

# MAINE STATE LEGISLATURE

The following document is provided by the  
**LAW AND LEGISLATIVE DIGITAL LIBRARY**  
at the Maine State Law and Legislative Reference Library  
<http://legislature.maine.gov/lawlib>



Reproduced from scanned originals with text recognition applied  
(searchable text may contain some errors and/or omissions)

**STATE OF MAINE  
DEPARTMENT OF INLAND FISHERIES AND WILDLIFE AND DEPARTMENT OF  
MARINE RESOURCES**

---

February 8, 2007

To: Members of the Joint Standing Committees on Inland Fisheries and Wildlife and Marine Resources of the 123<sup>rd</sup> Maine Legislature  
From: Colonel Thomas Santaguida, Chief - Maine Warden Service  
Major John Fetterman, Deputy Chief – Maine Marine Patrol  
Subject: Report of Findings: Statewide Boater Education Program (L.D. 307, Sec. 2)  
Pc: Commissioners George Lapointe and Roland D. Martin, Deputy Commissioners David Etnier, Paul Jacques, Deirde Gilbert, Andrea Erskine

---

This report is submitted pursuant to the requirements outlined in L.D. 307, Section 2 ***An Act To Improve Recreational Watercraft Safety*** (122<sup>nd</sup> Maine Legislature) that was approved by the Governor on April 5, 2006. A copy of the statute is attached.

Section 2 of the bill stated the following:

**Sec. 2. Safety Education Program.** The Commissioner of Inland Fisheries and Wildlife and the Commissioner of Marine Resources shall work together and with other interested parties to study the feasibility of developing, implementing and funding a statewide boater education program. The Commissioner of Inland Fisheries and Wildlife and the Commissioner of Marine Resources shall report to the joint standing committee of the Legislature having jurisdiction over inland fisheries and wildlife matters and the joint standing committee of the Legislature having jurisdiction over marine resource matters, respectively, by February 1, 2007, and their findings and recommendations on the development and implementation of a boater education safety program.

---

**Background:** Commissioner Martin (IFW) and Commissioner Lapointe (DMR) designated Colonel Thomas Santaguida of the Bureau of Warden Service and Major John Fetterman of the Bureau of Marine Patrol, respectively, to meet the requirements of studying the Safety Education Program concept as directed by the statute. Numerous meetings were held with groups, individuals and organizations determined to be interested parties. The working group of interested parties analyzed national boating accident data and from Maine. A review of boater education programs from around the United States was conducted. The working group quickly reached consensus that mandatory boater education is needed for all Maine boaters. The group never altered its position during the discussions. (Copy of meeting minutes and participants are attached).



**STATE OF MAINE  
DEPARTMENT OF INLAND FISHERIES AND WILDLIFE AND DEPARTMENT OF  
MARINE RESOURCES**

---

**Summary of Findings.** The working group reached consensus on the following points:

- That a mandatory boater education program is desired in Maine for motorboat operators and non-motorized boat operators.
- A boater education course, either on-line or live, will be acceptable if approved by the National Association of State Boating Law Administrator's (NASBLA).
- That there be an examination component to any approved course and successful passing of a proctored examination will be required.
- There will be a 'phase in' of the mandatory educational program based on date of birth to address the most at risk groups at the earliest possible juncture.
- Boater courses from other states would be accepted.
- People vacationing in Maine and staying for less than a designated time period would be exempt from the mandatory boater education requirement.
- States that have implemented mandatory education have experienced declines in boating accidents. The National Association of State Boating law Administrators (NASBLA) is soon to complete an analysis of program benefits to states that have implemented mandatory boater education – they have shown that the states that have such programs have observed the greatest percentage reduction in accident-injury and fatality. This will be available in the near future).
- The working group has prepared a draft bill (attached) that includes the substantive components of the consensus reached among working group members described in summary above.

**Points of Contact:**

Points of contact for state boating law administrators who have experienced mandatory boater education implementation in their state is available through Major John Fetterman of the Marine Patrol ([John.Fetterman@maine.gov](mailto:John.Fetterman@maine.gov)) or Colonel Thomas Santaguida of the Warden Service ([Thomas.Santaguida@maine.gov](mailto:Thomas.Santaguida@maine.gov))

---

**Details:**

The working group first met on October 27, 2007<sup>6</sup> at Inland Fisheries and Wildlife in Augusta. Present for the initial meeting were Colonel Thomas Santaguida (IFW), Major John Fetterman (DMR), Al Johnson, Recreational Boating Safety Specialist (USCG), Mike Sawyer, Recreation Safety Director (IFW), State Representatives Thom Watson (IFW Committee) and Leila Percy (Marine Resources Committee), and members of various organizations such as the United States Coast Guard, United States Coast Guard Auxiliary, United States Power Squadrons, Personal Watercraft Industry Association, National Transportation Safety Board, the



**STATE OF MAINE**  
**DEPARTMENT OF INLAND FISHERIES AND WILDLIFE AND DEPARTMENT OF**  
**MARINE RESOURCES**

---

Sportsmen's Alliance of Maine and other key groups and organizations ( a list of meeting attendees is included in the minutes of each meeting).

The initial working group of interested parties was determined by inter-agency consultation and discussion. Warden Brian Tripp was assigned to staff the working group and ensure that the administrative and support needs of the study group were met. Marine Patrol Officer Rachel Perron provided administrative assistance.

A second meeting was held on November 10, 2006 and a final meeting was held on January 4, 2007. The final meeting was expanded to invite a number of outside organizations such as the Sportsmen's Alliance of Maine; Maine Youth Camping Association, Maine Marine Association, Maine Harbormasters Association and the Maine Bass federation. The consensus of the group remained powerful throughout all three (3) working group sessions that boater education was necessary.

**Considerations:**

- The United States Coast Guard has listed mandatory boater licensing and education as a strategic plan goal and top priority.
- The National Transportation Safety Board has listed mandatory boater education for all states to be on their "ten most wanted list."
- It is to be expected that Maine will experience strong pressure from Federal entities if mandatory boater education is not implemented in Maine through internal processes.
- States that have implemented mandatory boater education have observed declines in boating accidents. In the near future, the National Association of Boating Law Administrators will have available an comprehensive analysis of states observations of declining rates of boater injury and fatality as a result of mandatory boater education.
- Boating safety is analogous to hunter safety. Until mandatory hunter safety was implemented Maine experienced many hunting related shooting including numerous fatalities. Once mandatory hunter education and mandatory hunter orange clothing were required, hunting related shootings decreased significantly. A further analogy may be made between mandatory hunter orange clothing and possibly requiring mandatory wearing of life jackets.
- Dive related commercial fisheries have a safety course requirement as a prerequisite to licensing by DMR --- resulted in an immediate reduction in accident and fatality rates.
- Lobster apprentice safety educational component recently implemented.
- Creation of a culture of safety for all Maine recreational boaters – Safety training and exposure has been low impact and well received in other states – national requirement in Canada.



**STATE OF MAINE  
DEPARTMENT OF INLAND FISHERIES AND WILDLIFE AND DEPARTMENT OF  
MARINE RESOURCES**

---

**Costs of the Proposed Boater Education Program:**

The costs of implementing and maintaining a mandatory boater education program are based upon developing a program that includes the components the work group was in consensus on.

Mr. Mike Sawyer, Recreational Safety Division director outlined the following proposed budget to implement a mandatory boater safety education in Maine.

**Maine Mandatory Boater Education Program**

**I.     Personal Services**

(1) Assistant Recreational Safety Officer, pay grade 17	49,500
(1) Office Associate II, pay grade 13	49,000
(3) Regional Safety Coordinators, pay grade 15, 1040 hrs. each	70,515
Fund additional 240 hrs. for existing coordinators (2640x25)	<u>66,000</u>
Total Personal Services	235,015

**II.    All Other**

Ten (10) contract positions for proctored examinations	25,000
Seasonal clerical contract	7,500
In state travel to administer program	30,000
General operations, printing, materials, postage, etc.	75,000
Supplies	5,000
Computer and telephone circuits	<u>5,000</u>
Total All Other	147,500

**III.   Annual Program Total**

---

Annual Program Total	382,515
----------------------	---------

**Other Costs (Boating Law Enforcement):**

There will be added costs to enforcement agencies to ensure compliance with a mandatory boater education program. Analysis of estimated enforcement costs associated with a mandatory boater education program may be developed upon understanding what type of program might be implemented.





**STATE OF MAINE  
DEPARTMENT OF INLAND FISHERIES AND WILDLIFE AND DEPARTMENT OF  
MARINE RESOURCES**

---

**Footnote:**

Maine averages less than 70 boating accidents per year. Most fatalities are drowning. Many involve non-motorized vessels and the victim not wearing a PFD (life jacket). Discussion did include the concept of mandatory PFD wear requirement in non-motorized vessels.

**Addendum, Attachments and Supporting Documents:**

LD 307 Workgroup Minutes (10/27/06, 11/20/06, 01/04/07); Draft Bill LD 307; Addendum #1-(An Act to Improve Recreational Watercraft Safety, Draft of Maine's Near shore Waters-Current Uses and Anticipated Trends); Addendum #2-(NTSB Most Wanted); Addendum # 3-(Deleted); Addendum #4-(Uniformity of State Boating Education); Addendum #5-(U.S.C.G. Policy Statement Educational Requirements); Addendum #6-(U.S.C.G First District Statistics 2005); Addendum #7-(Sample Legislation from New England States); Addendum #8-(Quick Phase in Educational Study); Addendum #9-(IF&W and DMR Violation Profile)

**Contact Information:**

**Colonel Thomas A. Santaguida (State Boating Law Administrator – Inland Waters)**  
**Chief, Maine Warden Service**  
**284 State Street**  
**Augusta, Maine 04333**  
**207-287-2766**  
**Thomas.Santaguida@maine.gov**

**Major John Fetterman**  
**Deputy Chief, Maine Marine Patrol (State Boating Law Administrator – Coastal Waters)**  
**21 SHS**  
**Augusta, Maine 04333**  
**207-624-6555**  
**john.Fetterman@maine.gov**



## **Minutes from: Work Group Meeting LD 307 10/27/2006**

**Attendees:** Col. Thomas Santaguida (IF&W), Maj. John Fetterman (DMR), Michael Sawyer (IF&W), Al Eggleston (USCGA), Bill Gossard (NTSB), Art Pickard (USPS), Bill Malloy (USPS), Al Johnson (USCG), Ralph Pears (PWIA), Rep. Thom Watson, Rep. Leila Jane Percy, Wdn. Brian Tripp (IF&W)

0900 Col. Santaguida opened the meeting and gave brief history of LD 307, NASBLA and the function of a state Boating Law Administrator.

The work group members introduced themselves, discussed their experience, and began collaborative efforts to outline the goals of proposed boating education requirements.

Bill Gossard handed out material from the National Transportation Safety Board on most wanted transportation safety improvements.

The group discussed the issue of boater education. The target group was determined to be the highest risk group of boaters. Statistically the highest risk group of recreational boaters is the operator's of 20-25' open boats with an average age of 40. It was felt that born after date or other "phase in" types of education would not target the group at highest risk.

The group discussed that reciprocity with other States especially in the New England region is essential. The possibility of a National Operator Certificate was discussed. It was felt that it would be the states responsibility to administer the education and testing. The board discussed the options for the education facet including home study and an internet based training site as well as more traditional classroom training. The majority of board members felt a proctored exam was necessary to maintain the integrity of the training certification process.

Bill Gossard pointed out that the fatality rate of recreational boating was second only to highways and this was a major concern of the National Transportation Safety Board.

Al Johnson presented information on recreational boating fatality statistics. There were 41 recreational boating fatalities from January 2006 to September 30<sup>th</sup>, 2006. Fifty nine percent of these involved non-motorized boats. Thirty-three of the forty-one were directly linked to cold water. This opened discussion about the mandatory wearing of PFD's for non-motorized boats. It was brought to the attention of the board that all states have a mandatory requirement for children to wear PFD's. The group concluded that although a mandatory PFD wear law would most likely decrease fatalities it would also distract from the mission of LD 307 and the two should be kept separate.



Major Fetterman advised that New Hampshire has nearly identical registration requirements and investigation into their testing process and fees would be beneficial to LD 307.

The group discussed a future license holder, who changed their residency to Maine and having to obtain a Maine license similar to the current driver's license requirements.

A list of stake-holder's was started and summer camp owners, EMS & fire organizations, boat dealers, Maine marina association, Maine harbor masters and Sheriff's departments were named as potential organizations which may hold interest in the proposed LD 307.

Al Johnson distributed a draft of a saltwater recreational review written by Elizabeth Stevenson.

**Summary:** All group members are in favor of a Boater Education Course that is NASBLA approved with a proctored exam, with recognition for a specific few other approved courses and exceptions for visiting recreational vessels. The group felt an eight-hour course was adequate, with a quick phase in of 5-10 years to hit the target group.

**Conclusion:** The group acknowledged a report date of February 1<sup>st</sup>, 2007. A draft of proposed LD 307 will be mailed out by Friday, November 10<sup>th</sup>.

**The next meeting will be held on Monday, November 20<sup>th</sup> 2006 at 10:00 a.m., at 284 State Street Augusta, Me.**

Meeting adjourned at 12:00 p.m.



## **Minutes from: Work Group Meeting LD 307 11/20/2006**

**Attendees:** Maj. John Fetterman (DMR), Maj. Gregg Sanborn (IF&W), Michael Sawyer (IF&W), Al Johnson (USCG), Al Eggleston (USCGA), Ralph Peters (PWIA), Ed Knapp (USPS), Bill Maloy (USPS), Art Pickard (USPS), Wdn. Brian Tripp (IF&W)

- 1000 Major Fetterman opened the meeting and it was established that during this meeting, a review of the LD 307 draft would occur and modifications would be made then an updated version would be distributed.
- Major Fetterman asked to use near shore safety document as support for the bill, he asked that we track down an electronic version of the document. Deborah Stevens is the point of contact for document.
- The focus of educating recreational boaters was reiterated.
- Discussions of commercial fishing vessel safety requirements began. State registered boats are exempt from these requirements. This eventually will be changed to require any one holding a commercial fishing license to comply.
- Major Fetterman discussed partnership with the Coast Guard. Al Johnson discussed the difference of staff responsible for commercial operations vs. recreational users.
- Discussion began regarding which States boater education programs are compatible with Maine. Maj. Fetterman recognized compatibility with Virginia's program because of its phase in process. Other phase in's take 40 to 50 years to become effective. Again, target audience is 40 y/o recreational "weekend" operators.
- Promotion of safety and pfd wearing developments were discussed from the enforcement side.
- NASBLA approved online course providers need acceptance and have a proctored exam.
- Discussed the administrative costs for the State of Maine. Course approval will require extensive resources.
- National trend is moving toward proctored exams. Proctoring the exam and issuing the certificate require funds.
- The user fee discussion began, all administrative service costs 124,000 boat registrations, / year statistically twice the registrations are certified operators. 250,000-300,000 certificates will be issued.
- An 8-hour exam was decided to be optimum.
- Reciprocity was discussed to accommodate boaters coming in from others States. If you hold a NASBLA approved certificate from any state you would be allowed to operate within the State of Maine.
- Mike sawyer discussed Connecticut law
- Mike Sawyer discussed Vermont's law which allows internet-based courses. The provider is "Boat Ed." The state of Vermont issues a certificate based on this report. Some classes are augmented by the auxiliary Troopers. The classes are





administered by retired marine officers their law only applies to 25 horsepower and greater. Fraud was rampant when proctored exams were not required.

- New Hampshire allows any NASBLA approved online program but as of January 1<sup>st</sup> 2007, they will be requiring a proctored exam
- Bill Maloy stated the idea is not to discourage boating and promote safety no skill based testing not looking for the expert helmsman just educated operators.
- Major Fetterman, Warden Tripp, and Ed Knapp discussed pros and cons of internet based courses. NASBLA website has a number of internet-based course providers, Boat Ed. Was offered as a good course by Major Fetterman. Mike Sawyer gave comparisons for internet based hunter safety education which had some gaps which was remedied by a two-hour class to prepare for course work and then return for 8-hour hands on class.
- Break at 11:26 am
- Ralph Pears expressed concerns with draft in reference to the accelerated PWC operator's requirements. Maj. Fetterman suggested that the definition of motor boat and PWC be melded for the purpose of this bill. Ralph also suggested that non-motorized vessel owners not be included.
- Brian Tripp agreed to research Maine's violation history crossed with DOB. To determine the age of operators at most risk and compare with national trends.
- The group discussed the first draft of LD 307 and made changes. They also listed support documents linked to each bullet of the ld 307 draft

**Summary:** All group members present are in favor of the updated draft of LD 307. The consensus for the need of proctored exams is unanimous with the course options left open to include any NASBLA approved training course.

**The next meeting will be in Augusta on Thursday January 4<sup>th</sup>, at 1000, location to be announced.**

Meeting adjourned at 2:10 p.m.



**Minutes from: Work Group Meeting LD 307**  
**01/04/07**

**Attendees:** Major Fetterman (DMR), Maj. Gregg Sanborn (IF&W), Al Johnson (USCG), Spencer Ordway (MYCA), George Smith (SAM), Susan Swanton (MMTA), Michael Sawyer (IF&W), Art Pickard (USPS), Bill Gossard (NTSB), Ralph Pears (PWIA), Wdn. Brian Tripp (IF&W), Off. Rachel Perron (DMR)

- 1000 Major Fetterman opens meeting and gives quick program overview for the benefit of new work group members.
- Each member of the work group introduces themselves.
- Bill gives statistics on operator's licenses and which states have some form of a safety law. Focus of educating recreational boaters was reiterated.
- Major Fetterman gives a background of the formation of the LD 307 draft. Point made that, 47 states have some form of educational requirement in their legislative boating package. National statistics show that our most at risk user group is white males age 40. A comparison for Maine shows the same trend.
- George asked for info on Accident, Injury and Fatality statistics.
- Discussion on states that still have no educational requirement. They are suffering the highest boating fatalities.
- Discussion about the Quick Phase In program and its effect on reducing fatalities.
- Discussion on using the Virginia model to draft LD 307. The Virginia model is one of the best models currently available.
- The initial group that drafted LD 307 included the CG, auxiliary, power squad, and NTSB because they are considered experts in their fields. This meeting is meant to get feedback from other interested parties on this proposal.
- Foundation documents will be provided for review.
- Discussion that the boating certificate should not be a license that can be pulled. It is not the intent of LD 307 to turn boating into a privilege that can be taken away.
- Discussion on other state's proficiency requirements. Question asked if there is any state that requires a hands on skill demonstration as their proficiency test.
- Discussion on why non-motorized boaters are being left out if they are the biggest risk for fatalities.
- Discussion on registering non-motorized boats. With out a registration vessels can not be tracked. Maine would have to register all vessels even non-motorized to track users. In order to have an education program you must have a tracking system and there is no easy way to track them unless the boats are registered.
- Discussion on benefits and shortfalls of other states programs already in place.
- Discussion on what the final product would look like as far as a certificate. Discussed the use of a plastic id card (some states use photos, some do not). Registration data base can be accessed to confirm if someone has completed course. Discussed issuing a card that the holder can laminate.
- Addendum # 6 discussed the breakdown of fatalities. Non motorized fatalities represented 57% on fatalities in the state of Maine.
- Discussion on mandatory life jacket wear, especially during cold months.



- Youth camp association representative voices his concerns on piling up more training to an already condensed time line for camps with hundreds of staff to train each year.
- Discussion on fraud associated with internet based courses.
- Discussion on who can proctor exams and where they could be proctored. The intention will be to make tests accessible as close as any individual's local school or library.
- Discussion that any certified course taken out of the state and approved by NASBLA will be accepted under Maine state law.
- Discussion about adding non-motorized boats to LD 307. Concern on non-motorized boats not being registered is reiterated.
- Major Fetterman makes suggestion to change the language in the opening paragraph to: it is unlawful to operate a state registered watercraft engaged in a non commercial activity. This would bring non motorized watercraft into the fold if it became mandatory to register them.
- Discussion between making LD 307 operator based as opposed to registration based.
- Discussion that some states are trying to expand their current laws to include non-motorized vessels.
- Discussion on the crossover benefits that takes place when motorized boaters are required to take any course. Many of those motorized boaters crossover into non-motorized boating activities and bring their training with them.
- Exemption # 7 stated that if you visit from out of state your approved course from another state is valid for only 60 days. Discussion that if you have an approved course from another state it should be accepted indefinitely. Decision made to remove 60 day stipulation from exemption # 7. This exemption was compared to Virginia's similar exemption.
- Review of Draft LD 307 starting with A.
  - Point made that omitting non-motorized vessel detracts from the creditability of bill.
  - Point made that the Maine definition of vessel, includes non-motorized vessels.
- Recommendation made to include an exemption for all supervised boating activities under Exemption # 4.
- Recommendation made to make **vessel** the uniform word through out the document.

**Summary:** All group members present, agreed on changes made to the LD 307 draft. The consensus was to use the word **vessel** uniformly throughout the document. It was agreed upon that all interested members would receive a copy of support documents and an updated draft for their own personal review.

**There will not be another meeting of the LD 307 work group at this time. Preparations will be made to ready the LD 307 draft for its introduction to the legislature.**

Meeting adjourned at approximately 12:30 p.m.



# Addendum

## # 1





APPROVED

APR 05 '06

BY GOVERNOR

CHAPTER

536

PUBLIC LAW

STATE OF MAINE

IN THE YEAR OF OUR LORD  
TWO THOUSAND AND SIX

H.P. 231 - L.D. 307

An Act To Improve Recreational Watercraft Safety

Be it enacted by the People of the State of Maine as follows:

Sec. 1. 12 MRSA §13071-A, sub-§5 is enacted to read:

5. Operating personal watercraft while 16 years of age or older and under 18 years of age; boater education. The following provisions apply to operating a personal watercraft by a person 16 years of age or older and under 18 years of age.

A. A person 16 years of age or older and under 18 years of age may not operate a personal watercraft unless:

(1) That person is accompanied by a person 18 years of age or older who physically occupies the personal watercraft; or

(2) While operating the personal watercraft, that person possesses on that person identification showing proof of age and proof of successful completion of a boater safety education course approved by a national association of state boating law administrators, including but not limited to courses offered by the U.S. Coast Guard Auxiliary or other organizations approved by the commissioner for providing boater safety education courses. The commissioner shall

*please note Sec. 2*

RECEIVED

APR 7 - 2006

DEPT. MARINE RESOURCES  
MARINE PATROL-AUGUSTA

1-0217(5)



establish a list of approved organizations for providing boater safety education courses and make that list readily available to the public.

B. The following penalties apply to violations of this subsection.

(1) A person who violates this subsection commits a civil violation for which a fine of not less than \$100 and not more than \$500 may be adjudged.

(2) A person who violates this subsection after having been adjudicated as having committed 3 or more civil violations under this Part within the previous 5-year period commits a Class E crime.

Sec. 2. **Safety education program.** The Commissioner of Inland Fisheries and Wildlife and the Commissioner of Marine Resources shall work together and with other interested parties to study the feasibility of developing, implementing and funding a statewide boater safety education program. The Commissioner of Inland Fisheries and Wildlife and the Commissioner of Marine Resources shall report to the joint standing committee of the Legislature having jurisdiction over inland fisheries and wildlife matters and the joint standing committee of the Legislature having jurisdiction over marine resources matters, respectively, by February 1, 2007, their findings and recommendations on the development and implementation of a boater education safety program.

Sec. 3. **Effective date.** Section 1 takes effect January 1, 2007.



## **MARINE RECREATION**

### ***Boating and Boating Facilities***

The popularity of recreational boating in Maine appears to be experiencing steady growth. Between 1998 and 2005 registrations of recreational boats increased from 126,665 to 128,202 boats (Bill Swan, ME Department of Inland Fisheries and Wildlife). Sailboats make up approximately 2.7% of the total number of registrations while the remainder consists of motor boats (ME DIFW). About 45% of these registered boats spend some or all of their time on coastal waters (ME DIFW).

Conversations with harbormasters from Southern, Midcoast and Downeast Maine suggest a statewide increase in recreational boating activity. Scarborough Harbormaster, David Corbeau, stated that four years ago, there were about 60-70 launches a day of recreational boats at the Scarborough boat ramp. This past summer, there were about 130 launches a day. The demand for moorings is also high. According to a 2003 study of 25 coastal municipalities conducted by Coastal Enterprises, Inc (CEI), 56% of these towns have recreational boaters on waiting lists for moorings. The number waiting varies from 3 people in Islesboro to 350 in Freeport. The length of the wait time ranges from several months to 20 years (CEI 2003). In 2003, there were 980 recreational boaters on waiting lists throughout the 25 communities surveyed by CEI (2003). Comparatively, there were 95 commercial fishermen on waiting lists in these towns (CEI 2003). (It is important to note that there are many people on both of these waiting lists who may already have a mooring but are waiting for a better spot to open up).

According to reports from several harbormasters, some of the demand for moorings is a direct result of increased coastal development. Philip Rose, selectman from Machiasport, said there has been an increase in demand for moorings as a result of the addition of several subdivisions in that town. Dave Schmanska, harbormaster for Port Clyde, Tenants Harbor and St. George, indicated that people purchasing property on the coast often want to ensure they will have a mooring in front of their house before they buy their property.

There has also been an increase in demand for moorings from people residing outside of these coastal municipalities. Some boaters like to purchase "convenience moorings" in harbors outside of their home port (Dave Schmanska, personal communication). These boaters usually have a mooring in their own town but want a second one at another location, farther up the coast, for example. In this way they will have a guaranteed place to moor their boat while cruising the coast, even though they may only use the mooring once or twice a year. Demand from outside also comes from residents of towns that have long waiting lists. Rather than waiting for a mooring, these individuals may choose to moor their boats in other towns that have shorter or non-existent waiting lists (Dave Schmanska, personal communication). In some cases these individuals must drive long distances from their homes to their boats. Although towns can not prohibit non-residents from buying a mooring, they can make these individuals pay higher fees for the mooring.



## DRAFT – FOR REVIEW ONLY

### Maine's Nearshore Waters – Current Uses and Anticipated Trends

Municipalities are trying to meet the demand by increasing the number of moorings where possible. Among the 25 towns surveyed by CEI (2003) there was an 8% increase in the number of recreational moorings from 6,880 to 7,216 between the years 2002 and 2003 (CEI 2003). Nine out of the twenty-five municipalities surveyed by CEI indicated that they have plans to expand their mooring fields (2003). However, seven of these 25 municipalities are not able to expand because they are limited by geography.

Increases in recreational boating have also lead to a need for more or expanded marinas. According to the Maine Marine Trades Association (Susan Swanton, Executive Director, MMTA), there has been some slow growth (1-2 new or expanded facilities per year) in the number and size of marinas and boatyards along the Maine coast. This growth is expected to continue, especially in the southern and mid-coast areas. There is most demand for new facilities in the mid-coast area (Susan Swanton, personal communication).

Marina growth and expansion is principally limited by siting requirements such as water depth, harbor shelter, and by state and local permitting requirements. New and/or expanded facilities are also subject to opposition from residential owners of shorefront property, especially seasonal residents. Lack of affordable waterfront land and rising waterfront property taxes are the major impediments to those wishing to develop or expand marinas and boating facilities (Susan Swanton, personal communication)

Recreational boating activity and the demand for supporting infrastructure will likely grow over the next decade. Much of this growth will likely be due to the expected, continued increases in coastal population.

#### *Docks, Piers and Wharves*

With increased private development along the coast, private docks, piers, and wharves have become more common. Their proliferation has elevated concern at the local, state, and federal levels regarding the cumulative and discrete impacts to coastal wetlands and scenic resources along the coast. The impacts range from direct impacts including resource degradation, fragmentation, and loss to use conflicts between new docks and the existing and traditional uses of the coastal zone. Indirect resource impacts, such as scour and destruction of submerged aquatic vegetation and oil and gas contamination from boats coming into and going from the docks, piers, and wharves is also of concern.

In response to this, the Maine Department of Environmental Protection (ME DEP) removed docks, piers, and wharves from 'permit-by-rule' status. These structures now require a full permit under the Natural Resources Protection Act (NRPA). Through statute, ME DEP has had the authority to assess impacts to scenic resources and to address cumulative impacts as part of their permit review procedure; until recently, the Department lacked a method to do so. In July, 2003, as part of the permit review process, the ME DEP adopted a standard operating procedure for assessing impacts to existing scenic and aesthetic uses under the Natural Resources Protection Act. In February, 2004, ME DEP adopted and began applying a similar standard operating procedure for assessing





**DRAFT – FOR REVIEW ONLY**  
**Maine's Nearshore Waters – Current Uses and Anticipated Trends**

cumulative impacts to protected natural resources under the Natural Resources Protection Act.

To support the regulatory changes relevant to docks, piers, and wharves, the Maine State Planning Office (ME SPO) is revising its dock construction handbook, originally produced in 1996. The revision will include more discussion of the resource implications of building docks, will offer best practices to minimize the effects, and will encourage the use of community docks in appropriate settings. ME SPO is also in the process of developing model ordinance language and guidance for towns interested in applying procedures to address cumulative impacts and impacts to scenic and aesthetic resources.

### *Sea Kayaking*

Maine's long coastline and numerous islands continue to be an attraction for both resident and nonresident kayakers. Although the popularity of kayaking continues to increase, there has been a shift in the type of kayakers that are engaging in the sport in Maine. Natalie Springuel, a former president of the Maine Association of Sea Kayak Guides and Instructors (MASKGI) notes that the numbers of experienced paddlers using traditional sea kayaks appear to have reached a plateau in recent years (based on anecdotal evidence from MASKGI meetings). This leveling off comes after a relative boom in the industry in the late 1990's. Many people entering the sport today appear to have less of an interest in becoming experienced, technical sea kayakers (Dave Mention, Maine Island Trail Association and Natalie Springuel, personal communication). Instead, it seems they are looking for a way to experience kayaking on the Maine coast without spending a lot of time or money on the sport. One indication of this change is that many tour operators are now offering more half-day trips rather than extended overnight trips (Natalie Springuel, personal communication). This shift makes it easier for people with less experience, lower levels of fitness and tighter schedules to participate in sea kayaking.

Another important indicator of change in the kayaking industry has been the increasing popularity of recreational kayaks over traditional sea kayaks. According to Wavelength Magazine (2005), over the past couple of years, national sales of the recreational kayak outpaced sales of traditional kayaks by a ratio of 8 to 1. Recreational kayaks are relatively light and durable, are appropriate for a wide range of fitness levels and body types and are much less expensive than traditional sea kayaks (Wavelength Magazine 2005). Additionally, unlike traditional sea kayaks, these boats can be purchased at retail stores such as Walmart. Thus they are more desirable and accessible to the growing numbers of less technically oriented kayakers who do not want to spend \$2500 for a classic sea kayak (Natalie Springuel). However, given that these recreational boats are best suited for flat water paddling on lakes and rivers, there are some problems associated with the use of these kayaks on the ocean. Unlike traditional sea kayaks, recreational kayaks do not have adequate buoyancy to remain horizontal if swamped by an ocean wave ([www.kayakacademy.com](http://www.kayakacademy.com)). Thus they are not suitable for certain sea conditions, a fact which the user may not understand without proper training. Unlike paddlers who purchase their kayaks from experienced outfitters, people who buy a recreational kayak from Walmart, for example, often do not receive any instruction on safety or on the



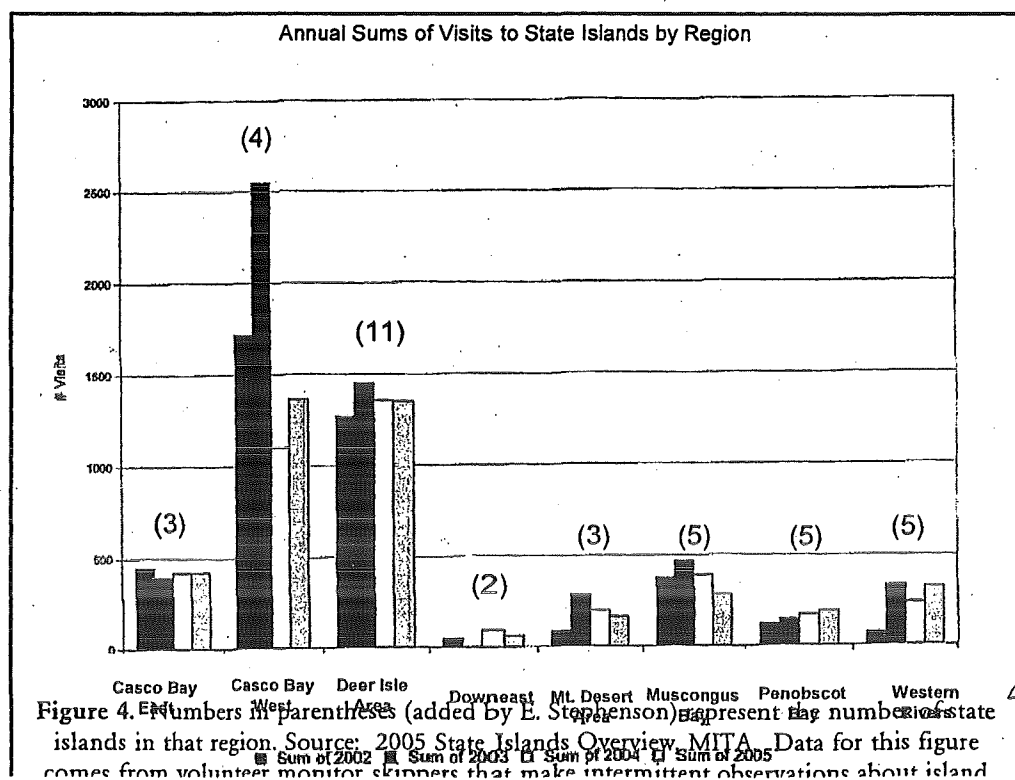
## DRAFT – FOR REVIEW ONLY

### Maine's Nearshore Waters – Current Uses and Anticipated Trends

kayaking “rules of the road” (Dave Mention, and Natalie Springuel, personal communication). The lack of training combined with the unsuitability of the recreational kayak for ocean conditions can create safety hazards. The purchase and use of these recreational kayaks will likely increase over the coming years as will the need to educate these users about kayaking safety.

Recreational and traditional sea kayakers alike utilize the Maine Island Trail, a 350-mile long waterway of public and private, island and mainland sites where boaters can land for day visits or overnights. Although motor and sail boats also use the Maine Island Trail, the majority of boaters who land on the islands consist of kayakers (Dave Mention, Maine Island Trail Association personal communication). Most recreational kayakers likely use primarily nearshore islands, given that these boats are not designed for extended, offshore paddles (Natalie Springuel, personal communication).

Currently there is little scientific, quantitative data concerning the use of the trail. However, Dave Mention of the Maine Island Trail Association (MITA) indicated that the data collected by monitor skippers and from the entries in logbooks on the state-owned islands suggest that some islands on the trail are used more frequently than others. The data found in Figure 4 reflects some of the use trends observed by Natalie Springuel. She indicates that the Stonington Deer Isle area is popular with paddlers due to the presence of many islands and multiple camping sites. She also indicated that Casco and Muscongus Bays are frequently utilized by kayakers. The Downeast area is gradually becoming more popular with experienced kayakers looking for new challenges (Natalie Springuel, personal communication). However, it is unlikely that this area will become extremely popular with a wide range of paddlers given the difficulty of dealing with the extreme tidal range and currents. Over the next few years, any increased use of the Maine Island Trail is likely to occur in and around the areas that are already popular with paddlers (Natalie Springuel and Dave Mention, personal communication).





## DRAFT – FOR REVIEW ONLY

### Maine's Nearshore Waters – Current Uses and Anticipated Trends

Sea kayakers and the sea kayak tour industry are conscientious about minimizing impact to the islands they visit (Dave Mention and Natalie Springuel, personal communication). For example, in the past five years, many kayak tour operators moved away from primarily using state owned islands for their tours. Some of these operators have made agreements with private property owners to use their islands with certain conditions (Natalie Springuel, personal communication). In this way, the tour operators avoid the congestion of state islands and reduce some of the impact on those popular places. Similar concerns about impacts on the islands caused many tour operators to voluntarily decrease their standard group size (Natalie Springuel, personal communication).

The sea kayak industry also promotes “Leave No Trace” principles to minimize human impact to the islands. There is anecdotal evidence that islands that are visited frequently by kayakers seem to have less trash on them than those that get infrequent use (Dave Mention, personal observation). According to Dave Mention, kayakers following “Leave No Trace” principles not only pack out their own trash, but often they also take with them any marine debris that they find on the island, thus leaving the island cleaner than they found it.

#### *Wildlife Sightseeing*

Based on information from the Maine Office of Tourism and other Maine tourism websites, there are approximately 70 commercial operations that offer wildlife sightseeing as part of their boat tours. The boats used for touring include schooners, modern day sailboats, motor boats, mailboats and private ferries. A few of these are advertised as being seal watches, whale watches or puffin cruises. However, in many cases, these boat tours are not advertised primarily as wildlife cruises. Instead, the opportunity to view wildlife such as seabirds, seals and whales is listed as one of the “highlights” or “things to do” while on the cruise. Other aspects of these cruises often include lighthouse viewing and a chance to see a lobsterman in action.

Close to half of these boat tour operations were based in the greater Penobscot Bay area. About 15% were based out of the greater Casco Bay area, 10% from the southern Maine coast, 12% out of Mount Desert Island, 7% out of Boothbay Harbor, 7% in Downeast Maine, and another 4% from the towns of Brunswick, Port Clyde and Georgetown combined. These numbers only account for those outfits that register with the Office of Tourism or those advertise on other internet tourism sites. Thus, these values may underestimate the actual number of boat tours available in Maine.

Ten of the businesses identified above offer cruises devoted to whale watching. Although whales are sometimes sighted in nearshore waters, whales and thus the whalewatch boats spend most of their time offshore, well outside of state waters. According to Cara Pekarcik of the Whale Center in Gloucester, Massachusetts, whale watching in New England is still a popular activity but seems to have reached a plateau in recent years. Zack Clyver, a naturalist with Bar Harbor Whalewatch also does not foresee dramatic growth in the industry over the next few years. Mr. Clyver indicates that future modest growth would likely occur in the number of small scale operations that use smaller boats to conduct



**DRAFT – FOR REVIEW ONLY**  
**Maine's Nearshore Waters – Current Uses and Anticipated Trends**

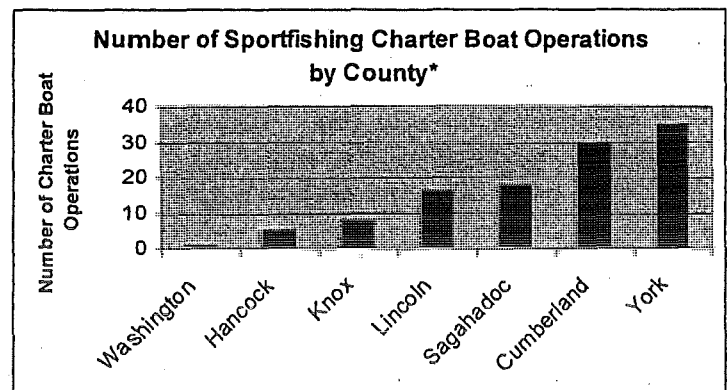
wildlife tours in nearshore waters. One of the limitations to growth in this industry may be finding additional space in the harbors where the tour operators can dock their boats.

### *Saltwater Angling*

Saltwater angling continues to be a popular pastime in Maine, although it does not appear to be on an increasing trend based on data from ME DMR and from industry representatives. Saltwater fishermen are not required to have a license in Maine. Therefore, to determine the amount of effort in the fishery, the ME DMR conducts the Maine Recreational Fisheries Statistics Survey (MRFSS) on an annual basis. According to the MRFSS, 287,434 anglers went saltwater fishing in Maine in 2004 (Table 3). Of these anglers, 132,247 were Maine residents. Another measure recorded by the MRFSS is the number of annual saltwater fishing trips. This number has generally been above 900,000 per year for the past several years, except in 2004 when it dipped to 750,000 trips, possibly due to poor weather. About half of these fishing trips were conducted from shore (either on the beach, a jetty or a pier) and the other half were conducted from a boat. The large majority of boat trips took place on private or rented boats while a very small percentage consisted of charter boat trips.

<b>Table 3</b>					
<b>Number of Saltwater Anglers Recreationally Fishing in Maine</b>					
<i>Source: Marine Recreational Fisheries Statistics Survey, Maine Dept. of Marine Resources</i>					
	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
<b>Maine Resident Anglers</b>	159,228	142,204	143,404	188,340	132,247
<b>Out of State Anglers</b>	150,224	166,015	172,154	169,763	155,187
<b>Total</b>	309,670	308,220	315,558	358,103	287,434

The data above from the MRFSS indicates that the number of saltwater anglers has fluctuated since 2000. Information obtained from several Maine charter boat captains, including Barry Gibson who has 36 years of experience in the industry, suggests that the overall popularity of recreational saltwater fishing has reached a plateau in recent years.



**Figure 5.** \*This figure contains only those operations registered with the Maine Dept. of Marine Resources. *Source: Outdoors at www.MaineToday.com; figure by Elizabeth Stephenson.*





**DRAFT – FOR REVIEW ONLY**  
**Maine's Nearshore Waters – Current Uses and Anticipated Trends**

Gibson states that due to commercial over-harvesting, there are relatively few types of fish for recreational anglers to target. Additionally the presence of high quality fishing in neighboring states means that Maine is not a prime destination for saltwater angling. He notes that his primary clients are local Mainers, people with second homes or tourists who are in Maine on vacation and decide to go fishing for a day. Only a small percentage is made up of people who come to Maine specifically to go saltwater fishing. This is one of the reasons why the charter boat fleet has not increased its capacity in about a decade, according to Gibson.

Data from the MRFSS show that although saltwater fishing occurs along the entire coast of Maine, most of the trips occur from Boothbay Harbor and south. This trend may be reflected by the fact that the reported number of sportfishing charter boat operations appears to increase dramatically as one heads from Eastport to Kittery (Figure 5). The pattern is likely due to the fact that striped bass are more abundant in southern Maine. Also, it is easier to reach good, offshore fishing grounds from southern Maine as compared to other areas of the state.

According to the MRFSS, anglers in Maine caught 25 different species of fish in 2004. However, for the majority of shore anglers, private boat anglers and charterboat anglers, striped bass was their targeted catch. Landings of this species have been relatively stable over the past several years (Figure 6).

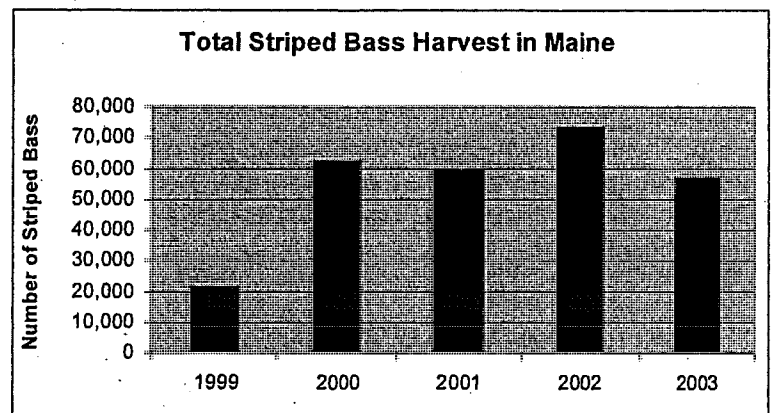


Figure 6. Source: Maine Recreational Fisheries Statistics Survey,  
Maine Dept. of Marine Resources

#### Marine Recreation Use Conflicts

One of the issues facing boaters, kayakers and fishermen is the lack of public access. Currently, there are 85 state-owned or assisted tidal, public boat access sites (up from 74 in 2001). This averages out to only one state site for every 54 miles of mainland shoreline. Finding new sites for public boat access is difficult because much of the coast is already developed and property costs are very high. Additionally, there may be resistance from private property owners who live in the area surrounding the proposed boat access site (George Powell, Maine Sea Grant Public Access Forum 2006).



**DRAFT – FOR REVIEW ONLY**  
**Maine's Nearshore Waters – Current Uses and Anticipated Trends**

At some of these boat launch sites, use by kayakers has been restricted or prohibited. Kayakers often require more time than other boaters to launch from the site because there is more equipment to prepare. If there are multiple kayakers on a ramp, they can create a temporary obstruction for others who want to use the ramp. Scott Shea, current president of the Maine Association of Sea Kayak Guides and Instructors (MASKGI) stated that kayakers may not launch their boats in Stonington Harbor, but instead must travel ¼ mile away to a less convenient site (Maine Sea Grant Public Access Forum 2006). He also noted that commercial outfitters are sometimes banned from using sites such as East End Beach in Portland. This ban is due to the high volume of kayakers that would be associated with regular use by an outfitter. However Scott noted that it is these same outfitters who are educating the kayakers on the “rules of the road” that may prevent conflict with other boaters (Maine Sea Grant Public Access Forum 2006). He indicated that these bans and restrictions make it more difficult for kayakers and kayak outfitters to pursue their sport and support their businesses.

Natalie Springuel, former president of MASKGI, indicates that traditional permissive use of private island and mainland sites is also decreasing. She stated that as property changes hands, the new owner may not allow the same use that was permitted by the previous owner. Additionally, both Springuel and Dave Mention of the Maine Island Trail Association indicate that the increasing number of kayakers over the past 10 years or so may have also caused property owners to be less permissive. A skiff from a sailboat dropping off eight people on an island may not seem nearly as onerous as eight kayaks landing on shore. Springuel and Mention note that although kayakers are known for their use of low impact practices, property owners may react negatively to what may seem like an armada of boats on their doorstep.

Several individuals associated with the salt water fishing industry also cited public access as one of the biggest barriers to pursuing their sport. However, Barry Gibson, a long time charter boat captain disagrees. Captain Gibson has been working in the recreational fishing industry for 36 years and has served on state, federal and international fisheries management boards. He states that access is not a significant problem for the industry. Instead, he says it is the depletion of fish species by commercial overexploitation that has harmed the recreational fishing industry. He says that either by direct harvest, bycatch or by targeting their forage fish, commercial fisheries have reduced the supply of groundfish, tuna, sharks, bluefish and others that were valued by recreational fishermen. Striped bass (known as stripers) are now the prime target fish for recreational anglers and commercial fishing for this species is currently prohibited. Consequently, he notes, there is currently no direct conflict between commercial and recreational fishermen. However, Gibson worries about the effects of commercial mid-water trawlers on species that are forage fish for the striped bass. He indicated that the fact that Maine's recreational fishery is dependent on this one species makes the industry very vulnerable should anything happen to the stripers.

One other use conflict is the potential for collision between kayakers and recreational or commercial boaters. Nationwide, in 2004, there were only a handful of collisions between kayakers and other vessels (United States Coast Guard Boating Accidents Statistics).



## **DRAFT – FOR REVIEW ONLY**

### **Maine's Nearshore Waters – Current Uses and Anticipated Trends**

However, the low profile of kayaks makes them difficult to see on the water and thus increases the possibility of their being struck by another boat. Natalie Springuel of Maine Sea Grant recently undertook a study to explore the effectiveness of radar reflectors in increasing sea kayak visibility. She found that when used as described in the report, and in combination with other safe kayaking practices, radar reflectors can improve sea kayak visibility. There was a lot of interest in incorporating these radar reflectors into kayaking gear. However, currently, no one is moving forward on an official level with this effort. There has been an effort to disseminate basic kayak safety information to paddlers. MASKGI, Maine Sea Grant and the U.S. Coast Guard developed a brochure entitled "From Store to Shore: Sea Kayak Safety and Stewardship." In the past few years approximately 50,000 of these brochures have been distributed to kayak outfitters, kayak guides and to other venues and people who interact with paddlers. One challenge will be bringing this information to the increasing number of individuals who buy recreational kayaks. Given that these individuals often do not buy their kayaks from experienced outfitters and given that they are less likely to go on a guided tour, they are generally not being exposed to the safety information offered at these venues.



# Addendum

## # 2



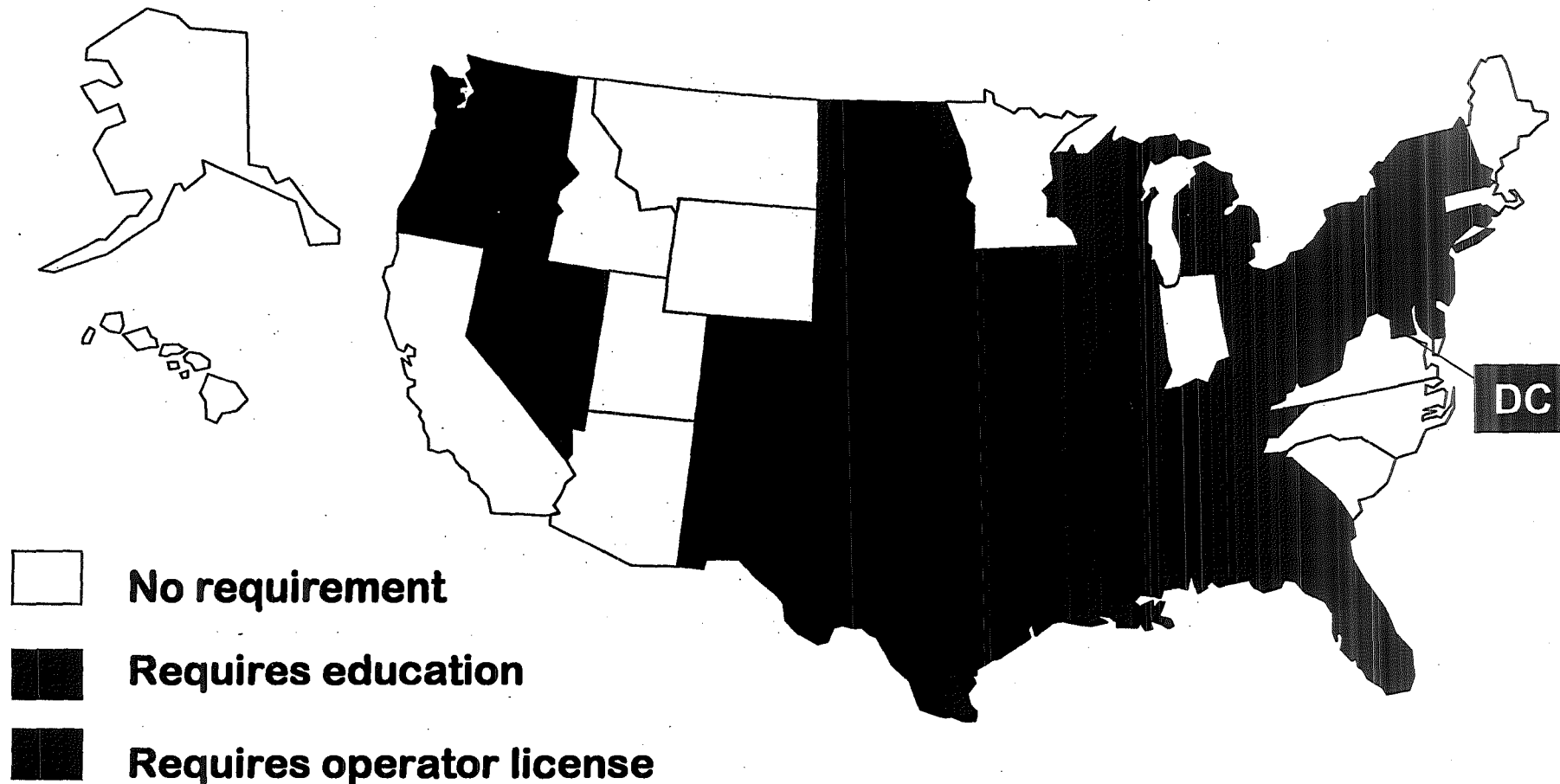




# NTSB MOST WANTED

Transportation Safety Improvements

## Boat Operator Knowledge



As of July 2006





# NTSB

# SAFETY ALERT

National Transportation Safety Board

## ★ Recreational Boating

### *Learn safe boating and protect your children*

#### ***Recreational boating deaths: a SERIOUS problem***

- Recreational boating is fun, but the water can be unforgiving.
- An average of 714 boaters die each year—508 of them by drowning.
- Deaths are the result of two major safety failures: lack of a required personal flotation device (PFD), and uneducated boaters.
- About 84 percent of these drowning victims would still be alive if they had worn PFDs, the U.S. Coast Guard estimates.
- On average, 80 percent of recreational boat operators involved in accidents had never completed a boating safety education course.
- Most of those who drown were in open motorboats—51 percent—and in boats less than 21 feet in length—71 percent.

#### ***What can you do to reduce recreational boating accidents and deaths?***

- Use a personal flotation device when aboard a recreational boat and be sure that children always wear PFDs. PFD wear is effective. Boating accident data shows that when mandatory PFD requirements are adopted, drowning fatalities go down.
- Most parents would not drive anywhere without their kids in seatbelts, car seats or booster seats. Parents should not hesitate to protect their children on the water in a life jacket.
- Complete a recreational boating safety course approved by your State.
- Talk or write to your State lawmakers and urge them to support the NTSB's recommendations that States require children to wear PFDs and require all recreational boating operators to complete a boating safety education course.

#### ***What should States do to make recreational boating safer?***

- Establish a State minimum boating safety program that:
  - Requires children, under age 13, to wear PFDs.
  - Requires all State recreational boating operators to complete a boating safety education course.
  - Require a recreational boating operator's license.
- As of October 2006, 46 States, the District of Columbia, Puerto Rico and the U.S. Virgin Islands have enacted laws requiring children to wear PFDs. Wisconsin, Iowa, Virginia and Wyoming need mandatory PFD wear requirements.
- Fifteen States need to act to adopt mandatory boating education safety requirements. They are: Alaska, Arizona, California, Hawaii, Idaho, Indiana, Maine, Massachusetts, Minnesota, Montana, North Carolina, South Carolina, Utah, Virginia, and Wyoming.

#### ***Need more information?***

- Visit the NTSB Web site: [www.nts.gov](http://www.nts.gov) and click on the Marine section of the Most Wanted List.

SA-07 October 2006



# Addendum

## # 4



# **Uniformity of State Boating Education Programs**

**Emily King**

Public Information and Education Section Manager for  
the Ohio Department of Natural Resources

**Gail Kulp**

Education Director for NASBLA



The following information was collected from BLAs and Education Coordinators in a series of surveys conducted by NASBLA over the past 6 months. Although all efforts have been made to verify the accuracy of this data, there may still be some inconsistencies present in the following slides.

Accident statistics cited are courtesy of the U.S. Coast Guard.

# NASBLA Model Act for Mandatory Boating Safety Education

- Guidelines for states to use when writing their own state boating education legislation.
- Is applicable to persons born on or after a given date
- Is intended to require motorboat operators to have and present evidence of successful completion of a NASBLA-approved course on safe boating (or an equivalency examination)
- It prohibits motorboat rental and leasing businesses from renting or leasing such a vessel to persons who cannot meet the act's requirements.

**In 2000, there were only 17 states  
with some type of mandatory  
education.**

**Just look at how much has been  
accomplished in just 6 years...**

**Today, a total of 47 states/territories have some type of mandatory education.**

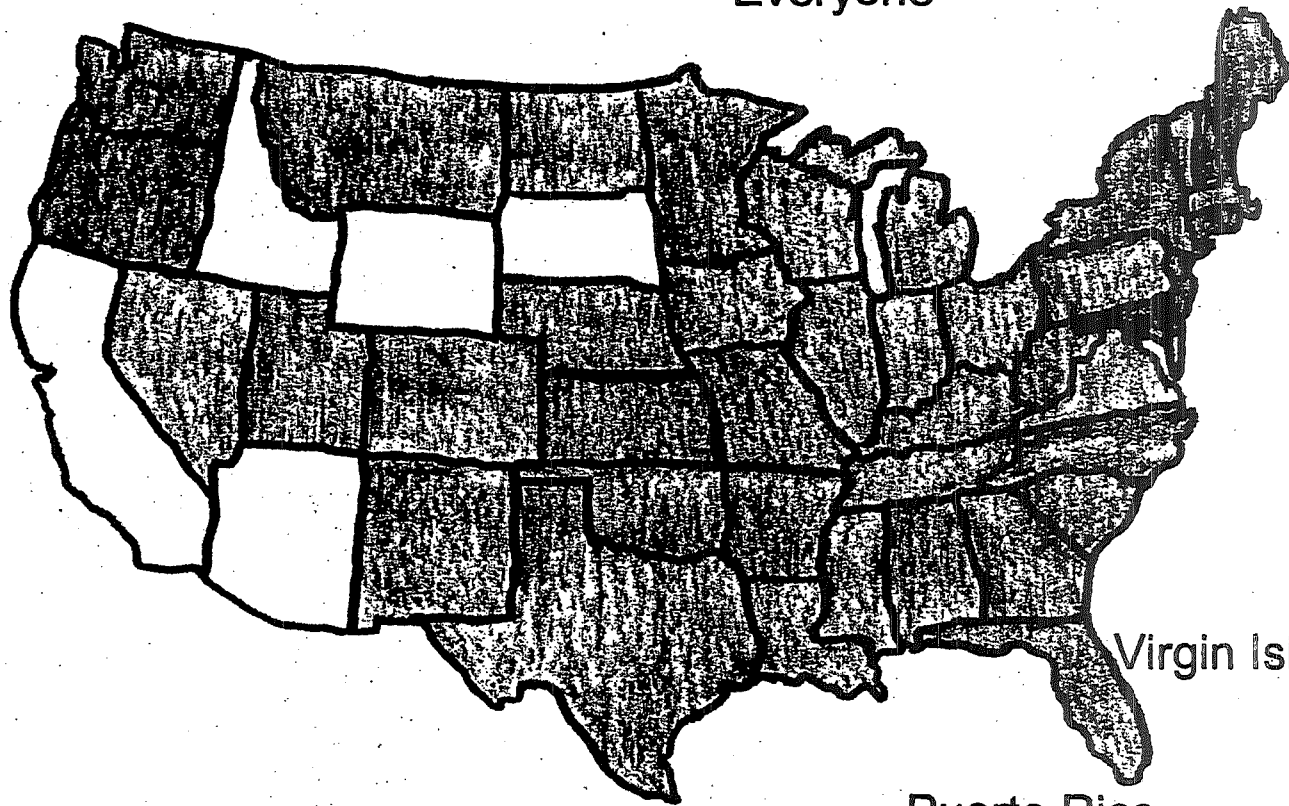
- No requirements
- Children or Teens
- Born on or after date
- Everyone



Guam

N. Mariana Islands

Amer. Samoa



Virgin Islands

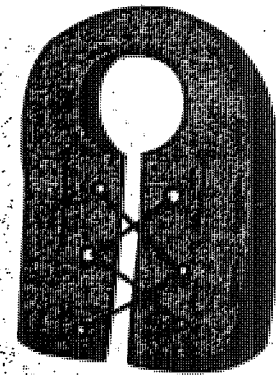
Puerto Rico

# Mandatory Boating Education

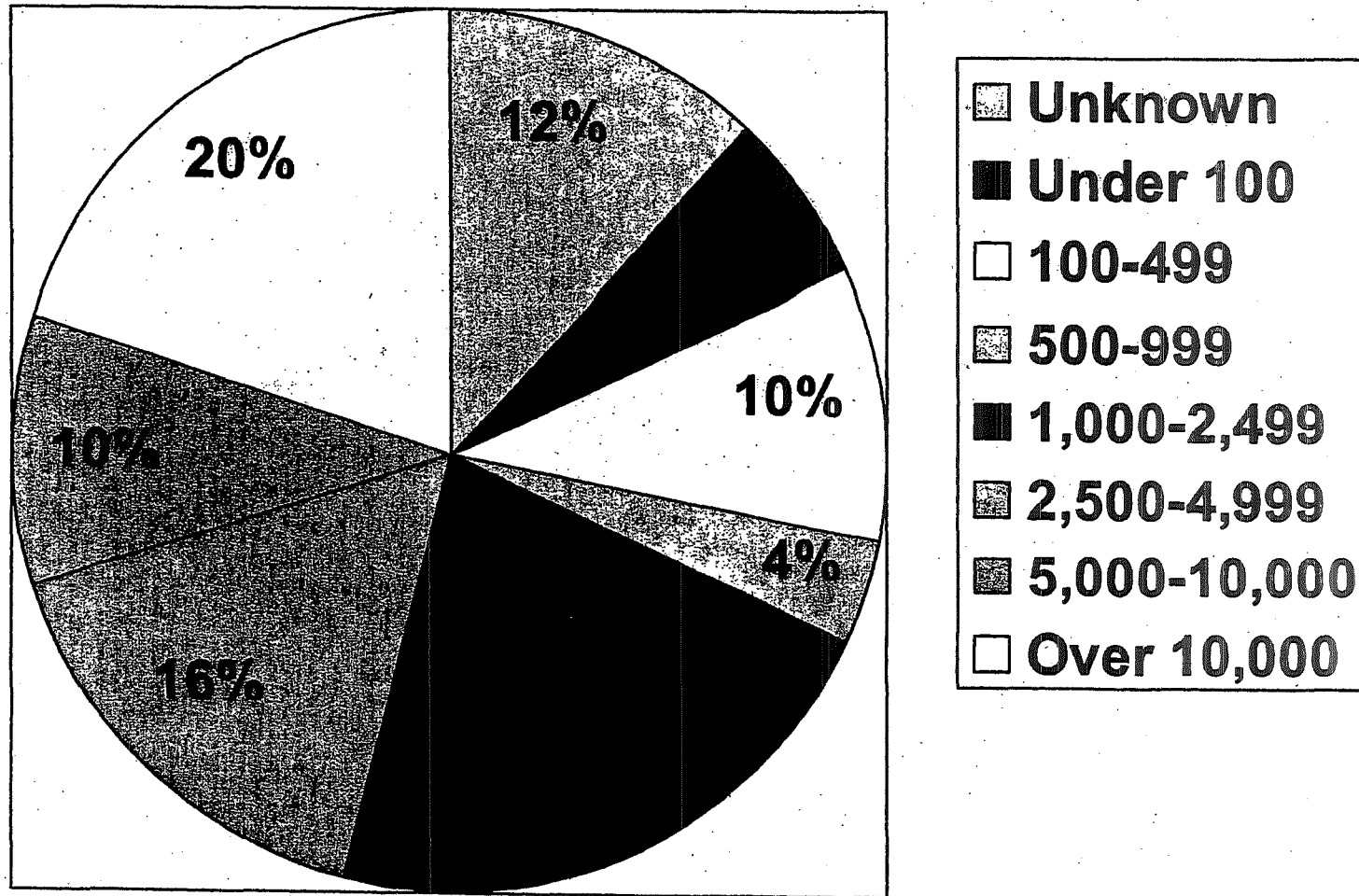
- 7 states/territories have legislation only for PWC operation
- 13 states issue a temporary certification for those renting boats or who have recently purchased a boat
- 7 states require paddlecraft to be registered

# Mandatory PFD Wear

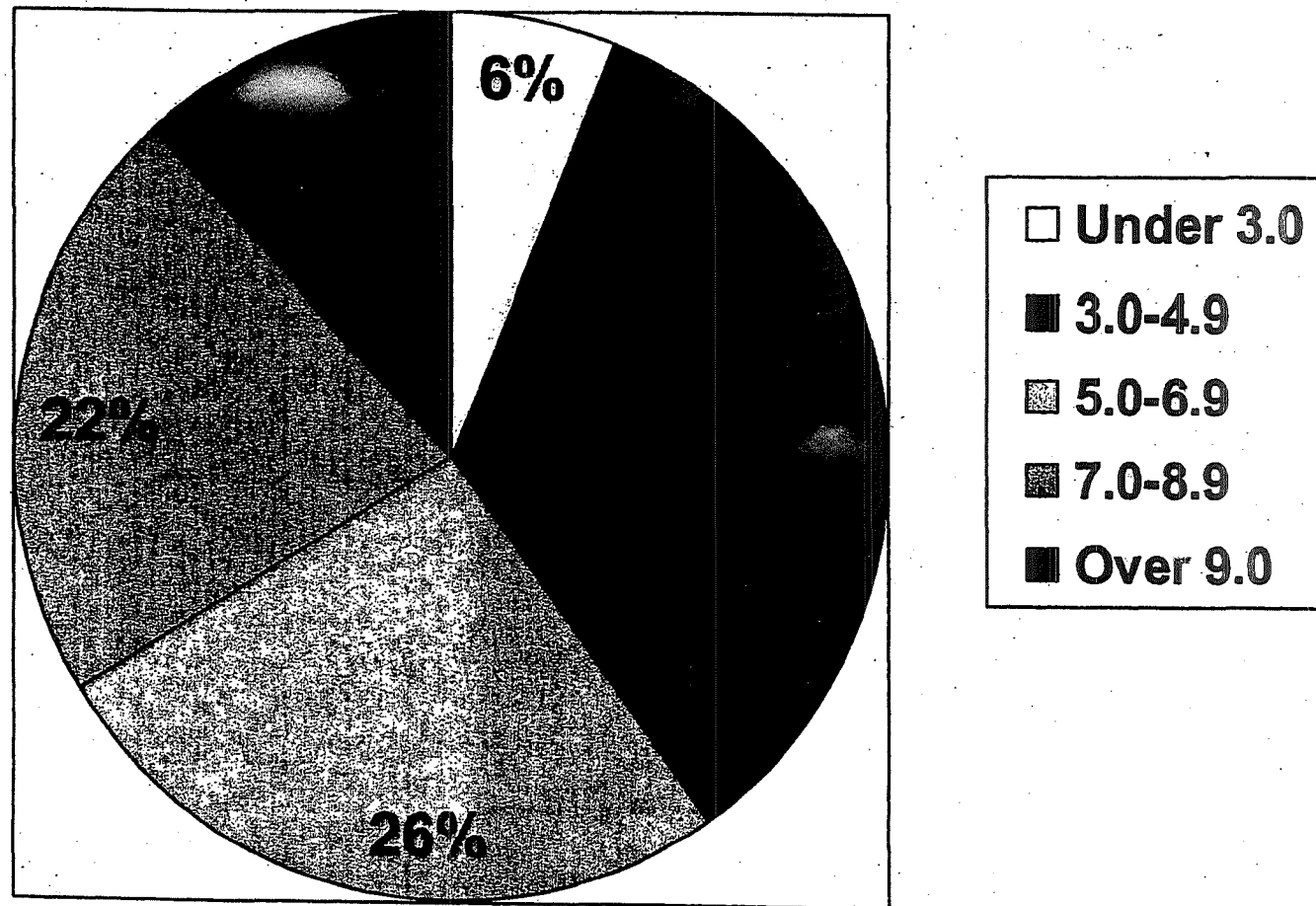
- A total of 52 states/territories require mandatory wear of PFDs for specific age groups and/or specific water activities such as water skiing, PWC usage, or windsurfing.



**The following chart shows the number of Boating Safety Education Certificates issued by states in 2005.**

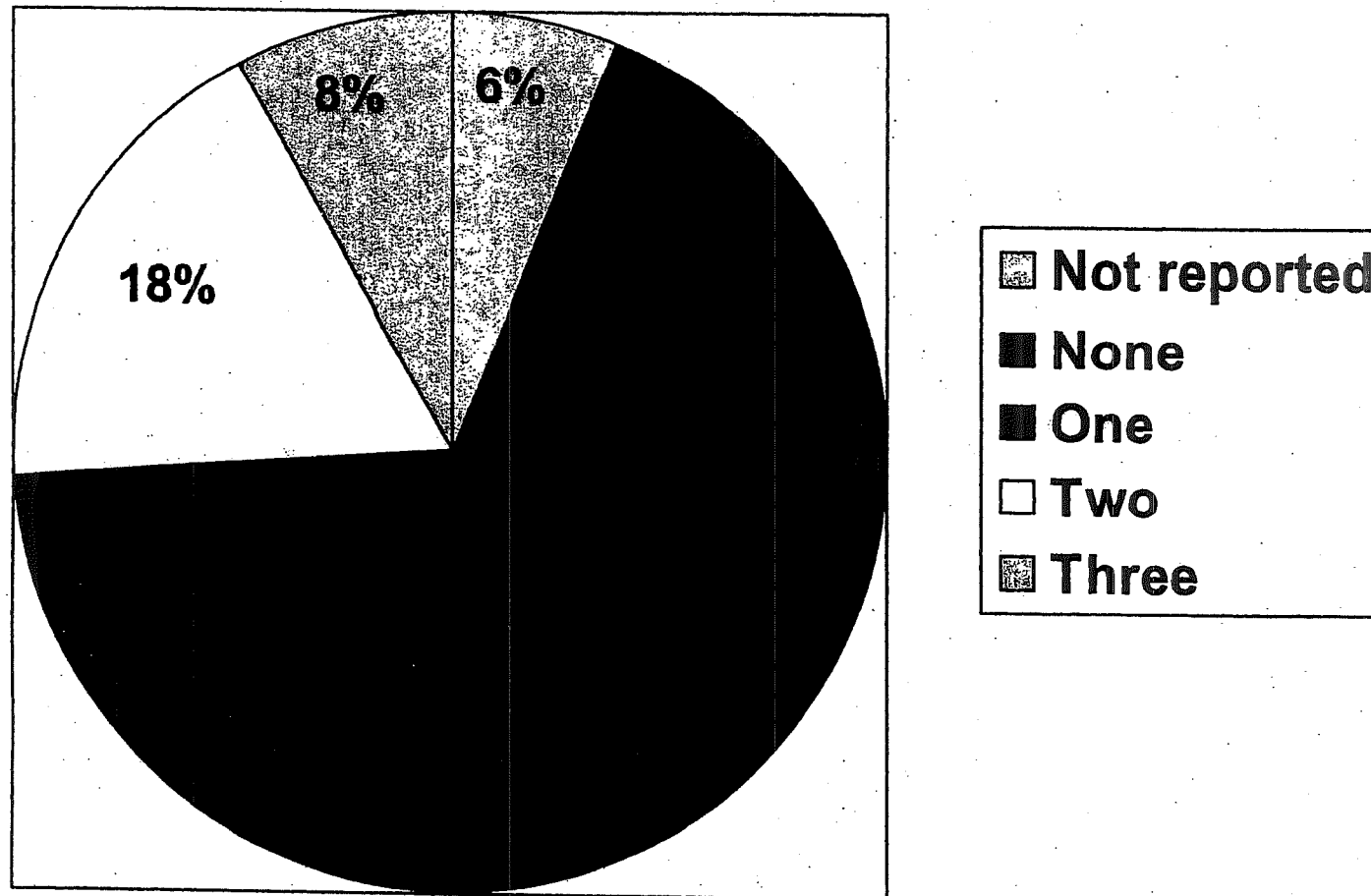


**The following chart shows the average number of fatalities per 100,000 boats for each state from 2001-2005.**





**The following chart shows the current number of full-time boating safety education employees on staff in each state.**



**And now for the survey results...**

## **The top 10 states in terms of the lowest number of fatalities per 100,000 boats are:**

- |                     |                         |
|---------------------|-------------------------|
| 1. Iowa – 1.15      | 6. Pennsylvania – 3.26  |
| 2. Minnesota – 2.37 | 7. New Hampshire – 3.52 |
| 3. Delaware – 2.69  | 8. Vermont – 3.66       |
| 4. Michigan – 3.16  | 9. Ohio – 3.83          |
| 5. Wisconsin – 3.19 | 10. Connecticut – 3.86  |

# Here is the 2005 registration information for the top 10 states:

- |                        |                            |
|------------------------|----------------------------|
| 1. Iowa – 243,924      | 6. Pennsylvania – 349,159  |
| 2. Minnesota – 853,489 | 7. New Hampshire – 102,268 |
| 3. Delaware – 52,119   | 8. Vermont – 32,756        |
| 4. Michigan – 944,138  | 9. Ohio – 412,375          |
| 5. Wisconsin – 639,198 | 10. Connecticut – 108,702  |

**Of the top 10 states, all of them have some type of mandatory education law in effect.**

**Law targets only children or teens:**

- 1. Iowa – 12-17 year olds**
- 2. Minnesota – 12-17 year olds for motorboats and 13 year olds for PWC**
- 5. Wisconsin – 12-15 year olds**

## Law created a born-on or after date:

- 3. Delaware – January 1, 1978
- 4. Michigan – December 31, 1978 for  
PWC only
- 6. Pennsylvania – January 1, 1982
- 8. Vermont – January 1, 1974
- 9. Ohio – January 1, 1982

Law applies or will apply to everyone  
after a phase-in period:

7. New Hampshire – Phase-in began in 2002 and will be complete in 2008.
10. Connecticut – Phase-in has been complete for 9 years.

# Mandatory Education



**Of the top 10 states, 4 of them have a registration requirement for paddlecraft.**

1. Iowa
2. Minnesota
6. Pennsylvania
9. Ohio

**Of the top 10 states, 3 have temporary certifications available for those renting boats or who have recently purchased a boat.**

- 5. Wisconsin
- 7. New Hampshire
- 10. Connecticut

**Of the top 10 states, 9 of them have mandatory PFD wear for specific age groups and/or water activities:**

1. Iowa – Water-skiing and PWC
2. Minnesota – Under age 10
3. Delaware – Under age 13, water-skiing, PWC
4. Michigan – Under age 6, PWC
6. Pennsylvania – Under age 13, water-skiing, PWC, windsurfing
7. New Hampshire – Under age 6
8. Vermont – Everyone on board
9. Ohio – Under age 10, water-skiing, PWC
10. Connecticut – Under age 12, water-skiing, PWC

**Of the top 10 states, 6 of them issued  
over 5,000 Boating Safety Education  
Certificates in 2005.**

- 4. Michigan- 39,153
- 10. Connecticut – 15,924
- 7. New Hampshire- 14,073
- 6. Pennsylvania – 12,842
- 9. Ohio – 9,448
- 2. Minnesota – 6,000

**Of the top 10 states, all of them have at least one Boating Safety Education Employee on staff part of the time.**

- 7. New Hampshire – 13 (1 communications)
- 4. Michigan – 3 (3 communications)
- 9. Ohio – 3 (4 communications)
- 10. Connecticut – 3 (4 communications)
- 2. Minnesota – 1 ½ (1 communications)
- 5. Wisconsin – 1 ½ (2 communications)
- 3. Delaware – 1 (1 communications)
- 6. Pennsylvania – 1 (2 communications)
- 8. Vermont – 1 (1 communications)
- 1. Iowa – ½ ( ½ communications)

**What about the other end of the  
spectrum?**

# Boating Accidents:

- The bottom 10 states are listed as having at least 8 accidents per 100,000 boats and the worst is listed as having 38.27 accidents per 100,000 boats.
- The average for the top 10 states is 3.069 whereas the average for the bottom 10 states is 12.755.

# Education Certificates:

- The combined total number of certificates issued by the bottom 10 states is only a little over 7,500.
- In comparison, the combined total number of certificates issued by the top 10 states is slightly over 100,000.



# Staffing:

- The top 10 states have an average of 2.85 people on staff for education programs in boating.
- The bottom 10 states have an average of 1.1 people on staff and 2 of those states have no one on staff for education.

# Mandatory Education:

- 8 of the 10 states at the bottom of the survey have some type of mandatory education.
- 1 state specifically targets children/teens
- 4 states have a born-on or after date
- 3 states have or will have everyone certified after a phase-in date

# Mandatory Education

- Of the top 10 states, the average length of time for Mandatory Education programs in effect is 11 years, with Minnesota having 31 years!!
- Also, 4 out of the 5 top states have a boating program in the public schools for youth.

# Mandatory Education

- Of the bottom 10 states, the average length of time for Mandatory Education Programs in effect is only 3.25 years.
- Only 1 of those states has had over 5 years of mandatory education in effect.

# Summary:

- The state education programs are more alike than we had originally thought, but there is still a lot of room for improvement.
- 80% of the 10 states with the worst accident statistics had some type of mandatory education, but this is obviously not enough.

# Summary:

- Many factors effect the fatality rate in states. Marketing, staffing, education, awareness campaigns, and other factors all play a part in a state's boating fatality rate. Those states listed in the top 10 are there because they have been proactive in education.

# Any Questions?

The data will be uploaded to the  
NASBLA website following the  
end of this conference.





## **Uniformity of State Education Requirements**

(as of September 15, 2006)

The NASBLA Model Act for Mandatory Boating Safety Education is written to provide states with guidelines that can be used to write their own state boating education legislation. The Model Act is applicable to persons born on or after a given date and the act is intended to require motorboat operators to have and present evidence of successful completion of a NASBLA-approved course on safe boating (or an equivalency examination) or to otherwise meet the operator requirements as provided in the act. It further prohibits motorboat rental and leasing businesses from renting or leasing such a vessel to persons who cannot meet the act's requirements.

1. A total of 47 states/territories have some type of mandatory education. The following states/territories do not have any requirements:

<b>State</b>	<b>Status of Mandatory Education Legislation</b>
Alaska	No requirement
American Samoa	No requirement
Arizona	No requirement
California	Requirement only applies to those convicted of a moving violation.
Guam	No requirement
Idaho	No requirement
Northern Mariana Is.	No requirement
South Dakota	No requirement
Wyoming	No requirement

2. The following table lists the date when mandatory education laws became effective in each state/territory.

<b>State</b>	<b>Date Legislation Became Effective</b>
Alabama	1994 and 2002
Arkansas	January 1, 2001
Colorado	January 1, 1998
Connecticut	1992
Delaware	January 1, 1994
District of Columbia	Not reported for survey
Florida	1996
Georgia	1994
Hawaii	January 1, 2004
Illinois	January 1, 1978
Indiana	January 1, 1996
Iowa	January 1, 2003
Kansas	2000
Kentucky	1998
Louisiana	July 1, 2003
Maine	March 30, 2006

Maryland	January 1, 1988
Massachusetts	1988
Michigan	1967
Minnesota	1975
Mississippi	July 1, 1997
Missouri	January 1, 2005
Montana	Not reported for survey
Nebraska	March 15, 2003 and January 1, 2004
Nevada	January 1, 2003
New Hampshire	2002
New Jersey	June 1, 2006
New Mexico	January 1, 2007
New York	1960 for 10-14 year olds 2000 for PWC
North Carolina	1997
North Dakota	1985
Ohio	January 1, 2000
Oklahoma	January 1, 2007
Oregon	October 17, 1999
Pennsylvania	2003
Puerto Rico	Not reported for survey
Rhode Island	2001
South Carolina	1998
Tennessee	January 1, 2005
Texas	1997
Utah	1995
Vermont	1991
Virginia	1998
Virgin Islands	April 3, 2006
Washington	Legislation passed 2005; takes effect 2008
West Virginia	January 1, 2001
Wisconsin	2006

3. A total of 20 states have mandatory education legislation which specifically targets teens or children. These states are:

<u>State</u>	<u>Age of children affected by mandatory education</u>
Colorado	14-15 year olds
Florida	21 and under
Georgia	12-15 year olds
Illinois	12 and under
Indiana	15 and older
Iowa	12-17 year olds
Kentucky	12-17 year olds
Massachusetts	12-15 year olds for motorboat and 16-17 for PWC
Minnesota	12-17 year olds for motorboat and 13 for PWC

Montana	13-14 year olds
Nebraska	14-17 year olds
New York	10-18 year olds and all PWC operators
North Carolina	12-16 year olds for PWC
North Dakota	12-15 year olds for PWC
Oklahoma	12-15 year olds (effective January 1, 2007)
South Carolina	Under 16
Texas	13-17 year olds
Utah	12-17 year olds for PWC
Virginia	14-15 year olds for PWC
Virgin Islands	Under 18

4. A total of 18 states have mandatory education legislation which created a born-on or after date for those people who must take boating safety courses. These states are:

<b>State</b>	<b>Born-on or after date</b>
Arkansas	Jan 1, 1986
Delaware	Jan 1, 1978
Kansas	Jan 1, 1989
Louisiana	Jan 1, 1988
Maryland	July 1, 1972
Michigan	Dec 31, 1978 for PWC operation only
Mississippi	June 30, 1980
Missouri	Jan 1, 1984
Nevada	Jan 1, 1983
New Mexico	Jan 1, 1989 (effective January 1, 2007)
Ohio	Jan 1, 1982
Pennsylvania	Jan 1, 1982
Puerto Rico	Jan 1, 1972
Rhode Island	Jan 1, 1986 and all PWC operators
Tennessee	Jan 1, 1989
Vermont	Jan 1, 1974
West Virginia	Jan 1, 1986
Wisconsin	Jan 1, 1989

5. A total of 9 states have mandatory education legislation that applies or will apply to everyone. These states are:

<u>State</u>	<u>Specifics of legislation</u>																
Alabama	Everyone 12 and older must have a license to boat.																
Connecticut	Already in effect for everyone																
District of Columbia	Already in effect for everyone																
Hawaii	Already in effect for all PWC operators.																
Maine	Everyone 14 and older for use of PWC only.																
New Hampshire	<table> <tr> <th><u>Date of Birth</u></th><th><u>Certificate Required</u></th></tr> <tr> <td>January 1, 1983</td><td>January 1, 2002</td></tr> <tr> <td>January 1, 1977</td><td>January 1, 2003</td></tr> <tr> <td>January 1, 1973</td><td>January 1, 2004</td></tr> <tr> <td>January 1, 1967</td><td>January 1, 2005</td></tr> <tr> <td>January 1, 1963</td><td>January 1, 2006</td></tr> <tr> <td>January 1, 1957</td><td>January 1, 2007</td></tr> <tr> <td>Everyone</td><td>January 1, 2008</td></tr> </table>	<u>Date of Birth</u>	<u>Certificate Required</u>	January 1, 1983	January 1, 2002	January 1, 1977	January 1, 2003	January 1, 1973	January 1, 2004	January 1, 1967	January 1, 2005	January 1, 1963	January 1, 2006	January 1, 1957	January 1, 2007	Everyone	January 1, 2008
<u>Date of Birth</u>	<u>Certificate Required</u>																
January 1, 1983	January 1, 2002																
January 1, 1977	January 1, 2003																
January 1, 1973	January 1, 2004																
January 1, 1967	January 1, 2005																
January 1, 1963	January 1, 2006																
January 1, 1957	January 1, 2007																
Everyone	January 1, 2008																
New Jersey	<table> <tr> <th><u>Date of Birth</u></th><th><u>Certificate Required</u></th></tr> <tr> <td>Dec. 31, 1968</td><td>June 1, 2005</td></tr> <tr> <td>Dec. 31, 1958</td><td>June 1, 2006</td></tr> <tr> <td>Dec. 31, 1948</td><td>June 1, 2007</td></tr> <tr> <td>Everyone</td><td>June 1, 2008</td></tr> </table>	<u>Date of Birth</u>	<u>Certificate Required</u>	Dec. 31, 1968	June 1, 2005	Dec. 31, 1958	June 1, 2006	Dec. 31, 1948	June 1, 2007	Everyone	June 1, 2008						
<u>Date of Birth</u>	<u>Certificate Required</u>																
Dec. 31, 1968	June 1, 2005																
Dec. 31, 1958	June 1, 2006																
Dec. 31, 1948	June 1, 2007																
Everyone	June 1, 2008																
Oregon	2003 - 30 and younger 2004 - 40 and younger 2005 - 45 and younger 2006 - 50 and younger 2007 - 60 and younger 2008 - 70 and younger 2009 - All boaters																
Washington	January 1, 2008 - 20 years old and younger; January 1, 2009 - 25 years old and younger; January 1, 2010 - 30 years old and younger; January 1, 2011 - 35 years old and younger; January 1, 2012 - 40 years old and younger; January 1, 2013 - 50 years old and younger; January 1, 2014 - 60 years old and younger; January 1, 2015 - 70 years old and younger; January 1, 2016 - All boat operators over 12 years of age will be required to have a card. Persons born before January 1, 1955 are exempt.																

6. Many states have mandatory education laws which apply only to certain types or sizes of vessels.

Law targets any motorized vessel in 19 states.

Alabama	Mississippi
Arkansas	Nebraska
Colorado	New Jersey
Connecticut	New Mexico
Delaware	New York
Idaho	Oklahoma
Illinois	Puerto Rico
Indiana	Vermont
Kansas	West Virginia
Massachusetts	

Law targets only Personal Watercraft in 7 states.

Hawaii	Utah
Maine	Virginia
Michigan	Virgin Islands
North Carolina	

Law specifies the horsepower of the vessel in 16 states.

<b>Over 10 hp</b>	<b>Over 15 hp</b>
Florida	Nevada
Iowa	South Carolina
Kentucky	Washington
Louisiana	
Montana	<b>Over 25 hp</b>
North Dakota	Minnesota
Ohio	New Hampshire
Oklahoma	Pennsylvania
Oregon	
Rhode Island	<b>Over 30 hp</b>
Texas	Georgia

Law has registration requirement for paddlecraft in 7 states.

Alaska	Ohio
Illinois	Oklahoma
Iowa	Pennsylvania
Minnesota	

7. A total of 6 states prohibit the use of Internet testing in their state and will not accept an Internet course as proof of mandatory education. These states are:

Colorado (only applies to 14-15 year olds)
Connecticut
New Jersey
New York
Utah
Puerto Rico (requires a 24- hour proctored course)

8. A total of 13 states issue temporary certification for those renting boats or for those who have recently purchased a boat. These states are:

State	Policy
Alabama	30 days for new boat owner
Arkansas	30-day temporary certification for rental or new owner
Connecticut	14 day waiver for rental 6 months for new boat owner
Idaho	Temporary certification for rental period only
Mississippi	30-day temporary certification for rental
Missouri	Temporary certification for rental upon exam completion (until 12/31/06)
Nevada	60 days for new boat owner
New Hampshire	14-day temporary certification available upon testing
New Mexico	30-day temporary certification for rental
Oregon	60 days for new boat owner
Washington	60 days for new boat owner
West Virginia	Temporary certification for rental period only 30 days for new boat owner
Wisconsin	DNR implementing rules for rental

9. A total of 52 states have mandatory wear of PFD laws which target specific age groups or water activities\*. These states are:

State	Age of Mandatory PFD Use
Alabama	Under age 8, water-skier, PWC
Alaska	12 and under
Arizona	Under age 12, water-skier, PWC
Arkansas	12 and under
California	Under age 12, water-skier, PWC
Colorado	Under age 12, water-skier, PWC
Connecticut	Under age 12, water-skier, PWC
Delaware	12 and under, water-skier, PWC
District of Columbia	Under age 13
Florida	Under age 6, water-skier, PWC

Georgia	Under age 10
Hawaii	Under age 12, PWC
Idaho	14 and under, water-skier, PWC
Illinois	Under age 13, PWC
Indiana	12 and under, PWC
Iowa	Water-skier, PWC
Kansas	Under age 12, PWC
Kentucky	Under age 12, water-skier, PWC
Louisiana	12 and under, PWC
Maine	10 and under, water-skier, PWC
Maryland	Under age 7, water-skier, PWC
Massachusetts	Under age 12, water-skier, PWC, canoe/kayak use 9/15-5/15
Michigan	Under age 6, PWC
Minnesota	Under age 10
Mississippi	Under age 12
Missouri	Under age 7
Montana	Under age 12, water-skier, PWC, sailboard for under age 15
Nebraska	Under age 12, water-skier, PWC
Nevada	11 and under, water-skier, PWC
New Hampshire	5 and under
New Jersey	Under age 12, water-skier, PWC
New Mexico	Under age 12, water-skier, PWC
New York	Under age 12, water-skier
North Carolina	Under age 13, PWC
North Dakota	Under age 12, water-skier, PWC
Ohio	Under age 10, water-skier, PWC
Oklahoma	12 and under, water-skier, PWC
Oregon	Under age 12, PWC
Pennsylvania	12 and under, water-skier, PWC, windsurfing
Puerto Rico	12 and under
Rhode Island	Under age 12
South Carolina	Under age 12
South Dakota	Under age 7
Tennessee	Under age 12
Texas	Under age 12, PWC
Utah	Under age 12, water-skier, PWC, any person boating on a river
Vermont	Everyone on a boat
Virginia	Water-skier, PWC
Virgin Islands	Under age 17
Washington	Under age 12, water-skier, PWC
West Virginia	Under age 12, water-skier, PWC
Wyoming	Water-skier, PWC

\*The laws in each state apply to power boats, unless another type of boat is specified. The length of the powerboat varies from less to 16 feet to less than 29 feet depending upon the State.

10. At least 35 states provide boating education at little or no cost to the boating public. These are the only states that responded to this survey, so the total number could be bigger.

State	Fee for course	Fee for certificate	Is there a law regarding the fee?
Arizona	Free	No	n/a
Arkansas	Classroom- free Internet- \$15	Free for original \$5 for duplicate	No
California	Free	n/a	n/a
Colorado	\$15	No	Set by Parks Board
Connecticut	Free	\$25	No
Delaware	Free	No	No
Florida	Free	No	Law allows \$2 fee, but they chose not to charge
Georgia	Free	No	No
Illinois	Classroom- free Internet- \$15	No	No
Indiana	Free	No	n/a
Kansas	Free	Free for original \$11 for duplicate	No
Louisiana	Classroom-free Internet- \$15	No	n/a
Maine	Up to \$5	No	There is a provision for the commissioner to charge fees for courses but we have never exercised that
Maryland	State course-free Agencies- \$15-\$35	No	State can't charge
Massachusetts	Free	no	Draft legislation to set \$25 fee for certificate
Michigan	Free	No	No
Minnesota	Classroom-free Internet- \$15	No	No
Mississippi	Free	No	n/a
Missouri	Classroom-free Internet- \$15	\$15 for original \$10 for duplicate	There is a law, but it doesn't set an amount.
Nebraska	\$10	No	Can charge up to \$10.
Nevada	Classroom- free Internet- \$15	No	Can't charge a fee for classroom course
New	\$10	\$10	Can't exceed \$50



Hampshire			
New York	No set fee	\$10. if over 18	\$10 for certificate fee
Ohio	\$5	No	The cost can't be more than the cost of the materials. Instructors are paid through boat registration and titling fees
Oklahoma	Free	No	No
Oregon	Range from free to \$25	\$10 for original \$5 for replacement	Certificate fee can no exceed \$10.
Pennsylvania	Internet- \$15 Volunteers can charge, but commissioned employees can't	\$10	No
Rhode Island	Free	No	No
South Dakota	free	No	No
Tennessee	Free	\$10 for original \$5 for replacement	Sets cost for certificate fee as \$10 and \$5 for replacement.
Texas	\$5 if taught by TPWD employee  \$13 if taught by outside person  \$10 if the course completion documents are sent	No	Sets prices as they are and allows persons outside the department to keep up to \$3 as a service fee. They are considering increasing this amount to encourage more people to teach the course and to retain the current instructors.
Utah	PWC course- \$12 Boating- Free Internet- \$15	Free for original \$5 for duplicate	Can not exceed \$12 for classroom course
Virginia	Free	No	n/a
Vermont	Free	No	Can't charge a fee
Washington	Free	\$10	\$10 for certificate fee

11. The following chart shows the number of Boating Safety Education certificates that were issued by each state in 2005. (\*These states do not have any type of mandatory education.)

<u>Unknown</u> 12%	<u>Under 100</u> 6%	<u>100-499</u> 10%	<u>500-999</u> 4%
Alaska*	South Dakota*	Colorado	Nevada
Georgia	Vermont	Maine	North Dakota
Hawaii	Washington	Montana	
Utah		New Mexico	
Wisconsin		West Virginia	
Wyoming*			
<u>1,000-2,499</u> 22%	<u>2,500-4,999</u> 16%	<u>5,000-10,000</u> 10%	<u>Over 10,000 (specify)</u> 20%
Arizona*	Arkansas	Maryland	Alabama- 571,126
California*	Indiana	Massachusetts	Connecticut- 15,924
Delaware	Louisiana	Minnesota	Florida-20,353
Idaho*	Mississippi	Missouri	Michigan- 39,153
Illinois	North Carolina	Ohio	New Hampshire- 14,073
Iowa	South Carolina		New Jersey- 15,000
Kansas	Tennessee		New York- 23,697
Kentucky	Virginia		Oregon- 26,933
Nebraska			Pennsylvania- 12,842
Oklahoma			Texas- 10,008
Rhode Island			

12. The following chart shows the average number of Fatalities per 100,000 boats from 2001-2005 for each state. \* These states do not have any type of mandatory education.

<u>0-2.9</u> 6%	<u>3.0-4.9</u> 34%	<u>5.0-6.9</u> 26%	<u>7.0-8.9</u> 22%	<u>Over 9.0 (specify)</u> 12%
Delaware	Connecticut	Alabama	Colorado	Alaska*- 38.27
Iowa	Georgia	Arizona*	Idaho*	Hawaii- 10.46
Minnesota	Illinois	Arkansas	Kentucky	Louisiana- 12.85
	Indiana	California*	Maine	Nevada- 11.43
	Kansas	Florida	Maryland	Washington- 9.19
	Michigan	Massachusetts	Montana	Wyoming*- 12.18
	Nebraska	Mississippi	Oregon	
	New Hampshire	Missouri	Rhode Island	
	New York	New Jersey	Utah	
	North Carolina	New Mexico	Virginia	
	Ohio	North Dakota	West Virginia	
	Oklahoma	Tennessee		
	Pennsylvania	Texas		
	South Carolina			

	South Dakota*			
	Vermont			
	Wisconsin			

12. The following chart shows the number of Full-time Boating Safety Education staff members that each state employs.

<b>Unreported 6%</b>	<b>No Employees 24%</b>	<b>One Employee 44%</b>	<b>Two Employees 18%</b>	<b>Three Employees 8%</b>
Kentucky	Colorado	Alabama	Arizona	Illinois
New Jersey	Georgia	Alaska	California	Michigan
Rhode Island	Iowa	Arkansas	Kansas	Nebraska
	Louisiana	Connecticut	Maryland	New Hampshire
	Maine	Delaware	New York	
	Massachusetts	Florida	Ohio	
	Mississippi	Hawaii	Oregon	
	Montana	Idaho	South Carolina	
	New Mexico	Indiana	West Virginia	
	Oklahoma	Minnesota		
	Wisconsin	Missouri		
	Wyoming	Nevada		
		North Carolina		
		North Dakota		
		Pennsylvania		
		South Dakota		
		Tennessee		
		Texas		
		Utah		
		Vermont		
		Virginia		
		Washington		

13. The following chart shows how states handle the coverage of their state specific information in the Education courses.

<b>States write their own state-specific information and test questions and give to course providers</b>	<b>States require course providers to write their own version of the state-specific information and test questions.</b>	<b>A combination of both practices.</b>
Arizona	California	Alaska
Connecticut	Georgia	Arkansas
Florida	Idaho	Colorado
Michigan	Kansas	Delaware
New Hampshire	Kentucky	Indiana
New Mexico	Minnesota	Louisiana

New York	Montana	Maine
Ohio	North Carolina	Maryland
Pennsylvania	Oklahoma	Massachusetts
Rhode Island	Oregon	Missouri
Virginia	Texas	Nevada
Washington	Vermont	New Jersey
		North Dakota
		South Carolina
		Tennessee
		Utah
		West Virginia
		Wyoming

# Addendum

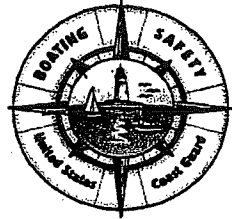
## # 5





# U. S. COAST GUARD

## INFORMATION SHEET



### ***EDUCATION REQUIREMENTS, OPERATOR PROFICIENCY STANDARDS, AND LICENSING REQUIREMENTS FOR OPERATORS OF RECREATIONAL BOATS***

**ISSUE:** Role of the U.S. Coast Guard in education, operator proficiency standards, and licensing for recreational boat operators.

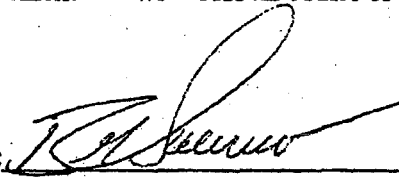
**BACKGROUND:** Recreational boat operator education and/or licensing requirements are issues being considered by many States throughout the nation. Currently (Jun 06), forty-six States and Territories require some form of mandatory education with licensing requirements in some States such as Alabama and New Jersey. While many of these requirements share similarities, no two are the same. The authority to mandate recreational boat operator education or licensing currently resides with each individual State. However, the Coast Guard is mandated to encourage uniformity of regulations and foster reciprocity between jurisdictions. The Coast Guard's authority to mandate operator licensing and education is currently restricted to commercial vessel operators.

**DISCUSSION:** In 1998 the National Boating Safety Advisory Council (NBSAC) passed a resolution requesting that the Coast Guard, in cooperation with the National Association of State Boating Law Administrators (NASBLA) and other boating organizations, develop a program to encourage and support adoption of mandatory education laws at the State level. In a cooperative effort made possible through the former Aquatic Resources (Wallop/Breaux) Trust Fund, the Coast Guard, NASBLA, Coast Guard Auxiliary, U.S. Power Squadrons, and other stakeholders developed minimum national standards for boating safety education that were published in September 1999, updated January 2005, and are used as the National Boating Safety Education Standards. These types of cooperative partnerships continue to be key principles for guiding the future of recreational boating safety. The Coast Guard continues to provide increased educational awareness through initiatives such as its national multi-year outreach initiative, "You're In Command. Boat Responsibly!" that advocates, along with our key boating safety principles, to take a boating safety course before a boater goes on the water. With boating accidents second only to vehicular accidents in transportation related fatalities, the National Transportation Safety Board has maintained Recreational Boating Safety on its Most Wanted Transportation Safety Improvements List with a recommendation to the States to require mandatory education of boat operators. In 2004, NBSAC passed a resolution advising the Coast Guard to seek statutory authority that would require that a boat operator, on waters subject to the jurisdiction of the United States, possess a certificate showing completion of an instructional course or its equivalent. In addition, the United Nations Economic Commission for Europe has forwarded UN Resolution No. 40 "International Certificate for Operators of Pleasure Craft", which is in effect a requirement for credentialing (licensing) of recreational boat operators within the jurisdiction of the signatories. The Coast Guard's Boating Statistics show on average that eighty percent (80%) of all reported fatalities occur on boats where the operator has not received boating safety instruction.

While the Coast Guard does not currently have the statutory authority to set education requirements, proof of proficiency, or licensing requirements for operators of recreational boats, it does strongly advocate that all boat operators be educated in accordance with the established National Boating Education Standards.

Further, Section 46 U.S.C. 13101 encourages uniformity in boating safety efforts, which would foster better cooperation and reciprocity between Federal, State, and local enforcement agencies and help ensure uniform enforcement of laws across all bodies of water, regardless of jurisdiction.

APPROVED:



DATE:

JUL 17 2006

B. M. SALERNO  
Rear Admiral, U.S. Coast Guard



# Addendum

## # 6



# Boating Statistics 2005

BOATING STATISTICS -- 2005 STATE / TERRITORY	REGISTERED BOATS	ACCIDENTS				PROPERTY DAMAGE
		ACCIDENTS	FATALITIES	INJURIES		
Alabama	265,172	69	16	52		\$543,570
Alaska	49,127	54	20	27		\$972,150
American Samoa	117	0	0	0		\$0
Arizona	148,343	193	5	155		\$938,689
Arkansas	205,414	68	13	50		\$319,400
California	963,758	635	58	428		\$3,386,901
Colorado	98,512	45	11	28		\$72,950
Connecticut	108,702	49	5	24		\$1,001,340
Delaware	52,119	18	1	4		\$639,600
District of Columbia	2,528	1	0	0		\$3,000
Florida	973,859	606	78	352		\$5,355,129
Georgia	318,212	115	16	80		\$3,115,047
Guam	2,762	5	2	1		\$4,000
Hawaii	15,302	10	5	0		\$52,000
Idaho	85,083	56	6	50		\$198,146
Illinois	380,865	102	16	92		\$254,845
Indiana	214,696	41	4	25		\$186,200
Iowa	243,924	55	9	49		\$94,900
Kansas	97,748	24	4	16		\$73,590
Kentucky	176,257	59	20	46		\$348,150
Louisiana	308,104	126	35	98		\$415,822
Maine	111,758	46	16	27		\$179,600
Maryland	205,812	185	15	125		\$1,136,302
Massachusetts	150,026	46	9	35		\$980,050
Michigan	944,138	163	28	122		\$340,127
Minnesota	853,489	114	24	85		\$351,577
Mississippi	208,466	21	6	18		\$135,518
Missouri	326,749	205	24	135		\$1,393,552
Montana	70,616	12	7	6		\$18,250
Nebraska	82,921	28	2	24		\$74,300
Nevada	57,726	93	5	71		\$445,129
New Hampshire	102,268	45	1	38		\$257,024
New Jersey	199,106	101	4	51		\$260,600
New Mexico	38,863	31	5	25		\$61,500
New York	508,536	192	15	139		\$1,327,878
North Carolina	362,784	165	17	126		\$912,085
North Dakota	44,498	9	0	9		\$33,400
Northern Mariana Islands	209	4	1	0		\$197,000
Ohio	412,375	132	12	102		\$959,262
Oklahoma	216,913	62	13	56		\$162,990
Oregon	187,640	52	15	14		\$830,389
Pennsylvania	349,159	63	12	52		\$256,535
Puerto Rico	61,032	7	1	6		\$6,800
Rhode Island	43,656	38	0	14		\$785,876
South Carolina	416,763	83	13	71		\$144,537
South Dakota	53,038	18	2	12		\$48,532
Tennessee	267,567	115	10	102		\$4,701,771
Texas	614,616	145	32	92		\$702,669
Utah	75,635	80	9	56		\$235,300

USCG



# Boating Statistics 2005

BOATING STATISTICS -- 2005	REGISTERED				
STATE / TERRITORY	BOATS	ACCIDENTS	FATALITIES	INJURIES	PROPERTY DAMAGE
Vermont	32,756	2	0	0	\$12,500
Virgin Islands	4,302	0	0	0	\$0
Virginia	245,073	127	14	88	\$2,012,592
Washington	267,793	128	25	82	\$1,398,097
West Virginia	50,061	14	6	12	\$39,850
Wisconsin	639,198	127	20	91	\$439,230
Wyoming	26,270	10	3	11	\$23,737
<b>TOTALS</b>	<b>12,942,414</b>	<b>4,994</b>	<b>690</b>	<b>3,474</b>	<b>\$38,839,988</b>
OFF-SHORE		ACCIDENTS	FATALITIES	INJURIES	PROPERTY DAMAGE
Atlantic Ocean		3	3	0	\$0
Gulf of Mexico		3	4	0	\$0
Pacific Ocean		2	0	0	\$17,000
<b>TOTALS</b>		<b>8</b>	<b>7</b>	<b>0</b>	<b>\$17,000</b>
	REGISTERED	TOTAL	TOTAL	TOTAL	TOTAL
	BOATS	ACCIDENTS	FATALITIES	INJURIES	PROPERTY DAMAGE
<b>GRAND TOTAL</b>	<b>12,942,414</b>	<b>5,002</b>	<b>697</b>	<b>3,474</b>	<b>\$38,856,988</b>



### Recreational Boating and Paddling Fatalities and Percentages 2005 to 1998

[illegible]





## Preliminary Data

First Coast Guard District  
Recreational Boating and Paddling Fatalities  
1 January - 30 September 2006

**Total Fatalities: 41**

Date	Vsl Type	Lgth	Cause	Location	Nearest Town	ST	Alcohol	PFD	Sex Age
21-Jan	Sailboat - M	16	Capsize	Marshall Point * CG	Port Clyde	ME		PFD	M 45
21-Jan	Kite Surfer - M		Capsize	Stratford Point * CG	Stratford	CT		No PFD	M 48
15-Feb	Canoe		Capsize	Delaware River	Sparrowbush	NY	No	No PFD	M 19
17-Feb	Canoe - M	15	Capsize	Reef Point * CG	Hull	MA		No PFD	M 26
10-Mar	Canoe	16	Capsize	Populatic Lake	Norfolk	MA		No PFD	M 26
13-Mar	Rowboat (3)-M		Capsize	Narragansett Bay*** CG	Kingston	RI		NoPFDsM19-M20-F21	
12-Apr	Kayak		Capsize	Fenton River	Mansfield	CT		No PFD	M 53
29-Apr	Motorboat	14	Capsize	Hatch Pond	South Kent	CT		No PFD	M 66
29-Apr	Rowboat		Capsize	Gamet Lake	Johnsburg	NY	No	No PFD	M 19
14-May	Canoe	16	Capsize	Winoski River	Duxbury	VT		No PFD	M 21
17-May	Motorboat		Fell Overboard	Jamaica Bay *	Rockaway	NY	No	No PFD	M 44
28-May	Motorboat	21	Collision w/dock	Lake George	Bolton	NY	Alcohol	No PFD	M 24
05-Jun	Raft		Capsize	Ausable River	Keeseville	NY	No	No PFD	M 28
06-Jun	Kayak		Pinned	Ausable River	Wilmington	NY	No	No PFD	M 35
13-Jun	Motorboat - M	22	Capsize	Rockaway Inlet * CG	Queens	NY	No	No PFD	M 36
22-Jun	Canoe		Capsize	Upper Oxbrook Lake	T6 R1 NBPP	ME		No PFD	M 18
25-Jun	Rowboat	12	Capsize	Lake Colby	Saranac Lake Vlg	NY	No	No PFD	M 22
27-Jun	Kayak		Capsize	Blue Heron Lake	Bedford	NY	Alcohol	No PFD	M 19
27-Jun	Cab Mtrboat	36	Capsize	Connecticut River	Middletown	CT		No PFD	M 70
30-Jun	Motorboat	18	Collision w/vsl	Great South Bay *	Babylon	NY	No	No PFD	M 43
30-Jun	PWC - M	8	Collision w/vsl	Mill Basin * CG	Kings County	NY	No	No PFD	M 17
01-Jul	Motorboat - M	24	Swam fm Boat	Boston Harbor * CG	Boston	MA	Alcohol	No PFD	M 29
08-Jul	Motorboat - M	22	Capsize	Little Peconic Bay * CG	Southampton	NY	No	No PFD	M 23
15-Jul	Rowboat (2)	10	Fell Overboard	Stoneville Pond	Auburn	MA		No PFDs	M 5 - M 34
23-Jul	Motorboat		Collision w/island	Fourth Lake	Webb	NY	Yes-Oper	No PFD	F 20
06-Aug	Motorboat	34	Swam fm Boat	Lake Winnepesaukee	Gilford	NH	Alcohol	No PFD	M 31
06-Aug	Motorboat	24	Swam fm Boat	Lake Winnepesaukee	Alton	NH	Alcohol	No PFD	M 62
19-Aug	Mtrboat - Swmr		Coll w/swimmer	Ossipe Lake	Waterboro	ME		No PFD	M 23
20-Aug	Kayak		Capsize	Scarborough River *	Scarborough	ME		PFD	M 59
22-Aug	Rescue Airboat	15	Capsize	Connecticut River	Charlestown	NH	No	No PFD	F 64
02-Sep	Motorboat - M	20	Capsize	Baker's Island * CG	Marblehead	MA		No PFD	M 37
10-Sep	Canoe		Capsize	Lake Hird	West Milford	NJ	Alcohol	No PFD	M 23
11-Sep	Kayak - M		Capsize	E. Penobscot Bay * CG	W. Stonington	ME		PFD	F 60
13-Sep	Kayak		Capsize	Megunticook Lake	Camden	ME		No PFD	M 77
18-Sep	Sailboat - M	19	Fell Overboard	Booth Bay * CG	Boothbay Harbor	ME		No PFD	M 78
21-Sep	Mtr - Pontoon		Fell Overboard	Hickory Hills Lake	Lunenburg	MA		No PFD	M 52
24-Sep	PWC - M		Fell Overboard	Lynn Harbor * CG	Lynn	MA		No PFD	M 42
28-Sep	Canoe		Capsize	Black Stream	Hermon	ME		No PFD	M 62
				Non-motorized - 24	Motorized - 17			PFD Worn	
Fatalities as of 30 September 2005 - 31				58.54%	41.46%			3 - 7.32%	
	M - MISLE			* State & Federal Water	CG - USCG				
Fatalities as of 31 December - Yearly totals.									
2005	2004		2003	2002	2001		2000	1999	1998
41	41		58	53	55		42	49	65

Compiled by:  
Al Johnson  
First Coast Guard District  
617-223-8464

Augusta, Maine  
27 October 2006



1998 through 2005 (2006 data not included)

(2006 data not included)	2006	2005	2004	2003	2002	2001	2000	1999	1998	Averages
<b>Fatalities (30 Sep 2006)</b>	41	41	41	58	53	55	42	49	65	8 Yr. (404)
Canoes:	7	5 - 12.19%	7 - 17.07%	12 - 20.69%	6 - 11.32%	17 - 30.91%	12 - 28.57%	11 - 22.45%	18 - 27.69%	(88) - 21.78%
Kayaks:	6	3 - 7.32%	6 - 14.64%	5 - 8.62%	7 - 13.21%	2 - 3.64%	5 - 11.91%	2 - 4.08%	2 - 3.08%	(32) - 7.92%
Total C & K percentage:	31.71%	(8) = 19.51%	(13) = 31.71%	(17) = 29.31%	(13) = 24.53%	(19) = 34.55%	(17) = 40.48%	(13) = 26.53%	(20) = 30.77%	(120) = 29.70%
Other										
manually powered (MP) craft:	9	6 - 14.63%	7 - 17.07%	8 - 13.79%	7 - 13.21%	4 - 7.27%	4 - 9.52%	4 - 8.16%	6 - 9.23%	(46) - 11.39%
Total MP percentage:	53.66%	(14) = 34.15%	(20) = 48.78%	(25) = 43.10%	(20) = 37.74%	(23) = 41.82%	(21) = 50%	(17) = 34.69%	(26) = 40%	(166) = 41.09%
Sailboats - non-motorized:	2	5 - 12.19%	2 - 4.88%	1 - 1.72%	0	3 - 5.45%	0	0	2 - 3.08%	(13) - 3.22%
Total non-motorized %:	58.54%	(19) = 46.34%	(22) = 53.66%	(26) = 44.83%	(20) = 37.74%	(26) = 47.27%	(21) = 50%	(17) = 34.69%	(28) = 43.08%	(179) = 44.31%
Motorboats:	15	17 - 41.46%	16 - 39.02%	27 - 46.55%	28 - 52.83%	27 - 49.09%	21 - 50%	28 - 57.15%	32 - 49.23%	(196) - 48.51%
PWCs:	2	5 - 12.19%	2 - 4.88%	5 - 8.62%	3 - 5.66%	2 - 3.64%	0	4 - 8.16%	4 - 6.15%	(25) - 6.19%
Sailboats - motorized:		0	1 - 2.44%	0	2 - 3.77%	0	0	0	1 - 1.54%	(4) - .99%
Total motorized %:	41.46%	(22) = 53.66%	(19) 46.34%	(32) = 55.17%	(33) = 62.26%	(29) = 52.73%	(21) = 50%	(32) = 65.31%	(37) = 56.92%	(225) = 55.69%
Life Jacket/PFD worn:	3	9 - 21.95%	7 - 17.07%	9 - 15.52%	11 - 20.75%	8 - 14.55%	7 - 16.67%	9 - 18.37%	10 - 15.38%	(70) - 17.33%
No Life Jacket/PFD worn:	38	31 - 75.61%	34 - 82.93%	47 - 81.03%	42 - 79.25%	47 - 85.45%	35 - 83.33%	40 - 81.63%	55 - 84.62%	(331) - 81.93%
PFD Status Not Known:		1 - 2.44%	0	2 - 3.45%	0	0	0	0	0	(3) - .74%
Alcohol: (*Drugs - 2)	7	14 - 34.15%	9 - 21.95%	12* - 20.69%	12 - 22.64%	17* - 30.91%	10 - 23.81%	11 - 22.45%	22 - 33.84%	(107) - 26.48%
No alcohol:	11	25 - 60.97%	29 - 70.73%	44 - 75.86%	39 - 73.59%	32 - 58.18%	30 - 71.43%	37 - 75.51%	42 - 64.62%	(272) - 67.33%
Alcohol status not known:	23	2 - 4.88%	3 - 7.32%	2 - 3.45%	2 - 3.77%	5 - 9.09%	0	0	1 - 1.54%	(21) - 5.20%
Not Recovered:		0	0	0	0	1 - 1.82%	2 - 4.76%	1 - 2.04%	0	(4) - .99%
Coastal - State and Federal Waters:	18	19 - 46.34%	17 - 41.46%	37 - 63.79%	33 - 62.26%	22 - 40%	8 - 19.05%	25 - 51.02%	30 - 46.15%	(191) - 47.28%
Inland - State Waters:	23	22 - 53.66%	24 - 58.54%	21 - 36.21%	20 - 37.74%	33 - 60%	34 - 80.95%	24 - 48.98%	35 - 53.85%	(213) - 52.72%
First District /		2005	2004	2003	2002	2001	2000	1999	1998	1997
Nationwide Fatalities:		41 / 697	41 / 676	58 / 703	53 / 750	55 / 681	42 / 701	49 / 734	65 / 815	52 / 821
% Change - First District /		No Change /	29.31% decrease /	9.43% increase /	3.64% decrease /	30.95% increase /	14.29% decrease /	24.62% decrease /	25% increase /	
Nationwide		3.11% increase	3.84% decrease	6.27% decrease	10.32% increase	2.85% decrease	4.50% decrease	9.94% decrease	0.73% decrease	
District Fatality Averages:		9 years = 50.67	8 years = 51.88	7 years = 53.41	6 Years = 52.67	5 Years = 52.6	4 Years = 52	3 Years = 55.33	2 Years = 58.5	1 Year = 52
Total 8 year fatalities: 404		2002 to 2005 Fatality Average: 48.25 ( 8.53% decrease) / 706.50 ( 3.58% decrease) ----- 1998 to 2001 Fatality Average: 52.75 / 732.75								



# Addendum

# 7



HOUSE BILL NO. 1627

Offered January 10, 2007

Prefiled September 27, 2006

*A BILL to amend and reenact § 29.1-748 of the Code of Virginia and to amend the Code of Virginia by adding a section numbered 29.1-735.2, relating to boating safety education requirements; civil penalty.*

-----  
Patrons-- Byron and Dudley

-----  
Committee Referral Pending  
-----

Be it enacted by the General Assembly of Virginia:

1. That § 29.1-748 of the Code of Virginia is amended and reenacted and that the Code of Virginia is amended by adding a section numbered 29.1-735.2 as follows:

*§ 29.1-735.2. Boating safety education required; Board to promulgate regulations.*

*A. ~~No person shall operate a motorboat or personal watercraft on the waters of the Commonwealth.~~ It is unlawful for any person to operate a motorboat or personal watercraft on the waters of the Commonwealth, unless the operator has met the requirements for boating safety education in accordance with the age provisions established in subsection D.*

*B. A person shall be considered in compliance with the requirements for boating safety education if the person meets one of the following:*

*1. Completes and passes a boating safety course approved by the National Association of State Boating Law Administrators (NASBLA) and accepted by the Department;*

*2. Passes a proctored equivalency examination that tests the knowledge of information included in the curriculum of an approved course;*

*3. Possesses a valid license to operate a vessel issued to maritime personnel by the United States Coast Guard or a marine certificate issued by the Canadian government;*

*4. Possesses a state-approved nonrenewable temporary operator's permit certificate to operate a motorboat for 90 days that was issued with the certificate of number for the motorboat, if the boat is new or was sold with a transfer of ownership;*

*5. Possesses a rental or lease agreement from a motorboat rental or leasing business, which lists the person as the authorized operator of the motorboat;*

*6. Operates the motorboat under supervised training;*

*7. Demonstrates that he is not a resident, is temporarily using the waters of Virginia for a period not to exceed 90 days, and meets any applicable boating safety education requirements of the state of residency, or possesses a Canadian Pleasure Craft Operator's Card; or*

*8. Has assumed operation of the motorboat due to the illness or physical impairment of the initial operator, and is returning the motorboat to shore in order to provide assistance or care for the operator.*





C. The Board shall promulgate regulations by July 1, 2008, to implement a ~~mandatory~~ boating safety education program for all motorboat and personal watercraft operators to meet boating safety education requirements.

D. Such regulations shall include provisions that phase-in the requirements for boating safety education according to the following:

1. Personal watercraft operators 20 years of age or younger to meet the requirements by July 1, 2009;
2. Personal watercraft operators 35 years of age or younger to meet the requirements by July 1, 2010;
3. Personal watercraft operators 50 years of age or younger to meet the requirements by July 1, 2011;
4. All personal watercraft operators, regardless of age, to meet the requirements by July 1, 2012;
5. Motorboat operators 20 years of age or younger to meet the requirements by July 1, 2011;
6. Motorboat operators 30 years of age or younger to meet the requirements by July 1, 2012;
7. Motorboat operators 40 years of age or younger to meet the requirements by July 1, 2013;
8. Motorboat operators 45 years of age or younger to meet the requirements by July 1, 2014;
9. Motorboat operators 50 years of age or younger to meet the requirements by July 1, 2015;
10. All motorboat operators, regardless of age, to meet the requirements by July 1, 2016.

E. Such regulations may include, but not be limited to, provisions for compliance, statewide availability of NASBLA-approved courses including through the Internet, the issuance of certificates to document successful course completion, duplicate certificates, record keeping, requirements for course providers, instructor certification, student name and address changes, equivalency exam criteria, requirements for motorboat rental and leasing businesses, issuance of a temporary operator's ~~permit~~, certificate and the establishment of fees (not to exceed the cost of giving such instruction for each person participating in and receiving the instruction) for boating safety courses and certificates.

F. The Board shall consult and coordinate with the boating public, professional organizations for recreational boating safety, and the boating business community in the promulgation of such regulations.

G. Any person who operates a motorboat on the waters of the Commonwealth shall, upon the request of a law-enforcement officer, present to the officer evidence that he has complied with subsection B.

H. Any person who violates any provision of this section or any regulation promulgated hereunder shall be subject to a civil penalty of not more than \$250. All civil penalties assessed under this section shall be deposited in the Motorboat and Water Safety Fund of the Game Protection Fund and used as provided for in § 29.1-701.



§ 29.1-748. Restrictions on operation; penalty.

A. It shall be unlawful for any person to:

1. Operate a personal watercraft unless he is at least sixteen years of age, except any person fourteen or fifteen years of age shall be allowed to operate a personal watercraft if he (i) has successfully completed a boating safety education course approved by the Director and (ii) carries on his person, while operating a personal watercraft, proof of successful completion of such course. Upon the request of a law-enforcement officer, such person shall provide proof of having successfully completed an approved course;

2. *Operate a personal watercraft unless he has complied with the provisions of § 29.1-735.2, regarding board regulations for ~~mandatory~~ boating safety education.*

3. Operate a personal watercraft unless each person riding on the personal watercraft is wearing a type I, type II, type III, or type V personal flotation device approved by the United States Coast Guard;

34. Fail to attach the lanyard to his person, clothing, or personal flotation device, if the personal watercraft is equipped with a lanyard-type engine cut-off switch;

45. Operate a personal watercraft on the waters of the Commonwealth between sunset and sunrise;

5-6 Operate a personal watercraft while carrying a number of passengers in excess of the number for which the craft was designed by the manufacturer; or

67. Operate a personal watercraft in excess of the slowest possible speed required to maintain steerage and headway within fifty feet of docks, piers, boathouses, boat ramps, people in the water, and vessels other than personal watercraft. Nothing in this section shall prohibit a personal watercraft from towing a person with a rope less than fifty feet in length.

B. A violation of any provision of this section shall constitute a Class 4 misdemeanor.

C. A violation of this section shall not constitute negligence, be considered in mitigation of damages of whatever nature, be admissible in evidence or be the subject of comment by counsel in any action for the recovery of damages arising out of the operation, ownership, or maintenance of a personal watercraft, nor shall anything in this section change any existing law, rule, or procedure pertaining to any such civil action, nor shall this section bar any claim which otherwise exists.

2. That the Board of Game and Inland Fisheries shall submit the proposed and final regulations authorized under the provisions of this act to the Senate Committee on Agriculture, Conservation and Natural Resources and the House Committee on Agriculture, Chesapeake and Natural Resources at the same time such regulations are submitted to the Virginia Register, so that the Committees may exercise their oversight responsibilities pursuant to § 2.2-4014 of the Code of Virginia.



# REGULATIONS OF ~~CONNECTICUT~~ STATE AGENCIES REGARDING BOATING EDUCATION

## STATUTES

### Sec. 15-140e. Safe boating certificate.

(a) On and after the following dates, no resident of the state, person owning real property in the state or person owning a vessel in the state shall operate on the waters of the state a vessel which is required to be registered or numbered pursuant to this chapter unless such person has a valid vessel operator license by the United States Coast Guard or has obtained a safe boating certificate issued by the Commissioner of Environmental Protection: For operators who are less than twenty years of age, June 23, 1993; for operators who are less than twenty-five years of age, October 1, 1993; for operators who are less than thirty years of age, October 1, 1994; for operators who are less than thirty-five years of age, October 1, 1995; for operators who are less than forty years of age, October 1, 1996; and for all operators forty years of age or older, October 1, 1997. Notwithstanding the provisions of this section, the commissioner may issue a certificate to a person who has successfully completed a course in safe boating operation approved by the commissioner before the date such person is required to take the exam under this section. A safe boating certificate may be suspended or revoked, pursuant to section 15-133, 15-140l or 15-140n, and shall be valid for the life of the person to whom it is issued unless otherwise suspended or revoked.

(b) A certificate shall be issued under subsection (a) to any applicant regardless of age who provides proof that he has

(1) successfully completed a course in safe boating operation approved by the Commissioner of Environmental Protection, which may include those offered by the United States Power Squadron, Coast Guard Auxiliary or other organizations,

(2) successfully passed an equivalency examination testing knowledge of safe boating operation administered by the commissioner,

(3) owned a vessel which was registered or numbered pursuant to this chapter in his name as an individual during any period in the five years preceding October 1, 1992, or

(4) been a member during any period in the five years preceding October 1, 1992, of the United States Power Squadron or United States Coast Guard Auxiliary. On and after October 1, 1997, no certificate shall be issued pursuant to subdivisions (3) and (4) of this subsection.

(c) Notwithstanding subsection (a) of this section, any person who purchases a new or used vessel after July 11, 1991, may, upon vessel registration, apply to the department for a temporary safe boating certificate which shall be valid for six months from the date of registration. No person shall be issued more than one temporary safe boating certificate.

(d) Any person operating a vessel other than a personal watercraft, as defined in section 15-140j, which is rented for a period of fourteen days or less from a person or organization engaged in the commercial rental of vessels need not obtain a certificate during the rental period. Persons or organizations engaged in the commercial rental of vessels shall furnish to each rental customer literature on safety and rules of navigation as supplied by the commissioner.

(e) Any person who violates any provision of this section shall be fined not less than sixty nor more than two hundred fifty dollars for each such violation.



(f) Any course in safe boating operation approved by the Commissioner of Environmental Protection, as described in subsection (b) of this section, shall include instruction on the proper means of: (1) Inspecting a vessel and trailers used for transporting such vessels for the presence of vegetation; and (2) properly disposing of such vegetation.

[P.A. 89-388, S. 1; P.A. 90-274, S. 7, 14; P.A. 91-408, S. 11, 18; P.A. 93-238, S. 2, 6; P.A. 95-145, S. 2, 3; P.A. 03-136, S. 5; 03-244, S. 8.]

**Sec. 15-140f. Courses in safe boating operation. Regulations. Reciprocity.**

(a) The Commissioner of Environmental Protection shall formulate courses in safe boating operation.

(b) The commissioner shall adopt regulations in accordance with the provisions of chapter 54, setting forth the content of safe boating operation courses. Such regulations may include provisions for examinations, issuance of safe boating certificates and establishment of reasonable fees for the course and examination and for issuing certificates, temporary certificates and duplicate certificates. Any fees collected pursuant to such regulations shall be deposited in the boating account established pursuant to section 15-155.

(c) Any person who holds a certificate from another state that has a reciprocal agreement with the commissioner may operate a vessel on the waters of this state.

[P.A. 89-388, S. 2, 27; P.A. 91-408, S. 12, 18; P.A. 00-152, S. 4; P.A. 01-105, S. 10.]

**Sec. 15-140j. Certificate of personal watercraft operation. Regulations. Suspension.**

(a) As used in this section, "personal watercraft" is any inboard powered vessel less than sixteen feet in length which has an internal combustion engine powering a water-jet pump as its primary source of motor propulsion and which is designed to be operated by a person sitting, standing or kneeling on the vessel, rather than the conventional manner of sitting or standing inside the vessel.

(b) On and after June 23, 1993, no person shall operate a personal watercraft unless he has successfully completed a course in safe personal watercraft handling approved by the Commissioner of Environmental Protection and has been issued a certificate of personal watercraft operation by the Commissioner of Environmental Protection. Notwithstanding the provisions of this section, the commissioner may modify or suspend requirements for a certificate of personal watercraft operation by written authorization with respect to any marine event authorized by the commissioner or upon receipt of a copy of the United States Coast Guard authorization for a marine event.

(c) The commissioner may adopt regulations in accordance with the provisions of chapter 54 establishing the content of courses in safe personal watercraft handling. Such regulations may include provisions for examinations, issuance of certificates of personal watercraft operation and establishment of a reasonable fee for such course and examination and for the issuance of a certificate and duplicate certificate. Any fee collected pursuant to regulations adopted under this section shall be deposited in the boating account established pursuant to section 15-155.

(d) Notwithstanding subsection (b) of this section, any person who purchases a new or used personal watercraft after May 20, 1994, may, upon vessel registration, apply to the Commissioner of Environmental Protection for a temporary certificate of personal watercraft operation which shall be valid for six months from the date of registration, provided the applicant has successfully completed a course in safe personal watercraft handling prior to application for the temporary certificate. No person shall be issued more than one temporary certificate of personal watercraft operation.





(e) The commissioner may enter into a reciprocal agreement with any other state which has a similar safe personal watercraft handling certificate program which the commissioner deems acceptable for purposes of this subsection. Any person who successfully completes a course in safe personal watercraft handling and holds a certificate or license from another state which has such a reciprocal agreement with the commissioner may operate a personal watercraft on the waters of this state.

(f) Any person required to obtain a certificate of personal watercraft operation pursuant to this section shall have such certificate on board at all times while operating a personal watercraft. On demand of an officer authorized to enforce the provisions of this chapter, such person shall exhibit the certificate to the officer.

(g) Any person who violates any provision of this section shall be fined not less than sixty dollars nor more than two hundred fifty dollars for each such violation.

(h) A certificate of personal watercraft operation may be suspended or revoked in accordance with the provisions of section 15-133, 15-140l or 15-140n.

[P.A. 89-388, S. 6; P.A. 90-274, S. 10, 14; P.A. 91-408, S. 15, 18; P.A. 93-238, S. 3, 6; P.A. 94-110, S. 4, 5; P.A. 95-145, S. 1, 3; P.A. 97-72, S. 1, 4; P.A. 03-244, S. 12.]

## **REGULATIONS**

### **Sec. 15-140e-4. Exemption for operators of rental vessels.**

Any operator of a vessel rented for a period of fourteen days or less from a person or organization engaged in the business of commercial rental of vessels, who claims exemption from safe boating certificate requirements pursuant to subsection (d) of Section 15-140e of the Connecticut General Statutes, shall carry on board such vessel the original or a copy of the written agreement for such rental stating the period of such rental and the identity of the lessee. Any such operator shall produce such rental agreement upon demand of any enforcement officer identified in Section 15-154 of the Connecticut General Statutes.

[March 9, 2004 (Secretary of State File Number (SOSFN): 5496)]

### **Sec. 15-140f-1. Safe boating certificate course content.**

Effective November 24, 1992

(a) Any person required by subsections (a) or (b) of Section 15-140e of the Connecticut General Statutes to successfully complete a course prior to issuance of a safe boating certificate shall complete a course in safe boating operation which, for purposes of these regulations, shall include a minimum of eight hours of classroom instruction. Said course shall subscribe to the National Association of State Boating Law Administrators (NASBLA) National Boating Education Standards amended from time to time and available from the NASBLA Headquarters Office, 1500 Leestown Road, Suite 330, Lexington, KY (859-225-9487) and online at [www.nasbla.org](http://www.nasbla.org). Said course shall include a section on invasive aquatic vegetation as described in section 5 of Public Act 03-136.

(b) For purposes of this section, Section 15-140e, and subsection (c) of Section 15-140f of the Connecticut General Statutes, the following courses in safe boating operation may be approved by the Commissioner:



(1) classroom courses with a closed book proctored examination in safe boating operation taught by Department of Environmental Protection personnel or their agents who have been designated to teach such course by the Commissioner;

(2) classroom courses in safe boating operation which have been approved by the National Association of State Boating Law Administrators with a proctored closed book examination;

(3) classroom courses in safe boating operation taught by members of the United States Coast Guard Auxiliary with a proctored closed book examination; and

(4) classroom courses in safe boating operation taught by members of the United States Power Squadrons with a proctored closed book examination.

(c) A list of approved courses shall be maintained by the Commissioner.

[September 8, 1998 (Secretary of State File Number (SOSFN): 5026); March 9, 2004 ((SOSFN): 5496)]

**Sec. 15-140f-2. Proctored examinations for safe boating certificates.**

Effective November 24, 1992

(a) Any person taking an approved course in safe boating operation as the prerequisite for issuance of a safe boating certificate shall also be required to pass a proctored closed book examination to be given at the conclusion of such course. In the case of a course in safe boating operation taught by Department of Environmental Protection personnel or its agents, such examination shall consist of no fewer than fifty questions prepared by the Commissioner. The minimum score to pass such examination shall be eighty percent correct answers.

(b) As provided by Connecticut General Statutes Section 15-140e(b)(2), any equivalency examination taken as the prerequisite for issuance of a safe boating certificate shall be taken in person at a place and at a time designated by the Commissioner upon application therefore. Such equivalency examination shall consist of a closed book examination of no fewer than fifty questions prepared by the Commissioner. The minimum score to pass such examination shall be eighty percent correct answers.

[September 8, 1998 (Secretary of State File Number (SOSFN): 5026); March 9, 2004 ((SOSFN): 5496)]

**Sec. 15-140f-3. Issuance of safe boating certificates.**

(a) Any person required by subsection (a) of Section 15-140e of the General Statutes, as amended, to obtain a safe boating certificate shall apply to the commissioner for such certificate on a form provided by the commissioner. The applicant shall provide the following information on the form: the applicant's name, address, date of birth, place of birth, phone number, sex, hair color, eye color, and height. Proof of identity shall be required as provided in subsection (a) of Section 14-137-67 of the Regulations of Connecticut State Agencies, except that a valid Connecticut motor vehicle operator's license with photograph of the applicant, or an acknowledgment of the identity of the applicant, taken by a person authorized by Section 1-29 of the General Statutes, as amended, to take such acknowledgment, if submitted as part of the application shall be conclusive proof of the identity of the applicant.

(b) A safe boating certificate issued to any person less than twelve years of age shall have a notation thereon that the holder of such certificate shall not operate a vessel with a motor of greater than ten horsepower unless he is under the on-board supervision of a person at least eighteen years of age who has been issued a safe boating certificate.

(c) Each safe boating certificate issued by the commissioner shall be assigned a boat operator number unique to the person to whom such certificate is issued and the same number shall be assigned to any duplicates of such



certificate. Only one safe boating certificate and boat operator number shall be assigned to any person and no person shall apply for or obtain more than one such certificate or number.

(d) No person shall make a material false statement on an application to obtain a safe boating certificate or duplicate certificate and every statement made on any such application shall be upon oath or affirmation. The certificate of any person who knowingly makes a material false statement, or provides insufficient funds for payment of applicable fees, or obtains any certificate to which he is not entitled, shall be null and void.

(e) No person shall alter or deface a safe boating certificate or a duplicate certificate, and no person shall exhibit to any enforcement officer identified in Section 15-154 of the General Statutes, a certificate or duplicate certificate which has been altered or defaced, or a certificate or duplicate certificate other than the one issued to him.

(f) Duplicates of safe boating certificates may be issued by the commissioner only to applicants who change their legal name or to applicants whose certificate is lost, stolen, or destroyed upon application to the commissioner on a form provided by the commissioner. Every statement made on any such application shall be upon oath or affirmation. Information to be provided by the applicant may include any or all of the items which the commissioner, in his sole discretion, deems required for issuance of an original certificate. Any person to whom a duplicate certificate is issued who subsequently finds or has returned to him the original or previous duplicate of such certificate shall, within five days, return his last-issued certificate to the boating division of the department of environmental protection.

(g) Temporary safe boating certificates shall be subject to the same provisions regarding issuance of safe boating certificates set forth in subsections (a) through (f) of this section. Each application for a temporary certificate shall be accompanied by a certificate of number or certificate of decal issued to the applicant for his vessel on the date of vessel registration. Temporary certificates shall expire in six months from the date of vessel registration as is provided for in Section 15-140e(c) of the General Statutes. No person shall be issued more than one temporary safe boating certificate and issuance of a temporary certificate shall not entitle the holder thereof to issuance of a lifetime certificate as provided for by subsection (a) of Section 15-140e of the General Statutes, as amended.

(h) For any person applying to the commissioner before October 1, 1997 for a safe boating certificate by providing proof that he has owned either a registered or numbered vessel during any period in the five years preceding October 1, 1992 or has been a member during any period in the five years preceding October 1, 1992 of the United States Power Squadrons or the United States Coast Guard Auxiliary, as provided for by subdivisions (3) and (5) of subsection (b) of Section 15-140e of the General Statutes, as amended, such proof shall consist of:

(1) in the case of an applicant who owns or has owned a registered or numbered vessel, the original of the applicant's vessel registration certificate or a copy thereof, provided the commissioner may waive such requirement of proof when verification is obtained by the applicant or the department of environmental protection from records of the department of motor vehicles that such registration certificate was issued. Proof of registration shall result in the issuance of a safe boating certificate only to a person or persons named on the registration as the owner or owners to whom the vessel is registered. Registration of a vessel to a corporation or other organization or entity shall not entitle any person who is an officer, partner or member of such corporation or other organization or entity to the issuance of a safe boating certificate.

(2) in the case of an applicant who is or has been a member of a United States Power Squadrons or the United States Coast Guard Auxiliary, the original of the applicant's membership certificate from either organization dated so as to prove membership during any period in the five years preceding October 1, 1992, or a copy thereof, or an original statement written on the organization's letterhead and signed by an authorized member of the organization attesting to such membership during such period.



(i) Any person applying for a safe boating certificate by providing proof that he has successfully completed an approved course in safe boating operation shall provide with his application the original document demonstrating successful course completion, or a copy thereof, or an original statement, written on the letterhead of and signed by an authorized representative of the agency or organization which gave such course, attesting to the existence of records which show that the applicant successfully completed such course.

(j) Any person applying for a safe boating certificate by providing proof that he has successfully passed an equivalency examination shall provide with his application the original document demonstrating that the applicant passed such examination. The commissioner may waive such requirement of proof when verification is obtained from records of the commissioner which show such examination was passed.

[September 8, 1998 (Secretary of State File Number (SOSFN): 5026)]

**Sec. 15-140f-4. Fees for safe boating certificate courses and examinations and for issuing safe boating certificates, temporary safe boating certificates and duplicate certificates.**

(a) There shall be no fee for the safe boating certificate course taught by Department of Environmental Protection personnel or its agents.

(b) The fee for a safe boating certificate equivalency examination shall be twenty-five dollars for any person taking such examination for the first time and shall be ten dollars for each time thereafter.

(c) The fee for issuance of a safe boating certificate or temporary safe boating certificate shall be twenty-five dollars.

(d) The fee for issuance of a duplicate safe boating certificate shall be ten dollars.

(e) Duplicate certificates issued because of name change due to marriage or divorce shall be free of charge.

(f) The fee payable under this section for an equivalency examination shall be paid prior to taking such examination. Fees for issuance of certificates payable under this section shall accompany the application for a safe boating certificate, temporary safe boating certificate or duplicate certificate.

[March 9, 2004 ((SOSFN): 5496)]

**Sec. 15-140j-1. Issuance of certificates of personal watercraft operation.**

Effective November 24, 1992

(a) A certificate of personal watercraft operation required by subsection (b) of Section 15-140j of the Connecticut General Statutes shall be a safe boating certificate as described in subsection (a) of Section 15-140e of the Connecticut General Statutes, with a notation thereon that the person to whom it is issued may operate a personal watercraft. For purposes of the Regulations of Connecticut State Agencies, "personal watercraft" shall be defined as that term is defined in section 15-140j of the Connecticut General Statutes, as amended.

(b) Any person required to obtain a certificate of personal watercraft operation shall apply for such certificate to the Commissioner on a form provided by the Commissioner. The application shall contain the items of information required by subsection (a) of 15-140f-3 of the Regulations of Connecticut State Agencies for issuance of a safe boating certificate. The applicant shall also provide with his application:

(1) the original document demonstrating successful completion of the course specified in Section 15-140j-2 of the Regulations of Connecticut State Agencies, or a copy thereof, or an original statement, written on the letterhead of and signed by an authorized representative of the agency or organization which gave such course, attesting to the existence of records which show that the applicant successfully completed such course; and





personal watercraft operation may complete a combined basic boating and safe personal watercraft handling course approved by the commissioner. Such combined course shall contain all topic areas designated in subdivisions (1), (2) and (3) of subsection (a) of this section and subsection (a) of Section 15-140f-1 of the Regulations of Connecticut State Agencies. Any person who successfully completes the combined basic boating and safe personal watercraft handling course shall also pass a proctored closed book examination given at the conclusion of the course. Such examination shall consist of not less than fifty questions covering all required topic areas. The minimum score to pass such examination shall be eighty percent correct answers.

[March 9, 2004 (Secretary of State File Number (SOSFN): 5496)]

**Sec. 15-140j-3. Fees for certificate of personal watercraft operation courses and for issuing certificates of personal watercraft operation, Temporary Certificates of Personal Watercraft Operation and duplicate certificates.**

Effective November 24, 1992

(a) There shall be no fee for the certificate of personal watercraft operation course taught by Department of Environmental Protection personnel or its agents.

(b) The fee for issuance of a certificate of personal watercraft operation or temporary certificate of personal watercraft operation shall be twenty-five dollars.

(c) The fee for issuance of a duplicate certificate of personal watercraft operation shall be ten dollars.

(d) Duplicate certificates issued because of name change due to marriage or divorce shall be free of charge.

(e) Fees for issuance of certificates and duplicate certificates payable under this section shall accompany the application for a certificate of personal watercraft operation or duplicate certificate.

[September 8, 1998 (Secretary of State File Number (SOSFN): 5026); March 9, 2004 ((SOSFN): 5496)]



Section 270-D:13 Issuance of Safe Boater Education Certificate. Page 1 of 2

# TITLE XXII

## NAVIGATION; HARBORS; COAST SURVEY

### CHAPTER 270-D

#### BOATING AND WATER SAFETY ON NEW HAMPSHIRE PUBLIC WATERS

#### Safe Boater Education

##### Section 270-D:13

##### **270-D:13 Issuance of Safe Boater Education Certificate. –**

I. The commissioner or designee shall issue a safe boater education certificate to a person 16 years of age or older who:

[Paragraph I(a) effective until January 1, 2007; see also paragraph I(a) set out below.]

(a) Passes a safe boater education course approved by the commissioner in accordance with the criteria of the National Association of State Boating Law Administration. The course shall provide a minimum of 8 hours of instruction. The minimum passing grade for the course shall be 70 percent; or

[Paragraph I(a) effective January 1, 2007; see also paragraph I(a) set out above.]

(a) Passes a safe boater education course approved by the commissioner in accordance with the criteria of the National Association of State Boating Law Administration. A classroom course shall provide a minimum of 8 hours of instruction. Passage of a safe boater education course shall require successful completion of a proctored examination administered by a person authorized by the commissioner in accordance with rules adopted by the commissioner. The minimum passing grade for the examination shall be 80 percent; or

(b) Passes a safe boater equivalency examination administered by persons approved to offer boating safety education courses. The minimum passing grade for the examination shall be 80 percent. A certificate issued to a person passing the equivalency examination shall specify that the certificate is issued as evidence of satisfactory completion of a safe boater examination and entitles the holder to operate a vessel on the public waters of New Hampshire.

II. Once issued, the certificate of safe boater education shall be valid for the lifetime of the person and may not be revoked by the department of safety or a court without cause and a hearing in accordance with RSA 541-A.

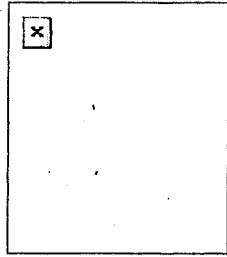
III. The commissioner, or designee, shall replace a lost or destroyed certificate upon written request of the person entitled thereto and payment of the prescribed fee, and such copy shall have the same form and effect as the original.

IV. Any person who successfully completes a safe boater education course or safe boater equivalency examination after reaching the age of 15 shall be issued a safe boater education certificate upon attaining the age of 16.

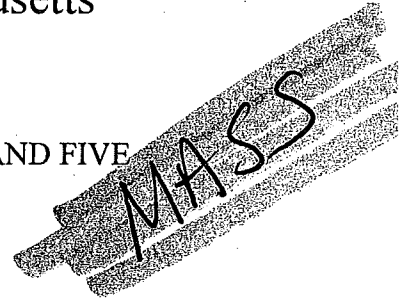


HOUSE..... NO. 4543

The Commonwealth of Massachusetts



IN THE YEAR TWO THOUSAND FIVE



**AN ACT** RELATIVE TO MANDATORY BOATING SAFETY  
EDUCATION

Chapter 90B of the General Laws as appearing in the 2002 Official Edition is hereby amended by adding the following sections:—

Section 39. As used in sections 39 to 45 the following terms shall have the following meanings:—

“Boating Certificate”, a boating safety education certificate issued to a person who has met the established minimum standard of boating safety education competency.

“Non-resident”, a person residing outside Massachusetts, or residing in Massachusetts for a period of less than 6 consecutive months.

Section 40. The director shall establish and implement a boating education program. In establishing such a program the director shall:

1. Set a minimum standard of boating education competency which shall be consistent with the applicable standard established by the National Association of State Boating Law Administrators (NASBLA). The director may update the minimum standard of competency as necessary.
2. Develop a boating education course, designed to meet the minimum standard of competency established pursuant to subsection (1) of this section.
3. Develop a boating education equivalency examination designed to test knowledge which meets the minimum standard of competency established pursuant to subsection (1) of this section.
4. Develop a boating certificate designed to meet the purposes of this act.
5. Establish a one-time fee of not more than \$25 for the boating certificate, and a reasonable fee for a duplicate.

Section 41. A person born on or after January 1, 1988 shall not operate a motorboat on the waters of the Commonwealth, unless such person obtains, beginning on January 1, 2007, a boating certificate as evidence of successful passage of an approved boating safety course or equivalency



examination pursuant to section 40.

A person shall not operate a personal watercraft on the waters of the Commonwealth, unless such person obtains by January 1, 2010, a boating certificate as evidence of successful passage of an approved boating safety course or an equivalency examination pursuant to section 40. Nothing in sections 39 to 42 shall supercede the requirements for operators of personal watercraft established in section 9A and 9B of chapter 90B.

The director may issue a boating certificate to any person at least 12 years of age or older who:

- (a) Shows evidence of having successfully completed a boating safety course approved by the director, or shows evidence of having successfully completed a boating safety equivalency examination approved by the director and
- (b) Pays the established fee for the certificate to the division.

Section 42. A person required to obtain a boating certificate shall possess such certificate when operating a motorboat and shall present such certificate upon the request of a law enforcement officer duly empowered to enforce Chapter 90B. Failure to present a valid certificate or its' equivalent to such a law enforcement officer shall constitute prima facie evidence of a violation of this section.

No person shall alter, forge, counterfeit, or falsify a boating certificate.

No person shall possess a boating certificate that has been altered, forged, counterfeited or falsified.

No person shall loan or permit his/her boating certificate to be used by another person.

No motorboat owner shall permit another person to operate his/her motorboat in violation of the provisions of this act.

A violation of this section shall be punished by a fine of \$50 for a first offense, \$100 for a second offense and \$250 for all subsequent offenses.

Section 43. A person is exempt from the provisions of this act under the following circumstances:

A nonresident, at least 12 years of age, who is temporarily operating a motorboat on waters of the Commonwealth for less than 60 days and complies with his/her state of residence certificate requirements or possesses a Canadian Pleasure Craft Operator's Card; or a person possesses a valid license to operate a commercial vessel issued by the U.S. Coast Guard pursuant to 46 C.F.R., Part 10 or an equivalent license issued by a state or the government of Canada; or a person who owns a motorboat with a new certificate of number shall have 120 days from the issue date, to obtain a boating certificate; or a person who operates a motorboat under training and is accompanied on-board and directly supervised by a competent person 18 years of age or older who holds a valid boating certificate or is exempt pursuant this section.

Section 44. The director may promulgate regulations deemed necessary to implement the provisions of this act.





HOUSE BILL NO. 4543 Page 3 of 3

Section 45. There is to be established on the books of the commonwealth a separate fund to be known as the Boating Education Trust Fund to be expended by the office of law enforcement in the executive office of environmental affairs. Said fund shall be expendable without further appropriation for the purposes of funding the costs associated with the staffing, administration and enforcement of this program pursuant to M.G.L c.90B and other actions related thereto including but not limited to, the purchasing of supplies and advertising. Said trust shall retain all interest earned on sums deposited in the fund. All fees, fines and other revenue collected and related to this program shall be deposited in said fund. The trust fund may receive funds as may be appropriate from time to time, as well as gifts and grants of money or other contributions from any source, public or private and settlements, fines or penalties not designated by law for other specific purposes, to be expended within the purposes of this trust fund.



# Addendum

## # 8



## ***"Quick Phase-In" Education vs. Other Education Policies***

Presented at the **78th Meeting**  
**NATIONAL BOATING SAFETY ADVISORY COUNCIL**

Sunday, October 22, 2006  
Hyatt Regency Crystal City  
Arlington, Virginia

By Harry A. Hogan



This study was conducted for the United States Coast Guard's Office of Boating Safety (available online at [www.uscgboating.org](http://www.uscgboating.org) under "Statistics")



by

Colin Meehan, Potomac Management Group, Inc.  
Harry A. Hogan, SAGE Systems Technologies, L.L.C.

## **Introduction**

### **Is Education Effective?**

- Comparison between
  - Boating Accident Report Database (BARD)
  - National Recreational Boating Survey
- 20%+ discrepancy
  - This suggests educated boaters are more likely to avoid accidents

2002 Operators Involved in Accidents



2002 Boating Public



## **"Quick Phase-In" policies**

- Motorboat operators have a short period of time to comply with laws requiring boating safety classes
- Incrementally phased-in over a few years
  - For example, AL and CT completed 5-year phase-ins
- Other types of State policies
  - Implement a "Date-of-Birth" cut-off (slowly phasing-in education)
  - Target only young operators
  - Target only personal watercraft users

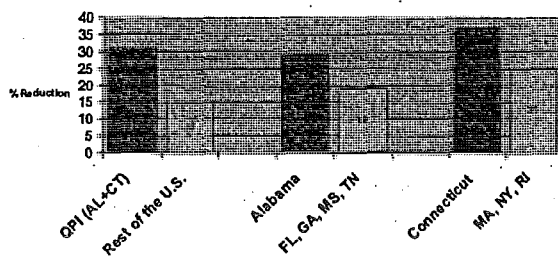
### Why Compare "Quick Phase-In" to Other Policies?

- Nearly all of the States (47 out of 56 States/Territories) have some type of operator education requirement already
  - Is a "Quick Phase-In" education policy the best?
- The "Quick Phase-In" strategy
  - Rapidly targets the majority of a State's boat operators in a short timeframe.
  - From a prevention standpoint, this seems like the best policy.

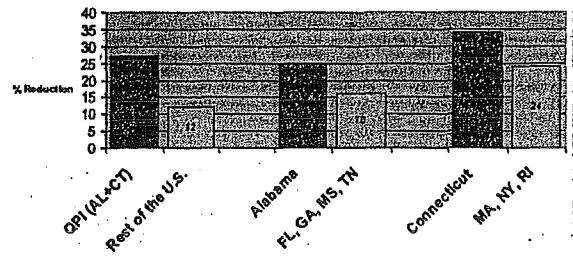
### What did we find?

- Research on education programs in other industries
  - Manner of implementation impacts effectiveness.
- Statistics in the Boating Accident Report Database (BARD), 1995 to 2005
  - When comparing "pre-"(1995-1999) to "post" (2000-2005) phase-in completion
    - AL and CT
      - 31% decline in fatality rates (exceeding the national level of 15%)
      - 27% decline in fatal accident rate (exceeding the national level of 11%)
      - Individually, greater reduction than their combined bordering states, as well
      - Outperformed States grouped by similar policy types
  - When examining the age of fatal accident operators from 1995 to 2005
    - The median age is 40
    - Only 5% of operators were 18 or under

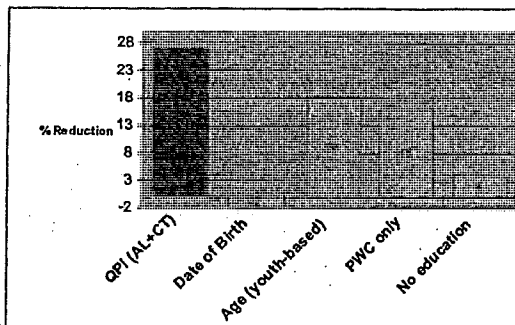
### Percent Reduction in FR Versus Rest of US and Bordering States



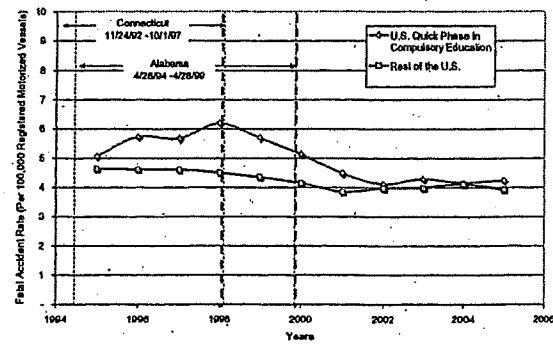
### Percent Reduction in FAR Versus Rest of US and Bordering States



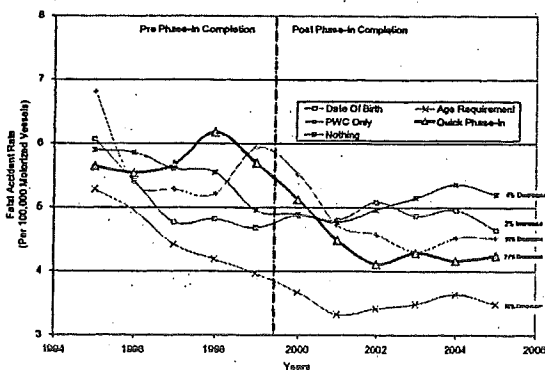
### Percent Reduction in FAR Versus States Grouped by Policy Type



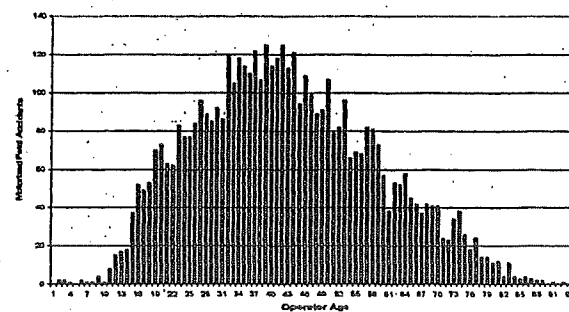
### Fatal Accident Rates (1995-2005) – QPI States Compared to the Rest of the United States (3 Year Rolling Average)



### Fatal Accident Rates (1995-2005) – Grouped by Education Policy Type (3 Year Rolling Average)



### Motorized Fatal Accidents by Operator Age from 1995 through 2005



### Drawbacks of "Date-of-Birth" and "Only Young Operators" Education Policies

- Maryland has the earliest DOB cut-off – 7/1/1972
  - Will not even reach 50 percent of its presumed target audience until 2012.
- Similarly, New Mexico and Tennessee have the latest DOB cut-off year – 1989
  - Boat operators in those States will not be forty years of age until 2029.
- "Only the Young Operators"
  - Smaller impact – only 5% of fatal accident operators were 18 or under

### Highlights from Our Analysis

- Using BARD data
  - Comparing "Pre" QPI completion vs. "Post" QPI completion
    - AL and CT
      - 31% decline in fatality rates (exceeding the national level of 15%)
      - 27% decline in fatal accident rate (exceeding the national level of 11%)
      - Individually, showed a greater reduction than their combined bordering states, as well
      - Outperformed States grouped by similar policy types
  - When examining the age of fatal accident operators from 1995 to 2005
    - The median age is 40
    - Only 5% of operators were 18 or under

### Conclusions

- The results of our study
  - Seem to indicate that States implementing QPI requirements can expect a significant decline in fatality rate.
  - Show the limitations of DOB cut-off policies and policies targeting only young operators.
- Limitations of our study make it difficult to establish that QPI education requirements were the primary cause of the greater fatality rate decline in AL and CT.
- It will be useful to reevaluate this analysis based on the results observed in WA, OR, NH, and NJ.



**A Comparative Analysis of Recreational Boating Policies: "Quick Phase-In"  
Education vs. Other Education Policies**

Conducted for the United States Coast Guard's Office of Boating Safety

Colin Meehan, Potomac Management Group, Inc.

Harry A. Hogan, SAGE Systems Technologies, L.L.C.



# DRAFT COPY

## Acknowledgements

This study was a collaborative effort between Potomac Management Group, Inc. and SAGE Systems Technologies, L.L.C. in association with the United States Coast Guard's Office of Boating Safety. We would like to thank Mr. Jeffrey N. Hoedt and Mr. Bruce Schmidt for their guidance and insight. The contractor support staff of Barry Nobles, Elizabeth Cusumano, Mitchell Cho, Philippe Gwet, Elizabeth Breesman, Rachel Warner, and Nick Guerra provided essential research, analysis, and statistical support. Thanks also need to be given to the State Boating Law Administrators who have continued to provide valuable statistics that enable this type of important investigation.



# DRAFT COPY

## Table of Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>5</b>
<b>INTRODUCTION .....</b>	<b>6</b>
EFFECTIVENESS VARIABILITY AMONG EDUCATION POLICIES .....	6
DATA SOURCES AND ANALYSIS .....	7
<i>Limitations of the Analysis</i> .....	8
<i>Methodology</i> .....	8
<b>DECLINE IN FATAL ACCIDENT RATES – STATISTICAL SIGNIFICANCE AND INTERPRETATION .....</b>	<b>9</b>
<b>FATAL ACCIDENT RATE TRENDS.....</b>	<b>11</b>
<b>HISTORICAL TRENDS IN CONNECTICUT AND ALABAMA VS. THE REST OF THE U.S. ....</b>	<b>13</b>
<b>EDUCATION POLICY AND OPERATOR AGE CONSIDERATIONS .....</b>	<b>14</b>
<b>HISTORICAL EFFECTIVENESS OF DIFFERING POLICIES.....</b>	<b>15</b>
<b>PREDICTING THE TREND FOR FUTURE QUICK PHASE-IN (QPI) REQUIRING STATES.....</b>	<b>17</b>
<b>CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>19</b>
<b>REFERENCES .....</b>	<b>21</b>
<b>APPENDIX A – DECREASE IN FATAL ACCIDENT RATES (1995-1999 PERIOD COMPARED TO 2000-2005 PERIOD).....</b>	<b>26</b>
<b>APPENDIX B – DECREASE IN FATALITY RATES (1995-1999 PERIOD COMPARED TO 2000- 2005 PERIOD).....</b>	<b>28</b>
<b>APPENDIX C – CALCULATION OF STATISTICAL SIGNIFICANCE .....</b>	<b>30</b>
<b>APPENDIX D – TYPES OF STATE BOATING SAFETY EDUCATION POLICIES .....</b>	<b>31</b>
<b>APPENDIX E – POLICY SUMMARIES FOR QUICK PHASE-IN STATES .....</b>	<b>34</b>

## List of Figures

<b>Figure 1. Fatal Accident Rates (FAR) (1995-2005) – QPI States Compared to the Rest of the United States (3 Year Rolling Average) .....</b>	<b>12</b>
<b>Figure 2. FAR (1995-2005) – AL and CT Compared to their Bordering States (3 Year Rolling Average).....</b>	<b>13</b>
<b>Figure 3. FAR (1985-2005) – QPI States Compared to the Rest of the United States (3 Year Rolling Average).....</b>	<b>14</b>
<b>Figure 4. Motorized Fatal Accidents by Operator Age from 1995 through 2005 .....</b>	<b>15</b>
<b>Figure 5. FAR (1995-2005) – Grouped by Education Policy Type (3 Year Rolling Average).....</b>	<b>16</b>
<b>Figure 6. FAR (1995-2005) – QPI States’ Overall Decline in FAR (3 Year Rolling Average).....</b>	<b>18</b>
<b>Figure 7. Prediction of the Future FAR for Oregon and New Hampshire (3 Year Rolling Average).....</b>	<b>19</b>



# DRAFT COPY

## List of Tables

<b>Table 1.</b> Comparison of FAR for Pre/Post Phase-In Completion (AL, CT) .....	10
<b>Table 2.</b> Comparison of Fatality Rates for Pre/Post Phase-In Completion (AL, CT) .....	11
<b>Table 3.</b> Comparison of FAR for Pre/Post Phase-In Completion (Grouped by Education Policy Type) .....	17
<b>Table 4.</b> All States - Decrease in FAR .....	26
<b>Table 5.</b> States Grouped by Education Policy Type - Decrease in FAR .....	27
<b>Table 6.</b> QPI States vs. Bordering States - Decrease in FAR .....	27
<b>Table 7.</b> All States - Decrease in Fatality Rates .....	28
<b>Table 8.</b> States Grouped by Education Policy Type - Decrease in Fatality Rates .....	29
<b>Table 9.</b> QPI States vs. Bordering States - Decrease in Fatality Rates .....	29
<b>Table 10.</b> P-Value Calculation - Decrease in Fatality Rates .....	30
<b>Table 11.</b> Age Requirement and No Education States .....	31
<b>Table 12.</b> Date of Birth, PWC Only, and Combination States .....	32
<b>Table 13.</b> Quick Phase-In and Combination States .....	33





## Executive Summary

In an effort to reduce the number of recreational boating accidents, injuries, and fatalities, many States have implemented various types of education and licensing requirements in recent years. This analysis uses several approaches to compare the States using these policies:

- Literature review of studies concerning the effectiveness of education.
- Analysis of accident data submitted from each State contained in the United States Coast Guard's Boating Accident Report Database (BARD).
- Analysis of State recreational boating education legislation.
- Analysis of the recreational boating education policies of Alabama and Connecticut, which employ a Quick Phase-In (QPI) approach.

Our search of literature on education's effectiveness as an intervention revealed that selection of an appropriate policy for mandating education/licensing and the manner in which it is implemented is vital to its success. The analysis of BARD data from 1995-2005 indicates the national median age of operators using vessels equipped with propulsion machinery who were involved in fatal accidents is forty years of age. Thus, the majority of these operators are not adequately addressed by youth-based policies.

Using an eleven year analysis period that compared the first five years to the last six years (pre versus post phase-in completion), we observed a decline in fatalities between the two periods and tested results for statistical significance. Alabama and Connecticut, who have QPI education requirements, have experienced a 31 percent decline in fatality rates (fatalities per 100,000 registered motorized vessels). This exceeded the national level of 15 percent since 1995. There was a 27 percent fatal accident rate (fatal accidents per 100,000 registered motorized vessels) reduction for these QPI States (AL and CT) versus an 11 percent reduction for the rest of the country. Similarly, the decline in both States individually exceeds those of their combined bordering States. Grouping the States based on policy type showed that over the same period, QPI States experienced a greater reduction in fatality rates than the others..

The results indicate that, following the phase-in period, States implementing QPI requirements may observe a greater reduction in fatalities when compared to the rest of the country. We would expect that such a decline would be more pronounced than that seen from States implementing different education policies. Our analyses also show that the decline in fatality rates for that QPI State would be greater than their bordering States. In the coming years, as more QPI periods are completed, it will be useful to reevaluate this analysis based on the results observed in Washington, Oregon, New Hampshire, New Jersey as well as States which adopt different education requirements.



## Introduction

The 2002 National Recreational Boating Survey conducted for the U.S. Coast Guard shows that 37.9 percent of propeller driven boat operators and 30.7 percent of water jet driven boat operators reported having taken a boating safety course (Strategic Research Group, 2003). In the same year, only 11.1% of operators involved in fatal accidents reported having received formal boating safety education. This snapshot shows that in 2002 a disproportionately larger number of boat operators who did not complete a boating education course were involved in fatal accidents. We have seen recreational boating fatalities [ associated with vessels equipped with propulsion machinery ] decline almost 50 percent from 1981 to 1995. However, over the past eleven years, fatalities involving these same type of vessels have hovered between 500 and 650, with a good deal of annual variation.

As a result of such statistics and trends, most states and territories (47 out of 56) have pursued motorboat operator education requirements as a way to reduce the current level of fatalities. Historically, there have been no requirements for recreational vessel operators to demonstrate: (1) their knowledge of safe boating practices or (2) their application of the regulatory and statutory rules that govern the safe operation and navigation of their vessel. The belief is that a more aware and informed recreational boating population is more likely to take safety precautions while on the water and thus, reduce their risk of being in a fatal accident.

In this analysis, we grouped policies together based on similarities in their manner of implementation and the population affected. Our primary categories are requirements based on: (1) the operator's Date of Birth (DOB); (2) Operator Age; (3) the use of a Personal Watercraft (PWC); and (4) requiring operators to obtain an education certificate within a short period of time. Our analysis suggests that this last approach (4) will be the most effective in reducing the number of fatal accidents by rapidly targeting a wider age range of operators.

The structure of these Quick Phase-In (QPI) approaches has been relatively similar across the States that have implemented them, with each year of the phase-in period covering a large set of ages. The primary variation has been the length of time over which education requirements are phased-in, for instance, Alabama and Connecticut have completed their five year phase-in programs, while other States have chosen slightly longer phase-in periods that are still in progress. Considerations such as the national age distribution of motorized vessel fatal accidents – only 5 percent of operators were between ages two and eighteen – along with other information leads us to believe that QPI education requirements will be the most effective in reducing fatalities among States. Using eleven years of detailed data, our analysis and results support this hypothesis.

## ***Effectiveness Variability among Education Policies***

Different types of mandatory education/licensing programs for recreational boaters can have varying results. As previously stated, we believe that QPI requirements are more effective than other formats of mandatory education. Studies from other



activities/industries have shown the importance of properly selecting and implementing education policies. The studies we examine below had a range of conclusions about the effectiveness of education on operator behavior. Differences in the subject and manner of implementation underscore the importance of matching the right education policy with the right goal.

Automobile driver education and licensing policies have not proven to be wholly successful. Scientific studies were not able to show that basic driver training was an effective safety measure, likely due to a failure in adequately addressing age/experience factors that cause youths to be at a higher risk of accidents (Mayhew and Simpson, 2002). Evidence does suggest that provisional licensing and graduated licensing programs, that allow teenaged drivers to gain experience before driving unsupervised, are effective at reducing teen crash risk (Masten, 2005). One study concluded that visually-impaired older drivers may benefit from educational interventions by reducing their driving exposure and increasing their avoidance of visually challenging driving situations (Owsley, Stalvey, and Phillips, 2003). Thus, it appears that automobile driver education has the potential to be effective, provided it is correctly implemented.

Other studies on education policies for diverse segments of public safety have shown a variety of results. A National Institute for Occupational Safety and Health (NIOSH) study concluded that worker training policies which provide opportunities for applying the knowledge gained through incentives or other means produce the best results (Cohen and Colligan, 1998). An Australian study showed that safety classes did not reduce the risks of bicycle injury in children and may have produced harmful effects in some children by encouraging risk taking; suggesting there is a need to monitor the implementation of the course more closely (Carlin, Taylor, and Nolan, 1998). Evaluation of pedestrian safety education programs revealed that they can change observed road crossing behavior, but the overall results varied considerably (Duperrex, Bunn, and Roberts, 2002). Again, it appears that education has the potential to be effective, but the manner in which the policy is implemented can impact the results.

All of these education programs from other activities/industries support the need for proper education program selection. We believe that the varying results reported in the available literature can be compared to the variation in mandatory boat operator education programs across the United States and its Territories. Essentially, it is not good enough to implement any type of education/licensing program. In order to achieve the desired end state, the appropriate policy for mandating education/licensing must be selected.

## ***Data Sources and Analysis***

In this analysis, we have worked primarily with the U.S. Coast Guard's Boating Accident Report Database (BARD) System. The Coast Guard believes that nearly all fatal recreational boating accidents are captured by the BARD System. According to the Code of Federal Regulations, Title 33, Part 173.55:

- (a) The operator of a vessel shall submit the casualty or accident report prescribed in Sec. 173.57 to the reporting authority prescribed



in Sec. 173.59 when, as a result of an occurrence that involves the vessel or its equipment:

- (1) A person dies; or
- (2) A person is injured and requires medical treatment beyond first aid; or
- (3) Damage to vessels and other property totals \$2,000 or more or there is a complete loss of any vessel; or
- (4) A person disappears from the vessel under circumstances that indicate death or injury.

In addition to compiling boating casualty statistics, the Coast Guard's Office of Boating Safety annually compiles statistics on registered boats that are equipped with propulsion machinery in the fifty States, five Territories and the District of Columbia. All States and Territories include the registration of such vessels in their respective systems. We have utilized boat registration data in this analysis to provide a level field among States that had different magnitudes of fatalities as a result of larger or smaller boating populations. Since education policies focus on motorized vessels, whenever possible in our analysis, we have removed non-motorized vessels from the dataset. Registration data from 1996 through 2005 are detailed enough to allow removal of non-motorized vessels.

## **Limitations of the Analysis**

The limitations of our analysis can be grouped into three primary categories: the data source, variables and the sample size. BARD is the only viable and credible data source for recreational boating fatalities, but it is not random and only represents the set of reported negative outcomes (i.e. fatalities and fatal accidents) associated with the use of recreational boats. Our study is also limited by the variables, such as demographics, geology, weather, and policy differences among the fifty-six (56) States and Territories. We also did not have data regarding operator compliance for QPI requirements or any of the education policies. Finally, only a few States had fully phased in requirements during the eleven year period of this analysis, creating a small sample size.

## **Methodology**

To provide a thorough analysis based on the available BARD data, we have employed several methods of analysis. Only looking at the beginning and ending-years of the analysis would not allow for a thorough investigation of policy effects over time, therefore, we used multiple-year periods for comparison. Separating the eleven years of data into a five year pre phase-in completion period versus a six year post phase-in completion period, we have observed the decline in fatalities between the two periods and tested the results for statistical significance. In addition we used rolling averages over the eleven year time period to develop trend analyses looking at the trajectory of State





fatality rates. In both analyses, QPI States were compared to the rest of the country, their bordering States, and States aggregated by policy type.

## Decline in Fatal Accident Rates – Statistical Significance and Interpretation

To find an observable effect of QPI requirements on Fatal Accident Rates (FARs), we used the U.S. Coast Guard's Boating Accident Report Database (BARD) as our primary data source. Since most education requirements apply only to motorized recreational vessels, we removed non-motorized vessels from the data set. Connecticut's QPI period was completed in late 1997 and Alabama's was completed in early 1999. Oregon and New Hampshire are still in the process of implementing QPI requirements, which are scheduled to be completed in 2008 and 2009 respectively. We divided the data set into the approximate "pre" (1995-1999) and "post" (2000-2005) QPI completions for Alabama and Connecticut (Table 1). We established FARs by using the number of annual motorized vessel fatal accidents reported in BARD per 100,000 registered vessels, excluding non-motorized vessels:

$$\left( \frac{\text{motorized vessel fatal accidents}}{100,000 \text{ motorized vessels}} \right) \Rightarrow FAR$$

Registered vessels are reported by States annually, data from 1996 and later is detailed enough to isolate the motorized vessel data. We chose to use fatal accidents as the representative statistic to better focus on the effect of QPI requirements through operator behavior.

When analyzing the QPI States from 1995 through 2005 (AL and CT aggregated), we observed a larger reduction in the FARs compared to the rest of the nation. Similarly, a larger reduction was also apparent when comparing Alabama and Connecticut to their neighboring States. Table 1 (below) compares average FARs from the pre phase-in completion to the post phase-in completion on national and regional levels:

$$100 - \left( \frac{\text{average FARs from 2000 to 2005}}{\text{average FARs from 1995 to 1999}} \right) \times 100 = \% \text{ reduction in FARs}$$



**Table 1.** Comparison of Fatal Accident Rates for Pre/Post Phase-In Completion (AL, CT)

Quick Phase-in vs. All Other States	Per Hundred Thousand Registered Motorized Vessels*			Average Annual Registered Motorized Boats
	Avg. 1995-1999 Fatal Accident Rates	Avg. 2000-2005 Fatal Accident Rates	% Reduction in Fatal Accident Rates	
QPI	5.7	4.2	27%	363,834
Rest of U.S.	4.5	4.0	15% Worse than QPI**	11,646,545
Alabama	7.0	5.3	25%	260,509
MS, FL, GA, TN	5.6	4.7	9% Worse than AL**	1,680,447
Connecticut	2.4	1.6	34%	103,325
NY, MA, RI	3.4	2.6	10% Worse than CT	692,467

\* 1995 includes all boats registered

\*\* Indicates statistically significant results

As noted in Table 1, the sizeable reduction in the FAR of the QPI group (AL and CT) relative to the rest of the country was statistically significant. Likewise, Alabama appeared to show a statistically significant reduction in its FAR relative to its neighboring States. Connecticut did not show statistical significance in FAR changes relative to its neighbors due to the large annual fluctuation in FARs; particularly in 1998 (*Appendix A contains tables displaying the decrease in fatal accident rate*).

Along with the FAR (the number of accidents resulting in any fatalities per 100,000 vessels) we analyzed Fatality Rates (FR) (the total number of fatalities per 100,000 vessels). As illustrated in Table 2, the FRs were slightly higher than the FARs from Table 1, given that more than one fatality can occur per fatal accident (*Appendix B contains tables displaying the decrease in fatality rate*). The difference in reductions between QPI and non-QPI States is similar to that found in Table 1 (*Appendix C contains a table displaying the calculation of statistical significance*).



**Table 2.** Comparison of Fatality Rates for Pre/Post Phase-In Completion (AL, CT)

	Per Hundred Thousand Registered Motorized Vessels*		
	Avg. 1995-1999 Fatality Rate	Avg. 2000-2005 Fatality Rate	% Reduction in Fatality Rates
<b>QPI</b>	6.5	4.5	31%
<b>Rest of U.S.</b>	5.3	4.5	<b>16% Worse than QPI**</b>
<b>Alabama</b>	7.8	5.6	29%
<b>FL, GA, MS, TN</b>	6.5	5.2	<b>10% Worse than AL**</b>
<b>Connecticut</b>	3.0	1.9	37%
<b>MA, NY, RI</b>	4.2	3.1	<b>12% Worse than CT</b>

\* 1995 includes all boats registered

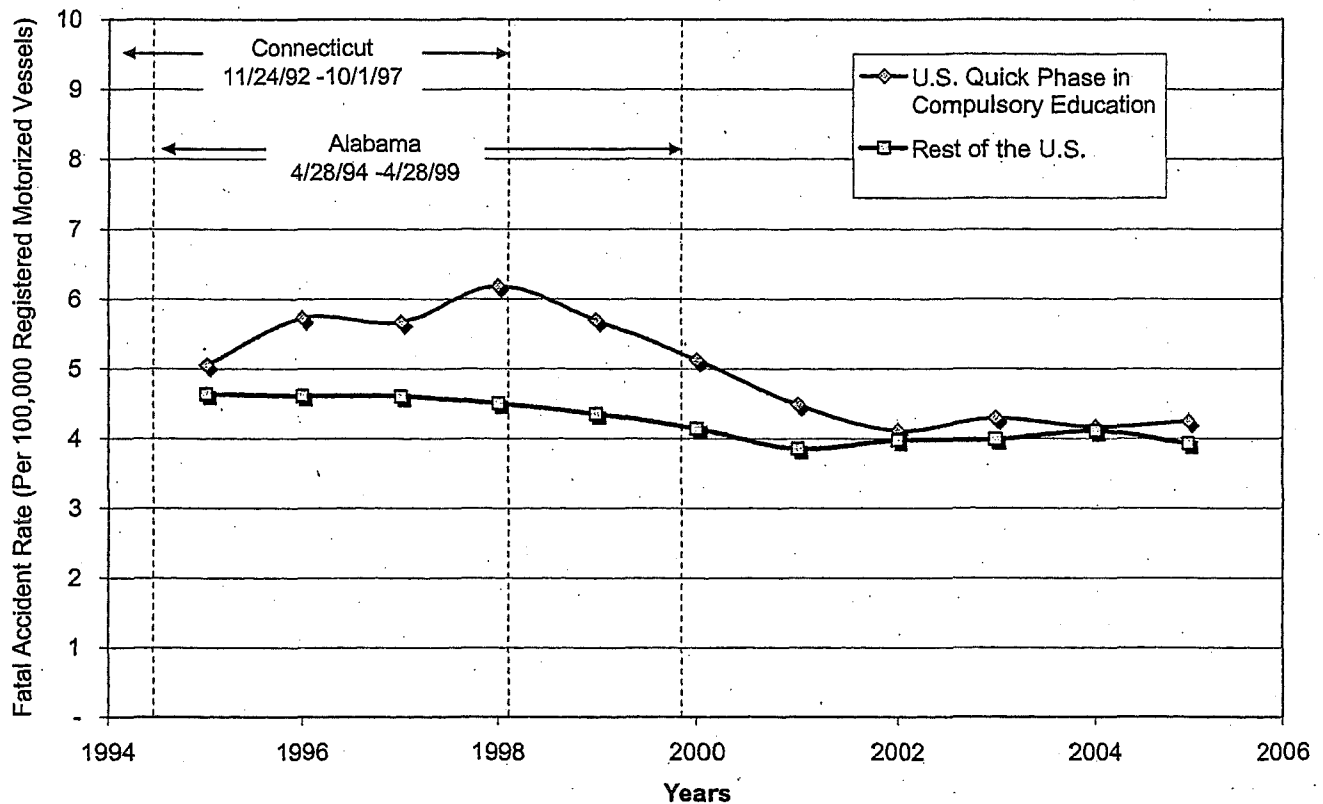
\*\* Indicates statistically significant results

## Fatal Accident Rate Trends

Using FAR (fatal accidents per 100,000 registered vessels), we plotted the eleven year period of 1995 through 2005 for Alabama, Connecticut, and all other U.S. States. We used a three year rolling average to display a smoother trend that visually assists in comparisons by averaging each year with the two years prior to it before plotting the resultant value on the graph. As shown in Figure 1, following a spike in 1998 driven by an abnormally high number of fatal accidents, AL and CT showed an overall decrease in FAR through the remaining years of the study. This decline corresponds with the end of the QPI period for both States, it also appears to be pronounced and sustained relative to the FAR for the rest of the country.



**Figure 1. Fatal Accident Rates (1995-2005) – QPI States Compared to the Rest of the United States (3 Year Rolling Average)**

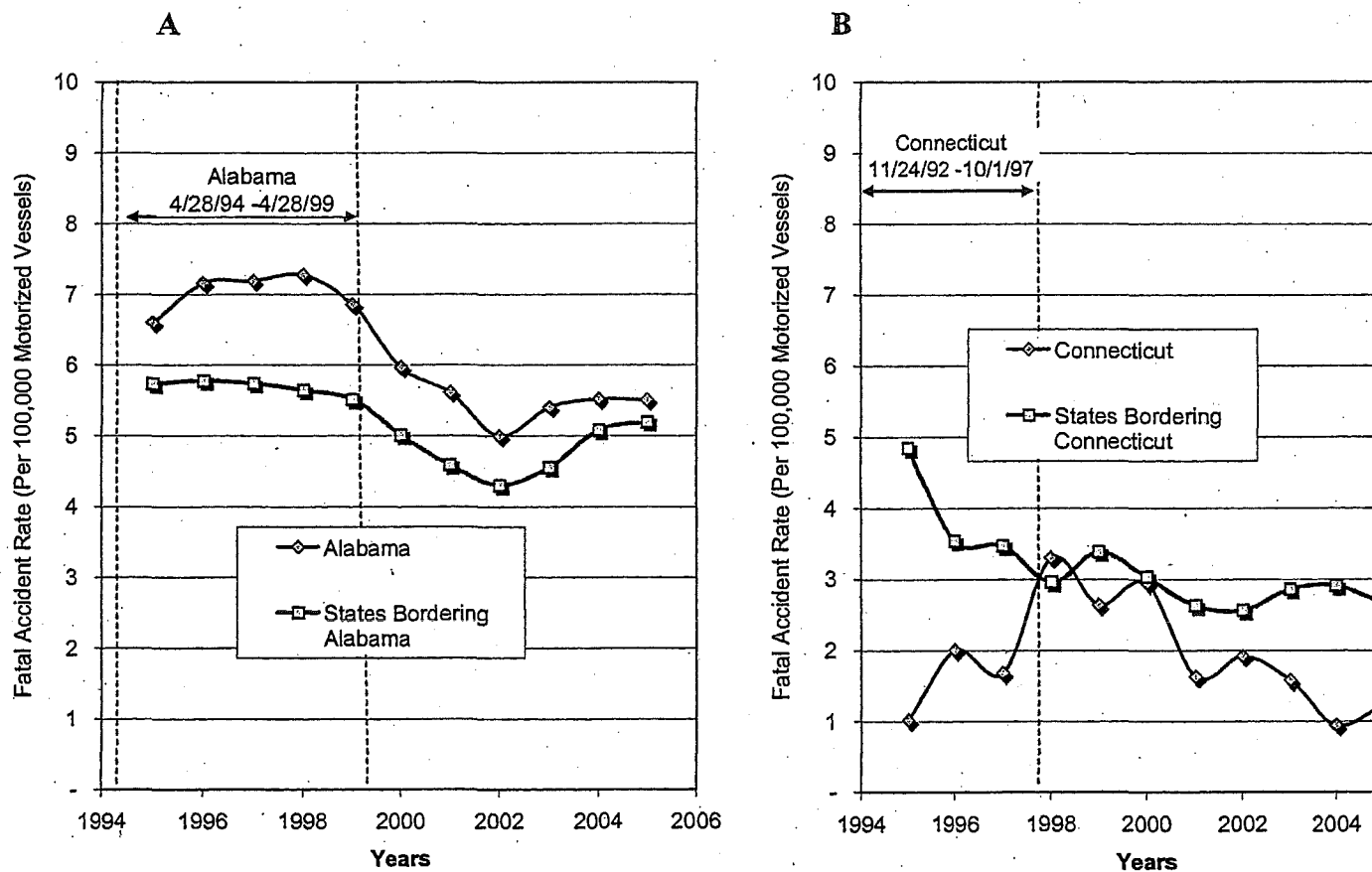


We also plotted the three year rolling average for both Alabama and Connecticut on the same graph as the three year rolling average of their neighboring States (Figures 2A and 2B). In Figure 2A, Alabama follows a pattern similar to the States bordering it, suggesting that some factors affecting the FAR are regionally influenced. From Table 1 we can see that Alabama has managed to narrow the gap with its bordering States, reducing its FAR by 10% more than the other States. Figure 2B shows that Connecticut's FAR trend did not match that of its bordering States, primarily because the low number of motorized vessel fatal accidents in CT leads to a large variance from year to year in the FAR. The chart also shows CT's FAR trend increased through 1998 before experiencing a pronounced and sustained decline with some of the annual variation observed throughout CT's timeline. The States bordering Connecticut showed a FAR decline, but it was neither sustained nor as great as either of the QPI States. From these charts we are able to conclude that on a regional level, the two States with QPI requirements (AL and CT) over the last five years have seen a greater and more sustained reduction in fatal accidents relative to their neighboring States.





**Figure 2. Fatal Accident Rates (1995-2005) – AL and CT Compared to their Bordering States (3 Year Rolling Average)**



### Historical Trends in Connecticut and Alabama vs. the Rest of the U.S.

To establish long term trends and differences between QPI States (AL and CT) and the rest of the U.S., we have taken historical fatal accident data from the USCG Annual Boating Statistics Reports dating back to 1981. Figure 3 shows the FAR trends from 1985 through 2005 as a three year rolling average. There was not enough detail in the Annual Boating Statistics Reports prior to 1995 to exclude non-motorized vessel data from this analysis. A comparison of the trends in the latter half of Figure 3 to the QPI trends excluding motorized vessels (Figure 1) established that while the magnitude grew when non-motorized vessels are included the trend changed very little, if at all. This implies, as expected, that any impact on the FAR has an even greater impact on the FR, reducing total fatalities by a higher percentage.



**Figure 3. Fatal Accident Rates (1985-2005) – QPI States Compared to the Rest of the United States (3 Year Rolling Average)**

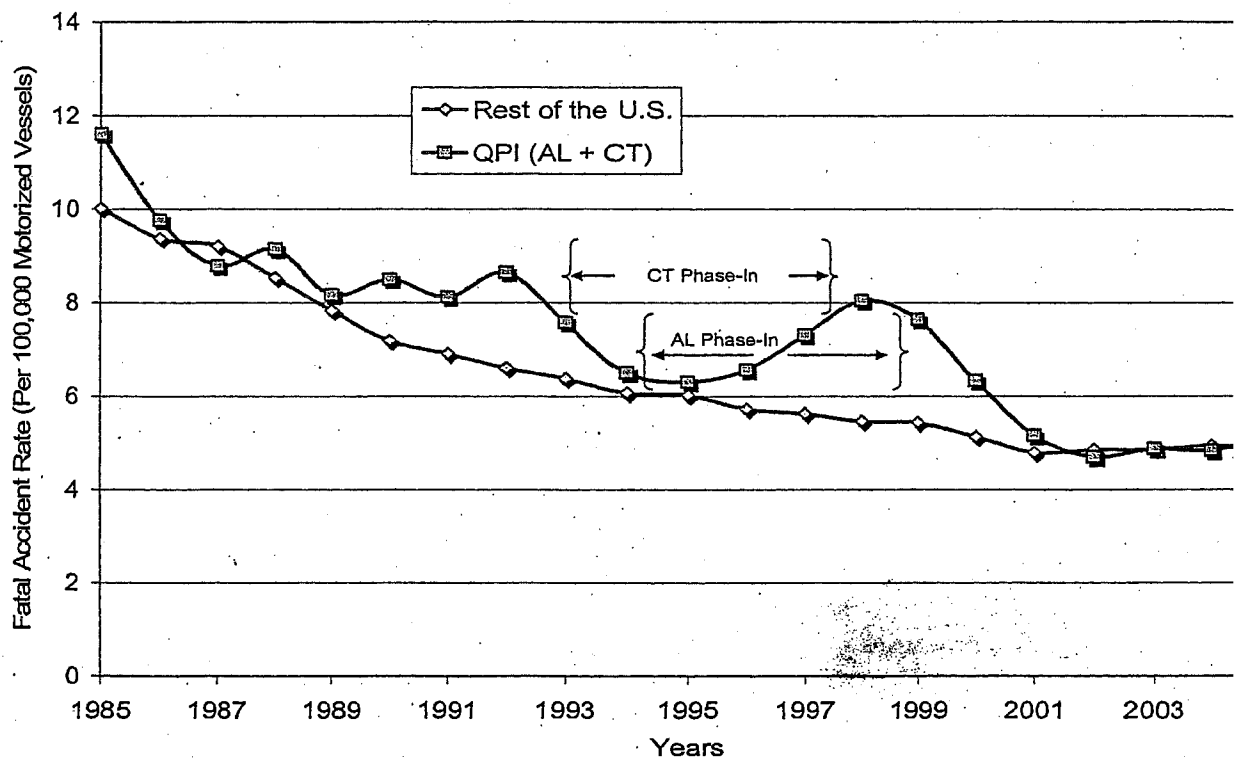


Figure 3 shows that from the late 1980's through 1992 (the first year of Connecticut's QPI program), the FAR for the QPI States remained between eight and nine, declining only slightly. During this period the rest of the U.S. experienced a steady decline in their FAR, indicating that CT and AL were performing more poorly than the rest of the country. A pronounced decline in the QPI States relative to the U.S. followed for the next 3 years as both Alabama and Connecticut began phasing in their education requirements. In 1996 the FAR began an upward trend that lasted until 1998. Connecticut and Alabama requirements were completely phased in by late 1997 and early 1999 respectively; around the same time the FAR began to decline. This decrease – 1998 to 2001 – was more pronounced than the overall U.S. downward trend and the FAR seems to have stabilized at a lower rate since 2001.

## Education Policy and Operator Age Considerations

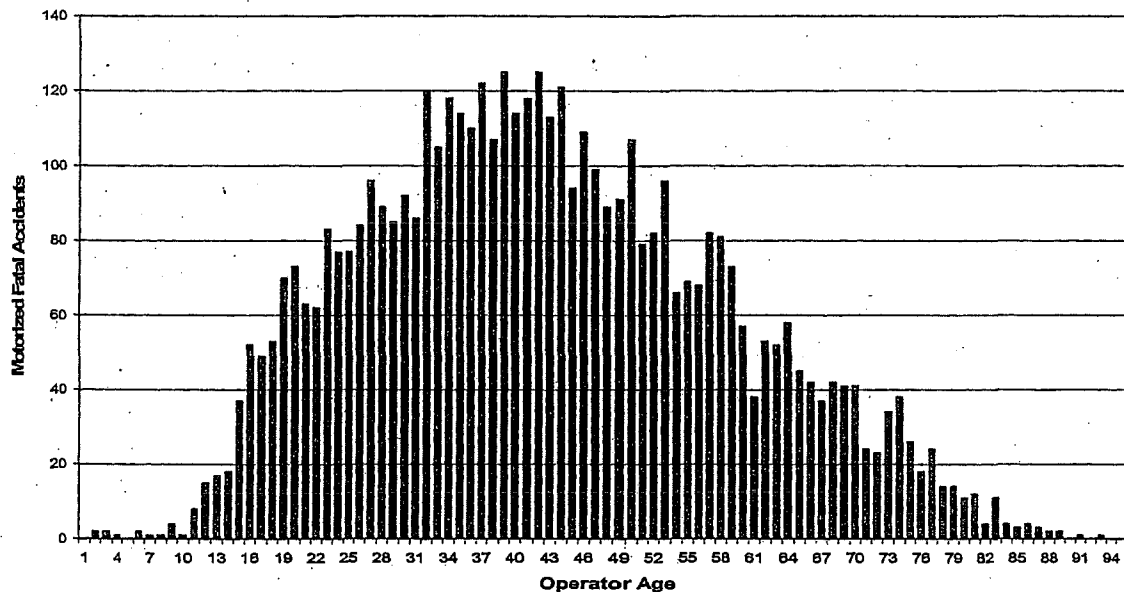
The primary advantage of QPI requirements is that they target wide ranging age of boat operators over a short period of time. By contrast, there are seventeen States that have a youth-based Operator Age requirement and fourteen States that have a DOB cut-off for mandatory education. The youth-based Operator Age requiring States generally set a range – i.e. twelve to seventeen year olds – for which education is mandatory. The



DOB cut-off policies establish a date after which anyone born will require boating safety education (*Appendix D contains tables displaying types of State boating safety education policies*).

Figure 4 displays the total number of recreational motorized vessel accidents involving a fatality by the operator's age from 1995 through 2005. Nationally, the median age of operators involved in a fatal accident is forty years of age. This means that in approximately 50 percent of the fatal motorized vessel accidents, the operator was over the age of forty. Thus, the seventeen States with youth-based Operator Age requirements, that also have a similar median age, are not reaching the majority of boaters involved in fatal accidents.

**Figure 4. Motorized Fatal Accidents by Operator Age from 1995 through 2005**



The fourteen States DOB cut-off will have a long wait before they begin reaching boaters that are forty years of age; consequently, they are delaying the intervention. For instance, Maryland has the earliest DOB cut-off – 7/1/1972 – meaning that Maryland will not even reach approximately 50 percent of its presumed target audience until 2012. Similarly, New Mexico and Tennessee have the latest DOB cut-off year – 1989 – as a result the boat operators in those States will not be forty years of age until 2029. Thus, the main drawbacks of education programs that do not require a QPI for all ages are either a failure to address the majority of operators or the delay that occurs in educating the wide ranging age group of operators who are involved in fatal accidents.

## Historical Effectiveness of Differing Policies

Grouping States by their education policies, we have done an analysis similar to the regional analyses discussed earlier, with the trends shown in Figure 5 verifying the conclusions above. Clearly the QPI States (AL and CT) have the highest reduction in

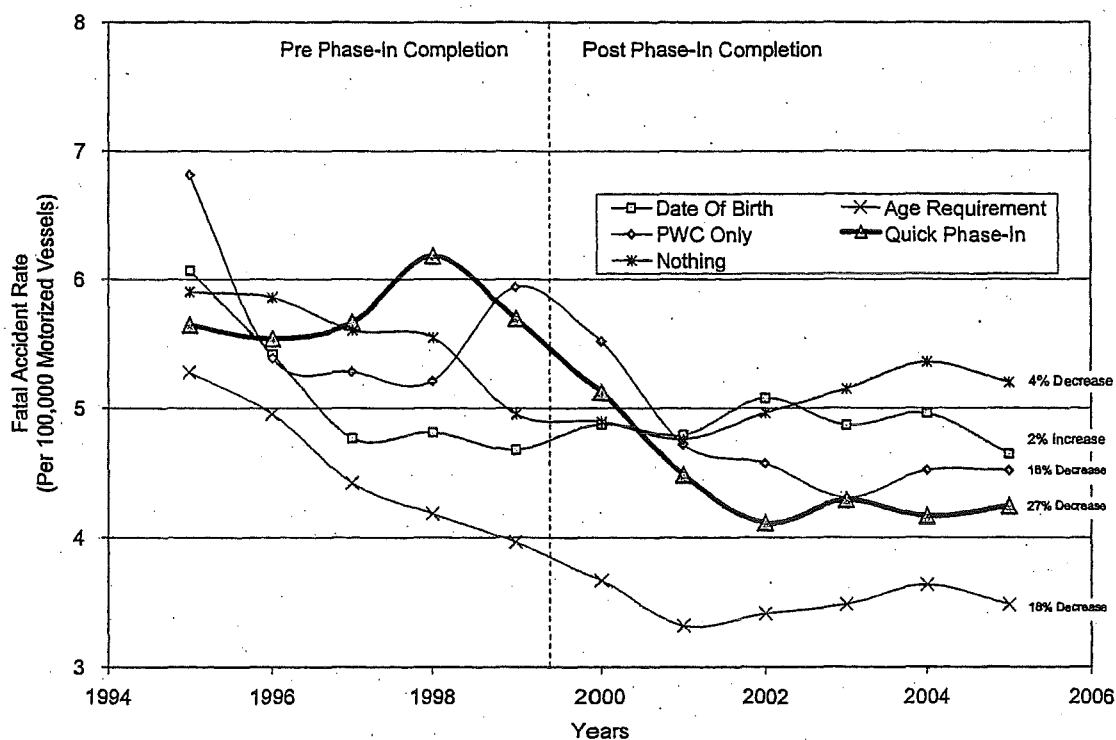


FAR, beginning the eleven year period with the second highest FAR on average for the first five years and dropping to the second lowest FAR by the end of the analysis period.

While States with Operator Age Requirement policies have a lower FAR in the later years, they had a similarly low FAR in the earlier years, before policies for most States had come into effect. In addition, the smaller reduction and recent rise in FAR suggests that States with QPI policies may soon achieve a FAR lower than those with Operator Age Requirement policies.

Although States pursuing only PWC policies did see some FAR reduction over time, it is not on the scale of QPI States. Moreover, as shown below, the variance in annual FAR has made determining a trend for this group particularly difficult. The States with Date of Birth policies show little or no real decline over the eleven year span, and those States with no education policy mostly follow the national trend, though at a higher average FAR. *(As previously mentioned, Appendix D contains tables displaying types of State boating safety education policies).*

**Figure 5. Fatal Accident Rates (1995-2005) – Grouped by Education Policy Type (3 Year Rolling Average)**



A statistical analysis of these trends, shown below in Table 3, further illustrates our conclusions derived from Figure 5. The analysis indicates that for States with Date of Birth, Operator Age Requirement or no educational policies, the trends that we observe are statistically significant. Unfortunately, as we can see from Figure 5, the variance in the FAR for States with PWC policies prevents us from drawing similarly meaningful





conclusions. In addition Table 3 shows quantitatively the difference in FAR reductions between States with different types of education policies. This difference shows once again that States with QPI requirements (AL and CT) have experienced a much larger reduction over the last eleven years than States with other education policies.

**Table 3. Comparison of Fatal Accident Rates for Pre/Post Phase-In Completion  
(Grouped by Education Policy Type)**

Quick Phase-In vs. All Other States	Per Hundred Thousand Registered Motorized Vessels*		
	Avg. 1995-1999 Fatal Accident Rates	Avg. 2000-2005 Fatal Accident Rates	% Reduction in Fatality Rates
Quick Phase-In	5.70	4.18	27%
Date Of Birth	4.74	4.86	-2% (29% Worse than QPI**)
Age Requirement	4.20	3.44	18% (9% Worse than QPI**)
PWC Only	5.40	4.55	16% (11% Worse than QPI)
No Education Policy	5.30	5.08	4% (23% Worse than QPI**)

\* 1995 includes all boats registered

\*\* Indicates statistically significant results

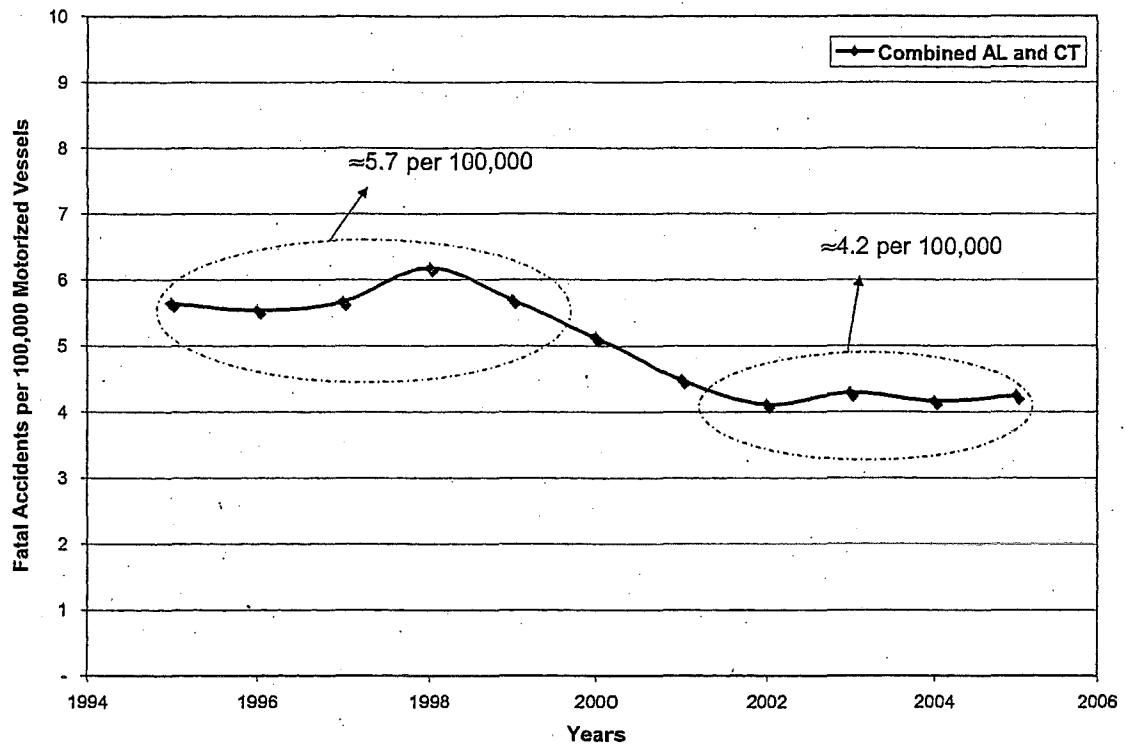
## Predicting the Trend for Future Quick Phase-In (QPI) Requiring States

Earlier in this analysis, we established that States which have elected to implement a QPI requirement have shown a greater improvement in FAR when compared to the rest of the United States. In this discussion, we use Alabama and Connecticut as models to predict what other States with QPI requirements can expect in the future. One assumption is that QPI requirements are the primary factor in the decline of the FAR for Alabama and Connecticut. Another assumption is that Alabama and Connecticut are following a trend that other States would also follow if they implemented QPI requirements. Figure 6 presents the combined three year rolling average of Alabama and Connecticut, portraying what States seeking to implement QPI requirements could expect, given the aforementioned assumptions.

Figure 6 shows that during the QPI period FAR remained level and even rose somewhat, likely due to normal yearly fluctuations. After the QPI period was complete (1998/1999), FAR declined and then leveled off at a lower FAR. The overall decline in FAR represented a decrease in approximately 1.5 fatal accidents per 100,000 registered motorized vessels and this represents a 25 percent decline in FAR. Therefore, jurisdictions that plan on implementing QPI requirements could first expect normal fluctuations in the FAR. After the QPI period, the FAR would decline for a few years before leveling off at a value that is approximately 25 percent lower.



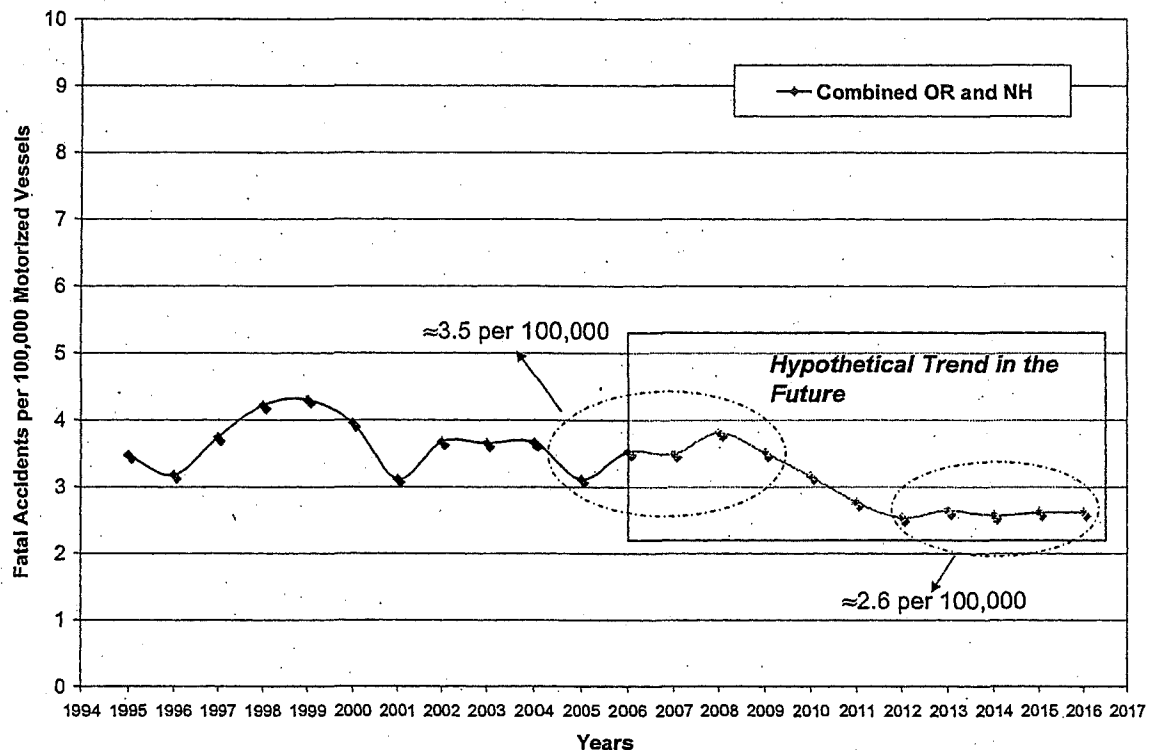
**Figure 6. Fatal Accident Rates (1995-2005) – QPI States' Overall Decline in FAR (3 Year Rolling Average)**



Oregon and New Hampshire will be interesting States to observe during the next ten years. New Hampshire's mandatory QPI education requirement began in 2002 and Oregon's started in 2003. They are both nearing the completion of the QPI period (2008 and 2009) and could provide support for the discussion above, if their FAR starts declining in the years thereafter. Figure 7 illustrates what type of decline would be expected if Oregon and New Hampshire followed the same trend as Alabama and Connecticut.



**Figure 7.** Prediction of the Future FAR for Oregon and New Hampshire (3 Year Rolling Average)



## Conclusions and Recommendations

Given the limitations of our dataset and the study period, it would be difficult to determine whether QPI requirements implemented in CT and AL were the primary cause of their precipitous decline in fatalities over the last six years. However, we have been able to show that AL and CT have fared better in terms of fatalities over the last eleven years than other States in regional, policy-based, and national comparisons. Among the same groups the eleven year trend analyses led to similar findings.

Overall, the results seem to indicate that States implementing QPI requirements can expect a steep decline in fatalities upon completion of the phase-in. Based on our research, we would expect that such a decline would be more pronounced than that seen from States implementing different education policies. In addition, our analyses show that the decline would be greater than the national and regional trends for that state.

In the coming years, as more QPI requirements are completed, it will be useful to reevaluate this analysis based on the results observed in WA, OR, NH, NJ as well as States which adopt different education requirements (*Appendix E contains policy summaries for QPI States*). The continued collection of data in the BARD database will be crucial to the ongoing evaluation of the States above as well as CT and AL. At this time, a thorough Recreational Boating Survey is planned, which will potentially provide another useful resource in future analysis. Data such as “hours on the water”, formal



## DRAFT COPY

boating education received for which a certificate was earned, and experience will allow for a non-biased dataset in the future which includes positive results (i.e., boat operators who received and did not receive education who were NOT in an accident, hours in which no boating accidents occurred) as well as negative.





## References

- 1) *Age of Operator (Title 58C §91.1)*. Retrieved May 23, 2006, from The Pennsylvania Code Online Web site:  
<http://www.pacode.com/secure/data/058/chapter91/chap91toc.html>
- 2) *Boat Alabama Certification Manual*. Retrieved: April 7, 2006, from Boat Ed Web site:  
[http://boat-ed.com/al/al\\_specific\\_images/pdfs/AL\\_CM\\_2003\\_OL.pdf](http://boat-ed.com/al/al_specific_images/pdfs/AL_CM_2003_OL.pdf)
- 3) *Boating Education*. Retrieved: April 7, 2006, from Oregon State Marine Board Web site: <http://www.boatoregon.com/Education/>
- 4) *Boater Education Course Requirement for Certain Persons (§31.109)*. Retrieved May 23, 2006, from Texas Legislature Online: Statutes Web site:  
<http://www.capitol.state.tx.us/statutes/docs/PW/content/html/pw.004.00.000031.00.htm#31.107.00>
- 5) *Boating Education Programs Frequently Asked Questions*. Retrieved: May 23, 2006, from New Hampshire Department of Safety- Division of Safety Services Web site:  
<http://www.state.nh.us/safety/divisions/ss/boatinged/boatedfaq.html>
- 6) *Boating License Online- Official Boating License and Boaters Safety Course for New Hampshire*. Retrieved May 23, 2006, from Boat Ed Web site: <http://www.boat-ed.com/nh/index.htm>
- 7) *Boating in Maryland*. Retrieved April 7, 2006, from Maryland Department of Natural Resources Web site: <http://www.dnr.state.md.us/boating/safety/require.html>
- 8) *Boating Safety Act (§75-13.3)*. Retrieved May 24, 2006, from North Carolina General Statutes Web site:  
[http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/ByChapter/Chapter\\_75A.html](http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/ByChapter/Chapter_75A.html)
- 9) *Boating Safety Education (Chapter 32-1139)*. Retrieved May 24, 2006, from the Kansas Legislature Web site: <http://www.kslegislature.org/legsrv-statutes/getStatuteInfo.do;jsessionid=7210C51066762350B83E822ABB80B3C2>
- 10) *Boater Safety Education (RS 34:851.36)*. Retrieved: May 23, 2006, from Louisiana Revised Statues Web site: <http://www.legis.state.la.us/lss/lss.asp?doc=181441>
- 11) *Boating Safety Certificates (Chapter 30.678)*. Retrieved May 24, 2006, from the Wisconsin Statutes Web site: [http://folio.legis.state.wi.us/cgi-bin/om\\_isapi.dll?clientID=29003666&infobase=stats.nfo&softpage=Browse\\_Frame\\_Pg](http://folio.legis.state.wi.us/cgi-bin/om_isapi.dll?clientID=29003666&infobase=stats.nfo&softpage=Browse_Frame_Pg)



12) *Boating Safety Education (§8-712.2)*. Retrieved: May 23, 2006, from Maryland Code Online Web site:

<http://198.187.128.12/maryland/lpext.dll/Infobase/421ee/4428f/44503/44662?f=hitlist&q=8-712.2&x=Advanced&opt=&skc=8000000300044663&c=curr&gh=1&2.0#LPHit1>

13) *Boating Safety Education; Rules (23 V.S.A. §3305.b)*. Retrieved May 24, 2006, from The Vermont Statutes Online Web site:

<http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=23&Chapter=029&Section=03305b>

14) *Boat Registration and Safety Act (625 ILCS 45/5-18)*. Retrieved: May 8, 2006, from the Illinois General Assembly: Illinois Compiled Statutes Web site:

<http://www.ilga.gov/legislation/ilcs/ilcs4.asp?DocName=062500450HArt%2E+V&ActID=1826&ChapAct=625%26nbsp%3BILCS%26nbsp%3B45%2F&ChapterID=49&ChapterName=VEHICLES&SectionID=60167&SeqStart=16000&SeqEnd=18700&ActName=Boat+Registration+and+Safety+Act%2E>

15) *Boating and Water Safety on New Hampshire Public Waters (Title XXII Chapter 270-D)*. Retrieved April 26, 2006, from the New Hampshire General Court Web site:

<http://www.gencourt.state.nh.us/rsa/html/XXII/270-D/270-D-10.htm>

16) Carlin, J.B., Taylor, P. and Nolan, T. (1998). School based bicycle safety education and bicycle injuries in children: a case-control study. *Injury Prevention*, 4, 22-27.

17) *Certificate of Boating Safety Education (Section 46-22-9.8)*. Retrieved May 24, 2006, from the State of Rhode Island General Laws Web site:

<http://www.rilin.state.ri.us/Statutes/TITLE46/46-22/46-22-9.8.HTM>

18) Cohen, A. and Colligan, M.J. (1998). *Assessing Occupational Safety and Health Training: A Literature Review*. Retrieved April 21, 2006, from the NIOSH Web site:

<http://www.cdc.gov/niosh/98-145-b.html>

19) Duperrex, O., Bunn, F. and Roberts, I. (2002). *Safety education of pedestrians for injury prevention: a systematic review of randomised controlled trials*. Retrieved April 24, 2006, from the British Medical Journal Web site:

<http://bmj.bmjournals.com/cgi/reprint/324/7346/1129>

20) *Educational Safety Program (Chapter 90B: section 9B)*. Retrieved May 24, 2006, from the General Laws of Massachusetts Web site:

<http://www.mass.gov/legis/laws/mgl/90b-9b.htm>

21) *Mandatory Boating Safety Education (Title 61, Chapter 830-Small Watercraft)*.

Retrieved April 7, 2006, from Oregon Revised Statutes- 2005 Edition Web site:

<http://www.leg.state.or.us/ors/830.html>



- 22) *Maryland: State Requirements for Recreational Vessels*. Retrieved: April 7, 2006, from Maryland Department of Natural Resources Web site:  
<http://www.dnr.state.md.us/boating/safety/recreationalvessels.pdf>
- 23) Masten, S.V. (2005). *Teenage Driver Risks and Interventions*. Retrieved April 20, 2006, from the California DMV Web site:  
[http://www.dmv.ca.gov/about/profile/rd/207\\_teen\\_driver\\_risk\\_report.pdf](http://www.dmv.ca.gov/about/profile/rd/207_teen_driver_risk_report.pdf)
- 24) Mayhew, D.R. and Simpson, H.M. (2002). The safety value of driver education and training. *Injury Prevention*, 8(suppl II), ii3-ii8.
- 25) *Montana Code Annotated 2003 (Title 23 Chapter 5)*. Retrieved May 23, 2006, from Montana Code and Constitution Web site:  
<http://data.opi.state.mt.us/bills/2003/mca/23/2/23-2-523.htm>
- 26) *Natural Resources and Environmental Act of 1994 (Section 324.80140)*. Retrieved: May 23, 2006, from Michigan Legislature Public Acts Web site:  
[http://www.legislature.mi.gov/\(v3c4uezplwafiqyuqle4jm45\)/mileg.aspx?page=getObject&objectName=mcl-324-80140](http://www.legislature.mi.gov/(v3c4uezplwafiqyuqle4jm45)/mileg.aspx?page=getObject&objectName=mcl-324-80140)
- 27) *News Release: Boater Safety Education Bill Signed by Governor Gregoire*. Retrieved: May 23, 2006, from Washington State Parks Web site:  
<http://www.parks.wa.gov/boatersafety.asp>
- 28) *Operating Personal Watercraft. (Title 12 §13071-A)*. Retrieved May 24, 2006, from Maine Revised Statutes Web site:  
<http://janus.state.me.us/legis/statutes/12/title12sec13071-A.html>
- 29) *Operation of Power Vessels (Title 12:7-61)*. Retrieved May 24, 2006, from the New Jersey Permanent Statutes Database Web site:  
[http://lis.njleg.state.nj.us/cgi-bin/om\\_isapi.dll?clientID=9167182&Depth=2&depth=2&expandheadings=on&headingswithhits=on&hitsperheading=on&infobase=statutes.nfo&record={3809}&softpage=Document42](http://lis.njleg.state.nj.us/cgi-bin/om_isapi.dll?clientID=9167182&Depth=2&depth=2&expandheadings=on&headingswithhits=on&hitsperheading=on&infobase=statutes.nfo&record={3809}&softpage=Document42)
- 30) *Operator Restrictions (Navigation Section 49)*. Retrieved May 24, 2006, from Laws of New York Web site:  
<http://public.leginfo.state.ny.us/menugetf.cgi?COMMONQUERY=LAWS>
- 31) *Operation of Vessels by Persons Born After January 1, 1989 (§69-9-226)*. Retrieved May 24, 2006, from Tennessee Code Web site:  
<http://198.187.128.12/tennessee/lpext.dll/Infobase/468af/473c9/4740e/47519?f=hitlist&q=69-10-226&x=Advanced&opt=&skc=800000020004751A&c=curr&gh=1&2.0#LPHit1>



32) *Operation of Vessels (Title 19-1026.5)*. Retrieved May 24, 2006, from the District of Columbia Municipal Regulations Web site:  
[http://www.amlegal.com/nxt/gateway.dll/Title%2019/chapter00010.htm?f=templates\\$fn=main-nf.htm\\$3.0#JD\\_1026](http://www.amlegal.com/nxt/gateway.dll/Title%2019/chapter00010.htm?f=templates$fn=main-nf.htm$3.0#JD_1026)

33) Owsley, C., Stalvey, B.T. and Phillips, J.M. (2003). The efficacy of an educational intervention in promoting self-regulation among high-risk older drivers. *Accident Analysis and Prevention*, 35, 393-400.

34) *Personal Watercraft (Chapter 235.285)*. Retrieved May 24, 2006, from Kentucky Revised Statutes Web site: <http://www.lrc.state.ky.us/KRS/235-00/285.PDF>

35) *Personal Watercraft and Boating Safety (Section 50-21-870)*. Retrieved May 23, 2006, from South Carolina Code of Laws Web site:  
<http://www.scstatehouse.net/code/t50c021.htm>

36) *Personal Watercraft Liveries (Title 67-7078)*. Retrieved May 24, 2006, from Idaho Statutes Web site: <http://www3.state.id.us/cgi-bin/newidst?sctid=670700078.K>

37) *Prohibited Operation (Title 20.1-13-07)*. Retrieved May 24, 2006, from the North Dakota Century Code Web site: <http://www.legis.nd.gov/cencode/t201c13.pdf>

38) *Requirements for Operation of Certain Powercraft (Title XV Section 1547.05)*. Retrieved: May 23, 2006, from Anderson's Ohio Online Docs Web site:  
<http://onlinedocs.andersonpublishing.com/oh/lpExt.dll/PORC/c20f/d1f1/d208?fn=document-frame.htm&f=templates&2.0#>

39) *Restrictions on Operation (§29.1-748)*. Retrieved May 24, 2006, from the Code of Virginia Web site: <http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+29.1-748>

40) *Safe Boating- A Boating Guide*. Retrieved April 7, 2006, from Connecticut Department of Environmental Protection Web site:  
[http://dep.state.ct.us/rec/boating/guide/part1\\_06.pdf](http://dep.state.ct.us/rec/boating/guide/part1_06.pdf)

41) *State Boating Act- Minimum Age of Operators (Title 73-18-15.3)*. Retrieved May 24, 2006, from Utah Code- Statutes and Constitution Web site:  
[http://www.le.state.ut.us/~code/TITLE73/htm/73\\_16025.htm](http://www.le.state.ut.us/~code/TITLE73/htm/73_16025.htm)

42) *State Boating Safety Education Requirements*. Retrieved: May 8, 2006, from National Association of State Boating Law Administrators Web site:  
[http://www.nasbla.org/education\\_requirements.htm](http://www.nasbla.org/education_requirements.htm).

43) Strategic Research Group (2003). *2002 National Recreational Boating Survey Report*. Retrieved June 14, 2006, from the Office of Boating Safety, United States Coast Guard Web site:  
[http://www.uscgboating.org/statistics/USCG\\_NRBS%202002-Report.pdf](http://www.uscgboating.org/statistics/USCG_NRBS%202002-Report.pdf)





DRAFT COPY

44) United States Coast Guard (2005) *Boating Statistics-2005*. Retrieved April 7, 2006, from the Office of Boating Safety, United States Coast Guard Web site:  
[http://www.uscgboating.org/statistics/Boating\\_Statistics\\_2005.pdf](http://www.uscgboating.org/statistics/Boating_Statistics_2005.pdf)

45) United States Coast Guard (1994-2005) *Boating Accident Report Database 1994-2005*. Accessed: April 7, 2006.

46) *Watercraft Safety Program (Section 86B.101)*. Retrieved May 23, 2006, from Minnesota Statutes- 2005 Edition Web site:  
[http://www.revisor.leg.state.mn.us/bin/getpub.php?pubtype=STAT\\_CHAP\\_SEC&year=current&section=86b.101](http://www.revisor.leg.state.mn.us/bin/getpub.php?pubtype=STAT_CHAP_SEC&year=current&section=86b.101)



# Appendix A – Decrease in Fatal Accident Rates (1995-1999 period compared to 2000-2005 period)

Table 4. All States - Decrease in Fatal Accident Rates

State	Fatal Accidents Per Hundred Thousand Motorized Vessels			Average Annual Total Fatal Accidents	Average Annual Registered Motorized Boats*	P-Value vs. QPI States
	Avg. 1995-1999 Fatal Accident Rate	Avg. 2000-2005 Fatal Accident Rate	% Reduction in Fatal Accident Rates			
US	4.6	4.0	13%	509	12,010,379	-
CT	2.2	1.5	45%	2	103,925	N/A
HI	18.9	5.6	71%	1	186,119	0.16
DE	7.5	2.7	65%	2	58,505	0.10
ID	9.3	4.5	52%	5	81,641	0.03
KS	3.9	1.9	50%	3	46,461	0.47
PR	4.2	2.2	47%	1	51,706	0.30
IN	3.8	2.1	47%	6	213,177	0.44
MT	6.9	3.9	43%	3	363,123	0.46
NH	2.8	1.6	41%	2	249,667	0.13
IA	2.7	1.6	40%	4	96,807	0.40
OK	7.6	4.7	38%	13	326,563	0.39
NV	12.1	7.5	38%	5	50,063	0.40
WV	5.9	3.7	37%	2	14,179	0.33
UT	9.1	6.0	34%	5	342,595	0.47
GA	5.1	3.4	33%	12	310,111	0.39
SC	5.3	3.7	30%	16	234,791	0.34
NY	3.4	2.4	30%	14	509,330	0.24
MO	5.6	4.0	27%	15	321,812	0.43
VI	23.8	17.9	25%	1	3,575	0.43
AR	7.1	5.4	25%	11	186,126	0.32
AL	7.1	5.5	24%	16	260,509	N/A
NC	5.2	4.0	24%	15	58,046	0.43
IL	3.9	3.0	24%	11	93,094	0.17
FL	7.2	5.5	24%	51	166,626	0.42
ND	4.7	3.7	23%	2	45,792	0.28
NJ	4.5	3.6	20%	8	94,834	0.16
WI	2.8	2.4	15%	14	195,177	0.01
VA	6.2	5.3	14%	13	344,981	0.37
CA	4.8	4.2	13%	37	565,796	0.02
KY	6.5	5.7	12%	10	75,206	0.46
NE	4.3	3.8	12%	3	72,275	0.15
RI	6.0	5.5	9%	2	54,126	0.29
OR	4.6	4.2	9%	8	32,347	0.10
TX	6.2	5.7	9%	37	619,014	0.24
PA	1.5	1.4	8%	5	224,246	0.07
MS	4.0	3.8	4%	10	197,076	0.09
AK	41.7	41.3	1%	13	838,691	0.10
MN	2.0	1.9	4%	12	255,189	0.01
VT	0.0	2.4	N/A	1	35,933	0.05
AS	0.0	0.0	N/A	0	119	0.00
GU	0.0	17.6	N/A	0	2,962	0.04
MP	0.0	68.4	N/A	0	928	0.19
AZ	4.5	4.6	-4%	7	149,131	0.01
MD	4.6	4.9	-5%	9	197,125	0.01
NM	2.6	2.8	-5%	1	346,281	0.07
MA	2.9	3.1	-10%	4	145,066	0.21
LA	9.6	10.7	-12%	32	38,071	0.02
CO	3.0	3.4	-12%	3	629,885	0.06
WA	4.9	5.7	-18%	14	842,530	0.09
MI	1.4	1.9	-30%	16	26,292	0.00
TN	3.7	5.3	-43%	13	281,978	0.03
WY	2.9	4.3	-45%	1	312,845	0.30
OH	2.5	3.9	-57%	12	953,089	0.01
ME	1.9	3.7	-94%	3	113,152	0.01
SD	1.7	3.3	-99%	1	48,932	0.02
DC	4.1	26.1	-529%	0	2,650	0.06

\*1995 includes all boats registered



**Table 5. States Grouped by Education Policy Type - Decrease in Fatal Accident Rates**

Policy Type	Fatal Accidents Per Hundred Thousand Motorized Vessels				Average Annual Registered Motorized Boats*	P-Value vs. QPI States
	Avg. 1995-1999 Fatal Accident Rate	Avg. 2000-2005 Fatal Accident Rate	% Reduction in Fatal Accident Rates	Average Annual Total Fatal Accidents		
Date Of Birth	4.7	4.9	-2%	48	2,467,077	0.00
Age Requirement	4.2	3.4	18%	38	5,812,884	0.09
PWC Only	5.4	4.5	16%	49	765,745	0.27
Quick Phase-In	5.7	4.2	27%	49	363,834	N/A
No Education Policy	5.3	5.1	4%	52	1,113,409	0.01

\*1995 includes all boats registered

Note: results are considered significant at a p-value below 0.1 (or tested at a 10 percent level of significance)

**Table 6. QPI States vs. Bordering States - Decrease in Fatal Accident Rates**

State Grouping	Fatal Accidents Per Hundred Thousand Motorized Vessels				Average Annual Registered Motorized Boats*	P-Value vs. QPI States
	Avg. 1995-1999 Fatal Accident Rate	Avg. 2000-2005 Fatal Accident Rate	% Reduction in Fatal Accident Rates	Average Annual Total Fatal Accidents		
QPI	5.7	4.2	27%	18	363,834	0.03
Rest of U.S.	4.5	4.0	11%	491	11,646,545	0.03
Alabama	7.0	5.3	25%	16	260,509	0.04
MS, FL, GA, TN	5.6	4.7	15%	87	1,680,447	0.04
Connecticut	2.4	1.6	34%	2	103,325	0.45
NY, MA, RI	3.4	2.6	24%	21	692,467	0.45

\*1995 includes all boats registered

Note: results are considered significant at a p-value below 0.1 (or tested at a 10 percent level of significance)



## Appendix B – Decrease in Fatality Rates (1995-1999 period compared to 2000-2005 period)

Table 7. All States - Decrease in Fatality Rates

State	Fatalities Per Hundred Thousand Motorized Vessels				Average Annual Registered Motorized Boats*	P-Value vs. QPI States
	Avg. 1995-1999 Fatality Rate	Avg. 2000-2005 Fatality Rate	% Reduction in Fatality Rates	Average Annual Total Fatalities		
US	5.3	4.5	15%	588	12,010,379	-
DE	7.8	2.4	69%	2	46,461	0.10
HI	17.9	7.8	56%	2	14,179	0.16
WV	7.5	3.4	55%	3	58,505	0.33
ID	9.4	4.4	53%	5	81,641	0.03
IA	3.0	1.5	52%	4	186,119	0.40
PR	4.9	2.6	48%	2	51,706	0.30
AK	70.5	39.8	44%	17	32,347	0.10
SC	6.4	4.0	38%	18	363,123	0.34
KS	4.2	2.6	38%	3	96,807	0.47
NC	6.3	4.0	37%	17	342,595	0.43
CT	7.0	4.9	30%	2	103,325	N/A
NV	14.2	9.1	36%	6	58,046	0.40
MO	6.5	4.3	34%	17	321,812	0.43
GA	5.3	3.5	34%	13	310,111	0.39
IN	4.0	2.7	33%	7	213,177	0.44
MT	7.2	4.9	33%	3	50,063	0.46
NY	4.2	2.9	31%	17	509,330	0.24
VA	8.1	5.7	30%	16	234,791	0.37
AL	7.3	5.6	29%	7	260,509	N/A
NH	2.7	1.9	29%	2	93,094	0.13
FL	8.1	5.8	28%	58	838,691	0.42
AR	7.7	5.7	27%	12	186,126	0.32
UT	9.1	6.8	26%	6	75,206	0.47
OK	8.1	6.1	25%	16	224,246	0.39
KY	8.0	6.2	22%	12	166,626	0.46
PA	1.7	1.4	20%	5	326,563	0.07
IL	4.2	3.4	19%	13	344,981	0.17
MA	3.7	3.0	18%	5	145,066	0.21
ND	6.0	5.0	18%	2	45,792	0.28
TX	7.6	6.3	17%	43	619,014	0.24
OR	5.5	4.7	14%	10	195,177	0.10
AZ	5.9	5.2	11%	8	149,131	0.01
NE	4.6	4.1	9%	3	72,275	0.15
MS	4.8	4.5	8%	11	249,667	0.09
WI	2.9	2.8	6%	16	565,796	0.01
CA	5.1	5.0	2%	42	842,530	0.02
AS	0.0	0.0	N/A	0	119	0.00
GU	0.0	20.5	N/A	0	2,962	0.04
MP	0.0	79.7	N/A	0	928	0.19
NM	3.1	3.2	-3%	2	54,126	0.07
MN	2.2	2.3	-5%	14	629,885	0.01
NJ	4.2	4.4	-6%	9	197,076	0.16
WA	6.2	6.5	-6%	16	255,189	0.09
WY	6.2	6.8	-9%	2	26,292	0.30
RI	5.9	6.6	-12%	2	38,071	0.29
LA	10.9	12.4	-14%	37	312,845	0.02
MI	1.8	2.1	-16%	19	953,089	0.00
CO	3.5	4.1	-18%	4	94,834	0.06
MD	5.0	5.9	-19%	11	197,125	0.01
TN	4.7	6.0	-27%	15	281,978	0.03
VI	19.0	24.9	-31%	1	3,575	0.43
OH	3.2	4.3	-32%	13	346,281	0.01
ME	2.4	4.1	-72%	4	113,152	0.01
SD	1.7	4.2	-145%	2	48,932	0.02
VT	1.1	3.0	-181%	1	35,933	0.05
DC	3.3	30.4	-817%	0	2,650	0.06

\*1995 includes all boats registered





**Table 8. States Grouped by Education Policy Type - Decrease in Fatality Rates**

Policy Type	Fatalities Per Hundred Thousand Motorized Vessels				Average Annual Registered Motorized Boats*	P-Value vs. QPI States
	Avg. 1995-1999 Fatality Rate	Avg. 2000-2004 Fatality Rate	% Reduction in Fatality Rates	Average Annual Total Fatalities		
Date Of Birth	5.5	5.6	-1%	55	2,467,077	0.01
Age Requirement	5.0	3.9	22%	44	5,812,884	0.12
PWC Only	6.6	4.9	27%	57	765,745	0.44
Quick Phase-In	6.5	4.5	30%	54	363,834	N/A
No Education Policy	6.5	6.0	8%	65	1,113,409	0.01

\*1995 includes all boats registered

Note: results are considered significant at a p-value below 0.1 (or tested at a 10 percent level of significance)

**Table 9. QPI States vs. Bordering States - Decrease in Fatality Rates**

State Grouping	Fatalities Per Hundred Thousand Motorized Vessels				Average Annual Registered Motorized Boats*	P-Value vs. QPI States
	Avg. 1995-1999 Fatality Rate	Avg. 2000-2004 Fatality Rate	% Reduction in Fatality Rates	Average Annual Total Fatalities		
QPI	6.5	4.5	31%	20	363,834	0.05
Rest of U.S.	5.3	4.5	15%	570	11,646,545	0.05
Alabama	7.8	5.6	29%	18	260,509	0.07
MS, FL, GA, TN	6.5	5.2	19%	97	1,680,447	0.07
Connecticut	3.0	1.9	37%	2	103,325	0.49
NY, MA, RI	4.2	3.1	25%	25	692,467	0.49

\*1995 includes all boats registered

Note: results are considered significant at a p-value below 0.1 (or tested at a 10 percent level of significance)



## Appendix C – Calculation of Statistical Significance

Table 10. P-Value Calculation - Decrease in Fatality Rates

Yr	QPI	Rest of U.S.	Pre (Rate Change)	Yr	QPI	Rest of U.S.	Post (Rate Change)	P-value
1995	5.05	4.64	0.41	2000	3.84	3.96	0.12	Pre vs. Post Phase-In
1996	6.39	4.59	1.80	2001	4.68	3.46	1.22	
1997	5.55	4.59	0.96	2002	3.81	4.51	0.70	
1998	6.60	4.32	2.28	2003	4.37	3.99	0.38	
1999	4.93	4.15	0.78	2004	4.30	3.82	0.48	
-	-	-	-	2005	4.04	3.97	0.08	
AVG	5.70	4.46	1.25	AVG	4.18	3.95	0.22	0.02

Yr	Alabama	MS, FL, GA, TN	Pre (Rate Change)	Yr	Alabama	MS, FL, GA, TN	Post (Rate Change)	P-value
1995	6.60	5.74	0.86	2000	4.58	4.16	0.42	Pre vs. Post Phase-In
1996	7.71	5.82	1.89	2001	5.80	4.18	1.62	
1997	7.24	5.66	1.58	2002	4.60	4.57	0.04	
1998	6.88	5.45	1.42	2003	5.80	4.92	0.88	
1999	6.44	5.43	1.01	2004	6.15	5.75	0.40	
-	-	-	-	2005	4.57	4.92	0.36	
AVG	6.97	5.62	1.35	AVG	5.25	4.75	0.50	0.02

Yr	Connecticut	NY, MA, RI	Pre (Rate Change)	Yr	Connecticut	NY, MA, RI	Post (Rate Change)	P-value
1995	1.01	4.85	3.84	2000	1.95	2.27	0.32	Pre vs. Post Phase-In
1996	2.99	2.23	0.76	2001	1.91	2.10	0.19	
1997	1.02	3.35	2.32	2002	1.87	3.31	1.45	
1998	5.89	3.30	2.59	2003	0.93	3.16	2.23	
1999	0.99	3.52	2.53	2004	0.00	2.24	2.24	
-	-	-	-	2005	2.77	2.56	0.21	
AVG	2.38	3.45	1.07	AVG	1.57	2.61	1.04	0.49

Note: results are considered significant at a p-value below 0.1 (or tested at a 10 percent level of significance)



## Appendix D – Types of State Boating Safety Education Policies

Table 11. Age Requirement and No Education States

State	Effective Date	Age Requirement	Boat
CO	01/01/1998	14-15 YOA	MB
FL	10/01/2001	< 22 YOA	MB >9 HP
GA	07/01/1998	12-13 YOA; 14-15 YOA	MB <31 HP & all HP PWC
IA	07/01/2003	12-17 YOA	MB>10 HP
IL	07/29/1999	12-17 YOA	MB
IN	01/01/1996	15 YOA	MB>10 HP
KY	01/01/1999	12-17 YOA	MB>10 HP PWC
MA	04/09/1990	12-15 YOA; 12-17 YOA	MB; PWC
MI	05/24/1995	12-15 YOA	MB>6 HP
MN	01/01/1991	12-17 YOA	MB>25 HP
MT	05/01/2000	13-14 YOA	MB>10 HP
ND	UNKNOWN	12-15 YOA	MB>10 HP
NE	01/01/2004	14-17 YOA	MB
NY	01/01/2000	ALL AGES; 10-17 YOA	PWC; MB
OK	01/01/2007	12-15 YOA	MB>10HP; SB>16' & PWC
SC	05/06/1997	<16 YOA	MB>14 HP
TX	09/01/1997	<18 YOA	MB>10 HP & SB>14'

KEY:	
HP	Horsepower
MB	Motorboat
PWC	Personal Watercraft
SB	Sailboat
YOA	Years of Age

State	Effective Date	No Requirements	Boat
AK			
AS			
AZ			
CA			
GU			
HI			
MP			
SD			
WY			



**Table 12.** Date of Birth, PWC Only, and Combination States

State	Effective Date	Date of Birth	Boat
AR	01/01/2001	B 1/1/1986	MB
DE	01/01/1994	B 1/1/1978	MB
LA	07/01/2003	B 1/2/1988	MB>10 HP
MD	07/01/1988	B 7/1/1972	MB
MO	01/01/2005	B 8/29/1984	MB & SB >12'
MS	07/01/1997	B 6/30/1980	MB
NM	01/01/2007	B 1/1/1989	MB
NV	01/01/2003	B 1/1/1983	MB>15 HP
OH	01/01/2000	B 1/1/1982	MB>10 HP
PA	01/01/2005	B 1/1/1982	MB>25 HP
PR	01/01/2001	B 7/1/1972	MB
RI	07/02/1999	B 1/1/1986	MB>10 HP
TN	01/01/2005	B 1/2/1989	MB>8.5 HP
VT	07/01/1991	B 1/2/1974	MB
WV	01/01/2001	B 12/31/1986	MB

State	Effective Date	PWC Only	Boat
ME	06/30/2006	16-17 YOA	PWC
NC	06/30/2000	12-15 YOA	PWC
UT	07/01/2002	12-17 YOA	PWC
VA	01/01/1999	14-15 YOA	PWC
VI	UNKNOWN	< 18 YOA	PWC

State	Effective Date	Combo	Boat
ID	07/01/1996	ALL AGES	RENTAL PWCS ONLY
KS	01/01/2001	B 1/1/1989 but only <21 YOA	MB & SB
WI	Late Summer 2006	12-15 YOA; B 1/1/1989	MB





**Table 13.** Quick Phase-In and Combination States

State	Effective Date	Quick Phase-In	Boat
AL	Start- 04/28/1994; End- 04/28/1999	12' YOA through B April 28, 1954	MB
CT	Start- 11/24/1992; End- 10/1/1997	ALL AGES	MB, SB>19.5'
DC	UNKNOWN	ALL AGES	ALL VESSELS
NH	Start- 01/01/2002; End- 01/01/2008	ALL AGES-- phase in by 1/1/2008	MB>25 HP
OR	Start- 01/01/2003; End- 10/23/2009	ALL AGES-- phase in by 10/23/2009	MB>10 HP
WA	Start- 01/01/2008; End- 01/01/2016	Individuals born before 01/01/1955 are exempt	MB

State	Effective Date	Combo	Boat
NJ	06/01/2008	13-15 YOA	MB<1 HP or 12 volts
		13-15 YOA	MB 12' + in length & <10 HP
		B 1/1/1979;	MB>10 HP
		ALL AGES;	PWC
		ALL AGES	SB>12'



## Appendix E – Policy Summaries for Quick Phase-In States

### Alabama

The Roberson/Archer Act of 1994 requires that residents who operate motorized vessels (does not apply to sailboats, rowboats, or canoes) in Alabama must first obtain an Alabama Boater Safety Certification. Residents that were 40-years old or older by April 28, 1994 are exempt. Additionally, no person under the age of 12 may operate a motorized vessel of any type. Residents had a 5-year “phase-in” period, from the time that the Act was passed in 1994, to obtain an Alabama Boater Safety Certification. The 5-year period ended on April 28, 1999. Residents may obtain an Alabama Boater Safety Certification by passing a written exam or presenting proof of completing an approved course in boating safety. The exams are offered at the Alabama Driver’s License Examining Offices and they contain twenty-five (twenty correct is passing) questions on rules of the road, laws, safety equipment, and waterways marking. Alabama Boater Safety Certification appears as a “V” endorsement placed on the automobile driver’s license or a “Vessel Only” license is issued for non-automobile license holders. Alabama Boater Safety Certification can be cancelled, suspended, or revoked (\$50 reinstatement fee along with meeting other requirements).

### Connecticut

Effective November 24, 1992, operators of motorboats and sailboats 19.5-feet or longer must obtain a Safe Boating Certificate from the Department of Environmental Protection. There was a 5-year “phase-in” period that began with those individuals who were twenty and younger and ended with the requirement that those forty and older obtain certificates by October 1, 1997. Likewise, operators of personal watercraft, regardless of state residency, must obtain a Certificate of Personal Watercraft Operation (Connecticut recognizes certificates from New York, Massachusetts, and Rhode Island). Individuals must pass an approved basic boating course with an exam or pass an equivalency exam (50 question multiple choice test) to apply for their Safe Boating Certificate. Personal watercraft operators are also required to pass an approved personal watercraft course (or combination course) to apply for a Certificate of Personal Watercraft Operation. These certificates are wallet-sized cards that need to be aboard the vessel at all times. No person under the age of twelve shall operate a vessel with greater than 10 horsepower unless they are accompanied by an individual that is 18 or older and both are carrying certificates of operation. After March 9, 2004, no person under the age of 16 may operate a personal watercraft without onboard supervision of an individual aged 18 or older (both carrying certificates of operation). Violation of these requirements can result in fines ranging between \$60 and \$250.



## DRAFT COPY

### New Hampshire

7 year "phase-in" period was initiated January 1, 2002 for those born on or after January 1, 1983. Operators of motorboats greater than 25 horsepower or personal watercraft operators must obtain a Safe Boater Education Certificate (all ages by January 1, 2008). The certificate can be obtained by completing a boating safety course or equivalency exam approved by the New Hampshire Marine Patrol or a National Association of State Boating Law Administrators (NASBLA) approved course of another state. The equivalency exam is 75 questions (80% correct passes) and it is offered on-line for \$15. The certificate must be carried on board. No person under the age of 16 may operate a personal watercraft. No person under the age of 16 may operate a motorboat greater than 25 horsepower without onboard supervision of an individual aged 18 or older (carrying a certificate of operation).

### Oregon

In 2003, operators thirty-years old and younger were required to carry a boater education card when operating motorized vessels greater than 10 horsepower. The age cut-off increases by ten each subsequent year resulting in a requirement that all boaters seventy-years old and younger must carry a boater education card by 2008 and in 2009 all boaters must meet the card carrying requirement. A person (12 years old and older) may obtain a boater education card by passing an approved boating safety course with an examination or the equivalency exam (seventy-five questions). Citations for non-compliance with the Mandatory Education Law are \$94.

### New Jersey

Legislation was passed on January 9, 2006 and signed by Governor Codey that requires all boaters to pass a boating safety course. Individuals 16 years of age or older shall not operate a power vessel, including a personal watercraft, on the waters of this State without having completed a boat safety course approved by the Superintendent of State Police in the Department of Law and Public Safety. Initially, mandatory boating safety education is required for persons born after December 31, 1978. The age cut-off increases yearly by ten-year age increments until all operators will be required to have completed a boating safety course by June 1, 2009. Operators will be required to complete a boating safety course with an examination or an equivalency exam (for experienced boaters). Violation of these requirements can result in fines ranging between \$100 and \$500.

### Washington

Boater safety education course legislation in Washington State was signed into law by Washington Governor Christine Gregoire May 11, 2005. It will require completion of a basic boating class, or passage of an equivalency exam, to obtain a Boater Education Card. The Boater Education Card will be required for operation of a boat with 15 horsepower or more. The "phase-in" period will begin on January 1, 2008, when boaters



## DRAFT COPY

20 years of age and younger will be required to obtain their Boater Education Card. The phased-in period for compliance will continue until 2016 for various age groups. Boaters born before January 1, 1955 will be exempt.





# Addendum # 9

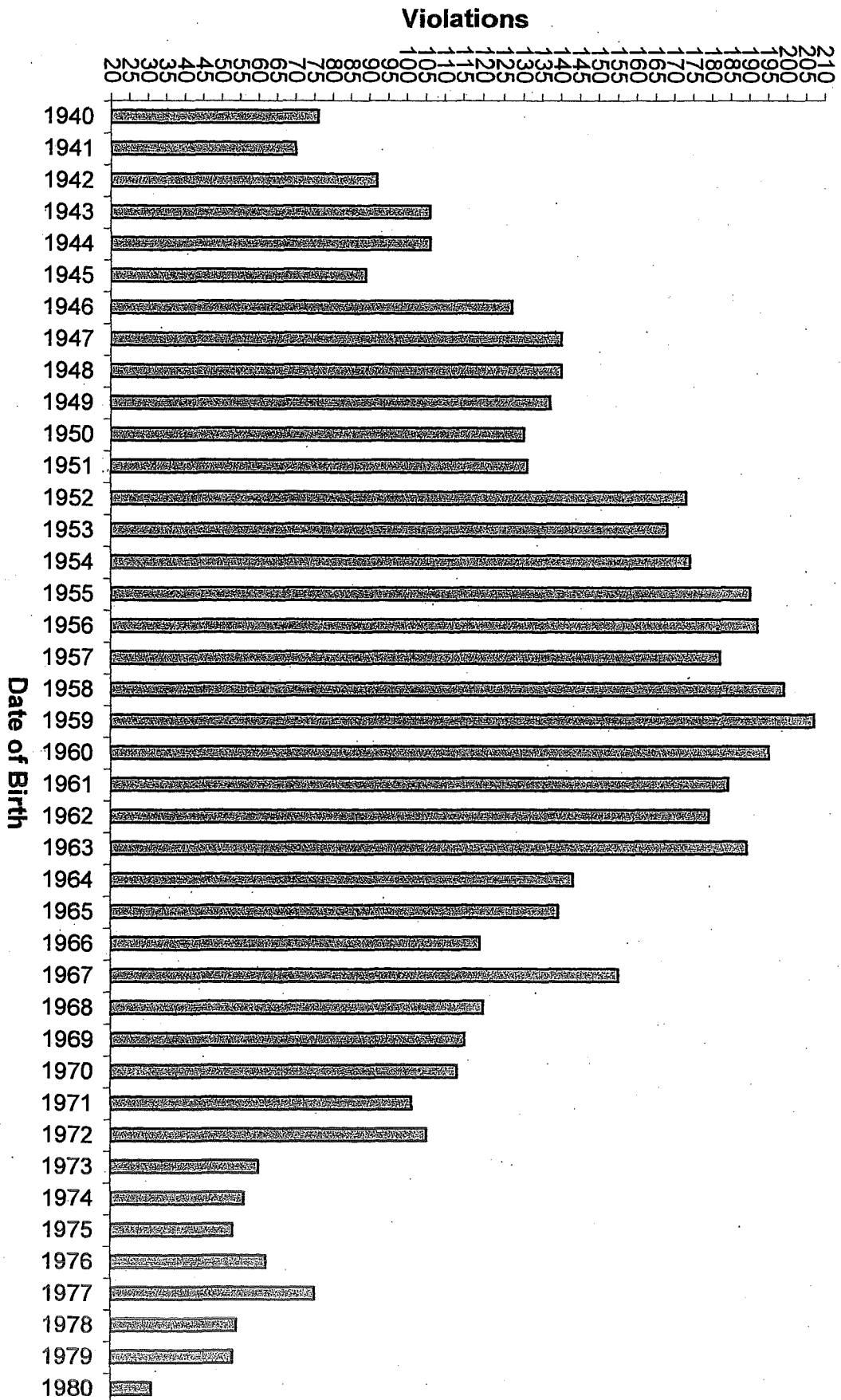


Age	CountOfID
	10
00	2
1905	1
1907	1
08	2
1909	2
1910	2
11	4
1912	4
1913	5
1 14	4
1915	6
1916	5
1 17	11
1918	12
1919	10
1 20	20
1921	17
1922	21
1 23	18
1924	25
1925	25
1 26	32
1927	33
1928	41
1 29	27
1930	33
1931	36
1 32	49
1933	27
1934	42
1 35	52
1936	55
1937	65
1 38	53
1939	65
1940	76
1 41	70
1942	92
1943	106
1 44	106
1945	89
1946	127
1 47	140
1948	140
1949	137
1 50	130
1951	131
1952	173
1953	168
1954	174
1955	190
1956	192
1957	182
1958	199

Age	CountOfID
1959	207
1960	195
1961	184
1962	179
1963	189
1964	143
1965	139
1966	119
1967	155
1968	120
1969	115
1970	113
1971	101
1972	105
1973	60
1974	56
1975	53
1976	62
1977	75
1978	54
1979	53
1980	31
1981	26
1982	22
1983	22
1984	7
1985	12
1986	9
1987	7
1988	1
1989	1
1991	1
1993	1
1996	1
1997	1
1998	1
1999	1
2002	1
2004	1



# Maine Warden Service Violations from 2000-2006





# Maine Marine Patrol Violations from 2000 - 2006

