENTS

- A 50-year-old male took his two sons out for a ride on their PWC. The water was rough and the PWC capsized during a turn, throwing everyone into the water. The victim struck his head on the PWC, probably knocking himself unconscious, which contributed to his drowning. The victim was pulled out of the water shortly after the accident, but it was too late. His blood alcohol level was .14%. He was not wearing a life jacket. His two sons were wearing life jackets and they suffered no ill effects from the accident.
- Two vessels were traveling toward each other on a narrow waterway. One vessel failed to keep to the starboard side and cut in front of the second vessel, causing a collision. The operator of the second vessel had attempted to avoid the collision but was unable to do so. A passenger in the first vessel, a 30-year-old male, suffered a fatal head injury. The operator of the first vessel, a 37-year-old male, had a blood alcohol level of .21%.
- Three people took a small row boat out on a lake. When they were some distance from shore, they noticed that water was entering the vessel through leaks in the hull. One person swam to retrieve a bottle to bail out the water. As he tried to re-enter the vessel, his movement caused the vessel to capsize, throwing everyone into the water. The vessel was not equipped with life jackets. The victim, a 34-year-old male, drowned after trying to swim to shore. The other two stayed with the vessel and were rescued. The victim's blood alcohol level was .22%.
- A 24-year-old male fell overboard after the vessel he was riding in accelerated from a stop. He was sitting in one of the rear seats and may have been standing up when he fell overboard. His body was not recovered, but all witnesses state that he was intoxicated at the time of the accident. He had been wearing a life jacket, but it was not zipped up. The life jacket was found floating in the water.
- A 20-year-old male was operating a PWC with a passenger behind him. Due to inexperience, he lost control of the vessel causing it to capsize, throwing both occupants into the water. The operator was not a good swimmer, had been drinking, and was not wearing a life jacket. The combination of these factors resulted in his drowning. His blood alcohol level was .04%. His passenger was wearing a life jacket and was unharmed.

FINDINGS

Table 4 shows the categorical breakdown of the 39 fatalities used in the study for 1995.

The analysis of the 1995 alcohol-related data shows that 34% of all motorboat fatalities were alcohol related where testing could be conducted. This figure is higher than the percentage in 1994 (11%), and is very close to the 1993 figure (33%). Although this figure has risen since 1994, it still represents a substantial reduction from the 59% figure in the Department's 1986 report.

TABLE 4 ALCOHOL-RELATED FATALITIES 1995

Boat Type	Fatalities			
	Total	Total Sober	Total Under Influence	Percentage Under Influence
All Boats	39	27	12	31%
Motorboats Only	29	19	10	34%

Accident Specifics

In 1995, there were 11 alcohol-related accidents, involving 12 victims and 13 vessels. Six vessels were open motorboats, 3 were PWC, 2 were houseboats, 1 was a rowboat, and 1 was a canoe. Ages of those under the influence of alcohol ranged from 15-50 years (only one of whom was under 21 years of age.)

Date/Time of Occurrence

Eleven of the 12 fatalities occurred between the hours of 2 p.m. and 7 p.m. The other fatality occurred around 11 p.m. Sixty-six percent of the fatalities occurred during the summer months and 75% occurred during weekends throughout the year.

Location

Nine of the 12 fatalities occurred on inland lakes, 2 occurred in the Sacramento-San Joaquin Delta and 1 on another river. Nine fatalities occurred in Northern California and 3 in Southern California.

Type of Accident

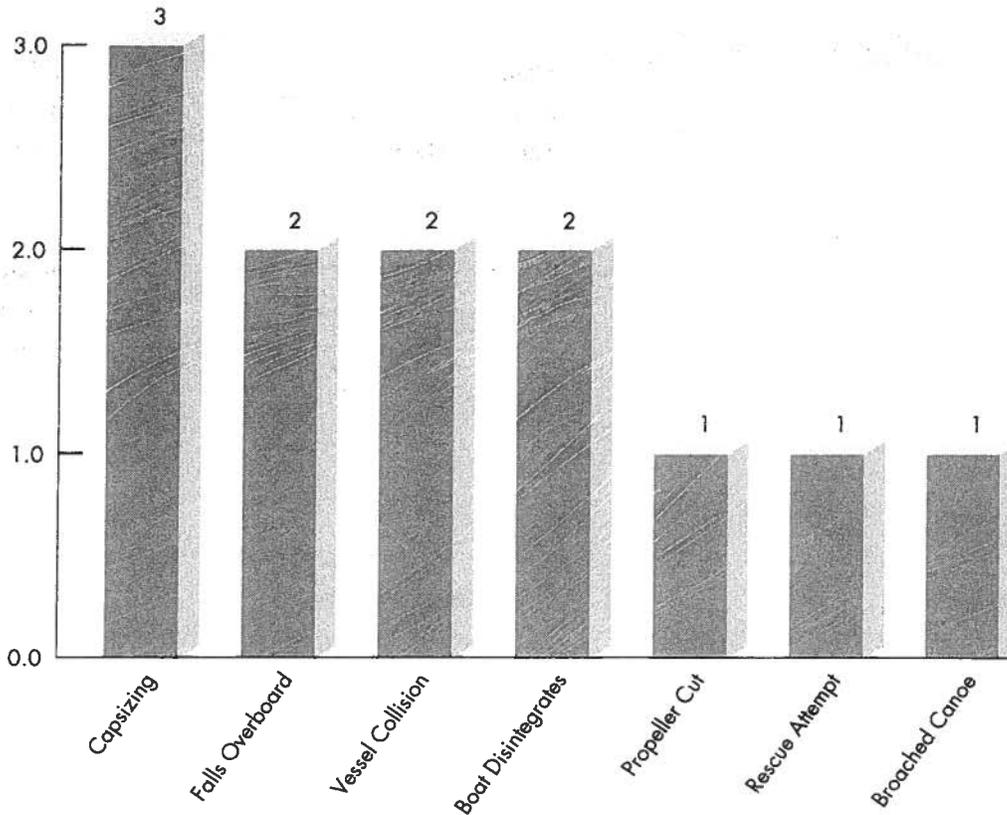
Only 2 alcohol-related fatalities resulted from collisions; single-vessel accidents accounted for 83% of the alcohol-related fatalities. Table 5 shows a breakdown of the types of accidents.

Cause of Death

Drowning was the cause of death in 7 of the 12 fatalities. Of the seven victims who drowned, six were not wearing life jackets and one was not wearing his properly, causing it to slip off as soon as he entered the water. In some cases, life jackets were available, but the victims had chosen not to wear them. The other 5 victims died of blunt trauma injuries.

An intoxicated operator contributed to the death of passengers in 3 of the 12 fatalities. However, in 1 of those 3 fatalities, a passenger was intoxicated as well and contributed to his own death. An examination of the entire group of alcohol-related fatalities reveals that 8 of the 12 victims were intoxicated passengers, six of whom were completely responsible for, or contributed to, their deaths because of poor judgment due to alcohol consumption. Examples of poor judgment ranged from a victim attempting to swim to shore instead of staying with the vessel, a non-swimmer jumping overboard to save another person, a victim swimming too close to a propeller, and others who fell overboard and were simply not alert enough to stay afloat. These findings are similar to those found in the *California Boating Accident Report for 1993* and further illustrate that a

TABLE 5 TYPE OF ACCIDENT—ALCOHOL RELATED FATALITIES Total Fatalities = 12



sober operator does not always ensure passenger safety. Intoxicated passengers in or around vessels are exposed to dangers that would not affect the safety of intoxicated passengers in a vehicle. The “designated operator” concept, which is popular in some boating literature, has its roots in automobile safety where the possibility of falling overboard and drowning or swimming too close to a propeller is not a factor. Therefore, based on the 1993 and 1995 accident data, the Department recommends that boat operators and passengers do not drink alcoholic beverages while boating.

RECOMMENDATIONS:

Although the level of alcohol use in fatal boating accidents has dropped since the mid-80’s, the Department recommends that law enforcement and educational efforts continue in order to reduce boating fatalities caused by alcohol consumption.

The Department will continue to provide education in the forms of public safety announcements and safety pamphlets. The Department also recommends that no person aboard a vessel drink alcohol.

DRUG-RELATED FATALITIES

There were 3 fatalities involving drugs reported in 1995; all 3 cases involved the use of marijuana. Unlike alcohol testing, drug testing has no established thresholds at which a person is considered to be “under the influence.” These drugs are illegal regardless of the amount of the drug present. However, whether or not the drug affected a person’s competence is not clear in many cases, especially since, unlike alcohol, some drugs stay in the blood stream for extended periods. These factors make the evaluation of drug-related accidents difficult and the analysis of these accidents is beyond the scope of this report.

ACCIDENTS INVOLVING PERSONAL WATERCRAFT

BACKGROUND

A personal watercraft (PWC) is a small vessel that uses an internal combustion engine powering a jet pump or a propeller. It is designed to carry from one to three persons, and to be operated by a person sitting, standing, or kneeling on the vessel rather than the conventional manner of sitting or standing inside the vessel.

The use of PWC is subject to all state, local and federal regulations governing the operation of powerboats of similar size.

California law states that it is an infraction for a person under 12 years of age to operate a motorboat over 10 HP designed to carry only one person. In addition, any person who permits a person under the age of 12 to do so is guilty of an infraction. A person under 12 may operate a motorboat designed to carry at least two persons if accompanied by a person 18 years of age or older.

As of December 31, 1995, there were approximately 113,639 PWC registered in California.

REPRESENTATIVE ACCIDENTS

- An open motorboat was towing an inner tube. A PWC was following the boat, jumping its wake. The person on the tube fell off and as the boat swung around to pick him up, the PWC became tangled in the tow rope. The end of the tow rope attached to the boat came loose and the rope with the attached metal D-ring snapped back and hit the fallen tuber, causing a severe injury to his foot.
- Two PWC operators were absorbed in watching a friend ride a third PWC and, not paying attention to their surroundings, struck each other. One sustained a dislocated shoulder and the other sustained a back injury.
- A person had just finished water-skiing behind a three-person PWC and was sitting in the third

seat bringing in the tow rope by winding it in loops around her forearm. Since both her hands were engaged in this activity, she was not holding on. The vessel operator took off without warning, causing the victim to fall overboard. She was then dragged behind the vessel by the rope, screaming until the operator stopped. The victim sustained a broken arm and numerous lacerations.

- The operator of an open motorboat was operating with his bow in the air, blocking his view and causing him to overtake and run over a PWC. The PWC operator's ear was shorn off and was re-attached at the hospital. He also suffered internal injuries. He narrowly missed being struck by the boat's propeller.
- A PWC operator was attempting to spray a person floating on an air mattress, but was not able to turn in time and ran over the person. The victim sustained broken ribs and internal injuries.
- While wake jumping, a PWC operator flew over the handlebars and hit his head on the bow eye-ring causing a skull fracture and brain bleeding.

FINDINGS

During the 1995 boating season, 353 accidents involving PWC were reported to the Department which resulted in 226 injuries, 6 fatalities, and \$579,550 worth of property damage.

As in previous years, the number of accidents involving PWC is higher than expected, considering their registered numbers. Department of Motor Vehicles information indicates that PWC account for 13.2% of all vessels registered in California. Department of Boating and Waterways statistics reveal that PWC were involved in 42% of all accidents, 46% of all injuries, 11.5% of all fatalities, and 23% of all property damage.

ACCIDENTS INVOLVING YOUTHS

Note: In this report, "youths" refers to persons under 18 years of age.

ACCIDENTS INVOLVING YOUTH OPERATORS

BACKGROUND

California law requires a person to be at least 12 years of age to operate a motorboat with more than 10 HP. If a person is under 12, a person 18 years of age or older must be on board the vessel. This law went into effect in 1987.

REPRESENTATIVE ACCIDENTS

- A 15-year-old female PWC operator was spinning donuts at full throttle, purposely trying to throw her passenger from the vessel. The passenger fell overboard and the vessel went over the top of her, catching her hair in the jet pump and holding her under water. She was hospitalized for the effects of near-drowning.
- A 13-year-old male was attempting to jump a wake, did not see another PWC and landed on top of the second vessel. The operator of the second vessel, a 9-year-old male, sustained a back injury. The 9-year-old's parents were also cited for allowing an under-age operator to operate the craft.

- A 13-year-old female PWC operator did not stay clear of a second unoccupied PWC and struck the operator of the second craft, who was in the water trying to re-board her vessel. The second operator sustained a head injury.
- A 15-year-old male PWC operator was traveling at an excessive speed (over 40 MPH), met a second vessel head-on and turned to port instead of starboard, causing the vessels to collide. He sustained a broken jaw and numerous lacerations. The operator of the second vessel sustained leg and neck injuries.
- A 15-year-old female was operating an open motorboat at an unsafe speed for the foggy night-time conditions and struck a gangplank attached to a dock. She sustained severe head injuries and underwent brain surgery. Her passenger sustained a less severe head injury and numerous lacerations.

FINDINGS

Accident Specifics

The 1995 accident data regarding youth operators shows that the number of fatal accidents they were involved in has decreased, but the total number of youth operators, the number of accidents involving them, and the number of injuries resulting from these accidents have

TABLE 8

**YOUTH OPERATORS AND ACCIDENTS, INJURIES, AND FATALITIES INVOLVING THEM
1993-1995**

YEAR	OPERATORS	ACCIDENTS	INJURIES	FATALITIES
1993	77	67	51	7
1994	99	86	63	3
1995	135	110	80	1

TABLE 9**COLLISIONS BETWEEN YOUTH AND ADULT OPERATORS
FAULT ASSESSMENT**

Operator	Accidents In Which This Operator Was At Fault
Youth operator only	28
Adult operator only	10
Both operators at fault	16
Operator fault unknown	4
TOTAL	58

increased. In 1995, youth operators were involved in 13% of all boating accidents, 16% of injuries and 2% of the fatalities. Of the 135 youth operators, 80 were under the age of 16.

Table 8 summarizes the findings regarding accidents involving youth operators since 1993.

Other Significant Findings

- Ninety-one percent of all youth operators ages 2-17, were involved in accidents while riding PWC. (See Table 10 for details.)
- Seventy-five percent of all accidents involving youth operators were collisions with other vessels.
- Operator inexperience was the leading cause of accidents involving youth operators, followed by inattention and excessive speed.

Two-Party Accidents and Operator Fault

In 1995, youth operators were involved in 83 collisions with other vessels. Twenty-five involved youth operators in collisions with other youth operators and 58 involved youth operators in collisions with adult operators. The 58 accidents involving youth operators versus adult operators were analyzed to determine which operator was at fault. The results are found in Table 9.

The findings regarding operator fault show that in

collisions between youth operators and adult operators, youth operators were nearly 3 times as likely as adult operators to be exclusively at fault. Youth operators were solely at fault 48% of the time, compared to 17% for adult operators.

Table 10 contains supplementary information regarding youth operators.

**YOUTHS AND WATER-SKIING/TUBING
ACCIDENTS****BACKGROUND**

For the purposes of this report, water-skiing activities include water-skiing as well as activities involving the towing of knee boards, wake boards, and inner tubes.

REPRESENTATIVE ACCIDENTS

- A vessel operator was pulling a tube and did not allow enough clearance for the tube around a houseboat. The person on the tube, a 9-year-old male, was dragged under the swim step of the houseboat and sustained lacerations to his eye and ankles, requiring stitches.
- A vessel operator was pulling a tube in a narrow cove and came too close to the shore. The tube picked up speed during a turn and the victim was ejected from the tube in a sling-shot manner. The victim, a 15-year-old male, cartwheeled over the water and struck the shore, fracturing his skull.

TABLE 10**YOUTH OPERATORS AND INJURIES AND FATALITIES INVOLVING THEM BY AGE**

AGE	# OF OPERATORS	INJURIES	FATALITIES
2*	2	1	0
8	1	1	0
9	4	6	0
10	5	4	0
11	3	2	0
12	12	6	0
13	14	14	0
14	19	12	0
15	20	13	1
16	33	17	0
17	22	20	0
TOTALS	135	96**	1

FINDINGS

In 1995, 31% of all injuries experienced by people under 18 occurred during water-skiing activities.

Victims in the 11-20 age group made up the largest group of people injured in water-skiing accidents. Most of the victims in the 11-20 age group were under 18 years old. Table 11 shows the age distribution of people injured in water-skiing accidents.

There is no single cause of the accidents involving this age group. Causes were evenly distributed among skier behavior, operator fault, and water conditions. This sport attracts younger people, which may account for the higher injury rate.

FATALITIES INVOLVING YOUTHS**BACKGROUND**

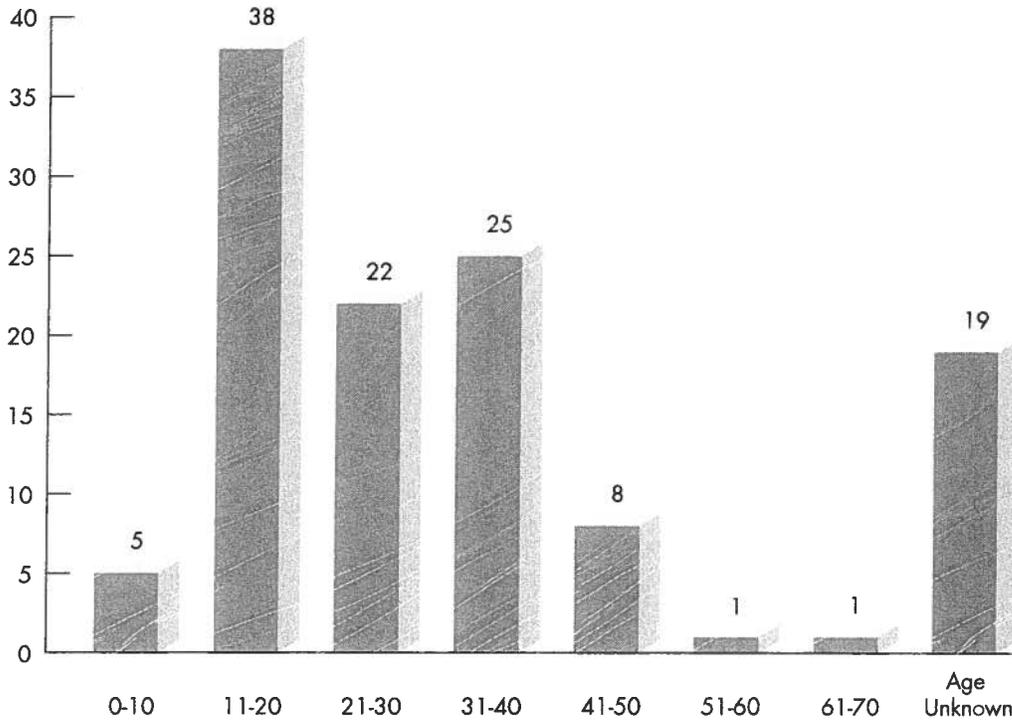
On January 1, 1994, a state law went into effect regarding children and the use of life jackets. Section 658.3 of the

*Both accidents involved 2-year-olds aboard PWC. The first accident involved a child whose parent was boarding the PWC behind him. Before the parent could board, the child grabbed the throttle and sped away without the parent and grounded the vessel. He suffered only minor injuries. The second accident involved a child who was riding in front of his parent. The child grabbed the throttle and the sudden burst of speed caused the parent to fall overboard. The child continued alone for some time before grounding the vessel and sustaining a head injury. Similar accidents occurred in 1993 and 1994 as well.

**Sixteen injuries were double counted because the operators involved in these accidents were minors from different age groups. The total number of injuries involving all minor operators was 80.

TABLE 11 WATER-SKIING INJURIES—BY AGE

Total Injuries = 119



Harbors and Navigation Code states the following:

No person shall operate a motorboat, sailboat, or vessel that is 26 feet or less in length unless every person who is six years of age or less is wearing a type I, II, or III Coast Guard approved personal flotation device while that motorboat, sailboat, or vessel is underway.¹

REPRESENTATIVE ACCIDENTS

■ A 5-year-old girl had been in the cabin of a vessel and had become seasick. She went to the back of the vessel and knelt on the seat and put her head on the transom to get fresh air. The operator accelerated, causing the stern to lower. When the operator turned back around, the victim had

disappeared. It is assumed that she fell overboard due to both her position in the stern and the angle of the vessel. The victim was not wearing a life jacket and there were no life jackets aboard.

■ A 4-year-old girl drowned when her father, the operator of the rented vessel she was riding in, overloaded the vessel, causing it to capsize. The vessel had room for 4 people, but there were 9 aboard. The operator was ferrying people across the lake and was trying to save time by making a single trip with numerous people aboard. The vessel had 4 life jackets and a throwable PFD, but not enough for everyone on board. When the vessel capsized, the victim was wearing a Type IV cushion on her back. When she went

¹ This law does not apply to a person operating a sailboat on which a person who is six years of age or less is restrained by a harness tethered to the vessel, or to a person operating a vessel on which a person who is six years of age or less is in an enclosed cabin. Also, this law does not apply to an operator reacting to an emergency rescue situation.

into the water, the PFD came off and she drowned. This accident could easily have been prevented if she had been wearing a PFD of the proper size and type. This point was illustrated by the fact that her 5-year-old brother, who was wearing a PFD, was discovered alive beneath the capsized vessel.

FINDINGS

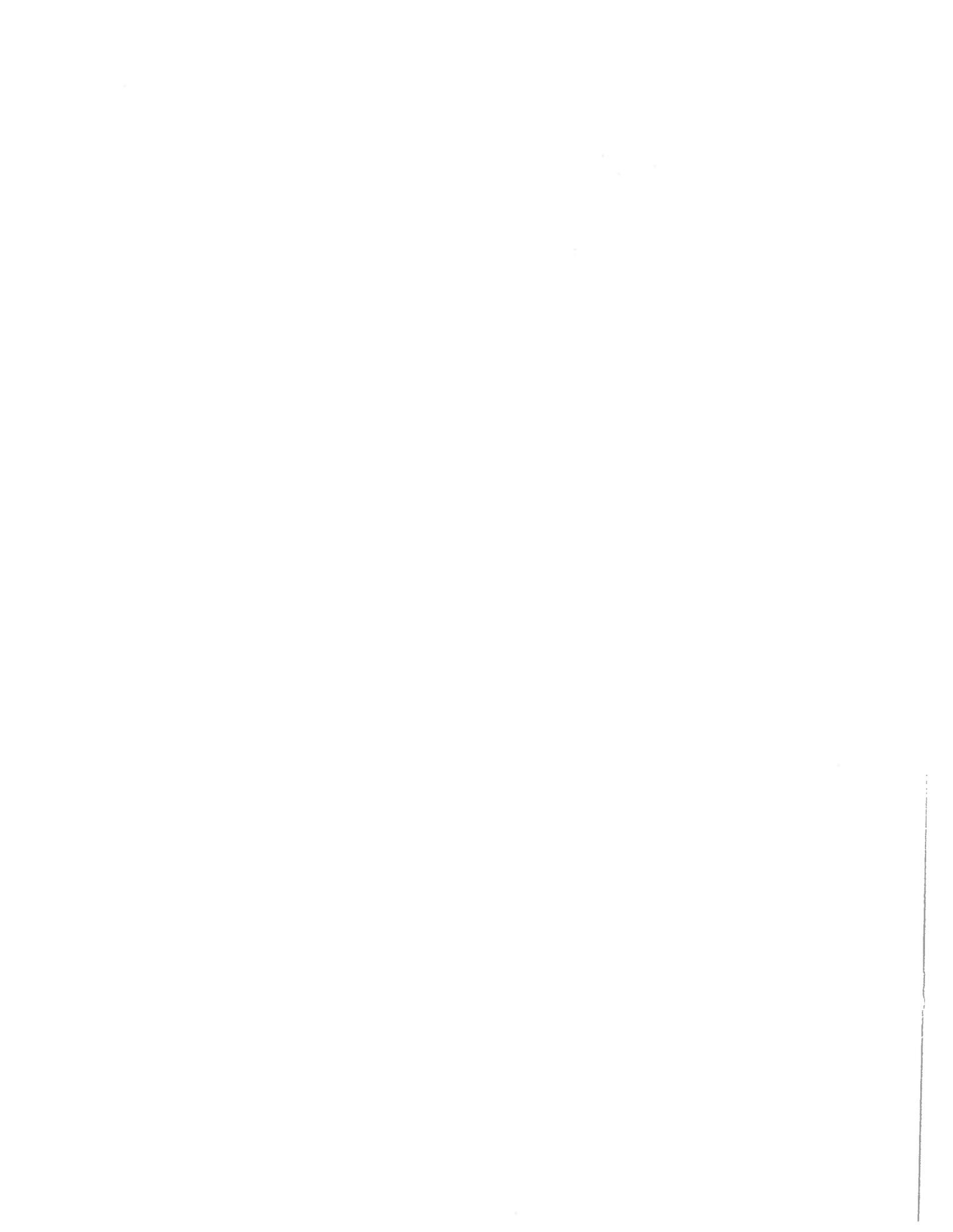
In 1995, 7 expired victims of boating accidents were under 18 years of age. Of the 6 victims who drowned, 4 were not wearing life jackets. When carrying children aboard vessels, operators should be aware that it is not enough to simply carry a PFD for each person aboard. There must be a life jacket of the proper size aboard for every person. Most children will slip right out of adult-size life jackets, once in the water. Many operators are cited each year for failing to carry child-size PFDs on board.

RECOMMENDATIONS:

Based on the findings from the 1994 accident report, the Department's youth education programs were updated to emphasize PWC operation and the rules of the road. In 1995, accidents involving youth operators increased, and youth operators were more likely to be at fault in collisions with adult operators. These findings show that continued emphasis needs to be placed on educating youth operators. Furthermore, the youth education programs will also include information regarding PFD use and water-skiing safety tips.

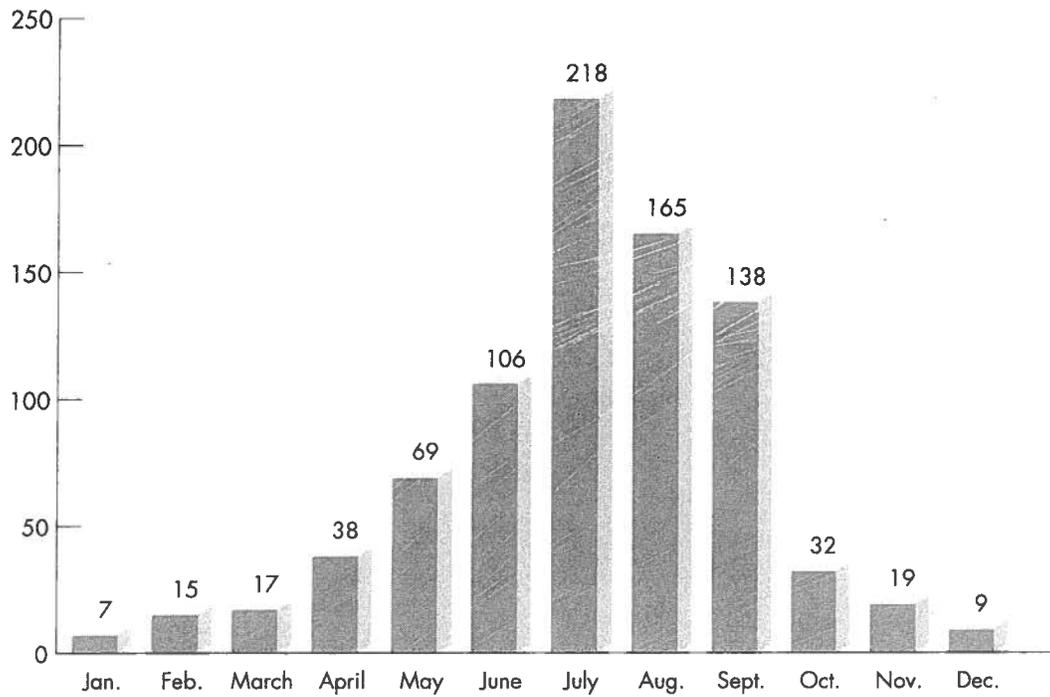


ACCIDENT DATA CHARTS



ACCIDENTS BY MONTH

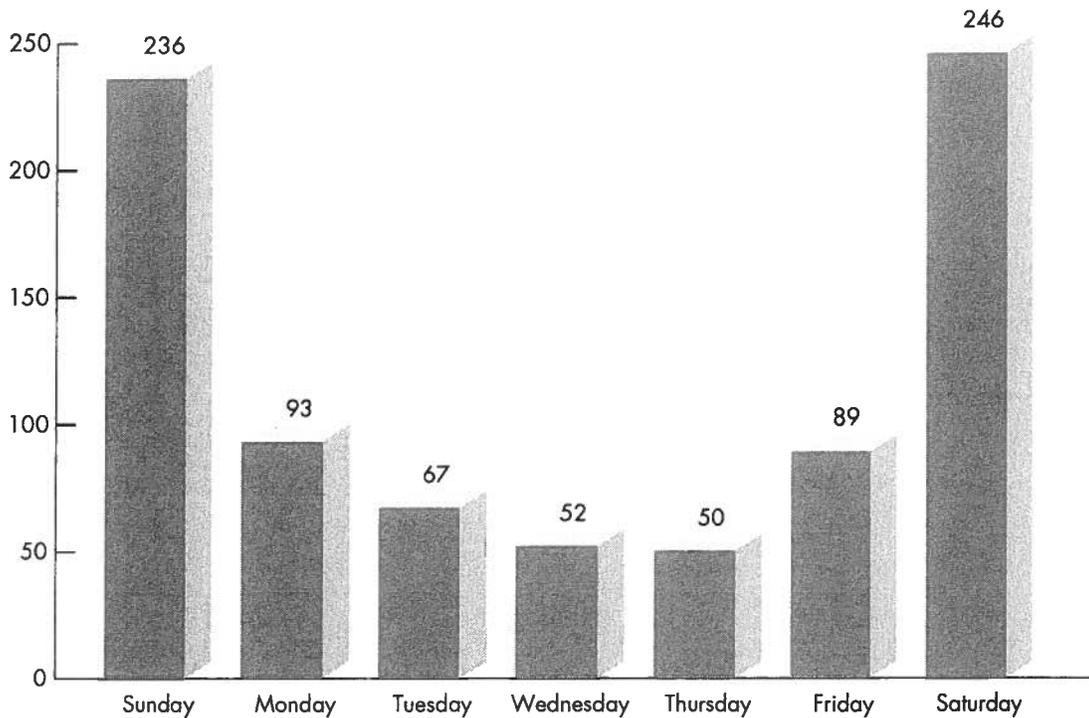
Total Accidents = 833



The findings on this chart reveal that most boating accidents occurred from May through September, with the largest number occurring in July.

ACCIDENTS BY DAY OF WEEK

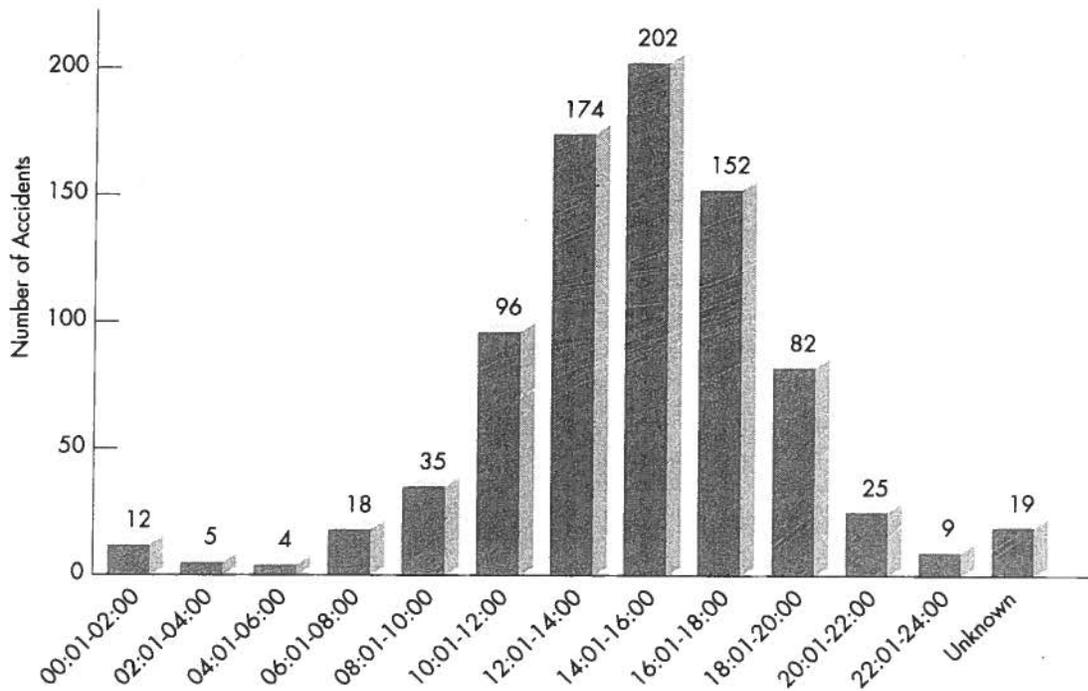
Total Accidents = 833



This chart reveals that most accidents happen on the weekends.

ACCIDENTS BY TIME OF DAY

Total Accidents = 833

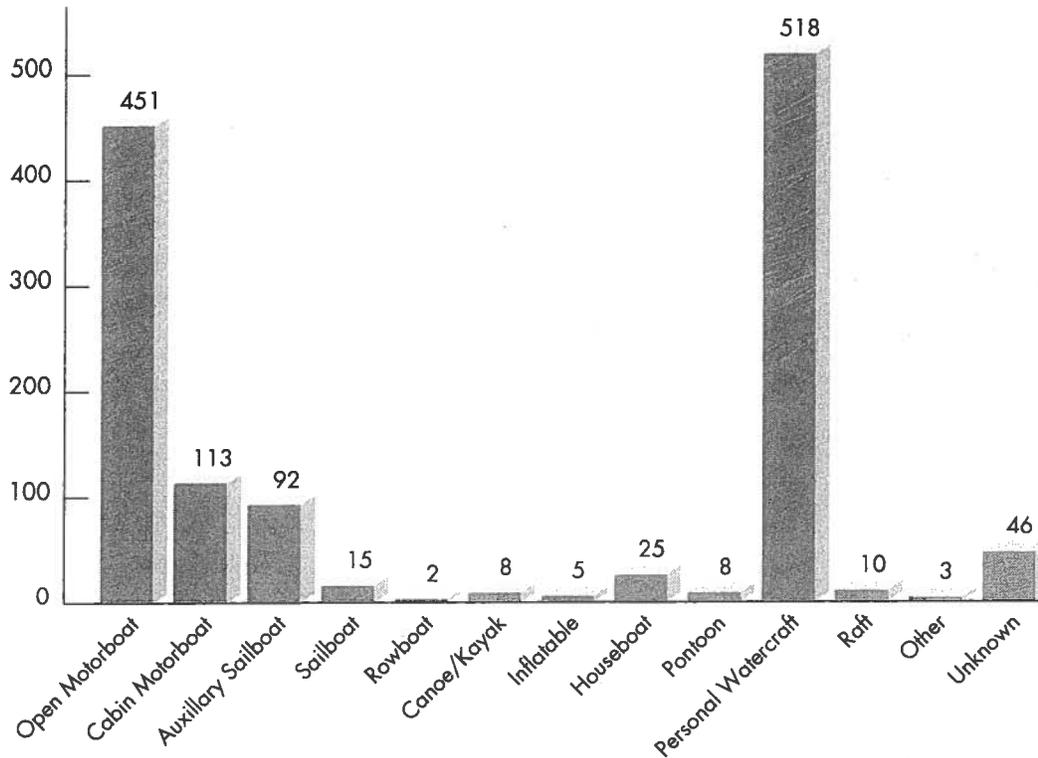


Time on this chart is represented by a 24-hour clock. Time progresses normally through 12 noon. After noon, add one hundred for each additional hour. One p.m. becomes 1300 hours, etc.

This chart reveals that from 14:01 to 16:00 was the most dangerous time to go boating. This is the time when the waterways would be expected to be the most congested, resulting in an increased chance of collision.

ACCIDENTS BY TYPE OF VESSEL

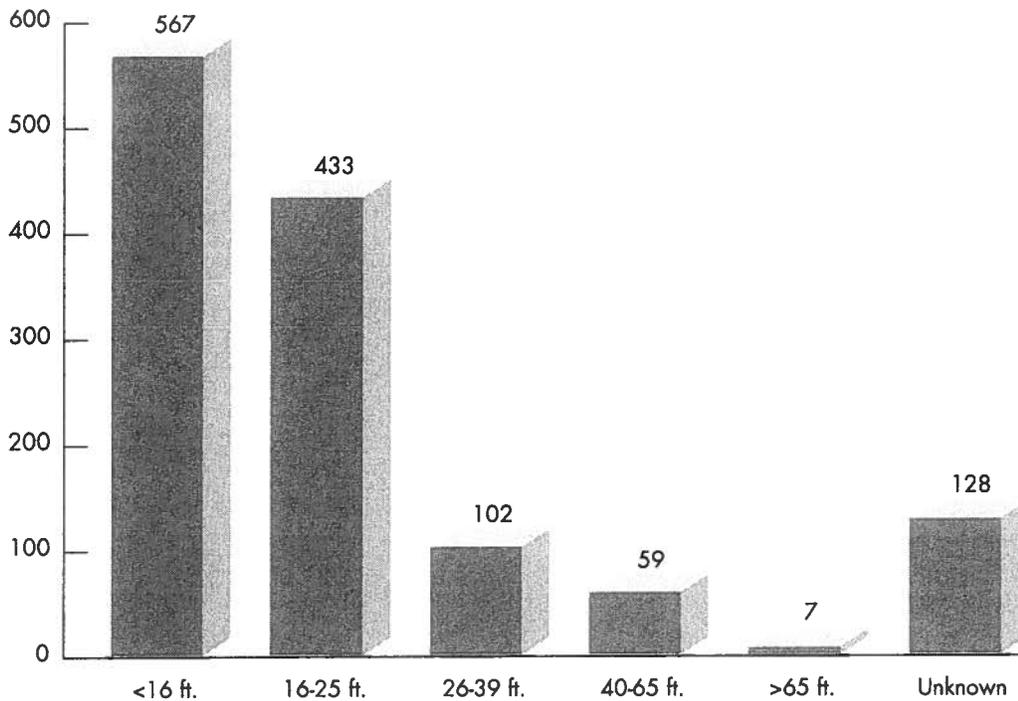
Total Vessels = 1296



Personal watercraft and open motorboats made up the majority of vessels involved in accidents. Personal watercraft represented 40% of vessels and open motorboats represented 35%. For the first time, the number of personal watercraft surpassed the number of open motorboats involved in accidents.

ACCIDENTS BY LENGTH OF VESSEL

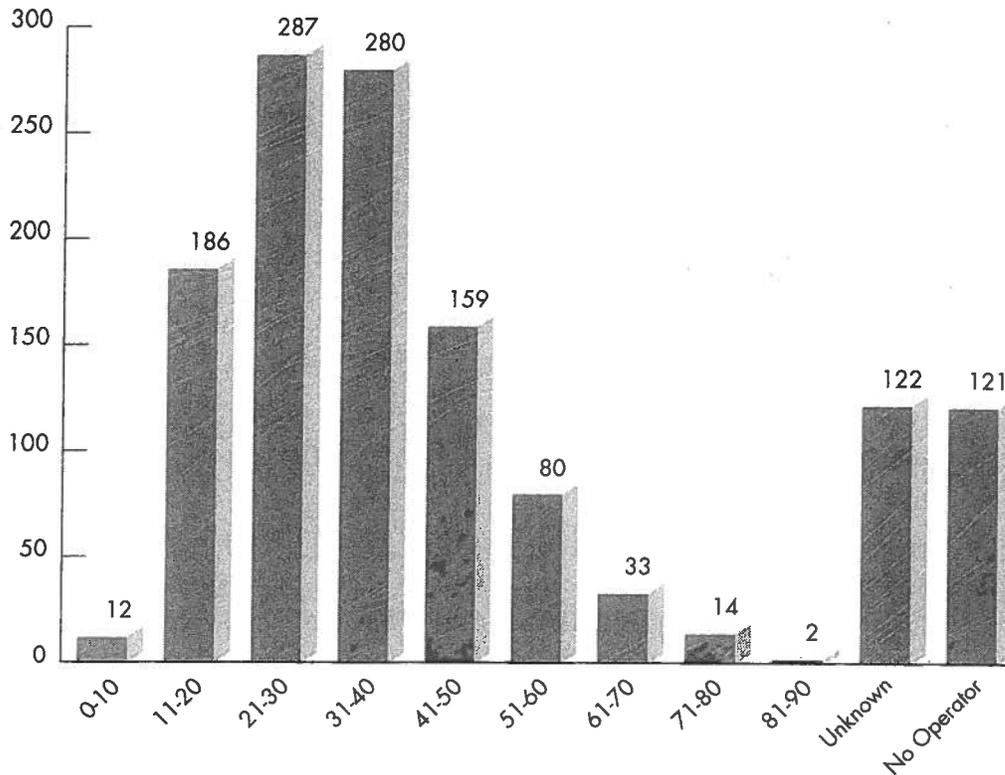
Total Vessels = 1296



Vessels less than 16 feet were involved in more accidents than any other category followed by vessels 16-25 feet.

ACCIDENTS BY AGE OF OPERATOR

Total Operators = 1175 Total Vessels = 1296



Operators from the 21-30 age group were involved in more accidents than any other age group followed by the 31-40 age group.

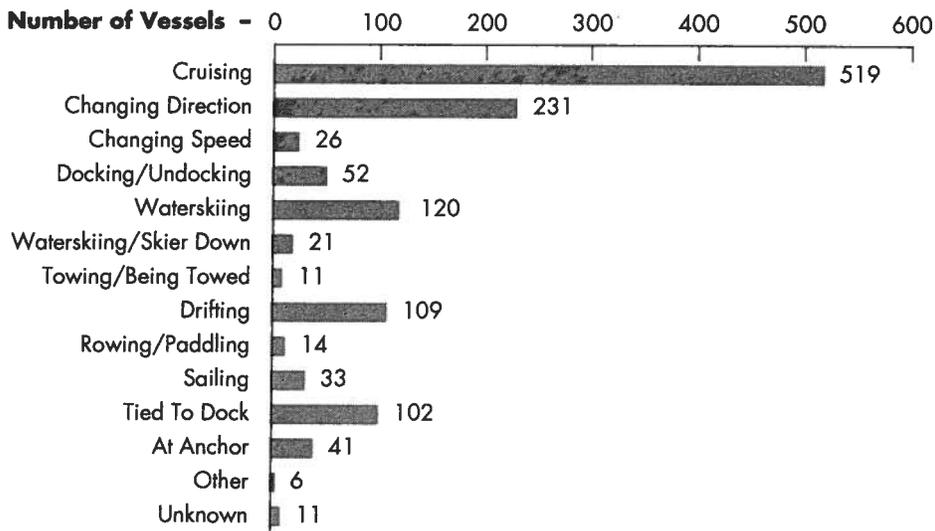
"No Operator" refers to accidents involving vessels where there was no operator present at the time of the accident. Most of these vessels were in vessel slips, tied to docks, or moored, and were struck by other vessels.

Some accident reports submitted to the Department do not include operator age information, as indicated by the "Age Unknown" category.

A detailed breakdown for operators under 18 years of age is available on page 21 of this report.

OPERATION AT TIME OF ACCIDENT

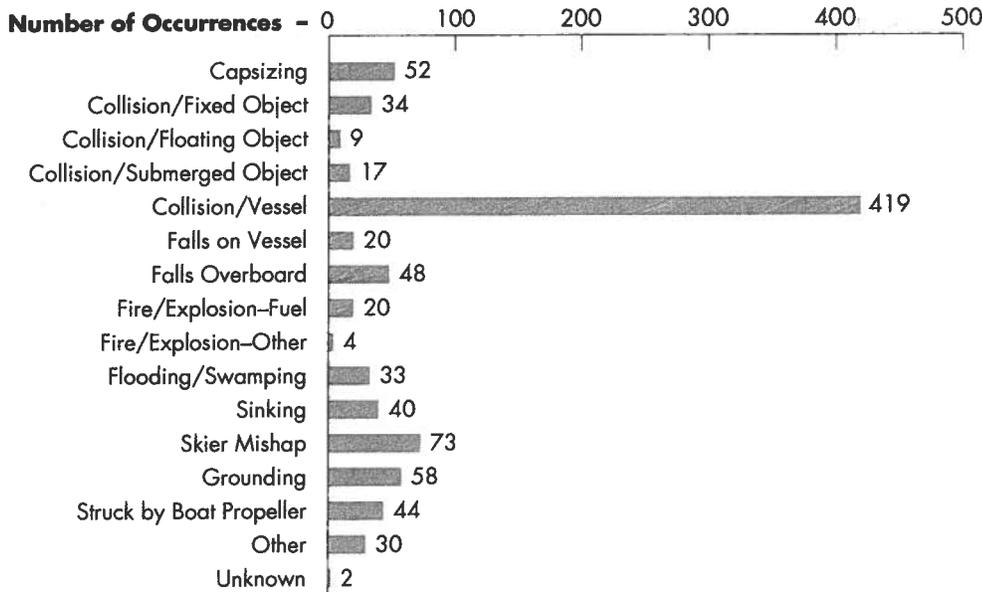
Total Vessels = 1296



Cruising was the most common type of vessel operation preceding accidents, followed by changing direction.

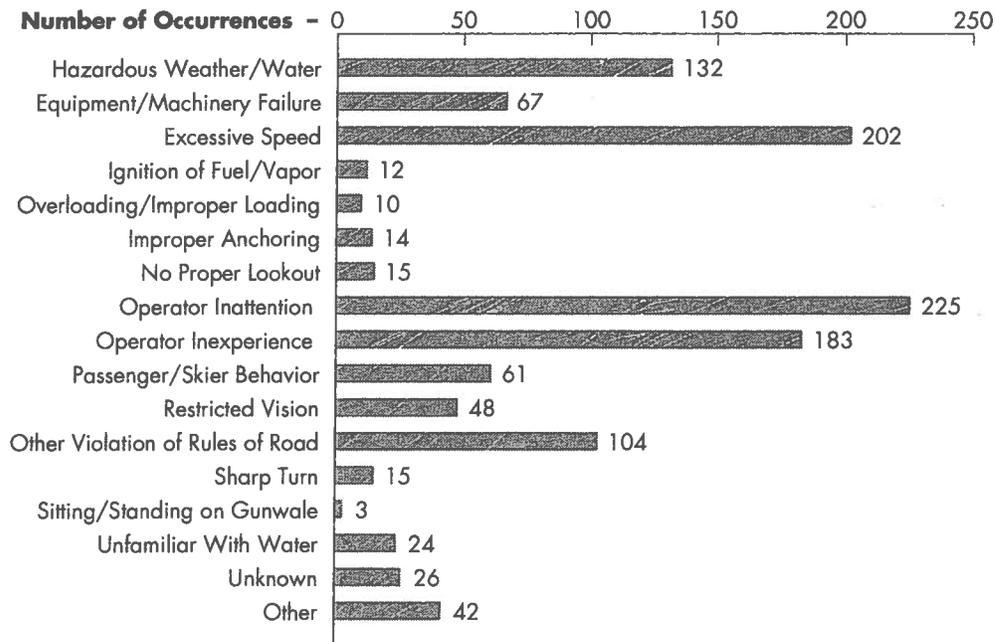
TYPE OF ACCIDENT

Total Types = 903



The leading type of accidents involved vessels colliding with other vessels. Fifty percent of all accidents were the result of collisions. Some accidents were represented by more than one accident type which accounts for the accident types exceeding the total number of accidents. Examples of accidents where this occurred were situations that involved an operator who fell overboard and then was struck by another vessel. That accident was represented in both the "Falls Overboard" category and the "Struck by Boat or Propeller" category since both of those occurrences were significant components of the accident.

CAUSE OF ACCIDENT Total Causes = 1183

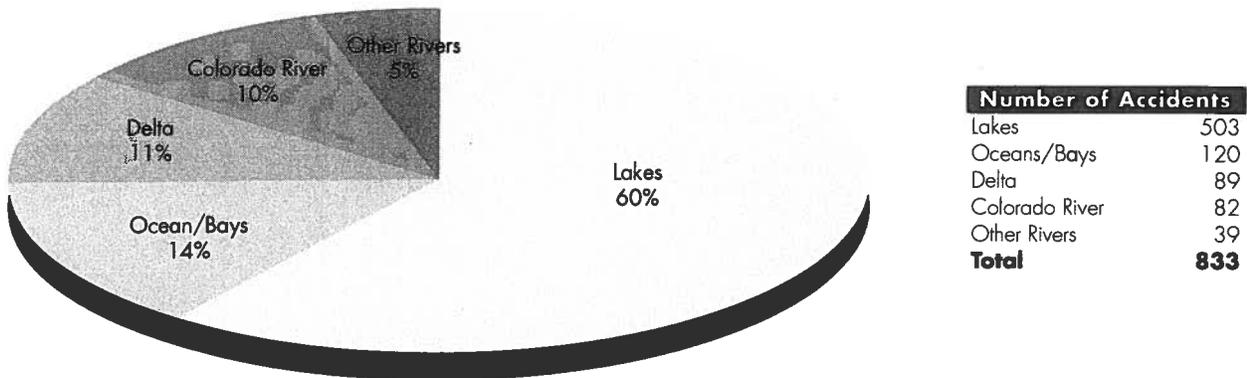


Operator inattention was the most common cause of accidents followed by excessive speed. In many cases, there was more than one cause for a single accident.

For an explanation of the difference between the causes "Improper Lookout" and "Operator Inattention," please refer to the glossary in the back of this report.

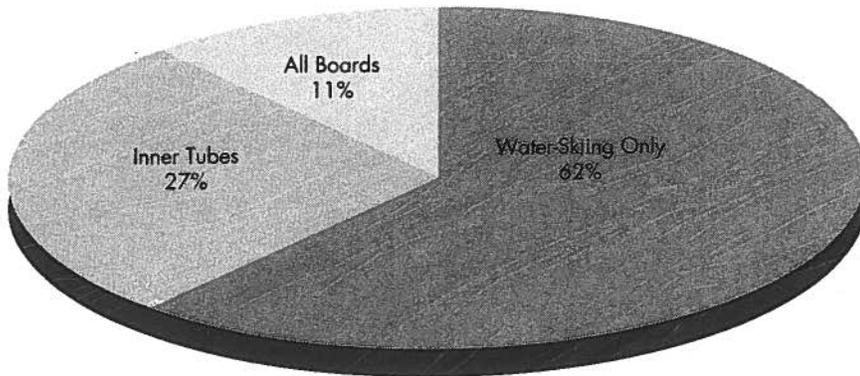
The category "Other" includes an assortment of causes that did not fit into any of the listed categories.

ACCIDENT LOCATIONS



More boating accidents occurred on lakes than on any other type of water body.

WATER-SKIING ACCIDENTS

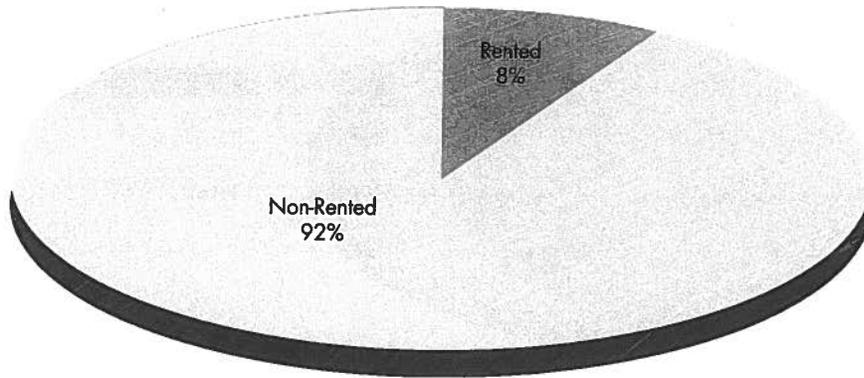


Number of Accidents

Waterskiing Only	84
Inner Tubes	37
All Boards	15
Total	136

Accidents involving traditional water-skiing accounted for the largest number of water-skiing type accidents followed by accidents involving inner tubes.

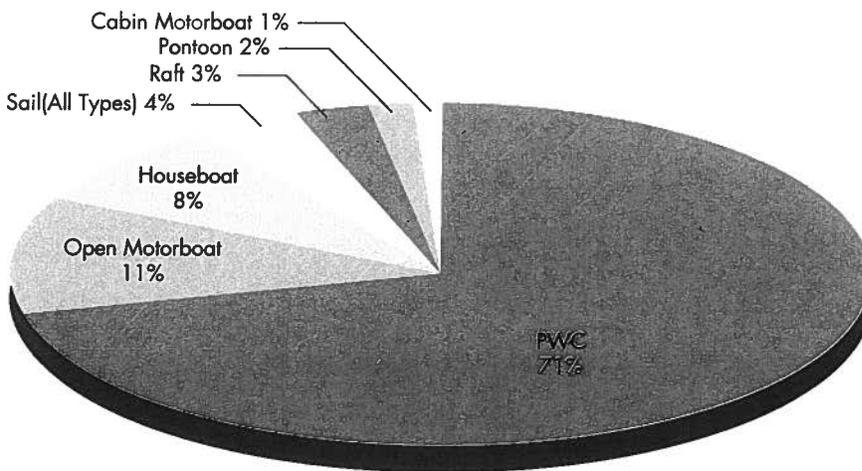
RENTED VESSELS—CHART ONE



Number of Vessels	
Rented	108
Non-Rented	1188
Total	1296

This chart reveals that only 8% of vessels involved in accidents were rented.

RENTED VESSELS—CHART TWO

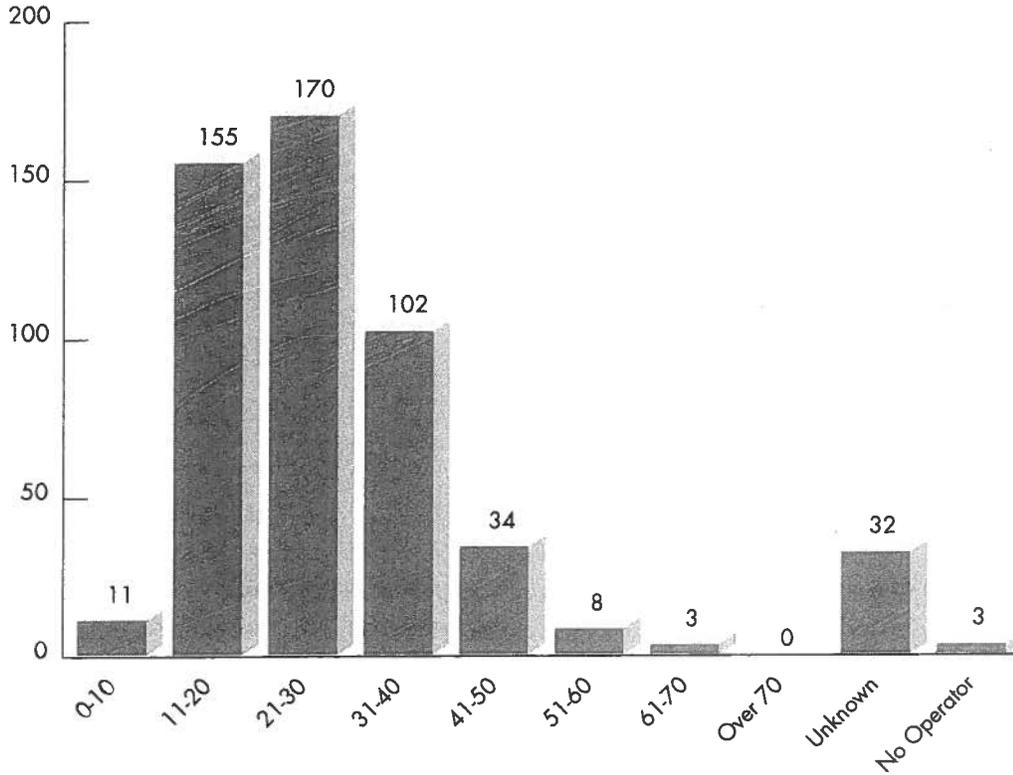


Number of Vessels	
PWC	77
Open Motorboat	12
Houseboat	9
Sail (all types)	4
Pontoon	3
Raft	2
Open Motorboat	1
Total	108

Of those vessels that were rented, the majority were personal watercraft.

PERSONAL WATERCRAFT—AGE OF OPERATOR

Total Operators = 515 Total Vessels = 518



Operators from the 21-30 age group were involved in more accidents than any other age group. This group was followed by the 11-20 age group.

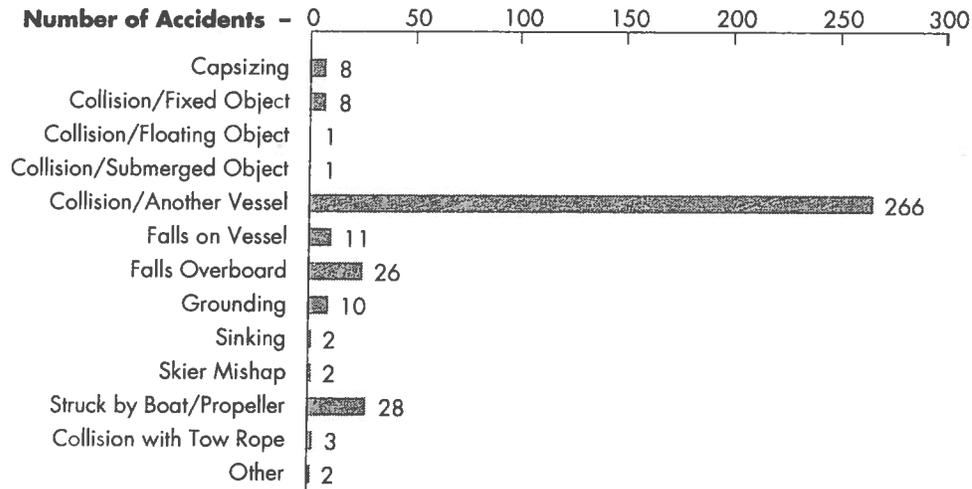
"No Operator" refers to accidents in which there was no operator present at the time of the accident. This category refers mostly to vessels that were in vessel slips, tied to docks, or moored, and were struck by other vessels. Because PWC do not tend to be housed in slips, due to their small size, the number of vessels found in this category is much lower than the number found on the chart on page 30.

Some accident reports submitted to the Department do not include operator age information, as indicated by the "Age Unknown" category.

A detailed age breakdown for operators under 18 years of age is available on page 21 of this report.

PERSONAL WATERCRAFT—TYPE OF ACCIDENT

Total Types = 368



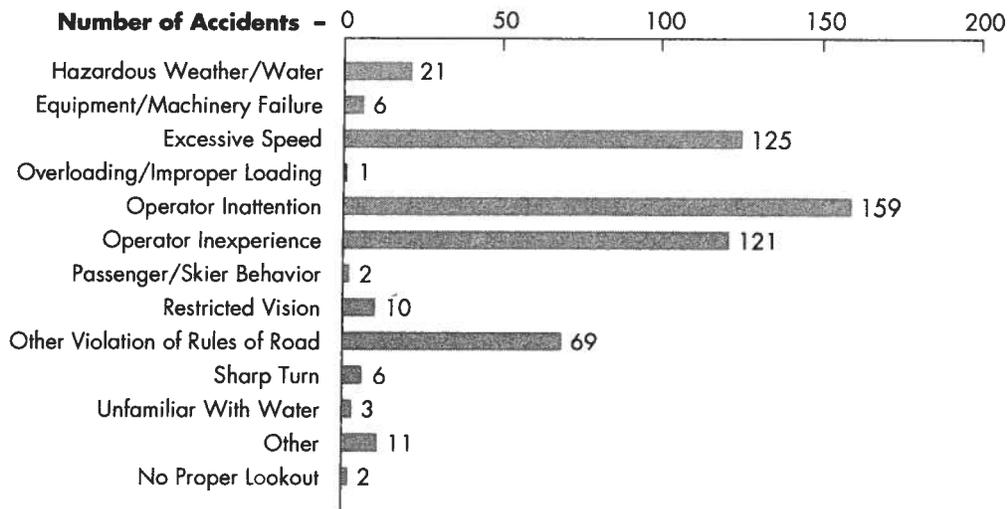
The majority of accidents involving Personal Watercraft involved PWC colliding with other vessels, most often, other PWC.

The "Falls on Vessel" category represents PWC operators who became separated from their craft and then fell back on top of it. This kind of occurrence normally takes place during wake jumping activities.

Some accidents had more than one accident type which is reflected in this chart.

PERSONAL WATERCRAFT—CAUSE OF ACCIDENT

Total Causes = 536



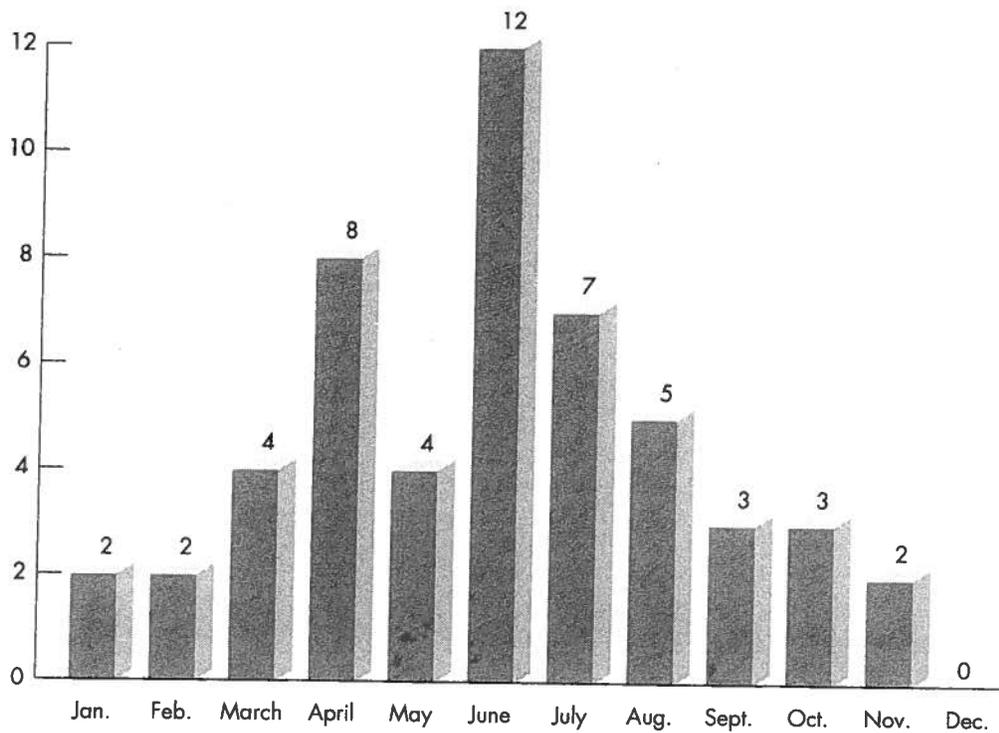
The leading cause of accidents involving personal watercraft was operator inattention, followed by excessive speed and operator inexperience. Many accidents had more than one cause which is reflected by this chart.

For an explanation of the difference between the causes "Improper Lookout" and "Operator Inattention," please refer to the glossary in the back of this report.

The category "Other" includes causes that do not fit into any of the listed categories.

BOATING FATALITIES—ACCIDENTS BY MONTH

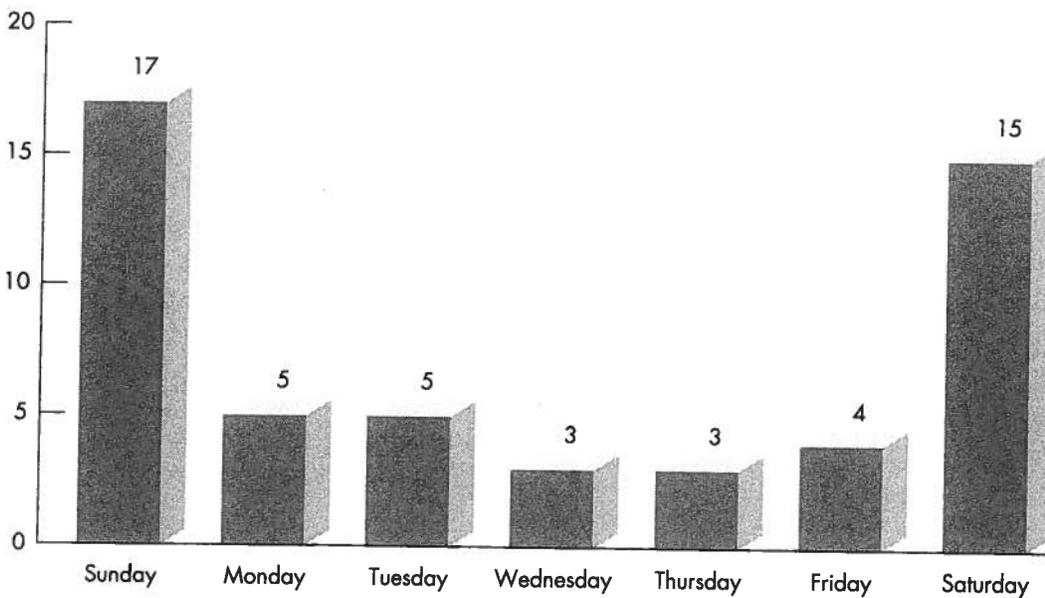
Total Fatalities = 52



The largest number of fatal boating accidents occurred during the month of June followed by April and July.

BOATING FATALITIES—ACCIDENTS BY DAY OF WEEK

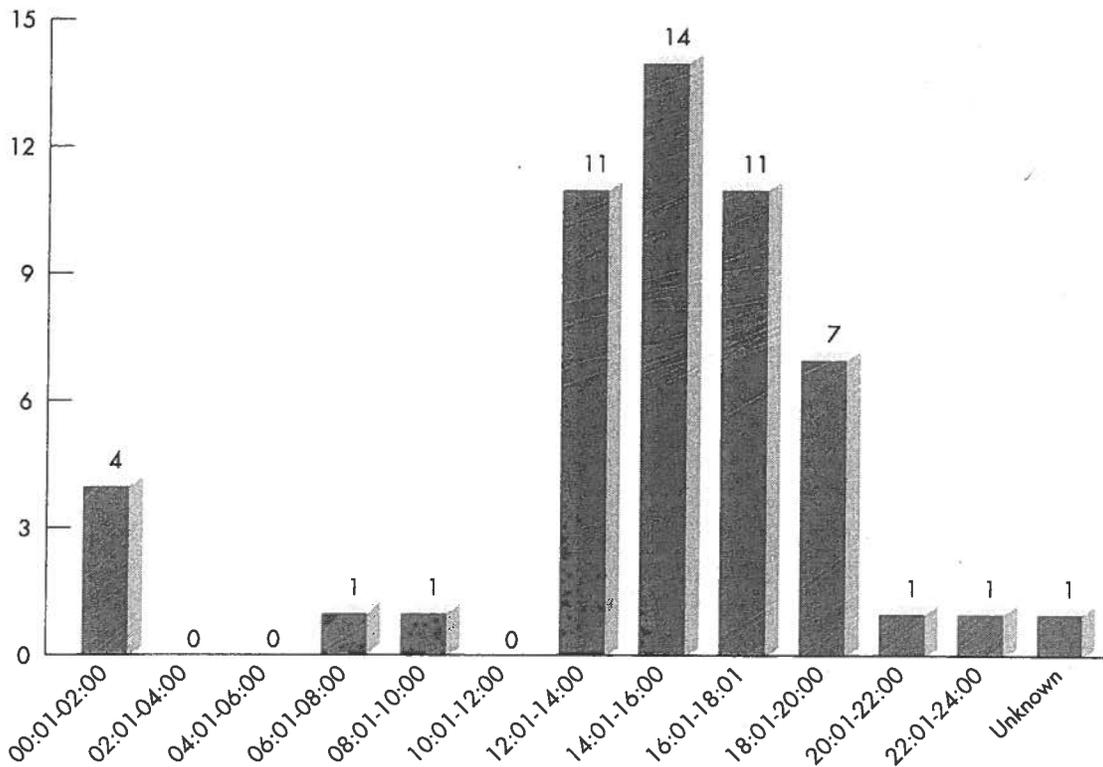
Total Fatalities = 52



The largest number of fatal boating accidents occurred on Sunday followed by Saturday.

BOATING FATALITIES—ACCIDENTS BY TIME OF DAY

Total Fatalities = 52

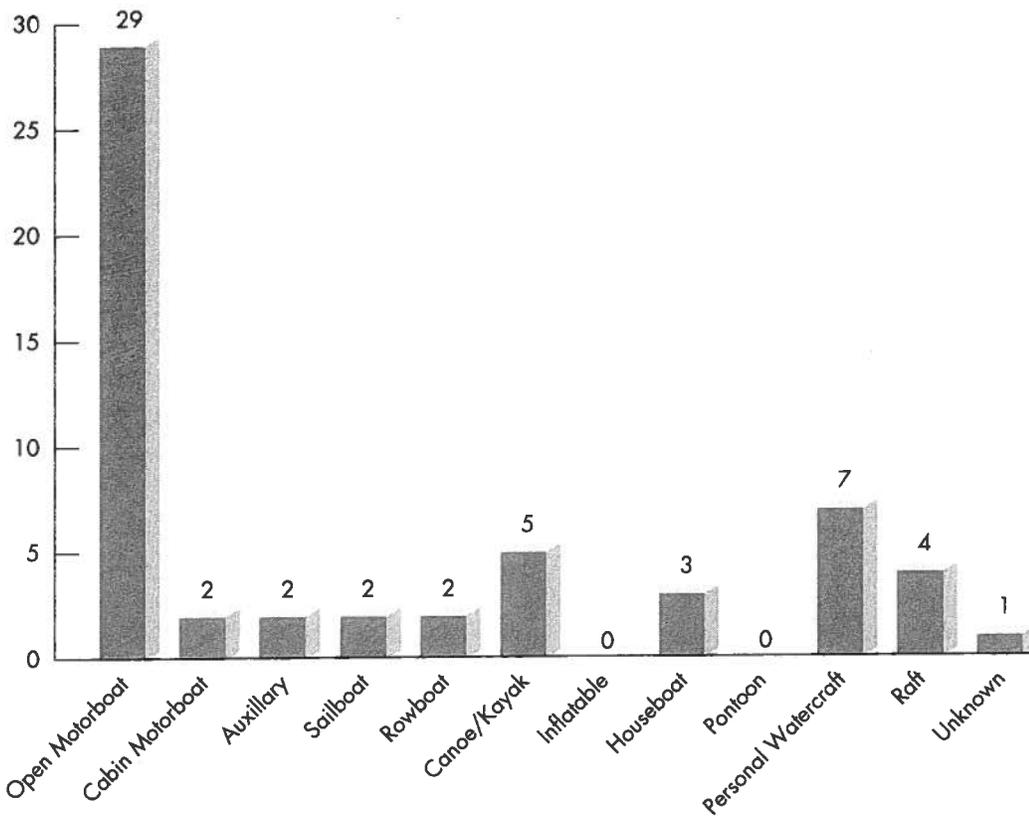


Time on this chart is represented by a 24-hour clock. Time progresses normally through 12 noon. After noon, add one hundred for each additional hour. One p.m. becomes 1300 hours, etc.

The largest number of fatal boating accidents occurred from 14:01 to 16:00. This finding is consistent with the time of day chart for all boating accidents located on page 28.

BOATING FATALITIES—TYPE OF VESSEL

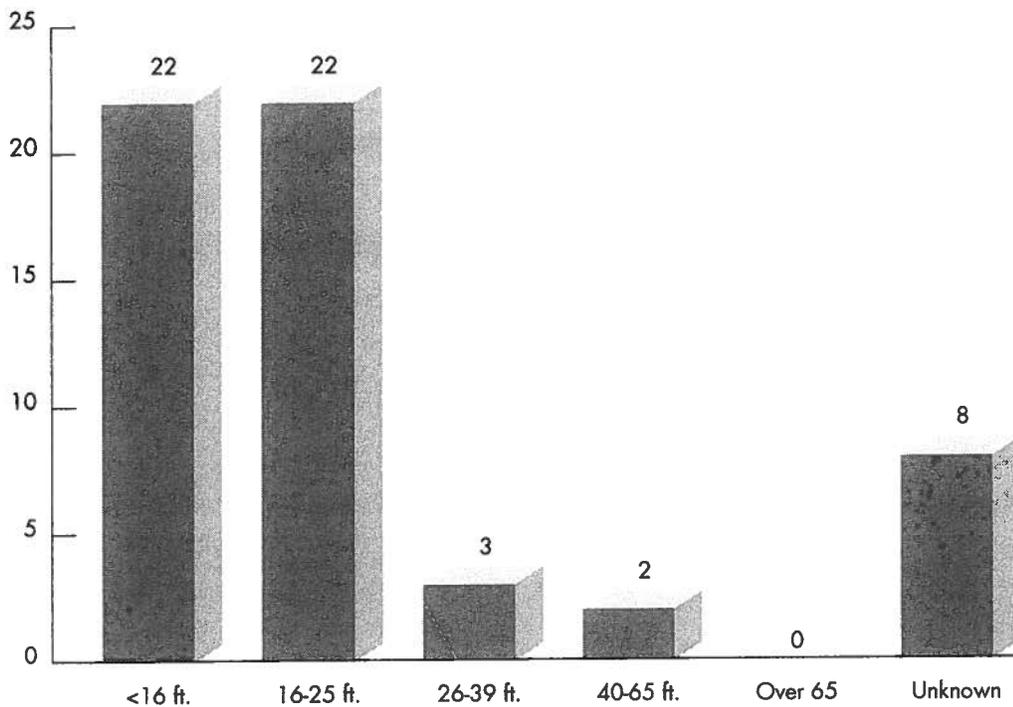
Total Vessels = 57



The majority of vessels involved in fatal boating accidents were open motorboats.

BOATING FATALITIES—LENGTH OF VESSEL

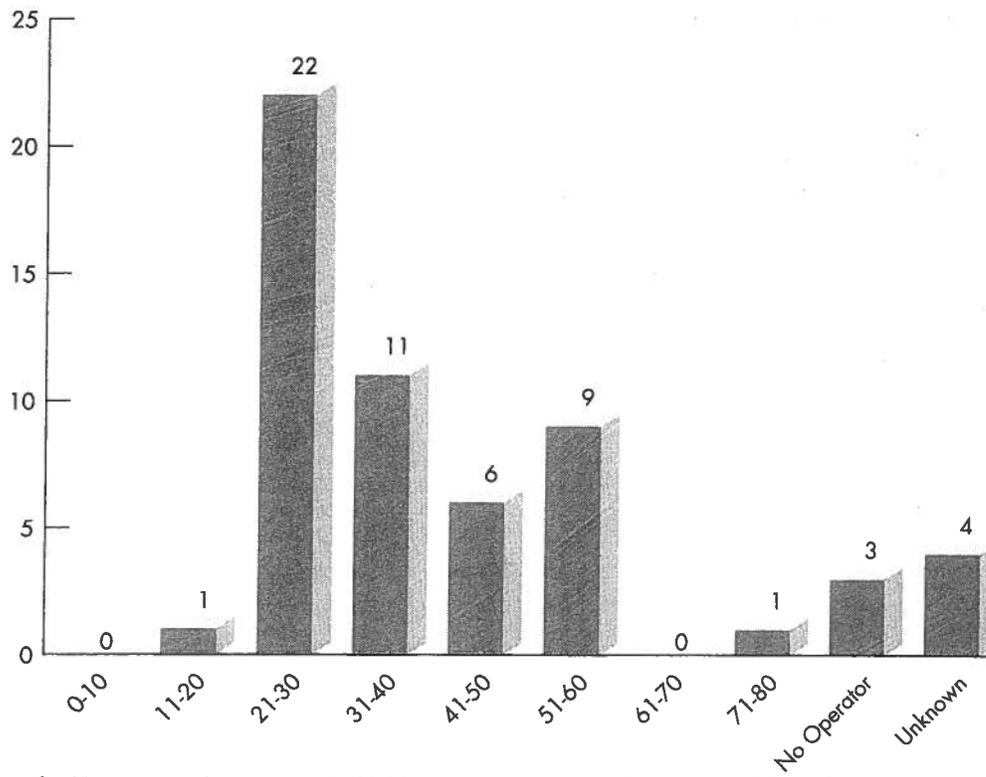
Total Vessels = 57



The majority of vessels (77%) involved in fatal boating accidents were less than 26 feet. There was an even number of vessels in both the "less than 16 feet" category and in the "16-25 feet" category.

BOATING FATALITIES—AGE OF OPERATOR

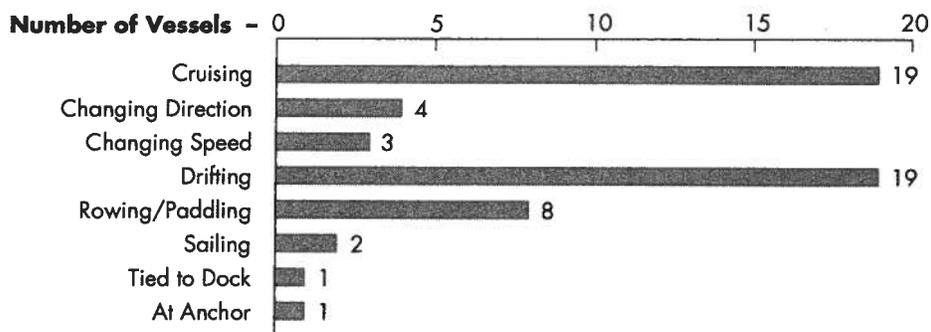
Total Operators = 54 Total Vessels = 57



More operators in fatal boating accidents were in the 21-30 category than in any other age group followed by the 31-40 age group.

BOATING FATALITIES—OPERATION AT TIME OF ACCIDENT

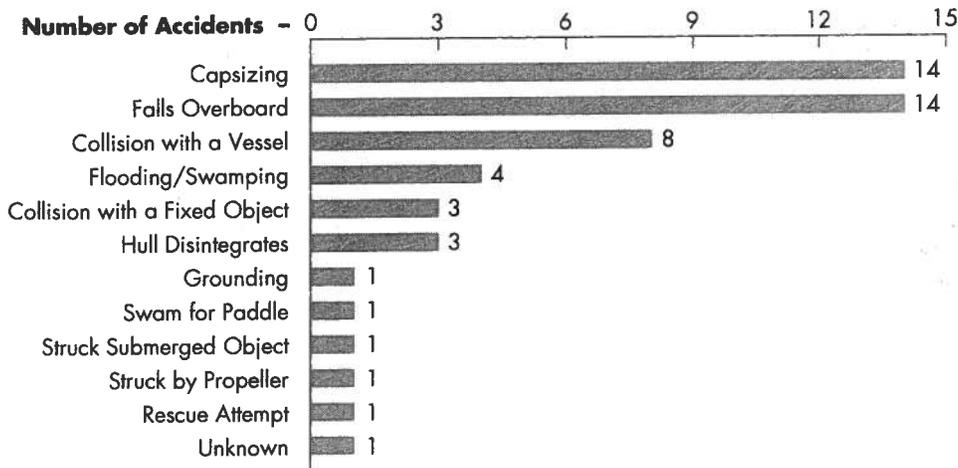
Total Vessels = 57



The most common vessel operation preceding a fatal boating accident was split between "Cruising" and "Drifting."

BOATING FATALITIES—TYPE OF ACCIDENT

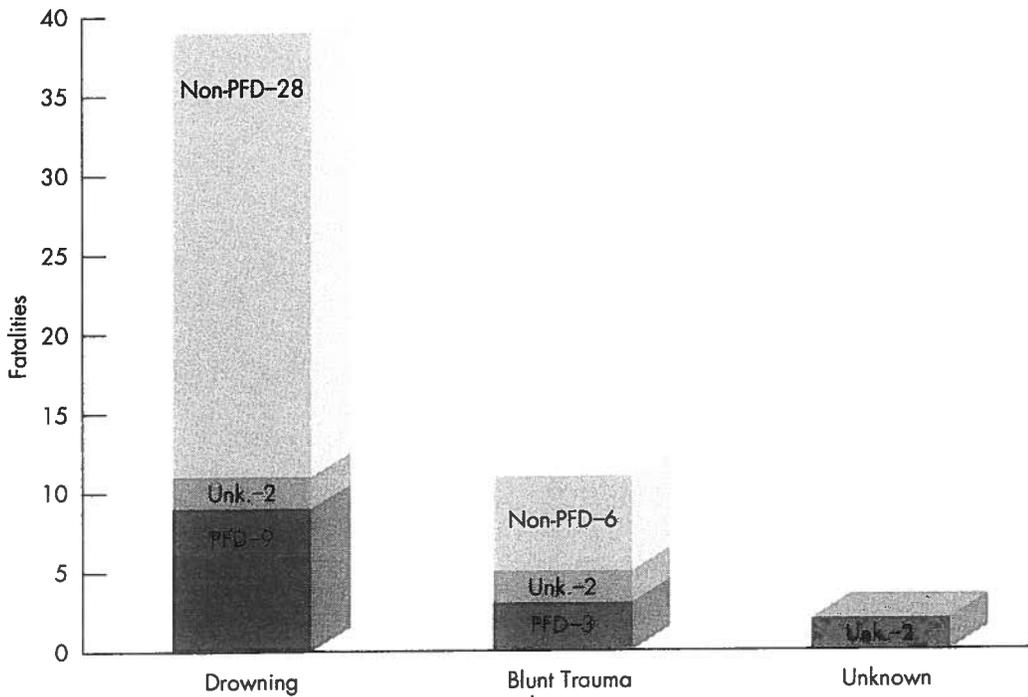
Total Fatalities = 52



The most common type of fatal boating accident involved either vessels capsizing or people falling overboard.

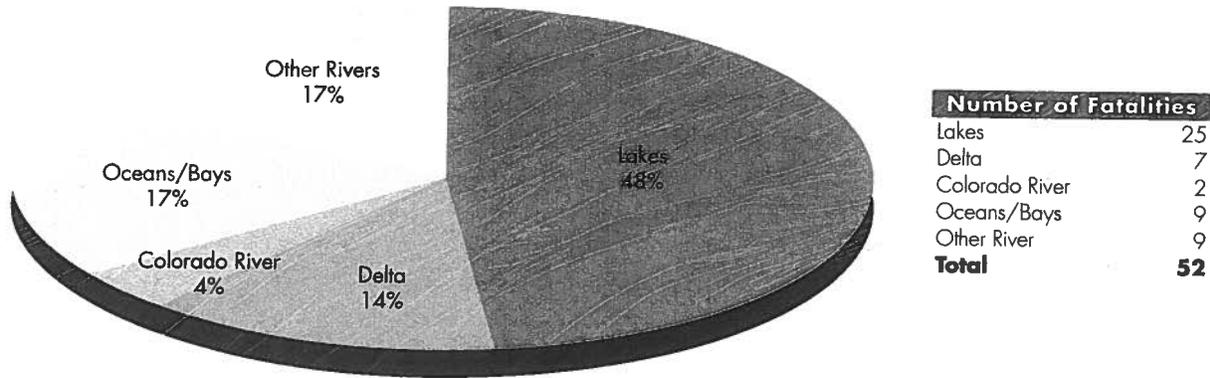
BOATING FATALITIES—CAUSE OF DEATH

Total Fatalities = 52



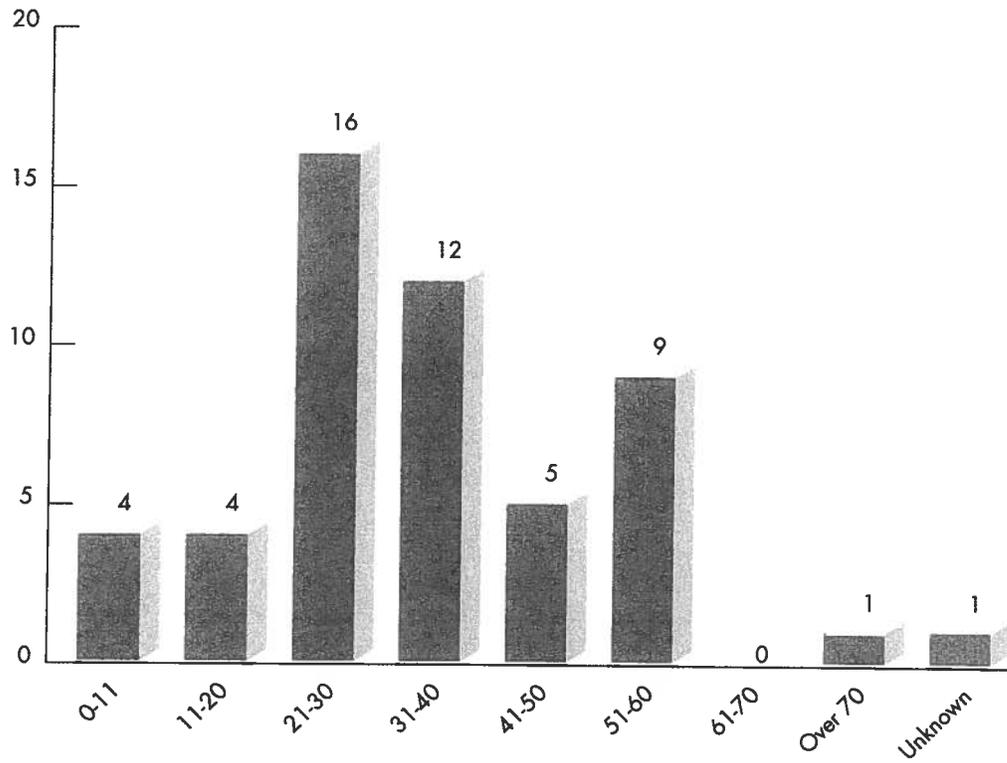
Drowning was the leading cause of death in fatal boating accidents. This chart also reflects PFD usage. Of the victims who drowned, 72% were not wearing their life jackets.

BOATING FATALITIES—ACCIDENT LOCATIONS



More accidents occurred on lakes than on any other type of water body. This finding is consistent with the findings on the water body chart for all accidents on page 32.

BOATING FATALITIES—AGE OF VICTIM Total Fatalities = 52



The largest number of victims were in the 21-30 age group.

GLOSSARY OF BOATING TERMS

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

Cabin Motorboat Motorboats with a cabin which can be completely closed by means of doors or hatches.

Capsizing Overturning of a vessel. The bottom must become uppermost, except in the case of a sailboat, which lies on its side.

Collision with Fixed Object The striking by a vessel 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 of the water.

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

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

Fire/Explosion (Fuel) Accidental combustion of vessel fuel or liquids including their vapors.

Fire/Explosion (Other) Accidental burning or explosion of any materials on board, except vessel fuels or their vapors.

Flooding/Swamping Filling with water, but retaining sufficient buoyancy to remain on the surface.

Grounding The running aground of a vessel, striking or pounding on the rocks, reefs, or shoals.

Improper Lookout No proper watch; the failure of an operator to perceive danger because no one was serving as a lookout, or the person so serving failed to do so. (For purposes of this report, this term refers only to accidents where the ski observers were not present or failed to do their job, or sailboat accidents where a lookout was not posted or failed to perceive danger. All other accidents involving inattentive operators fall under "Operator Inattention."*)

Maneuvering Changing of course, speed, or similar boat handling action during which a high degree of alertness is required.

Open Motorboat Craft of open construction specifically built for operating with a motor, including boats canopied or fitted with temporary partial shelters.

Personal Flotation Device (PFD) (commonly known as a life jacket, or life saving device.) A PFD can be a jacket, vest, cushion, or ring buoy that will serve as a lifesaving aid. PFDs must be U.S. Coast Guard approved.

Personal Watercraft (PWC) A small vessel that uses an internal combustion engine powering a jet pump or a propeller. It is designed to carry from one to three persons, and to be operated by a person sitting, standing, or kneeling on the vessel rather than the conventional manner of sitting or standing inside the vessel.

Rules of the Road Statutory and regulatory rules governing the navigation of vessels.

Unsafe Speed Operating at a speed that is not reasonable or prudent considering the circumstances.

* In the report, *California Boating Accident Report for 1993*, the term "improper lookout" included all types of accidents that were caused by failure to perceive danger or inattentiveness.



IMPORTANT—It is mandatory that all items be completed when the information is available.

CALIFORNIA BOATING ACCIDENT REPORT

THE OPERATOR OF EVERY RECREATIONAL VESSEL IS REQUIRED BY SECTION 656 OF THE HARBORS AND NAVIGATION CODE TO FILE A WRITTEN REPORT WHENEVER A BOATING ACCIDENT OCCURS WHICH RESULTS IN DEATH, DISAPPEARANCE, INJURY THAT REQUIRES MEDICAL TREATMENT BEYOND FIRST AID, TOTAL PROPERTY DAMAGE IN EXCESS OF \$500, OR COMPLETE LOSS OF A VESSEL. REPORTS MUST BE SUBMITTED WITHIN FORTY-EIGHT (48) HOURS IN CASE OF DEATH OCCURRING WITHIN 24 HOURS OF THE ACCIDENT, DISAPPEARANCE, OR INJURY THAT REQUIRES MEDICAL TREATMENT BEYOND FIRST AID. ALL OTHER REPORTABLE ACCIDENTS MUST BE SUBMITTED IN WRITING WITHIN TEN (10) DAYS. **REPORTS ARE TO BE SUBMITTED TO THE DEPARTMENT OF BOATING AND WATERWAYS, 1629 S STREET, SACRAMENTO, CA 95814-7291, (916) 322-1833.** FAILURE TO SUBMIT THIS REPORT AS REQUIRED IS A MISDEMEANOR AND IS PUNISHABLE BY A FINE NOT TO EXCEED ONE THOUSAND DOLLARS (\$1,000) OR IMPRISONMENT NOT TO EXCEED SIX (6) MONTHS OR BOTH.

COMPLETE ALL BLOCKS (PRINT OR TYPE ALL INFORMATION. INDICATE THOSE NOT APPLICABLE BY "NA." THOSE UNKNOWN BY "UN.")

OPERATOR'S NAME AND ADDRESS AGE _____ <input type="checkbox"/> YES <input type="checkbox"/> NO PHONE () WORK PHONE ()	2. RENTED BOAT <input type="checkbox"/> YES <input type="checkbox"/> NO	3. OPERATOR'S EXPERIENCE THIS TYPE OF BOAT OTHER BOAT OPERATING EXPERIENCE <input type="checkbox"/> UNDER 20 HOURS <input type="checkbox"/> UNDER 20 HOURS <input type="checkbox"/> 20 TO 100 HOURS <input type="checkbox"/> 20 TO 100 HOURS <input type="checkbox"/> 100 TO 500 HOURS <input type="checkbox"/> 100 TO 500 HOURS <input type="checkbox"/> OVER 500 HOURS <input type="checkbox"/> OVER 500 HOURS
OWNER'S NAME AND ADDRESS PHONE () WORK PHONE ()	5. NUMBER OF PERSONS ON BOARD 6. NUMBER OF PERSONS TOWED (I.E. SKIING ETC.)	7. FORMAL INSTRUCTION IN BOATING SAFETY <input type="checkbox"/> NONE <input type="checkbox"/> AMERICAN RED CROSS <input type="checkbox"/> USCG AUXILIARY <input type="checkbox"/> STATE <input type="checkbox"/> US POWER SQUADRON <input type="checkbox"/> OTHER (SPECIFY)

VESSEL NO. 1 (YOUR VESSEL)

13. HAT NUMBER	9. BOAT NAME	10. BOAT MANUFACTURER	11. BOAT MODEL	12. MFGR. HULL IDENT. NO.
TYPE OF BOAT OPEN MOTORBOAT CABIN MOTORBOAT AUXILIARY SAIL SAIL ONLY HOUSEBOAT AFT CANOE KAYAK WETSKI/SKI ROWBOAT OTHER (SPECIFY) _____	14. HULL MATERIAL <input type="checkbox"/> WOOD <input type="checkbox"/> ALUMINUM <input type="checkbox"/> STEEL <input type="checkbox"/> FIBERGLASS <input type="checkbox"/> RUBBER/VINYL <input type="checkbox"/> PLASTIC <input type="checkbox"/> OTHER (SPECIFY) _____	15. PROPULSION <input type="checkbox"/> OUTBOARD <input type="checkbox"/> INBOARD <input type="checkbox"/> INBOARD-OUTBOARD <input type="checkbox"/> JET <input type="checkbox"/> SAIL <input type="checkbox"/> PADDLE/OARS <input type="checkbox"/> OTHER (SPECIFY) _____ TYPE OF FUEL _____	16. BOAT DATA NUMBER OF ENGINES _____ LENGTH _____ MAKE OF ENGINE _____ BEAM (WIDTH) _____ HORSEPOWER (TOTAL) _____ DEPTH (TOP OF INNER TRANSOM TO KEEL) _____ YEAR BUILT _____ YEAR BUILT (BOAT) _____ (ENGINE)	17. PRIMARY BOAT USE <input type="checkbox"/> RECREATIONAL <input type="checkbox"/> COMMERCIAL <input type="checkbox"/> FOR-HIRE <input type="checkbox"/> WORK BOAT
				18. PREVIOUS ACCIDENTS INVOLVING THIS BOAT DATES _____

VESSEL NO. 2 (OTHER VESSEL INVOLVED)

19. BOAT NUMBER	20. BOAT NAME	21. BOAT MANUFACTURER	22. BOAT MODEL	23. MFGR. HULL IDENT. NO.
24. NAME OF OPERATOR AGE _____ PHONE () PHONE ()		25. ADDRESS _____ _____ _____		
26. NAME OF OWNER PHONE () PHONE ()		27. ADDRESS _____ _____ _____		

WITNESSES

WITNESS 1	AGE _____	ADDRESS _____	TELEPHONE NUMBER _____
WITNESS 2	AGE _____	ADDRESS _____	TELEPHONE NUMBER _____
WITNESS 3	AGE _____	ADDRESS _____	TELEPHONE NUMBER _____

ACCIDENT DATE AND LOCATION

28. DATE OF ACCIDENT	30. TIME ____ AM ____ PM	31. NAME OF BODY OF WATER	33. LOCATION (AS PRECISELY AS POSSIBLE)
		32. LAST PORT OF CALL	
29. STATE		35. NEAREST CITY OR TOWN	36. COUNTY

ENVIRONMENTAL CONDITIONS

37. WEATHER	<input type="checkbox"/> CLEAR <input type="checkbox"/> BREEZY <input type="checkbox"/> CLOUDY <input type="checkbox"/> DRIZZLE <input type="checkbox"/> FOG	<input type="checkbox"/> RAIN <input type="checkbox"/> SNOW <input type="checkbox"/> HAZY	38. WATER CONDITIONS <input type="checkbox"/> CALM <input type="checkbox"/> CHOPPY <input type="checkbox"/> ROUGH <input type="checkbox"/> VERY ROUGH <input type="checkbox"/> STRONG CURRENT	39. TEMPERATURE (ESTIMATE) AIR _____ °F WATER _____ °F	40. WIND <input type="checkbox"/> NONE <input type="checkbox"/> LIGHT (0 TO 6 MPH) <input type="checkbox"/> MODERATE (7 TO 14 MPH) <input type="checkbox"/> STRONG (15 TO 25 MPH) <input type="checkbox"/> STORM (25 MPH AND OVER)	41. VISIBILITY <input type="checkbox"/> GOOD <input type="checkbox"/> FAIR <input type="checkbox"/> POOR	42. WEATHER ENCOUNTERED <input type="checkbox"/> WAS AS FORECAST <input type="checkbox"/> NOT AS FORECAST <input type="checkbox"/> FORECAST NOT OBTAINED
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ACCIDENT DATA

43. OPERATION AT TIME OF ACCIDENT (CHECK ALL APPLICABLE) <input type="checkbox"/> CRUISING <input type="checkbox"/> DRIFTING <input type="checkbox"/> MANEUVERING <input type="checkbox"/> AT ANCHOR <input type="checkbox"/> WATER SKIING <input type="checkbox"/> TIED TO DOCK <input type="checkbox"/> TOWING <input type="checkbox"/> OTHER (USE ITEM 48) <input type="checkbox"/> ACCELERATING	44. TYPE OF ACCIDENT <input type="checkbox"/> GROUNDING <input type="checkbox"/> COLLISION WITH FIXED OBJECT <input type="checkbox"/> CAPSIZING <input type="checkbox"/> COLLISION WITH FLOATING OBJECT <input type="checkbox"/> FLOODING <input type="checkbox"/> FALL OVERBOARD <input type="checkbox"/> SINKING <input type="checkbox"/> FALL IN BOAT <input type="checkbox"/> FIRE OR EXPLOSION (FUEL) <input type="checkbox"/> PERSON(S) HIT BY BOAT OR PROPELLER <input type="checkbox"/> FIRE OR EXPLOSION (OTHER THAN FUEL) <input type="checkbox"/> OTHER (USE ITEM 48) <input type="checkbox"/> VESSEL(S) COLLISION	45. IN YOUR OPINION, CAUSE OF ACCIDENT <input type="checkbox"/> WEATHER CONDITIONS <input type="checkbox"/> RESTRICTED VISION <input type="checkbox"/> EXCESSIVE SPEED <input type="checkbox"/> FAULT OF HULL <input type="checkbox"/> NO PROPER LOOKOUT <input type="checkbox"/> FAULT OF MACHINERY <input type="checkbox"/> OVERLOADING <input type="checkbox"/> FAULT OF EQUIPMENT <input type="checkbox"/> IMPROPER LOADING <input type="checkbox"/> FATIGUE <input type="checkbox"/> HAZARDOUS WATERS <input type="checkbox"/> OTHER (SPECIFY) <input type="checkbox"/> ALCOHOL <input type="checkbox"/> DRUGS
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46. PERSONAL FLOTATION DEVICES (PFD) WAS THE BOAT ADEQUATELY EQUIPPED WITH COAST GUARD APPROVED PERSONAL FLOTATION DEVICES? <input type="checkbox"/> YES <input type="checkbox"/> NO WERE THEY ACCESSIBLE? <input type="checkbox"/> YES <input type="checkbox"/> NO WERE THEY USED? <input type="checkbox"/> YES <input type="checkbox"/> NO	47. FIRE EXTINGUISHERS WAS THE VESSEL CARRYING NONAPPROVED LIFESAVING DEVICES? <input type="checkbox"/> YES <input type="checkbox"/> NO WERE THEY ACCESSIBLE? <input type="checkbox"/> YES <input type="checkbox"/> NO WERE THEY USED? <input type="checkbox"/> YES <input type="checkbox"/> NO	WAS APPROVED TYPE FIRE FIGHTING EQUIPMENT ABOARD? <input type="checkbox"/> YES <input type="checkbox"/> NO WERE THEY USED? (IF "YES", LIST TYPE(S) AND NUMBER) <input type="checkbox"/> YES <input type="checkbox"/> NO
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48. ACCIDENT DESCRIPTION

DESCRIBE WHAT HAPPENED AND WHAT COULD HAVE PREVENTED THIS ACCIDENT. (INCLUDE FAILURE OF EQUIPMENT. EXPLAIN CAUSE OF DEATH OR INJURY, MEDICAL TREATMENT, ETC. USE SKETCH IF HELPFUL IF NEEDED, CONTINUE DESCRIPTION ON ADDITIONAL PAPER.)

49. POLICE REPORT TAKEN? <input type="checkbox"/> YES <input type="checkbox"/> NO AGENCY NAME: _____	TELEPHONE NUMBER ()
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50. DECEASED

NAME	ADDRESS	DATE OF BIRTH	VICTIM WAS— <input type="checkbox"/> SWIMMER <input type="checkbox"/> NON-SWIMMER <input type="checkbox"/> DRINKING ALCOHOL <input type="checkbox"/> USING DRUGS	CAUSE OF DEATH <input type="checkbox"/> DROWNING <input type="checkbox"/> DISAPPEARANCE <input type="checkbox"/> OTHER (USE ITEM 48)
NAME	ADDRESS	DATE OF BIRTH	VICTIM WAS— <input type="checkbox"/> SWIMMER <input type="checkbox"/> NON-SWIMMER <input type="checkbox"/> DRINKING ALCOHOL <input type="checkbox"/> USING DRUGS	CAUSE OF DEATH <input type="checkbox"/> DROWNING <input type="checkbox"/> DISAPPEARANCE <input type="checkbox"/> OTHER (USE ITEM 48)

51. INJURED (UNCONSCIOUS, GIVEN MEDICAL TREATMENT OR DISABLED OVER 24 HOURS)

NAME	ADDRESS	DATE OF BIRTH	NATURE OF INJURY INJURED WAS— <input type="checkbox"/> DRINKING ALCOHOL <input type="checkbox"/> USING DRUGS	<input type="checkbox"/> RECEIVED TREATMENT <input type="checkbox"/> INCAPACITATED OVER 24 HOURS
TELEPHONE NUMBER ()				
NAME	ADDRESS	DATE OF BIRTH	NATURE OF INJURY INJURED WAS— <input type="checkbox"/> DRINKING ALCOHOL <input type="checkbox"/> USING DRUGS	<input type="checkbox"/> RECEIVED TREATMENT <input type="checkbox"/> INCAPACITATED OVER 24 HOURS
TELEPHONE NUMBER ()				

52. PROPERTY DAMAGE (ESTIMATE AND DESCRIBE)

THIS BOAT \$ _____

TOTALLY DESTROYED YES NO OTHER BOAT \$ _____ TOTAL BOTH BOATS \$ _____ OTHER PROPERTY \$ _____

53. PERSON COMPLETING REPORT

SIGNATURE OF PERSON COMPLETING REPORT	ADDRESS	DATE SUBMITTED
QUALIFICATION (CHECK ONE) <input type="checkbox"/> OPERATOR <input type="checkbox"/> OWNER OTHER (SPECIFY) _____		TELEPHONE NUMBER ()