# **Exhibit II-1 California Boating Accident Statistics** 1999-2008

Year	Number of Accidents	Number of Injuries	Number of Fatalities	Amount of Property Damage
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
2008	686	382	48	\$5,899,184

**Exhibit II-2** 2008 California Registered Vessels and Boating Accidents by County

County	Number of Registered Vessels	Accidents	Injuries	Fatalities	Property Damage
Alameda	23,992	7	1	1	\$19,250.00
Alpine	124	1	0	1	\$0.00
Amador	3,245	1	0	0	\$1,000.00
Butte	16,372	3	2	1	\$2,800.00
Calaveras	6,131	2	0	0	\$10,700.00
Colusa	1,416	1	3	0	\$16,500.00
Contra Costa	34,243	28	26	2	\$114,700.00
Del Norte	1,498	2	4	1	\$3,050.00
El Dorado	14,433	9	7	1	\$12,500.00
Fresno	21,797	14	7	3	\$27,550.00
Glenn	1,928	2	2	1	\$3,000.00
Humboldt	7,382	1	1	0	\$3,000.00
Imperial	2,173	1	2	0	\$300.00
Inyo	1,116	0	0	0	\$0.00
Kern	16,810	8	4	0	\$7,450.00
Kings	2,848	0	0	0	\$0.00
Lake	10,611	12	8	0	\$36,250.00
Lassen	3,232	0	0	0	\$0.00
Los Angeles	110,288	55	10	3	\$1,120,080.00
Madera	6,240	8	6	0	
	8,299				\$9,050.00
Marin		7	6	2	\$18,650.00
Mariposa	1,611	3	0	0	\$19,500.00
Mendocino	4,888	0	0	0	\$0.00
Merced	6,432	5	6	0	\$8,400.00
Modoc	787	0	0	0	\$0.00
Mono	1,528	2	1	1	\$0.00
Monterey	8,121	11	10	0	\$130,400.00
Napa	6,158	27	20	0	\$54,800.00
Nevada	9,544	7	5	0	\$13,846.00
Orange	62,964	69	12	0	\$881,900.00
Placer	20,466	12	3	0	\$419,800.00
Plumas	3,683	7	3	0	\$19,600.00
Riverside	49,500	21	13	4	\$34,750.00
Sacramento	43,483	22	13	1	\$128,650.00
San Benito	1,723	0	0	0	\$0.00
San Bernardino	48,841	47	49	0	\$229,400.00
San Diego	61,572	84	55	0	\$1,093,390.00
San Francisco	3,673	15	7	0	\$204,450.00
San Joaquin	24,709	58	32	9	\$482,950.00
San Luis Obispo	12,876	6	6	0	\$14,900.00
San Mateo	10,986	5	3	4	\$220,550.00
Santa Barbara	9,761	28	1	1	\$204,100.00
Santa Clara	25,058	4	2	0	\$5,800.00
Santa Cruz	7,230	1	0	0	\$600.00
	19,356				
Shasta	319	27	14	2	\$18,450.00
Sierra		0	0	0	\$0.00
Siskiyou	4,171	0	0	0	\$0.00
Solano	14,818	9	7	4	\$26,550.00
Sonoma	17,811	8	5	1	\$80,450.00
Stanislaus	17,989	8	4	0	\$15,450.00
Sutter	5,455	1	0	1	\$0.00
Tehama	4,457	2	1	0	\$900.00
Trinity	2,212	0	0	0	\$0.00
Tulare	8,918	3	2	1	\$5,500.00
Tuolumne	6,084	6	3	0	\$33,268.00
Ventura	23,772	18	10	3	\$132,200.00
Yolo	5,878	5	3	0	\$11,600.00
Yuba	4,278	3	3	0	\$1,200.00
Totals*	855,290	686	382	48	\$5,899,184.00

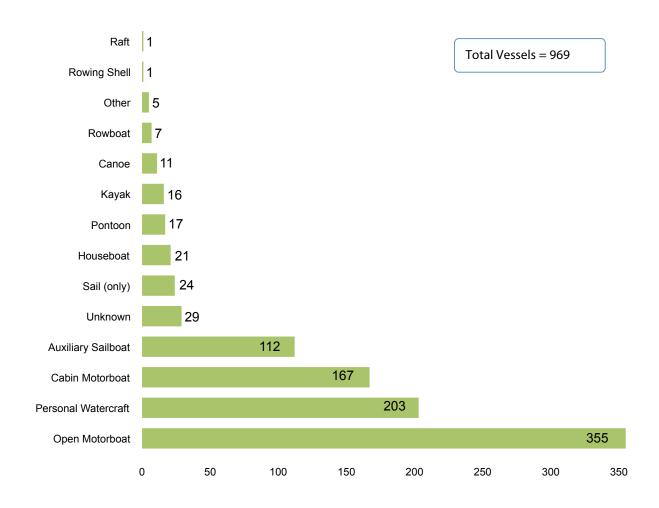
<sup>\*</sup>does not include 3,563 out of state vessels, which brings the total registered vessels to 858,853

# Exhibit II-3 California Boating Accidents, Injuries, and Fatalities by Location 2007-2008\*

	Accidents			Injuries			F	atalities	
	2007	2008	Difference	2007	2008	Difference	2007	2008	Difference
Northern Lake	234	141	-93	149	82	-67	18	9	-9
Southern Lake	131	93	-38	89	54	-35	12	7	-5
Northern Coast	19	23	4	10	22	12	1	7	6
Southern Coast	224	230	6	88	78	-10	7	5	-2
Northern River	36	32	-4	30	23	-7	9	3	-6
Southern River	1	5	4	0	3	3	0	1	1
SF Bay Area	27	25	-2	13	9	-4	1	0	-1
Delta	83	101	18	47	66	19	4	15	11
Colorado River	49	36	-13	56	45	-11	3	1	-2
Totals	804	686	-118	482	382	-100	55	48	-7

<sup>\*</sup>For the first time, accidents on the coast exceeded those on lakes, accounting for 37% of accidents. (The "Northern Coast" group excludes the San Francisco Bay area.)

# Exhibit II-4 Vessels Involved in all Accidents by Type

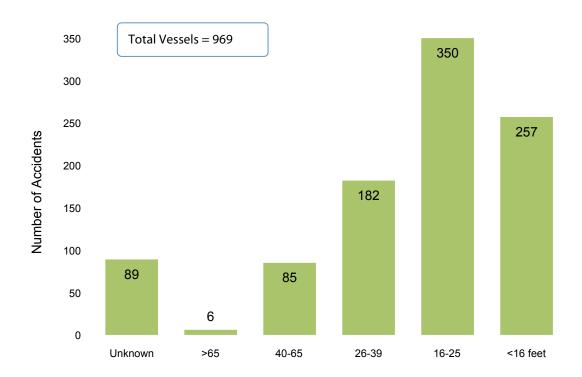


## Exhibit II-5 Accidents by Vessel Type from 2004-2008

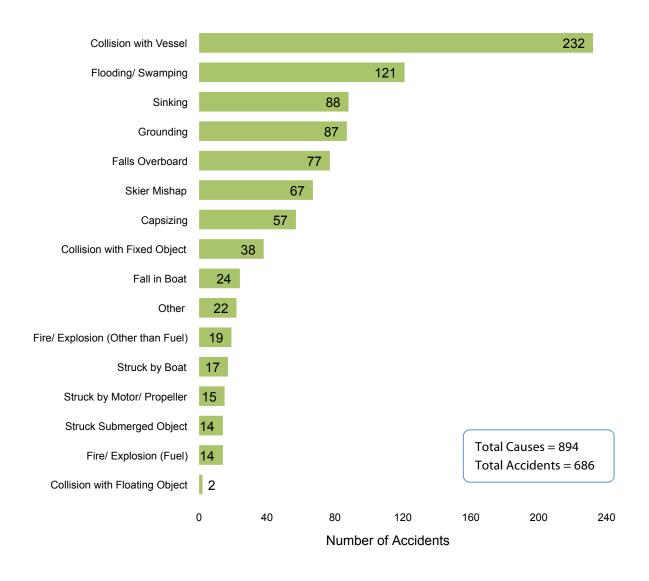
Type of Boat	2004	2005	2006	2007	2008
Open Motorboat	386	406	366	397	317
Cabin Motorboat	147	138	134	152	141
Personal Watercraft	186	203	180	204	139
Houseboat/ Pontoon	35	44	39	30	33
Canoe/ Kayak	7	12	7	10	24
All Sailboats	74	90	113	106	121

The numbers in this chart differ from those in Exhibit II-4 because an accident that involves two open motorboats will only be counted once in this chart, but both vessels will be represented in Exhibit II-4.

# Exhibit II-6 Vessels Involved in all Accidents by Length



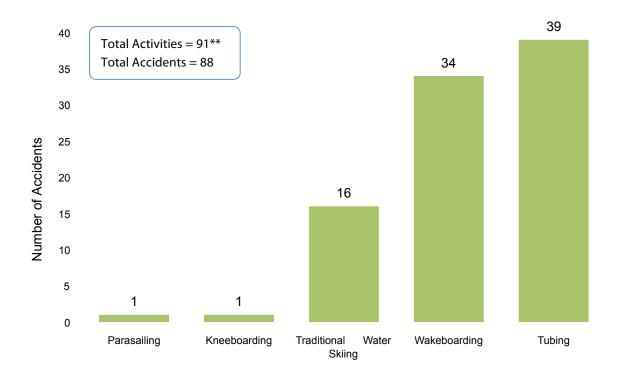
# **Exhibit II-7 Type of Accidents**



## **Exhibit II-8 Type of Accident by Vessel Type**

Type of Accident	All Vessels	Open Motorboat	Cabin Motorboat	Personal Watercraft	All Sailboats	Houseboat/ Pontoon	Canoe/ Kayak
Collision with Vessel	34%	28%	46%	63%	52%	42%	8%
Collision with Fixed Object	6%	5%	6%	1%	7%	6%	0%
Grounding	13%	9%	13%	6%	21%	9%	0%
Falls Overboard	11%	9%	5%	22%	2%	0%	17%
Flooding/Swamping	18%	22%	20%	1%	7%	15%	25%
Sinking	13%	16%	17%	1%	5%	9%	25%
Capsizing	8%	9%	2%	1%	5%	6%	50%
Skier Mishap	10%	20%	1%	4%	1%	3%	0%
Struck by Boat	2%	2%	1%	7%	1%	3%	4%

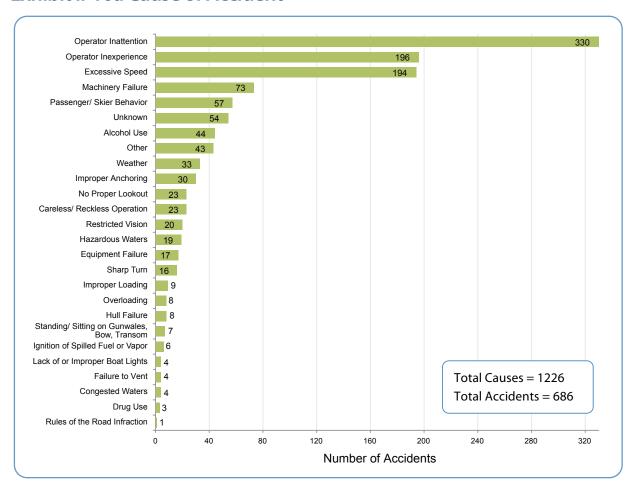
### **Exhibit II-9 Accidents Involving Towing Sports**



<sup>\*</sup>Towing sports include persons being towed on lines behind vessels on water skis, wake boards, wake skates, kneeboards, tubes and parasails.

<sup>\*\*</sup>Three accidents each involved two vessels involved in different types of towing-related activities. This accounts for the number of activities totaling 91 but the number of accidents totaling 88.

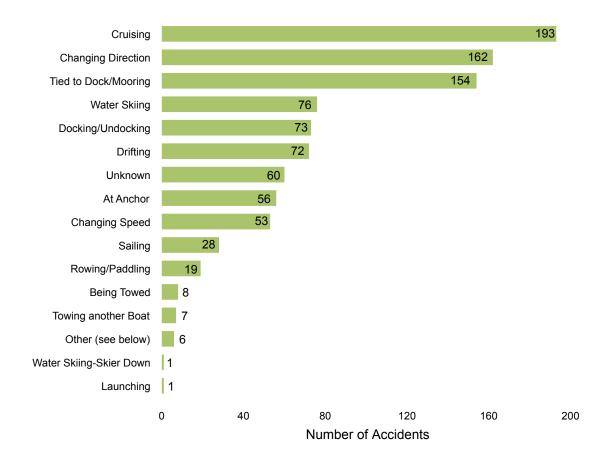
### **Exhibit II-10a Cause of Accident**



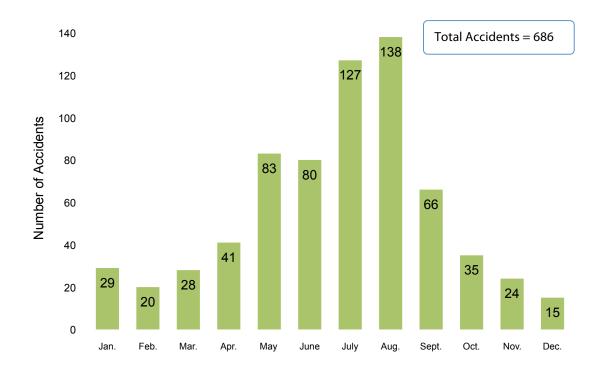
# **Exhibit II-10b Cause of Accident by Type of Vessel**

Cause of Accident	All Vessels	Open Motorboat	Cabin Motorboat	Personal Watercraft	All Sailboats	Houseboat/ Pontoon	Canoe/ Kayak
Machinery Failure	11%	9%	21%	2%	14%	6%	0%
Operator Inattention	48%	58%	46%	58%	43%	48%	29%
Operator Inexperience	29%	21%	19%	59%	25%	30%	54%
Excessive Speed	28%	29%	18%	72%	8%	12%	0%
Improper Anchoring	4%	1%	6%	0%	14%	12%	0%
Weather	5%	4%	6%	0%	9%	6%	17%
Passenger/Skier Behavior	8%	15%	4%	1%	0%	9%	0%

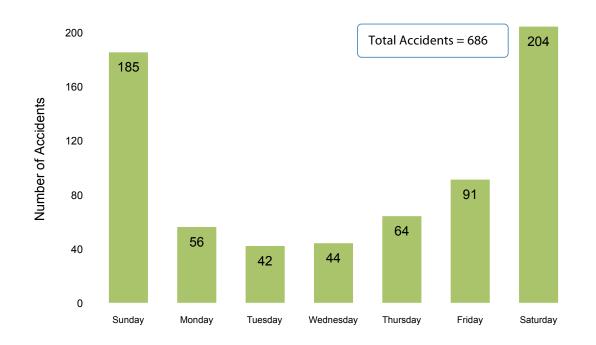
# **Exhibit II-11 Operation at Time of Accident**



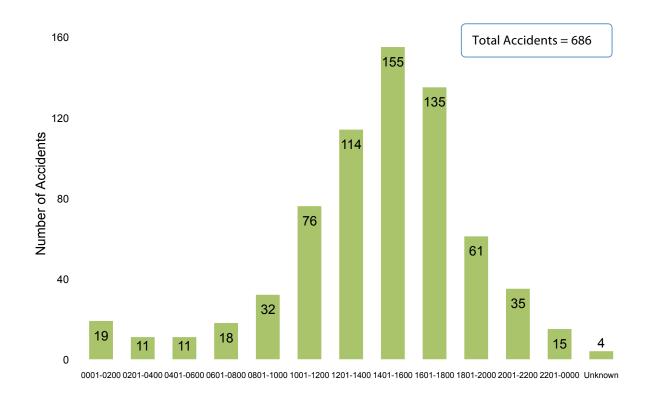
## **Exhibit II-12 Accidents by Month**



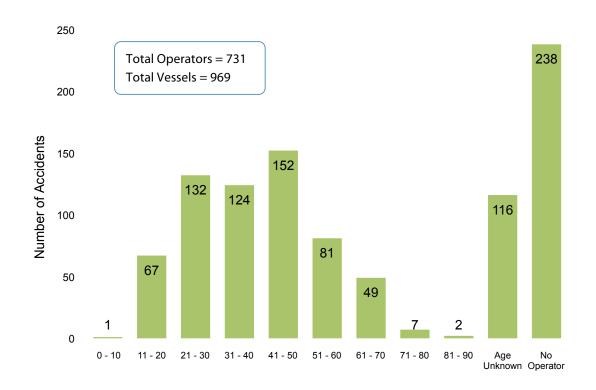
# Exhibit II-13 Accidents by Day of the Week



# **Exhibit II-14 Accidents by Time of Day**



# Exhibit II-15 Operators Involved in all Accidents by Age



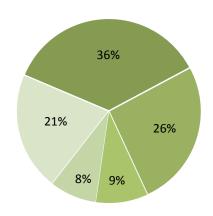
# **Exhibit II-16 Accidents Involving Youth Operators**

Years	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
2008	32	28	32	3

## **Exhibit II-17 Ownership Status of Vessels Involved in Accidents**

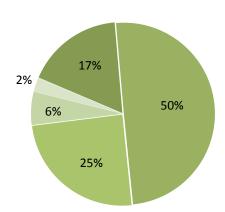
#### **All Vessels Involved in Accidents**

- Owner/Operator the same 347
- Borrowed 251
- Rented 89
- Unknown 80
- No Operator 202



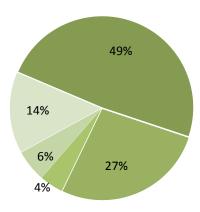
#### **PWC Involved in Accidents**

- Owner/Operator the same 35
- Borrowed 101
- Rented 50
- Unknown 12
- No Operator 5

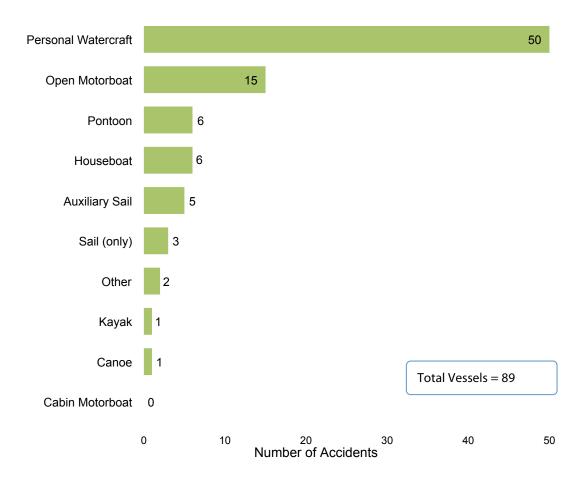


### **Open Motorboat Involved in Accidents**

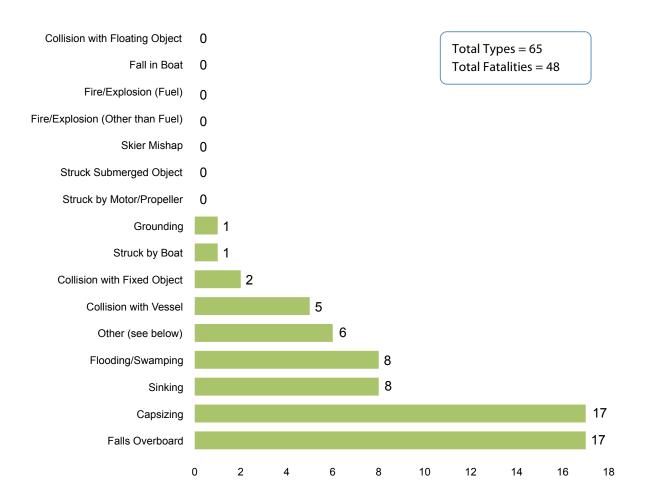
- Owner/Operator the same 173
- ■Borrowed 96
- Rented 15
- Unknown 20
- No Operator 51



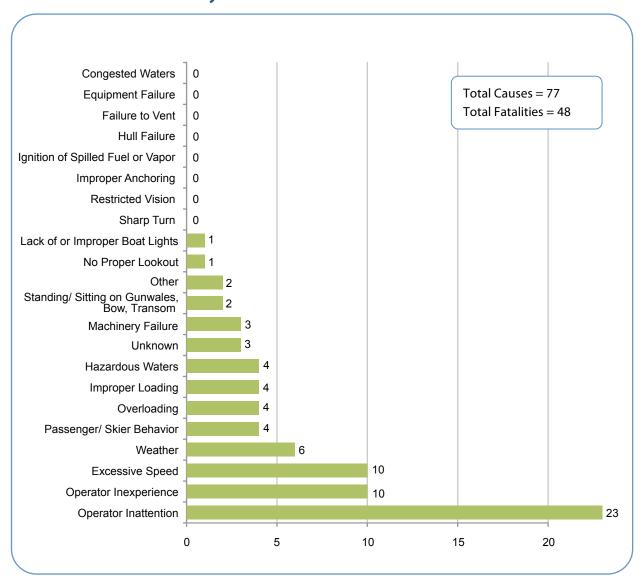
# Exhibit II-18 Rented Vessels Involved In Accidents by Type



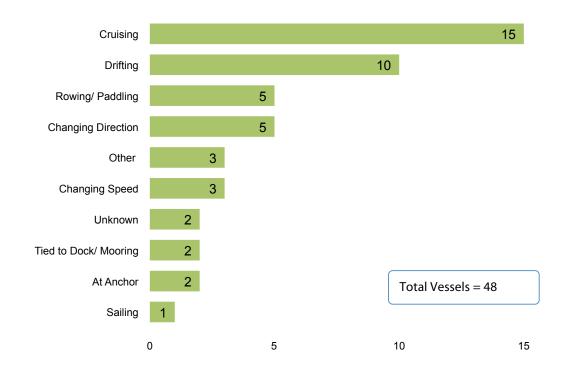
# **Exhibit II-19 Fatalities by Type of Accident**



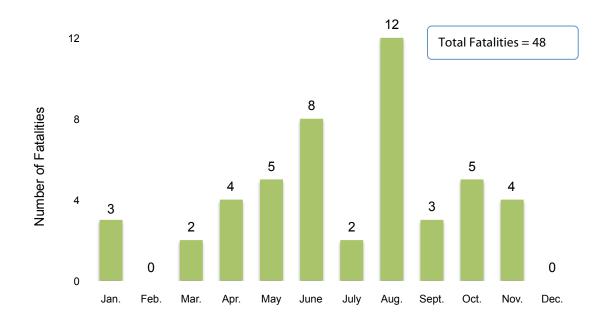
## **Exhibit II-20 Fatalities by Cause of Accident**



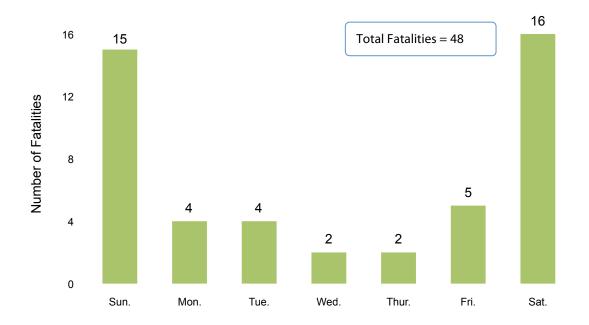
# **Exhibit II-21 Fatalities by Operation at Time of Accident**



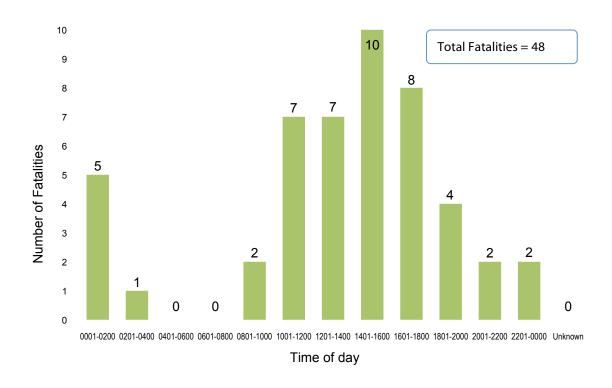
# **Exhibit II-22 Fatalities by Month**



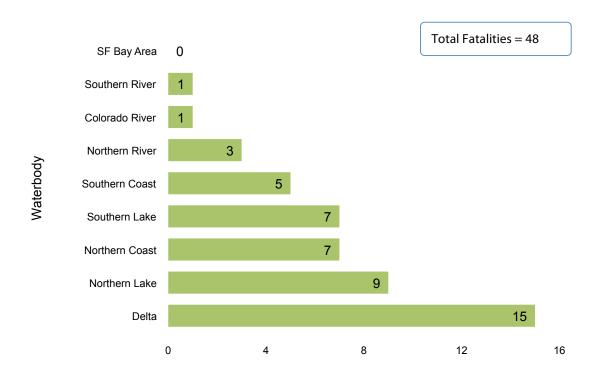
# Exhibit II-23 Fatalities by Day of the Week



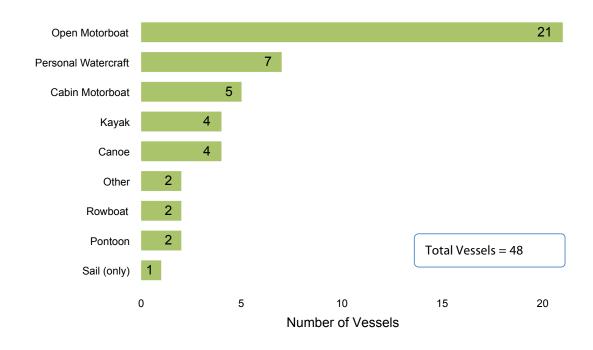
## **Exhibit II-24 Fatalities by Time of Day**



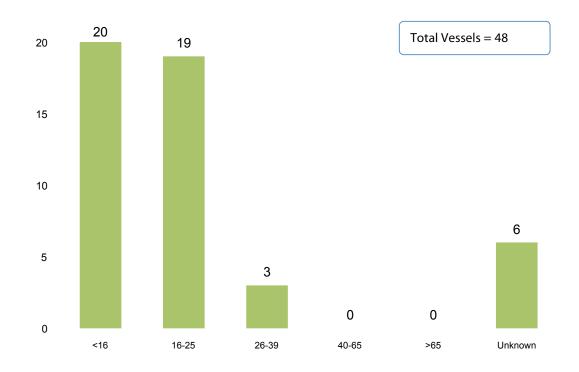
## **Exhibit II-25 Fatalities by Accident Location**



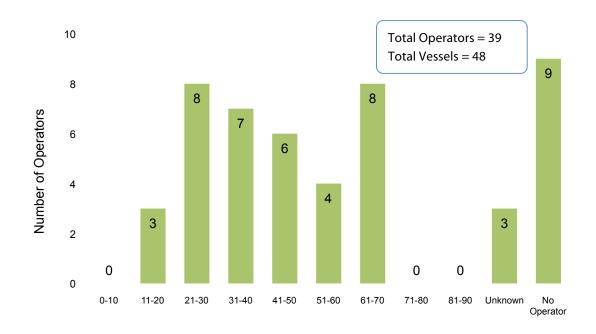
# **Exhibit II-26 Types of Vessels Involved in Fatal Accidents**



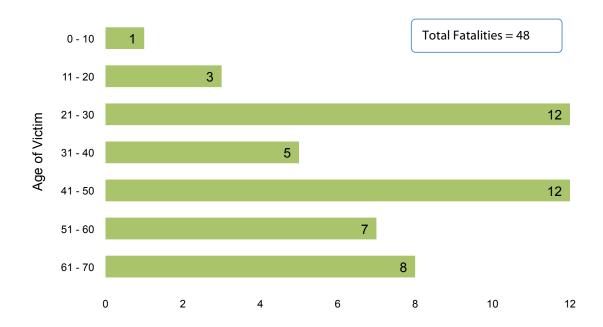
# **Exhibit II-27 Fatalities by Length of Vessel**



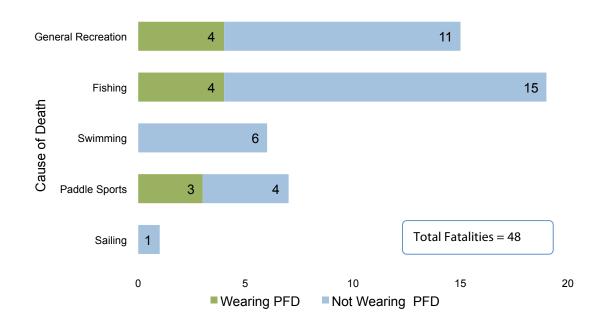
# Exhibit II-28 Operators Involved in Fatal Accidents by Age



## **Exhibit II-29 Fatalities by Age of Victim**



## Exhibit II-30 Fatalities by Type of Activity and Life Jacket Usage



# **Exhibit II-31 Fatalities by Cause of Death**



# **Exhibit II-32 Location of Fishing Fatalities--1995-2008**

Body of Water	Fishing Fatalities
Northern Lakes	64
Northern Coast	47
Delta	39
Southern Lakes	30
Southern Coast	28
Northern River	17
SF Bay Area	8
Southern River	3
Colorado River	0
Total	236

# Exhibit II-33 Fishing Fatalities--Specific Areas--1995-2008

Body of Water	Fatalities
Half Moon Bay Area	11
Bodega Bay/Tomales Bay	11
San Luis Reservoir/O'Neil Forebay	10
New Melones Reservoir	8
Shasta Lake	5

# **Exhibit I-2 Boating Fatality Comparison**

Prior to Commencement of Law Changes and Safety Enhancements			After Enactment of Laws and Changes and Safety Enhancements			
Year	# of Fatalities	Fatalities Per 100,000 Vessels	Year	# of Fatalities	Fatalities Per 100,000 Vessels	
1976	98	18.1	1999	42	4.4	
1977	116	21.4	2000	51	5.6	
1978	104	18.9	2001	48	5	
1979	99	17.5	2002	53	5.9	
1980	112	20.1	2003	61	6.3	
1981	87	15.1	2004	44	4.9	
1982	103	17.6	2005	58	6	
1983	95	15.6	2006	42	4.7	
1984	93	14.8	2007	55	5.7	
1985	76	11.7	2008	48	5.6	

# **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."

#### **Auxiliary Sailboat**

A sailboat also equipped with an engine.

#### **Cabin Motorboat**

Motorboat with a cabin that 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 may lie on its side.

#### **Carbon Monoxide Poisoning**

Death or injury resulting from an odorless, colorless gas generated from auxiliary boat equipment (stoves, heaters, refrigerators, generators, hot water heaters, etc.) or boat exhaust from either the boat the person was aboard or one in close proximity.

#### **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 that is free to move with the tide, current, or wind, except another vessel.

#### **Collision with Vessel**

Any striking together of two or more vessels, regardless of operation at the time of accident.

#### Cruising

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

#### **Drifting**

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

#### **Equipment Failure**

Defect and/or failure of auxiliary equipment associated with the vessel (e.g.: communication or navigation equipment, life jackets, fire extinguishers, etc.)

#### **Excessive Speed**

Operating at a speed that is not responsible, prudent, or legal considering the circumstances.

#### **Failure to Vent**

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

#### **Fall in Boat**

Any operator or passenger who slips, trips, or falls on board or within the vessel.

#### **Falls Overboard**

Any operator or passenger who falls off of the vessel.

#### Fire/Explosion (Fuel)

Accidental combustion of vessel fuel or liquids, including their vapors.

#### Fire/Explosion (Other)

Accidental burning or explosion of any material 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.

#### **Hull Failure**

Defect or failure of the structural body of a vessel (e.g.: hull material, design, or construction) not including superstructure, masts, or rigging.

#### **Ignition of Spilled Fuel or Vapor**

Accidental combustion of vessel fuel, liquids, and/or their vapors.

#### **Improper Loading**

Loading, including weight shifting, of the vessel causing instability, limited maneuverability, or dangerously reduced freeboard.

#### **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."

#### Inflatable

A vessel constructed with its sides and bow made of flexible tubes containing pressurized gas. On smaller inflatables, the floor and hull beneath it is often flexible. On larger inflatables, the boat often has a rigid floor and solid hull capable of supporting a more powerful transom mounted outboard engine or even an inboard engine.

#### **Machinery Failure**

Defect and/or failure in the machinery or material, design or construction, or components installed by the manufacturer, involved in the mechanical propulsion of the boat (e.g.: engine, transmission, fuel system, electric system, and steering system).

#### 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.

#### **Operator Inattention**

Failure on the part of the operator to pay attention to the vessel, its occupants, or the environment in which the vessel is operating.

#### **Operator Inexperience**

Lack of practical experience or knowledge in operating a vessel, or, more particularly, the vessel involved in the accident or activity involving it. Additionally, lack of familiarity with the specific waterway or type of water and the conditions or hazards associated with it.

#### Overloading

Excessive loading of the vessel causing instability, limited maneuverability, dangerously reduced freeboard, etc.

#### Passenger/Skier Behavior

Behavior by any of the boat's passengers as well as those being towed that either interferes with the safe operation of a vessel or contributes to an injury to a passenger or towed person.

#### 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 designed to serve as a lifesaving aid.

#### Personal Watercraft (PWC)

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 the conventional manner of sitting or standing inside the vessel.

#### **Pontoon Boat**

A boat consisting of a rigid structure connecting at least two parallel fore (front) and aft (rear) rigid sealed buoyancy chambers.

#### **Restricted Vision**

Visual limitations occurring from a vessel's bow, high trim, glare, sunlight, bright lights, darkness, a dirty windshield, spray, sail, or canopy top, etc.

#### **Rules of the Road**

Statutory and regulatory rules governing the navigation of vessels.

#### Sail (only)

Any boat whose sole source of propulsion is the natural element (i.e.: wind) or a boat designed or intended to be propelled primarily by sail, regardless of type or size.

#### **Sharp Turn**

An immediate or abrupt change in the boat's course of direction.

#### Sinking

Losing enough buoyancy to settle below the surface of the water.

#### **Skier Mishap**

Injury to a person engaged in a towing sport that includes 1) falling, or 2) striking objects, the shore, or other vessels, or 3) striking or becoming entangled in the tow line.

#### Standing/Sitting on the Gunwale, Bow, or Transom

Standing/sitting on the upper edge of the side of a boat, usually on a small projection above the deck, and or standing/ sitting on the most forward part of the boat, and/or standing/sitting on the back of the boat.

#### **Towing Sports**

Persons being towed on lines behind vessels on water skis, wakeboards, wake skates, kneeboards, skurf boards, tubes, air chairs, and parasails.

#### Weather

As a contributing factor of an accident, "weather" signifies a stormy, windy or foggy condition that results in dangerous operating conditions.