



### Engineering, Reporting & Analysis Committee (ERAC)

This is an interim report on committee charges and related crossover activities as of Feb. 20, 2018, in advance of the committee's in-person meeting scheduled for March 3 in Lexington. The focus is on current project status, current or potential challenges to successful implementation, and charge modifications or additions to date. It does not include updates on purely monitoring activities.

At this time, the committee does not have any specific requests for Executive Board guidance or intervention, but is likely to have such requests before the end of this committee cycle, especially regarding two projects destined for NASBLA membership consideration and approval.

Committee-wide leaders and committee staff are below. See the last page of this report for the full roster of 2017-2018 committee membership, including U.S. Coast Guard representatives and all State and Associate members.

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## Monitoring & Evaluation

### ERAC\_M&E\_2018-1: Input to USCG policy/regulatory proposals and actions

**Give input to U.S. Coast Guard policy and regulatory proposals and actions in areas related to the committee's charter:** Monitor, research and provide feedback to Coast Guard policy initiatives and regulatory proposals on accident reporting and other areas related to ERAC's charter, whether published in the Federal Register or issued through other official mechanisms. Inform the states and encourage them to provide feedback. Coordinate NASBLA's organizational responses to such proposals and use [NASBLA's Federal Register webpages](#) and the [NASBLA Lighthouse On the Horizon](#) and discussion forum portals to provide resources and promote open discussion among the states.

**Why it's important:** Agency notices, proposed rules, final rules and other formal and informal policy guidance issued by the U.S. Coast Guard can significantly impact recreational boating and RBS programs in the states. ERAC has taken a lead in monitoring, analyzing, [chronicling proposed policy and regulatory actions](#), and communicating with NASBLA members about their significance to the states and other RBS stakeholders **and** about the importance of weighing in, especially through formal comment submission processes that mandate the Coast Guard to publicly respond to the feedback it receives.

**Challenges:** Three early-2017 actions by the Trump administration froze federal regulatory (and more broadly, related policy and regulatory interpretation) activity during CY 2017, signaling a pronounced shift in the regulatory climate. The actions resulted in delay of the otherwise anticipated release of Federal Register notices for public comment on the Coast Guard Boating Accident Report Form (CG-3865, set to expire 3/2019) and final action on a revised form for the collection of State [Vessel] Registration Data (CG-3923).

**Implementation/Status:** The regulatory/policy pipeline may once again be flowing—or at least trickling—in CY 2018. As of Nov. 2017, ERAC became an integral partner in a larger consensus-based project with the U.S. Coast Guard to draft national policy on accident reporting (**see ERAC\_IR&A-2018-1**). This project, currently in progress with a workgroup consisting of CG-BSX and State representatives, will engage the full ERAC – and then the CG and NASBLA leadership, and all States – in the next stages of the process. As part of the committee's ongoing monitoring of the Federal Register, ERAC staff also has been advised to be on the watch for a notice seeking comments on the delayed CG-3865, and that will weigh into the consensus project discussions on accident report data elements for submission to the Coast Guard.

**Measures of effectiveness:** To be refined in light of recent developments. Previous MOEs were: Short term: On key policy initiatives that will impact all states to some degree, a comment/response rate of a minimum of 30 NASBLA member states. Long range: More robust input submitted to the U.S. Coast Guard. Improved communication between the states and the Coast Guard.

## Knowledge & Content Management

### ERAC\_K&CM\_2018-1: Lighthouse Forum.

**Continue developing the NASBLA Lighthouse Forum:** Continue growing the content and components of the [NASBLA Lighthouse](#) and actively promote its use. Ensure ERAC's involvement in NASBLA-wide discussions and execution of the association's knowledge and learning management systems (KMS and LMS). Maintain the Lighthouse webpages, continue integrating ERAC products, and upload and classify library resources in line with protocols developed through the KMS efforts. Implement best practices for driving users to the discussions and resources.

**NOTE:** 2018 charge includes roll out/evaluation of 2017 promotional video by Enforcement & Training Committee for 2016 ERAC products on [accident narratives](#) and [alcohol/drug involvement in accidents](#).

**Why it's important:** [The Lighthouse](#) was first envisioned by a 2010 charge team as an accessible, online forum where users and producers of recreational boating data could share data and successful practices, forego "reinventing the wheel," and locate viable resources and information applicable to their work. The need for collaboration and timely sharing of information on complex boating safety issues has not waned; with increasingly constrained time and resources at all government levels and across all sectors, such a value-added resource has even more merit. This activity is responsive to data-related initiatives of the 2017-2021 National RBS Program Strategic Plan.

**Challenges:** In 2018, the team must continue to balance content development on the main webpages with strategies for increasing participation in the discussion forum and population of the resource library.

**Implementation/Status:** The Lighthouse consists of public webpages with information products and tools developed by or in coordination with ERAC, issue alerts, and resource links; and a member portal to [a discussion forum and library on NASBLA's Connect](#). ERAC's Vice Chair, who also serves as charge leader, along with representatives from the other NASBLA policy committees, was tapped to serve on a workgroup toward developing and implementing an association-wide Knowledge Management Policy. This CY, at least one additional resource webpage will be created as a result of new charge ERAC\_E&E-2018-2 toward development of a model act and other information regarding marine carbon dioxide detection systems.

**Measures of Effectiveness:** To be refined. Previous MOEs were: Short term: Facilitated discussion of at least three topics of interest/relevance to Lighthouse users. Minimum of 100 percent increase in number of members currently enrolled on discussion forum. Long-range: More informed, engaged states and other stakeholders regarding measures and details associated with recreational boating and boating accident data.

## Investigation, Reporting & Analysis

### **ERAC\_IR&A\_2018-1 (revised Nov. 2017): Developing national policy on accident reporting**

In November 2017, a carryover charge to complete work on a manual that would provide operational guidance and resource information for states to use in gathering and recording accident report data for their own purposes and in reporting that data to the U.S. Coast Guard was modified significantly. The charge now involves a consensus-based project to assist in drafting the critical components of the Coast Guard's national policy on recreational boating accident reporting. An official project workgroup is comprised of a diverse group of state members (including one NASBLA Board member) and Coast Guard staff from the Office of Auxiliary and Boating Safety. Additional state members of ERAC (including the Board Liaison) have also participated in teleconferences. Content facilitation is by the Coast Guard, with ERAC assisting and coordinating the project logistics. The full ERAC committee and NASBLA leadership will review and comment on the work before the draft product rolls out to the rest of the NASBLA membership for comment and, upon any further refinement, vote of acceptance. As this is intended to be national policy, the product will require approval by Coast Guard leadership before implementation.

**Why it's important:** Clear policies and procedures are critical to the states' ability to capture and report boating accident data to the Coast Guard. This project addresses a long-standing need and opportunity for NASBLA to work with the USCG and the states to develop and achieve approval of a comprehensive, consensus-based policy that would improve the accident reporting system and structure.

**Challenges:** This is an ambitious project, running on an approximately eight-month timeline set by CG-BSX, and covering all aspects of the national recreational boating accident reporting system. As was the case for the Accident Reporting Terms & Definitions Project (2011-2013), there is a need to balance momentum with the realities of engaging consistent team efforts (**see Implementation/Status and separate copy of a recent project update prepared by Susan Weber (USCG project lead) for her leadership**). Perhaps the biggest challenges will come in engaging and informing the BLA population, which has undergone significant turnover in recent years and may not be as fully attuned to or familiar with the previous efforts to improve the accident reporting system; and in convincing longer-tenured BLAs that this time the work will result in positive outcome.

**Implementation/Status:** As of mid-February, the project workgroup had conducted 13 calls on topics of accident reporting structure, reporting thresholds, vessel determinations, and data elements. A subgroup on accident report decision making/scenarios had conducted another two. Additional full workgroup calls are scheduled to occur prior to the BLA Workshop, and an in-person session will also take place. Workshop attendees will be briefed on the project and approval process that will play out in coming months. There are still questions remaining as to what form the ultimate body of work will take: policy equivalent to regulation; as condition of state grant; or regulatory change.

**Measure of effectiveness:** To be finalized. Previous long-range MOE in keeping with other, similar projects is: More consistent, accurate, and viable accident report data gathered for use by the states and submitted by the states to the U.S. Coast Guard.

## ERAC\_IR&A\_2018-2: Roll out state-level statistical report template

**Roll out and continue refining the state-level statistical report template:** In coordination with the U.S. Coast Guard, subject to the resolution of issues associated with the BARD vendor transition, roll out this BARD-based report template for use by the states in creating their own accident statistics reports. Develop instructional materials and maintain them and links to other template resources on the NASBLA Lighthouse [Get Equipped dedicated subpage](#). Participate in related, state-specific template work associated with the NASBLA Boating Safety Dashboard project

**Why it's important:** Many states want or need to identify recreational boating accident-related issues or answer questions posed by the public or legislators, but do not have the resources, time or expertise to easily and accurately build statistical reports on their own from BARD queries. Even states that produce basic reports are looking for ways to improve their products and reduce production time and effort. Working with the Coast Guard—through its primary representative to the committee, who is also responsible for oversight of BARD—ERAC developed the contents for a template that will give states the ability to more easily and accurately generate written state-level statistical reports from the accident report data they enter into BARD. The template, built into BARD-Web, will allow users to generate an editable Microsoft Word document with narrative, summary statistics, and detailed tables.

**Challenges:** By closeout of the 2016 committee cycle, the product had undergone final testing by the charge team and additional state members, and was revised with the intent of going live by the end of November 2016. That month, the Coast Guard announced procurement of a new BARD vendor and the need to focus attention internally on the system transition period for the agency and state users of BARD. In mid-January 2017, the BARD vendor transitioned from CNSI to Knight Point Systems, but spent additional months resolving priority issues for state users. As such, the charge was subject to change pending further discussions with CG-BSX as to whether the template activity could/should resume in BARD and how the intent to pursue future upgrades to BARD might impact the project.

**Implementation/Status:** While the work of the charge team was effectively on hold for the past year+, there has been a recent breakthrough in the status of this project. Per Susan Weber on 2/14/18, the Coast Guard contracting office and the BARD contractor negotiated to finish up work on the template in BARD. Per Susan, the vendor has 120 days to accomplish this task. The charge team will re-engage as the developer gets his bearings on the project, and likely additional state volunteers will be asked to test their report data in the not distant future. This product should serve as a complement to state work associated with the Dashboard project.

**Measures of Effectiveness:** To be refined. However, previous MOEs were: Short term: In first year template is made available through BARD, confirm that at least 10 states are using the tool as a primary or secondary method of developing the content for an annual statistical report on accidents in their states. Long-range: More states using their state-level statistics to inform their RBS program planning, educate policy makers and constituents, and make improvements to data entry.

## ERAC\_IR&A\_2018-3: Expand pilot / refine collection and analysis of human factors data

**Expand the pilot program, increase number of cases for analysis, and refine best practices for gathering and examining the data:** Continue working with Florida and Oregon in applying the [human performance investigation guidance](#) and [supplemental report form](#) (v. 2016), and expand into additional states as feasible. Refine the analyses and the guidance and form as needed, and determine whether and how the work could be expanded by seeking grant opportunities. Continue building the [human factors product webpage](#) in the Lighthouse and the resources in the [Lighthouse Library](#). Communicate and coordinate with the [National Boating Safety Advisory Council \(NBSAC\)](#) as it pursues work in this area

**Why it's important:** Investigations into accidents for other transportation modes indicate the majority of causes or contributing factors are related to human failures. But getting to conclusive evidence about the role of such errors in recreational boating accidents—and developing interventions—calls for consistently-collected data and information identifying the contributors *and* getting at why and how failures occurred. Four years ago, ERAC began working to understand the factors that might be associated with performance failures, and has since refined guidance and a supplemental report form for use by officers/investigators in states that want to augment their investigations, add to knowledge about human factors, and use it to evaluate their safety programs and strategies.

**Challenges:** None regarding the specifics of this charge at this time, although there *are* challenges associated with the actual collection of the human performance data in recreational boating accident investigations and providing guidance on both the collection and the analyses of data in a manner reasonable and viable for states.

**Implementation/Status:** Tennessee was the first state to test the human factors guidance and supplement and apply it to fatalities in their 2015 boating season. As an initial step in the second piloting phase, both Oregon and Florida used the human factors supplemental forms for a sample of accidents that had already occurred and been investigated and for which there was some information that could be put to the form for analysis. Toward the end of the 2017 committee cycle, however, charge leader Dan Maxim, produced a more comprehensive analysis for team review. That analysis, contained in "[HFACS-Lite applied to a sample of Florida accident cases](#)," which outlined next steps has received initial review by the current team and will be taken up again in discussions at the March 3 ERAC meeting.

**Measures of effectiveness:** To be refined. Previous MOEs were: Short term: Human performance supplemental tool adopted for initial use by at least three test states (partial achievement to date). Long-range: More consistent, in-depth information on human performance gathered in accident investigations.

## RBS Statistics & Research

### ERAC\_S&R\_2018-1: Continue exploring boating fatality/casualty rate numerators

**Continue exploring the feasibility of changing the basis for calculating the numerator used in recreational boating fatality and casualty rates:** Review the findings of an [initial \(2017\) examination of the gap between the victim's residence \(state of origin\) and accident location \(the current basis for calculating the numerator\)](#). Determine whether more data needs to be reviewed for years not included in the initial study. By end of first quarter of 2018 cycle, make recommendation to the NASBLA Executive Board as to whether and how the charge should proceed or if the gap analysis suggests other research questions worthy of investigation

**Why it's important:** While exposure hour-based statistics as the basis for the denominator in fatality or injury rates may be an improvement conceptually for assessing the risks associated with recreational boating, that change alone would not result in flawless measures, for example, of the effectiveness of a state's safe boating initiatives. The rate only accounts for where the fatality or injury occurred, not where the boat was registered or the victim resided. That is a potential issue for states with boating opportunities that attract a lot of boaters from other places—not only for how it affects the rate, but also for how it affects outreach efforts. Those out-of-state boaters may lack the local knowledge and will be, at least partially, products of their home states' boating safety cultures.

**Challenge:** Challenges to completion of this charge are largely regarding the availability of sufficient, multi-year exposure hours data.

**Implementation/Status:** This charge is the result of a revision determined at the March 2017 ERAC meeting. With only 2012 exposure data, the committee could not proceed with an extensive project covering multiple years. But the group decided it would be a useful first step toward the larger question of numerators to determine how big a gap there is between accident location and victim's state of origin. A data set was pulled for five years' worth of fatalities and injuries, and a set of observations were chronicled in [Preliminary Analysis for Discussion: Exploring a possible recalculation of the numerator used in boating fatality rates-A look at the gap between the victim's state of origin and accident location](#). The team has given initial review to the analysis and the outcomes and on March 3 will continue its discussions on next steps (e.g., should additional years be pulled for analysis? should additional variables be considered to discern "why" out of state boaters may represent a large proportion of casualties in some states). The team will make a recommendation to the committee and the NASBLA Executive Board as to how/whether to proceed.

**Measures of effectiveness:** To be discussed pending decision regarding feasibility of proceeding with the charge this cycle.



**Assist the NASBLA Paddlesports Committee’s charge on Data and Trends (see below):** In areas of mutual data and research interests and trends identification, ERAC will partner with the Paddlesports Committee on its related charge and engage in work to develop a comprehensive knowledge base on paddlesports accidents and related statistics.

**PADDLESPORTS Charge 1: Data and Trends** In 2017, the Paddlesports Committee created a draft report that summarized the most relevant available data and trends surrounding paddlesports. For 2018, forward document to the ERAC Committee to ask them to add to it by conducting a more thorough statistical analysis of paddlesports incidents to provide a summary of trends in the data including demographic profiles. Once complete the data should be shared through the data dashboard where it can be an asset to any state that is planning to engage their paddlesports communities. Committee should reach out to ERAC to inquire if they would be capable to conducting a more thorough analysis of a sample of fatal boating accidents in order to gather insights on the most important human factors at work in fatal paddlesports incidents. This analysis can be used to inform discussions of specific interventions that might be used to address human behaviors that, if changed (adopted or prevented) would have the highest likelihood of saving lives. This is consistent with the strategies identified in the national strategic plan. Taken together, the statistical summary and behavior analysis would be valuable in taking the next steps toward a robust social marketing plan. For example, a reasonable first step in developing a social marketing-based strategy would be to hire a research firm to conduct primary quantitative (surveys) and qualitative (focus groups) research. As such, our basic research data would inform how survey questions might be worded, how a survey might be distributed and what demographic groups should be targeted.

**Why it’s important:** There is broad interest in paddlecraft, paddlecraft risks and the increasing number of accidents as boating safety issues—coming in at #4 of the top 10 as identified by NASBLA members the last two years; and #4 and #2, respectively among NBSAC members and the CG-BSX-2 / RBS Specialists, in a separate issue ranking conducted in fall 2016.

**Challenges:** None identified at this time.

**Implementation/Status:** On March 3, ERAC will host a joint session with the Paddlesports Committee to focus on updates and plan the way forward on this and a second charge regarding flotation issues. Various resources, including a 2017 Paddlesports draft data report compiled by Washington State, will help to frame the discussion.

**Measures of effectiveness:** To be developed jointly with Paddlesports if discussions lead to data activity this cycle.



## Engineering & Equipment

**ERAC\_E&E\_2018-1: Identify best approach(es) for capturing, recording and analyzing the role of vessel hull and other design characteristics in recreational boating accidents.**

**Identify, test, evaluate approach(es) for capturing and recording vessel hull design characteristics and related detail in accident investigations:** Continue beta test with selected states that have agreed to incorporate additional questions to their boating accident investigations and forms. Evaluate initial findings mid-cycle and make refinements as needed. Supplement with analyses of already-investigated cases from select states. Intent is to capture and analyze such data to allow for improved understanding of potential design flaws that may lead to serious injury or death and to better understand the role of the operator and possible operator error vis-à-vis design characteristics

**Why it's important:** Handling issues surfaced in relation to “Texas Flats” and other shallow water boats. Those issues, associated with tragic accidents, have been described in detail by state members in past NASBLA forums as well as in USCG Boating Safety Circulars [88](#) (Fall 2014) and [89](#) (Spring 2016). The Coast Guard, in discussions on these incidents and in seeking resolution of them, places emphasis on whether or not BARD results show the issue to be significant and national in scope. Currently, however, hull and other vessel design information is not systematically gathered in BARD for ongoing evaluation or when circumstances arise. Like other efforts to increase the quality and consistency of accident detail, the task is to balance need for the information with the ability to identify the best—and most officer-friendly—means for recording these characteristics and to understand the role of the operator and operator experience or error vis-a-vis design characteristics.

**Challenges:** None identified at this time.

**Implementation/Status:** This may be the opportune time for the identification and proposal of specific elements and fields that can be incorporated into the boating accident report form. The USCG/NASBLA ERAC/States policy project to draft the Coast Guard’s national policy on recreational boating accident reporting (see ERAC\_IR&A-2018-1) is currently in discussions on data elements, fields and definitions for inclusion in the report by the states to the Coast Guard under a revamped reporting system and structure. The team will have further discussion on this charge at the March 3 ERAC meeting.

**Measure of effectiveness:** To be finalized. However, a previous long-range MOE in keeping with other, similar projects is: More consistent, accurate, and viable accident report data gathered for use by the states and submitted by the states to the U.S. Coast Guard.

**ERAC\_E&E-2018-2 (added Nov. 2017): Develop model act and related resources re marine carbon monoxide detection systems**

Develop a model act for marine carbon monoxide detection systems on all vessels with enclosed accommodations. Present the act for membership consideration at the 2018 NASBLA Annual Conference. Also develop investigative guidance for recognizing and reporting carbon monoxide incidents (see similar guidance developed for electric shock drownings (ESDs) at <https://www.nasbla.org/lighthouse/esd-resources>).

**Why it's important:** Until recently, carbon monoxide detectors were only required in accommodation areas in vessels using gasoline either for engines or generators. ABYC now requires all new boats with enclosed accommodations to have detectors installed in each sleeping compartment and main compartment. In 2016, Minnesota became the first state to enact a requirement that all vessels with enclosed accommodations (as defined by ABYC, an enclosed space with a permanent head, galley and sleeping accommodations), be equipped with CO detectors, with a 2017 effective date. The effective date was extended to May 1, 2018 because boaters needed time to comply and to ensure access to the necessary UL-certified marine CO detectors. Now, other states have begun expressing interest in introducing similar legislation, speaking to the immediate need for common, appropriate language and provisions as well as resources that can assist in CO poisoning response and investigation.

**Challenges:** None identified at this time.

**Implementation/Status:** The charge team has developed a workplan intended to result in the following products, the first of which will require NASBLA membership approval at the end of the committee cycle: a Model Act on Mandatory Carbon Monoxide (CO) Detectors on All Vessels with Enclosed Accommodations; a resource webpage patterned after the ESD Resources subpage at the NASBLA Lighthouse; a CO Poisoning Response and Investigation Checklist; and Legislative Considerations for the State Boating Law Administrator.

**Measures of effectiveness:** To be developed as part of ERAC March 3 discussions.

**Continue examining basic flotation issues as they apply to canoes and kayaks and assisting the NASBLA Paddlesports Committee with its charge on flotation standards:**

**PADDLESPORTS Charge 6: Kayak and Canoe Flotation Standards:** Work with the ABYC on updating the flotation standards for kayaks and canoes - #H-29. Monitor and potentially participate/comment in the process that will be used to update the standard

**Why it's important:** ERAC members' interest flotation issues was sparked by reviews in more recent years of canoe and kayak accidents involving people swimming away from – or attempting to swim away from – their vessels after capsizings: this, in contrast to experiences with older aluminum craft that allowed people to stay and stay afloat with their vessels. Reports of vessels sinking or barely maintaining at the surface (and perhaps not allowing support of a human body) *at least suggested* that the persons involved may not have had an alternative other than to swim away. Such reports, coupled with reviews of limited data, raise important questions about the vessel materials and manufacture of some canoes and kayaks, as well as the efficacy of education on the use of PFDs and of devices for flotation, generally.

**Challenges:** A primary challenge is the limitation of data in gauging flotation issues. BARD data alone, for example, cannot help determine the adequacy of flotation in this exploration, so the ERAC and Paddlesports members have had to consider alternate approaches to addressing the basic question of why flotation is important and what it does for the user.

**Implementation/Status:** In 2017, with carryover into 2018, NASBLA's Paddlesports Committee adopted a formal charge regarding Flotation Standards (i.e., to create a subcommittee to review manufacturing standards for kayaks and canoes to determine sufficiency, and plan for a process to involve stakeholders in making recommendations for improving standards). Both committees will continue monitoring the activity of the American Boat & Yacht Council (ABYC) on the H-29 Standard.

On March 3, ERAC will host a joint session with the Paddlesports Committee to focus on updates and plan the way forward on this and a second charge regarding data and trends.

**Measures of effectiveness:** To be developed jointly with Paddlesports Committee as discussions continue.

## 2017-2018 ENGINEERING, REPORTING & ANALYSIS COMMITTEE (ERAC)

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