

Tennessee Wildlife Resources Agency



2011 Tennessee Boating Accident Statistical Report

Summary of Reportable Boating Accidents

TWRA Boating & Law Enforcement Division

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HISTORY:

The Tennessee Wildlife Resources Agency acquired the state's boating program in 1965 with the implementation of the 'Boating Safety Act'. Before this date the United States Coast Guard (USCG) administered the state's boating program.

INTRODUCTION:

The 2011 Boating Accident Statistical Report is compiled by the Tennessee Wildlife Resources Agency (TWRA), Boating Division. The data used in this report is retrieved from "reportable boating accident" reports submitted by TWRA officers who investigate boat accidents and report their findings on TWRA Boating Accident Report forms (BAR). This data is for accidents which occurred during the 2011 calendar year.

To be considered a "reportable boating accident", an accident must involve a death, missing person, an injury which requires or should have required treatment beyond first aid, or property damage of \$2,000 or more. Tennessee requires operators involved in an accident to immediately notify TWRA and provide certain information to the investigating officer. TWRA officers are required by Agency policy to investigate accidents that meet the reporting criteria.

At the end of each calendar year, boating accident data is compiled and assembled into Tennessee's annual report. These statistics are analyzed in an effort to formulate proactive plans to reduce the number of boating accidents and their related fatalities, injuries, and damage. The accident information is also reported to the USCG Office of Boating Safety in Washington, D.C. to be included in the National Boating Accident Database consisting of data from all U.S. states, commonwealths, and territories.

Any questions concerning this report should be directed to:

Tennessee Wildlife Resources Agency
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Nashville, TN 37204
Telephone: (615) 781-5271



2011 TENNESSEE BOATING ACCIDENT STATISTICAL REPORT EXECUTIVE SUMMARY

2011 REPORTABLE BOATING ACCIDENTS

- The total number of *registered vessels* in 2011 was **258,096**. That was a **decrease** of over **8,000** from 2010.
- The total number of *reported accidents* in 2011 was **162**. That was a **decrease** from 2010 which had **167**.
- The *accident rate* for 2011 was **62.79 per 100,000** registered vessels. This was almost equal to 2010 which was **62.78 per 100,000**.
- The *body of water* that reported the most accidents was **Ocoee River** with **30 accidents**. (resulting from whitewater activities)
- The *county* that reported the most accidents was **Polk County**. (whitewater activities)
- The *monetary amount* of damage resulting from boating accidents in 2011 was **\$553,910**. This was a slight **increase** from 2010 which reported **\$551,553**.
- The most common *type of boat* involved in an accident was an **open motorboat**.
- The leading *type of accident* was **collision with another vessel**.
- The most common *operation* during an accident was **cruising**.
- The leading *primary cause* of accidents was **hazardous waters** (whitewater activities) followed by **improper lookout**.
- *Alcohol and/or drug use* was a primary cause in **4.9%** of accidents. This was a **decrease** from 2010 which was **5.7%** of accidents.
- *Rented or borrowed vessels* were involved in **20.3%** of accidents in 2011. This was an **increase** from 2010 which was **13.4%** of accidents.
- The most likely *time* to be involved in an accident was between the hours of **Noon to 4:00 pm**.
- The most likely *day of the week* to be involved in an accident was **Saturday**.
- The leading *age groups* of operators to be involved in an accident was **21 through 25** and **31 through 35**.

2011 BOATING FATALITIES

- The *number* of boating fatalities for 2011 was **23 accidents resulting in 24 deaths**. This was an **increase** from 2010 which reported **19**.
- The *type of accident* that resulted in the most fatalities was **capsizing** with 5 occurrences.
- The *type of vessel* that was most common in fatal accidents was the **open motorboat** with 10 vessels.
- The *length of vessel* that was most common in fatal accidents was **16 to 26 feet** with 13 vessels.
- The top *primary cause* for fatal accidents was **alcohol impairment** with 5 occurrences or 21%.

2011 INJURY ACCIDENTS

- The *number* of injury accidents in 2011 was **78** resulting in **105 injuries**.
- The leading *contributing cause* of injury accidents was **hazardous waters**.
- The *type of accidents* that resulted in the most injuries was **collision with vessel**.
- The *body of water* that produced the most injury accidents was the **Ocoee River** with **27** accidents. (These resulted from whitewater sports activities.)

2011 PROPERTY DAMAGE ACCIDENTS

- The *number* of property damage accidents in 2011 was **60**. This was an **increase** from 2010 which reported **40**.
- The *type of accident* that most commonly resulted in property damage was **collision with another vessel** with **15** occurrences.
- The *bodies of water* that reported the most property damage accidents was **Douglas Lake, Ft. Loudon Lake, and Kentucky Lake** with **5** accidents each.
- The leading *primary cause* in property damage accidents was **improper lookout** and **operator inexperience** with **9** occurrences each.

2011 PERSONAL WATERCRAFT (PWC) ACCIDENTS

- The *number* of PWC's involved in accidents in 2011 was **16**, a **decrease** from 2010 which reported **25**.
- The *number* of PWC's involved in injury accidents was **15**, a **decrease** from 2010 which reported **24**.
- The *number* of PWC's involved in fatal accidents was **0**, a **decrease** from 2010 which reported **1**.
- The leading *primary cause* for PWC accidents was **operator inattention** with **3** occurrences.
- The *bodies of water* with the most PWC accidents was **Dale Hollow Lake, J. Percy Priest Lake, Kentucky Lake, and Tellico Lake** with **2** accidents each.
- The most common *operator age groups* to be involved in a PWC accident was **16 through 20, 21 through 25, and 46 through 50** with **2** accidents each.

2011 LAW ENFORCEMENT SUMMARY

• Total boating law enforcement hours	82,435	
• On-Water law enforcement hour(boat log hours)	50,817	
• Boating citations issued	1,783	
• BUI arrests	116	
• Warning citations issued	986	
• Vessels inspected by law enforcement	76,226	
• Search and rescue missions	25	
• Total number of boating enforcement officers	185	full time
	45	part time
	230	total
<hr/>		
• Officers trained in BUI detection	12	
• Officers trained in accident investigation	185	

2011 BOATING EDUCATION SUMMARY

In 2005 a law went into effect that required vessel operators born after January 1, 1989 to have onboard the Tennessee Wildlife Resources Agency (TWRA)-issued Boating Safety Education Certificate. Students must pass a monitored exam administered by appointed volunteers or TWRA personnel. All exams are approved by the National Association of State Boating Law Administrators (NASBLA).

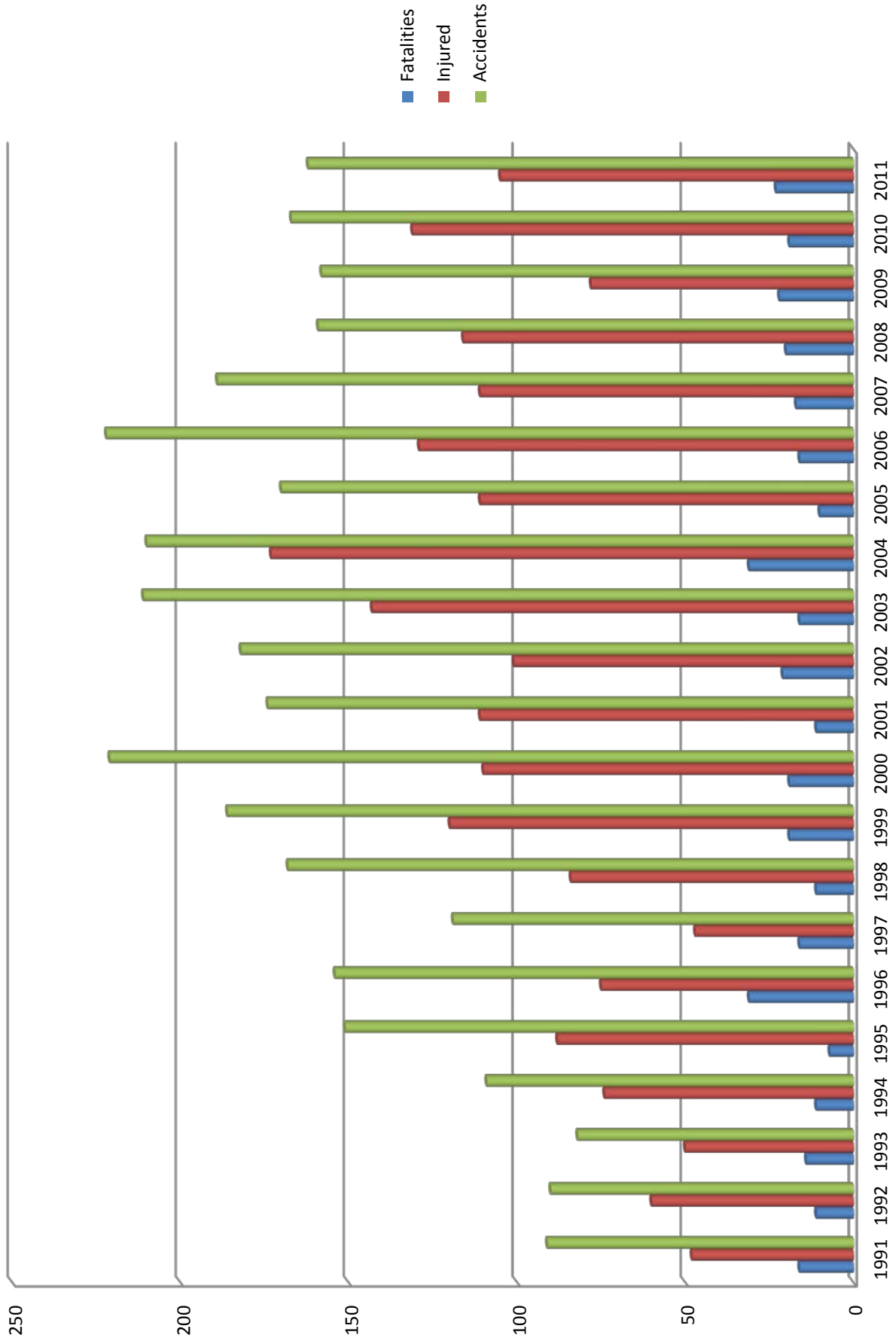
- Number of persons successfully completing exam in 2011 **5942**



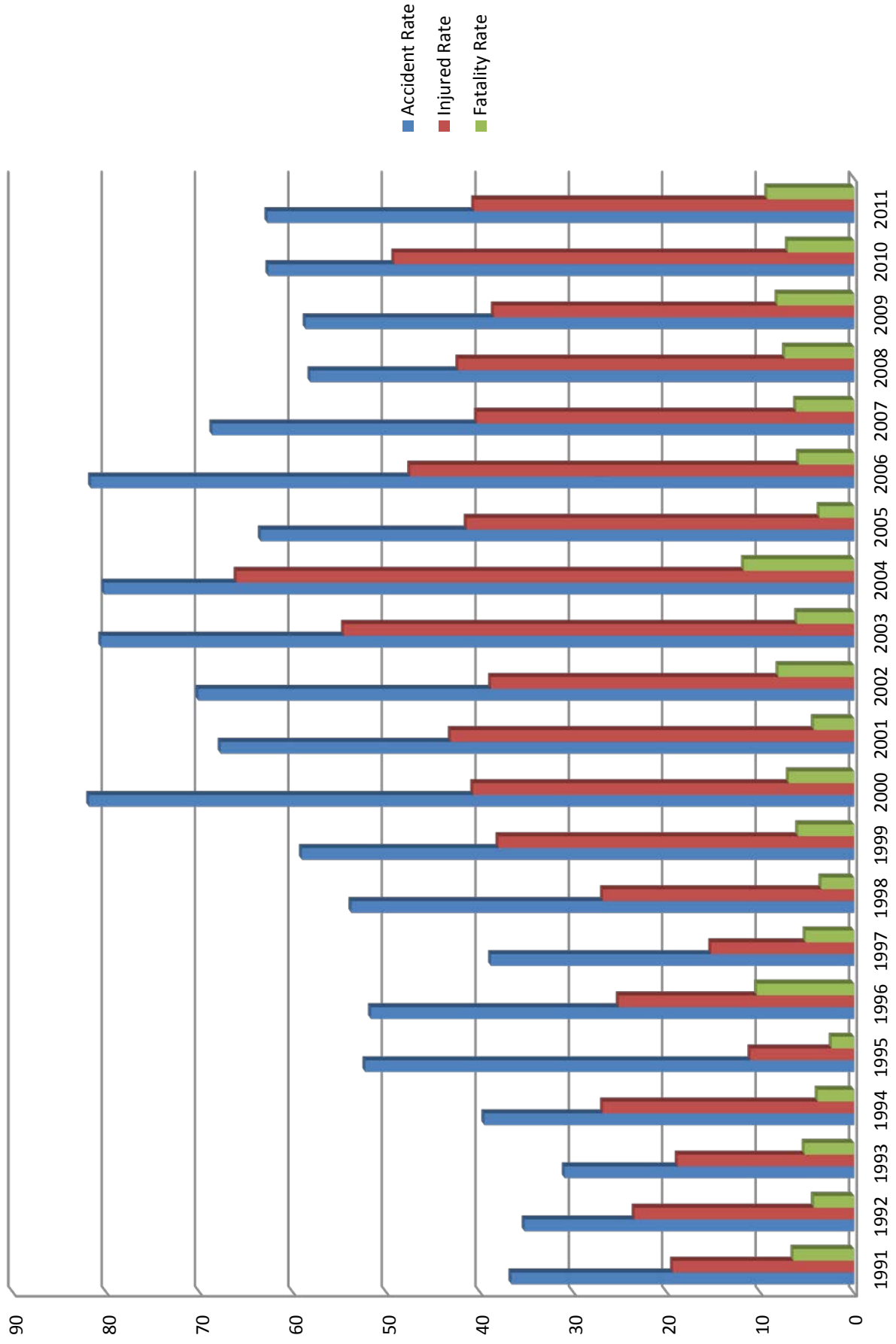
Boat Accident Report Statistics - Compiled From 1965 through 2011

YEAR	NUMBER			RATE PER 100,00 VESSELS			
	REGISTERED VESSELS	INJURED	FATALITIES	ACCIDENTS	INJURED	FATAL	ACCIDENTS
1965	70,899	6	2	13	8.5	2.8	18.3
1966	81,897	13	8	33	15.9	9.8	40.3
1967	90,844	11	29	51	12.1	31.9	56.2
1968	97,785	16	18	54	16.4	18.4	55.2
1969	122,958	16	27	40	13	21.9	32.5
1970	120,292	18	40	51	14.9	33.3	42.4
1971	140,370	1	22	18	0.7	15.7	12.8
1972	153,227	9	25	48	5.9	16.3	31.3
1973	174,729	13	47	72	7.4	26.9	41.2
1974	189,290	27	37	64	14.3	19.5	33.8
1975	204,499	49	30	95	23.9	14.7	46.5
1976	169,543	30	26	90	17.7	15.3	53.1
1977	182,752	64	35	102	35	19.2	55.8
1978	215,292	32	29	84	14.9	13.5	39
1979	183,224	46	37	84	25.1	20.2	45.8
1980	185,298	78	30	92	42.1	38.9	49.6
1981	186,221	41	38	78	22	20.4	41.9
1982	187,850	38	32	71	20.2	17	37.8
1983	192,018	46	32	93	23.9	16.7	48.4
1984	196,446	47	24	69	23.9	12.2	35.1
1985	200,582	36	22	74	17.9	10.9	36.9
1986	207,409	49	28	82	23.6	13.5	39.5
1987	214,646	50	26	90	23.3	12.1	41.9
1988	224,709	51	15	89	22.7	6.7	39.6
1989	233,403	39	24	73	16.7	10.3	31.3
1990	241,632	41	19	72	16.9	7.7	29.8
1991	247,661	48	16	91	19.4	6.5	36.7
1992	255,043	60	11	90	23.5	4.3	35.3
1993	264,194	50	14	82	18.9	5.3	31
1994	275,597	74	11	109	26.9	3.9	39.6
1995	288,834	88	7	151	11.1	2.4	52.3
1996	297,719	75	31	154	25.2	10.4	51.7
1997	306,215	47	16	119	15.3	5.2	38.9
1998	312,030	84	11	168	26.9	3.5	53.8
1999	314,620	120	19	186	38.1	6	59.1
2000	269,583	110	19	221	40.8	7	81.9
2001	256,670	111	11	174	43.2	4.3	67.8
2002	259,235	101	21	182	38.9	8.1	70.2
2003	261,636	142	17	213	54.6	6.1	80.6
2004	261,465	173	31	210	66.1	11.8	80.3
2005	267,567	108	10	169	41.5	3.7	63.5
2006	271,687	129	16	222	47.5	5.9	81.7
2007	274,914	111	17	189	40.4	6.2	68.7
2008	271,455	116	20	159	42.4	7.4	58.2
2009	269,361	104	22	158	38.6	8.2	58.7
2010	266,185	131	19	167	49.2	7.1	62.7
2011	258,096	105	24	162	40.7	9.3	62.8
Averages	217,395	64	23	112	27	13	49

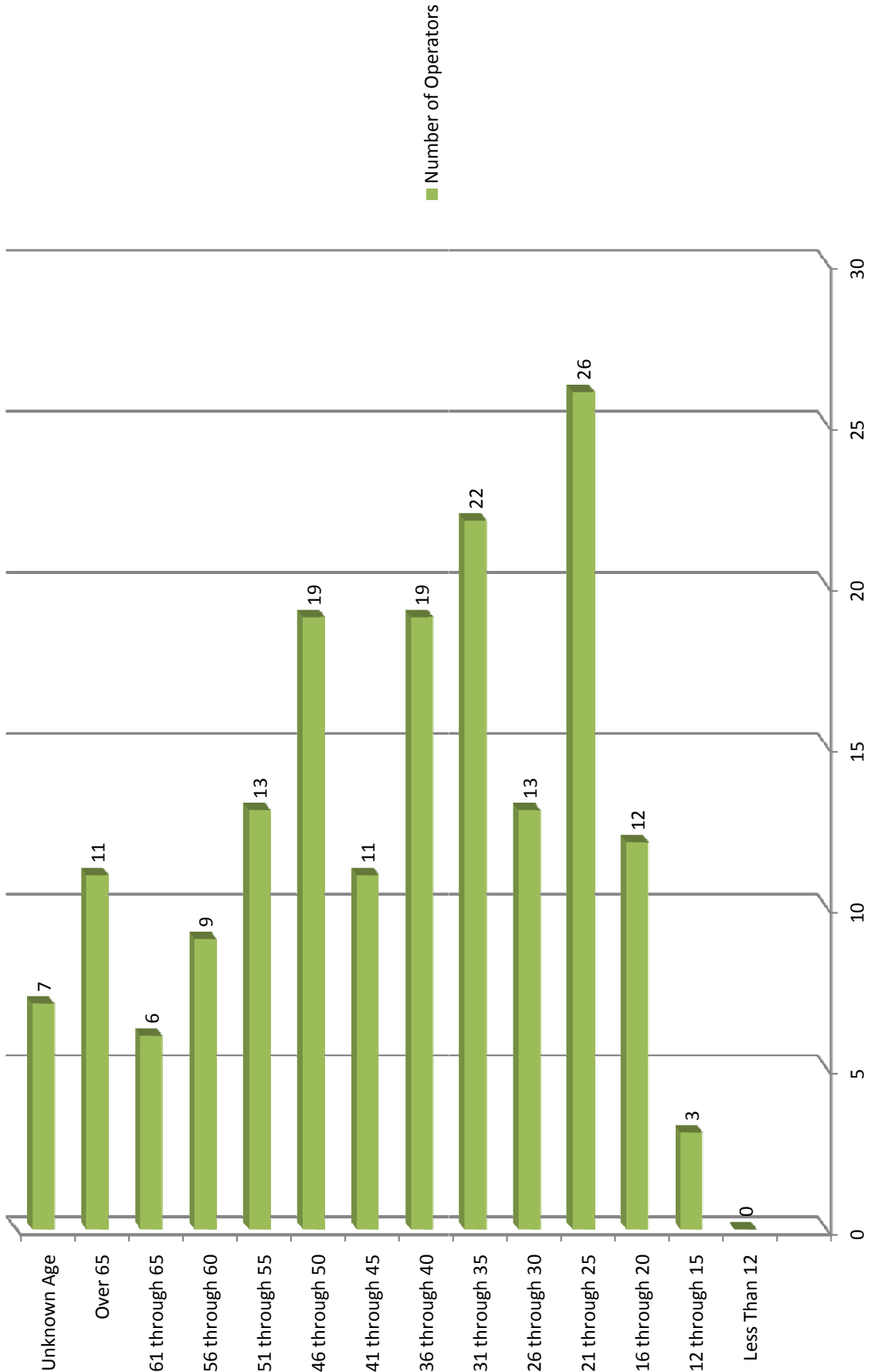
Tennessee Boat Accident Totals 1991-2011



Tennessee Boat Accident Rates 1991 - 2011



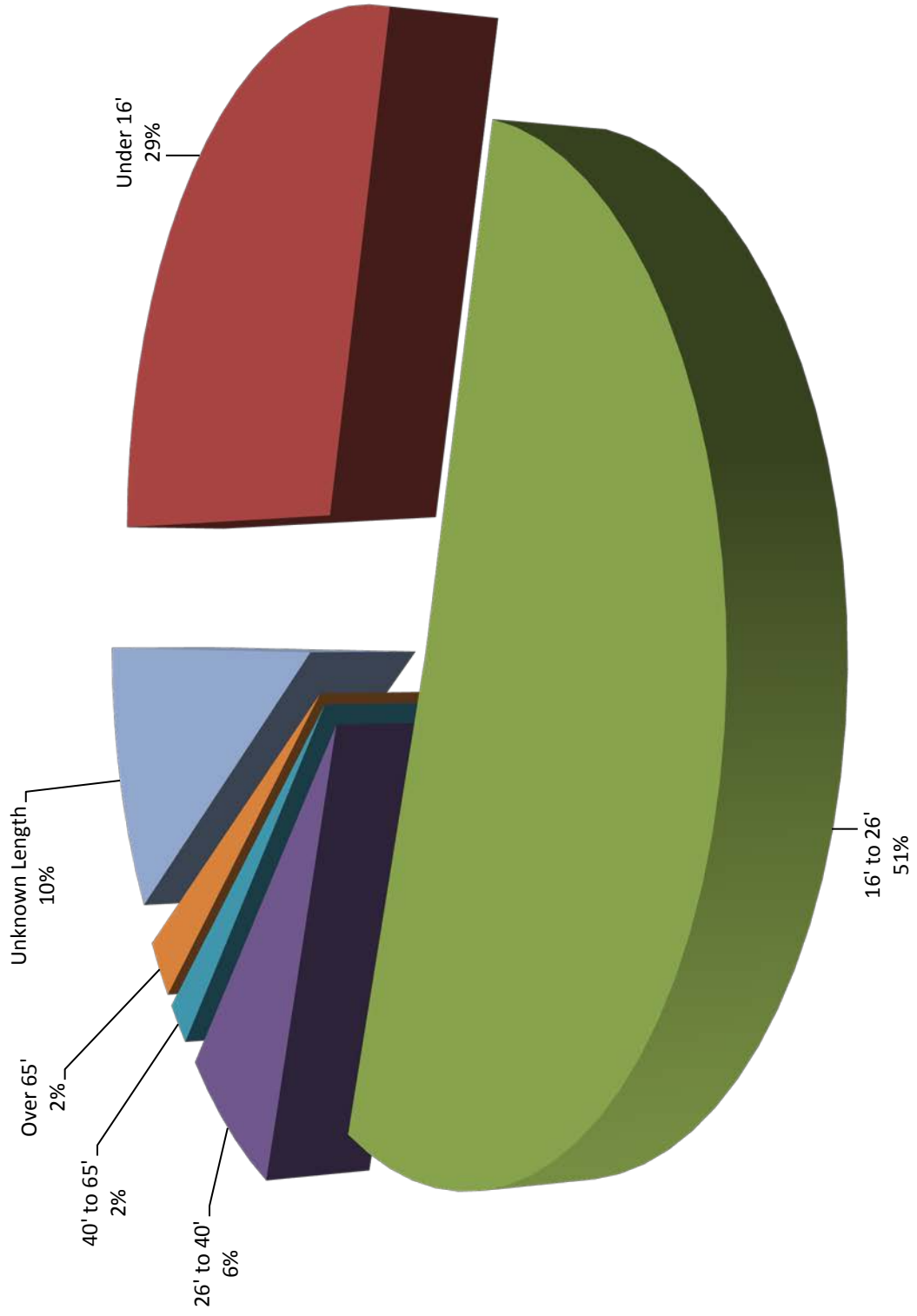
Number of Operators by Age Groups All Accidents 2011



Number of Operators by Age Groups All Accidents 2011

Operator Age	Number of Operators
Less Than 12	0
12 through 15	3
16 through 20	12
21 through 25	26
26 through 30	13
31 through 35	22
36 through 40	19
41 through 45	11
46 through 50	19
51 through 55	13
56 through 60	9
61 through 65	6
Over 65	11
Unknown Age	7

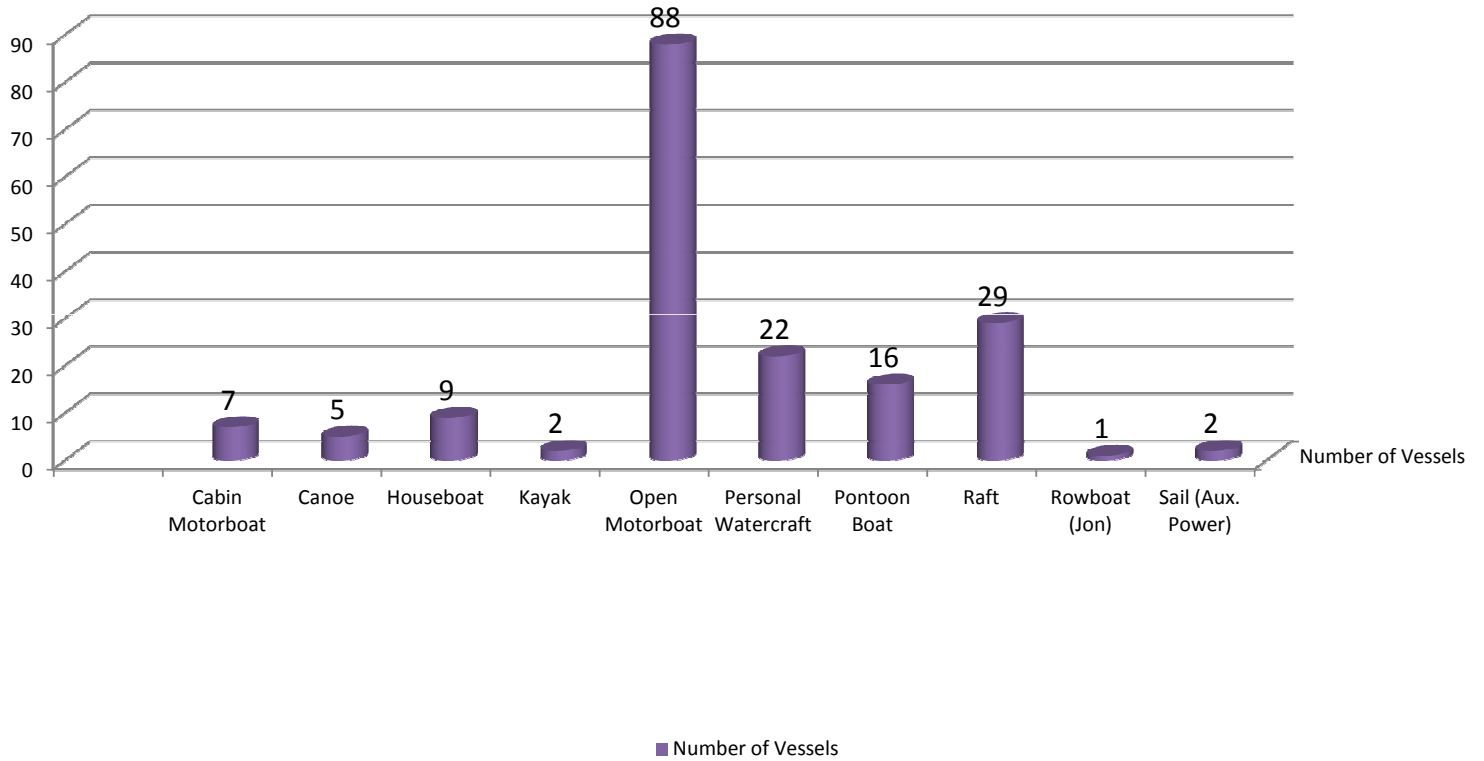
Number of Vessels by Length Category All Accidents 2011



Number of Vessels by Length Category All Accidents 2011

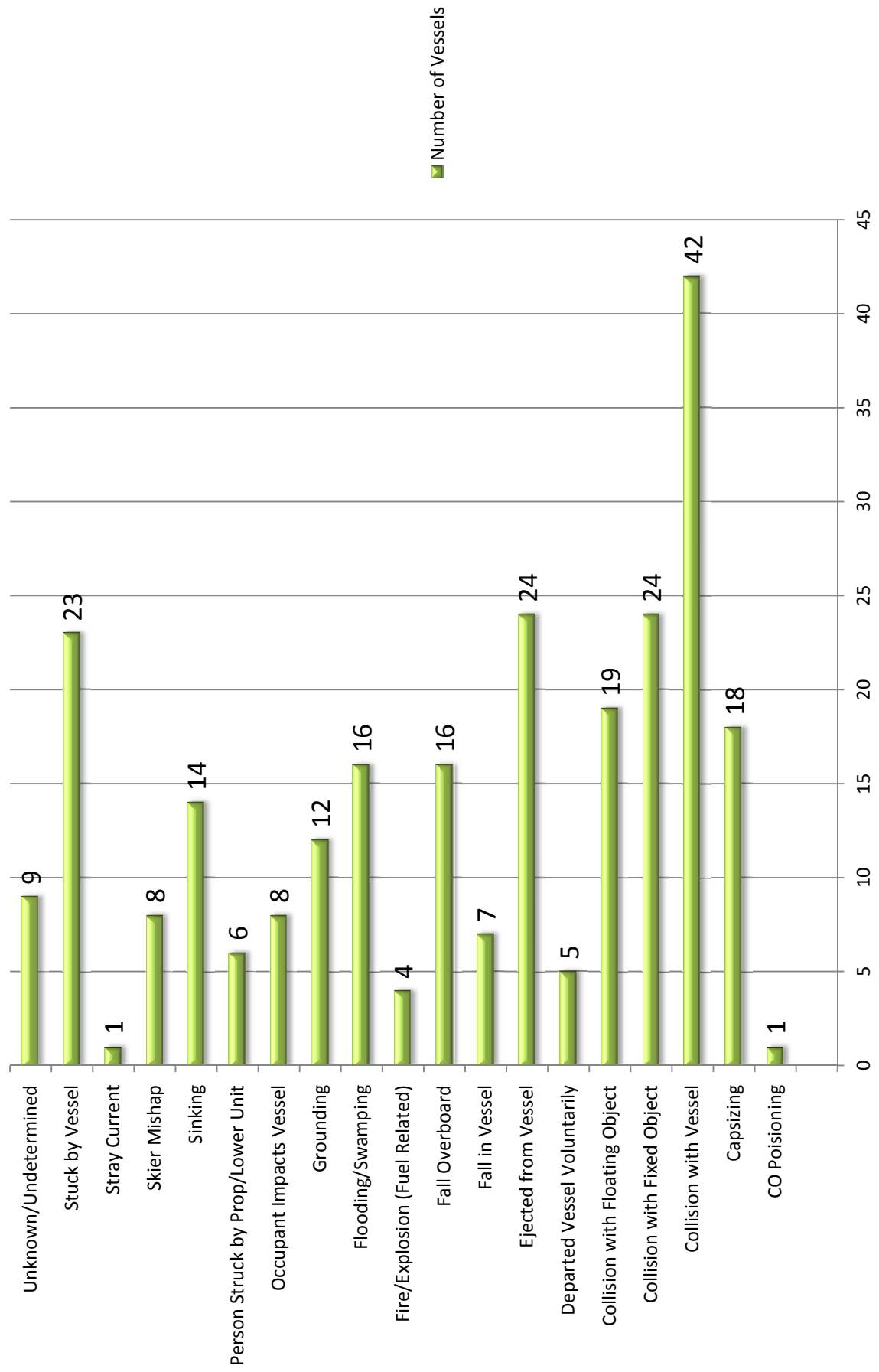
Vessel Length Category	Number of Vessels
Under 16'	54
16' to 26'	95
26' to 40'	12
40' to 65'	3
Over 65'	4
Unknown Length	18

Number of Vessels by Vessel Type All Accidents 2011



Vessel Type	Number of Vessels
Cabin Motorboat	7
Canoe	5
Houseboat	9
Kayak	2
Open Motorboat	88
Personal Watercraft	22
Pontoon Boat	16
Raft	29
Rowboat (Jon)	1
Sail (Aux. Power)	2

Number of Vessels Involved by Accident Type All Accidents 2011

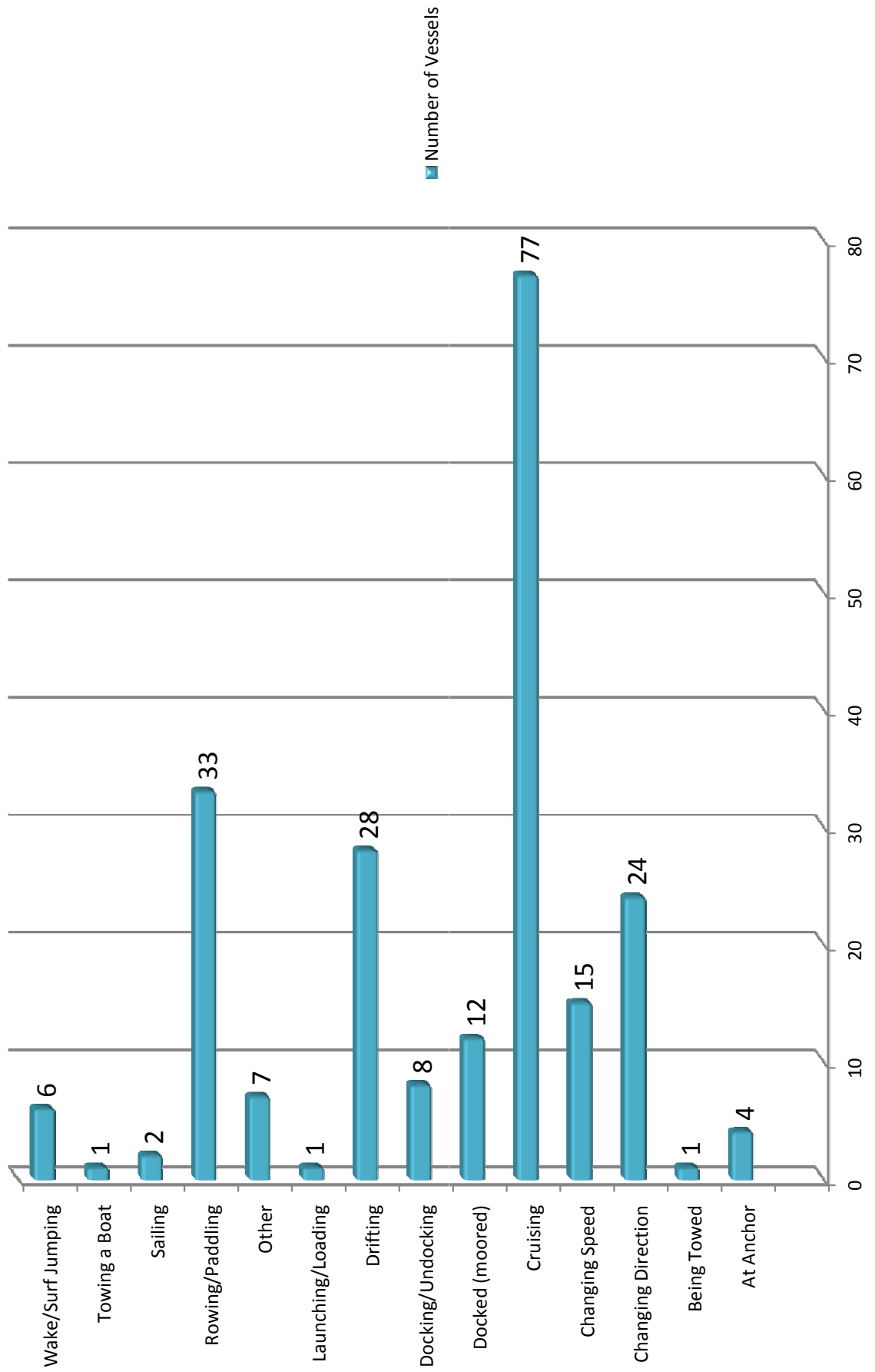


Number of Vessels Involved By Accident Type

All Accidents 2011

Accident Type	Number of Vessels
CO Poisoning	1
Capsizing	18
Collision with Vessel	42
Collision with Fixed Object	24
Collision with Floating Object	19
Departed Vessel Voluntarily	5
Ejected from Vessel	24
Fall in Vessel	7
Fall Overboard	16
Fire/Explosion (Fuel Related)	4
Flooding/Swamping	16
Grounding	12
Occupant Impacts Vessel	8
Person Struck by Prop/Lower Unit	6
Sinking	14
Skier Mishap	8
Stray Current	1
Stuck by Vessel	23
Unknown/Undetermined	9

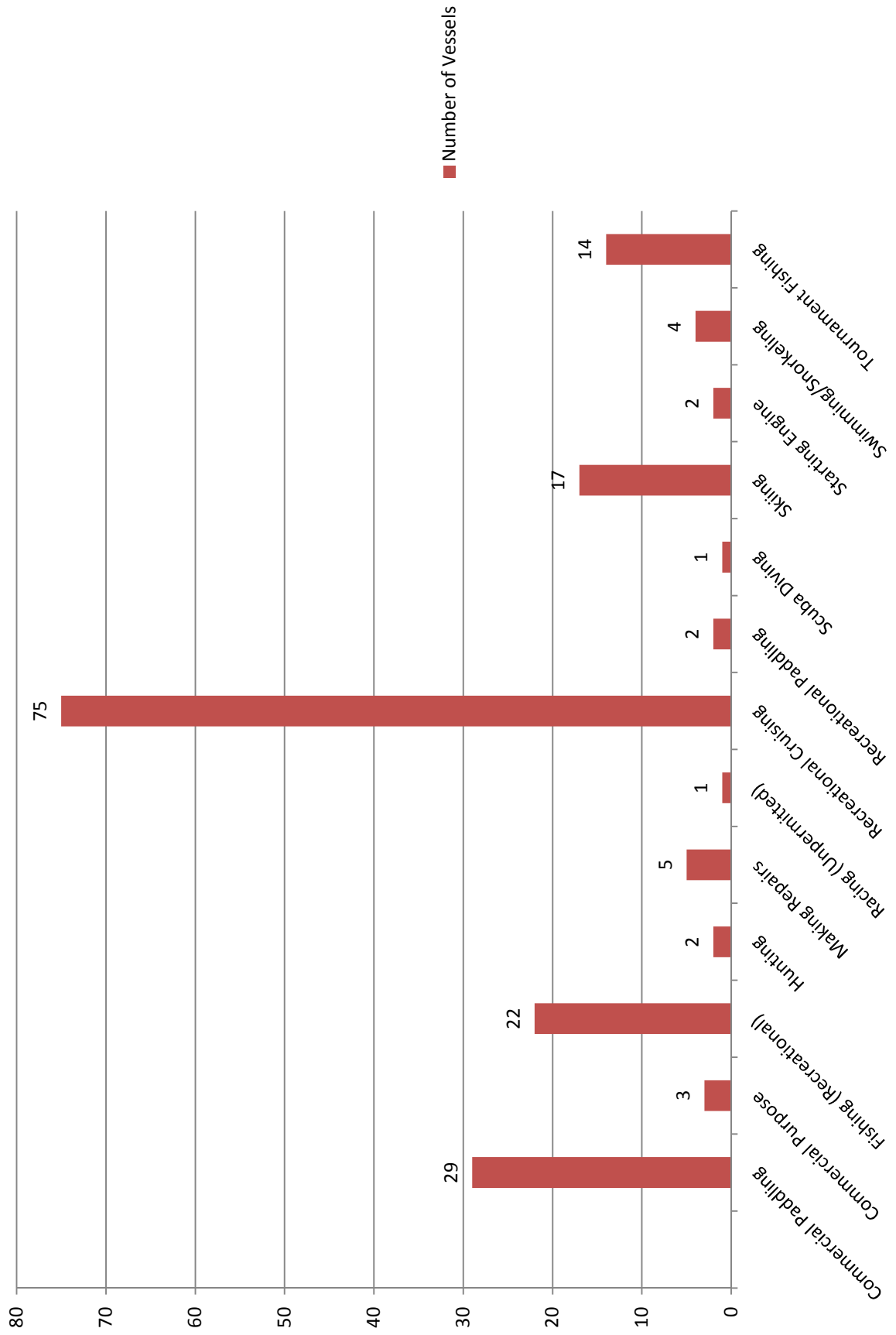
Number of Vessels by Operation Type All Accidents - 2011



Number of Vessels by Operation Type All Accidents 2011

Vessel Operation	Number of Vessels
At Anchor	4
Being Towed	1
Changing Direction	24
Changing Speed	15
Cruising	77
Docked (moored)	12
Docking/Undocking	8
Drifting	28
Launching/Loading	1
Other	7
Rowing/Paddling	33
Sailing	2
Towing a Boat	1
Wake/Surf Jumping	6

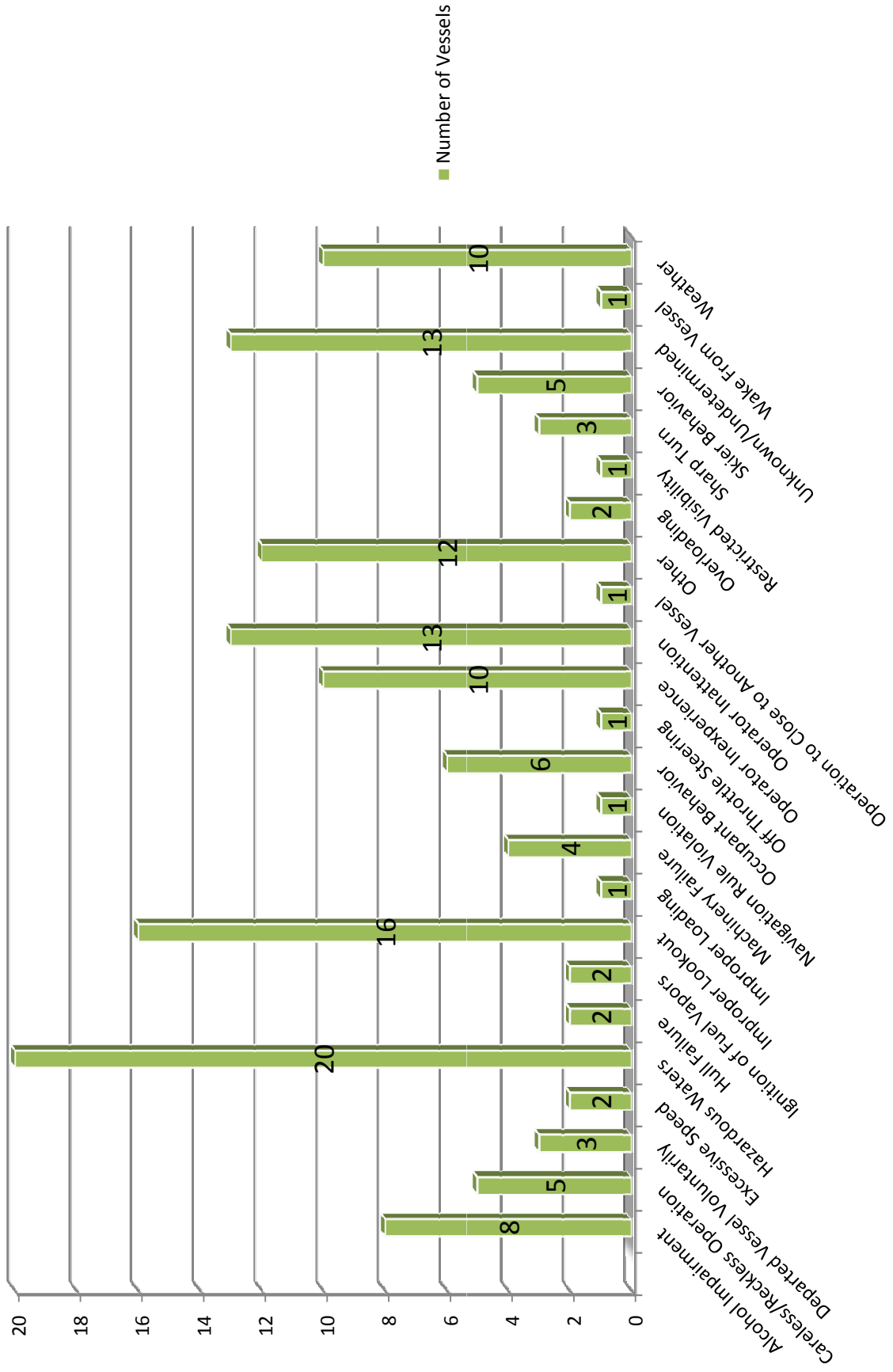
Frequency of Activity at Time of Accident All Accidents 2011



Frequency of Activity at Time of Accident All Accidents 2011

Activity	Number of Vessels
Commercial Paddling	29
Commercial Purpose	3
Fishing (Recreational)	22
Hunting	2
Making Repairs	5
Racing (Unpermitted)	1
Recreational Cruising	75
Recreational Paddling	2
Scuba Diving	1
Skiing	17
Starting Engine	2
Swimming/Snorkeling	4
Tournament Fishing	14

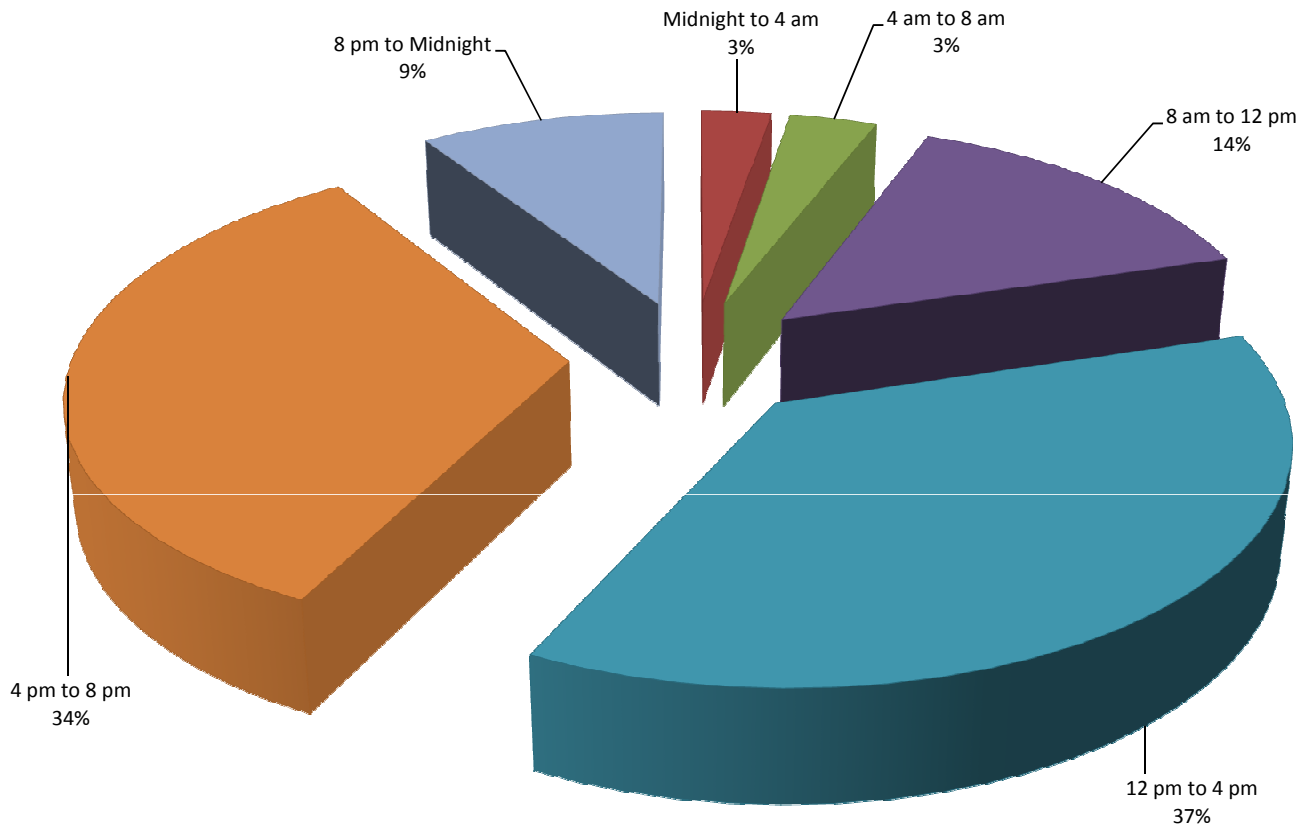
Number of Vessels by Primary Cause All Accidents 2011



Number of Accidents by Primary Cause All Accidents 2011

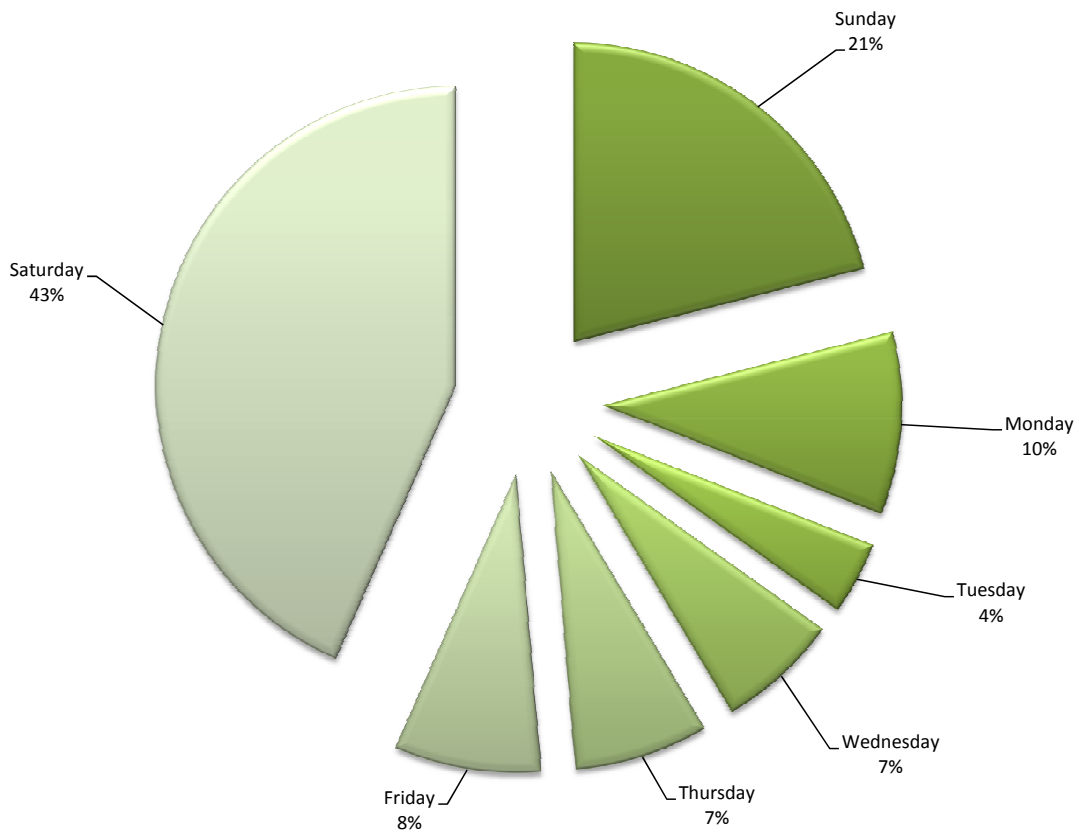
Primary Cause	Number of Vessels
Alcohol Impairment	8
Careless/Reckless Operation	5
Departed Vessel Voluntarily	3
Excessive Speed	2
Hazardous Waters	20
Hull Failure	2
Ignition of Fuel Vapors	2
Improper Lookout	16
Improper Loading	1
Machinery Failure	4
Navigation Rule Violation	1
Occupant Behavior	6
Off Throttle Steering	1
Operator Inexperience	10
Operator Inattention	13
Operation to Close to Another Vessel	1
Other	12
Overloading	2
Restricted Visibility	1
Sharp Turn	3
Skier Behavior	5
Unknown/Undetermined	13
Wake From Vessel	1
Weather	10

Number of Accidents by Time Period All Accidents 2011



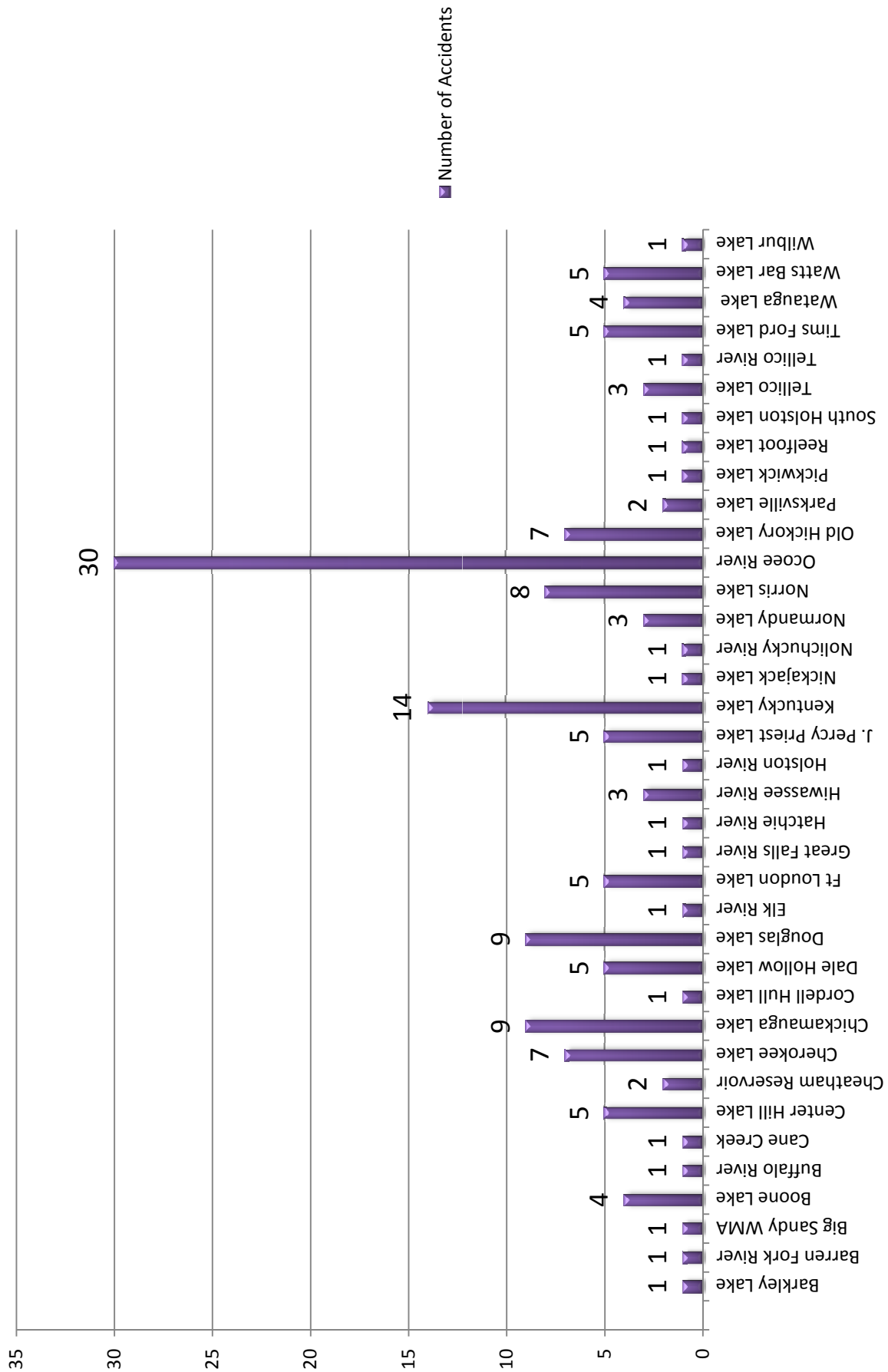
Time Period	Number of Accidents
Midnight to 4 am	4
4 am to 8 am	5
8 am to 12 pm	22
12 pm to 4 pm	56
4 pm to 8 pm	51
8 pm to Midnight	14

Number of Accidents by Day of the Week All Accidents 2011



Day of Week	Number of Accidents
Sunday	32
Monday	15
Tuesday	6
Wednesday	10
Thursday	11
Friday	12
Saturday	66

Number of Accidents by Body of Water All Accidents 2011

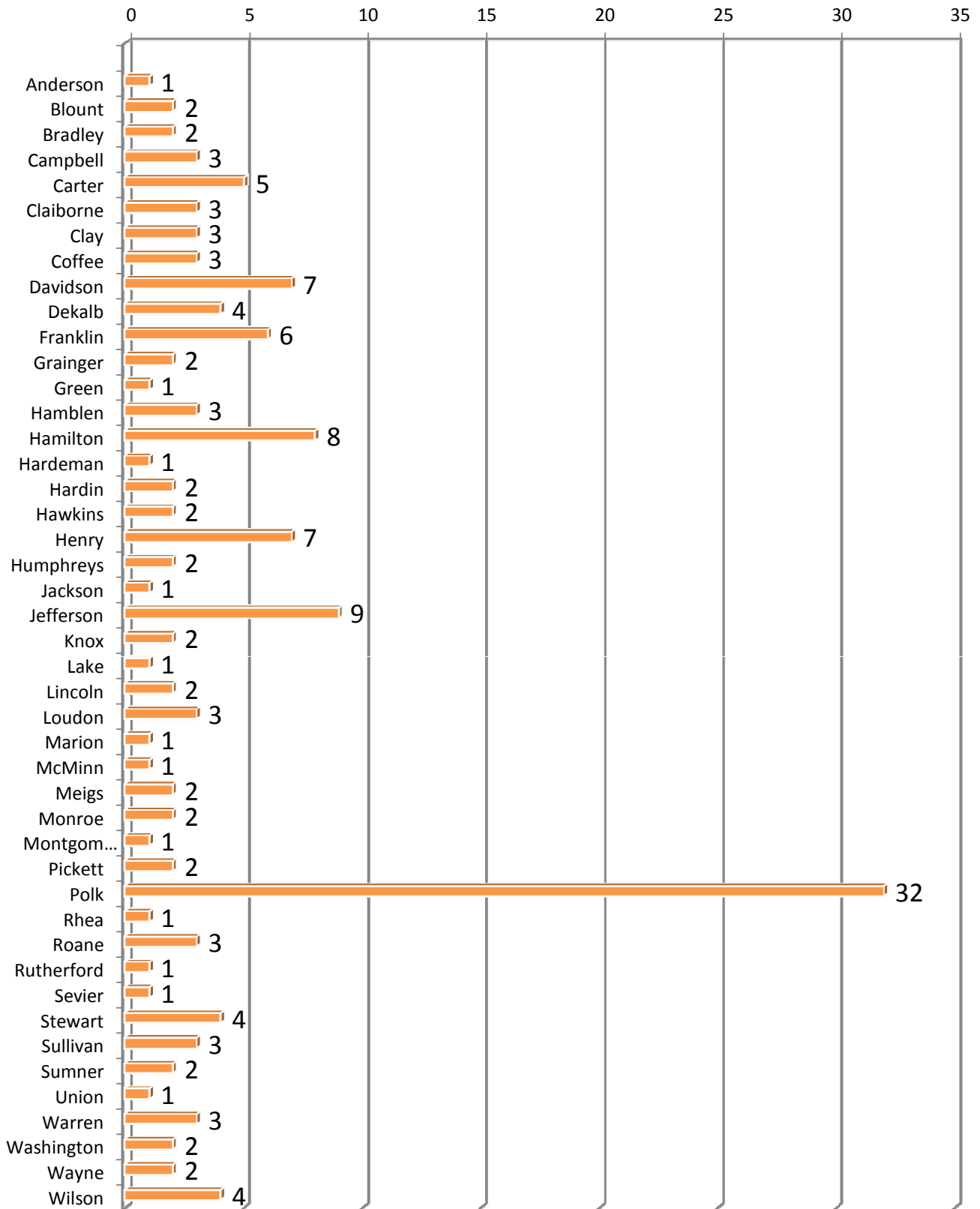


Number of Accidents by Body of Water

All Accidents 2011

Body of Water	Number of Accidents
Barkley Lake	1
Barren Fork River	1
Big Sandy WMA	1
Boone Lake	4
Buffalo River	1
Cane Creek	1
Center Hill Lake	5
Cheatham Reservoir	2
Cherokee Lake	7
Chickamauga Lake	9
Cordell Hull Lake	1
Dale Hollow Lake	5
Douglas Lake	9
Elk River	1
Ft Loudon Lake	5
Great Falls River	1
Hatchie River	1
Hiwassee River	3
Holston River	1
J. Percy Priest Lake	5
Kentucky Lake	14
Nickajack Lake	1
Nolichucky River	1
Normandy Lake	3
Norris Lake	8
Ocoee River	30
Old Hickory Lake	7
Parksville Lake	2
Pickwick Lake	1
Reelfoot Lake	1
South Holston Lake	1
Tellico Lake	3
Tellico River	1
Tims Ford Lake	5
Watauga Lake	4
Watts Bar Lake	5
Wilbur Lake	1

Number of Accidents by County All Accidents 2011

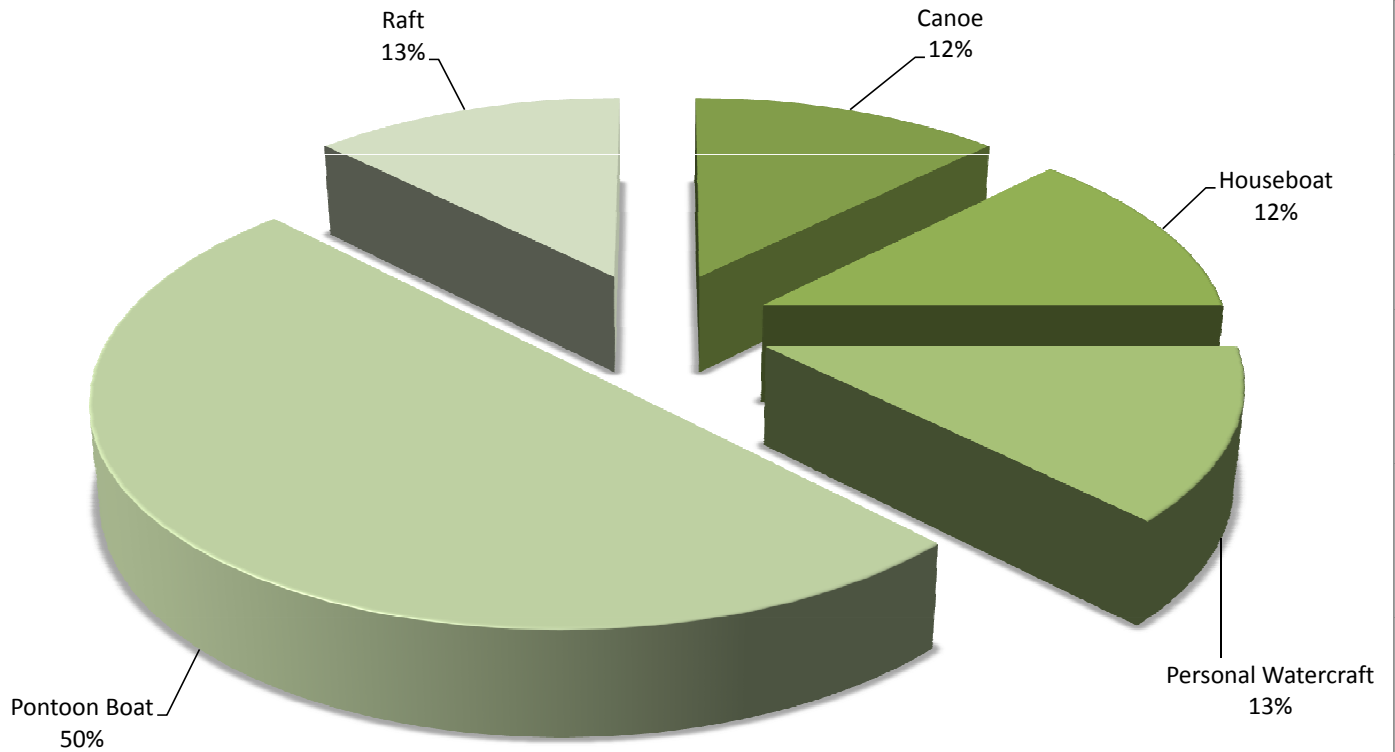


Number of Accidents by County

Accidents 2011

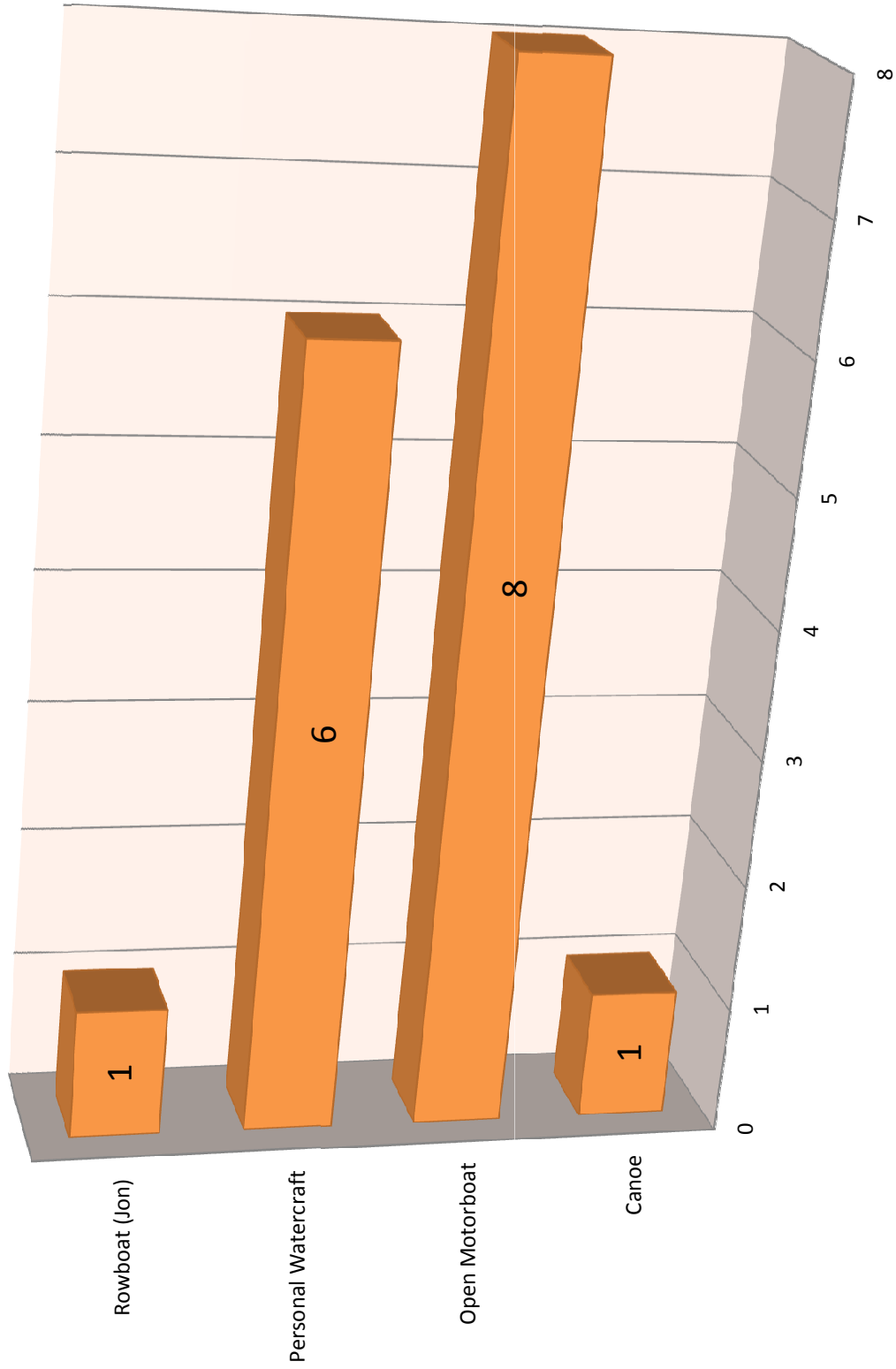
County	Number of Accidents
Anderson	1
Blount	2
Bradley	2
Campbell	3
Carter	5
Claiborne	3
Clay	3
Coffee	3
Davidson	7
Dekalb	4
Franklin	6
Grainger	2
Green	1
Hamblen	3
Hamilton	8
Hardeman	1
Hardin	2
Hawkins	2
Henry	7
Humphreys	2
Jackson	1
Jefferson	9
Knox	2
Lake	1
Lincoln	2
Loudon	3
Marion	1
McMinn	1
Meigs	2
Monroe	2
Montgomery	1
Pickett	2
Polk	32
Rhea	1
Roane	3
Rutherford	1
Sevier	1
Stewart	4
Sullivan	3
Sumner	2
Union	1
Warren	3
Washington	2
Wayne	2
Wilson	4

Number of Rented Vessels by Vessel Type All Accidents 2011



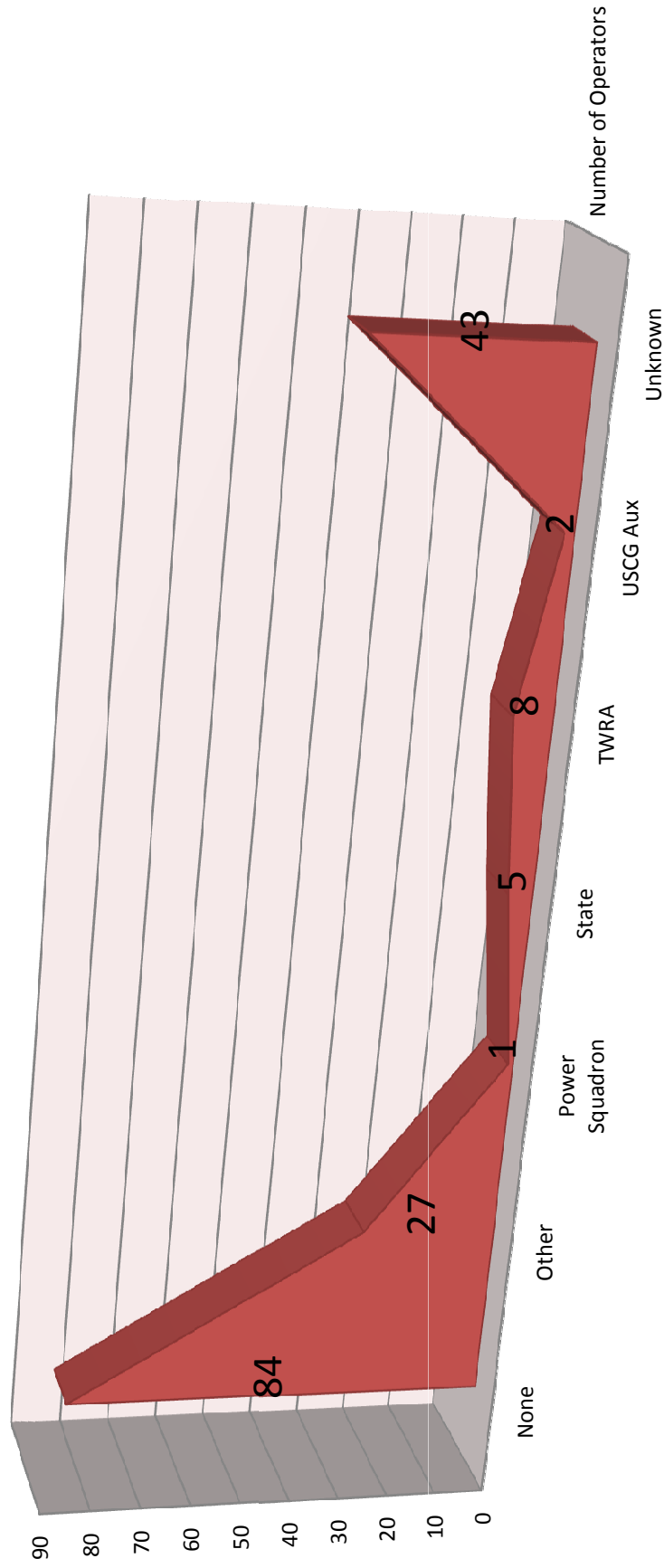
Type of Boat	Number of Vessels
Canoe	1
Houseboat	1
Personal Watercraft	1
Pontoon Boat	4
Raft	1

Number of Borrowed Vessels by Vessel Type All Accidents 2011



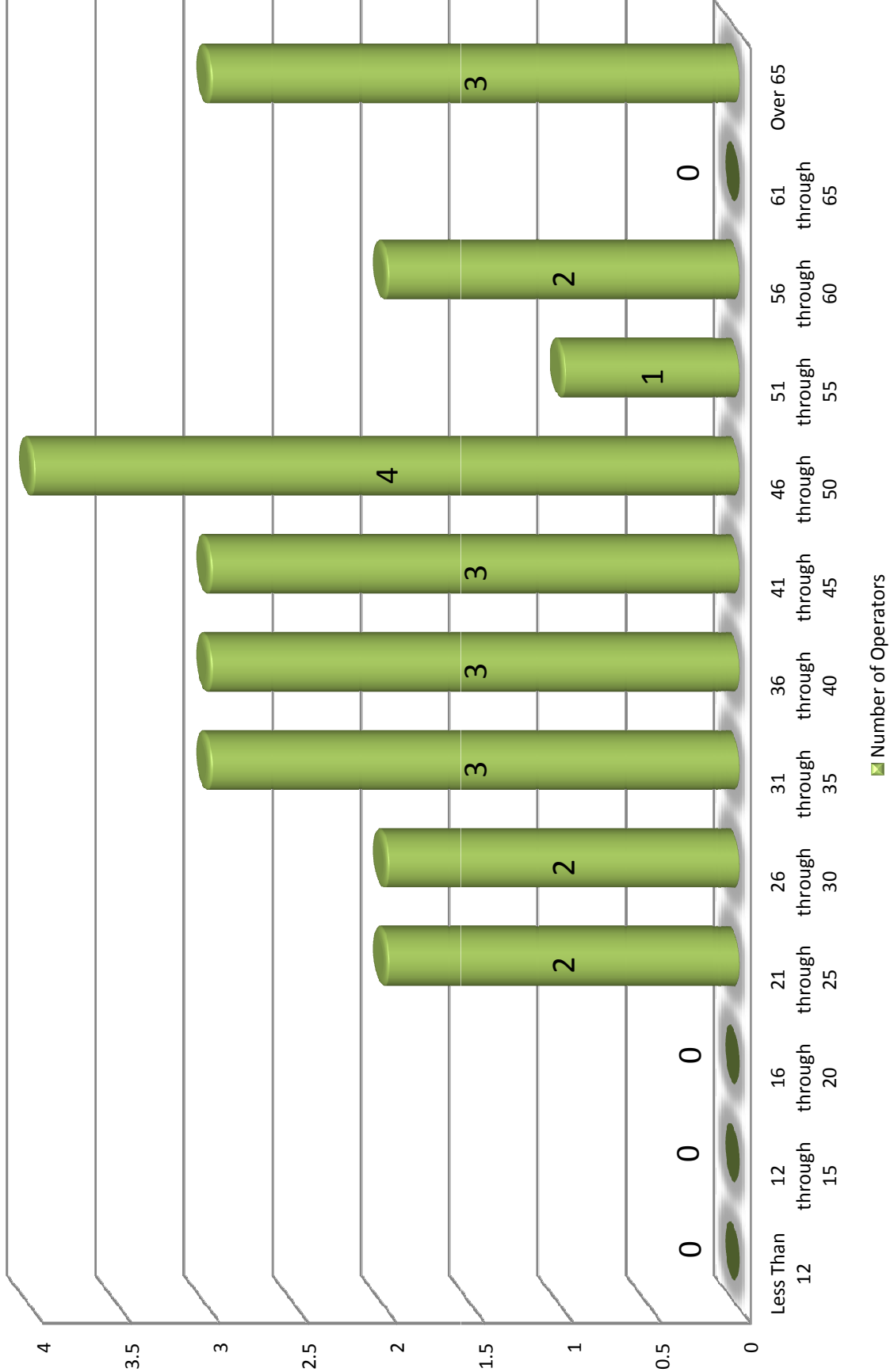
Number of Vessels	Canoe	Open Motorboat	Personal Watercraft	Rowboat (Jon)
1	1	8	6	1

Number of Operators by Boat Education Type All Accidents 2011



Number of Operators	None	Other	Power Squadron	State	TWRA	USCG Aux	Unknown
	84	27	1	5	8	2	43

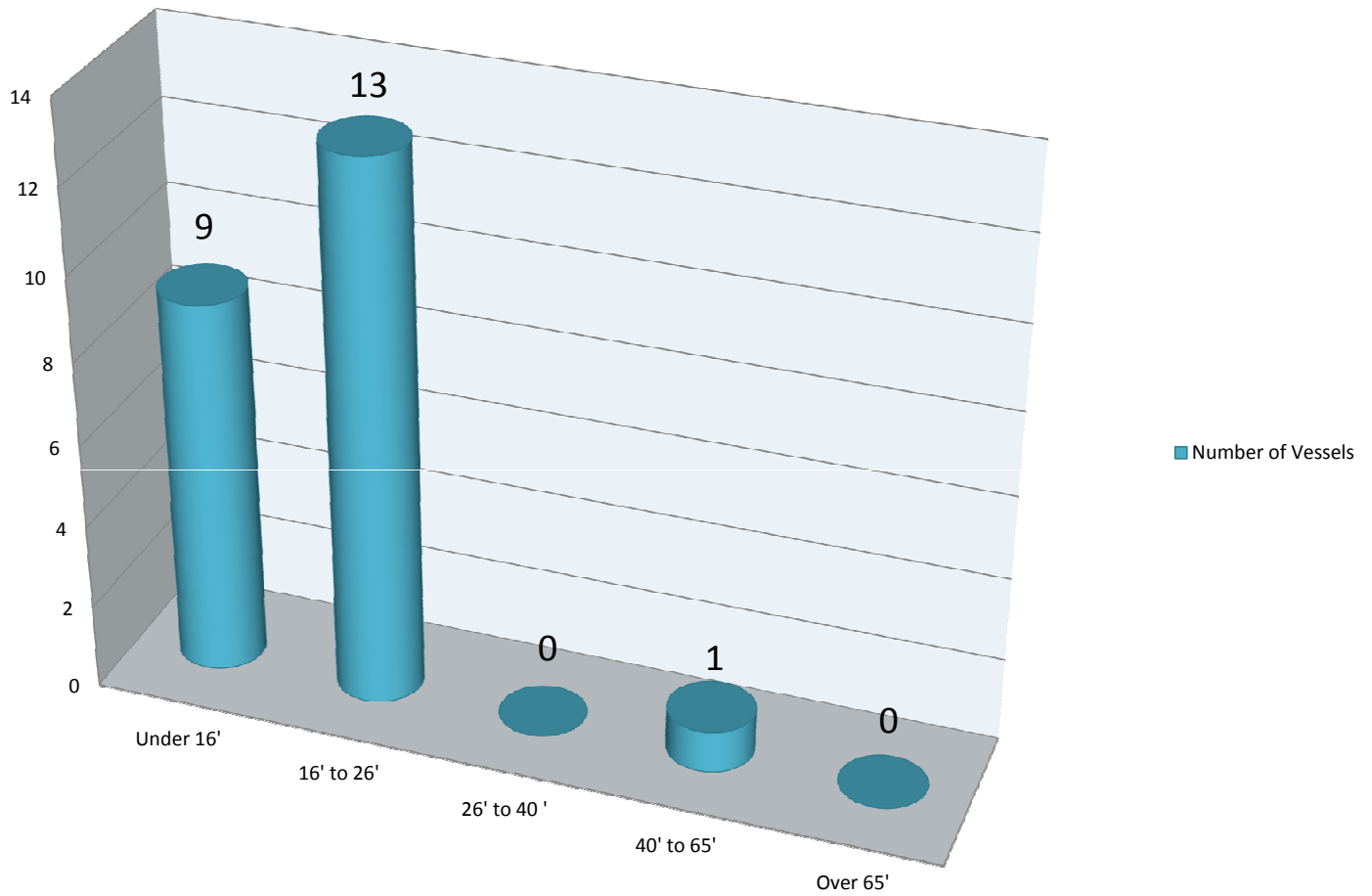
Number of Operators by Age Category Fatal Accidents 2011



Number of Operators by Age Category Fatal Accidents 2011

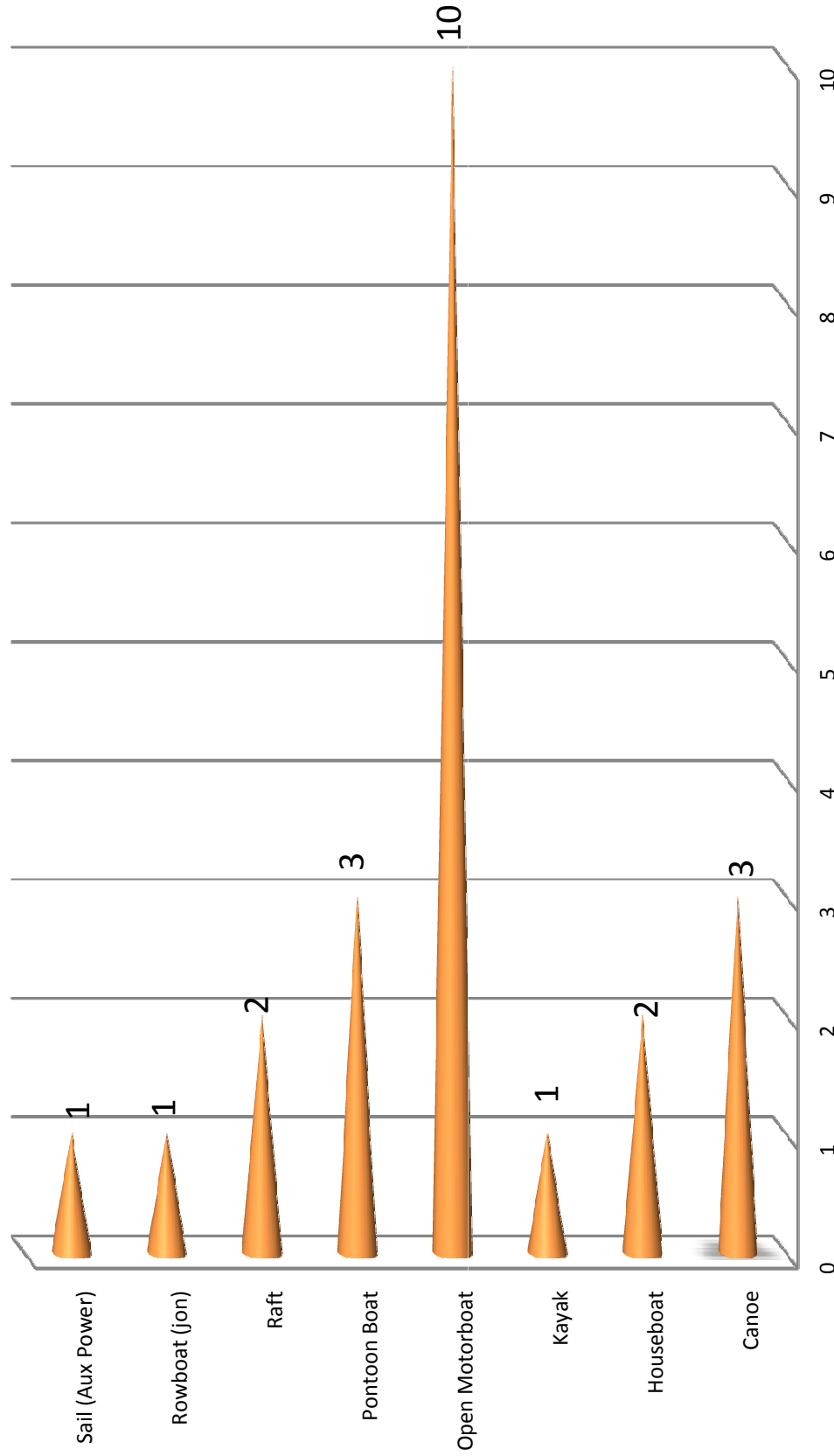
Operator Ages	Number of Operators
Less Than 12	0
12 through 15	0
16 through 20	0
21 through 25	2
26 through 30	2
31 through 35	3
36 through 40	3
41 through 45	3
46 through 50	4
51 through 55	1
56 through 60	2
61 through 65	0
Over 65	3

Number of Vessels by Vessel Length Fatal Accidents 2011



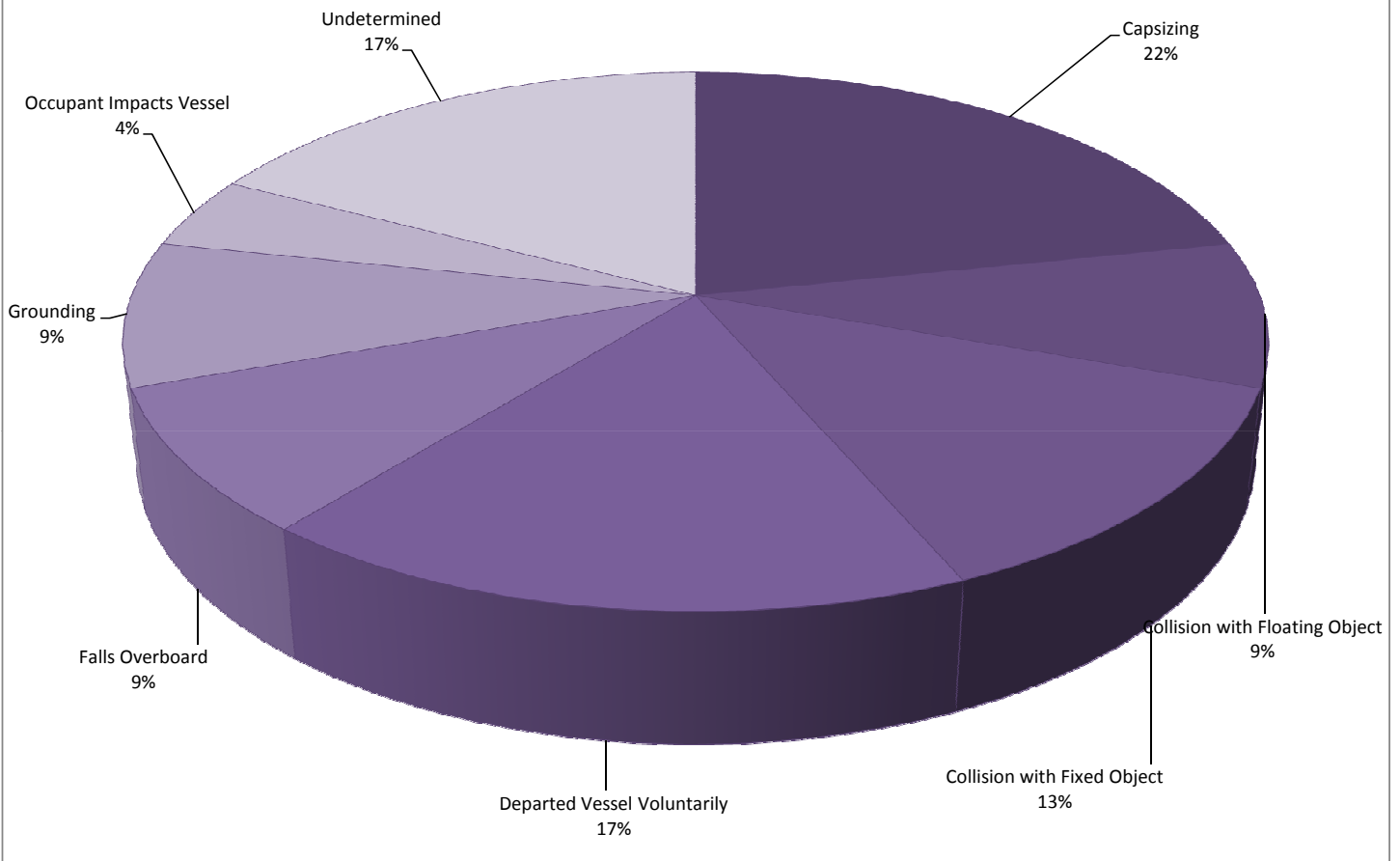
Vessel Length	Number of Vessels
Under 16'	9
16' to 26'	13
26' to 40'	0
40' to 65'	1
Over 65'	0

Number of Vessels by Vessel Type Fatal Accidents 2011



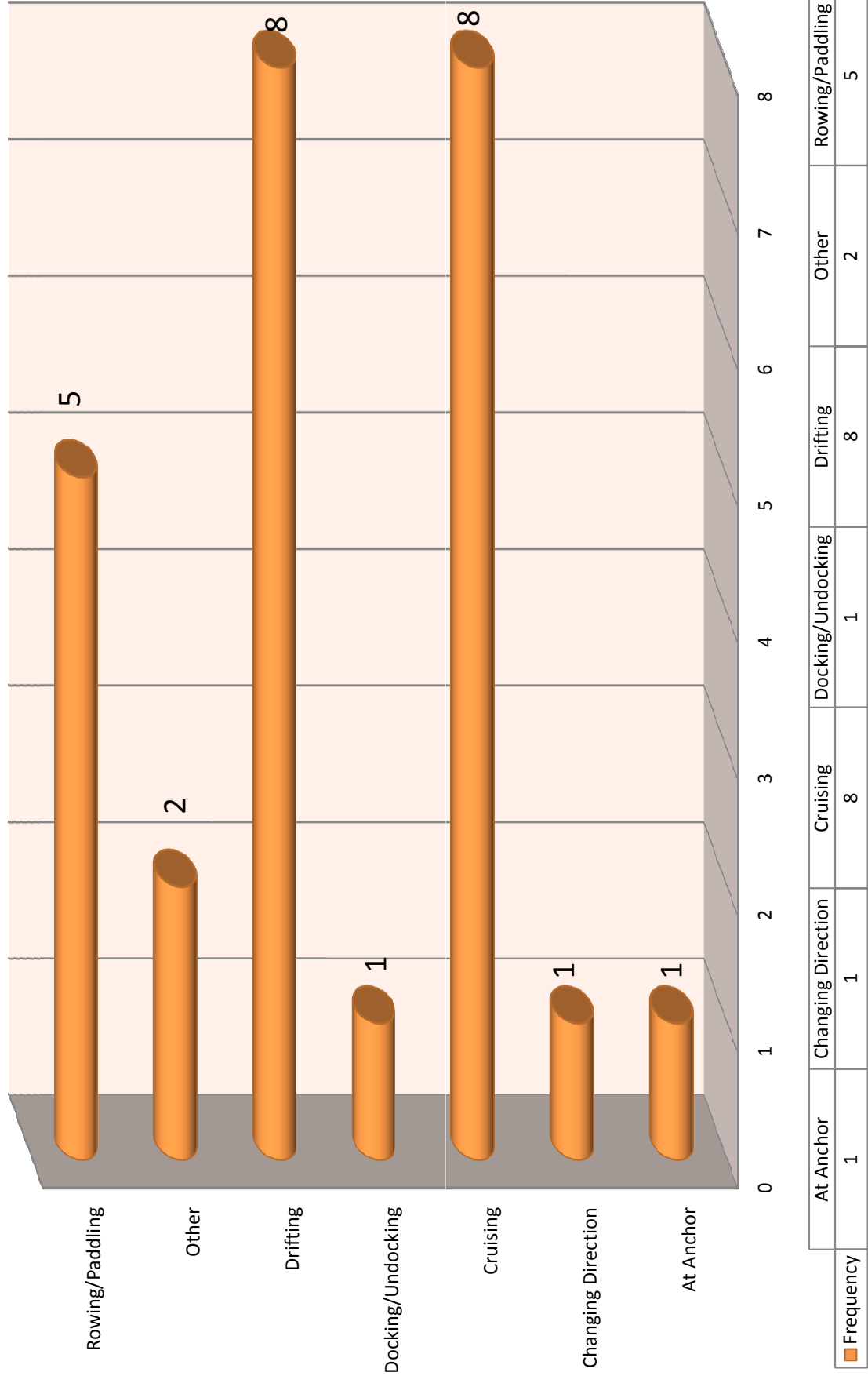
	Canoe	Houseboat	Kayak	Open Motorboat	Pontoon Boat	Raft	Rowboat (jon)	Sail (Aux Power)
Number of Vessels	3	2	1	10	3	2	1	1

Number of Accidents by Accident Type Fatal Accidents 2011

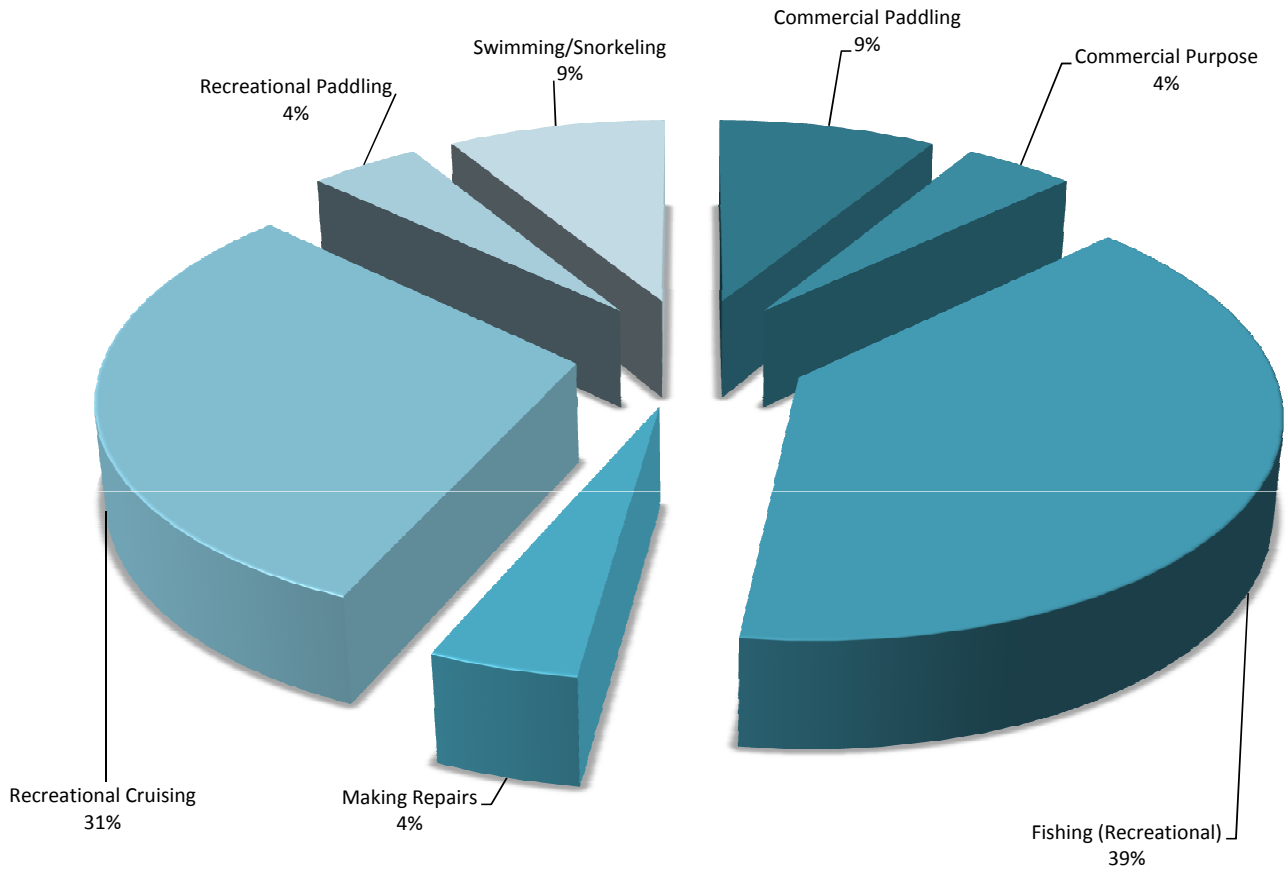


Accident Type	Number of Accidents
Capsizing	5
Collision with Floating Object	2
Collision with Fixed Object	3
Departed Vessel Voluntarily	4
Falls Overboard	2
Grounding	2
Occupant Impacts Vessel	1
Undetermined	4

Operation at Time of Accident Fatal Accidents 2011

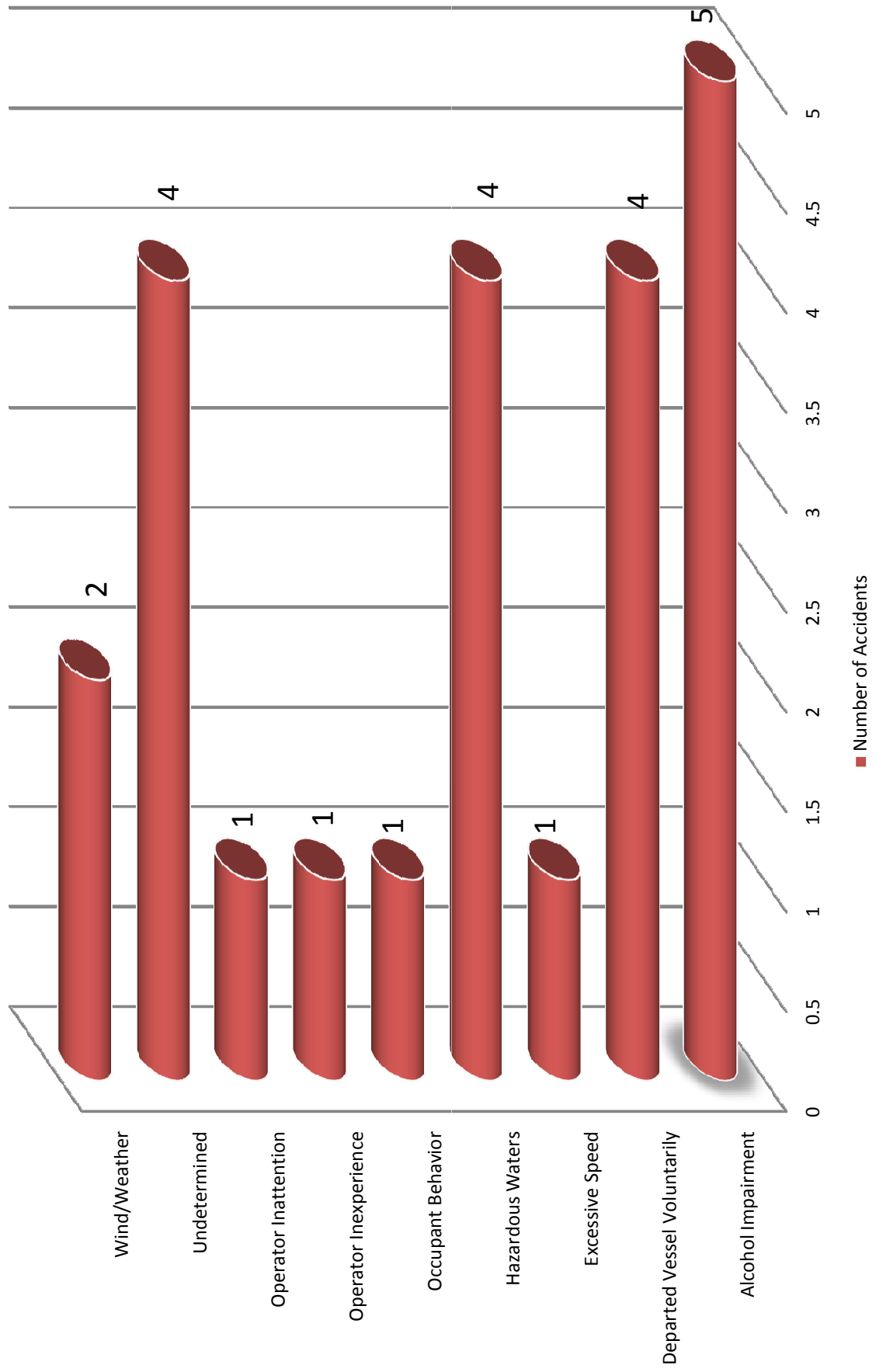


Number of Vessels by Activity at Time of Accident Fatal Accidents 2011



Activity	Number of Vessels
Commercial Paddling	2
Commercial Purpose	1
Fishing (Recreational)	9
Making Repairs	1
Recreational Cruising	7
Recreational Paddling	1
Swimming/Snorkeling	2

Number of Accidents by Primary Cause Fatal Accidents 2011

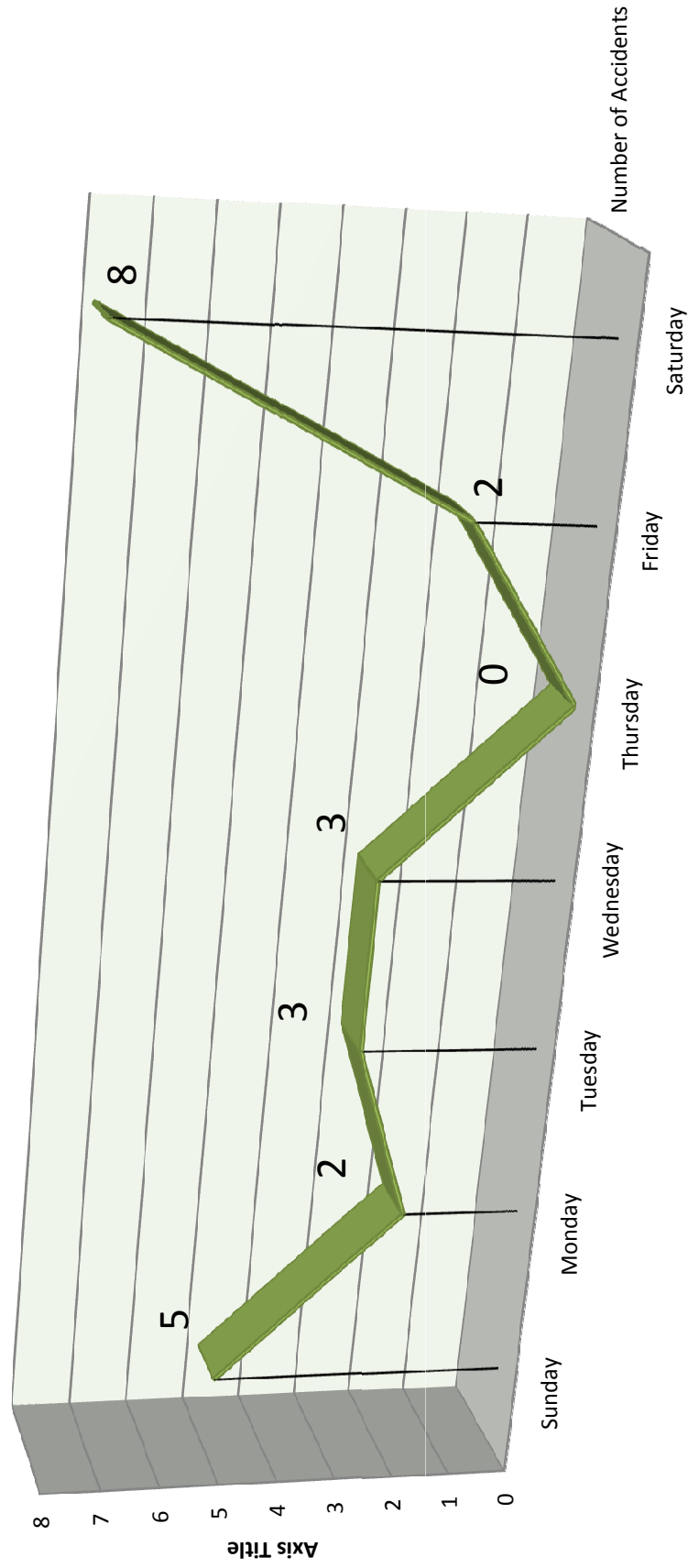


Number of Accidents by Primary Cause

Fatal Accidents 2011

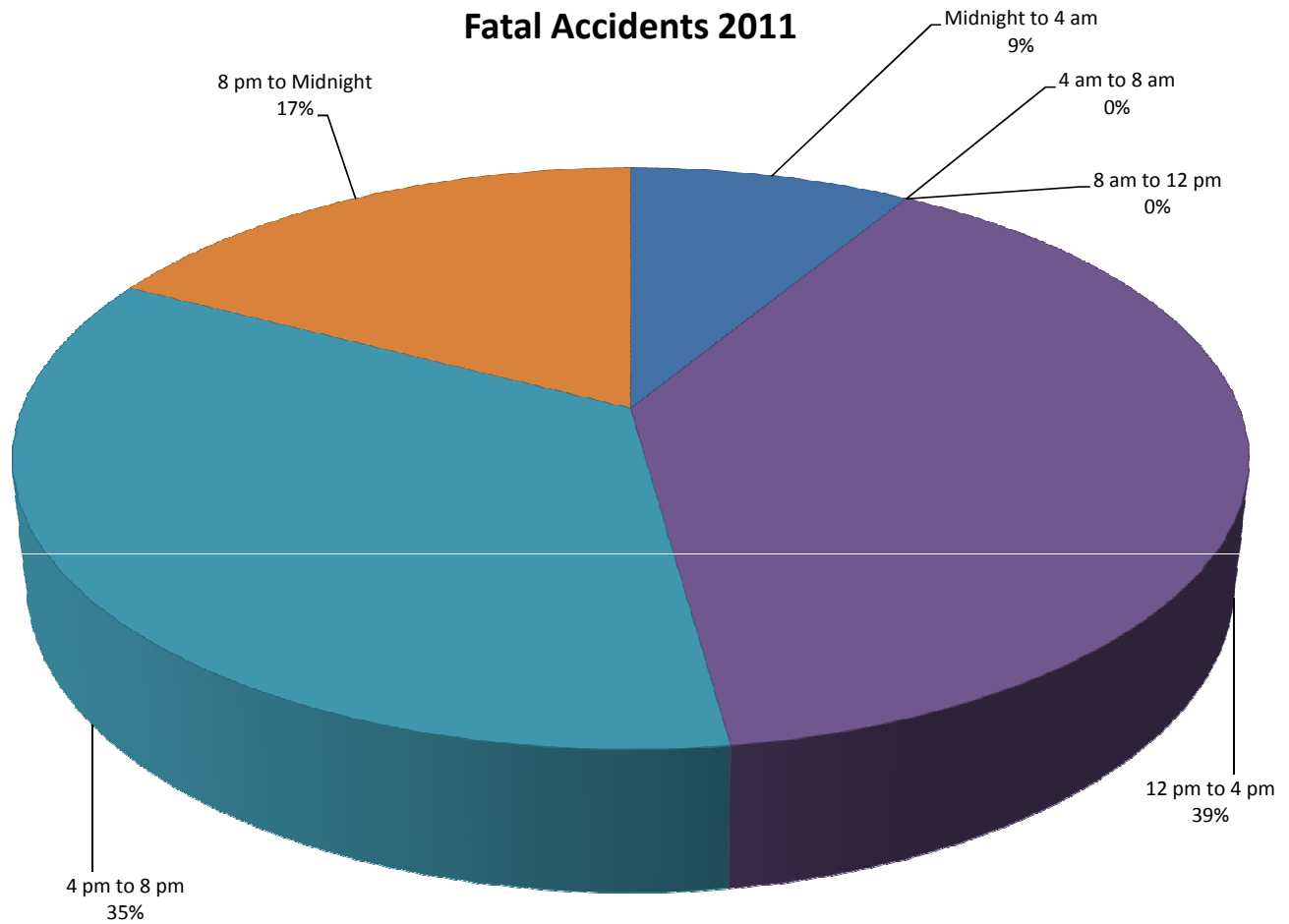
Primary Accident Cause	Number of Accidents
Alcohol Impairment	5
Departed Vessel Voluntarily	4
Excessive Speed	1
Hazardous Waters	4
Occupant Behavior	1
Operator Inexperience	1
Operator Inattention	1
Undetermined	4
Wind/Weather	2

Number of Accidents by Day of Week Fatal Accidents 2011



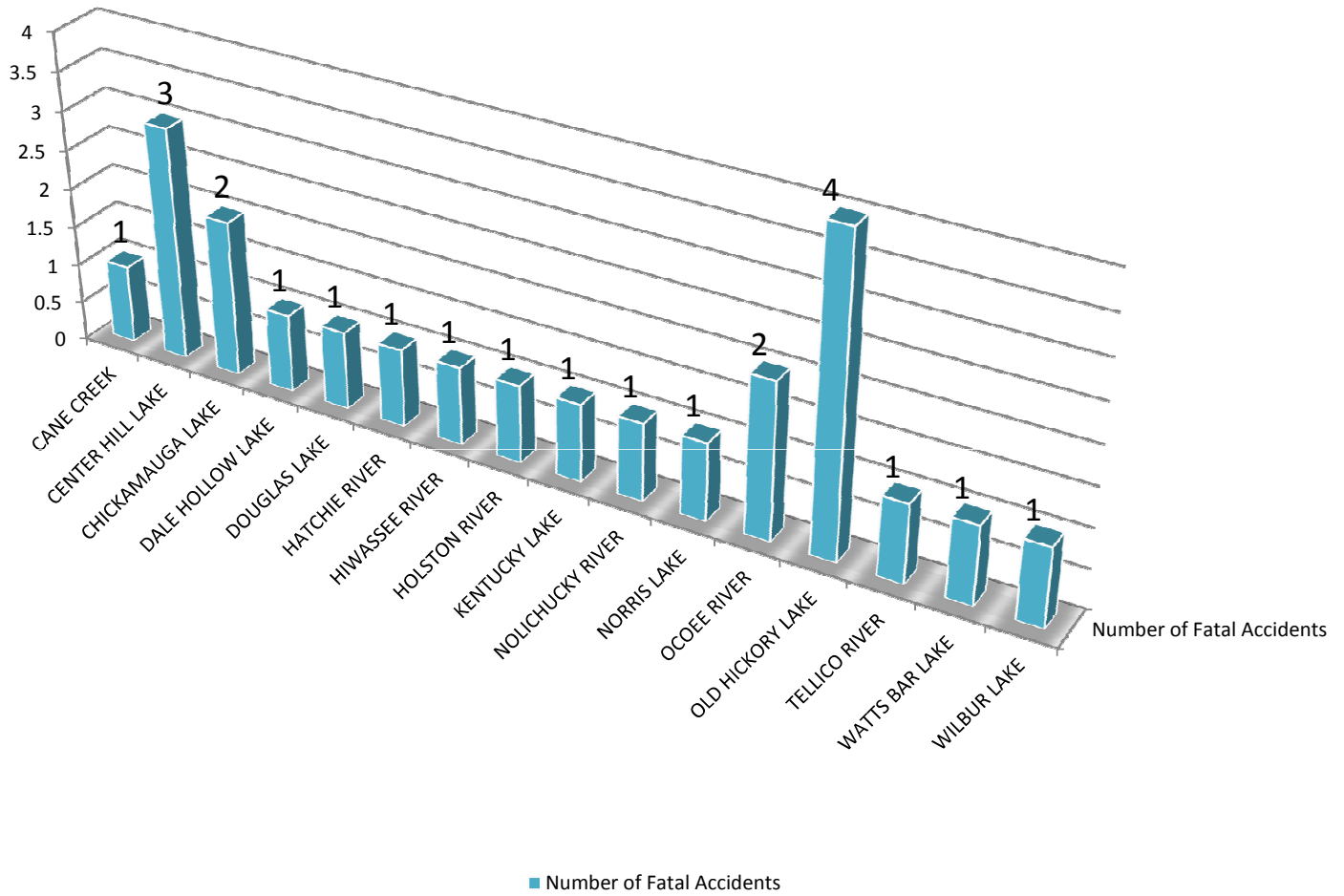
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Number of Accidents	5	2	3	3	0	2	8

Number of Accidents by Time of Day Fatal Accidents 2011



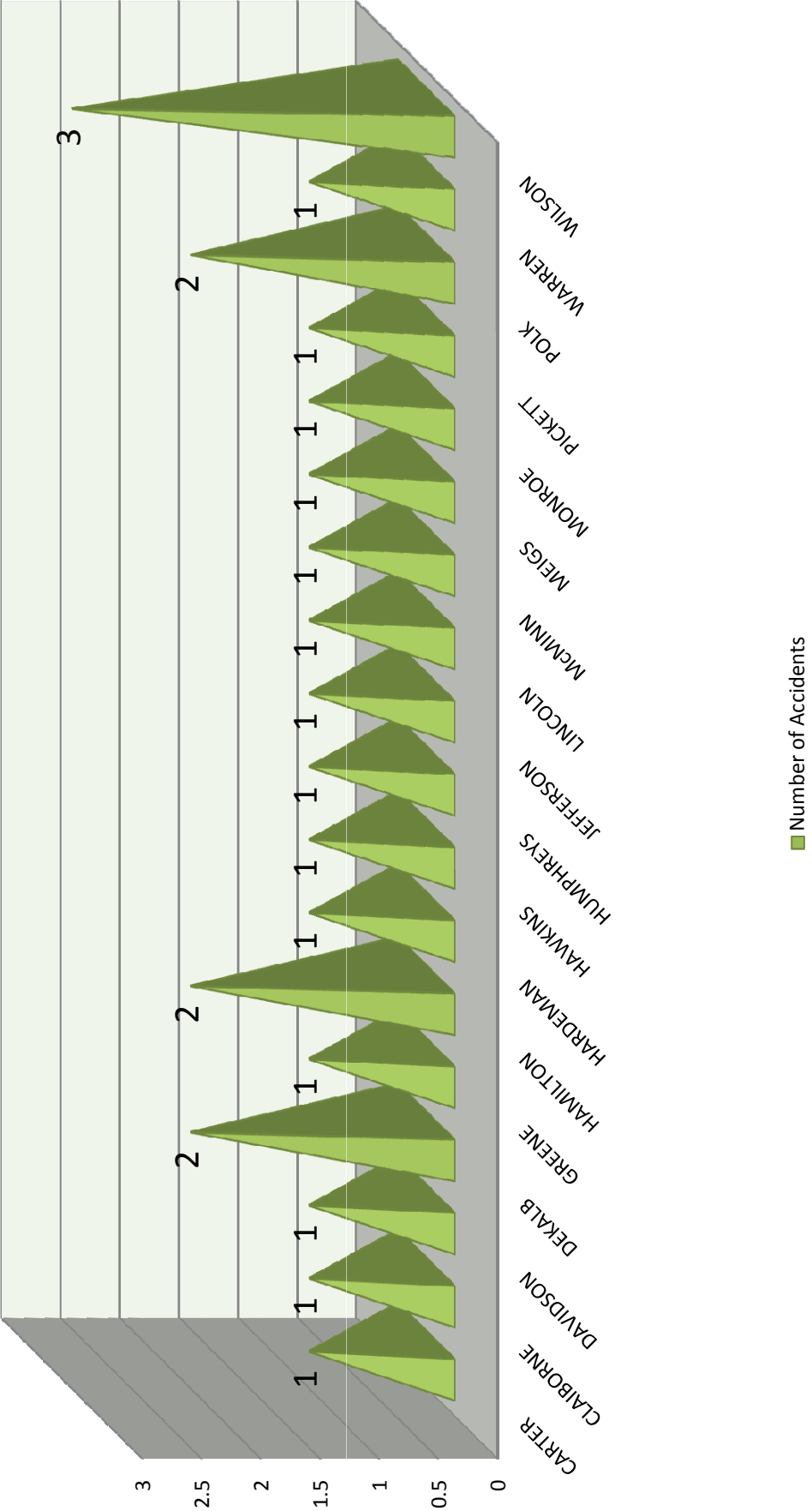
Time of Day	Number of Accidents
Midnight to 4 am	2
4 am to 8 am	0
8 am to 12 pm	0
12 pm to 4 pm	9
4 pm to 8 pm	8
8 pm to Midnight	4

Number of Accidents by Body of Water Fatal Accidents 2011



Body of Water	Number of Fatal Accidents
CANE CREEK	1
CENTER HILL LAKE	3
CHICKAMAUGA LAKE	2
DALE HOLLOW LAKE	1
DOUGLAS LAKE	1
HATCHIE RIVER	1
HIWASSEE RIVER	1
HOLSTON RIVER	1
KENTUCKY LAKE	1
NOLICHUCKY RIVER	1
NORRIS LAKE	1
OCOEE RIVER	2
OLD HICKORY LAKE	4
TELLICO RIVER	1
WATTS BAR LAKE	1
WILBUR LAKE	1

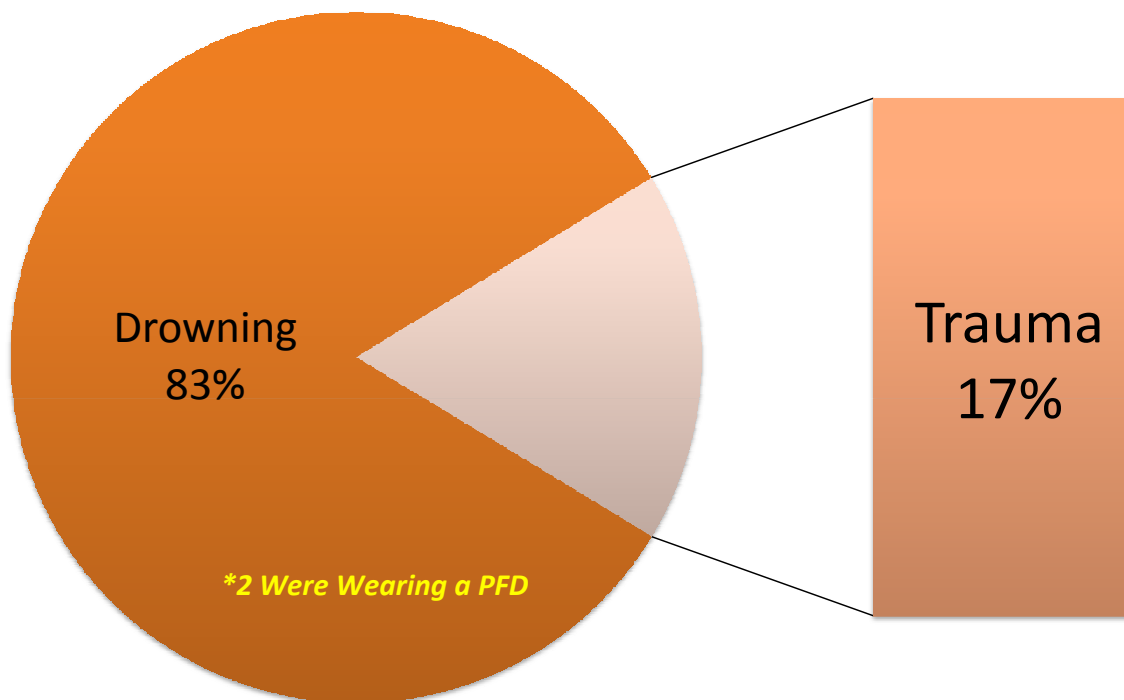
Number of Accidents by County Fatal Accidents 2011



Number of Accidents by County Fatal Accidents 2011

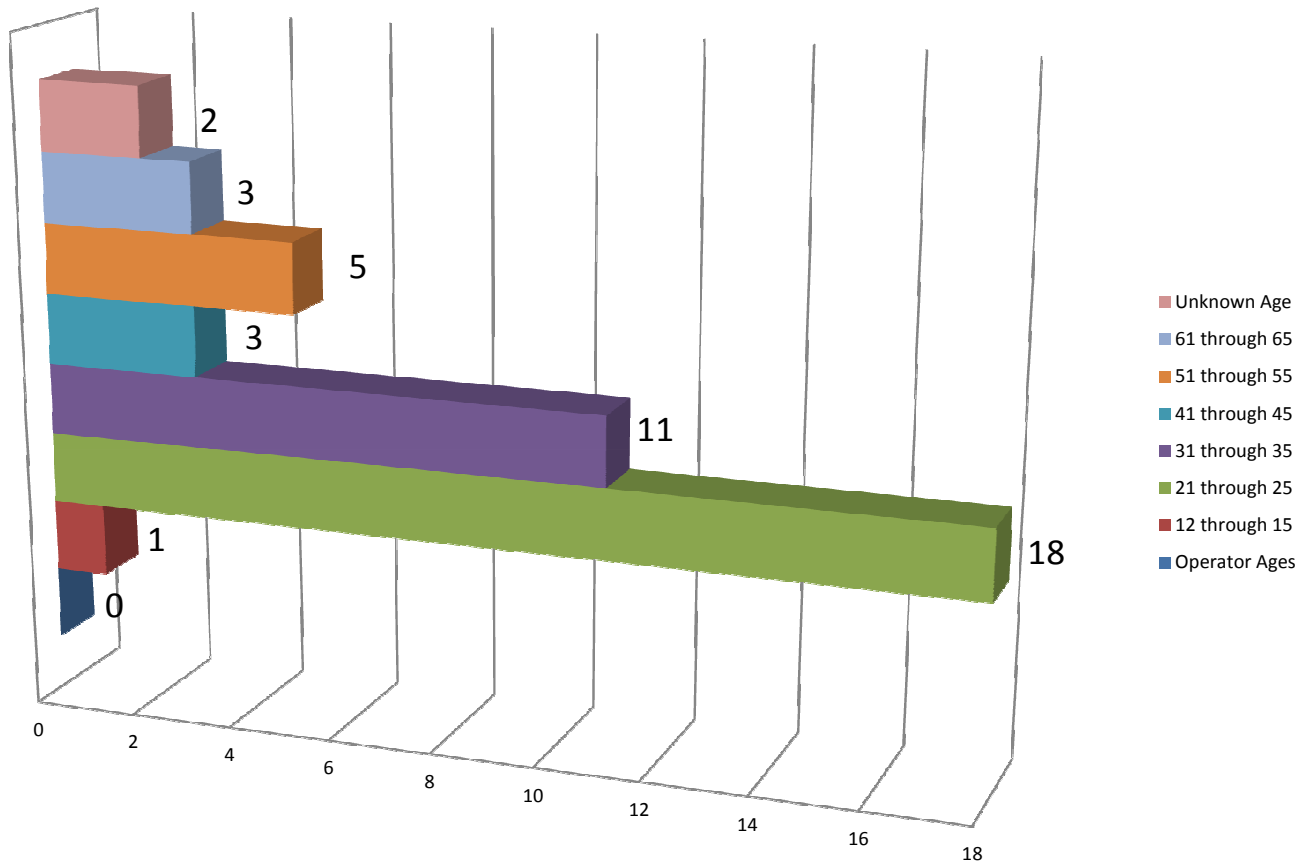
County	Number of Accidents
CARTER	1
CLAIBORNE	1
DAVIDSON	1
DEKALB	2
GREENE	1
HAMILTON	2
HARDEMAN	1
HAWKINS	1
HUMPHREYS	1
JEFFERSON	1
LINCOLN	1
McMINN	1
MEIGS	1
MONROE	1
PICKETT	1
POLK	2
WARREN	1
WILSON	3

Cause of Death for Fatal Accidents 2011



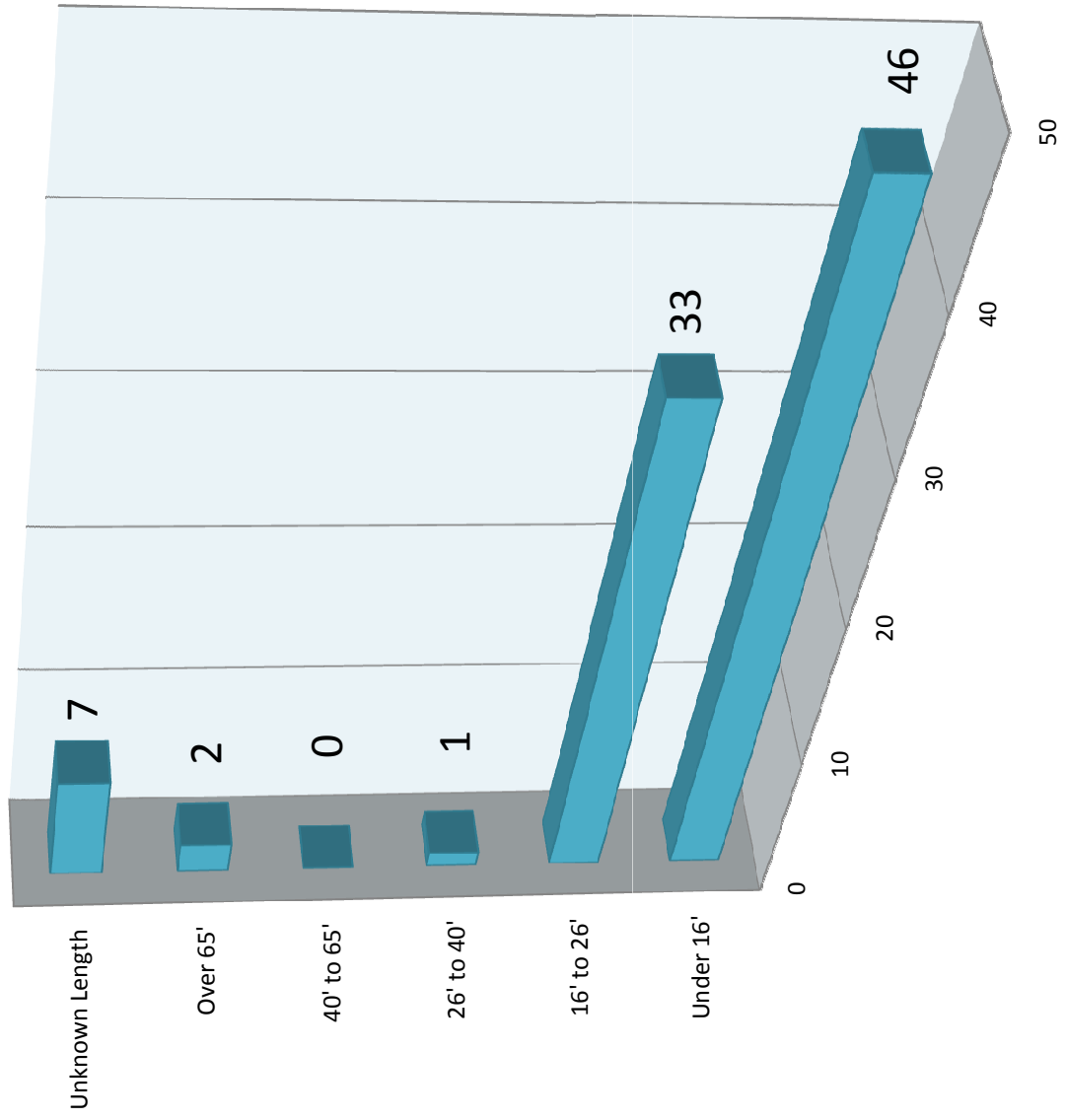
Cause of Death	Number of Victims
Drowning	19
Trauma	4

Number of Operators by Age Groups Injury Accidents 2011



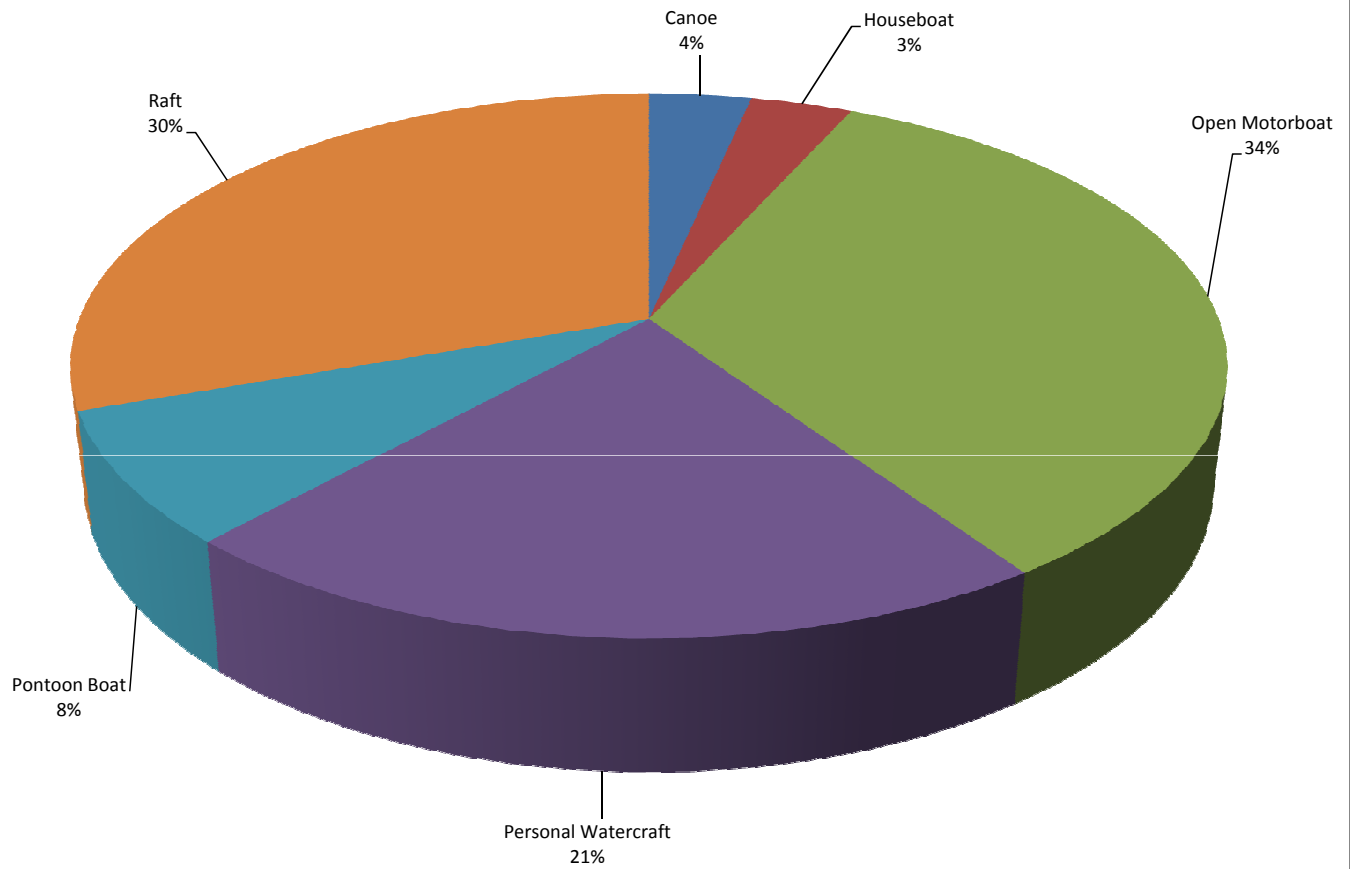
Operator Ages	Number of Operators
Less Than 12	0
12 through 15	1
16 through 20	10
21 through 25	18
26 through 30	7
31 through 35	11
36 through 40	13
41 through 45	3
46 through 50	9
51 through 55	5
56 through 60	1
61 through 65	3
Over 65	3
Unknown Age	2

Number of Vessels by Length Category - Injury Accidents 2011



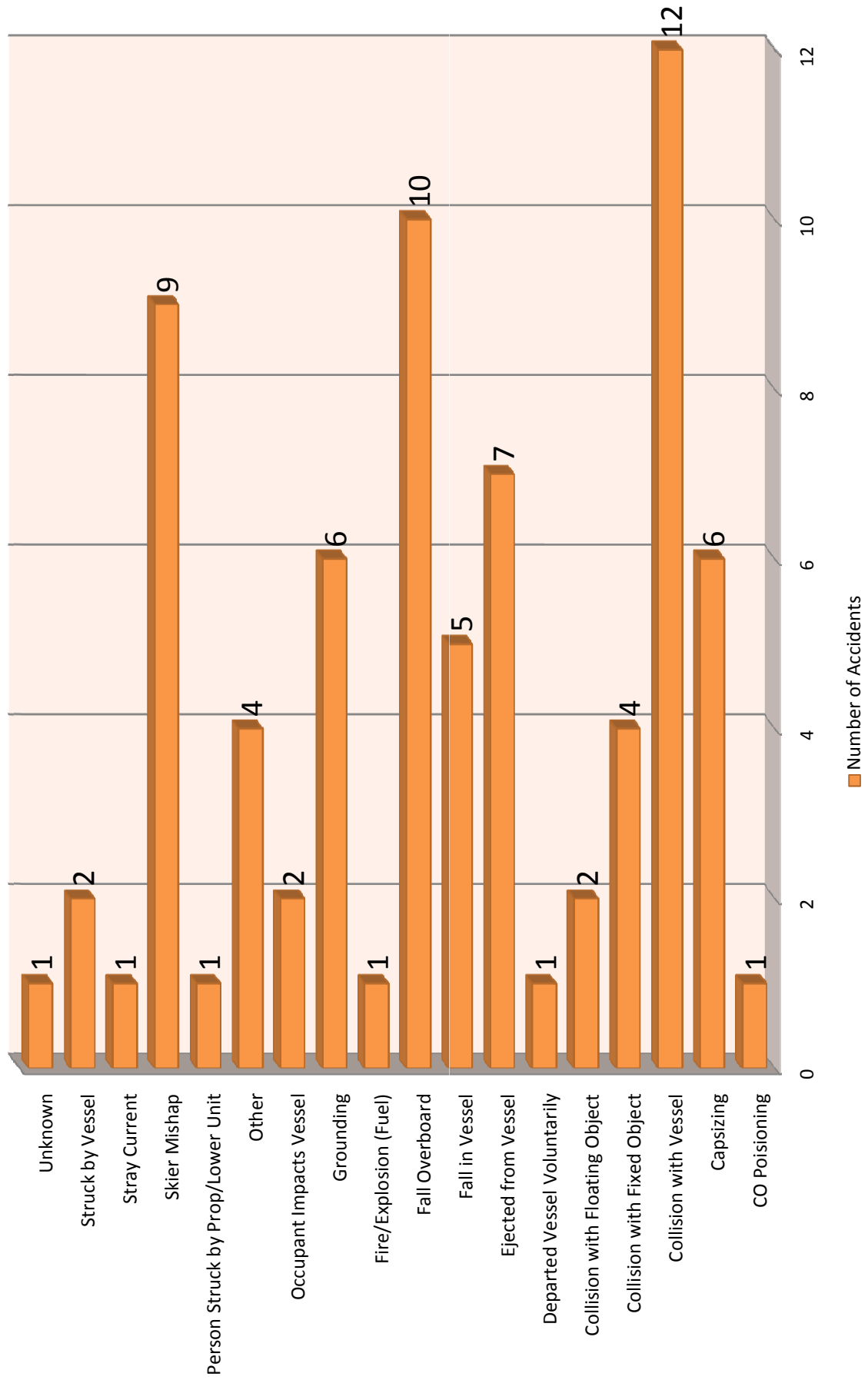
Number of Vessels	Under 16'	16' to 26'	26' to 40'	40' to 65'	Over 65'	Unknown Length
	46	33	1	0	2	7

Number of Vessels by Vessel Type Injury Accidents 2011



Vessel Type	Number of Vessels
Canoe	3
Houseboat	3
Open Motorboat	30
Personal Watercraft	19
Pontoon Boat	7
Raft	27

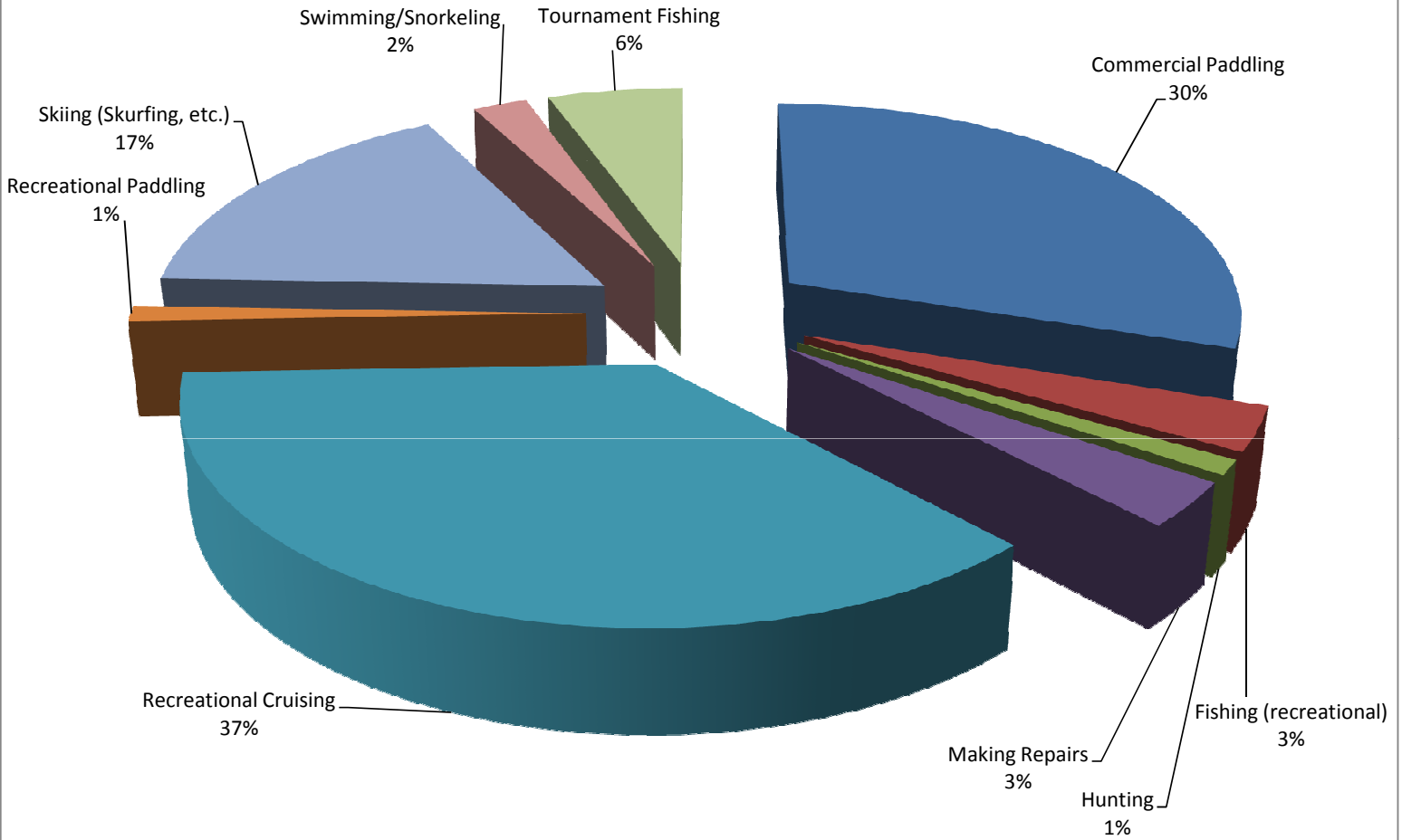
Number of Accidents by Primary Accident Type Injury Accidents 2011



Number of Accidents by Accident Type Injury Accidents 2011

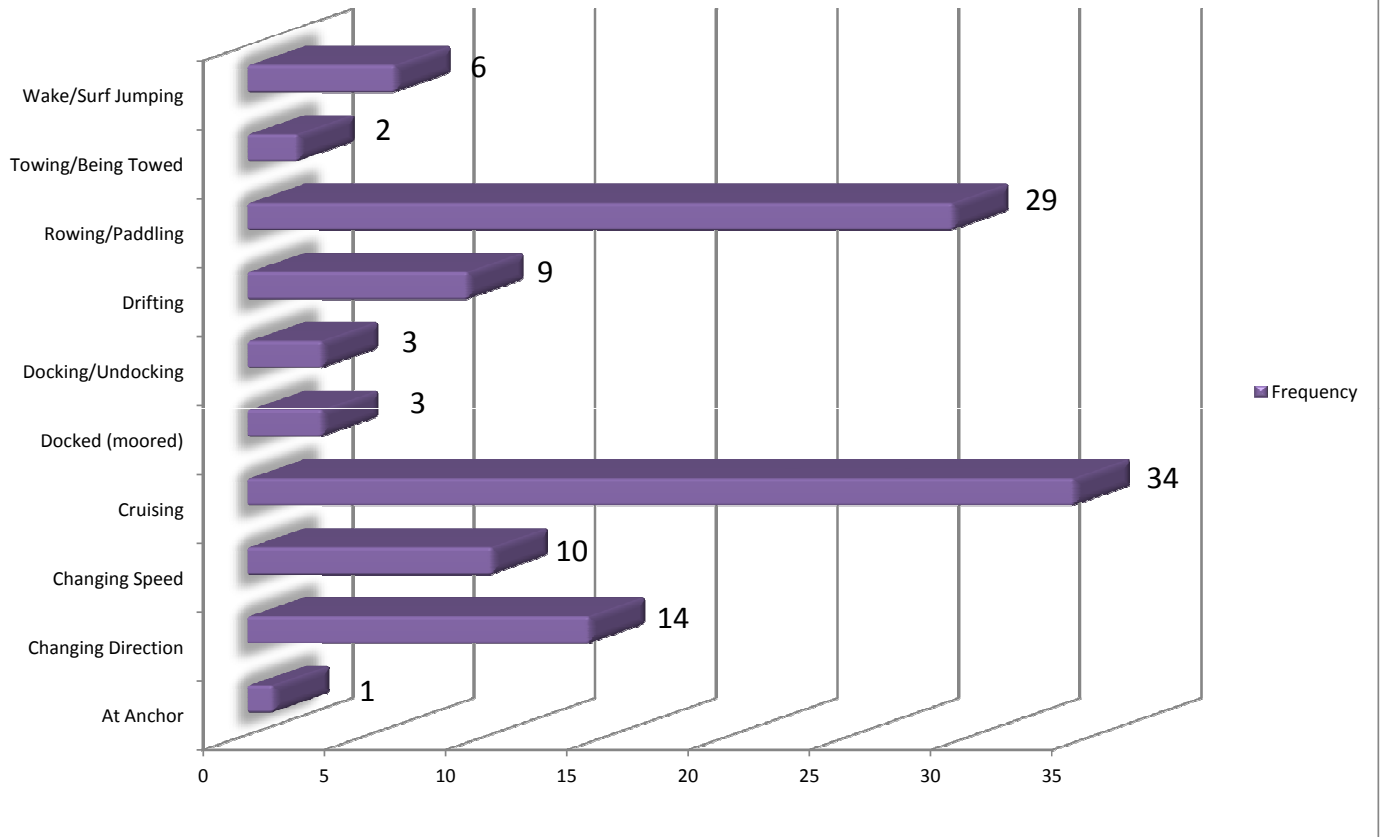
Accident Type	Number of Accidents
CO Poisoning	1
Capsizing	6
Collision with Vessel	12
Collision with Fixed Object	4
Collision with Floating Object	2
Departed Vessel Voluntarily	1
Ejected from Vessel	7
Fall in Vessel	5
Fall Overboard	10
Fire/Explosion (Fuel)	1
Grounding	6
Occupant Impacts Vessel	2
Other	4
Person Struck by Prop/Lower Unit	1
Skier Mishap	9
Stray Current	1
Struck by Vessel	2
Unknown	1

Number of Vessels by Activity During Accident Injury Accidents 2011



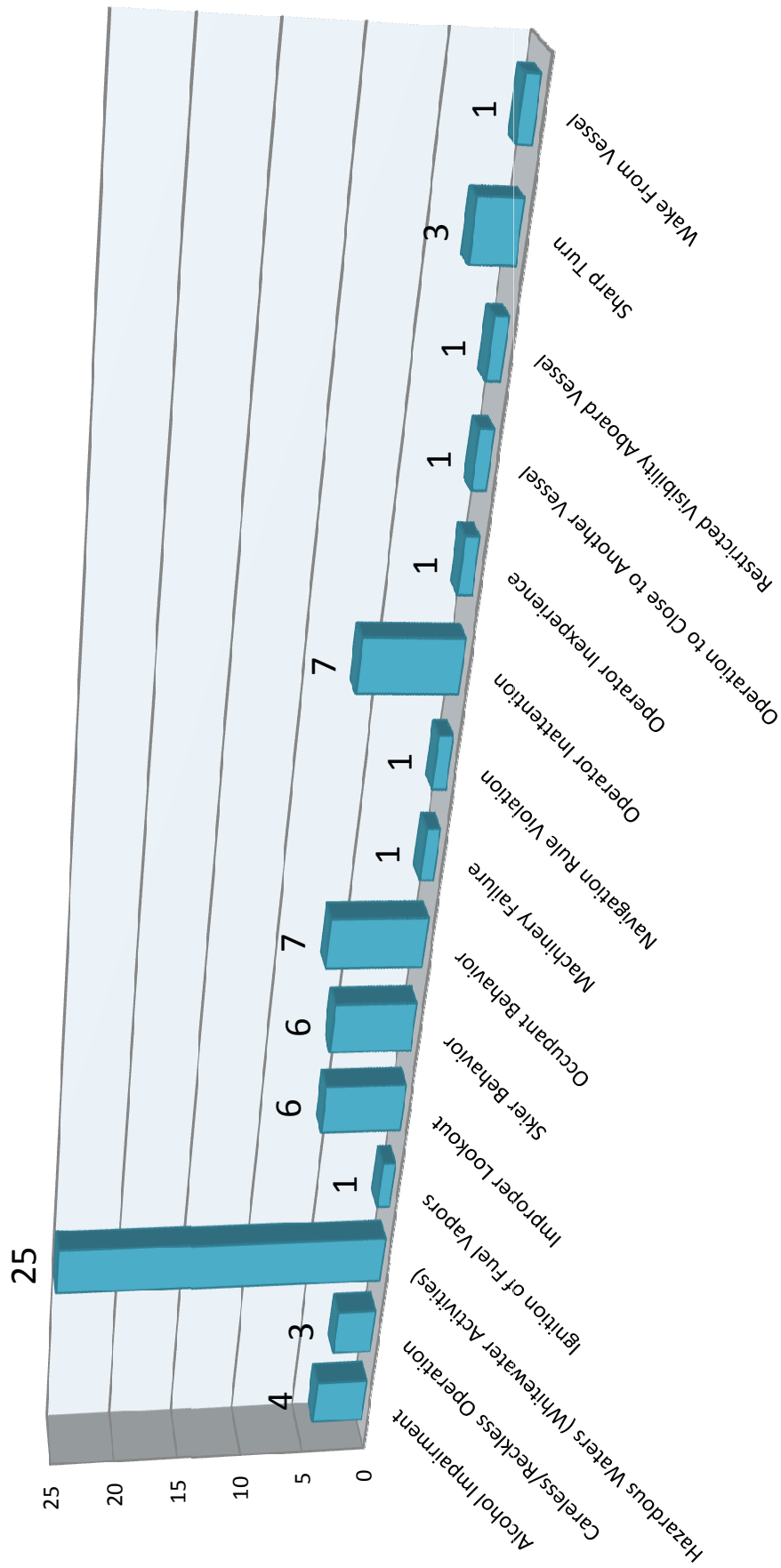
Activity	Number of Vessels
Commercial Paddling	27
Fishing (recreational)	3
Hunting	1
Making Repairs	3
Recreational Cruising	33
Recreational Paddling	1
Skiing (Skurfing, etc.)	15
Swimming/Snorkeling	2
Tournament Fishing	5

Frequency of Operation by Vessels Involved in Accidents Injury Accidents 2011



Vessel Operation	Frequency
At Anchor	1
Changing Direction	14
Changing Speed	10
Cruising	34
Docked (moored)	3
Docking/Undocking	3
Drifting	9
Rowing/Paddling	29
Towing/Being Towed	2
Wake/Surf Jumping	6

Number of Accidents by Primary Cause Injury Accidents 2011

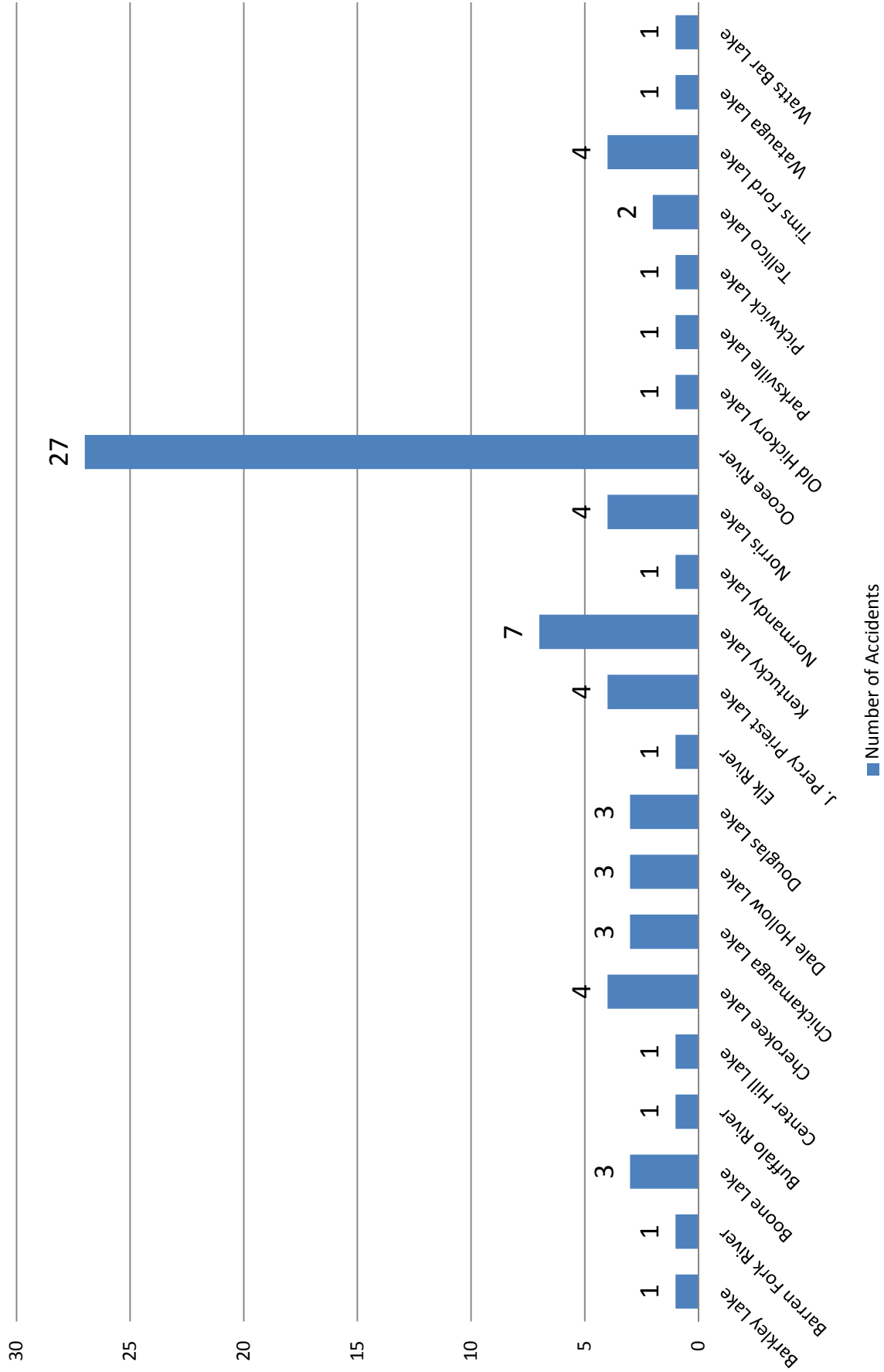


■ Number of Accidents

Number of Accidents by Primary Cause Injury Accidents 2011

Primary Cause	Number of Accidents
Alcohol Impairment	4
Careless/Reckless Operation	3
Hazardous Waters (Whitewater Activities)	25
Ignition of Fuel Vapors	1
Improper Lookout	6
Skier Behavior	6
Occupant Behavior	7
Machinery Failure	1
Navigation Rule Violation	1
Operator Inattention	7
Operator Inexperience	1
Operation to Close to Another Vessel	1
Restricted Visibility Aboard Vessel	1
Sharp Turn	3
Wake From Vessel	1

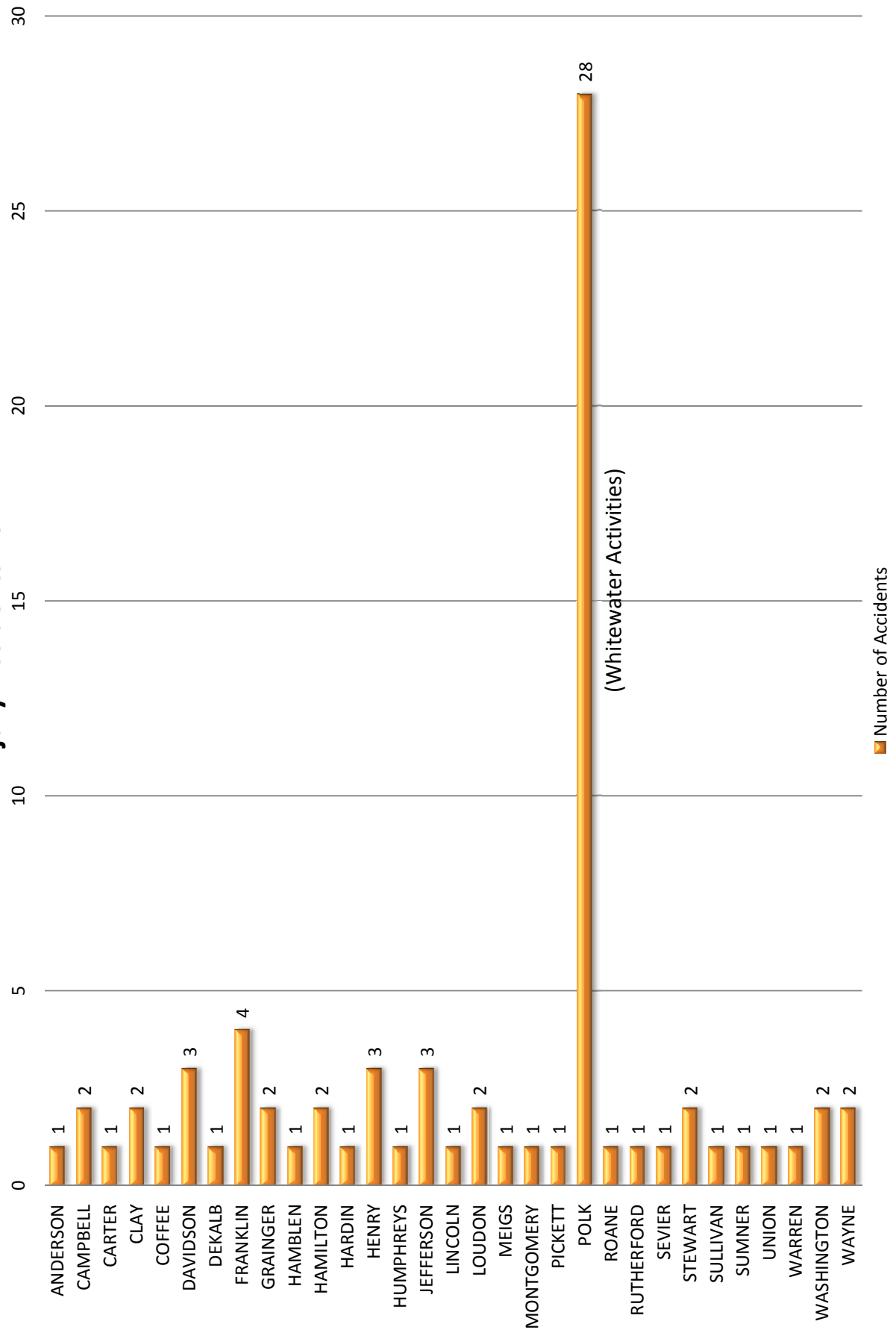
Number of Accidents by Body of Water Injury Accidents 2011



Number of Accidents by Body of Water Injury Accidents 2011

Body of Water	Number of Accidents
Barkley Lake	1
Barren Fork River	1
Boone Lake	3
Buffalo River	1
Center Hill Lake	1
Cherokee Lake	4
Chickamauga Lake	3
Dale Hollow Lake	3
Douglas Lake	3
Elk River	1
J. Percy Priest Lake	4
Kentucky Lake	7
Normandy Lake	1
Norris Lake	4
Ocoee River	27
Old Hickory Lake	1
Parksville Lake	1
Pickwick Lake	1
Tellico Lake	2
Tims Ford Lake	4
Watauga Lake	1
Watts Bar Lake	1

Number of Accidents by County Injury Accidents 2011

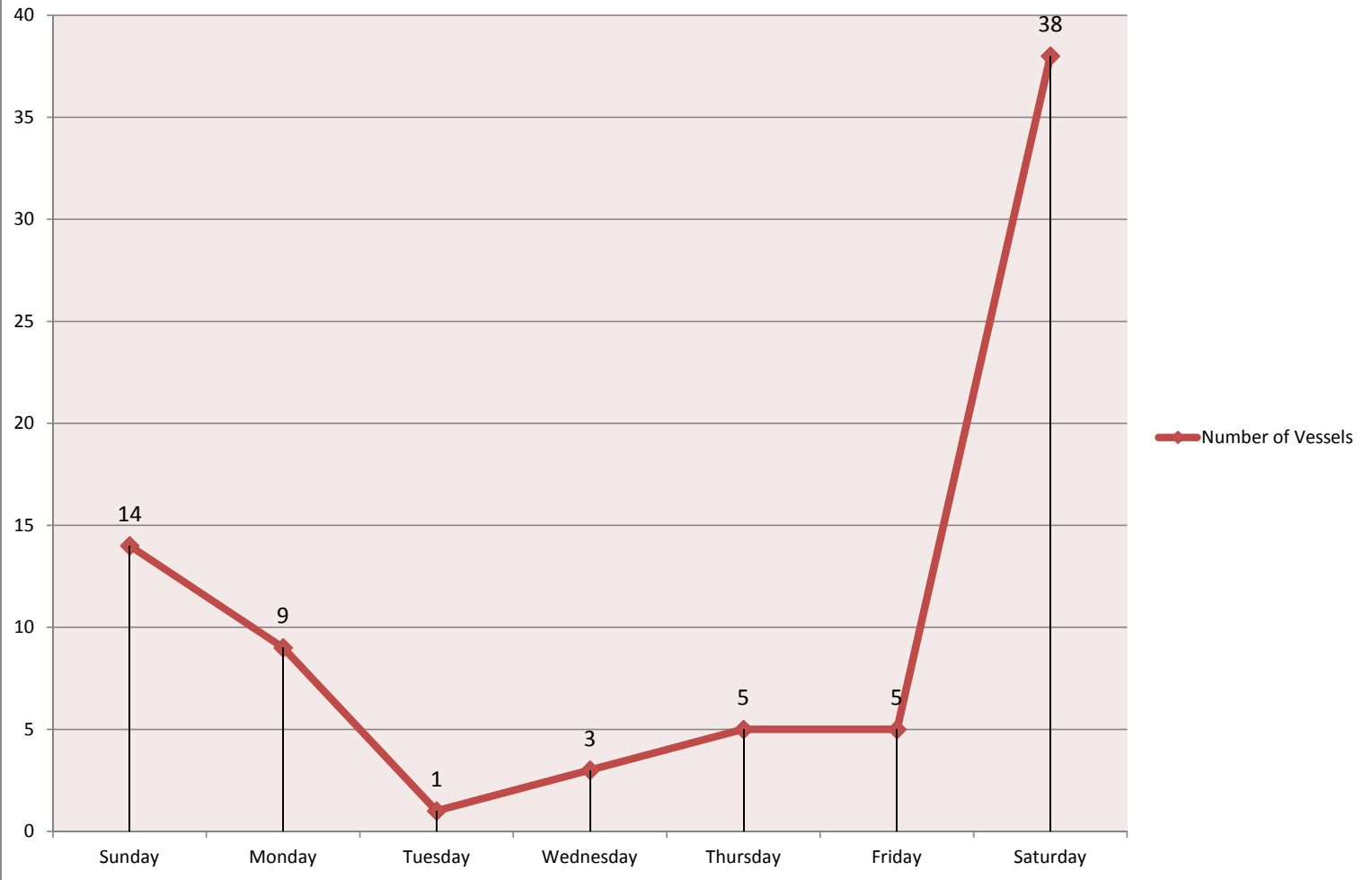


Number of Accidents by County

Injury Accidents 2011

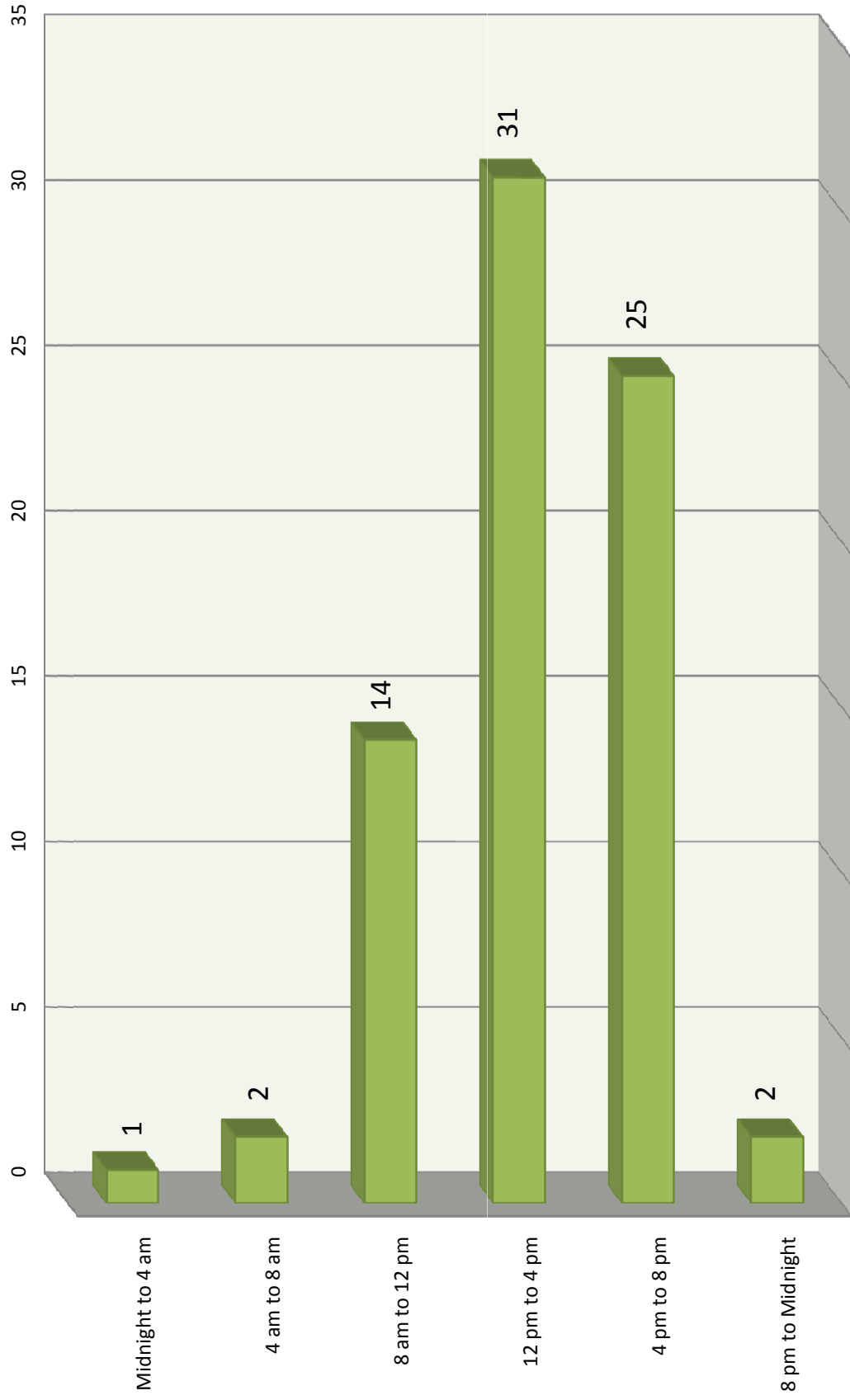
County	Number of Accidents
ANDERSON	1
CAMPBELL	2
CARTER	1
CLAY	2
COFFEE	1
DAVIDSON	3
DEKALB	1
FRANKLIN	4
GRAINGER	2
HAMBLEN	1
HAMILTON	2
HARDIN	1
HENRY	3
HUMPHREYS	1
JEFFERSON	3
LINCOLN	1
LOUDON	2
MEIGS	1
MONTGOMERY	1
PICKETT	1
POLK (Whitewater Activities)	28
ROANE	1
RUTHERFORD	1
SEVIER	1
STEWART	2
SULLIVAN	1
SUMNER	1
UNION	1
WARREN	1
WASHINGTON	2
WAYNE	2

Number of Accidents by Day of Week Injury Accidents 2011



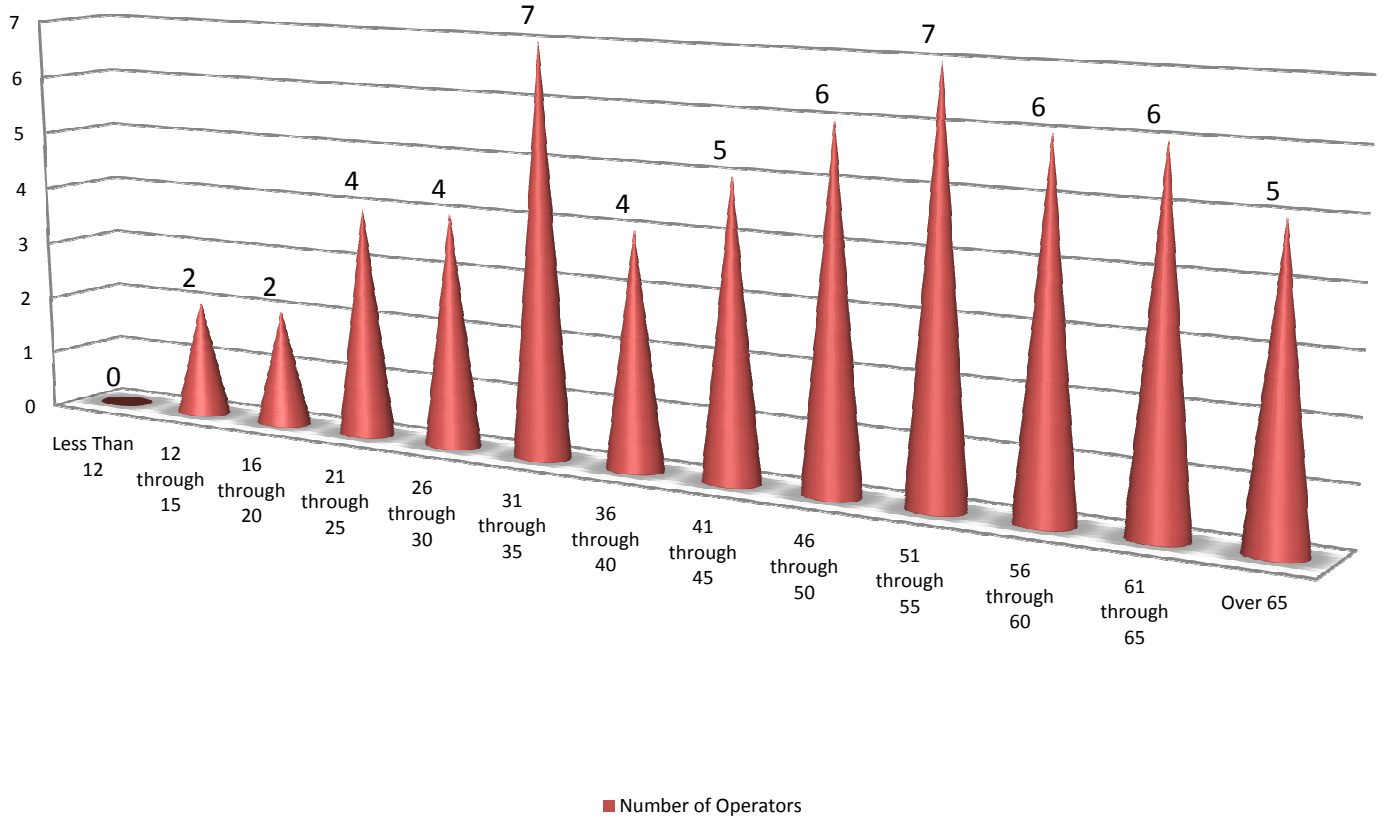
Day of Week	Number of Vessels
Sunday	14
Monday	9
Tuesday	1
Wednesday	3
Thursday	5
Friday	5
Saturday	38

Number of Accidents by Time of Day Injury Accidents 2011



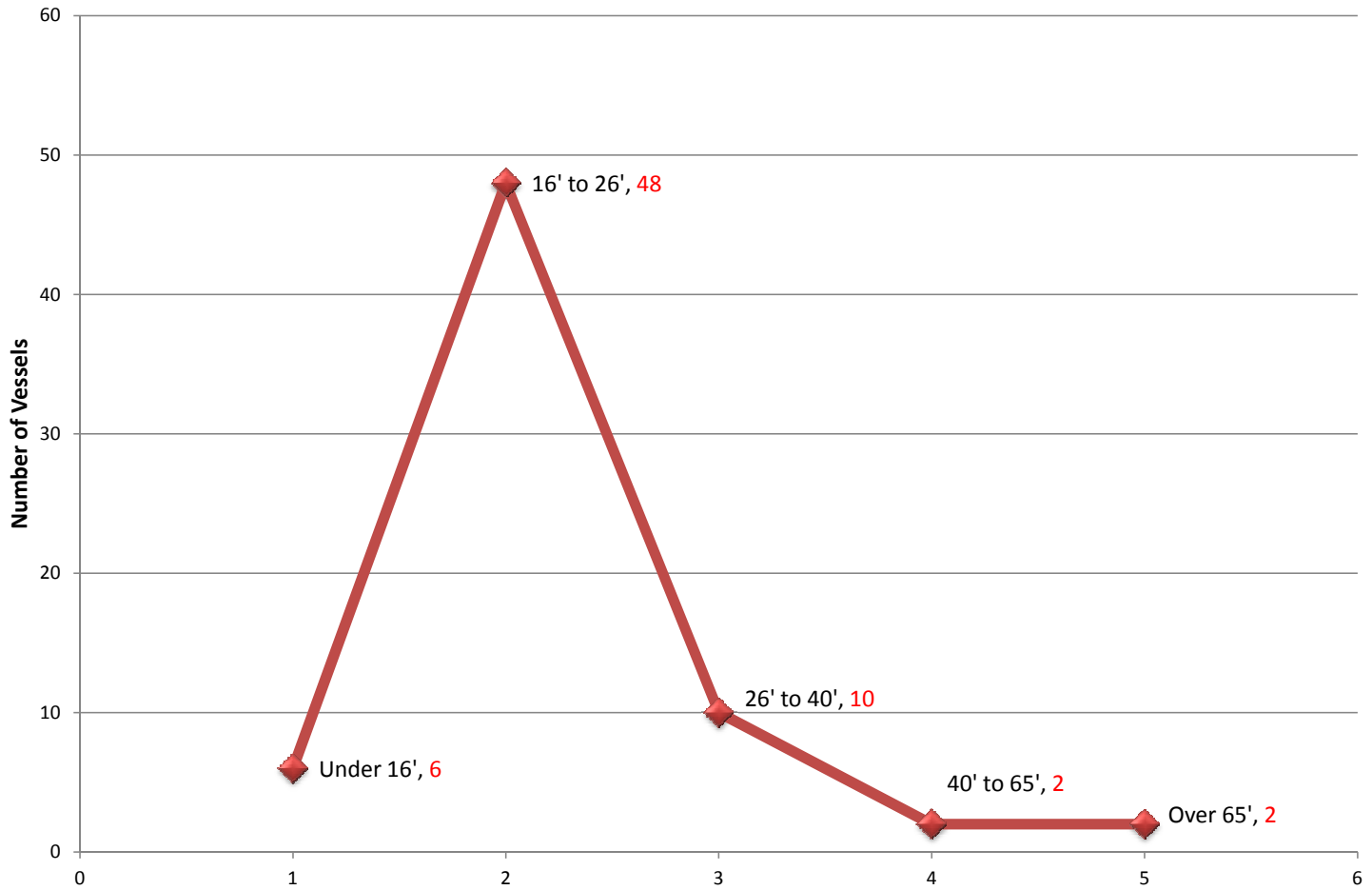
	8 pm to Midnight	4 pm to 8 pm	12 pm to 4 pm	8 am to 12 pm	4 am to 8 am	Midnight to 4 am
Number of Accidents	2	25	31	14	2	1

Number of Operators by Age Category Property Damage Accidents 2011



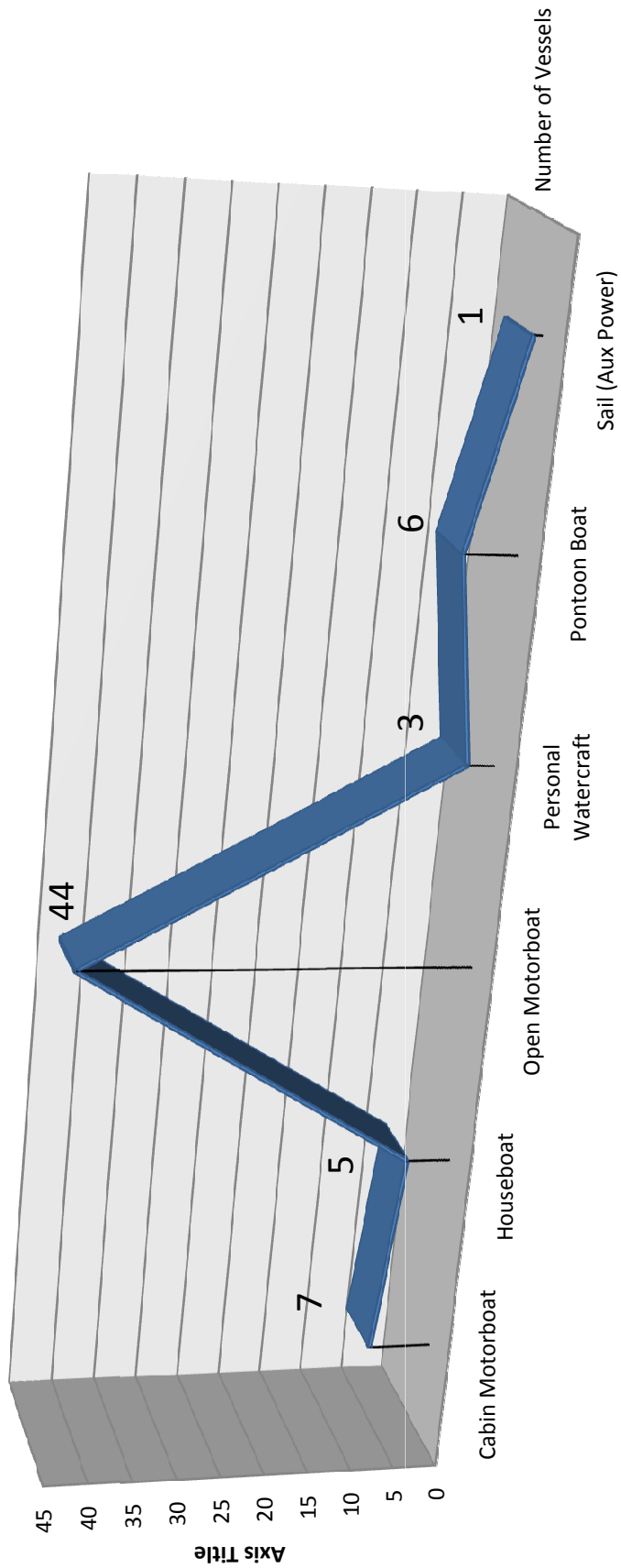
Operator Ages	Number of Operators
Less Than 12	0
12 through 15	2
16 through 20	2
21 through 25	4
26 through 30	4
31 through 35	7
36 through 40	4
41 through 45	5
46 through 50	6
51 through 55	7
56 through 60	6
61 through 65	6
Over 65	5

Number of Vessels by Length Category Property Damage Accidents 2011



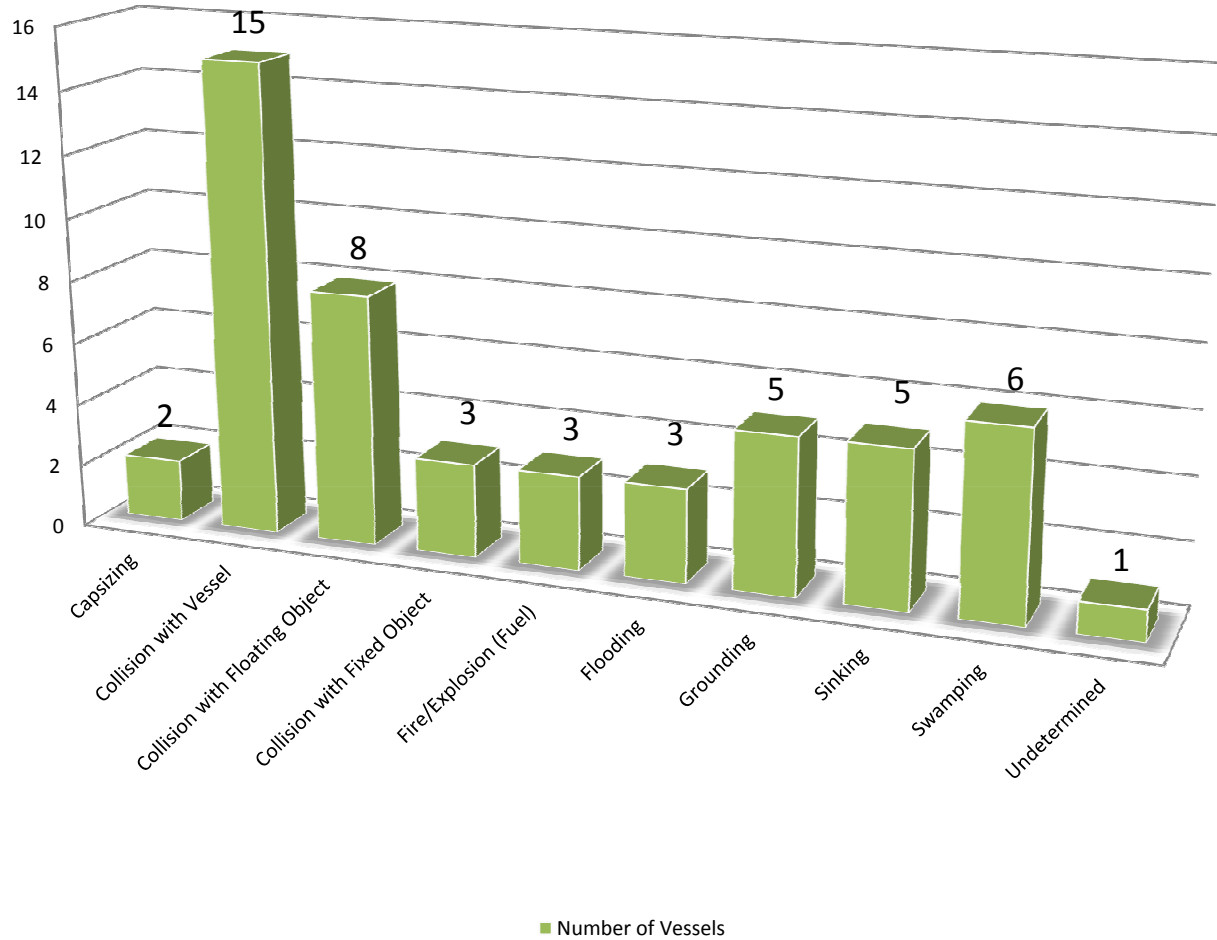
Vessel Length Category	Number of Vessels
Under 16'	6
16' to 26'	48
26' to 40'	10
40' to 65'	2
Over 65'	2

Number of Vessels by Vessel Type Property Damage Accidents 2011



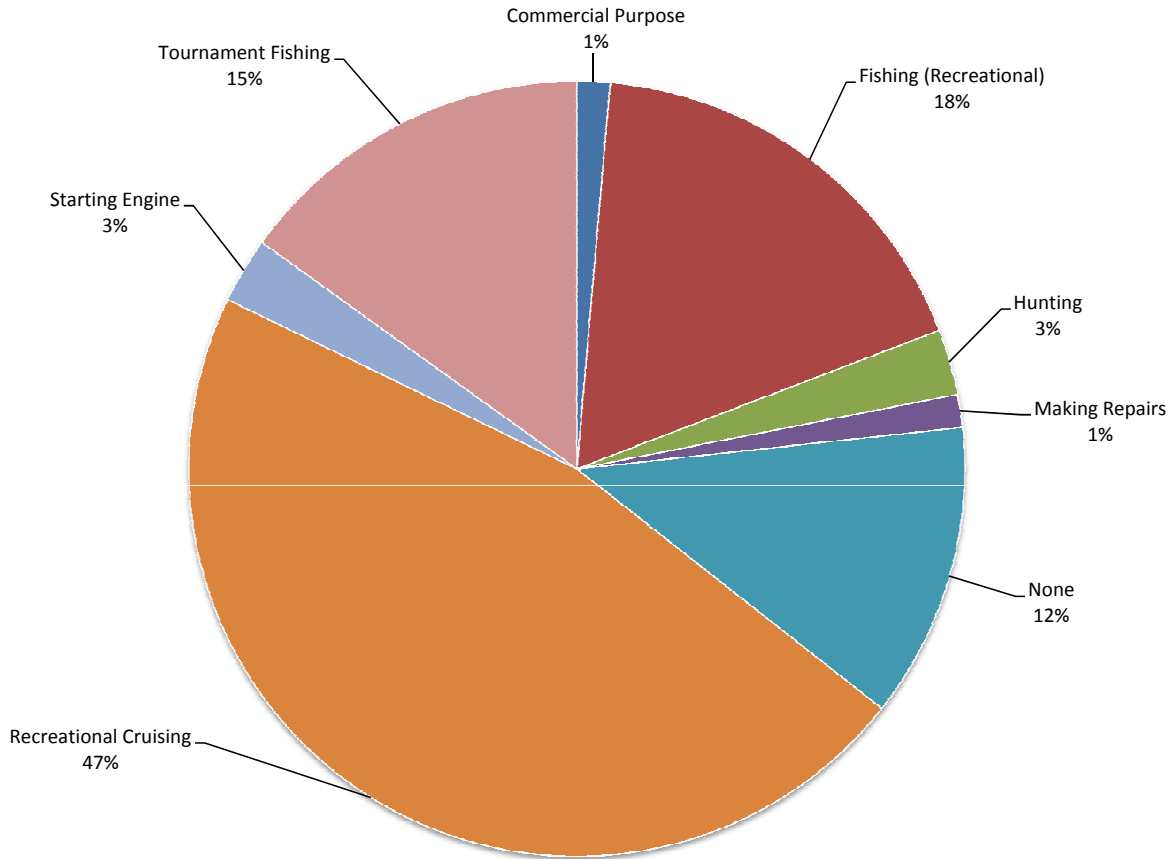
Number of Vessels	Cabin Motorboat	Houseboat	Open Motorboat	Personal Watercraft	Pontoon Boat	Sail (Aux Power)
	7	5	44	3	6	1

Number of Vessels by Primary Accident Type Property Damage 2011



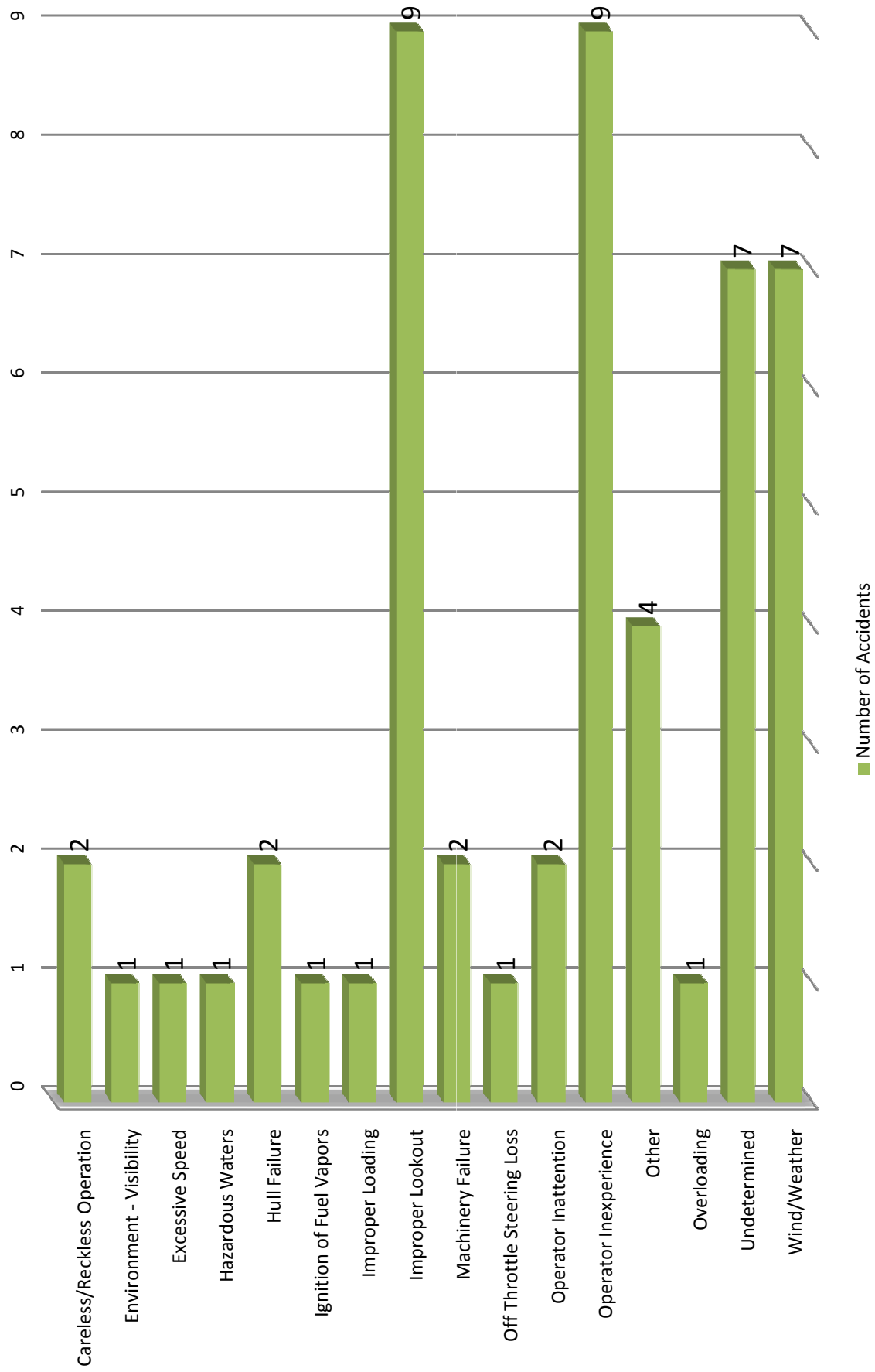
Accident Type	Number of Vessels
Capsizing	2
Collision with Vessel	15
Collision with Floating Object	8
Collision with Fixed Object	3
Fire/Explosion (Fuel)	3
Flooding	3
Grounding	5
Sinking	5
Swamping	6
Undetermined	1

Number of Vessels by Activity During Accident Property Damage Accidents 2011



Activity	Number of Vessels
Commercial Purpose	1
Fishing (Recreational)	13
Hunting	2
Making Repairs	1
None	9
Recreational Cruising	34
Starting Engine	2
Tournament Fishing	11

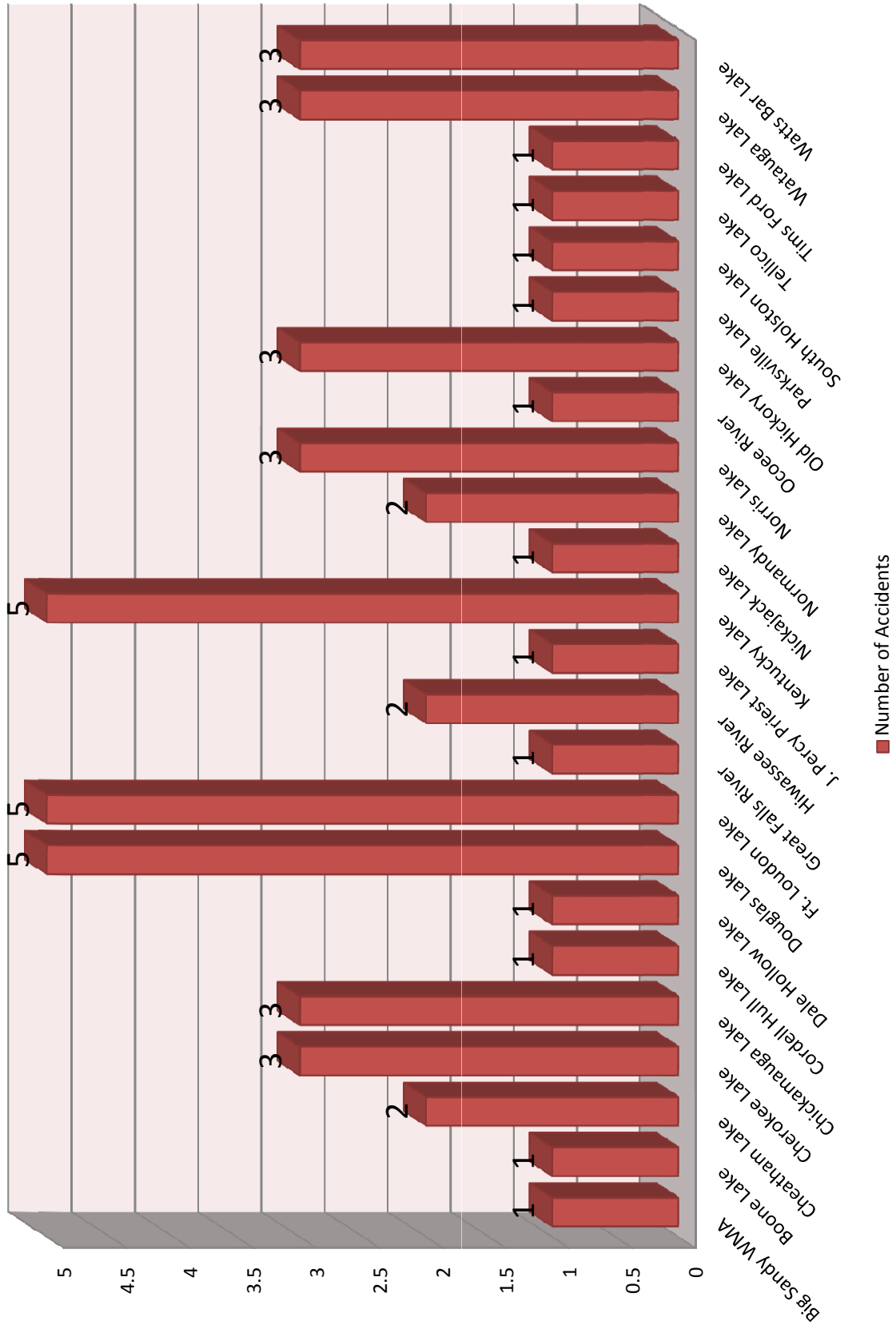
Number of Accidents by Primary Cause Property Damage Accidents 2011



Number of Accidents by Primary Cause Property Damage Accidents 2011

Primary Cause	Number of Accidents
Careless/Reckless Operation	2
Environment - Visibility	1
Excessive Speed	1
Hazardous Waters	1
Hull Failure	2
Ignition of Fuel Vapors	1
Improper Loading	1
Improper Lookout	9
Machinery Failure	2
Off Throttle Steering Loss	1
Operator Inattention	2
Operator Inexperience	9
Other	4
Overloading	1
Undetermined	7
Wind/Weather	7

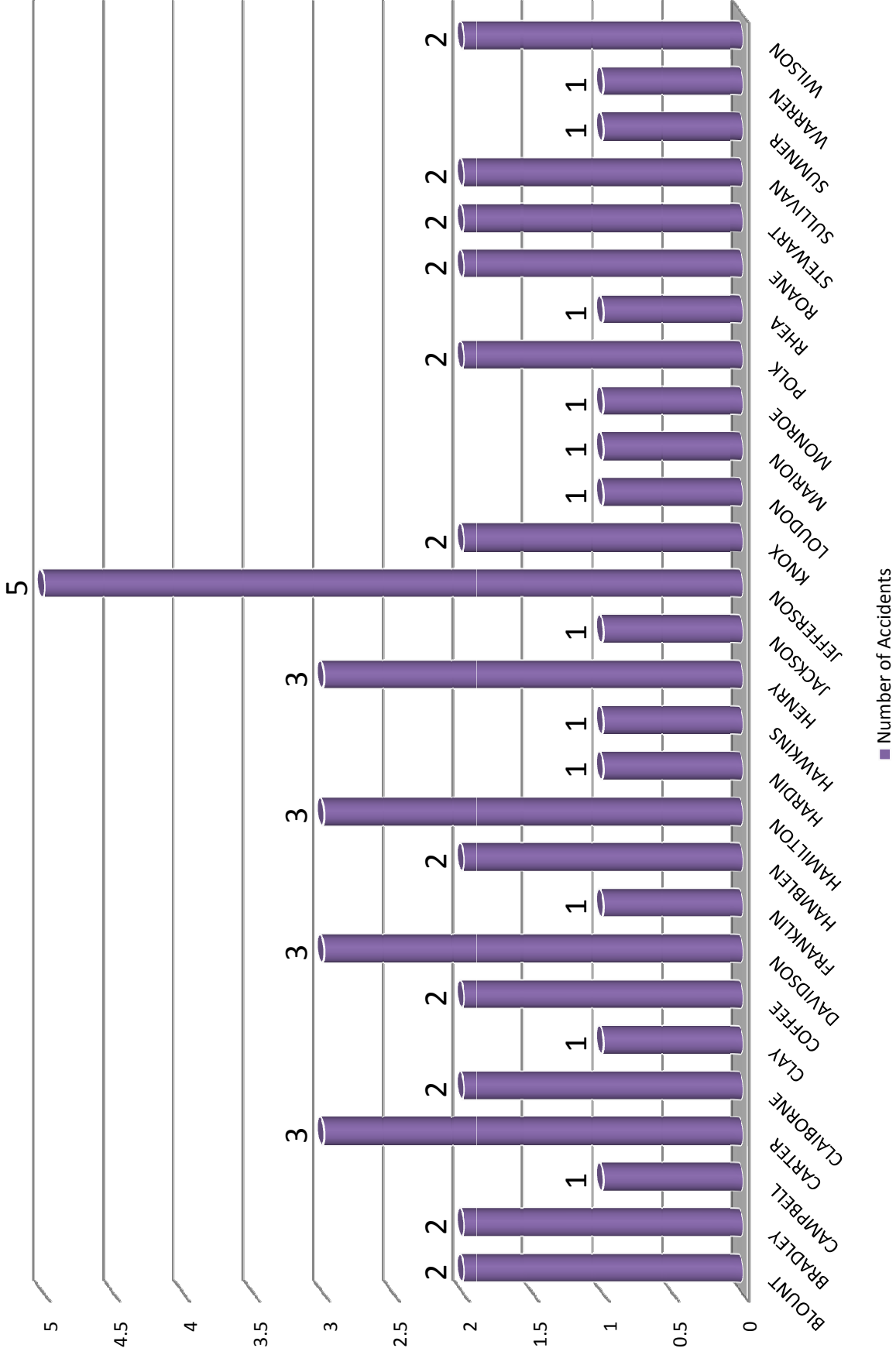
Number of Accidents by Body of Water Property Damage Accidents 2011



Number of Accidents by Body of Water Property Damage Accidents 2011

Body of Water	Number of Accidents
Big Sandy WMA	1
Boone Lake	1
Cheatham Lake	2
Cherokee Lake	3
Chickamauga Lake	3
Cordell Hull Lake	1
Dale Hollow Lake	1
Douglas Lake	5
Ft. Loudon Lake	5
Great Falls River	1
Hiwassee River	2
J. Percy Priest Lake	1
Kentucky Lake	5
Nickajack Lake	1
Normandy Lake	2
Norris Lake	3
Ocoee River	1
Old Hickory Lake	3
Parksville Lake	1
South Holston Lake	1
Tellico Lake	1
Tims Ford Lake	1
Watauga Lake	3
Watts Bar Lake	3

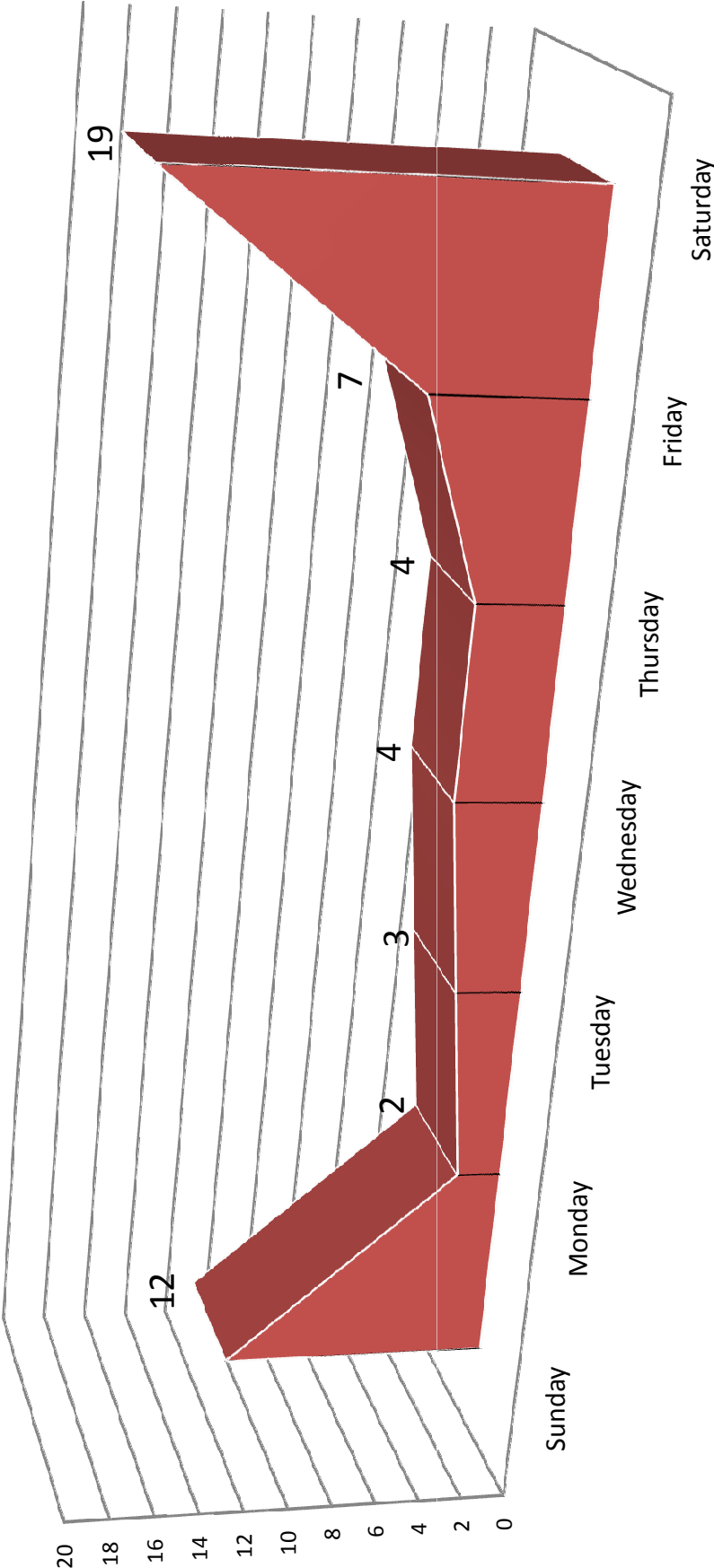
Number of Accidents by County Property Damage Accidents 2011



Number of Accidents by County Property Damage Accidents 2011

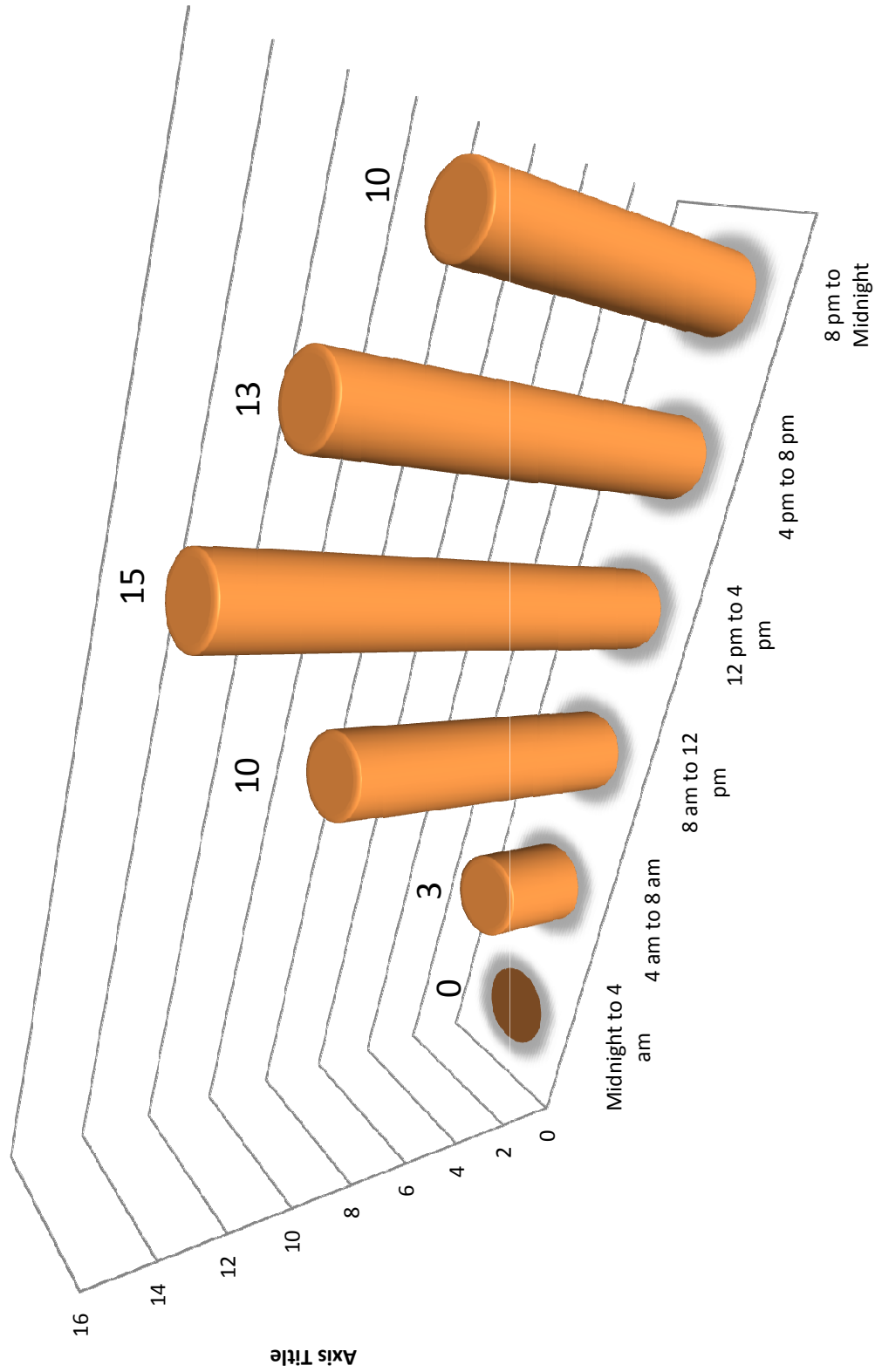
Name of County	Number of Accidents
BLOUNT	2
BRADLEY	2
CAMPBELL	1
CARTER	3
CLAIBORNE	2
CLAY	1
COFFEE	2
DAVIDSON	3
FRANKLIN	1
HAMBLEN	2
HAMILTON	3
HARDIN	1
HAWKINS	1
HENRY	3
JACKSON	1
JEFFERSON	5
KNOX	2
LOUDON	1
MARION	1
MONROE	1
POLK	2
RHEA	1
ROANE	2
STEWART	2
SULLIVAN	2
SUMNER	1
WARREN	1
WILSON	2

Number of Accidents by Day of Week Property Damage Accidents 2011



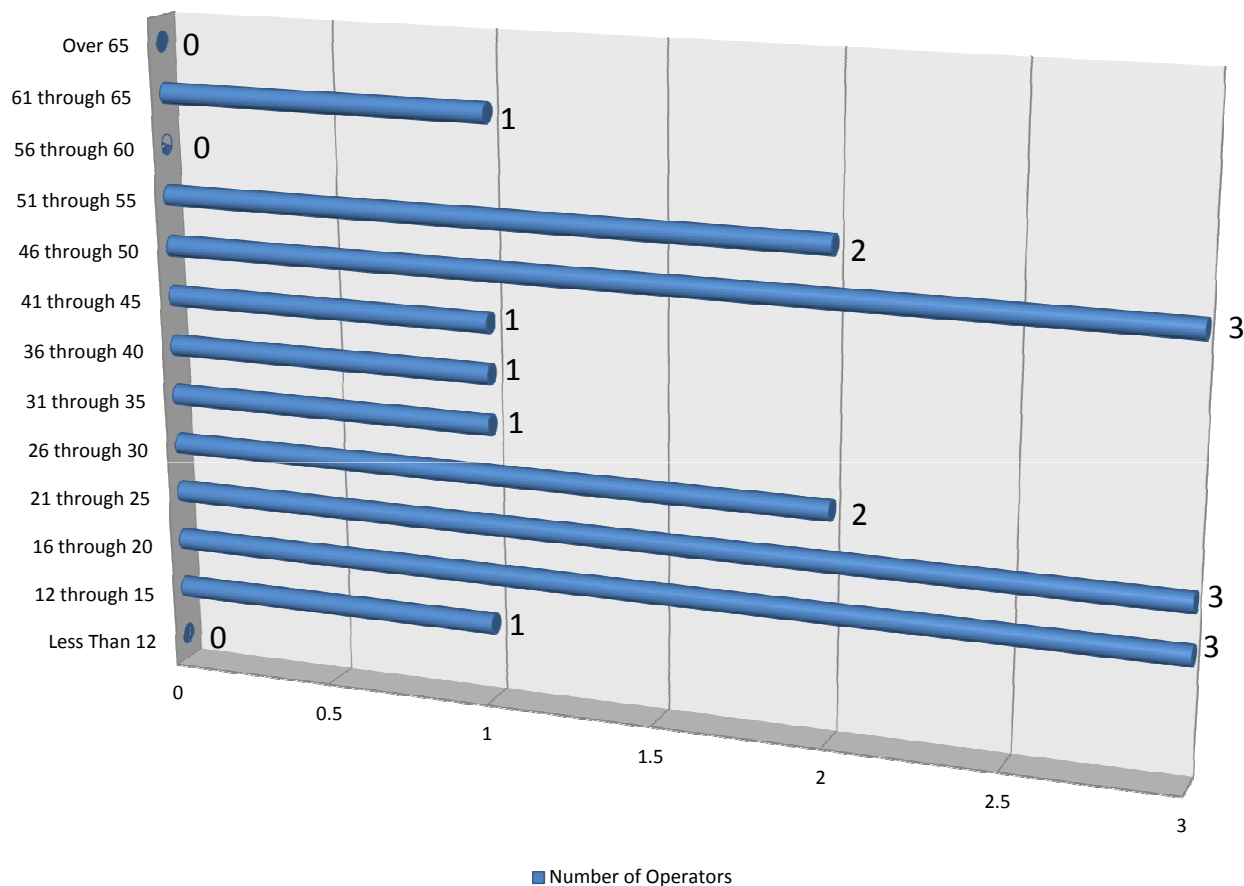
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
■ Number of Accidents	12	2	3	4	4	7	19

Number of Accidents by Time of Day Property Damage Accidents 2011



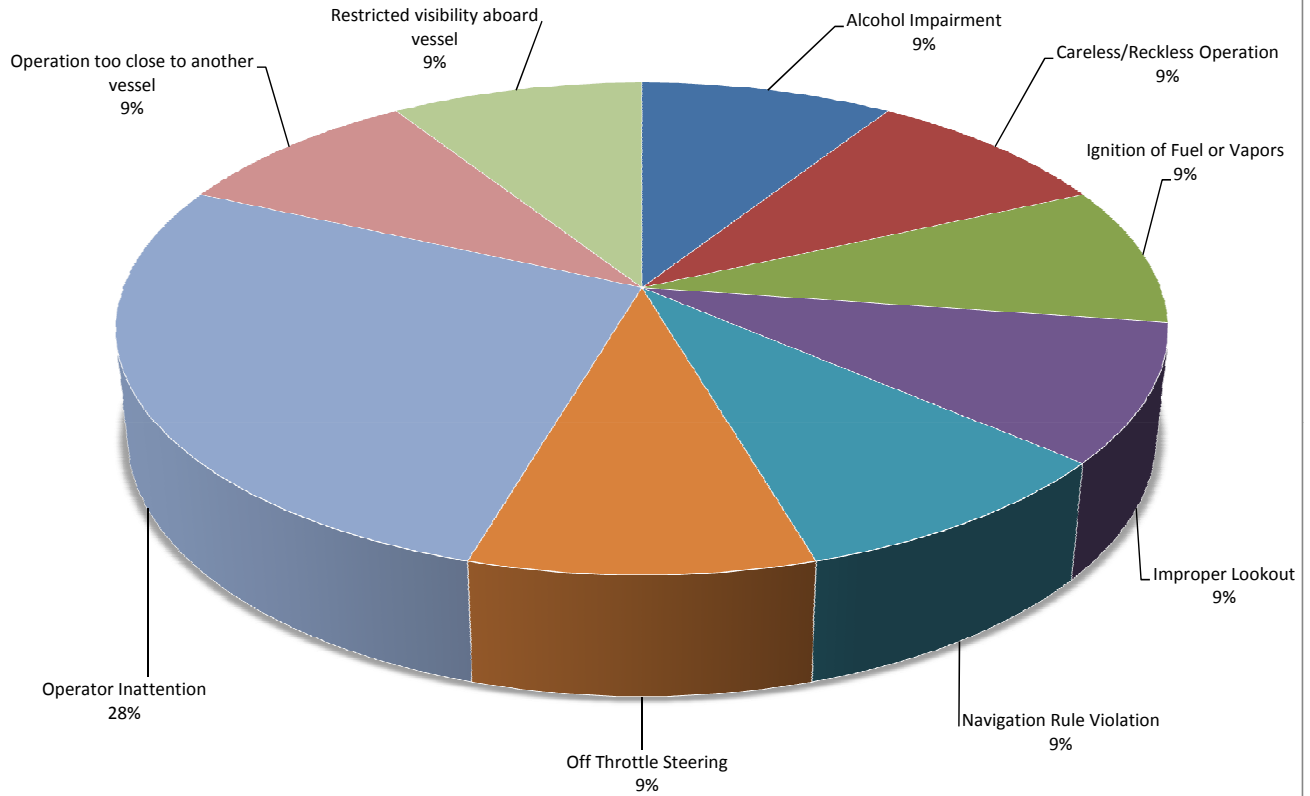
Number of Accidents	Midnight to 4 am	4 am to 8 am	8 am to 12 pm	12 pm to 4 pm	4 pm to 8 pm	8 pm to Midnight
	0	3	10	15	13	10

Number of Operators by Age Category Accidents Involving PWCs 2011



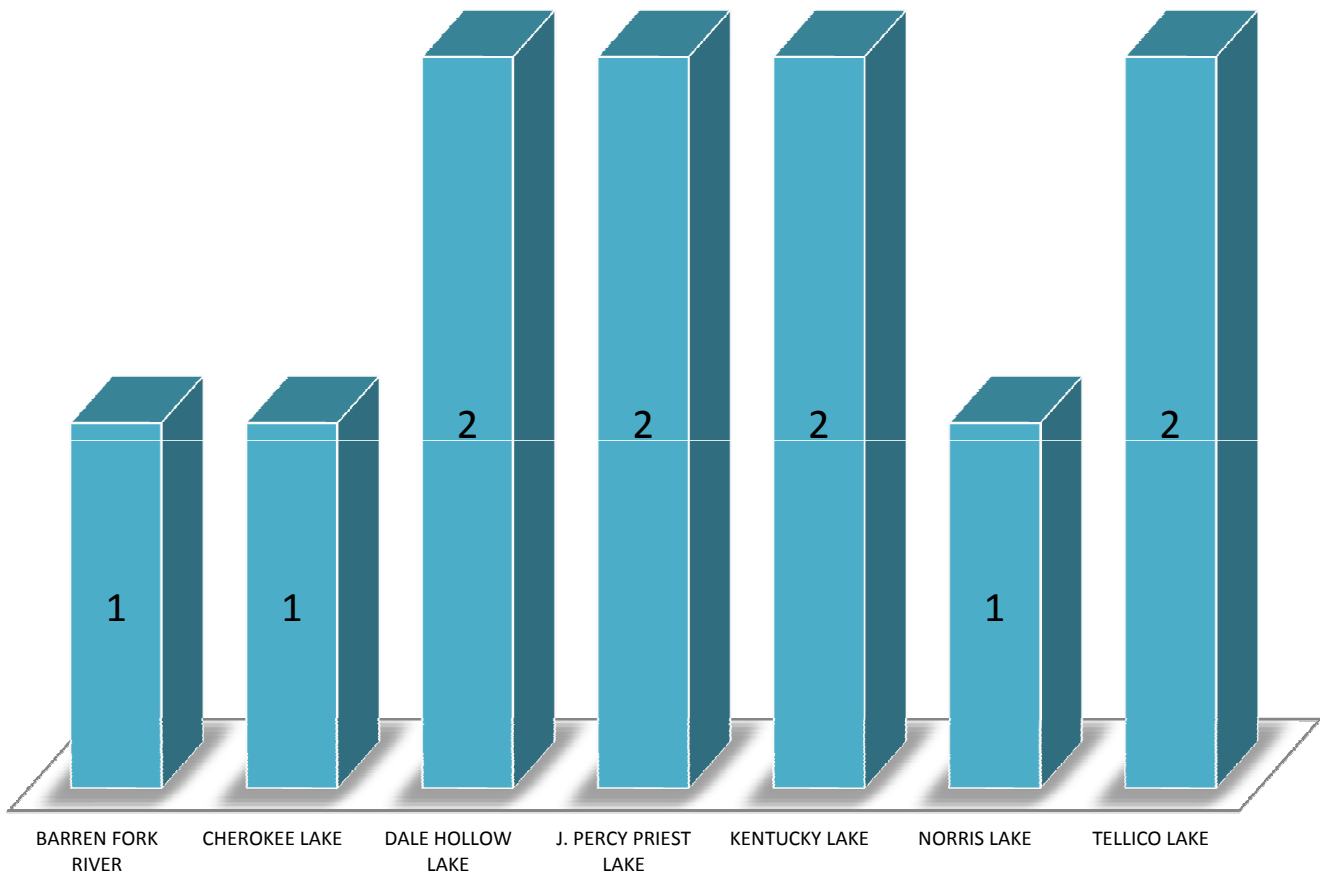
Operator Ages	Number of Operators
Less Than 12	0
12 through 15	1
16 through 20	3
21 through 25	3
26 through 30	2
31 through 35	1
36 through 40	1
41 through 45	1
46 through 50	3
51 through 55	2
56 through 60	0
61 through 65	1
Over 65	0

Number of Accidents by Primary Cause Accidents Involving PWCs 2011



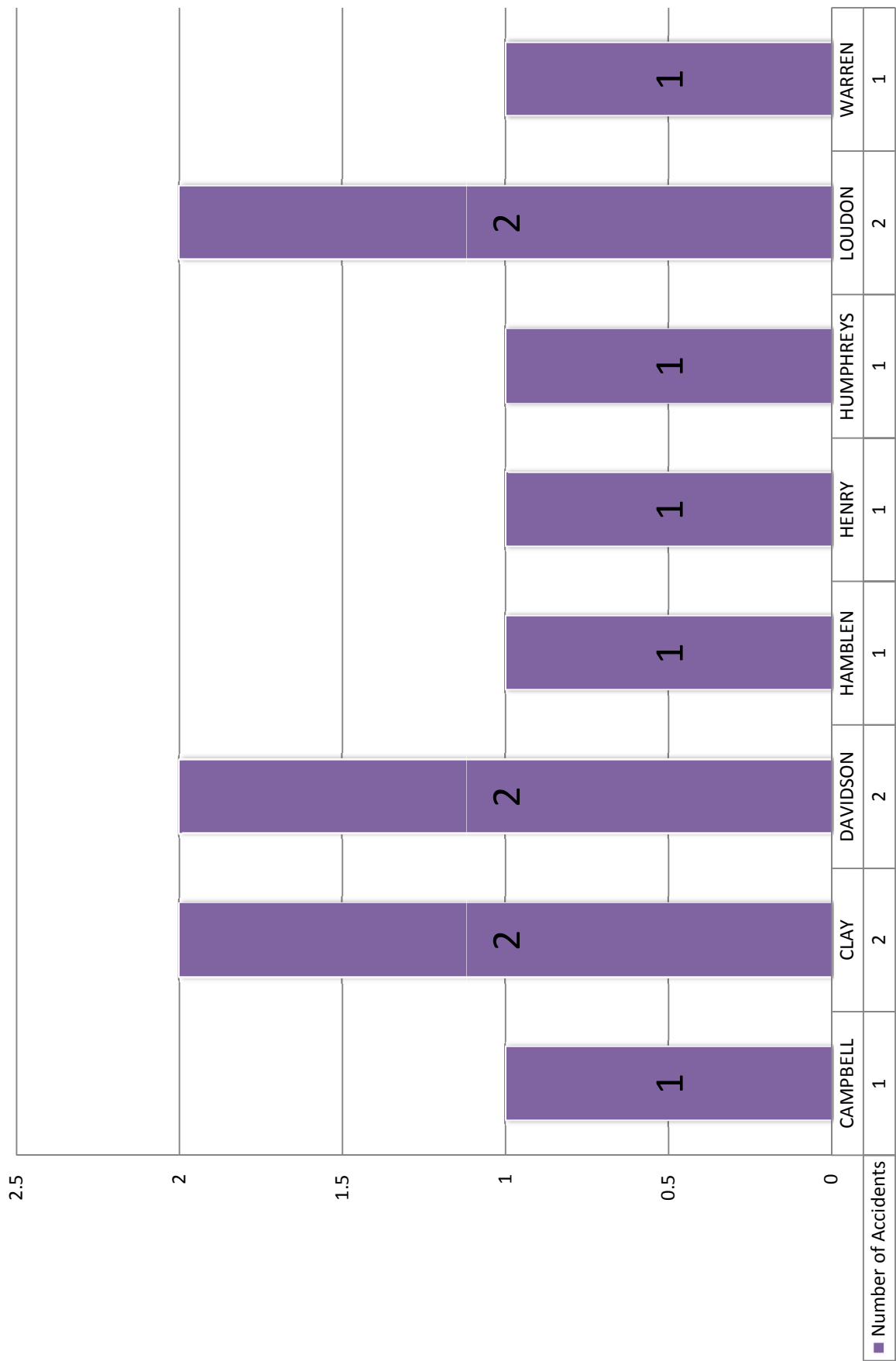
Primary Cause	Number of Accidents
Alcohol Impairment	1
Careless/Reckless Operation	1
Ignition of Fuel or Vapors	1
Improper Lookout	1
Navigation Rule Violation	1
Off Throttle Steering	1
Operator Inattention	3
Operation too close to another vessel	1
Restricted visibility aboard vessel	1

**Number of Accidents by Body of Water
Accidents Involving PWCs 2011**



Body of Water	Number of Accidents
BARREN FORK RIVER	1
CHEROKEE LAKE	1
DALE HOLLOW LAKE	2
J. PERCY PRIEST LAKE	2
KENTUCKY LAKE	2
NORRIS LAKE	1
TELLICO LAKE	2

Number of Accidents by County Accidents Involving PWCs 2011



2011 GLOSSARY

Alcohol Impairment: When alcoholic beverages are consumed and the investigating official has determined that the operator was impaired or affected while operating the vessel -- or -- the vessel's passengers were impaired and such impairment contributes to the resultant accident. This includes alcohol consumption that may have occurred outside of the vessel and the occupants are now under the influence.

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. Large motorboats with cabins, even though referred to as yachts, are considered to be cabin motorboats.

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

Carbon Monoxide Poisoning: Death or injury resulting from an odorless, colorless gas generated from auxiliary vessel equipment (stoves, heaters, refrigerators, generators, hot water heaters, etc.), another vessel's exhaust, or the exhaust of the vessel on which persons were either aboard or in close proximity.

Collision with Vessel: Any striking together of two or more vessels, regardless of operation at time of accident, is a collision. Also includes colliding with the tow of another vessel, regardless of the nature of the tow (e.g., surfboard, ski ropes, skier, tow line). A vessel does not have to be underway to be involved in a collision, but a collision with a vessel moored to a dock or pier is not considered be a collision with a vessel (considered Collision with Fixed Object).

Collision with fixed object- The striking 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 that is free to move with the tide, current, or wind, except with another vessel.

Commercial Activity: The vessel is being used for commercial activity. This type of activity includes carrying passengers for hire; fishing, crabbing, or shrimping in support of one's business; or charging a fee to tow a vessel.

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

Departed Vessel Voluntarily: Acting of their own free will, and as a first event, occupant departs from the vessel, and the departure results in occupant's injury or death. The vessel from which the occupant departed is not moored, beached or anchored,

Documented yacht- A vessel of five or more net tons owned by a citizen of the United States and used exclusively for pleasure with a valid marine document issued by the Coast Guard. Documented vessels are not numbered.

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

Environmental Conditions Affecting Visibility: Operator's ability to discern other vessels or hazards is affected by an external condition in the surrounding environment (e.g., sun glare, fog, background lighting (lights on docks and shorelines, etc.), rain, snow, minimal night visibility due to overcast skies or moon phase, etc.)

Excessive Speed: Speed above that which a reasonable and prudent person would have operated under the circumstances that existed. It is not necessarily a speed in excess of a posted limit.

Falls Overboard: Falls from the vessel with resulting injury or death. Any unintentional spilling out of person(s) into the water without completely overturning the vessel. Using the vessel as a swimming platform and/or voluntarily departing the vessel as a first event whether the vessel was underway or not, should not be considered a reportable boating accident.

Fallen Skier- A person who has fallen off their water skis.

Fiberglass (plastic) hull- Hulls of fiber reinforced plastic. The laminate consists of two basic components, the reinforcing material (glass filaments) and the plastic or resin in which it is embedded.

Fire/explosion (fuel)- Accidental combustion of vessel fuel, liquids, including their vapors, or other substances, such as wood or coal.

Fire/explosion (other)- Accidental burning or explosion of any material on board except vessel fuels or their vapors.

Flooding: Filling with water, by means of entry of the water through a fitting, a drain plug, a hole or crack in the hull, or other means that allows ingress of water through the hull, not over the top of the gunwale, transom, or decking of the vessel. Vessel retains sufficient buoyancy to remain on the surface of the water.

Fueling- Any stage of the fueling operation, primarily concerned with the introduction of explosive or combustible vapors or liquids on board.

Grounding- Bringing vessel's keel into contact with the bottom so that she ceases to be completely waterborne.

Hull Failure: Defect or failure of the structural body of a vessel (i.e., 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, regardless of the cause of the spill.

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 the operator to perceive danger because no one was serving as lookout, or the person so serving failed in that regard.

Inboard-outboard- Propulsion system consisting of an inboard engine connected through the transom to an outboard drive unit. Also known as Inboard/Outdrive.

Maneuvering- Changing of course, speed, or similar boat handling action during which a high degree of alertness is required or the boat is imperiled because of the operation, i.e. docking, mooring, undocking, etc.

Motorboat- Any vessel equipped with propulsion machinery, not more than sixty-five feet in length.

Motor vessel- Any vessel equipped with propulsion machinery (other than steam) more than 65 feet long.

Navigation Rules Violation: Violation of the statutory and regulatory rules governing the navigation of vessels other than those listed.

Numbered vessel- An undocumented vessel numbered by a state with an approved numbering system or by the Coast Guard under Chapter 123 of title 46, U.S.C.

Off Throttle Steering- A term used to describe the lack of steering ability on a jet drive vessel that has no rudder. Steering is accomplished by directing the flow of water from the drive. When no water is flowing from the drive (off throttle) steering ability is lost. Common to Personal Watercraft.

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

Outboard- An engine not permanently affixed to the structure of the craft, regardless of the method or location used to mount the engine, e.g. motor wells, “kicker pits”. Motor pockets, etc.

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

Personal Watercraft(PWC)- Craft less than 13 feet in length designed to be operated by a person or persons sitting, standing or kneeling on the craft rather than within the confines of a hull.

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

Sailboat or auxiliary sailboat- Craft intended to be propelled primarily by sail, regardless of size or type.

Sharp Turn: An immediate or abrupt change in the vessel's course or direction

Skier Mishap: A person who suffers injury or death by

(1) falling off their water-skis,

(2) striking a fixed or submerged object, or by

(3) becoming entangled or struck by the tow line.

NOTE: Also includes mishaps involving inner-tubes and other devices on which a person can be towed behind a vessel, or surfing on the wake created by the vessel, even if not being towed behind the vessel.

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

Speeding- Operating at a speed, possibly below the posted limit, above that which a reasonable and prudent person would operate under the circumstances.

Steel hull- Hulls of sheet steel alloy, not those with steel ribs and wood, canvas, or plastic hull coverings.

Struck by boat or propeller- Striking of a victim who is outside of the boat, but not necessarily a swimmer.

Swamping: Ingress of water over the top of the gunwale, transom, or decking of the vessel. Vessel retains sufficient buoyancy to remain on the surface of the water.

Towing- Engaged in towing any vessel or object, other than a person.

Undetermined: After thorough investigation, the officer was unable to reach a conclusion as to a contributing cause, due to lack of witnesses or insufficient evidence.

White water Sports: This vessel was traveling in white water "rapids" where the water conditions were rough and the current very strong (Class 3+).

Wood hull- Hulls of plywood, molded plywood, wood planking, or any other fiber in its natural consistency, including those of wooden construction that have been "sheathed" with fiberglass or sheet metal.

Reporting Criteria and Guidelines for Recreational Vessel Accidents

- I. Title 33 Code of Federal Regulations, Subchapter S – Boating Safety, Part 173 – Vessel Numbering and Casualty and Accident Reporting, Subpart C – Casualty and Accident Reporting, applies to vessels that are used by their operators for recreational purposes, or that are required to be numbered, except for those vessels required by law to have a Certificate of Inspection.
- II. Recreational vessel means any vessel manufactured or operated for pleasure; or leased, rented, or chartered to another for the latter's pleasure that is propelled or controlled by machinery, sails, oars, paddles, poles, or another vessel.
- III. A recreational boating accident means a recreational vessel, a numbered vessel, or a documented vessel is being used by its operator for recreational purposes **AND** one or more of the following events occur involving the vessel or its equipment:
 - Grounding;
 - Capsizing;
 - Flooding / Swamping;
 - Falls within or overboard a vessel;
 - Person(s) ejected from a vessel;
 - Person leaves a vessel that is underway to swim for pleasure;
 - Person leaves a vessel in an attempt to retrieve a lost item, another person, or another vessel;
 - Sinking;
 - Fire or Explosion;
 - Skier Mishap;
 - Collision with another vessel or object;
 - Striking a submerged object;
 - The vessel, propeller, propulsion unit, or steering machinery strikes a person;
 - Carbon Monoxide asphyxiation.

As a general guideline, if any of the above events occur and there is a reasonable likelihood that as a result of the event(s) – an injury, death, or property damage occurs – the incident is a recreational boating accident. More than likely, the boating trip would have been successfully completed without incident had any of the above event(s) not occurred.

- IV. The operator of a vessel involved in a recreational boating accident as defined in Section III must submit a casualty or accident report to the reporting authority in the State where the accident occurred when:
 - a. A person dies;
 - b. A person is injured and requires medical treatment beyond first aid;
 - c. Damage to vessels and other property totals \$2000 or more or there is a complete loss of any vessel; or
 - d. A person disappears from the vessel under circumstances that indicate death or injury.

The following guidelines list occurrences directly or indirectly involving a vessel where vessel activities or operation DID NOT contribute to a boating accident as defined in Section III. The occurrences alone are considered to be outside the scope of a boating safety program. While these occurrences may be reported in a State and subsequently captured by the Boating Accident Report Database (BARD) system, they will be classified as “**non-reportable recreational boating accidents**” in the National BARD system at Coast Guard Headquarters.

- a. A person dies or is injured from self-inflicted wounds, alcohol poisoning, ingestion of drugs, controlled substances or poison; or from gunshot wounds.
- b. A person dies or is injured from assault by another person or persons while aboard a vessel.
- c. A person dies or is injured from natural causes while aboard a vessel.
- d. A person dies or is injured while swimming for pleasure from a vessel that **IS NOT underway** (the vessel is anchored, moored, or docked).

CAUTION needs to be exercised to confirm that the vessel was used as a swimming platform only. The following are **REPORTABLE** boating accidents involving a swimmer, a recreational vessel and its operation:

- *A person dies or is injured while swimming because of Carbon Monoxide asphyxiation;*
 - *A person dies or is injured while swimming because a vessel is improperly connected to shore power and resultant stray electrical current enters the water causing electrocution;*
 - *A person dies or is injured after leaving a vessel that is underway to swim for pleasure because the vessel IS NOT anchored, moored or docked and the vessel drifts away from the swimmer and the swimmer is unable to get back to the vessel.*
- e. A person dies or is injured in swimming to retrieve an object or a vessel that is adrift from its mooring or dock, having departed from the shore or pier.
 - f. A person dies, or is injured after falling or jumping from a swim raft that is moored or anchored for use as a swimming platform or other purpose.
 - g. A person dies, is injured, or property damage occurs while preparing a vessel for launching or retrieving a vessel **AND** the vessel is not in or upon the water.
 - h. Damage, injury or death results from a fire on shore or a pier that spreads to a vessel or vessels.

- i. A person dies, is injured, or property damage results from an “ice boat” accident. [An “ice boat” is a device that is designed to travel primarily over the ice on lakes and rivers on runners/blades, carrying at least one person and using a sail for propulsion. It is not designed for use nor has the ability to navigate on open water.]
- j. Damage, injury or death on a docked or moored vessel resulting from storms, unusual tidal, sea or swell conditions; or when a vessel gets underway in those conditions in an attempt to rescue persons put in peril.
- k. Damage to a docked or moored vessel due to theft or any vandalism.
- l. Deaths, injury or damage on a docked or moored or anchored non-propelled houseboat or other vessel used primarily as a permanent residence.
- m. A person dies or is injured while using underwater breathing apparatus (i.e., snorkeling or scuba diving) and the vessel did not contribute to the casualty.