

UNITED STATES COAST GUARD

25 August 2004

NATIONAL TRANSPORTATION SAFETY BOARD

MS701: FORUM – Personal Flotation Devices in Recreational Boating

Captain Scott Evans, Chief, Office of Boating Safety

USCG NATIONAL RECREATIONAL BOATING SAFETY PROGRAM

MISSION:

To minimize the loss of life, personal injury, property damage, and environmental impact associated with the use of recreational boats, through preventive means, in order to maximize the safe use and enjoyment of U.S. waterways by the public.

USCG NATIONAL RECREATIONAL BOATING SAFETY PROGRAM

OUTCOME GOALS:

- Reduce fatalities.
- Reduce injuries and associated healthcare costs.
- Reduce accidents and property damage.

RISK-BASED DECISION MAKING

- **A PROCESS THAT ORGANIZES INFORMATION ABOUT:**
 - **the possibility for one or more unwanted outcomes**
 - **into a broad, orderly structure**
 - **that helps decision makers make more informed management choices.**

RISK-BASED DECISION MAKING

**FOCUS ON THE HIGHEST RISK OF AN
ACTIVITY, DETERMINED BY:**

- **The types of possible losses,**
- **The frequencies at which they are expected to occur, and**
- **The effects they might have.**

2003 BOATING ACCIDENT STATISTICS

- Registered Boats: **12,766,536**
- Accidents: **5,443**
- Injuries: **3,888**
- Fatalities: **703**
Ages 12 and Under: 27

- Most Reported Types of Boats in Accidents:
 - **Open Motorboats: 43%**
 - **PWC: 27%**
 - **Cabin Motorboats: 14%**

BOATING ACCIDENT STATISTICS FIVE-YEAR (1999 – 2003) TREND

Year	Accidents	Injuries	Fatalities
1999	7,931	4,315	734
2000	7,740	4,355	701
2001	*6,419	4,274	681
2002	5,705	4,062	750
2003	5,443	3,888	703

* Amended reporting criteria, effective July.

2003 TOP-5 TYPES OF ACCIDENTS, INJURIES AND FATALITIES

Numbers in () = rank

Type of Accident	Accidents	Injuries	Fatalities
Collision w/Vessel	1,469 (1)	1,063 (1)	70 (3)
Collision w/ Fixed Object	558 (2)	491 (2)	50 (4)
Capsizing	514 (3)	330 (5)	206 (1)
Falls Overboard	508 (4)	353 (4)	201 (2)
Skier Mishap	451 (5)	466 (3)	6
Swamping	274	61	41 (5)

2003 CAUSE OF DEATH

Death Caused by	#Fatalities
Drowning	481
Trauma	135
Hypothermia	32
Carbon Monoxide	7
Other	18
Not Reported	30
TOTAL	703

1999 - 2003 DROWNING DEATHS

1999 - 2003	Drowning	Other	Total
Year	Deaths	Deaths	Fatalities
1999	517	217	734
2000	519	182	701
2001	498	183	681
2002	524	226	750
2003	481	222	703

INITIAL ASPECTS OF THE HIGHEST RISK

FATALITIES:

- **481** of the 703 fatalities in CY 2003 due to drowning.

DROWNINGS:

- **416** of the 481 drowning victims were not wearing a PFD.

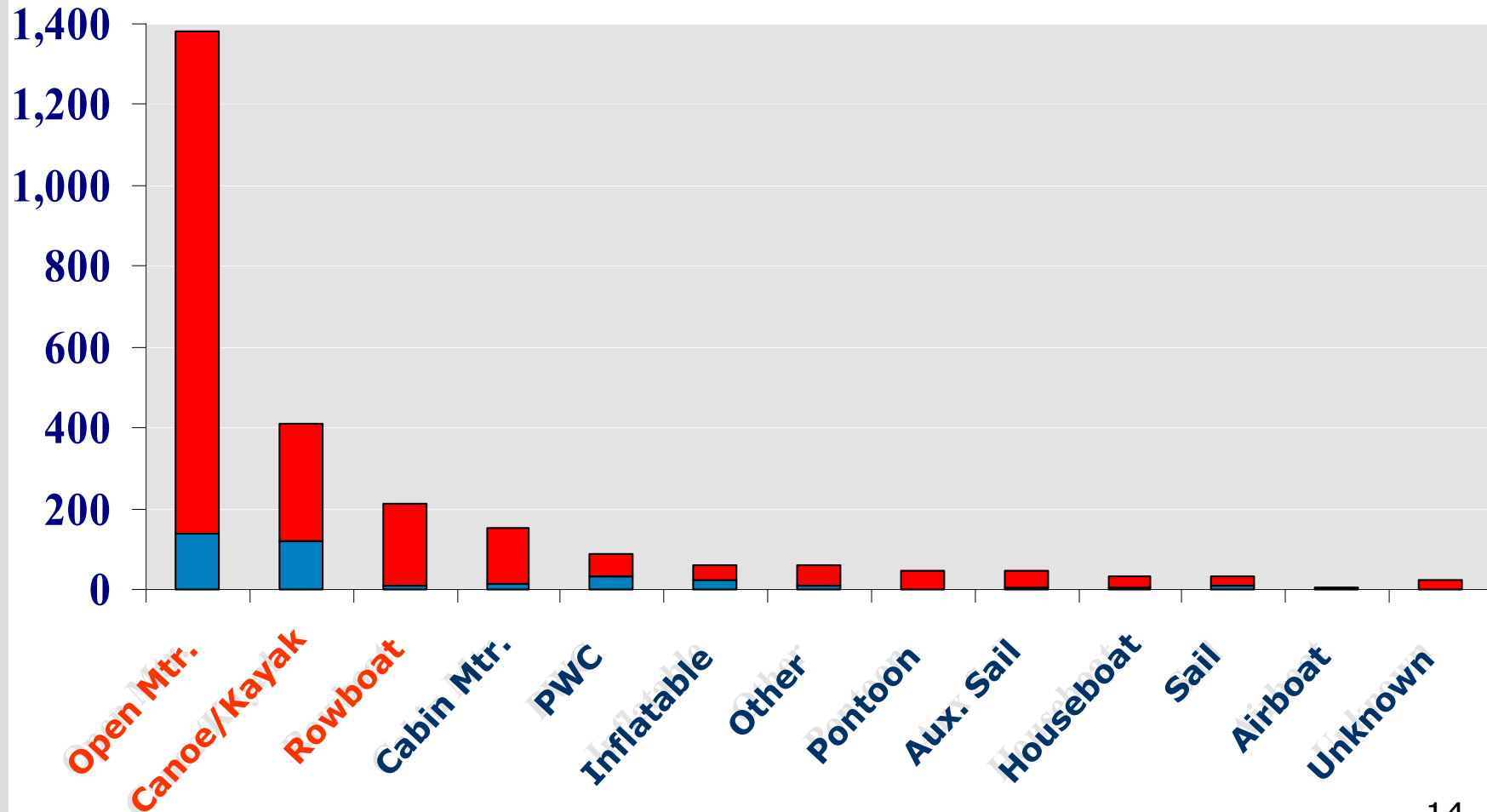
2003 DROWNINGS BY TYPE OF ACCIDENT/PFD WEAR

TYPE OF ACCIDENT	TOTAL DROWNINGS	PFD WORN	
		YES	NO
Capsizing	170	34	136
Falls Overboard	169	14	155
Flooding/Swamping	36	6	30
Depart Vessel/Swim	26	0	26
Depart Vessel/Other	10	0	10
Collision with Fixed	19	4	15
Collision with Vessel	9	2	7
Sinking	6	0	6
Fire/Explosion (fuel)	4	0	4

2003 TYPES OF ACCIDENTS, DROWNINGS & PFD WEAR (con't.)

TYPE OF ACCIDENT	TOTAL DROWNINGS	PFD WORN	
		YES	NO
Ejected from Vessel	3	0	3
Fall in boat	3	2	1
Other	3	1	2
Grounding	2	0	2
Struck Submerged Object	2	1	1
Collision with Floating Object	1	0	1
Skier Mishap	1	0	1
Struck by Boat	1	0	1
Struck by Motor/Propeller	1	0	1
Not Reported	15	1	14
TOTALS	481	65	416

1999 - 2003 DROWNINGS/TYPE OF BOAT/PFD WORN -- NOT WORN

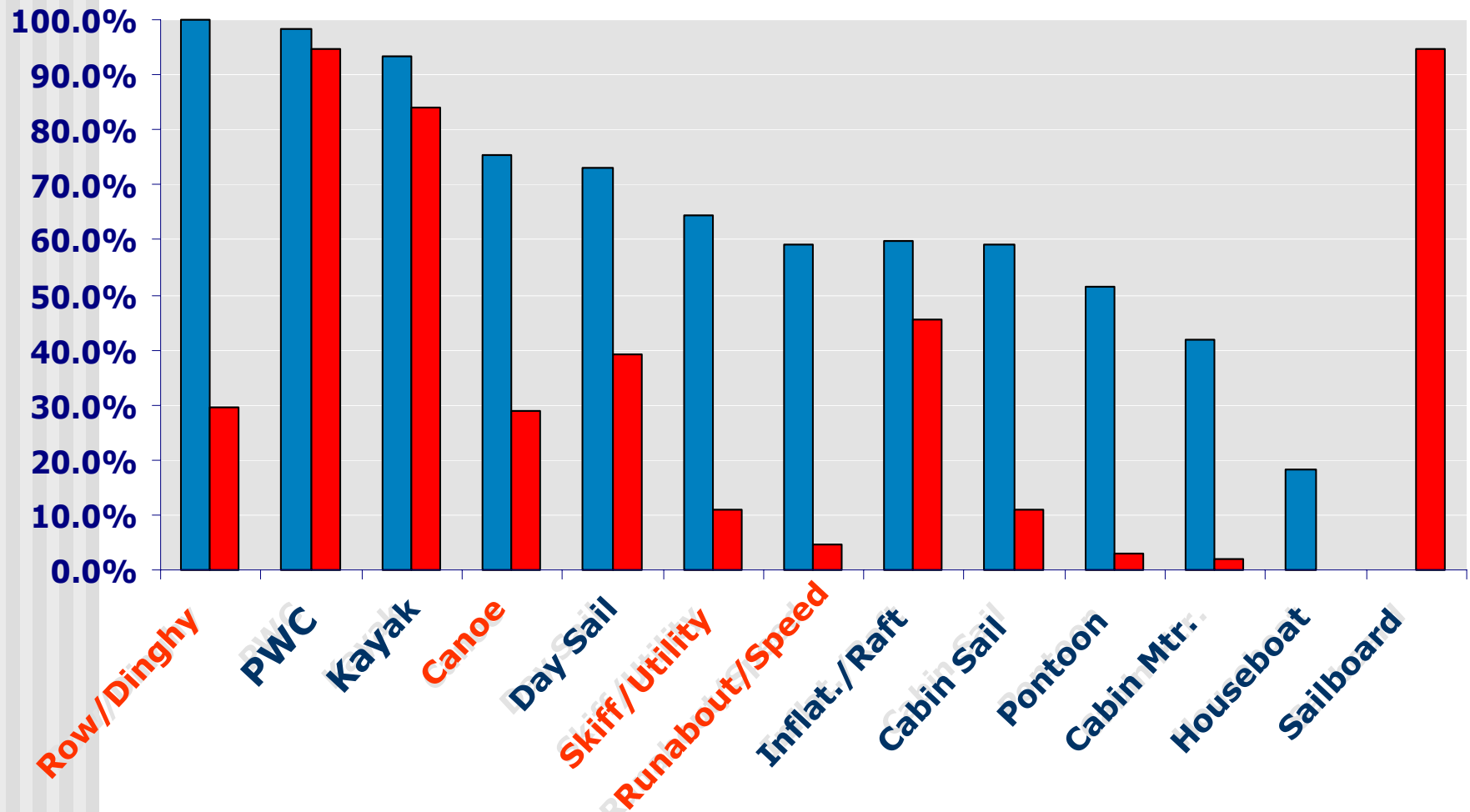


1999 - 2003 DROWNINGS

TYPE OF BOAT - PFD WEAR

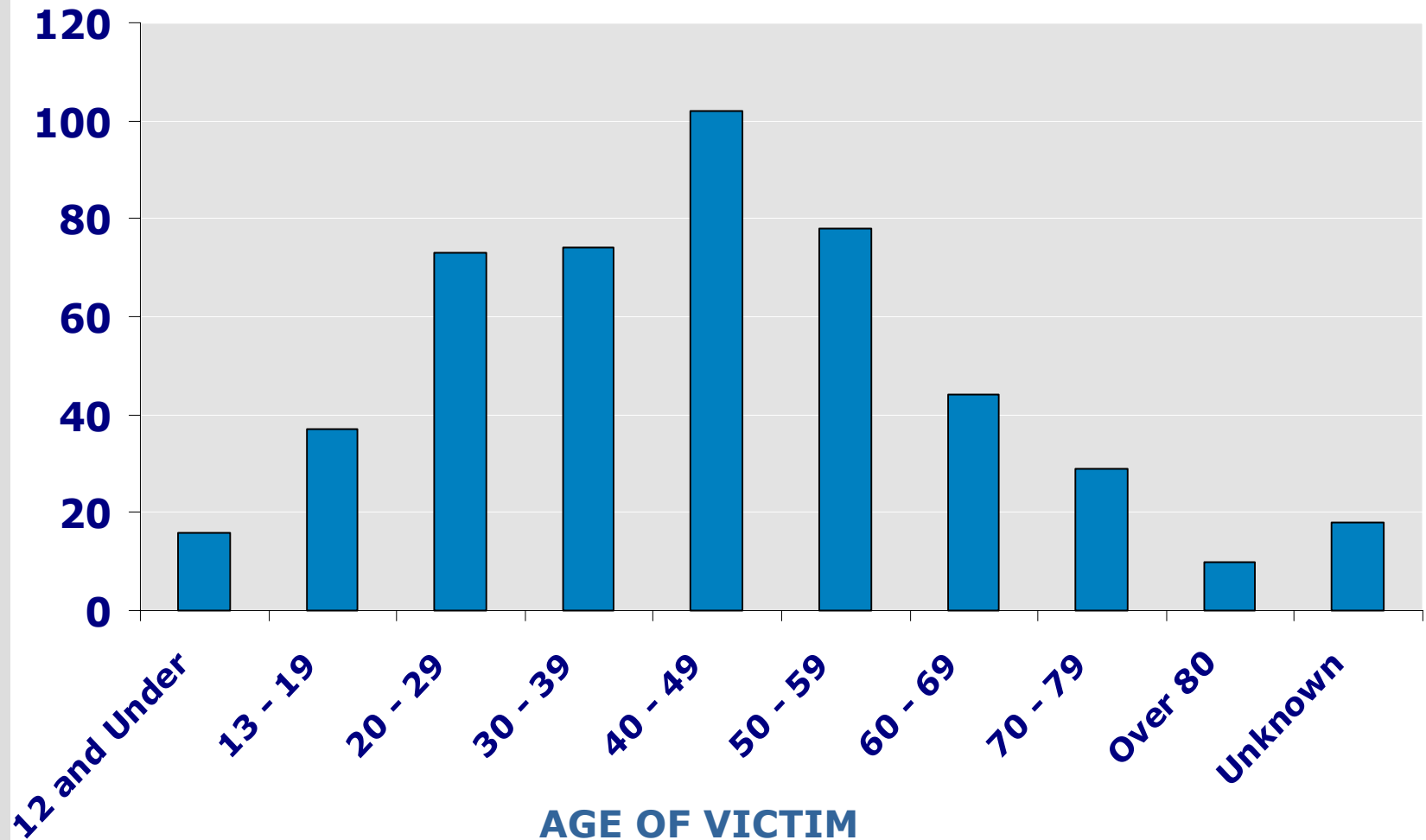
TYPE OF BOAT	Total Drownings	PFD Worn	
		Yes	No
Open Mtr.	1,381	137	1,244
Canoe/Kayak	408	121	287
Rowboat	211	7	204
Cabin Mtr	153	15	138
PWC	86	30	56
Inflatable	62	23	39
Other	60	8	52
Pontoon	47	1	46
Aux Sail	45	6	39
Houseboat	30	5	25
Sail	30	7	23
Airboat	4	0	4
Unknown	22	2	20
Totals	26	2	24

2003 OBSERVED PFD WEAR RATE* YOUTH – UNDER 18 YEARS ADULTS – 18 YEARS & OLDER

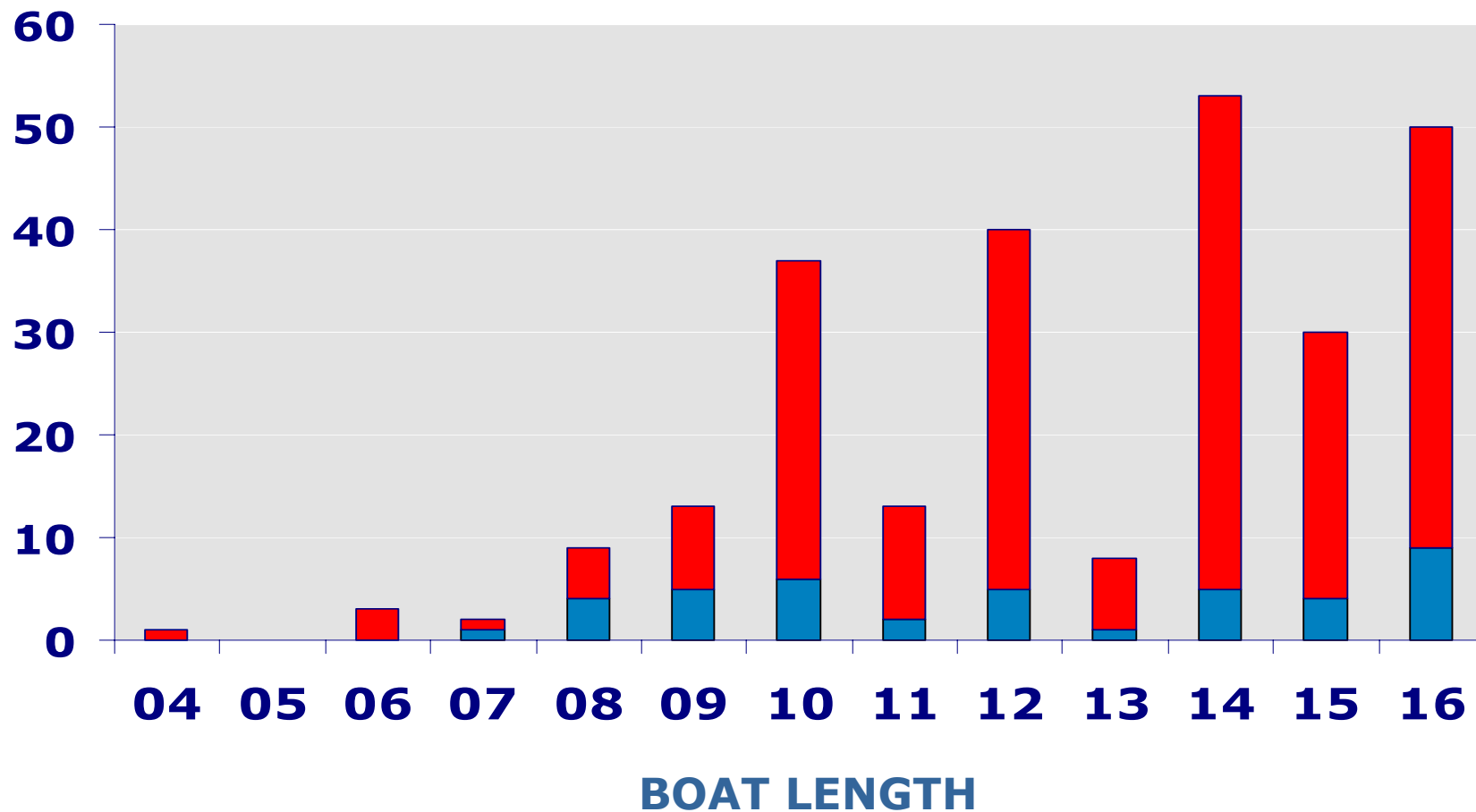


*JSI National PFD Wear Rate Observational Study -- 2003

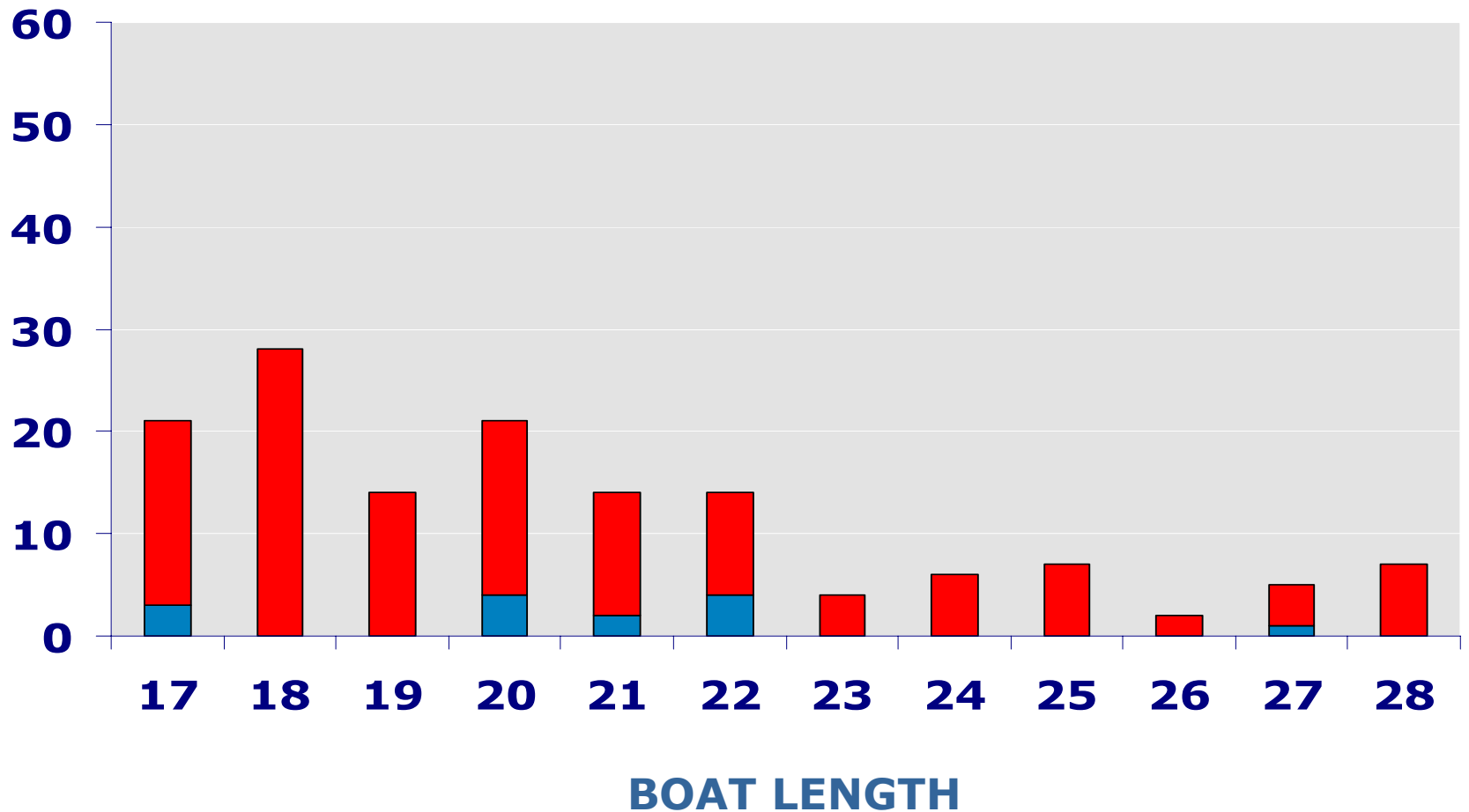
2003 DROWNINGS AGE OF VICTIM



2003 DROWNINGS BOATS 16' & UNDER PFD WORN -- NOT WORN



2003 DROWNINGS BOATS 17' TO 28' PFD WORN -- NOT WORN



2003 - DROWNINGS

BOAT LENGTH & PFD WEAR

BOAT Length	NUMBER OF DROWNINGS	PFD WORN	
		YES	NO
04	1	0	1
05	0	0	0
06	3	0	3
07	2	1	1
08	9	4	5
09	13	5	8
10	37	6	31
11	13	2	11
12	40	5	35
13	8	1	7
14	53	5	48
15	30	4	26
UNDER 16'	209	33	176

2003 - DROWNINGS

BOAT LENGTH & PFD WEAR

BOAT Length	NUMBER OF DROWNINGS	PFD WORN	
		YES	NO
16	50	9	41
17	21	3	18
18	28	0	28
19	14	0	14
20	21	4	17
21	14	2	12
22	14	4	10
23	4	0	4
24	6	0	6
25	7	0	7
26	2	0	2
16' - 26'	181	22	159

2003 - DROWNINGS

BOAT LENGTH & PFD WEAR

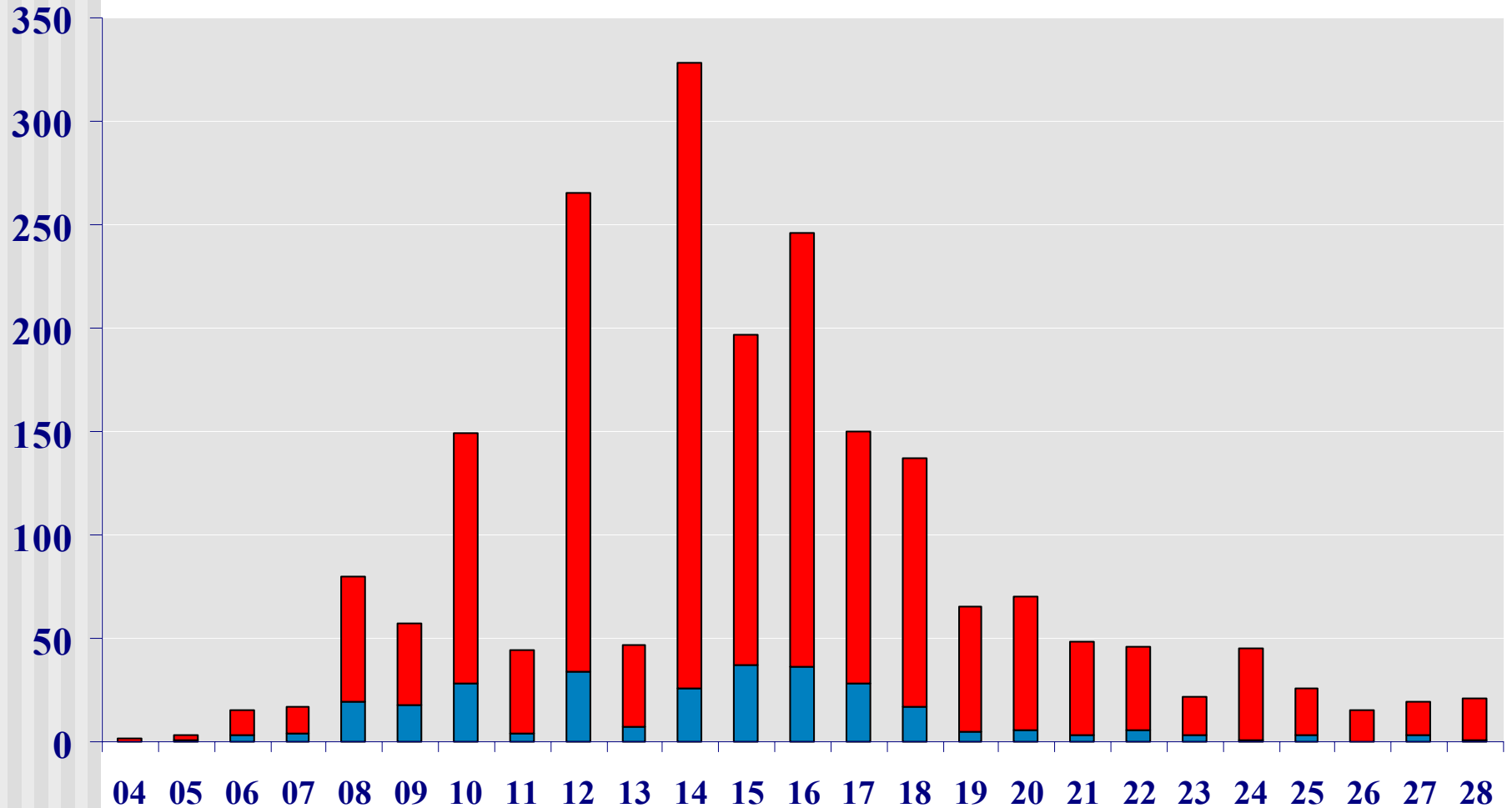
BOAT Length	NUMBER OF DROWNINGS	PFD WORN	
		YES	NO
27	5	1	4
28	7	0	7
29	1	0	1
30	4	0	4
31	2	0	2
32	2	1	1
34	1	0	1
35	2	0	2
38	1	0	1
40	2	1	1
50	1	0	1
56	1	0	1
96	1	0	1
> THAN 26'	30	3	27

2003 - DROWNINGS

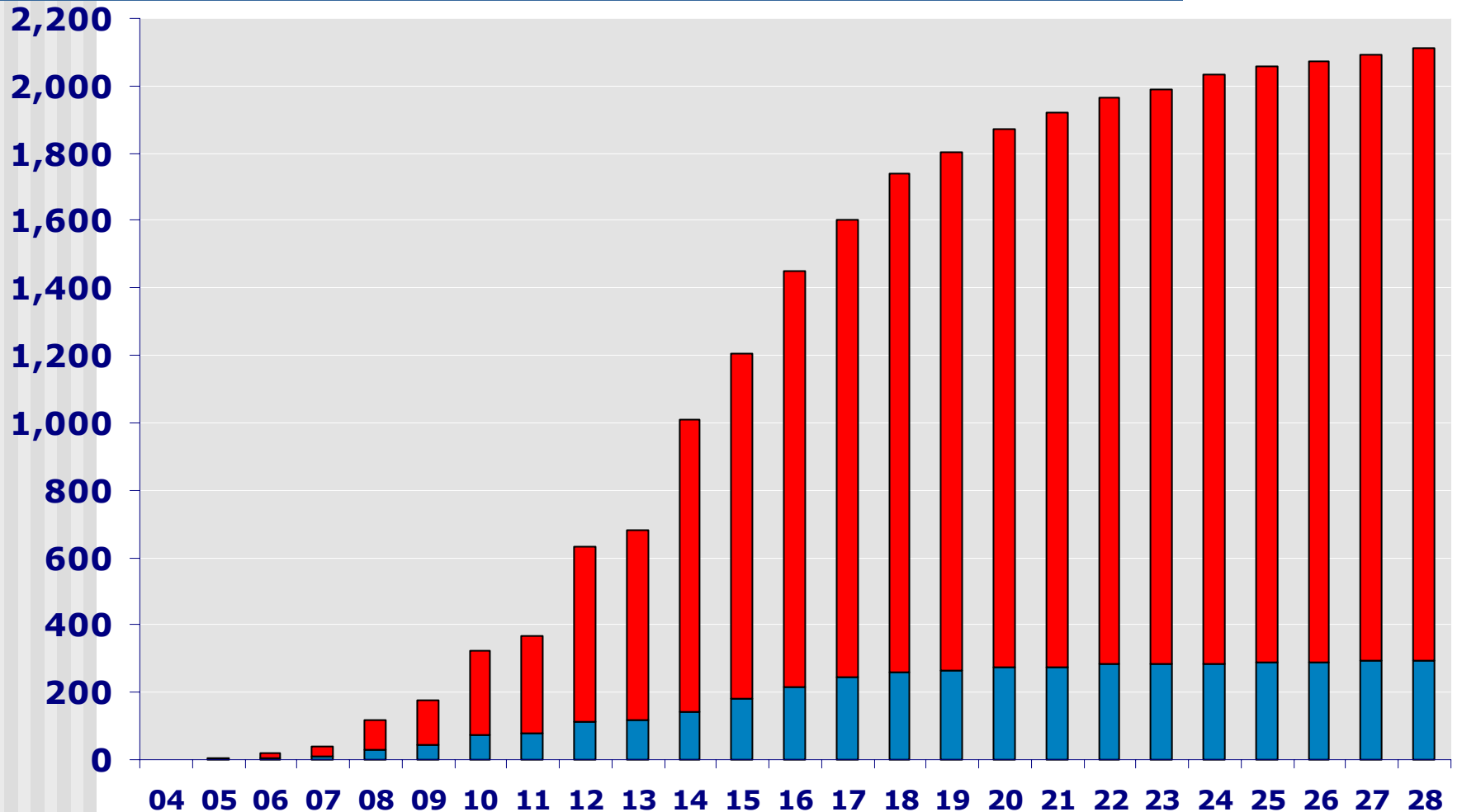
BOAT LENGTH & PFD WEAR

BOAT Length	NUMBER OF DROWNINGS	PFD WORN	
		YES	NO
UNDER 16'	209	33	176
16' - 20'	134	16	118
21' - 26'	47	6	41
> THAN 26'	30	3	27
NOT REPORTED	61	7	54
TOTALS	481	65	416

1999 - 2003 DROWNINGS/BOATS 28' & UNDER/PFD WORN -- NOT WORN



1999 - 2003 DROWNINGS / BOATS 28' & UNDER – RUNNING TOTALS PFD WORN -- NOT WORN



1999 - 2003 DROWNINGS BOATS 15' & UNDER RUNNING TOTALS

1999 - 2003 Boat Length	TOTAL DROWNINGS	PFD	WORN	CUMMULATIVE DROWNINGS	PFD	WORN
		YES	NO		YES	NO
04	2	0	2	2	0	2
05	3	1	2	5	1	4
06	15	3	12	20	4	16
07	17	4	13	37	8	29
08	80	19	61	117	27	90
09	57	18	39	174	45	129
10	149	28	121	323	73	250
11	44	4	40	367	77	290
12	265	34	231	632	111	521
13	47	7	40	679	118	561
14	328	26	302	1,007	144	863
15	197	37	160	1,204	181	1,023
LESS THAN 16'	1,204	181	1,023			

1999 - 2003 DROWNINGS BOATS 16' TO 28' RUNNING TOTALS

1999 - 2003 Boat Length	TOTAL DROWNINGS	PFD YES	WORN NO	CUMMULATIVE DROWNINGS	PFD YES	WORN NO
16	246	36	210	1,450	217	1,233
17	150	28	122	1,600	245	1,355
18	137	17	120	1,737	262	1,475
19	65	5	60	1,802	267	1,535
20	70	6	64	1,872	273	1,599
21	48	3	45	1,920	276	1,644
22	46	6	40	1,966	282	1,684
23	22	3	19	1,988	285	1,703
24	45	1	44	2,033	286	1,747
25	26	3	23	2,059	289	1,770
26	15	0	15	2,074	289	1,785
27	19	3	16	2,093	292	1,801
28	21	1	20	2,114	293	1,821
16 TO 28 FEET	910	112	798			

KEY ASPECTS OF THE HIGHEST RISK

- **FATALITIES:** Due to drowning.
- **DROWNINGS:** PFDs were not worn by victims.
- **BOATS:** Various boat lengths, particularly those less than 21'.
 - Possible types of boats include open motorboats, canoes/kayaks and rowboats.

2003 - POTENTIAL LIVES SAVED DUE TO PFD WEAR

Length Of Vessel	Fatalities Due to Drowning	% Of Total Drowning (481)	Potential Lives Saved (Drowning victims - PFD not worn) (84% of Drowning Fatalities)	703 Total Fatalities
Less than 16'	209	43%	176	25% Reduction in Total Fatalities
Less than 21'	343	71%	294 (includes <16')	42% Reduction in Total Fatalities

THE NEXT STEPS...

- Follow through with National Boating Safety Advisory Council (NBSAC) recommendation to increase PFD Wear Rate on High-risk Vessels (Under 21' LOA) through identified strategies.
 - Intermediate Goals*:
 - 2003 overall measured PFD wear rate: 22%.
 - 2005 target overall PFD wear rate: 27.5%.
 - 2006 target overall PFD wear rate: 33%.
 - 2007 overall PFD wear rate goal: 44%.
- NBSAC will "evaluate the reports at each meeting and be expected to recommend whatever other measures they deem necessary to significantly increase PFD wear."**

“A mind once stretched by a new idea never returns to its original dimensions.”

