

Section 2:

Boating Accident Program

This section summarizes 2007 boating accident statistics. The California Department of Boating and Waterways, law enforcement agencies, the United States Coast Guard, educational institutions and California boaters use these statistics to help improve boating safety.

A. Limitations of the Analysis

Reportable Accidents

The statistics in this report reflect every reported boating accident in California in 2007. Although Cal Boating believes that all accidents involving fatalities were reported, many non-fatal accidents are never reported to Cal Boating or law enforcement agencies due to noncompliance with, or ignorance of, the reporting law. The U.S. Coast Guard estimates that only about 10% of accidents are actually reported to state programs nationwide.

An increase in the number of reported accidents from year to year might not necessarily reflect an increase in the actual number of accidents, but rather might result from improved reporting efforts or research from other sources (e.g., news clippings). To improve the accuracy of accident statistics, Cal Boating has increased its efforts to obtain all accident reports by working closely with law enforcement agencies.

Accident Statistics

A total of 804 accidents were reported to Cal Boating in 2007. Some statistics in this report are measured as a percentage of these total accidents. Often, there is more than one cause of an accident, more than one operator involved in an accident or more than one vessel involved. Therefore, the number of vessels, like the number of operators involved in accidents, usually exceeds the number of accidents. A total of 930 operators and 1,137 vessels were involved in boating accidents in 2007. Many statistics presented in this report are measured as a percentage of the number of operators or vessels involved or the number of causes—rather than the 804 accidents—in order to provide more accurate comparisons.



Alcohol Use

Analysis of alcohol-related accidents can be complicated for the following reasons:

- **Delayed Accident Reporting** – Often there is significant delay between the time of the accident and the reporting of the accident to law enforcement agencies. Delays can happen for a variety of reasons, including emergency care needs and the desire to avoid legal consequences. (Operators/passengers are reluctant to report themselves as being under the influence of alcohol or drugs.) Unfortunately, these delays can result in the loss of accurate data due to alcohol burn-off.
- **Delayed Body Recovery** – Sometimes, the bodies of boating accident victims are not recovered immediately. A delay of more than two days in recovering a body can result in significantly altered blood alcohol levels due to the process of decomposition, a by-product of which is blood alcohol. In 2006, 26% of boating fatalities could not be tested for alcohol for the above reasons.

B. Findings

The 804 accidents reported to Cal Boating during 2007 involved 482 injuries, 55 fatalities and \$10.6 million in property damage. All totals were higher than 2006 totals (757 accidents, 445 injuries, 42 fatalities and \$8.9 million).

Exhibit II-1 presents boating accident statistics in California from 1980 through 2007.

Type and Cause of Accidents

Exhibit II-3 presents types and causes of accidents by vessel type. Overall, the most common type of accident involved collision with another vessel (34%). Open motorboats and PWC were the most common types of vessels involved in accidents and were involved in 49% and 25% of accidents, respectively. The most common type of accident involving open motorboats was collision with another vessel

Exhibit II-1 1980-2007 California Boating Accident Statistics

Year	Number of Accidents	Number of Injuries	Number of Fatalities	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
1996	850	537	56	\$2,241,700
1997	925	526	43	\$3,266,800
1998	772	413	58	\$2,299,600
1999	907	491	42	\$2,864,000
2000	906	524	51	\$3,038,400
2001	907	502	48	\$2,841,900
2002	911	468	53	\$3,732,850
2003	963	502	61	\$3,820,000
2004	744	439	44	\$4,073,400
2005	801	428	58	\$3,584,700
2006	757	445	42	\$8,913,375
2007	804	482	55	\$10,643,800

Exhibit II-2

2007 California Boating Accidents by County

County	Accidents	Injuries	Fatalities	Property Damage
Alameda	8	4	1	\$25,500
Amador	3	4	0	\$2,550
Butte	10	6	0	\$113,100
Calaveras	9	3	1	\$8,600
Colusa	3	2	3	\$1,100
Contra Costa	23	8	1	\$149,850
Del Norte	2	0	1	\$13,500
El Dorado	13	11	1	\$25,800
Fresno	13	6	2	\$29,250
Glenn	1	0	0	\$550
Humboldt	2	1	0	\$2,000
Kern	21	15	0	\$23,250
Lake	15	4	2	\$35,500
Los Angeles	57	26	1	\$2,490,900
Madera	16	8	0	\$37,850
Marin	7	9	0	\$20,800
Mariposa	4	1	0	\$8,450
Mendocino	1	2	0	\$3,500
Merced	8	0	0	\$24,150
Monterey	7	0	0	\$30,650
Napa	33	18	2	\$63,900
Nevada	4	2	1	\$1,300
Orange	86	18	1	\$3,885,700
Placer	35	25	3	\$526,000
Plumas	6	4	0	\$6,100
Riverside	36	30	2	\$69,600
Sacramento	26	21	1	\$115,900
San Benito	1	3	0	\$0
San Bernardino	45	52	7	\$176,450
San Diego	88	61	5	\$483,250
San Francisco	15	5	1	\$823,250
San Joaquin	44	26	3	\$374,550
San Luis Obispo	13	6	0	\$97,550
San Mateo	5	1	1	\$4,600
Santa Barbara	12	2	0	\$448,950
Santa Clara	10	6	0	\$8,550
Santa Cruz	1	1	0	\$1,200
Shasta	30	19	3	\$57,850
Sierra	2	0	1	\$5,000
Siskiyou	1	0	1	\$0
Solano	2	1	0	\$157,200
Sonoma	3	2	1	\$85,000
Stanislaus	15	12	3	\$22,250
Sutter	4	4	0	\$10,150
Tehama	9	13	2	\$31,900
Trinity	4	4	0	\$0
Tulare	7	4	1	\$14,500
Tuolumne	20	15	0	\$44,150
Ventura	8	2	3	\$36,650
Yolo	9	10	0	\$44,100
Yuba	7	5	0	\$1,350
Totals	804	482	55	\$10,643,800

Exhibit II-3 Types and Causes of 2007 California Boating Accidents by Vessel Type

		Open Motorboats		Personal Watercraft		Other Vessels		All Vessels	
Types of Accidents	Collision with Vessel	27%	Collision with Vessel	57%	Collision with Vessel	42%	Collision with Vessel	34%	
	Skier Mishap	16%	Falls Overboard	24%	Flooding/ Swamping	15%	Flooding/ Swamping	14%	
	Grounding	16%	Struck by Boat	10%	Grounding	12%	Grounding	13%	
		Open Motorboats		Personal Watercraft		Other Vessels		All Vessels	
Causes of Accidents	Operator Inattention	44%	Operator Inexperience	62%	Operator Inattention	44%	Operator Inattention	44%	
	Excessive Speed	33%	Excessive Speed	58%	Operator Inexperience	22%	Operator Inexperience	33%	
	Operator Inexperience	30%	Operator Inattention	51%	Machinery Failure	14%	Excessive Speed	32%	

(27%), followed by accidents involving skier mishaps (16%) and vessels grounding (16%). Most accidents involving PWC were collisions with other vessels (57%), followed by falls overboard (24%).

The most frequently stated causes of accidents overall were operator inattention (44%) operator inexperience (33%) and excessive speed (32%). (A boating accident can have more than one attributable cause.)

The leading causes of accidents involving open motorboats were operator inattention and excessive speed. The leading causes of accidents involving PWC were operator inexperience and excessive speed.

Time and Location

Accidents occurred mostly during the summer months (May through September), on weekends and between 2:00 and 4:00 p.m.

Of the 804 boating accidents, 165 (21%) occurred during the three holiday periods of Memorial Day, Independence Day and Labor Day. During these periods, 115 injuries (24%) and eight fatalities (15%) also occurred.

Exhibit II-4 presents 2007 accidents, injuries and fatalities by location. Overall, most accidents and injuries occurred on lakes, 45% and 49% respectively, and more occurred on northern lakes.

Vessel Type and Length

In 2007, open motorboats accounted for approximately 48% of all vessels registered in California, and PWC accounted for 18%. Open motorboats were involved in 49% of all accidents and PWC were involved in 25% of all accidents. A total 65% of vessels involved in all accidents and 72% of vessels involved in fatal accidents were less than 26 feet in length.

Exhibit II-5 presents registration and accident statistics for open motorboats, PWC and other vessels during 2007.

Operator Age

Overall, operators in the 31-40 age group were involved in accidents more often than those in any other age group, followed closely by operators in 21-30 age group. The 31-40 age group was involved most often in open motorboat-related accidents, followed by the 41-50 age group. The 11-20 age group was involved most often in PWC-related accidents, followed by the 21-30 age group.

Operator Owner Status

A total of 41% of all vessels involved in accidents were operated by the registered owner. An additional 41% of vessels were operated by someone other than the registered owner (33% were borrowed and 8% were rented).

Exhibit II-4

2007 California Boating Accidents by Location

Location	Number of Accidents	Number of Injuries	Number of Fatalities
Northern Lake	234	149	18
Southern Lake	131	89	12
Northern River	36	30	9
Southern River	1	0	0
Northern Coast	19	10	1
Southern Coast	224	88	7
SF Bay Area	27	13	1
Delta	83	47	4
Colorado River	49	56	3
TOTAL	804	482	55

C. Accidents Involving Personal Watercraft (PWC)

Background

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

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

As of December 31, 2007, there were 172,476 PWC registered in California, comprising 18% of registered vessels. **Exhibit II-6** shows the total number of PWC registered in California from 1993 through 2007.

Findings

A total of 204 PWC-related accidents were reported in 2007, resulting in 172 injuries, nine fatalities and \$356,250 in property damage. The accident, injury and fatality totals were higher than 2006 levels (180, 145, five respectively) and the total property damage was lower (\$389,475 in 2006).

Exhibit II-7 presents a 15-year summary for PWC accidents, injuries, fatalities, and property damage.

Exhibit II-8 presents 2007 reported PWC-related accidents by county.

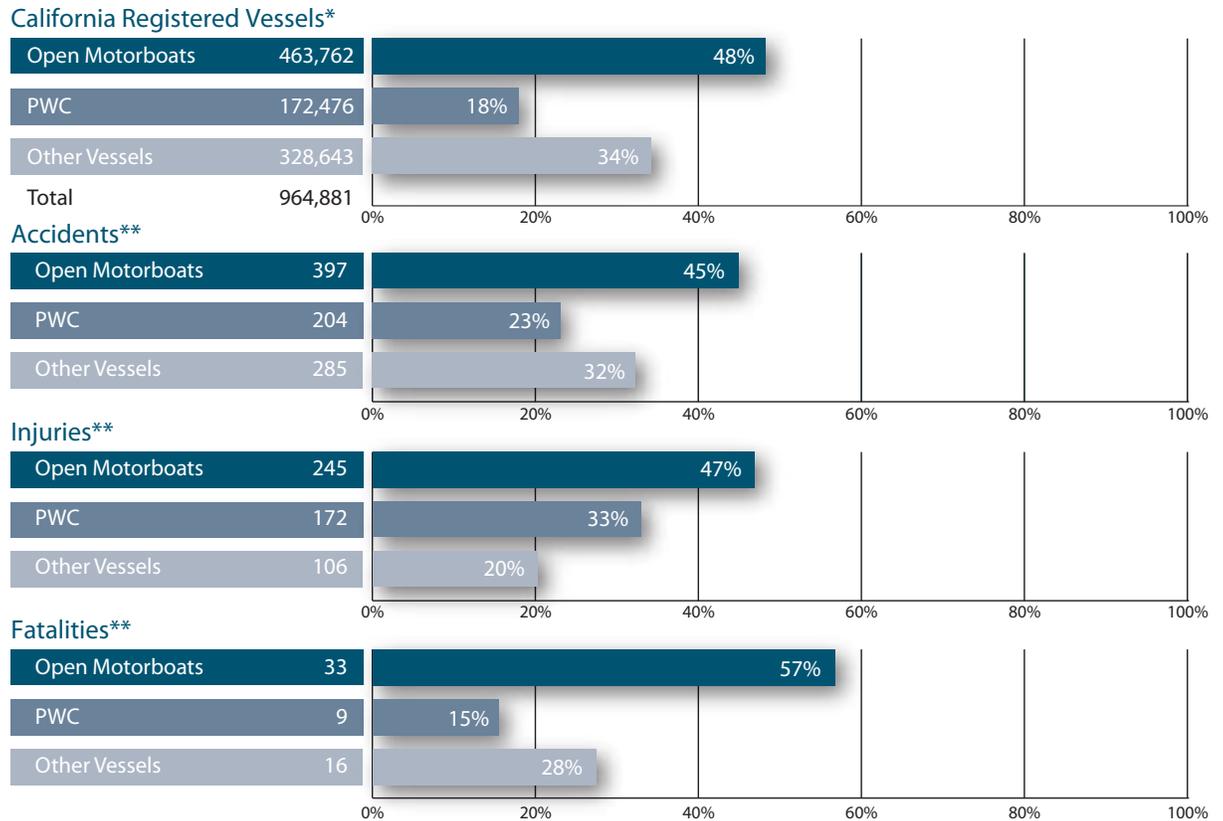
PWC were involved in 25% of accidents, 36% of injuries, 16% of fatalities and 3% of property damage.

Accidents involving PWC continue to remain significantly lower than the 1997 totals of 391 accidents, a decrease of 48%.

For a number of years, PWC-related accidents have been on a downward trend. This long-standing decrease appears to be attributable mainly to two laws affecting PWC that took effect in January 1998. The first law prohibited activities such as wake jumping within 100 feet of another vessel, spraying down other vessels and playing “chicken.” These activities now constitute endangerment of life, limb and property. The second law raised the minimum age to operate a vessel of over 15 HP alone from 12 to 16 years of age. Since the vessel of choice of operators between 12 and 16 is the PWC, restricting this group’s ability to operate vessels has resulted in a decrease in PWC-related accidents. This reduction in accidents is also discussed in the section **Accidents Involving Youths**.

PWC accidents involving radical maneuvers such as wake jumping, donuts and spraying other vessels remained 22% lower than the 88 accidents that

Exhibit II-5 2007 Registration and Accident Statistics for Open Motorboats, PWC and Other Vessels



* These figures are estimates, based on Department of Motor Vehicles Registration categories.
 ** The sum of the percentage does not equal 100 percent because some of the accidents, injuries, and fatalities involve multiple types of vessels.

occurred in 1997. However, they are at the highest level since the above-mentioned 1998 law took effect. Radical maneuvers accounted for 69 PWC-related accidents in 2007. These accidents have increased 50% from 2006.

Accidents involving youth operators remained low in 2007, falling from 120 in 1997 to 58, a decrease of 52%.

Type and Cause of Accidents

Overall Accidents

Most reported PWC accidents involved collisions with other vessels (57%). Falls overboard accounted for 24% of accidents. Persons struck by boats accounted for 10% of accidents.

An examination of the 116 collisions involving PWC reveals that 80 (69%) involved a PWC colliding with a second PWC.

The most common causes of all PWC accidents were operator inexperience (62%), excessive speed (58%) and operator inattention (51%). (Some accidents have more than one attributable cause.) All of these causes are operator-controllable factors.

Operator Age

PWC operators in the 11-20 age group were involved in more accidents than any other age group followed by the 21-30 age group.

Operator Owner Status

A total of 75% of PWC involved in accidents were operated by someone other than the registered owner (57% were borrowed and 18% were rented).

Additional Safety Concerns

- Many PWC operators do not realize that when they let off the throttle, they lose steering capability. Numerous accidents have resulted from this lack of knowledge.
- PWC sometimes present a danger to their riders because of the craft's lack of visibility when it capsizes. Riders who are attempting to remount their PWC are often not visible to other watercraft, and are liable to be struck by other vessels.
- Although rare, lanyards sometimes present difficulties for operators. In one case, the operator fell overboard and was injured, rendering him unable to swim back to the craft. Since the lanyard was on his wrist, the passenger was unable to maneuver the craft to retrieve him. In other cases, lanyards became detached and could not be reattached quickly enough to avoid grounding or colliding with another vessel. These situations are rare, but noteworthy.

D. Accidents Involving Water Skiing

In this report, the term “water skiing” refers to all activities involving a vessel towing a person on a towline.

In recent years, the sport of water skiing has evolved beyond traditional water skiing and now encompasses the towing of inner tubes, wakeboards, kneeboards, wake skates, wake surfers and air chairs.

Findings

In 2007, a total of 105 accidents involving water skiing activities were reported to Cal Boating, resulting in 96 injuries and seven fatalities. The accidents accounted for 13% of all accidents, 20% of injuries and 13% of fatalities.

Accidents involving inner tubes accounted for 44% of water skiing accidents, followed by wake boarding (36%) and traditional water skiing (18%).

Exhibit II-6
1993-2007 California PWC Registrations

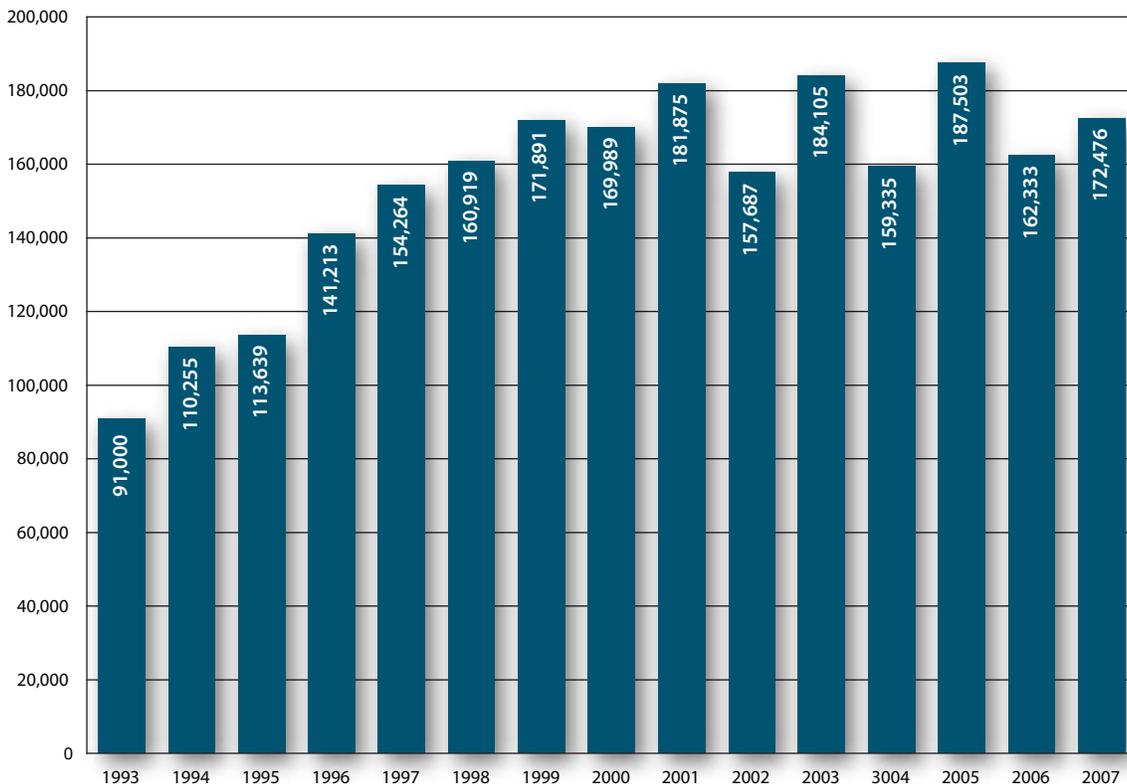


Exhibit II-7 1993-2007 California PWC Accident Statistics

Year	Number of Accidents	Number of Injuries	Number of Fatalities	Amount of Property Damage
1993	248	178	5	\$306,900
1994	257	178	7	\$294,800
1995	353	226	6	\$579,550
1996	385	298	8	\$508,300
1997	391	276	8	\$709,450
1998	229	161	9	\$384,050
1999	264	215	6	\$447,550
2000	293	238	6	\$436,650
2001	273	216	5	\$465,200
2002	253	188	7	\$524,250
2003	261	200	12	\$483,500
2004	186	148	7	\$293,300
2005	203	155	7	\$467,250
2006	180	145	5	\$389,475
2007	204	172	9	\$356,250

Although total accidents involving water skiing have been declining since 2003 when there were 161 accidents, they increased 15% compared with 2006 totals. Fatalities associated with water skiing activities increased from two in 2006 to seven in 2007, which is the highest number of fatalities since 1979. Fatalities in which the operator of the towing vessel or another vessel contributed to the accident accounted for five of the seven fatalities. Specific behaviors associated with operator error are discussed later in this chapter.

Time and Location

A total of 96% of water skiing accidents occurred between May and September. 67% of water skiing-related accidents occurred in Northern California and 33% in Southern California. The most popular bodies of water were lakes (80%), followed by the Sacramento-San Joaquin Delta (7%) and the southern coast (6%).

Vessel Type and Length

Of the vessels involved in water skiing accidents, (92%) were open motorboats, followed by PWC (7%).

Type and Cause of Accidents

Exhibit II-9 provides a breakdown of the 2007 reported water skiing activities by situation.

Water skiing accidents, in which the skier was responsible for the accident, accounted for 34% of the accidents. These accidents most often involved inexperienced skiers, who were injured while attempting to stand up or who attempted maneuvers beyond their experience level.

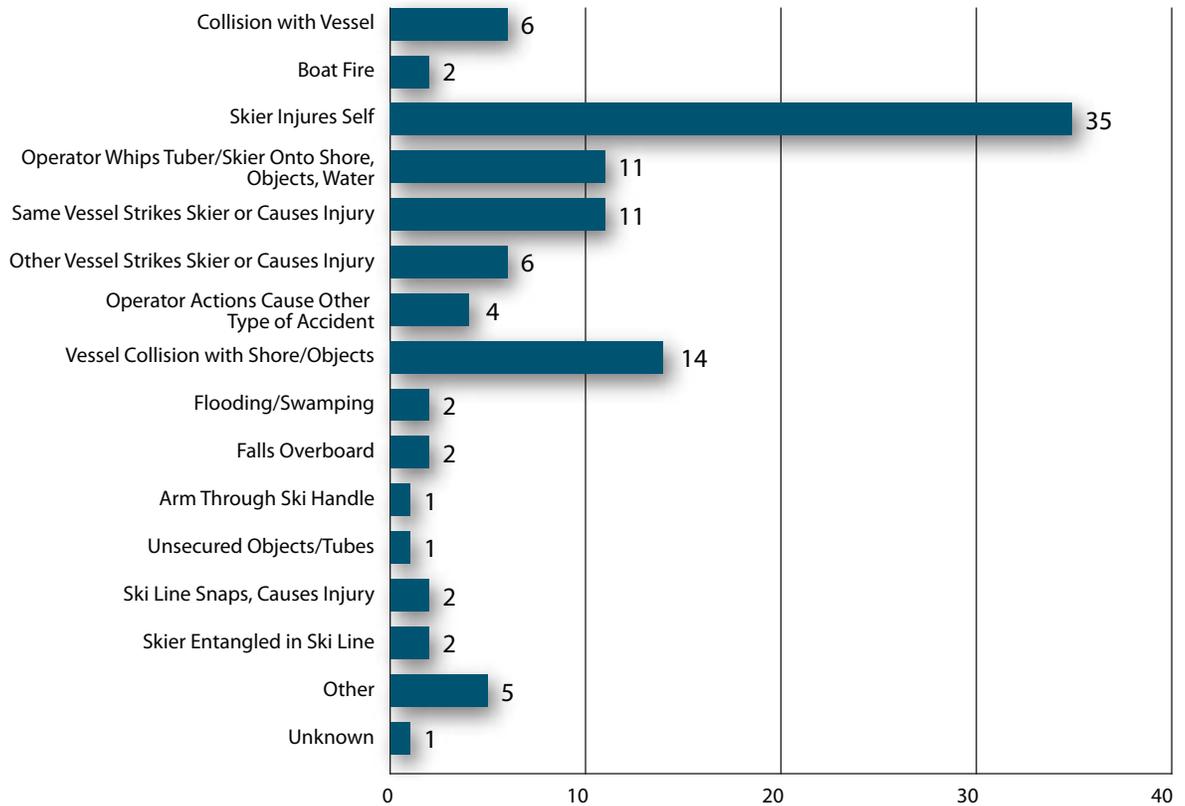
A variety of unsafe behaviors, both by operators towing skiers and also by other vessels operating in the vicinity of vessels towing skiers accounted for 66% of accidents. These accidents, in which the operator's unsafe behavior contributed to the accident, increased from 36% in 2006.

Exhibit II-8

2007 California PWC-Related Accidents by County

County	Accidents	Injuries	Fatalities	Property Damage
Amador	2	1	0	\$550
Butte	4	3	0	\$5,300
Calaveras	6	3	1	\$4,150
Contra Costa	3	2	0	\$5,550
El Dorado	3	4	0	\$2,000
Fresno	4	2	0	\$8,500
Kern	13	10	0	\$18,200
Lake	4	2	0	\$17,500
Los Angeles	9	6	1	\$14,400
Madera	8	5	0	\$28,850
Mariposa	1	0	0	\$1,700
Mendocino	1	2	0	\$3,500
Merced	3	0	0	\$9,050
Napa	8	5	1	\$7,900
Nevada	1	0	0	\$1,300
Orange	6	3	0	\$24,400
Placer	8	7	1	\$7,100
Riverside	23	24	0	\$34,800
Sacramento	6	5	0	\$8,900
San Bernardino	17	17	0	\$31,950
San Diego	20	19	1	\$31,900
San Joaquin	7	6	1	\$16,700
San Luis Obispo	5	4	0	\$18,000
San Mateo	1	1	0	\$0
Santa Clara	4	4	0	\$0
Shasta	4	4	1	\$3,000
Stanislaus	13	12	1	\$22,250
Sutter	1	1	0	\$1,700
Tehama	3	4	1	\$300
Trinity	1	1	0	\$0
Tulare	3	3	0	\$10,500
Tuolumne	7	7	0	\$4,600
Yolo	2	3	0	\$11,100
Yuba	3	2	0	\$600
Totals	204	172	9	\$356,250

Exhibit II-9 2007 California Water Skiing Accidents by Situation



Consistent with other years, the most common situations involved:

- Vessels not keeping appropriate distances from drifting vessels involved in assisting fallen skiers, thereby running over ski lines.
- Operators commencing operation of vessels while ski lines are still in the water, causing the lines to become entangled in the propellers.
- Operating too close to the shoreline while towing tubes, not realizing that the tubers cannot maneuver the tubes and causing them to strike the shoreline.
- Operators towing tubes in donuts to provide the tubers with more exciting rides, but instead, running over the ski lines and pulling the tubes into the propellers.
- Operators failing to notice that other vessels are towing skiers, causing collisions with skiers.
- Operators looking over their shoulders, watching skiers instead of relying on the observers, resulting in collisions with other vessels or the shoreline.
- Operators failing to secure tubes, resulting in their blowing overboard, tangling people in lines or wakeboards so that they fall off racks and injure people.
- Operators failing to make sure skiers are wearing life jackets, as required by California law.

E. Accidents Involving Youths Findings

Background

Throughout this report, “youths” refers to persons under 18 years of age.

From 1987 through 1997, California law required a person to be at least 12 years of age to operate a craft of more than 10 HP. If an operator was under 12, a person 18 years of age or older had to be on board the vessel.

In 1998, the law changed. The operator of a craft of more than 15 HP is required to be at least 16 years of age. Persons 12-15 may operate if a person of at least 18 years of age is attentively supervising aboard the vessel.

Note: Exceptions to this law include the operation of a sailboat that does not exceed 30 feet in length or a dinghy used directly between a moored boat and the shore, or between two moored boats.

During the 2007 boating season, youth operators were involved in 7% of all accidents, 10% of injuries and 7% of fatalities.

Exhibit II-10 presents a 15-year summary for youth operator accident statistics.

The number of accidents involving youths had remained consistent for three years prior to the 1998 boating season. However, since the previously mentioned operator age limit increase took effect in January 1998, there has been a substantial decrease in the number of accidents involving operators under 16 years of age. The total number of accidents involving all youth operators is 52% lower than the number reported in 1997.

Of the 69 youth operators involved in accidents, 30 (43%) were under the age of 16, and four were under the age of 12. Of the operators younger than 16 years of age, 80% were operating illegally by either not having an adult on board, or, when the operator

Exhibit II-10

1993-2007 California Youth Operator Accidents

Year	Number of Operators	Number of Accidents	Number of Injuries	Number of Fatalities
1993	77	67	51	7
1994	99	86	63	3
1995	135	110	80	1
1996	136	117	95	3
1997	140	120	87	2
1998	81	70	51	6
1999	73	63	56	2
2000	94	80	72	2
2001	107	88	92	0
2002	90	79	68	2
2003	99	83	72	8
2004	65	51	44	2
2005	57	46	42	0
2006	63	55	52	2
2007	69	58	49	4

was younger than 12, operating the vessel under any circumstance. The percentage of underage operators operating illegally has increased from 63% in 2006.

Type and Cause of Accidents

Collisions (72%) were the primary type of accident involving youth operators, followed by persons struck by boats (9%) and falls overboard (7%).

The most common cause of accidents involving youth operators was operator inexperience (67%). Operator inexperience was a factor in only 33% of accidents involving operators of all ages. Excessive speed was a factor in 57% of accidents followed by operator inattention (53%).

Vessel Type

The vast majority (81%) of youth operators involved in accidents were operating PWC. An additional 13% were operating open motorboats.

Additional Safety Concerns

Very young children riding on PWC can present serious safety problems. While riding in front of an

operator, a child has easy access to the vessel controls and can easily manipulate them. Such situations have resulted in accidents. Seating a young child behind a PWC operator is unsafe as well, because he or she can easily fall overboard.

Additionally, in a previous year, a lanyard was left attached on a drifting, unoccupied PWC. A small child playing in the area climbed aboard, pressed the start button and shot across the water, striking a swimmer, who later died of serious head injuries.

F. Fatal Boating Accidents

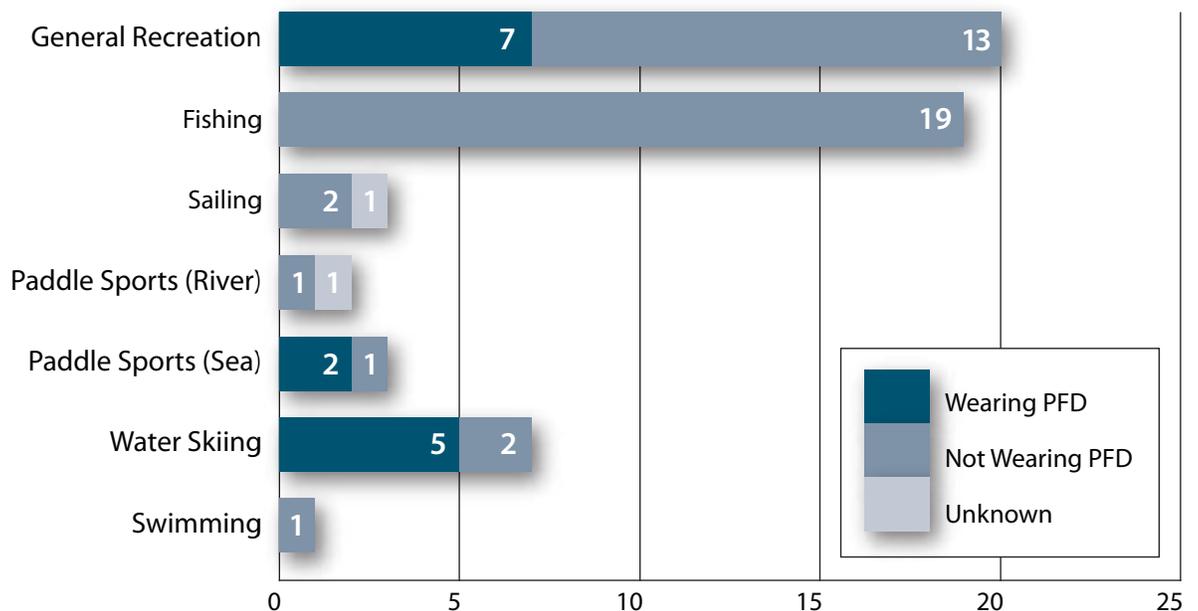
Findings

In 2007, 55 fatalities occurred on California waterways. This represents 5.7 fatalities per 100,000 registered vessels. The number of fatalities increased from 42 in 2006 (4.7 per 100,000 registered vessels).

Type and Cause of Accidents

The most common type of fatal accident involved vessels capsizing (35%), falls overboard (25%) and collisions with other vessels (13%). Operator

Exhibit II-11
2007 California Boating Fatalities by Type of Activity and Life Jacket Usage



inattention (44%), overloading/improper loading (29%), operator inexperience (25%) and excessive speed (18%) were the primary causes of fatalities. Of the fatalities 71% of the victims drowned. Of that group, 87% were not wearing a life jacket.

Fatalities involving overloading or improper loading rose from two in 2006 to 16 in 2007, the largest number that the department has on record. Nearly all vessels involved were less than 16 feet in length—most were 12 feet or less in length. Some vessels were overloaded with people or equipment which exceeded the capacity. Other situations involved passengers moving unsafely around in vessels causing stability issues.

Time and Location

Fatalities occurred in consistent numbers from March through August. Figures show that 45% of fatalities occurred during the off-season of October through April. 53% of fatalities occurred on a Saturday or Sunday, 55% of fatalities occurred on lakes, 16% occurred on oceans/bays, 5% occurred on the Colorado River, 16% on other rivers throughout the State, and 7% occurred in the Sacramento-San Joaquin Delta region. Northern California had 60% of fatalities compared with 40% in Southern California.

Vessel Type and Length

Open motorboats accounted for 50% of the vessels involved in fatal accidents, followed by PWC (21%), paddle craft (14%), cabin motorboats (7%) and sailboats (5%). The majority of vessels involved in fatal accidents were less than 26 feet in length (72%).

Operator Profile

The 31-40 age group was involved in more fatalities than any other age group. Of the 55 operators involved in accidents, 98% were males.

Victim Activity

Exhibit II-11 presents boating fatalities by type of activity and life jacket usage.

Fishing-Related Fatalities

Fishing-related fatalities typically account for about one of every three fatalities in California each year and are of particular concern to the department.



In 2007 these accidents accounted for 19 (35%) of boating fatalities.

A total of 15 of the 19 fatalities occurred between October and April, when the water was cold. A number of victims were wearing heavy clothes which hampered their swimming ability. Most (89%) drowned and of that group, none were wearing life jackets.

The majority of the fishing-related fatalities occurred as a result of vessels capsizing (68%) or victims falling overboard (26%). A total of 53% involved either overloading or improper loading of vessels. Additionally, testing for alcohol impairment was conducted on 17 victims and of that group, 53% were found to be alcohol related.

Victims of fishing-related accidents (47%) were boating on southern lakes followed by northern lakes (26%), northern rivers (21%) and the Sacramento/San Joaquin Delta (5%).

Paddle Sport Fatalities

Five victims died while engaged in paddle sport activities in 2007. Two victims died on rivers during whitewater or swift-water boating activities, and three died while in ocean waters.

Capsizing was the most common type of these accidents, and inexperience and hazardous weather and water conditions were the main causes.

All of the victims drowned. Two of the five were wearing their life jackets. Strong currents pulled them beneath the surface of the water despite their jackets being worn.

G. Alcohol Use and Fatal Boating Accidents

Background

In 1987, state law made it illegal to operate a recreational vessel with a blood alcohol level of 0.10% or more. In 1991, the legal limit was decreased to 0.08%. Furthermore, a “boating under the influence” conviction now appears on Department of Motor Vehicles records and can be used to suspend or revoke a vehicle driver’s license.

For the purpose of this analysis, only fatal boating accidents were analyzed for alcohol relatedness. A person with a blood alcohol level of 0.035% or higher is assumed to be “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 judgment and operational competency occur.

As discussed earlier, testing was not conducted on all victims due to delayed accident reporting or delayed body recovery, which can alter blood alcohol levels.

Findings

Of the 55 fatalities, blood alcohol information was available in 44 of the cases. Of these 44 cases, 20 victims or operators (45%) had blood alcohol levels equal to or greater than 0.035%.

Type and Cause of Accidents

The majority of alcohol-related boating fatalities were the result of vessels capsizing (45%), or falls overboard (30%). Operator inattention (50%), overloading/improper loading (45%), and operator inexperience (25%) were the leading causes of accidents. (Some accidents had more than one cause.) Of the 80% of the victims that drowned, none were wearing a life jacket.

Type of Vessel

A total of 22 vessels were involved in these accidents. The two most common types of vessels involved were open motorboats (59%) and cabin motorboats (14%). Of all vessels involved, 82% were less than 26 feet in length.

Time and Location

Of the 20 alcohol-related fatalities, 55% occurred on weekends; 50% occurred in Northern California and 50% in Southern California.

Activity

Alcohol-related fatalities (45%) took place during fishing activities. 45% took place during general recreation activities, one while swimming, and one during water skiing activities.

Profile of Intoxicated Boater

An examination of the 20 alcohol-related fatalities revealed that ten were operators, eight were passengers, one was a swimmer and one was a water skier. As in previous years, several of the victims who were not operators contributed to their deaths due to their level of alcohol consumption.

These findings related to intoxicated passengers or other occupants were consistent with findings from other years. Persons other than the operator who are under the influence often put themselves in dangerous positions in the boating environment, engaging in activities such as leaning over or sitting on gunwales or jumping from one vessel to another. Additionally, intoxicated passengers often stand in or move about in vessels, causing them to fall overboard, or the vessel to capsize, placing all aboard in danger. Persons also swim too close to propellers, causing danger to themselves.

These situations underscore Cal Boating’s long-held view that a sober operator does not ensure passenger safety. Intoxicated persons in or around vessels are exposed to dangers that would not affect the safety of intoxicated passengers in a vehicle. The “designated driver” concept, which is popular in some boating safety literature, has its roots in automobile safety where the possibility of falling overboard and drowning (or swimming too close to the propeller) is not a factor. Therefore, based upon the findings of these fatalities and others from previous years, Cal Boating recommends that neither operators nor passengers drink alcoholic beverages while boating.