



**US Army Corps  
of Engineers®**

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# **Life Jacket Mandate Study Interim Report**

**2 May 2008**

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**I. INTRODUCTION.** A Life Jacket Mandate Study was initiated at the request of USACE Director of Civil Works, MG Don Riley, in April 2007, to analyze the impacts and benefits of establishing a Federal regulation under Title 36, CFR 327 that would require members of the public to wear a life jacket while recreating on Corps waters. The study, led by the HQUSACE National Operation Center for Water Safety, was conducted in-house by a product delivery team (PDT) comprised of a variety of recreation and safety managers from Corps headquarters, division, district and lake staffs. The PDT used data collected from a district questionnaire, an employee survey on the Corps NRM Gateway web site, interagency discussions and written comments, fatality and accident report statistics, general comments from field leadership, and self-analysis of current national educational materials and programming, to determine their final recommendations for MG Riley.

On 28 February 2008, the PDT briefed MG Riley with their findings. Based on information gathered from district and field offices as well as U.S. Coast Guard, state agencies and other non-Corps partners, the PDT's recommendation was to not change Title 36 to establish a regulation requiring life jacket wear on Corps waters at this time. The PDT recommended that the Corps continue to support U.S. Coast Guard's life jacket wear initiatives and to aggressively pursue voluntary wear of life jackets through targeted public education actions, life jacket loaner programs and increased partnerships. MG Riley decided to defer his decision on establishing a policy until additional information can be gathered. Specifically, he requested that the PDT identify districts willing to conduct a field test exercise in which the life jacket wear requirement is applied and monitored for effectiveness. This is the interim report of the PDT findings prior to the initiation of a field test.

**II. BACKGROUND.** The US Army Corps of Engineers is the Nation's largest provider of outdoor recreation, operating more than 2,500 recreation areas at 456 projects (mostly lakes) in 43 states and leasing an additional 1,800 sites to State or local park and recreation authorities or private interests. The Corps hosts nearly 372 million visits a year at its lakes, beaches and other areas, and estimates that 25 million Americans (one in ten) visit a Corps project at least once a year. The US Army Corps of Engineers is the steward of the 12 million acres of lands and waters at Corps water resources projects. Our rangers and park staff are the stewards serving and supporting our visitors and the nation. Since the vast majority of our recreation areas are located next to water, the Corps, in partnership with other agencies, is active in the National Water Safety Program. From 1998 through 2007, the Corps recorded 1,641 accidental and unintentional deaths resulting from activities around or near bodies of Corps managed waters. Statistical records on Corps of Engineer facilities indicate that 92% of the water-related fatalities involved persons who were not wearing a PFD.

**III. STUDY PROCESS.** The initial phase of the study consisted of two internal questionnaires designed to gather opinions regarding critical information needed to assist the PDT in formulating a recommendation. A district questionnaire was distributed in September 2007 to 34 district points of contact (POCs). Their responses were consolidated and placed on the Natural Resource Management (NRM) Gateway web site at "<http://corpslakes.usace.army.mil>". It was suggested that those POC's informally contact state partners to ascertain a preliminary partner position.

A short 12-question version of the district survey was placed on the NRM Gateway for employees to anonymously share their opinions. The results of that survey are also posted on the NRM Gateway.

On 15-16 November 2007, the PDT met in HQ for internal discussions and to formally and initially meet with known partners for an open discussion concerning the study topic. A summary of that meeting report is in Section VIII of this report. Formal written comments regarding a life jacket mandate were solicited from partners at that meeting and via email following that meeting. The meeting report and written comments from states are available on the NRM Gateway.

MG Riley was briefed on the PDT findings on 28 February 2008. He decided to defer his decision on establishing a policy and requested that the PDT identify districts willing to conduct a field test exercise in which the life jacket wear requirement is applied and monitored for effectiveness. He also agreed to meet with the US Coast Guard to discuss their role in mandating life jacket wear. This launched the second phase of this study which is not part of this interim report.

#### **IV. PDT INITIAL RECOMMENDATIONS.**

- A. The following PDT recommendations were not accepted by MG Riley in their entirety.
1. PDT recommends that no change be made to our current policy regarding life jacket wear on Corps waters.
  2. PDT recommends that a letter be prepped for MG Riley's signature advising the US Coast Guard of the findings of our study. This letter will encourage the USCG to consider adopting a life jacket wear policy for adults that would have broader application than a policy set by the US Army Corps of Engineers.
  3. PDT requests that the DCW concur with team's alternate recommendations that specifically address education outreach, partnerships and facility management. These recommendations include:
    - a. Educational outreach
      - (1) Refocus public education/awareness directed at targeted risk groups
      - (2) Revamp marketing strategy to develop key messages and actions for targeted audiences
      - (3) Further investigate brokering educational incentive products at the national level
    - b. Develop national life jacket loaner program policy and standards.
    - c. Expand partnerships for recreational safety.

#### **V. STATISTICAL INFORMATION.**

To approach this study, the PDT needed to fully understand the statistics and trends associated with drownings, not only from a Corps perspective, but from a National perspective. Statistical information from a National perspective was gathered from the Center for Disease Control, (CDC), United States Lifesaving Association (USLA), and the National Park Service.

In the CDC data, all drownings regardless of source or activity are recorded. This presents a frequency rate, based on population, which gives an understanding of the national scope of the issue. For example, this data includes home accidents (drownings in bathtubs; toilets; laundry tubs; swimming pools), occupational drowning and drowning as a result of water based recreational activity. While it is this last category (water-based recreational activity) that the Corps is most concerned with, little archival data was found that provides adequate detail to allow us to use this activity exclusively in our study approach. The following paragraphs provide summary data from different sources. While this data cannot be used as exact statistical comparisons, it provided the team with circumstantial data that allowed the study team to better evaluate the relative degree of success of the current Corps water safety program and water-based accident rates.

A. Center For Disease Control (CDC) – The CDC provides a national perspective for all deaths listed as caused by drowning. The following tables, charts and graphs provide trend data for drownings in all settings, recreational, industrial, etc. It helps us to understand trends and demographics relative to all national drownings.

**10 Leading Causes of Unintentional Injury Deaths, United States, 2005, All Races, Both Sexes**

	Age Groups										
Rank	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	All Ages
1	Unintentional Suffocation 748	Unintentional Drowning 493	Unintentional MV Traffic 560	Unintentional MV Traffic 763	Unintentional MV Traffic 10,657	Unintentional MV Traffic 7,047	Unintentional Poisoning 6,729	Unintentional Poisoning 6,983	Unintentional MV Traffic 4,287	Unintentional Fall 15,802	Unintentional MV Traffic 43,667
2	Unintentional MV Traffic 140	Unintentional MV Traffic 489	Unintentional Fire/burn 138	Unintentional Drowning 132	Unintentional Poisoning 2,484	Unintentional Poisoning 4,386	Unintentional MV Traffic 6,491	Unintentional MV Traffic 6,179	Unintentional Poisoning 2,007	Unintentional MV Traffic 7,048	Unintentional Poisoning 23,618
3	Unintentional Drowning 64	Unintentional Fire/burn 208	Unintentional Drowning 121	Unintentional Fire/burn 85	Unintentional Drowning 649	Unintentional Drowning 385	Unintentional Fall 607	Unintentional Fall 1,181	Unintentional Fall 1,451	Unintentional Unspecified 5,069	Unintentional Fall 19,656
4	Unintentional Fire/burn 36	Unintentional Pedestrian, Other 129	Unintentional Other Land Transport 47	Unintentional Other Land Transport 63	Unintentional Other Land Transport 298	Unintentional Fall 295	Unintentional Drowning 497	Unintentional Fire/burn 506	Unintentional Suffocation 509	Unintentional Suffocation 3,271	Unintentional Unspecified 6,551
5	Unintentional Unspecified 22	Unintentional Suffocation 126	Unintentional Suffocation 44	Unintentional Suffocation 59	Unintentional Fall 236	Unintentional Other Spec., classifiable 229	Unintentional Fire/burn 340	Unintentional Drowning 492	Unintentional Fire/burn 405	Unintentional Fire/burn 1,178	Unintentional Suffocation 5,900
6	Unintentional Poisoning 20	Unintentional Natural/Environment 38	Unintentional Pedestrian, Other 25	Unintentional Firearm 37	Unintentional Firearm 203	Unintentional Fire/burn 228	Unintentional Suffocation 306	Unintentional Suffocation 466	Unintentional Natural/Environment 376	Unintentional Natural/Environment 1,069	Unintentional Drowning 3,582
7	Unintentional Fall 16	Unintentional Fall 34	Unintentional Natural/Environment 17	Unintentional Poisoning 34	Unintentional Unspecified 198	Unintentional Other Land Transport 199	Unintentional Other Spec., classifiable 305	Unintentional Natural/Environment 459	Unintentional Unspecified 369	Unintentional Poisoning 931	Unintentional Fire/burn 3,299
8	Unintentional Natural/Environment 16	Unintentional Struck by or Against 31	Unintentional Poisoning 17	Unintentional Other Transport 32	Unintentional Suffocation 175	Unintentional Suffocation 196	Unintentional Other Land Transport 272	Unintentional Unspecified 388	Unintentional Drowning 266	Unintentional Other Spec., NECN 506	Unintentional Natural/Environment 2,462
9	Unintentional Struck by or Against 9	Unintentional Other Land Transport 25	Three Tied 15	Unintentional Pedestrian, Other 22	Unintentional Fire/burn 171	Unintentional Unspecified 196	Unintentional Unspecified 259	Unintentional Other Spec., classifiable 365	Unintentional Other Spec., classifiable 219	Unintentional Drowning 465	Unintentional Other Land Transport 1,533
10	Two Tied 4	Unintentional Firearm 22	Three Tied 15	Three Tied 18	Unintentional Other Transport 138	Unintentional Other Transport 152	Unintentional Natural/Environment 238	Unintentional Other Transport 235	Unintentional Other Transport 210	Unintentional Other Land Transport 263	Unintentional Other Spec., classifiable 1,479

WISQARSTM

Produced By: Office of Statistics and Programming, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention Data Source: National Center for Health Statistics (NCHS), National Vital Statistics System

**TABLE 1**

Statistics from the 2005 CDC data indicate that drowning of all forms (recreation, domestic, occupational) is the #6 cause of unintentional injury death for all ages in the United States, as shown

in Table 1. Note that the trend indicates that drownings occur in the top three cause range within the age groups from less than age 1 through 34, then begin a steady decrease.

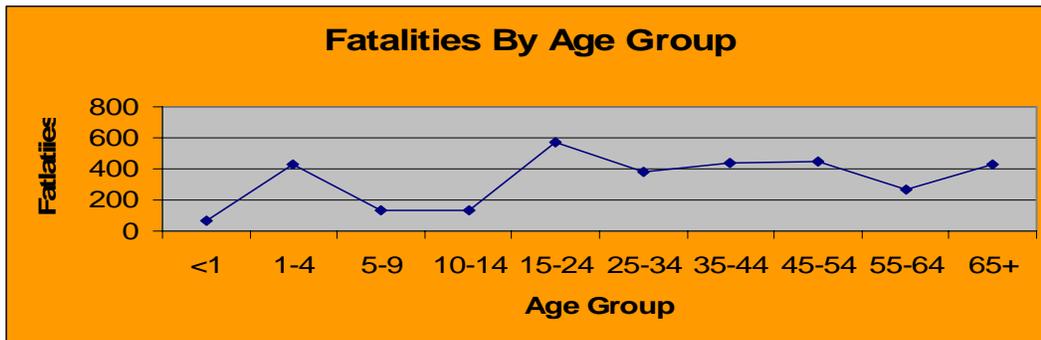


TABLE 2

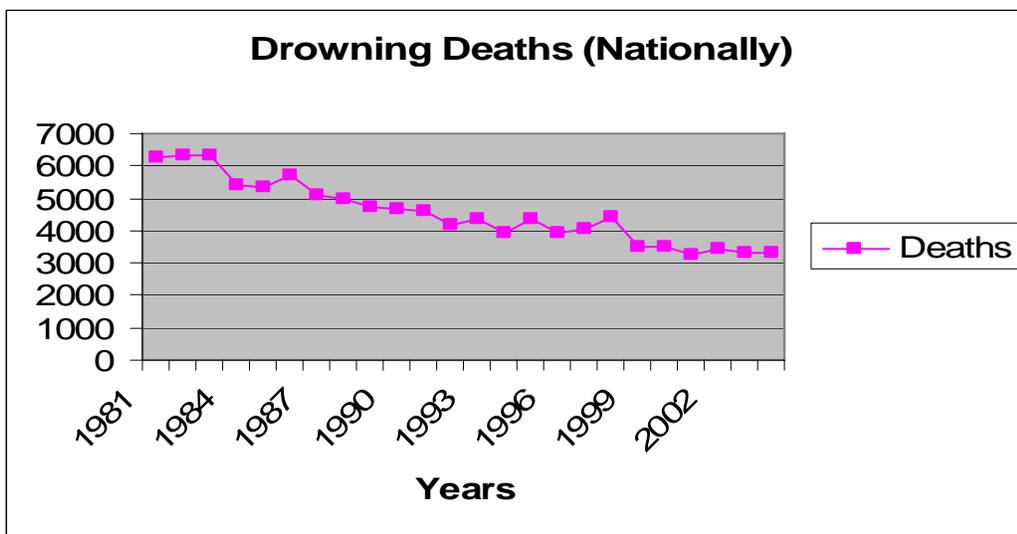


TABLE 3

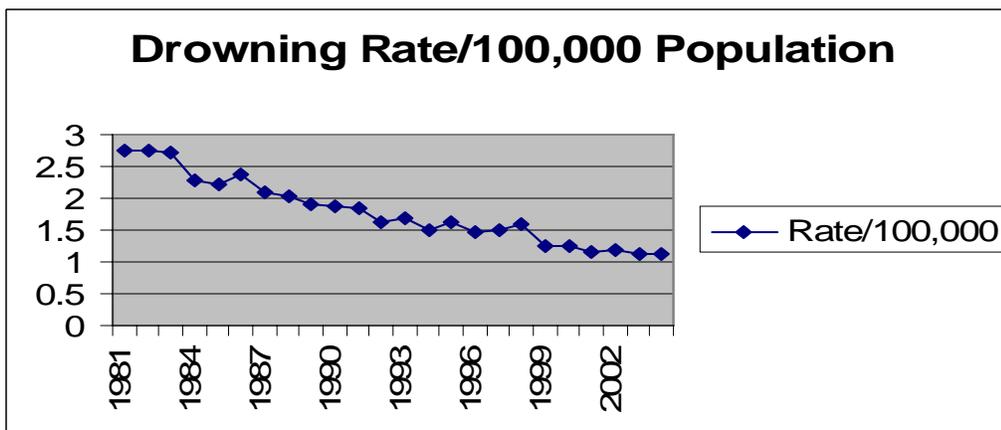


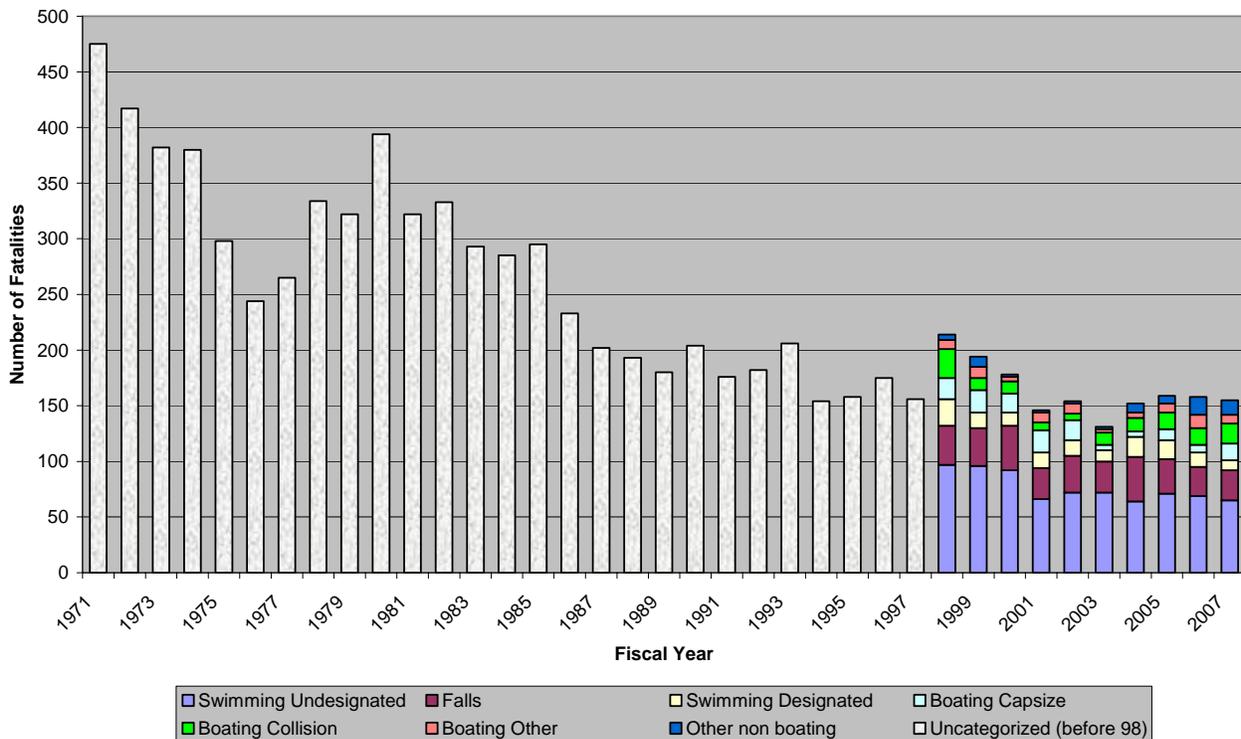
TABLE 4

Over the course of record keeping, CDC has charted the trend in all drowning deaths as illustrated by Tables 2 through 4. Additionally, a one year snapshot of data for water-based recreational fatalities was found in a Center for Disease Control document. The document is titled [“Non-fatal and Fatal Drownings in Recreational Water Settings”](#) --- United States, 2001 – 2002.

B. Corps of Engineers Statistical Information. The Corps of Engineers archival information on public fatalities was somewhat fragmented and deemed unreliable prior to 1998. That was when the gathering and consolidation of ENG 3394s (United States Army Corps of Engineers Accident Investigation Reports) began at the National level to evaluate water-related fatalities. With the advent of the new reporting requirements associated with ENGLINK in 2005, Corps of Engineers public fatality statistics are considered to be more accurate. Unlike the Center for Disease Control however, the Corps groups their deaths as “recreation fatalities” or “water-related fatalities”. For the purpose of this study, the PDT separated water-related fatalities from the overall recreation fatality category. Water-related fatalities from FY98-07 include drownings (86%), trauma deaths (9%) typically as a result of boat collisions, hypothermia (2%), medical (1%), carbon monoxide (1%) and unknown (1%). However, we only began tracking CO deaths in FY06 and we suspect there were more before it was identified as a problem.

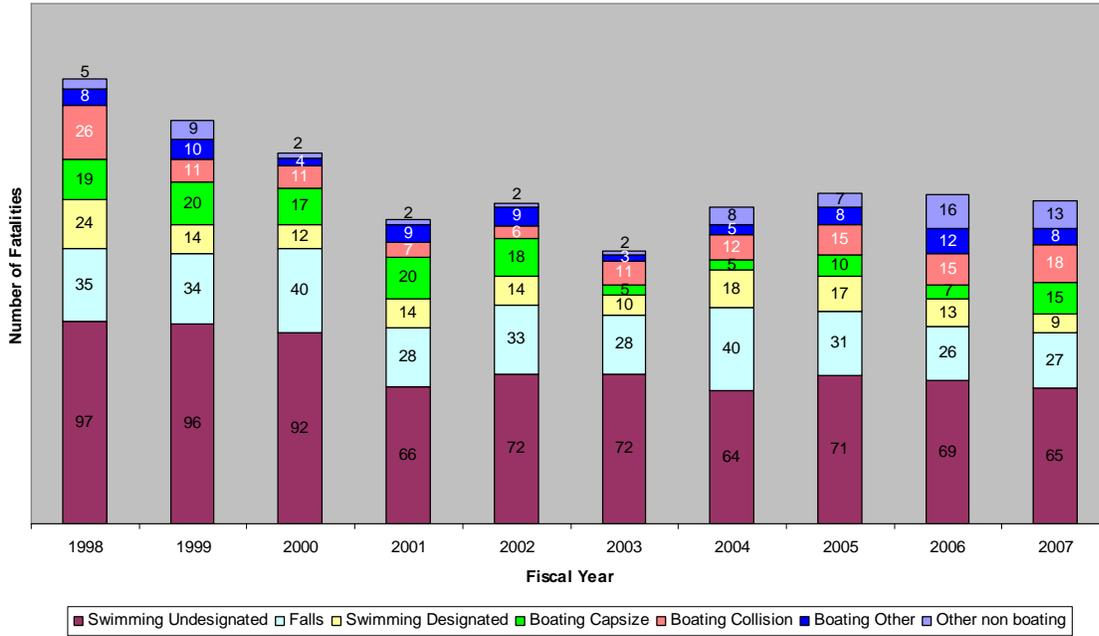
Table 5 provides insight into the trends associated with recreation fatalities from 1972 to present. This illustrates a decrease in public fatalities since public safety educational efforts were introduced and a leveling out as educational efforts have remained steady. Also, since 1998 water-related fatalities have been categorized by activity type as shown by the colored bars.

**Corps of Engineers Water-related Fatalities  
1971 to 2007**



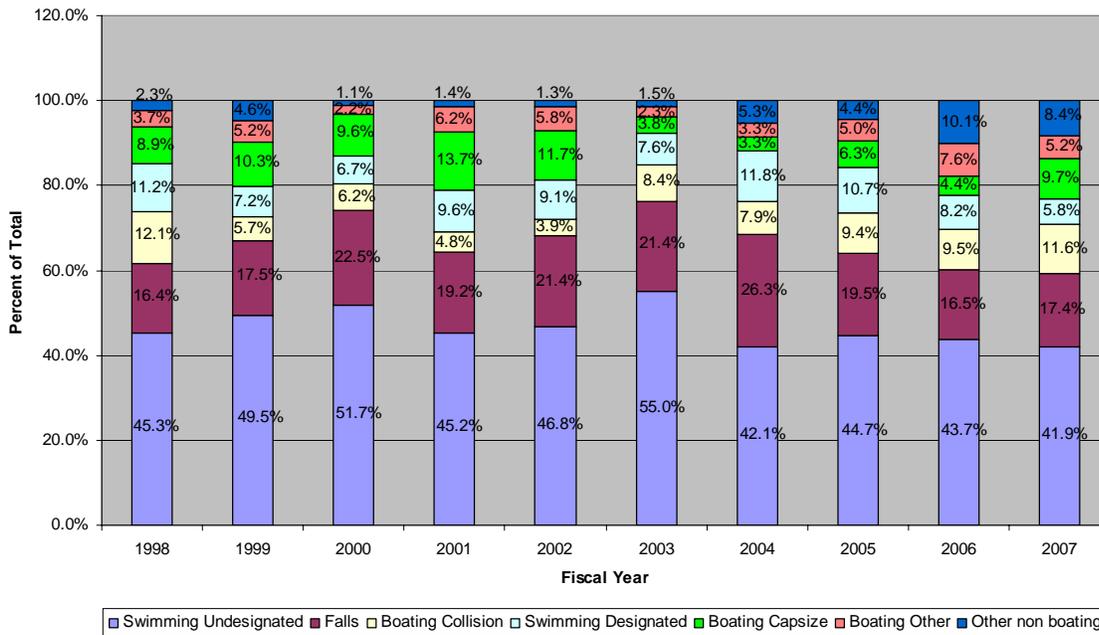
**TABLE 5**

**Corps of Engineers  
Public Water-related Fatality Activity Categories  
By Number**



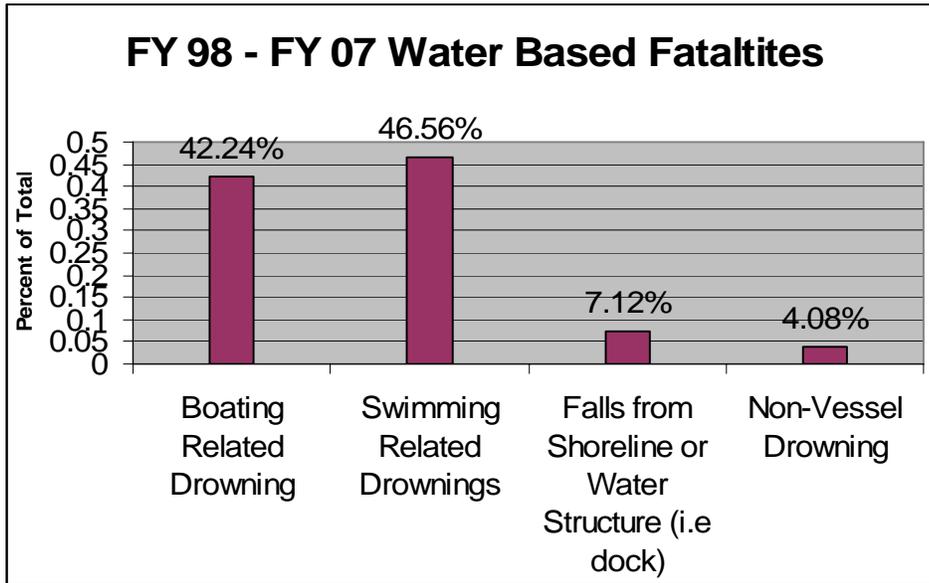
**TABLE 6**

**Corps of Engineers  
Public Water-related Fatality Activity Categories  
By Percentage**

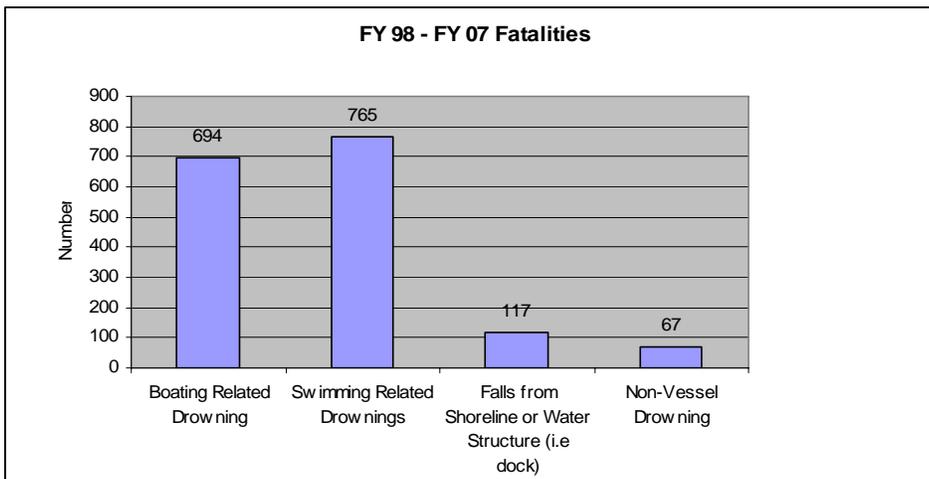


**TABLE 7**

Tables 6 and 7 illustrate the categories of activities visitors are engaged in that result in public recreation fatalities. When we combine all of the swimming in undesignated area fatalities, it makes up the highest risk activity category for the 10-year period showing an average of 46.6%. In most cases, these individuals were exceeding their swimming abilities. The second highest risk activity average at 19.6% are those who fall either from boats (12.5%) and other places i.e. docks, shoreline etc. (7.1%). The other activity category averages are 8.8% swimming in designated swimming areas, 8.3% capsizing usually due to weather or overloading and 8% collisions. Only 4.7% of all water-related fatality victims in the 10-year period were wearing a life jacket.



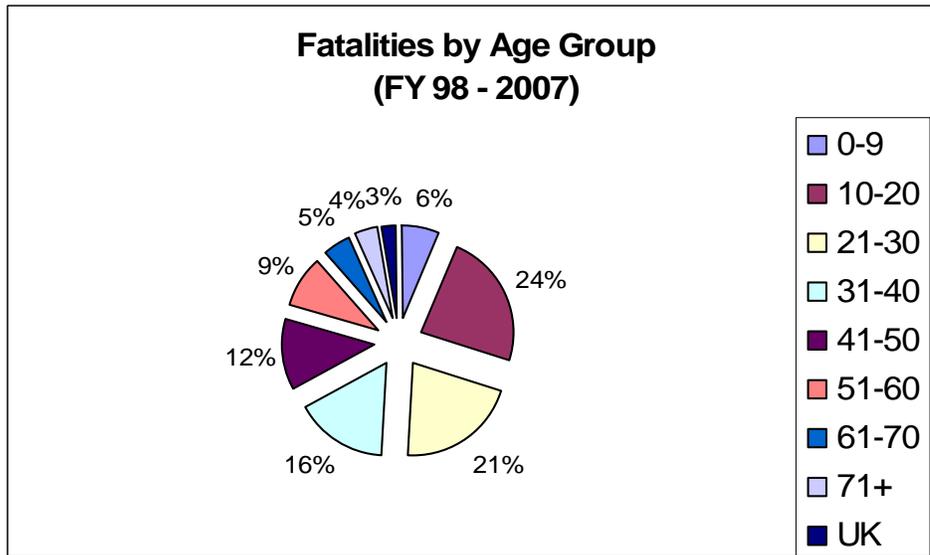
**TABLE 8**



**TABLE 9**

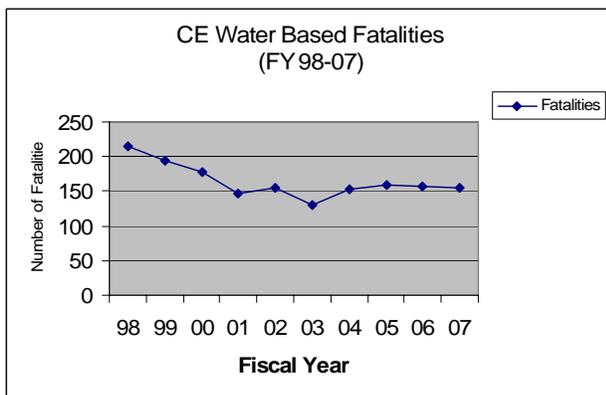
The data indicates in Table 8 and 9 that over the course of the past 10 years fatalities have fallen into the following four (4) general groupings. A swimming-related fatality is when an individual intentionally enters the water. However, if they are swimming from a boat those are included in the

boating category in these tables. It should be noted that 113 or 16.28% of the boating-related fatalities in Table 8 and 9 were people swimming around a boat who intentionally entered the water.

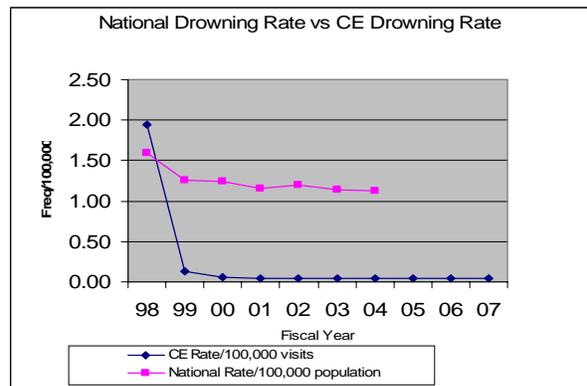


**TABLE 10**

Table 10 illustrates the ages of water-related fatality victims in 10-year periods from FY98-07. The majority (24%) are in the aged 10-20 range with 21% in the 21-30 year old age groups. However, if when we break this down into an 18-35 year old age group, it shows 38% is the highest risk age group.



**TABLE 11**

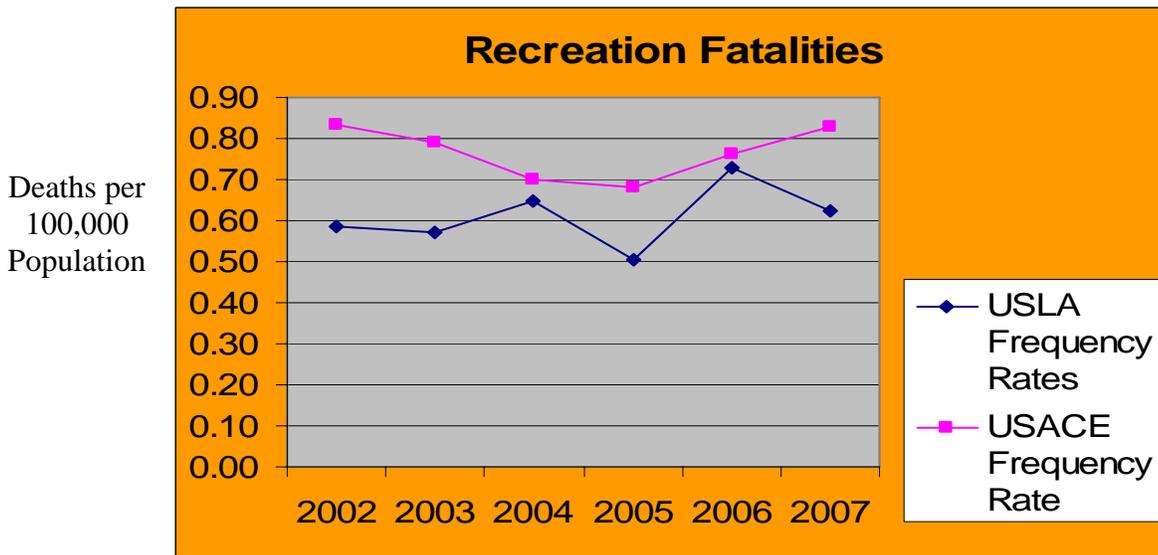


**TABLE 12\***

\*Note: Table 12 - 1998 statistical trend inaccurate due to incomplete visitation data in OMBIL

There is no direct comparison in Tables 11 and 12 between the USACE water-related fatality experience and the national drowning rate since the USACE water-related fatality experience includes all water-related fatalities rather than exclusively drowning. However, drownings are 86% of all USACE water-related fatalities. Water-related fatalities on Corps of Engineers Water Resource Development Projects compositely average 4.71% of the nation’s drowning deaths over the past 10 years. The much lower frequency rate experienced by the Corps lends some credence that our various water safety programs are having a positive impact.

C. US Lifesaving Association Statistics. Data was found for recreational beach fatalities as reported and compiled by the US Lifesaving Association. Their statistics are collected annually from America's beach lifeguard providers on a collaborative and volunteer basis. Normally, people recreating in the water or on the sand, and at adjacent picnic areas, parking lots, recreation concessions and bike paths are included in the beach visitation data. It does not include people that merely transit on bikes or in cars. The data provides a comparative 6 year trend based on annual population samples ranging from a low of 223.5 million persons to a high of 273.4 million persons.



**TABLE 13**

Table 13 indicates the frequency rate of fatalities based on the number of fatalities per 100,000 populations according to the US Lifesaving Association and USACE data. It should be noted that USLA beach visitation is based on estimates by lifeguards without benefit of a positive methodology to determine actual visitation.

D. National Park Service Statistics. National Park Service data was obtained for the 2007 recreation season. The National Park Service and the Corps of Engineers both develop recreational fatality frequency rates using the same formula (# public recreating fatalities times 1,000,000 divided by visitor days.). The following chart provides a snapshot of comparative data between the USACE and NPS for the 2007 recreation season.

AGENCY	VISITOR DAYS (Millions)	FATALITIES	RATE
USACE	211.4	175	.83
NPS	109	97	.95

## **VI. PITTSBURGH DISTRICT (LRP) MANDATORY WEAR INITIATIVE.**

A. The Director of Civil Works asked the PDT to specifically look at a program that was implemented in the Pittsburgh District. The following events and timeline were determined.

May 1981 – May 1985. LRP implements District-wide alcohol ban. Began in 1981, the ban extended to all projects by 1985. Congressional elements were notified and were publicized through news releases. According to some staff, while the alcohol ban has not eliminated alcohol from the projects, recreation areas are no longer party destinations.

May 1990 – LRP establishes the requirement that Personal Flotation Devices (PFDs) must be worn by all people on all boats less than 16 ft in length, all canoes and all non-swimmers. The rulemaking took place under Title 36, Chapter III, Part 327, Rules and Regulations Governing Use of Water Resource Development Projects Administered by the Chief of Engineers, Section 12, Restrictions. Section a of this regulation indicates that ...The District Commander may establish and post a schedule of visiting hours or restrictions on the public use of a project or portion of a project. The District Commander may close or restrict the use of a project or portion of a project when necessitated by reason of public health, public safety, maintenance, resource protection, or other reasons in the public interest. Entering or using a project in a manner which is contrary to the schedule of visiting hours, closures or restrictions is prohibited.

- May 8 1990 - PFD policy approved by LTC Roudabush, Pittsburgh District Engineer.
- May 11 1990 - Sixty-two (62) letters were mailed to Federal legislators & State boating law administrators.
- May 15 1990 - A District-wide press release was sent to all newspapers.
- Memorial Day 1990 - Signage installed at lake projects prior to holiday. Flyers and posters developed and distributed prior to the start of the summer recreating season.

By 1991, the regulation was in effect at 13 of the 16 district lakes. Overall, the regulation was accepted by the boating public. In 1991, there were several hundred verbal warnings, 223 written warnings, and 12 citations issued for violations of the new regulation.

In Pennsylvania, although the Boating Law Administrator expressed angst over the LRP Regulation, he did not ask for it to be rescinded. Note that a period of four years passed between the Pittsburgh District Rulemaking and the date of adoption of the rule for Pittsburgh District Lakes by the Pennsylvania Fish and Boat Commission (PF&BC). The adoption of the rule by the PF&BC coincided with the arrival of Mr. Peter Colangelo as the Executive Director for the Pennsylvania Fish and Boat Commission (PF&BC). Mr. Colangelo had served as the US Army Corps Chief of the Natural Resource Management Branch in the Pittsburgh District prior to his retirement from the Corps and subsequent employment by the PF&BC. The regulation currently applies only on Pittsburgh District Lakes in Pennsylvania. Lakes in Pennsylvania under the Philadelphia and Baltimore Districts are not covered by the special alcohol nor PFD requirements initiated by the Pittsburgh District. The enforcement of the regulations on the Pittsburgh District lakes is the responsibility of both the USACE park rangers and Pennsylvania Fish and Boat Commission Officers. Warning and Citations are issued by PF&BC officers under PA Fish and Boat Code, Section 5124.

Most state or local agencies cannot enforce Title 36, CFR. The Pennsylvania Fish and Boat Commission (PF&BC) is the primary boating enforcement agency for waters in Pennsylvania, to include waters managed or held in fee by the U.S. Army Corps of Engineers. As a result of the Pittsburgh District initiative, the PF&BC, adopted, under Pennsylvania Code the following to allow its officers to be consistent with Corps's rangers on the waterways in the Pittsburgh District. A sample portion of the regulation for the Corps Youghiogheny River Lake is shown below.

§ 111.26. *Fayette County.*

(a) *Dunlap Creek Reservoir. The operation of boats powered by internal combustion motors is prohibited.*

(b) *Virgin Run Lake. The operation of boats powered by internal combustion motors is prohibited.*

(c) ***Youghiogheny River Lake. Persons shall wear a Coast Guard approved personal flotation device at all times when on board boats less than 16 feet in length or any canoe or kayak.***

#### *Authority*

*The provisions of this § 111.26 amended under the Fish and Boat Code, 30 Pa.C.S. § 5124.*

#### *Source*

*The provisions of this § 111.26 adopted June 3, 1994, effective June 4, 1994, 24 Pa.B. 2795; amended March 9, 2001, effective March 10, 2001, 31 Pa.B. 1369. Immediately preceding text appears at serial page (227695).*

B. General Comments Summarizing Pittsburgh District Mandatory PFD Program. No increase in staffing (temporary or permanent rangers) took place to accomplish the new 327.12.a requirement. A reduction in force (R.I.F.) in 2004 reduced staffing even further. Both the Pittsburgh District staff and officers of the PF&BC reported that violations of this restriction are rarely enforced. Tracking the effectiveness of this policy has been, and continues to be, a problem. While the program has not been "ineffective", there has not been sufficient tracking to quantify its success. Approximately 110 327.12a citations are issued each year. The majority (more than 50%) are issued for alcohol. Averages of three citations per year are issued for lack of PFD usage. Although the policy has been in place in LRP since 1990, a direct correlation to decreased fatalities is not clear.

## **VII. SIGNIFICANT FINDINGS OF THE SURVEYS SUMMARY.**

A. In most cases the Corps of Engineers is not the primary enforcement agency on the waters that it manages. Either by statute or agreements state and other agencies provide primary enforcement capabilities on the water. Cooperative partners generally don't have the capacity to enforce Title 36 nor other Corps of Engineers restrictions under state or local statute or code. As such, the Corps of Engineers would implement any form of mandatory PFD wear without the enforcement cooperation of our partners until such time that state and local entities adopt similar codes for enforcement under their statutes.

It should also be noted that approximately 37% of Corps of Engineers owned water resource development projects have no rangers to provide enforcement of any aspects of Title 36. Additionally, at those projects where rangers do exist, 22% are staffed by only one ranger; 16% by 2 rangers; and 8% by 3 rangers. Only 16% of the Corps of Engineers projects listed have staffing of more than 3 personnel.

Under Title 36, rangers have no arrest authority, but have the authority to issue collateral forfeiture citations. Collateral forfeiture schedules (dollar value for each violation) are set by the Federal Magistrate in the applicable district serving that water resource development project. Federal Magistrates enjoy a great deal of latitude in their interpretation and/or enforcement of Title 36, especially under Section 12 Restrictions, and there are inconsistencies in how Title 36 is enforced by them. Should the Corps of Engineers develop a new restriction; the courts will ultimately determine the effectiveness of prosecution of violators under this rule.

B. Complete versions of all questionnaire results are available on the NRM Gateway. What follows is a summary of the primary concerns identified in those survey responses from district POCs and employees.

#### 1. Enforcement

a. 100% of the District POC responses said the Corps alone does not have adequate staffing to enforce a mandate under Title 36, 327.12a, posted restrictions. 80% of 1,193 employees surveyed said the same.

b. Corps average time of boat patrol during a busy week of the recreation season is 8-13 hours per week. Other agencies (i.e. States, Coast Guard, CG Auxiliary, local law enforcement) during same time period patrol an average of 28-34 hours per week. Patrols during non-recreation season drop to 2-3 hours per week for the Corps and 5-7 hours per week for other agencies.

c. In order to adequately enforce a new Corps regulation 55% said it would require an additional 20 or more hours per week of boat patrol and 21% stated it would require 15-20 more hours per week.

d. The types of program adjustments mentioned that would have to be made to accommodate an increase in boat patrol include reduced land-based patrols, reduced outreach/educational efforts, increase costs of equipment (boats) purchases, etc.

e. 93% felt that if adopted, the Corps should allow a minimum of 1-year transition or warning period. Several commented that it may take more time than that.

f. The majority of state agencies who patrol "Corps waters" do so under state laws, not Corps-issued agreements or contracts.

g. When we asked respondents if the public would comply with a posted life jacket requirement even if we didn't have adequate enforcement, all of the District POCs said no. Only 12% of employees surveyed said yes people would comply, and 23% said maybe people would.

#### 2. US Coast Guard

a. The majority (97%) of District responses said it would be best if the USCG took the lead in this effort because states would likely follow or risk losing Federal funds.

b. On a scale of 1-10 with 1 being negative and 10 being positive impacts 68% of District POCs and 53% of employees rated in the more positive (6-10) range if the USCG adopted a life jacket wear requirement. 88% of District POCs and 69% of employees rated (1-5) negative impact if the Corps adopted this policy.

3. Economic Impacts-Local Businesses/Partners/Stakeholders/Leaders
  - a. 65% responded either yes or maybe we may see a negative impact on local businesses if we implemented a mandatory wear requirement
  - b. 71% anticipate negative impact on partnerships
  - c. Most anticipate that we may not have the support of Congress (69%), state legislatures (63%), or local politicians (59%)
  
4. Education and Outreach
  - a. 54% of projects reporting do not work with local water safety councils
  - b. 51% of field educational efforts are directed to elementary-aged children or younger, 23% middle school, 15% direct efforts towards high-school-aged. Only 11% direct their educational efforts to Young Adults (18-30) and 11% to Adults
  - c. Within current staffing and funding capabilities, the level of educational & outreach efforts were reported as average (29%), above average (47%), or maximized (15%)
  
5. Opinions. Table 14 shows that the majority (62%) of District Engineers and Operations Chiefs, and 34.49% of Safety Chiefs do not support a life jacket mandate. However, the majority (65.51%) of Safety Office Chiefs support a life jacket mandate in some form, but only 31% of District Engineers and Operations Chiefs do. The most common condition mentioned in support of the “yes with conditions” option was if the US Coast Guard took the lead.

<b>District Engineers, Operations Chiefs, &amp; Safety Chiefs support for implementation of a District regulation to Title 36, 327.12(a) that mandates life jacket wear?</b>						
	<b># DE</b>	<b>% DE</b>	<b>#OD</b>	<b>%OD</b>	<b>#SO</b>	<b>%SO</b>
<b>Yes</b>	<b>4</b>	<b>13.79%</b>	<b>4</b>	<b>13.79%</b>	<b>9</b>	<b>31.03%</b>
<b>Yes with conditions</b>	<b>5</b>	<b>17.24%</b>	<b>5</b>	<b>17.24%</b>	<b>10</b>	<b>34.48%</b>
<b>Support Total</b>	<b>9</b>	<b>31.03%</b>	<b>9</b>	<b>31.03%</b>	<b>19</b>	<b>65.51%</b>
<b>No</b>	<b>16</b>	<b>55.17%</b>	<b>17</b>	<b>58.62%</b>	<b>8</b>	<b>27.59%</b>
<b>No with conditions</b>	<b>2</b>	<b>6.90%</b>	<b>1</b>	<b>3.45%</b>	<b>2</b>	<b>6.90%</b>
<b>Do Not Support Total</b>	<b>18</b>	<b>62.07%</b>	<b>18</b>	<b>62.07%</b>	<b>10</b>	<b>34.49%</b>
<b>Not sure</b>	<b>2</b>	<b>6.90%</b>	<b>4</b>	<b>13.79%</b>	<b>1</b>	<b>3.45%</b>
<b>Not applicable</b>	<b>5</b>		<b>3</b>		<b>4</b>	

**Table 14**

**VIII. PARTNER REACTION.**

A. Those from outside the Corps of Engineers who attended the 16 Nov 07 Interagency meeting to discuss this study proposal included Joseph Carro, US Coast Guard (USCG), Office of Boating Safety; Cindy Squares, National Marine Manufacturers Association (NMMA), Chief Counsel for Public Affairs; Matthew Long, National Association of State Boating Law Administrators (NASBLA), Director, Government Relations; Ruth Wood, National Safe Boating Council, Chair; Margaret Podlich, BoatUS; John Potts, US Coast Guard Auxiliary, Department Chief, Boating; Raphael Kozolchyk, Personal Watercraft Industry Association (PWIA); Gale Alls, US Power Squadron (USPS).

US Army Corps of Engineers attendees were Richard Wright, HQ Chief, Safety and Occupational Health; Jim Walker, HQ, Chief, Navigation; Steve Austin, Senior Policy Advisory for Park Ranger Activities; Karl Anderson, HQ Safety-Construction, Operations, and Training program manager; Lynda Nutt, Manager National Operations Center for Water Safety; Michael Tustin, Great Lakes and Ohio River Division (LRD), Safety Chief; Madeline Morgan, Chief, Safety, Ft. Worth District; Rachel Garren, Natural Resources Specialist, St. Louis District and Policy Advisor HQUSACE Water Safety Team; Charlie Burger, Deputy Chief, Operations, Ft. Worth District.

B. In summary, partners expressed appreciation for being brought into this discussion early in the process. All were very concerned about this initiative because of negative repercussions due to inconsistencies and enforcement issues. BoatUS requested more data and would like to continue being involved with this initiative. NMMA suggested that even if we implement a regulation on a district by district basis it is critical for us to allow public comments. NASBLA said that 47 states have some form of boating education requirement. Their position is that uniformity is essential for law enforcement. It is a nightmare for them and for the public when agencies have inconsistencies in regulations. The Federal Boating Act is what they support. USPS said they support the “under 13 wear requirement” and they have no position on mandatory use. Their priority is to support boating educational initiatives. PWIA supports mandatory PFD wear on all personal watercraft, except they don’t support inflatables. Also, they do not have a position on mandatory use for other vessels. USCG would like to see us extrapolate more data such as “under 13 fatalities” that could have been saved by wearing life jackets. USCGA supports the USCG in all their educational efforts. Further written correspondence from partners is posted on the NRM Gateway.

## **IX. POTENTIAL OPTIONS.**

A. There were no set parameters for this study identifying what a life jacket requirement would entail. It should be noted that there are only two ways to implement changes to Title 36 that would be necessary to implement a life jacket mandate at any Corps project. One is for USACE to change Title 36 at the National level, which requires going through the Federal Register public review process. This along with other approval processes can take years to implement. We will not consider doing this until this study is completed. Another way is for a District Engineer to use his authority in Title 36, 12.a. to make additional regulations that apply only to their district or specific projects within their district. There is no authorized process to implement a Title 36 change from the MSC level.

B. Those wanting to participate in the test phase of this study would need to determine parameters at their district in cooperation with members of the Life Jacket Mandate Study PDT. There was some discussion by the PDT about possible parameters. Below is a bullet list of options, starting with those requiring the least amount of effort, and the pros and cons for each option.

1. Mandatory PFD Loaner Program - HQ consistent policy on loaner boards.

2. Status Quo

a. Pro

- Can be performed within existing resource allocations.
- Public reaction unchanged.

b. Con

- Fatality rate will most likely remain consistent.
- Quantifying success is difficult.
- Public reaction unchanged.

3. Increase education/awareness.

a. Pro

- Able to target high risk groups.
- National awareness (professional) using major media.
- Public reaction expected to be favorable.

b. Con

- May be expensive. (resource intensive)
- Quantifying success is difficult.

4. Mandatory boater education training / licensing

a. Pro

- Trained and educated boaters aren't usually involved in accidents

b. Con

- This would need to be done at the state level to be the most effective.
- Quantifying success is difficult.

5. Pittsburgh Example – Mandatory on boats less than 16 ft in length, all canoes and all non-swimmers

a. Pro

- Potential to reduce fatalities in the boating category.

b. Con

- Selective regulation to a small portion of the using public. Nationally we don't know how many boats on our lakes are less than 16'. We do not have statistics indicating accident rate specifically for these vessels?
- Expected negative public reception for this user group.
- Quantifying success is difficult. (CE doesn't require statistical breakdown based on boat size).

6. Mandatory on all watercraft not carrying passengers for hire while underway. (option – at all times)

a. Pro

- Potential to reduce fatalities in boating category.
- Quantifying success should be achievable.

b. Con

- May leave out fishing guides operating “undercover”.
- Would eliminate tour boats/ferries.
- From a resource perspective, trade education for enforcement.
- Relocation of recreational opportunities from CE controlled waters to one less restrictive.
- Expected negative public reception for this user group.

7. Mandatory on all watercraft while underway. (option – at all times) May have to make allowances for houseboats – tour boats.

a. Pro

- Potential to reduce fatalities.
- Quantifying success should be achievable.

b. Con

- From a resource perspective, trade education for enforcement.
- Relocation of recreational opportunities from CE controlled waters to one less restrictive.
- Expected negative public reception for this user group.

8. Mandatory for any time someone is on/in the water, to include those swimming outside designated swimming areas (sub-option require only those under age 13).

a. Pro

- Potential to reduce fatalities from the highest risk behavior--swimming.
- Quantifying success should be achievable.

b. Con

- From a resource perspective, trade education for enforcement.
- Relocation of recreational opportunities from CE controlled waters to one less restrictive.
- Expected negative public reception for this user group.
- Concerns that we may increase our liability for fatalities within the designated areas, especially since we don't have lifeguards and often no rescue equipment at designated swim areas.

**X. SUMMARY.** A Life Jacket Mandate Study was initiated at the request of USACE Director of Civil Works, MG Don Riley, in April 2007, to analyze the impacts and benefits of establishing a Federal regulation under Title 36, CFR 327 that would require members of the public to wear a life jacket while recreating on Corps waters. The study, led by the HQUSACE National Operation Center for Water Safety, was conducted in-house by a product delivery team (PDT) comprised of a variety of recreation and safety managers from Corps headquarters, division, district and lake staffs. The PDT used data collected from a district questionnaire, an employee survey on the Corps NRM Gateway web site, interagency discussions and written comments, fatality and accident report statistics, general comments from field leadership, and self-analysis of current national educational materials and programming to determine their final recommendations for MG Riley.

On 28 February 2008, the PDT briefed MG Riley with their findings. Based on information gathered, the PDT's recommendation was to not change Title 36 to establish a regulation requiring life jacket wear on Corps waters at this time. The PDT recommended that the Corps continue to support U.S. Coast Guard's life jacket wear initiatives and to aggressively pursue voluntary wear of life jackets through targeted public education actions, life jacket loaner programs and increased partnerships. MG Riley decided to defer his decision on establishing a policy until additional information can be gathered. Specifically, he requested that the PDT identify districts willing to conduct a field test exercise in which the life jacket wear requirement is applied and monitored for effectiveness. This Interim Report only summarizes the first inquiry stage of the life jacket mandate study prior to the initiation of a field test.

New initiatives are often put into place without giving thought to the long term determination of the degree of success of that initiative. The obvious benefit of a mandatory PFD requirement could be the potential to save lives and reduce drowning incidences on Corps of Engineers waters. Unknown would be the public's reception toward a new rule, the extent of voluntary compliance, and the actual reduction of the number of fatalities as a result of the rulemaking. Also unknown would be the visitation and fiscal impacts that may result from the public relocating to other recreational opportunities as a result of the rulemaking. Determining the degree of success would involve consistent data collection across all affected Corps of Engineers districts.

During the preparation of this study, it was noted that archival data concerning Corps of Engineers public fatalities was not available in a reliable automated and consistent format. This and future examinations of this issue is reliant on accurate, consistent and relatively complete information.

**XI. LIFE JACKET STUDY PRODUCT DELIVERY TEAM (PDT) PARTICIPANTS.**

Lynda Nutt, Manager, National Operations Center (NOC) for Water Safety

Stephen Austin, Senior Policy Advisor for Park Ranger Activities, CECW-CO-N

Rachel Garren, Policy Advisor Water Safety NOC, Natural Resources Specialist, CEMVS

Brenda Warren, Public Safety Program, CESO

Kareem El-Naggar, Assistant Chief of Operations, CELRD

Kevin Paff, Natural Resources Specialist, CENWD

Michael Tustin, Chief, Safety and Occupational Health, CELRD

Gary King, Chief, Safety and Occupational Health, CESAD

Charles Burger, Assistant Chief of Operations, CESWF

Madeline Morgan, Chief, Safety and Occupational Health, CESWF

Joe Ferguson, Safety Specialist, CESPCK

Dwight Beall, Operations Project Manager, CENAB, Raystown Lake