UNITED STATES COAST GUARD
BOATING SAFETY DIVISION (BSX-2)

2016 ANNUAL REPORT
OFFICE OF AUXILIARY & BOATING SAFETY (CG-BSX)
BOATING SAFETY DIVISION (CG-BSX-2)
OUR MISSION

TO ENSURE the public has a safe, secure, and enjoyable recreational boating experience by implementing programs to minimize fatalities, injuries, and property damage while cooperating with environmental and national security efforts.
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## PURPOSE OF THIS REPORT

The Boating Safety Division of the Coast Guard’s Office of Auxiliary & Boating Safety administers the National Recreational Boating Safety (RBS) Program. The National RBS Program refers to the collective and collaborative effort coordinated by the Boating Safety Division and executed in conjunction with state agencies, non-governmental organizations, the recreational marine industry, and members of the public. This report provides an in-depth explanation of the structure and function of the Boating Safety Division, and provides an update on the major accomplishments of the Boating Safety Division for calendar year 2016. This report is intended as an informative tool to display how the monetary resources of our nation are being utilized to enhance the recreational boating experience of its citizens.
THE FOUNDATION of the National Recreational Boating Safety (RBS) Program was established in 1971 when Congress enacted the Federal Boat Safety Act (“The Act”). The Act, which built upon the Federal Numbering Act of 1918, the Motorboat Act of 1940, and the Federal Boating Act of 1958, designated the Coast Guard as the coordinator of the National RBS Program. The Act was the impetus for the creation of what is now the Office of Auxiliary and Boating Safety at Coast Guard Headquarters. The Act provided the authority to establish safety standards for boat construction, improve accident investigations and reporting, and provide financial assistance for state boating safety activities. These activities include: law enforcement, search and rescue missions, education campaigns, numbering and titling of vessels, Aids to Navigation and managing boating access for the public.

The program has achieved noteworthy successes since its creation, with annual boating-related deaths reduced from a high of 1,754 in 1973 to a record low of 560 in 2013. Over the past decade the number of deaths has leveled off and now averages about 700 per year, and the most recent five-year average (2012-2016) is 630 deaths, even as the number of Americans who go boating has increased.

Boating Safety Division (CG-BSX-2) Structure and Organizational Chart

The U.S. Coast Guard’s Boating Safety Division is the coordinator of the National RBS program, and is charged with the important task of making boating safer for us all. Its many responsibilities include programmatic oversight of state boating safety programs, tracking boating accidents, looking for correlations among these incidents, recommending and implementing remedial measures (such as recalls), and processing grants.

In 2016, the Division was part of the Office of Auxiliary & Boating Safety, and reported to the Director of Inspections & Compliance (CG-5PC), which falls under the Assistant Commandant for Prevention Policy (CG-5P). The Division currently consists of three Branches noted below along with examples of the work each does:

1 CG-BSX-21 Program Management & Operations
   - Financial Management for CG-BSX-2
   - Boating Accident Report Database (BARD)
   - Publication of Annual Boating Statistics
   - Statistical Analysis
   - Strategic Planning
   - National Recreational Boating Safety Survey (NRBSS)
   - Legislation
   - Regulations Development
   - National Boating Safety Advisory Council (NBSAC)
     (www.uscg.mil/our-organization/auxiliary/administration/cg-bsx/)
   - State RBS Grant Program Administration
   - Nonprofit Grant Administration
   - National Education Program
   - RBS Liaison to Non-Governmental Organizations, Agencies, and Federal Partners
   - CG-BSX-2 Website (www.uscgboating.org)
   - Vessel Identification System (VIS)
   - Boating Safety Outreach

2 CG-BSX-22 – Grants Management
   - Fiscal matters concerning RBS grants
     - RBS grants provided to the states and territories
     - RBS grants provided to national nonprofit public service organizations
   - Liaison to DHS concerning federal financial assistance (grants)
   - RBS grants for the NRBSS
### CG-BSX-23 Recreational Boating Product Assurance

- Federal safety regulations for the manufacture and importation of recreational boats and associated equipment
- Manufacturer Identification Codes (MICs)
- Exemptions to Federal regulations
- Inspect and test recreational boats for compliance with Federal requirements/regulations
- Consumer complaints involving safety defects and non-compliance with Federal regulations
- Recalls of recreational boats and associated equipment
- National and international standards organizations in the development of voluntary safety standards for recreational boats
- Boating Safety Circular newsletter

The personnel in the Office of Auxiliary and Boating Safety are noted below.

**FIGURE 1 ORGANIZATIONAL CHART AS OF AUGUST 2017:**
FROM THE EARLY 1960s until the late 1990s, there was a consistent annual increase in the number of registered vessels in the U.S. In the last few years the number of registered vessels has remained relatively constant. There are several inter-related factors that may explain the slowdown in the growth of the number of registered vessels in the last decade, including:

- Paddlesports have seen a huge increase in popularity, and most states do not require paddlecraft to be registered;
- American population demographics are shifting away from outdoor recreation;
- The use of computer systems to manage vessel registration records has made it easier to purge registration records of inactive registrations; and
- The cost of many motorboats and gasoline has increased, which combined with economic uncertainties, may have made boat ownership cost prohibitive for some Americans.

While the number of registered vessels has generally increased, the number of deaths has generally declined. Figure 2 below shows both the increase in registered vessels (red line) and the decrease in deaths (yellow line).

Boating safety legislation and regulations at the State and Federal level have had a dramatic effect on boating safety, greatly reducing recreational boating casualties over time. The Boating Safety Division continues to look for safety interventions and works with State and national nonprofit organization stakeholders to identify and implement programs that will increase safe boating practices by our nation’s boaters. Figure 3 shows key actions by the Coast Guard and its stakeholders since the Federal Boating Act of 1958 that correspond with the decline in recreational boating fatalities.
A. Sport Fish Restoration and Boating Trust Fund

The Sport Fish Restoration and Boating Trust Fund is an excellent example of a ‘user-pays, user-benefits’ program. This means that some of the dollars Americans spend on boating and fishing are taxed and transferred through the U.S. Treasury each year into the Trust Fund and Americans benefit from the facilities and services provided by the states and federal government.

These benefits include, though are not limited to, services such as search and rescue, boating access, RBS programs, fish restocking, and wildlife restoration. The revenues include, though are not limited to, a formulaic tax on motorboat fuel, import duties on boats, yachts, and tackle, and a tax on fishing equipment.

While the U.S. Fish and Wildlife Service (USFWS) and Army Corps of Engineers receive the majority of the approximately $700 million dollars annually, the Coast Guard receives approximately $100 million, most of which is allocated to the states to support their RBS programs and some of which is allocated to national nonprofit public service organizations who compete annually to provide services to reduce deaths and injuries of recreational boaters.

In FY2017 a total of $627,740,632 was available for distribution from the Trust Fund: the Coast Guard received $113,048,726 to administer the RBS Program, $105,517,694 of which went directly to the states via the grant program.
FIGURE 4. RECREATIONAL BOATING SAFETY (RBS) PORTION OF TRUST FUND

Revenue transferred or deposited to the Trust Fund

- Import duties on tackle, pleasure boats & yachts
- 10% tax on fishing equipment
- Motorboat fuel tax formula attributable to motorboats
- Small engine fuel tax formula attributable to small engines
- Interest earned on Trust Fund

Deductions from the Trust Fund

- WSFR Administration $s based on 2000 Improvement Act
- $3M Multistate Conservation Grant Program
- $400,000 Sport Fishing & Boating Partnership Council
- $200,000 to each Atlantic States, Gulf States, Pacific States & Great Lakes States Fisheries Commissions (Total $800,000)

Distribution of remaining funds

- 18.5% Coastal Wetlands
- 18.5% Recreational Boating Safety
- 2% Clean Vessel Act
- 2% Boating Infrastructure Grant Program
- 2% Recreational Boating & Fishing Foundation
- 57% Sport Fish Restoration

Current as of 04/2015
**Trust Fund Reauthorization**

Thanks to collaboration with our stakeholders and other federal agencies, the Coast Guard helped achieve a successful reauthorization as part of the 114 Congress’ Fixing America’s Surface Transportation (FAST) Act [H.R 22 / P.L. 114-94]. The FAST ACT was signed into law by President Obama on Dec. 4, 2015.

This reauthorization provides many benefits to the nation’s boaters via the following actions:

- Authorized through 2020 (for long-term security of the Program)
- Combined the Coast Guard’s administrative accounts from two accounts to one account (for simplicity and transparency)
- Moved the Coast Guard’s administrative account to the top of the Trust Fund vs. from the percentage of the funds distributed to the states (for parity with USFWS)
- Provided a one-year opportunity to transfer costs from Coast Guard operating funds to the Trust Fund (for staffing parity with USFWS—though more needs to be done here)
- Established funding for the National Boating Safety Advisory Council via the Trust Fund (for parity with USFWS)
- Established not less than $2.1 million annually for compliance with Chapter 43 of the U.S. Code (as preferred by some stakeholders)
- Established not more than $1.5 million annually for the National Recreational Boating Safety Survey (NRBSS) as either a contract or as a grant (to better-assess risk to boaters)
- Continued the competitive grant program for National Non-profit Public Service Organizations
- Continued the grant program for our 56 states and territories

**FIGURE 6. SPORT FISH RESTORATION & BOATING TRUST FUND - AFTER FAST ACT**

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**B. National Boating Safety Advisory Council**

The National Boating Safety Advisory Council (NBSAC) was established by The Act of 1971 (“The Act”). The authority for it to operate is found in 46 U.S.C. 13110. The current authority expires on September 30, 2020. The law requires the Secretary of Homeland Security and the Commandant of the Coast Guard by delegation, to consult with the Council in prescribing Federal regulations, and regarding other major boating safety matters. NBSAC operates...
with three standing subcommittees, and forms ad hoc subcommittees on an as needed basis. The three standing subcommittees are Prevention through People (PTP), Boats and Associated Equipment (BAE), and Strategic Planning (SP).

**NBSAC Meetings**

In March 2017 the 97th NBSAC meeting was held in Arlington, VA. The 98th meeting is scheduled for October 2017.

The 97th meeting was held March 16-18, 2017. During this meeting:

- Awards and thanks were presented to Mr. Jeff Hoedt and CAPT Tom Boross in advance of their upcoming retirements.
- Two Resolutions were passed by the Council and presented to the Coast Guard. They were:
  - Recognition of Outstanding Leadership—CAPT Tom Boross (2017-97-01)
  - Recognition of Outstanding Leadership—Mr. Jeff Hoedt (2017-97-02)
- NBSAC meeting members were presented with one Challenge from the Coast Guard which they will work on and report back on at the next meeting.
  - The U.S. Coast Guard requests that the NBSAC continue work on development of a proposed tactical/implementation plan to support the National RBS Program 2017-2021 Strategic Plan.

In 2016 the 95th and 96th NBSAC meetings were held. Both took place in Arlington, VA.

The 95th meeting was held April 21-23, 2016. During this meeting:

- A new Chairman, Dr. L. Daniel Maxim, was appointed to lead the Council
- Two Resolutions were passed by the Council and presented to the Coast Guard. They were:
  - Improved Accident Reporting System (2016-95-01)
  - Boating Safety Education Requirements for Recreational Boat Operators (2016-95-02)
- NBSAC meeting members were presented with one Challenge from the Coast Guard on which they worked and reported back at the 96th meeting.
  - The U.S. Coast Guard requests that NBSAC continue work on the development of the recommended National RBS Program 2017-2021 Strategic Plan. (continued from the 92nd NBSAC meeting)
- Six Resolutions were passed by the Council and presented to the Coast Guard. They were:
  - Alternative Options for Distress Alerting and Locating Signals for Recreational Boats (2016-96-01)
  - Consolidation of Coast Guard Carriage Requirements for Recreational Boat Safety Equipment (2016-96-02)
  - Update to Recreational Boat Manufacturer Requirements Found in 33 CFR 181 & 183 (2016-96-03)
  - Pontoon Boat Casualty Mitigation (2016-96-04)
  - Recommendation to the United States Coast Guard for a Study to Establish the Nexus Between On-Water Recreational Boater Education and Reduced Recreational Boater Casualties (2016-96-05)
  - Increased Emphasis on Human Factors (2016-96-06)
- NBSAC meeting members were presented with two Challenges from the Coast Guard which they worked on and reported back on at the 97th meeting.
  - The U.S. Coast Guard requests that the NBSAC initiate work on development of a proposed tactical/implementation plan to support the National RBS Program 2017-2021 Strategic Plan.
  - Recently, a new fire extinguisher regulation was finalized and implemented. It does have an impact on recreational vessels. The USCG would like for the NBSAC to review this regulation and such impacts and advise the USCG whether the regulation is acceptable or should be amended.

In 2015 the 93rd and 94th NBSAC meetings were held. Both took place in Arlington, VA. The 93rd meeting occurred May 28-30, 2015. The 94th meeting occurred November 12-13, 2015.

The 94th meeting was notable for being the last meeting of Chairman James P. Muldoon. Mr. Muldoon served as Chairman from 1998—2015, and the most significant achievement during his chairmanship was the implementation of a rigorous strategic planning process that will continue to guide the efforts of the National RBS Program into 2021 and beyond. Succeeding Mr. Muldoon was Dr. Dan Maxim, who was appointed Chairman prior to the 95th NBSAC meeting. Dr. Maxim continues to help implement the strategic plan and encourages the Council to be data focused in the advice they provide to the National RBS Program. Minutes from these NBSAC meetings and other information about the Council are available online at: https://homeport.uscg.mil/
C. The Strategic Plan of the National Recreational Boating Safety Program

Before 2004, there were many boating safety organizations and programs in America that were performing helpful services, though there was little coordination among them. At that time, the Coast Guard worked independently to set the performance goals of the National RBS program. To better-coordinate these national efforts and gather essential stakeholder input to set the performance goals and the best ways to achieve them, the Boating Safety Division began a strategic planning process. The Division worked with NBSAC to identify and invite members of the recreational boating community to serve on the first Strategic Planning Panel, led by Mr. Fred Messmann, the Boating Law Administrator from the state of Nevada. Members were selected based on their expertise within the boating community and their willingness to collaborate and share their knowledge. Once the Panel was formed, the passionate participants deliberated intensely and developed the Program’s first strategic plan for 2007-2011. Unlike other strategic plans that contain vague visions and non-specific platitudes, our Plan included very specific measurable objectives and strategies to reduce casualties and identified which organizations would lead each and by what time-frame.

RBS Performance Goal 2007-2011 and 2012-2016:
The performance goal of the strategic plan of the RBS Program is to reduce recreational boating deaths and injuries. The following numerical targets were established for recreational boating casualties (the sum of deaths and injuries) for the first two plans.

<table>
<thead>
<tr>
<th>Year</th>
<th>Deaths</th>
<th>Injuries</th>
<th>Casualties</th>
<th>Year</th>
<th>Deaths</th>
<th>Injuries</th>
<th>Casualties</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>671</td>
<td>3,288</td>
<td>3,959</td>
<td>2007</td>
<td>694</td>
<td>3,673</td>
<td>4,367</td>
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<tr>
<td>2008</td>
<td>655</td>
<td>3,150</td>
<td>3,805</td>
<td>2008</td>
<td>695</td>
<td>3,331</td>
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<tr>
<td>2009</td>
<td>685</td>
<td>3,585</td>
<td>4,270</td>
<td>2009</td>
<td>700</td>
<td>3,450</td>
<td>4,150</td>
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<td>2010</td>
<td>675</td>
<td>3,492</td>
<td>4,166</td>
<td>2010</td>
<td>705</td>
<td>3,386</td>
<td>4,091</td>
</tr>
<tr>
<td>2011</td>
<td>659</td>
<td>3,406</td>
<td>4,065</td>
<td>2011</td>
<td>709</td>
<td>3,321</td>
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<tr>
<td>2013</td>
<td>668</td>
<td>3,212</td>
<td>3,880</td>
<td>2013</td>
<td>684</td>
<td>3,053</td>
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<td>2014</td>
<td>665</td>
<td>3,132</td>
<td>3,797</td>
<td>2014</td>
<td>655</td>
<td>2,909</td>
<td>3,564</td>
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<td>2015</td>
<td>662</td>
<td>3,054</td>
<td>3,716</td>
<td>2015</td>
<td>641</td>
<td>2,813</td>
<td>3,454</td>
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<tr>
<td>2016</td>
<td>659</td>
<td>2,997</td>
<td>3,656</td>
<td>2016</td>
<td>630</td>
<td>2,748</td>
<td>3,378</td>
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</table>
To develop the new Plan for 2017-2021, NBSAC created a smaller, more nimble offshoot of NBSAC’s Strategic Planning Subcommittee, the Strategic Planning Work Group with members selected in the same manner as the previous plans. In addition to the Work Group members, the Coast Guard provided a representative from its strategic planning office to help provide a template and guidance for the Work Group to use in developing this Plan. The Work Group met in person several times and conducted numerous conference calls to discuss the new template, terminology, and to develop performance initiatives that will help to reduce deaths and injuries.

The Work Group provided a transparent process during the development of this Plan requesting comments on draft versions from interested parties. In addition, the Work Group asked for public comment through the Federal Register process. The comments received through the Federal Register were vetted by the Work Group and incorporated where appropriate. At the Fall 2016 NBSAC meeting, the Work Group presented the final version of the Plan to NBSAC for their acceptance and recommendation to the Coast Guard.

For this current Plan, the Work Group established performance goals and three performance initiatives to address three major priorities: cultivate a boating public that is better prepared to engage in safer boating behaviors, make better informed policy decisions by building and using highly-integrated systems to gather and evaluate data from many sources, and nurture collaborative efforts among the stakeholders that benefit the boating public within the recreational boating community. The three performance initiatives are designed to take advantage of the opportunities while addressing the challenges just described. They are:

- **a.** Improve and expand recreational boating education, training, and outreach;
- **b.** Update, leverage, and enforce policies, regulations, and standards; and
- **c.** Improve upon and expand recreational boating data collection.

### 2017-2021 RBS Performance Goal

The performance goal of the National RBS Program 2017-2021 Strategic Plan is to reduce recreational boating deaths and injuries, the same as in the previous two plans. Following are the numbers established for reported recreational boating casualties (the sum of deaths and injuries) for FY 2017 through FY 2022:

- Deaths were calculated by subtracting 3 from the previous year.
- Injuries were calculated by subtracting 1% from the previous year.

### Table 2. Goals for 2017-2021 Plan

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Number of Deaths</th>
<th>Number of Injuries</th>
<th>Total Casualties (Deaths &amp; Injuries)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>608</td>
<td>2729</td>
<td>3337</td>
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<tr>
<td>2018</td>
<td>605</td>
<td>2701</td>
<td>3306</td>
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<td>599</td>
<td>2648</td>
<td>3247</td>
</tr>
<tr>
<td>2021</td>
<td>596</td>
<td>2621</td>
<td>3217</td>
</tr>
<tr>
<td>2022</td>
<td>593</td>
<td>2595</td>
<td>3188</td>
</tr>
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</table>

FY 2017 goals were based on the latest, validated 3-year average data (FY 2012-2014). Starting with the FY 2017 goals:

### Achievements of the Strategic Plan

The Strategic Plan has created a new, coordinated way of doing business to emphasize and streamline data-collection and analyses. Many suggestions to improve accident reporting and Boating Statistics have evolved from our planning process. We now have tools to measure life jacket wear rates and the number of boating safety certificates issued across the nation. These efforts help determine whether the Program's efforts are successful and drive how we can make systemic improvements via the following tools available to the Program: state and federal legislation, regulation, policies, outreach, and law enforcement. One notable achievement was the establishment of the national program to prevent boating under the influence: Operation Drywater led by the National Association of State Boating Law Administrators. This has become the premiere tool for stakeholders and law enforcement to coordinate efforts to keep our waters safe from intoxicated operators.
D. Current Regulatory Projects

The Boating Safety Division has and continues to propose regulations to protect recreational boaters and the boating environment. Over the history of the program many regulations were implemented to make recreational boating safer without imposing undue burdens on the boating public, manufacturers, or other stakeholders such as the states. These regulations have led to a reduction in the number of accidents, deaths, and injuries over time. The Division continues to assess regulatory projects that will continue this positive trend.

The Division is currently working on the regulatory projects listed below and a status of each is provided.

1. **Uniform Certificate of Title Act for Vessels (UCOTA-V)**

   Development of Notice of Proposed Rulemaking (NPRM) is underway with the regulatory project team.

   This regulation may propose to:
   - Provide means for certifying state titling systems creating the availability for preferred ships mortgage status.
   - Provide for greater maritime security in that certified titling programs must participate in the Vessel Identification System providing all required information.
   - Provide for consumer protection via title branding provisions similar to motor vehicles.

2. **Emergency Locator Beacon (ELB) Carriage Requirements for Certain Recreational Vessels**

   Development of an NPRM is underway with the regulatory project team.

   This regulation may propose to:
   - Allow for the carriage of ELBs in lieu of currently approved visual distress signals for certain recreational vessels.
   - Relieve recreational boaters of the burden of disposing of pyrotechnic visual distress signals that have passed their expiration date if they choose to carry ELBs instead.

3. **Accident Reporting Requirements**

   Development of an NPRM is underway with the regulatory project team.

   This regulation may propose to:
   - Update recreational boating accident reporting requirements.
   - Simplify the process for recreational boaters.
   - Create a two-tier approach promoting an “operator notifies—BLA reports” approach. This system was one of 15 recommendations for improving recreational boating accident reporting made by NBSAC in February 2009.

   NBSAC’s recommendations were discussed in a 2011 Federal Register notice published by the Boating Safety Division (https://federalregister.gov/a/2011-22630). The notice asked 29 questions about the recommendations and 35 comments were received.

   The BLAs specifically expressed interest in seeing actual proposed regulatory language, particularly with respect to reporting timelines, the scope of the investigations States would be expected to carry out, and whether the BLAs themselves or other State or local government agencies would carry out the investigations.

   The Boating Safety Division is developing proposed changes to the existing accident reporting requirements based on NBSAC recommendations, comments received from the Federal Register Notice, and other feedback from NASBLA’s Engineering, Reporting and Analysis Committee on terms and definitions to be used in accident reporting.

   In August 2015, the Boating Safety Division published a Notice of Availability in the Federal Register, publicizing the release of a draft COMDTINST M16782.1, Accident Reporting Manual for public comment. Among the topics addressed in the Manual are vessel determinations and definitions. The 90-day comment period ended in November 2015. The Boating Safety Division is developing an NPRM in anticipation of moving this regulatory project forward.

4. **Installation and Use of Engine Cut-Off Switches**

   Development of an NPRM is underway with the regulatory project team.

   The Coast Guard is considering proposing a regulation requiring the proper installation, maintenance, and use of engine cut-off switches to keep motorized recreational vessels from becoming dangerous “run-away” vessels. An engine cut-off switch is a device that turns a vessel’s propulsion machinery off when the vessel operator cannot either safely operate the vessel or intentionally turn it off. Although most small recreational vessels already have an engine cut-off switch installed, the Coast Guard may seek to ensure that all newly constructed small recreational vessels have an engine cut off switch installed, and that they are properly maintained and used. As a precursor to this regulation and to gauge public feedback, the Coast Guard published an advance notice of proposed rulemaking (ANPRM) on this issue in June 2011 (76 FR 33161). This 2011 ANPRM asked 29 questions and drew comments from 93 sources. The Coast Guard has reviewed and analyzed those comments and is working on a proposed rulemaking based on the Coast Guard’s original intent along with the feedback from the comments.
CHAPTER 3
PROGRAM OPERATIONS (CG-BSX-21)

The 56 states and territories are key stakeholders in recreational boating safety efforts. The Act of 1971 established a federal financial assistance program intended to encourage state participation in boating safety efforts and to encourage uniformity throughout the states. The Act was also designed to permit the states to assume the greater share of boating safety education, assistance, and enforcement activities.

The financial assistance provided to the States through the Trust Fund has contributed significantly to the States’ ability to assume an increasingly larger share of responsibility for RBS program activities, as envisioned by The Act, and is critical to the continued success of the state RBS programs. To be eligible to participate in the state RBS grant program, a state must be “approved” by demonstrating that it has:

1. A vessel numbering system;
2. A cooperative Boating Safety Assistance Program with the Coast Guard;
3. Sufficient patrol and other activity to ensure adequate enforcement of applicable state boating safety laws and regulations;
4. A state boating safety education program that includes the dissemination of information concerning the hazards of operating a vessel under the influence of alcohol or drugs; and
5. A marine casualty reporting system.

To ensure compliance by the states with the five eligibility requirements, states submit information on their boating safety programs to the Coast Guard using the Performance Report Part II (PRPII) form. The PRPII form is the same for all states and allows the Coast Guard to check for complete and accurate reporting. In addition, the Coast Guard compiles the information from the PRPII forms from each state to conduct trend analyses.

In addition to the PRPII form that each state needs to submit, the Division’s Program Operations Branch monitors each state’s program to ensure it meets the requirements for approval. Along with reviewing the required documentation from each state, the Program Operations Branch also conducts a state compliance visit to each state every three years. This allows for onsite review of state laws and regulations, facilities, equipment, as well as an opportunity to discuss any issues that either the state or Coast Guard is aware of.

### TABLE 3. YEAR OF STATE VISIT

<table>
<thead>
<tr>
<th>State/Territory</th>
<th>Last Year of State Visit</th>
</tr>
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<tbody>
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<td>Alabama</td>
<td>2017</td>
</tr>
<tr>
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<tr>
<td>Arizona</td>
<td>2016</td>
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<td>2017</td>
</tr>
<tr>
<td>Kentucky</td>
<td>2014</td>
</tr>
<tr>
<td>Louisiana</td>
<td>2016</td>
</tr>
<tr>
<td>Maine</td>
<td>2015</td>
</tr>
<tr>
<td>Maryland</td>
<td>2017</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>2017</td>
</tr>
<tr>
<td>Michigan</td>
<td>2016</td>
</tr>
<tr>
<td>Minnesota</td>
<td>2016</td>
</tr>
<tr>
<td>Mississippi</td>
<td>2016</td>
</tr>
<tr>
<td>Missouri</td>
<td>2016</td>
</tr>
<tr>
<td>Montana</td>
<td>2015</td>
</tr>
<tr>
<td>Nebraska</td>
<td>2015</td>
</tr>
<tr>
<td>Nevada</td>
<td>2016</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>2014</td>
</tr>
<tr>
<td>New Jersey</td>
<td>2017</td>
</tr>
<tr>
<td>New Mexico</td>
<td>2017</td>
</tr>
<tr>
<td>New York</td>
<td>2017</td>
</tr>
<tr>
<td>North Carolina</td>
<td>2016</td>
</tr>
<tr>
<td>North Dakota</td>
<td>2014</td>
</tr>
<tr>
<td>Ohio</td>
<td>2015</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2016</td>
</tr>
<tr>
<td>Oregon</td>
<td>2017</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>2016</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>2016</td>
</tr>
<tr>
<td>South Carolina</td>
<td>2016</td>
</tr>
<tr>
<td>South Dakota</td>
<td>2017</td>
</tr>
<tr>
<td>Tennessee</td>
<td>2016</td>
</tr>
<tr>
<td>Texas</td>
<td>2016</td>
</tr>
<tr>
<td>Utah</td>
<td>2015</td>
</tr>
<tr>
<td>Vermont</td>
<td>2016</td>
</tr>
<tr>
<td>Virginia</td>
<td>2016</td>
</tr>
<tr>
<td>Washington</td>
<td>2016</td>
</tr>
<tr>
<td>West Virginia</td>
<td>2014</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>2016</td>
</tr>
<tr>
<td>Wyoming</td>
<td>2016</td>
</tr>
<tr>
<td>American Samoa</td>
<td>2015</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>2017</td>
</tr>
<tr>
<td>Guam</td>
<td>2016</td>
</tr>
<tr>
<td>Northern Marianas</td>
<td>2016</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>2015</td>
</tr>
<tr>
<td>Virgin Islands</td>
<td>2017</td>
</tr>
</tbody>
</table>
A. State Grant Program

The 56 states and territories are the key partners in RBS efforts. The Act of 1971 established a federal financial assistance program intended to encourage state participation in boating safety efforts. The Act was also designed to permit the states to assume the greater share of boating safety education, assistance, and enforcement activities (46 U.S.C. Chapter 131).

Originally the funding for these state programs was provided from the Coast Guard’s operating expenses budget that was authorized and appropriated by Congress. When the authorization for the RBS grant program expired in 1979, it was reestablished by new legislation, and the funding for this program was then authorized by what is now called the Sport Fish Restoration and Boating Trust Fund. This Trust Fund gets its funding from the receipts of Federal excise taxes attributable to motorboat and small-engine fuel use and on sport fishing equipment, along with import duties on fishing equipment, yachts and pleasure craft. The Trust Fund is an excellent example of a “user pay – user benefits” program and the State grant programs provide the benefits directly to the boaters and fishermen in their states.

To be eligible to participate in the state RBS grant program and receive funding from the Coast Guard, a state RBS program must meet the five criteria noted in Chapter 3, Program Operations. The funds provided to the states to administer their boating safety programs are distributed to the qualifying states as follows:

- One-third allocated equally among participating states.
- One-third allocated based on the percent of numbered boats in the state.
- One-third allocated based on the percent of the state’s prior-year RBS expenditures.

A state cannot receive more than one-half of the total cost of its RBS program from the Coast Guard, and must provide matching funds from general state revenues, undocumented vessel numbering and license fees, or state marine fuel taxes.

FIGURE 8. STATE GRANT FUNDING FY2007-FY2016 (PER MILLION)
Figure 8 shows how much funding the states cumulatively have spent over the last 10 years. It separates the amount of money the states themselves spend on boating safety, the amount of money they receive from the Coast Guard for their boating safety programs, and the cumulative amount spent from both the state and federal funding.

The Federal funds provided for a state’s boating safety program may be used for any of the following:

- Providing facilities, equipment, and supplies for boating safety education and law enforcement, including purchase, operation, maintenance, and repair.
- Training personnel in skills related to boating safety and to the enforcement of boating safety laws and regulations.
- Providing public boating safety education, including educational programs and lectures to the boating community and the public school system.
- Acquiring, constructing, or repairing public access sites used primarily by recreational boaters.
- Conducting boating safety inspections and marine casualty investigations.
- Establishing and maintaining emergency or search and rescue facilities, and providing emergency or search and rescue assistance.
- Establishing and maintaining waterway markers and other appropriate aids to navigation.
- Providing state recreational vessel numbering and titling programs.

The states report how the funds they received were used and this information is submitted to the Coast Guard via the PRPII form as detailed in Chapter 3, Program Operations.

### B. National Nonprofit Public Sector Organization Grant Program

The RBS Program of the Coast Guard is authorized to spend up to five percent of its Trust Fund allocation for grants to national nonprofit public service organizations to conduct national boating safety activities. A grant solicitation notice is published annually to which any interested and eligible organization can apply for grant funding to support a specific project. The applications are first reviewed for eligibility and completeness. The project cost portions of the proposals are reviewed to ensure they meet Federal requirements. Applications are then subjected to a merit review performed by subject matter experts who review each application for technical merit, personnel qualifications, and the degree to which a proposal offers potential value and measurements to RBS Program goals as stated and described in the proposal rating criteria. The Nonprofit Organization Grants Coordinator prepares the top-ranked grant award recommendations for review and approval to the Director of Inspections and Compliance who has final approving authority.

Organizations do not have to be boating-related. Any organization meeting the following qualifications is eligible to apply:

1. It must be a nongovernmental organization. (City, County or State governments or municipalities, for example, are not eligible).
2. It must be accorded a nonprofit organization tax-exempt status by the Internal Revenue Service in accordance with 26 U.S.C. 501(c) (3).
3. It has the ability to provide public boating safety benefits that are national in scope or dimension.
4. It must be primarily in existence to provide “public service” and serve the general public. Fraternal, lobbying, or religious organizations are not eligible.

In most years, Areas of Interest are published with the nonprofit organization application package to inform applicants of the Coast Guard’s priorities for the upcoming year. These Areas of Interest are used to assist with the scoring process, but organizations are invited to submit proposals that would assist the Coast Guard in reducing the number of accidents, injuries, and deaths on America’s waterways and provide a safer and more enjoyable experience for the boating public.

### TABLE 4. NONPROFIT PUBLIC SECTOR ORGANIZATION GRANT PROGRAM FUNDING 2008-2016

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Total Funding Approved</th>
<th>Number of Nonprofit Grants Funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>$6,371,192</td>
<td>36</td>
</tr>
<tr>
<td>2009</td>
<td>$6,028,097</td>
<td>34</td>
</tr>
<tr>
<td>2010</td>
<td>$6,111,800</td>
<td>39</td>
</tr>
<tr>
<td>2011</td>
<td>$5,598,110</td>
<td>32</td>
</tr>
<tr>
<td>2012</td>
<td>$5,384,100</td>
<td>33</td>
</tr>
<tr>
<td>2013</td>
<td>$5,598,688</td>
<td>35</td>
</tr>
<tr>
<td>2014</td>
<td>$4,841,669</td>
<td>24</td>
</tr>
<tr>
<td>2015</td>
<td>$5,341,477</td>
<td>25</td>
</tr>
<tr>
<td>2016</td>
<td>$5,354,409</td>
<td>31</td>
</tr>
</tbody>
</table>
Examples of Nonprofit Grant Products

The RBS Program now requires that grantees provide website-ready final reports. These reports are provided to the public via the Division’s website https://www.uscgboating.org/grants/nonprofit-grants.php. The image to the right is from a final report submitted by U.S. Sailing for their 2013 grant “Development and Design of a National Course Template for On-Water Instruction for Recreational Boat Operations - Sail & Human Domains.”

The Foundation for Recreational Boating Safety and Education received funding to continue its work with the National Marine Manufacturers Association (NMMA) and Discover Boating to increase boating safety through on-water skills training at boat shows. The image to the right shows an email invitation to attendees of a specific boat show to participate in the hands-on training.

The Sea Tow Foundation developed the ‘Designated Skipper’ campaign in 2016. The campaign is a proactive education deterrent effort to bring about awareness and stop the action before enforcement is necessary to help eliminate Boating Under the Influence (BUI) and alcohol related accidents on the water. To take the pledge go here http://www.designedskipper.com/
The Product Assurance Branch focuses on manufacturer compliance with laws and regulations intended to ensure the safety of recreational boats and associated equipment. The Product Assurance Branch’s responsibilities include, but are not limited to:

- Inspecting and testing recreational boats for compliance with Federal requirements;
- Investigating consumer complaints involving alleged safety defects and non-compliance with Federal standards;
- Issuing recalls of recreational boats and associated equipment;
- Encouraging development of voluntary safety standards for recreational boats by international and national standards organizations;
- Interpreting Federal standards;
- Handling requests for exemptions to Federal standards;
- Assigning Manufacturer Identification Codes (MICs) to boat manufacturers; and
- Publishing the Boating Safety Circular newsletter.

One of the major ways in which the Product Assurance Branch ensures compliance with Federal safety standards is through the compliance inspection program. In this program, Coast Guard representatives visit the factories of recreational boat manufacturers and inspect boats under construction, looking for discrepancies between the way the boats are constructed and what the Federal safety standards require.

In June 2014 a new contract was put in place that integrated boat dealers and boat shows as additional venues for boat inspections. The Coast Guard representatives will continue to conduct inspections at all three venues and boat tests will also continue at the Boat Test Facility in Maryland as they have in the past.

In 2016 there were 619 visits to manufacturers, retailers, and boat shows; 2,777 boat inspections; 883 discrepancies found; and 86 recall campaigns initiated. Recalls of recreational boats and associated equipment occur when they are non-compliant or contain a substantial risk defect. The number of visits, inspections, discrepancies, and recalls in previous years is in the table below and was included in the previous strategic plans. Along with these inspections and recalls, the program assigned 182 Manufacturer Identification Codes (MICs) to new manufacturers.

**TABLE 5. MANUFACTURER INSPECTION DATA FY2010-2016**

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Number of Visits</th>
<th>Number of Inspections</th>
<th>Number of Discrepancies</th>
<th>Number of Recalls</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>619</td>
<td>2,777</td>
<td>883</td>
<td>86</td>
</tr>
<tr>
<td>2015</td>
<td>580</td>
<td>2,853</td>
<td>817</td>
<td>18</td>
</tr>
<tr>
<td>2014</td>
<td>444</td>
<td>345</td>
<td>270</td>
<td>12</td>
</tr>
<tr>
<td>2013</td>
<td>1302</td>
<td>468</td>
<td>411</td>
<td>15</td>
</tr>
<tr>
<td>2012</td>
<td>1120</td>
<td>359</td>
<td>445</td>
<td>11</td>
</tr>
<tr>
<td>2011</td>
<td>1174</td>
<td>387</td>
<td>481*</td>
<td>15</td>
</tr>
<tr>
<td>2010</td>
<td>1785</td>
<td>485</td>
<td>358</td>
<td>19</td>
</tr>
</tbody>
</table>

*Several new builders had an unusually large number of discrepancies*
The Product Assurance Branch published its most recent Boating Safety Circular in Spring 2017. It contains articles on the following:

- My Boat is Defective, or is it?
- Grant of Exemption: An Overview
- Conducting Drills For Your Kids
- Is a gasoline outboard kicker too much horsepower?
- Notices of Defects or Non-Compliances

In Spring 2016 the Product Assurance Branch published the 89th edition of the Circular. It contains articles on the following items:

- Shallow Water Boats Including Texas Flats Boats Stability Study Update
- Responsibility of a Recreational Boat Importer
- Navigation Lights, The rules are for your safety
- We’ve Got an App for That
- Does the Coast Guard Certify Boats
- Backyard Built Boats; Things You May Not Know
- Notices of Defects or Non-Compliances

To see all of the Circulars and read the articles in full, go here: https://www.uscgboating.org/content/boating-safety-circulars.php

The Product Assurance Branch continues to partner with national and international standards organizations to develop voluntary safety standards for recreational boats. Product Assurance Branch staff engineers participate in the committee work of the American Boat & Yacht Council (ABYC), Underwriters Laboratories (UL), and other organizations that develop safety standards for the design, construction, equipage, repair and maintenance of boats, to ensure that the Coast Guard’s point of view is considered when standards are developed and reviewed. In 2016 ABYC released a Supplement which contains the following updates to 13 current standards:

- A-16, Electric Navigation Lights;
- A-27, Alternating Current Generator Sets;
- E-10, Storage Batteries;
- H-5, Boat Load Capacity;
- H-25, Portable Marine Gasoline Fuel Systems;
- H-26, Powering of Boats;
- H-28, Inflatable Boats;
- H-33, Diesel Fuel Systems;
- P-6, Propeller Shafting Systems;
- P-14, Mechanical Propulsion Control Systems;
- S-8, Boat Measurement and Weight;
- T-1, Aluminum Applications;
- T-5, Safety Signs and Labels.

Additional information about ABYC and the standards can be found here: https://www.abycinc.org.
MUCH OF THE DATA the Boating Safety Division collects comes from stakeholders, and the Division uses it to provide statistics and conduct analyses. Three particular publications are produced on an annual or intermittent basis:
- Boating Statistics;
- National Recreational Boating Safety Survey; and
- Life Jacket Wear Observation Study.

Each of these three major publications will be discussed in greater detail in the remainder of this section. The Division also conducts smaller analyses making use of the data typically compiled in the Boating Statistics. Some of the analyses are ongoing, while others are one-time research projects for a particular need. In addition to the Coast Guard conducting various analyses with its data, many of the grantees also conduct research and analysis projects that are provided to the Coast Guard.

**Annual Boating Statistics**

Every year, the Coast Guard compiles statistics on reported recreational boating accidents. These statistics are derived from accident reports that are filed by the owners or operators of recreational vessels involved in accidents. The fifty states, five U.S. territories and the District of Columbia submit accident report data to the Coast Guard for inclusion in the annual Boating Statistics publication. It provides statistics on recreational boating-related deaths, injuries, and accidents for each year and is available online at: http://www.uscgboating.org/statistics/accident_statistics.php.

All of the accident reports are entered in the Coast Guard’s Boating Accident Reporting Database (BARD) and then compiled on a calendar year basis for the statistics publication. No changes were made to the data collection requirements this past year. However, the online version of BARD, referred to as BARD-Web, was modified to allow states to enter preliminary information about an accident and

![Figure 10. Deaths, Injuries and Accidents by Year 1997-2016](image-url)
then return at a later time to provide the full report. A new interface for use with stories captured by news media sources was developed to allow Division personnel to enter a news media story into BARD-Web and alert the state contact about a possible boating accident.

4 **Boat-Person Hours** - the total number of hours persons are aboard a boat in use out on the water. The “boat-person hours” definition is most commonly used to mean “exposure” or “recreational boating exposure hours” in this report.

Recreational Boating Risk Ratios are fractions with exposure rates (boat days/hours, or boat-person days/hours) as the denominators and either the number of recreational boating accidents or fatalities are the numerators. Recreational Boating Risk Ratios provide a more valid and consistent measure that can be used to compare rates of boating accidents and fatalities across states and different types and sizes of boats. Over the next several years, the RBS Program plans to utilize exposure-based risk ratios as a primary performance criterion that will be employed to evaluate the effectiveness of efforts to reduce accidents and fatalities.

The Coast Guard’s 2011 NRBSS was conducted from August 24, 2011 through December 31, 2011 by mail as well as by telephone. The mail survey targeted U.S. households owning a registered recreational boat. The telephone survey’s target population was that of U.S. households owning a recreational boat (whether it must be registered or not), or having a member who participated in recreational boating in 2011.

The 2012 NRBSS lasted the entire calendar year. It consisted of a Participant Survey conducted by telephone along with a monthly Trip Survey conducted by phone and online. The monthly Trip Survey was considered to be a more reliable way to collect data than the recall method used in 2011. To calculate 2012 exposure rates, the

### National Recreational Boating Safety Survey

The primary purpose of the National Recreational Boating Safety Survey (NRBSS) is to produce valid and reliable estimates of recreational boating exposure to be used to generate risk ratios. These risk ratios are needed to meet requirements by GAO and OMB to have statistically valid data for the RBS program.

The NRBSS calculated and presented recreational boating exposure rates in the following four ways:

1. **Boat Day** - any day that a boat is used out on the water regardless of the amount of time it is used that day;
2. **Boat Hours** - the number of hours a boat is used out on the water during a given period of time (e.g., a day, month, year);
3. **Boat-Person Day** - an estimate of the number of persons on a boat on the day that it is used out on the water;
4. **Boat-Person Hours** - the total number of hours persons are aboard a boat in use out on the water. The “boat-person hours” definition is most commonly used to mean “exposure” or “recreational boating exposure hours” in this report.

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### Table 6. Exposure Hours by Boat Type in 2011

<table>
<thead>
<tr>
<th>Boat Type</th>
<th>Number of Boats in the U.S. (000)</th>
<th>Boats Used (%)</th>
<th>Average Number of Use Days Per Year</th>
<th>Average Number of Hrs on Water Per Use Day</th>
<th>Average Number of People Aboard Per Use Day</th>
<th>Boating Person Hrs 1 (000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Boat</td>
<td>10,119</td>
<td>70.3</td>
<td>19.3</td>
<td>5.1</td>
<td>2.9</td>
<td>2,053,042</td>
</tr>
<tr>
<td>Sailboat</td>
<td>733</td>
<td>50.4</td>
<td>19.2</td>
<td>4.2</td>
<td>2.3</td>
<td>70,906</td>
</tr>
<tr>
<td>PWC</td>
<td>1,689</td>
<td>69.3</td>
<td>16.3</td>
<td>3.9</td>
<td>1.8</td>
<td>130,686</td>
</tr>
<tr>
<td>Canoe</td>
<td>2,505</td>
<td>50.1</td>
<td>8.8</td>
<td>3.9</td>
<td>2.1</td>
<td>90,350</td>
</tr>
<tr>
<td>Kayak</td>
<td>3,898</td>
<td>69.3</td>
<td>12.8</td>
<td>3.4</td>
<td>1.1</td>
<td>133,125</td>
</tr>
<tr>
<td>Pontoon Boat</td>
<td>854</td>
<td>83.4</td>
<td>21.8</td>
<td>4.5</td>
<td>4.3</td>
<td>301,209</td>
</tr>
<tr>
<td>Row/Inflatable/Other</td>
<td>2,418</td>
<td>50.7</td>
<td>14.7</td>
<td>4.8</td>
<td>2.3</td>
<td>193,682</td>
</tr>
<tr>
<td><strong>All Boats</strong></td>
<td>22,217</td>
<td>65.5</td>
<td>16.7</td>
<td>4.5</td>
<td>2.4</td>
<td>2,972,999</td>
</tr>
</tbody>
</table>
Coast Guard used data collected in the 2012 Trip Survey along with some data from the 2011 Boat Owner Survey.

In addition to the formal report developed for the Survey, Fact Sheets were created to share more information that was collected in the Survey. The first fact sheet was posted December 2014 and focused on the types of water on which recreational boating occurred in 2012.

These fact sheets and the report on the Survey can be found on the Boating Safety Division website: https://www.uscgboating.org/statistics/accident_statistics.php

Work is already underway for the next Survey. Scheduled to be conducted in 2018; it will be done via a grant versus a contract. This method was authorized by the recent reauthorization of the Sport Fish Restoration and Boating Trust Fund.

**Proceedings Magazine**

In the fall of 2016, the Coast Guard published its quarterly Proceedings magazine focused solely on recreational boating safety. This is the second such edition of Proceedings in the last decade that focused on recreational boating. The previous version was published in the fall of 2010.

The 2016 publication includes articles from Coast Guard personnel, state Boating Law Administrators, and other boating related partners. It focused on four main areas: RBS program synopsis, increase adoption of recreational boating safety principles, assess effectiveness of recreational boating safety efforts, and improve the delivery of recreational boating safety. The entire archive of Proceedings magazines can be found here: https://www.uscg.mil/proceedings/archive/
**Life Jacket Wear Observation Study**

The Division has awarded a nonprofit organization grant to conduct an annual life jacket wear observation study for the past eighteen years (1999-2016). The study tracks changes in life jacket wear rates over time and provides “important statistics for those individuals and groups responsible for educating the public about boating safety, improving boating safety programs, and for legislative efforts targeting safety improvements for recreational boating.” The full report of the observation study can be read here: [https://www.uscgboating.org/statistics/national-life-jacket-wear-rate-study.php](https://www.uscgboating.org/statistics/national-life-jacket-wear-rate-study.php)

During the development of the first Strategic Plan for 2007-2011 an objective was developed to increase the observed life jacket wear rate of adults in open motorboats. To assist with tracking this rate, beginning in 2006 the observation study created a specific calculation and chart of this information. As noted in the report on the observation study, in order to ensure that comparisons to 2006 are valid, the proportion of skiffs to speedboats in each state for each subsequent year was set to mirror the proportions found in 2006 since the wear rates for skiffs are generally greater than those for speedboats. The proportions are likely to fluctuate each year in each state.

**FIGURE 11. ADULT WEAR RATES ON OPEN MOTORBOATS* 2006-2016 (WEIGHTED TO 2006 SKIFF-SPEEDBOAT PROPORTIONS FOR EACH STATE)**

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* The Open Motorboat category is created by grouping “Skiffs” and “Speedboat/Runabouts” together. Two factors are controlled for in this chart: Age (proportions of 18 to 64 and 65+ adults), and the proportion of Skiffs to Speedboat/Runabouts, which has been set each year within each state to reflect the proportions observed in 2006, the year in which the Strategic Plan goals were first measured. In addition, each state’s contribution to the national average is weighted to reflect the 2006 proportions.
Alcohol Related Research

As part of the first strategic plan (2007-2011) and continuing in the second plan (2012-2016), the Coast Guard tracked the number of deaths where alcohol was the primary contributing factor. The results are shown above in Figure 12.

Paddlecraft Related Research

The use of manually propelled vessels has increased in recent years. In addition, there has been an increase in the number of deaths associated with their use. The Coast Guard began tracking paddler deaths as it noticed the number of those deaths increasing. The RBS program is working with its partners and paddlecraft manufacturers to figure out ways to reduce these paddler deaths and all recreational boating deaths.

FIGURE 12. NUMBER OF DEATHS WHERE ALCOHOL USE WAS A PRIMARY CONTRIBUTING FACTOR OF THE ACCIDENT

FIGURE 13. PADDLER DEATHS 2012-2016

Note: Red indicates a single fatality. Purple indicates two or more fatalities.

FIGURE 14. PADDLER DEATHS 2007-2016

4,826
73%

1,777
27%
State Specific Data
As stated in Chapter 3, Program Operations, the states must provide information on their boating safety programs to the Coast Guard using the PRPII form. The PRPII form not only allows the Coast Guard to check for complete and accurate reporting, but allows for data/trend analyses.

The Coast Guard uses this information in conjunction with the amount of funding given to the states to look at such items as the state’s education cost per student, total number of officers, RBS LE/SAR hours over several years, on-water hours, number of officers per registered boats, etc. Many of these analyses were conducted only to track resources over time.

A one-page document was created to quickly compile some of the key data from PRPII for each state to provide the Boating Safety Division’s Program Analysts with a quick synopsis of how the state’s data looks over the most recent three year period.

Operator Education Policy Analysis
As there are no federal requirements for recreational boat operator education, states have begun to implement their own education requirements. See Figure 15 for the disparity in the state’s policies for boat operator education requirements.

Quick Phase-In Education and Analysis
Using accident data submitted from each State contained in the Coast Guard’s BARD, an analysis was conducted of the fatality rates, fatal accident rates, and trends of two States (Alabama and Connecticut) that have completed a “Quick Phase-In” boat operator education policy and compared them to the rest of the country, their bordering States, and States categorized by policy type. The analysis was first conducted in 2006. The results indicated that, following the phase-in period, States implementing “Quick Phase-In” requirements may observe a greater reduction in fatalities when compared to the rest of the country. Our analyses also showed that the decline in fatality rates for that “Quick Phase-In” State would be greater than their bordering States. Over time additional states have instituted a quick phase-in approach to requiring education for boat operators. The Boating Safety Division has monitored the progress of the original quick phase-in states and began tracking the other states who also implemented this approach to instituting their educational requirement.

Other maps were created for comparison among selected states regarding their boating fatality rates. These types of analyses allowed for a greater understanding of how states compare to each other and were often shared with boating safety partners or included in presentations by members of the Division. Figures 16 and 17 show how the showed how the “Quick Phase-In” states compared to the State of Minnesota which has a history of a low boating fatality rate.
NBSAC – Related Research

To assist the NBSAC with various issues brought before the Council, the Boating Safety Division provides research and analyses support as needed. Following are a few examples of the various types of research and data provided to the NBSAC.

Prevention Through People Subcommittee

In April 2010 the NBSAC recommended the development of a work group to research components of and draft language for a specific resolution addressing mandatory wear of life jackets for certain types of boats, lengths of boats, and/or boating activity in specific conditions. The Boating Safety Division reviewed 14 years of casualty data (1995—2008) on vessels exempt from life jacket wear and kiteboards/standup paddleboards. The data was divided into three separate sections:

1. drowning and hypothermia deaths where a life jacket was worn;
2. drowning and hypothermia deaths where a life jacket was not worn; and
3. all deaths from all causes that occurred, regardless of life jacket worn or not worn.
A data set for each category was assimilated and then summarized by four more categories: 1. victim information; 2. operator information; 3. vessel information; and 4. accident information. This data helped to answer the work group’s list of research questions that were formulated to describe the reality of boating-related drowning incidents in the nation.

Another NBSAC Prevention Through People Subcommittee recommendation in the Spring of 2012 was that the USCG assign staff to perform additional research to better understand the apparent success of state boating programs and to develop a set of best practices relative to boating safety program effectiveness for use by other states and boating safety organizations. The Boating Safety Division produced a presentation for the November 2012 meeting that included data gathered from analysis of fatal accident rates and interviews with Boating Law Administrators of selected states.

Manually propelled vessel populations and casualties have increased in recent years and as a result the Coast Guard has begun discussions on whether or not there should be changes to the mandatory safety equipment carriage requirements for vessels that are currently exempt. Furthermore, some advocates for standup paddleboarding have sought relief from existing safety equipment carriage requirements. The Boating Safety Division provided the data in Table 8 which the Subcommittee reviewed to develop a resolution that was presented to the Coast Guard at the 92nd NBSAC meeting.

**Boats and Associated Equipment Subcommittee**

Another project the Boating Safety Division worked on was emergency locator beacon data. The Coast Guard requested that NBSAC provide advice on whether or not there should be changes to the mandatory safety equipment carriage requirements for vessels that are currently exempt. Furthermore, some advocates for standup paddleboarding have sought relief from existing safety equipment carriage requirements. The Boating Safety Division provided the data in Table 8 which the Subcommittee reviewed to develop a resolution that was presented to the Coast Guard at the 92nd NBSAC meeting.

**Table 9. Cost Comparison of Notification Types with Lives Lost Value**

<table>
<thead>
<tr>
<th>Means of Notification</th>
<th>Cases</th>
<th>Sorties</th>
<th>Lives Lost</th>
<th>Lives at Risk</th>
<th>Average Cost per Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone</td>
<td>252</td>
<td>400</td>
<td>4</td>
<td>88</td>
<td>$349,063</td>
</tr>
<tr>
<td>VHF/FM</td>
<td>390</td>
<td>514</td>
<td>4</td>
<td>207</td>
<td>$105,360</td>
</tr>
<tr>
<td>Satellite phone</td>
<td>5</td>
<td>7</td>
<td>0</td>
<td>4</td>
<td>$47,954</td>
</tr>
<tr>
<td>Misc.</td>
<td>19</td>
<td>32</td>
<td>2</td>
<td>14</td>
<td>$938,258</td>
</tr>
<tr>
<td>Unspecified</td>
<td>60</td>
<td>99</td>
<td>0</td>
<td>45</td>
<td>$177,466</td>
</tr>
<tr>
<td>EPIRB</td>
<td>12</td>
<td>22</td>
<td>0</td>
<td>13</td>
<td>$63,063</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>738</td>
<td>1,074</td>
<td>10</td>
<td>371</td>
<td>$215,939</td>
</tr>
</tbody>
</table>

The Boating Safety Division worked with the subcommittee members to develop a model to calculate the costs and benefits of possible regulatory options. In parallel, the Boating Safety Division conducted an analysis of FY 2011 Search and Rescue (SAR) data from the USCG’s Marine Information for Safety and Law Enforcement (MISLE) database, working with guidance from the Coast Guard’s Office of Search and Rescue and the NBSAC members to perform technical analyses of accident data.

Each accident case was reviewed for relevancy and means of notification, and then each case appropriate for inclusion was monetized using specific government rates for the sortie involved (type of vessel used for response). The final step in the analysis was to calculate the value of each life lost and the cost per case. The table below shows the average cost per case for each of the notification types. The results of the SAR lives lost per lives at risk data suggests that use of EPIRBs may result in reduced fatalities. In addition, it is critical to note that the finding is important in view of assumed value of statistical life ($9.1 million).
OTHER RESEARCH Fatality Rates
To determine where risks may be greatest, Division staff calculated fatality rates using available data. Rates were mapped for easy comparison among the states. The following figures are examples of some of the maps that were created for analysis.

FIGURE 19. 2007-2011 FATALITY RATES BASED ON PARTICIPATION (per Million Participants)

Source: BARD and 2011 National Recreational Boating Safety Survey

FIGURE 20. 2012 FATALITIES/ 100 MILLION EXPOSURE HOURS based on Exposure Data from the 2012 NRBS

Source: BARD and 2012 National Recreational Boating Safety Survey
FIGURE 21. 2012-2016 FATALITIES/100K BOATS AVG

Source: BARD

FIGURE 22. 2012-2016 POWERBOAT FATALITIES/100K POWER BOATS

Source: BARD
FIGURE 23. 2012-2016 MOTORIZED DEATHS/100K MOTORIZED BOATS BY TOPOGRAPHICAL AND GEOGRAPHICAL SIMILARITIES

National Rate is 4.0

Source: BARD. (Average Fatality Rate)

FIGURE 24. STATES REQUIRING MOTORBOAT OPERATOR OR PWC PROOF OF CERTIFICATION

As of December 12, 2017
Education Coverage
In order to analyze the efficacy of various boater education laws, an estimate of the percentage of people that required motorboat operator education in 2015 was completed. It is based on the population estimates that the US Census Bureau released (for 2015) as well as each state’s policy on requiring boat operator safety courses during 2015. This map represented an estimation of the portion of operators based on their age that fell under a regulatory requirement to have taken a safety course. The regulatory requirement increased by a small percentage up to 28.4% from 27.5% in 2014.

FIGURE 25. ESTIMATE OF THE PERCENTAGE OF PEOPLE THAT REQUIRED SELECT* MOTORBOAT OPERATOR EDUCATION IN 2015

Note: Estimates are based on state’s boating regulations and US Census data by state. Boating population was considered residents who are 10-79 years of age. Youths that were prohibited from operation of certain vessels were included in the required education category.
Life Jacket Wear Regulations
Figure 26 was created to provide a visual depiction of the various state life jacket wear requirements. The federal requirement is for children under 13 years of age to wear life jackets while boating. Most states have similar child-wear regulations but the ages are variable. There are also numerous other instances that require boaters to wear life jackets in certain states, including seasonally, aboard PWCs, while being towed, or aboard paddlecraft in certain areas.

Motorized Vessel Operator Ages
Figure 27 displays the distribution of... of motorized vessel operator ages for recreational boating accidents where deaths occurred. It represents eight years (2005-2012) of recreational boating accident data from BARD. For this period, operators that were aged 45 and over accounted for 51% of the total for deaths aboard motorized vessels.
CHAPTER 7
RECENT BOATING SAFETY ACTIVITIES

Operation Dry Water

Operation Dry Water (ODW) is a national awareness and enforcement campaign launched by the National Association of State Boating Law Administrators (NASBLA) in 2009 in partnership with the Coast Guard. It is partially funded by the national nonprofit organization grant program administered by the Boating Safety Division. ODW puts thousands of local, state, and federal marine law enforcement officers on the water just before the Fourth of July to spread awareness about the dangers of boating under the influence (BUI) and to facilitate heightened boating under the influence enforcement before a holiday known for drinking and boating – and fatal accidents. NASBLA, in conjunction with the Coast Guard, conducted its eighth ODW campaign June 25-26, 2016.

As part of the ODW campaign, NASBLA created and published a newsletter in the months leading up to ODW weekend and in the months following the conclusion of the campaign. The distribution list included individuals who were involved or interested in the ODW campaign, which consists of over 4,000 individuals.

While participating law enforcement agencies concentrate their media outreach efforts locally, the Coast Guard and NASBLA handle national media outreach. This includes distributing media releases and making pitch calls to national radio, television, and print outlets. For example, from May 30 to September 17, 2013 ODW generated: 782 unique television news stories; 1056 unique online mentions, including social media sites; 135 unique print articles; and 139 unique wire stories/hyperlink mentions.

Law enforcement participation in the ODW campaign continues to grow. For the 2016 ODW campaign, within the 538 participating agencies, units, and stations reporting there were 6,196 officers who participated in heightened BUI awareness and enforcement across the nation. The increase in the number of agencies and officers participating is testament to the interest and support the campaign is receiving from the law enforcement community.

TABLE 10. NATIONAL RESULTS OF OPERATION DRY WATER CAMPAIGN

<table>
<thead>
<tr>
<th>Year</th>
<th>Agencies/Units/Stations</th>
<th>Officers</th>
<th>Vessel Contacts</th>
<th>Boater Contacts</th>
<th>Citations</th>
<th>BUI</th>
<th>Safety Warnings</th>
<th>Highest BAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>538</td>
<td>6,196</td>
<td>55,141</td>
<td>131,054</td>
<td>4,975</td>
<td>367</td>
<td>13,594</td>
<td>0.38 (IN)</td>
</tr>
<tr>
<td>2015</td>
<td>582</td>
<td>6,605</td>
<td>57,402</td>
<td>125,087</td>
<td>4,855</td>
<td>278</td>
<td>13,087</td>
<td>0.285 (WI)</td>
</tr>
<tr>
<td>2014</td>
<td>585</td>
<td>6,961</td>
<td>58,670</td>
<td>146,711</td>
<td>4,952</td>
<td>318</td>
<td>13,655</td>
<td>0.317 (CA)</td>
</tr>
<tr>
<td>2013</td>
<td>513</td>
<td>6,219</td>
<td>58,971</td>
<td>144,044</td>
<td>4,942</td>
<td>290</td>
<td>12,217</td>
<td>0.243 (KS)</td>
</tr>
<tr>
<td>2012</td>
<td>505</td>
<td>4,519</td>
<td>49,209</td>
<td>113,116</td>
<td>4,819</td>
<td>337</td>
<td>9,695</td>
<td>0.38 (KS)</td>
</tr>
<tr>
<td>2011</td>
<td>447</td>
<td>3,687</td>
<td>43,777</td>
<td>97,648</td>
<td>4,370</td>
<td>325</td>
<td>8,763</td>
<td>0.305 (MI)</td>
</tr>
<tr>
<td>2010</td>
<td>175</td>
<td>2,708</td>
<td>40,127</td>
<td>66,472</td>
<td>4,171</td>
<td>322</td>
<td>7,522</td>
<td>0.303 (KY)</td>
</tr>
<tr>
<td>2009</td>
<td>N/A</td>
<td>2,442</td>
<td>17,454</td>
<td>36,277</td>
<td>2,522</td>
<td>283</td>
<td>5,320</td>
<td>N/A</td>
</tr>
</tbody>
</table>

ODW information can be found here: http://www.operationdrywater.org/a specific keyword search in the “Other Vessel Type” category. Only canoe and kayak accidents where racing was designated in the “Activity” category were included.
Collaboratory of Partners

In 2014 the Division started a monthly Collaboratory of Partners (COP) call with the Coast Guard District RBS Specialists to allow for more open dialogue and discussion of boating safety issues between Coast Guard headquarters and the ‘boots on the ground’ in each of the Coast Guard Districts. Since then the calls have continued and in 2016 there were eight calls and the topics ranged from discussion of NBSAC meetings, to reporting of accidents, to updates on Coast Guard headquarter personnel changes, and updates from each District on projects specific to their area of operations that may also be of interest to the other Districts. The open dialogue during the calls has led to informative and productive information sharing and assistance with specific issues.

One example of assistance that stemmed from these calls is the conversion of the ‘If Found’ sticker program from one that is being monitored by the First District to now being a CG Auxiliary-centric program. Because the First District expressed concern over the time and effort spent on this program, CG Headquarters staff, and specifically the Auxiliary Division took the initiative to discuss alternative methods for supporting this program.

The District RBS Specialists also conduct research.

One example is the the 5th District RBS Specialist created the above map, Figure 28. It illustrates the GIS position of 2013 RBS fatalities. A red dot indicates one death and a blue dot indicates multiple deaths.

District of Columbia Harbor Patrol Visit

In late September 2014 the members of the Office of Auxiliary and Boating Safety were invited to visit the District of Columbia Harbor Patrol. The participants were provided with an overview of the work and services provided by the DC’s Harbor Patrol; went on a tour of the facility, including the classroom used for education classes; viewed the fleet of vessels available along with on-road equipment that can be used to support their on-water fleet; and participated in an on-water excursion to view the DC Harbor Patrol’s area of operations.
EACH YEAR more than 70 million Americans participate in recreational boating. Since the creation of the National Recreational Boating Safety (RBS) program, the estimated number of recreational boats has more than doubled, while the number of reported boating casualties (the sum of deaths and injuries) has decreased by more than 50%.

Although recreational boating has become safer, each year lives are lost or injured and property is damaged. Boaters and boating safety proponents also face numerous challenges:

1 **Uniform state laws**: Recreational boaters can experience differing state laws when crossing state lines—this can create confusion and directly conflicts with the Coast Guard’s mandate to promote uniformity. Forty-nine of 56 states/territories have some form of education laws though the states’ requirements vary drastically and no two programs are the same. Most states leave huge voids—some laws apply only to children, rented personal watercraft, etc.; and many have a phase-in period that will require multiple decades to reach the most at-risk population.

2 **Reciprocity of boater education requirements**: Further complicating matters is the issue of reciprocity: whether or not and to what degree a boater’s approved course completion certificate will be accepted when that boater temporarily operates a boat in another state. It is easy to see how the boating public could get confused about what is required with so many different requirements in place. Additionally, there are no inter-state boundary lines on the water as there are on land. Boaters do not have reference markers like drivers when they enter a new state and therefore, boaters who are unaware as they cross state lines are also not likely to know of or meet an adjoining state’s requirements for boater education requirements.

3 **Boating safety education requirements**: In 2016, approximately 70 percent of the population (10 to 80 years of age) were not covered by state boating education requirements. The rest are either older than their state’s requirement, the state has no requirement, or there was only a requirement for personal watercraft operators.

From 2006 to 2010, 16 percent of deaths occurred on boats where the operator had received boating safety instruction, according to the USCG Boating Statistics Annual Reports. The success of recently implemented comprehensive, faster-phase-in education requirements in Alabama and Connecticut support the conclusion that Coast Guard regulations resulting from this proposal would help reduce fatal accidents. Setting a minimum federal standard would ensure that all states have at least a baseline of information that all boaters need to know, and would be inexpensive, since most already have some form of education requirement in place, and many offer on-line or home study courses.

“Although recreational boating has become safer, each year lives are lost or injured and property is damaged.”
## SUBJECT MATTER INDEX

<table>
<thead>
<tr>
<th>Education</th>
<th>Quick Phase-In</th>
<th>Study completed and documented in 2016 Annual report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulation</td>
<td>ECOS</td>
<td>Documented in 2016 Annual report</td>
</tr>
<tr>
<td></td>
<td>VIS</td>
<td>Documented in 2016 Annual report</td>
</tr>
<tr>
<td></td>
<td>UCOTA-V</td>
<td>Documented in 2016 Annual report</td>
</tr>
</tbody>
</table>

### NBSAC

![Image of people in kayaks]