



**National Association of
State Boating Law Administrators**

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

**Committee Report for 2018-2019 Cycle
and Preliminary 2019-2020 Cycle Recommendations**

v2 October 22 2019

ENGINEERING, REPORTING & ANALYSIS COMMITTEE (ERAC) 2018-2019 Committee Report & Preliminary 2019-2020 Recommendations

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Full committee roster is on the last page of this report

CHARTER IN SUPPORT OF NASBLA'S MISSION AND SERVICE TO THE MEMBERSHIP:

As one of NASBLA's five standing policy committees, ERAC identifies, evaluates, and analyzes recreational boating data and other related information that can shed light on factors associated with boating incidents; be used to inform the development of state- and national-level boating safety policies, programs and campaigns; and, ultimately, be used to measure their effectiveness.

To ensure that the results of the research and analyses are valid and reliable, ERAC also actively seeks ways to advance the quality, relevance, accuracy, consistency, applicability, and completeness of the data and information.

IN PRACTICE, ERAC:

- **Takes on targeted research questions.** ERAC teams review and evaluate report data and other boating-related statistics to identify risk factors, patterns and trends in boating incidents;
- **Partners for data improvement.** Works in partnership with the States, the U.S. Coast Guard, and other key agencies and organizations in the recreational boating community to improve the criteria, processes, and training associated with reporting, collecting, entering and using incident data;
- **Promotes uniformity.** On behalf of the States, and in the interest of uniformity and shared understanding, collaborates with the U.S. Coast Guard to clarify reporting criteria and procedures;
- **Seeks to mitigate risk factors.** Identifies and examines boating safety program, equipment design, and related efforts that could mitigate risk factors identified through the committee's analyses;
- **Stays informed.** Monitors the activities of and receives reports from subcommittees and panels of NBSAC, ABYC, and NMMA among others, to identify and inform about issues of mutual interest; and
- **Works across committees.** Also interacts with other NASBLA committees and panels and stays informed about projects of mutual interest—not only to add value to ERAC products, but also to determine how ERAC can effectively serve as a resource to them.

ABOUT THIS REPORT

REVIEW OF ASSIGNED CHARGES (pages 4-13)

Unlike some of the other NASBLA policy committees, ERAC does not operate with subcommittees. However, its work is grouped into five categories:

- **Monitoring & Evaluation:** Monitoring, evaluating, collaborating or taking other action as needed on policy proposals, rulemaking, issues, and projects in areas covered by the committee.
- **Knowledge & Content Management:** Developing, maintaining, and delivering ERAC's products in alignment with NASBLA's knowledge, content, and learning management systems.
- **Investigation, Reporting & Analysis:** Conducting work to improve the criteria, processes, and training associated with reporting, collecting, entering, and using recreational boating incident data.
- **RBS Statistics & Research:** Identifying and working to improve incident and other boating statistics for the purpose of identifying risk factors, patterns, and trends.
- **Engineering & Equipment:** Identifying and examining engineering issues, equipment design, and related efforts that could mitigate risk factors identified through the committee's activities.

[At the start of the 2018-2019 Cycle](#), ERAC member teams were assigned seven charges—one of which continues in close collaboration with the U.S. Coast Guard and the states—and four additional maintenance or monitoring activities intended for charges that had been completed in 2018 or for topics that were pending further action by entities outside of ERAC's control. However, a charge on marine carbon monoxide detection systems that had resulted in two products and was marked "completed" at the end of the 2017-2018 cycle was reinstated mid-2019 cycle for action beyond maintenance.

For each committee activity, as applicable, this report: describes its importance; the deliverable(s); status; measure(s) of effectiveness; and preliminary recommendation for continuation in or omission from the next committee cycle. In this version 2 of the report, issued Oct. 22, 2019, the status of two charges--**ERAC M&E 2019-1** and **USCG/ERAC IR&A 2019-1**—has been updated to reflect recent activity.

CONDUCTING THE WORK

The committee's 2018-2019 work officially kicked off in a full committee teleconference on Oct. 24, 2018, with 18 members and project partners in attendance. While the bulk of the work for the remainder of the cycle was conducted through team teleconferences and online forums, including Basecamp (for project management) and NASBLA Connect (for online submissions of feedback to major project work), the committee also met for an all-day session in Lexington, Ky., on March 2, 2019. Fifteen state, associate, and USCG representatives attended all or a portion of the day, in person or on the phone. Attendees included the NASBLA President, U.S. Coast Guard Boating Safety Division Chief, and NASBLA Education/Outreach Chair. Members of the Paddlesports Committee assembled with ERAC for an afternoon discussion on charges of mutual interest. Refer to **APPENDIX A** for information about these two events.

REPORT APPENDICES

This report includes live links to online references and documents associated with the 2018-2019 activities. However, it also includes the following appendices:

APPENDIX A 2018-2019 Full Committee Teleconference (Oct. 24, 2018) and In-Person Meeting (March 2, 2019)

APPENDIX B1 USCG/ERAC IR&A 2019-1 BLA Workshop Presentation

APPENDIX B2 USCG/ERAC IR&A 2019-1 Project Resource Document

APPENDIX B3 USCG/ERAC IR&A 2019-1 Project Process – Status as of August 2019

APPENDIX C ERAC IR&A 2019-2 State Statistical Template Report User Manual v1.1

APPENDIX D ERAC E&E 2019-2 Marine CO Detection Systems – Legislative Considerations for the State BLA

MONITORING & EVALUATION

Monitoring, evaluating, collaborating or taking other action as needed on policy proposals, rulemaking, issues, and projects in areas covered by the committee

Input to USCG policy / regulatory proposals and actions (ERAC_M&E 2019-1)

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](#), the [NASBLA Lighthouse On the Horizon](#), and NASBLA Connect 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. Over the past few years, 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 require the Coast Guard to publicly respond to the feedback it receives.
- ✓ **Deliverables:** In this cycle, comments were submitted by NASBLA to two 60-day Federal Register Notices of the Coast Guard's intent to submit information collection requests to OMB. One was for the [Coast Guard's Boating Accident Report and form](#) (USCG-2018-0881), which was set to expire on March 31, 2019. The other was for the [Boat Owner's Report; Possible Safety Defect report](#) (USCG-2018-0498), which, in its [current online format](#), is aimed at boat owners and consumers and was set to expire April 30, 2019. The comments did not challenge the merits of collecting the information, but both submissions did broach related recommendations of the national project on recreational boating incident reporting (**USCG/ERAC IR&A 2019-1**). Another deliverable during this cycle was the upkeep of [NASBLA's Federal Register pages](#).
- ✓ **Status:** In response to the Coast Guard's Information Collection Request (ICR), the Office of Management & Budget approved a [revised CG-3865](#), reflecting changes in CFR that took effect Jan. 1, 2017, and with an expiration date of July 31, 2022. With regard to the Boating Safety Defects Report, a 30-day notice on the Boating Safety Defects Report Notice was published May 3, 2019, stating no comments had been received to the 60-day notice and therefore no changes to the collection planned. However, as noted in **Deliverables**, NASBLA's comments were [submitted and confirmed as posted](#) to the docket on regulations.gov. While Jeff Ludwig, Chief of CG-BSX-23 Product Assurance Branch, could not confirm what had transpired with the Coast Guard office that handles the ICRs, he noted internal discussions have been toward modifying the title and some of the content of the online form to better accommodate and facilitate the reporting of safety defects by parties other than consumers (e.g., state reporting authorities / investigators). **[Update: On Fri., Oct. 11, 2019, the Coast Guard published a second 30-day notice—this one acknowledging the submissions received through the original solicitation and seeking further comments on the changes proposed to be made in response.]**

While ERAC continued to monitor the Federal Register for Coast Guard activity that could impact recreational boating, its primary input to Coast Guard policy in the 2018-2019 cycle was—and in the

next cycle will continue to be—in conjunction with charge **USCG/ERAC_IR&A 2019-1**, the collaborative project to develop national policy on incident reporting.

- ✓ **Measures of effectiveness:** Short term: On key policy initiatives that will impact all states to some degree, an increase in the comment/response rate of NASBLA member states (minimum of 30 jurisdictions). [For the policy project associated with **USCG/ERAC_IR&A 2019-1**, however, responses should be more stringent, and on the order of minimum two-thirds of NASBLA member states in order to demonstrate consensus with proposals]. Long-range: More robust input submitted to the U.S. Coast Guard. Improved communications and coordination of efforts between the states and the Coast Guard.
- ✓ **Preliminary recommendation for 2019-2020 cycle:** Propose that this be reclassified as an ongoing committee function.

KNOWLEDGE & CONTENT MANAGEMENT

Developing, maintaining, and delivering ERAC’s products in alignment with NASBLA’s knowledge, content and learning management systems.

Lighthouse Forum – continue developing (ERAC_K&CM 2019-1)

Continue growing the content and components of the [NASBLA Lighthouse](#) and actively promote its use by target audiences. Ensure ERAC’s continuing involvement in NASBLA-wide discussions and execution of the association’s knowledge and learning management systems (KMS and LMS, respectively). Maintain/update the Lighthouse webpages, continue integrating ERAC (completed) products, and upload and classify library resources in accordance with protocols developed through the KMS efforts. Implement best practices for driving users to the discussions and resources.

- ✓ **Why it’s important:** [The Lighthouse](#) was envisioned by a 2010 ERAC charge team as an accessible, online forum where users and producers of recreational boating data could gather to share data and successful practices, forego “reinventing the wheel,” and locate viable resources and information applicable to their work. The need for collaboration, contextual narrative, and timely sharing of information about 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 also responsive to data-related initiatives of the National RBS Program Strategic Plan for 2017-2021.
- ✓ **Deliverables:** Ongoing updates to the webpages at <https://www.nasbla.org/lighthouse/nasbla-lighthouse>. Another resource page in the Get Equipped portal (patterned after [ESD Resources](#)) on Marine [Carbon Monoxide Incidents Information and Resources](#) went live August 2018 and was updated during the current cycle to accommodate the additional activity associated with **ERAC_E&E 2019-2**.
- ✓ **Status:** Updates to the Lighthouse webpages at <https://www.nasbla.org/lighthouse/nasbla-lighthouse> were made on an as-needed basis in the 2018-2019 cycle. However, more substantial activity cannot be undertaken until there is further discussion and guidance as to where and how the Lighthouse fits in to NASBLA’s larger plans for online activity and the more recent proliferation

of communities and libraries on Connect, the e-Learning platform (with Resources area), and the boating safety dashboards.

- ✓ **Measures of effectiveness:** Short term: Facilitate discussion of at least three topics of relevance to Lighthouse users. Minimum of 100 percent increase in number of members currently enrolled in the community on Connect. Long-range: More informed, engaged states and other stakeholders regarding measures and details associated with recreational boating safety, and boating incident and other data.
- ✓ **Preliminary recommendation for 2019-2020 cycle:** Propose that this continue as a standing charge, with revised language to reflect policy and protocol modifications. Once decisions are made as to where and how the Lighthouse fits into the larger scheme, and if it is retained as a distinct online resource, then the activity should be reclassified as an ongoing committee function.

INVESTIGATION, REPORTING & ANALYSIS

Conducting work to improve the criteria, processes, and training associated with reporting, collecting, entering, and using accident data.

USCG/ERAC Collaborative development of national policy on incident reporting (USCG/ERAC_IR&A 2019-1)

In collaboration with the USCG, complete the outstanding project work from “phase 1” of the project—that is, conducting all review and feedback processes with the committee, NASBLA and USCG leadership, and the States, in order to achieve consensus on the policy and regulatory recommendations associated with the accident reporting structure, vessel determinations, incident report data elements, roles and relationships, and vessel safety issues/defects/recalls/bridge allisions. Initiate and complete work on “phase 2” of the project—that is, developing system recommendations for the future BARD to accommodate the recommendations, and identifying best practices and guidance for implementation in the near term (especially for policy-based recommendations).

- ✓ **Why it’s important:** Updated, consistent, clear, published policy and procedures are critical to the states’ ability to capture and report boating incident data to the Coast Guard and to the Coast Guard’s ability to fulfill its statutory obligations to gather and report accurate and timely statistics on recreational boating incidents. However, the Coast Guard, states, and NASBLA are in overall agreement that the current reporting structures, systems, and processes are woefully outdated and in need of substantial improvement. The regulatory and policy recommendations emerging from this consensus-based, national project are intended to create more certainties about reporting requirements, improve uniformity and consistency in collecting and processing incident data, and advance the RBS programmatic and policy interests of both the Coast Guard and the states.
- ✓ **Deliverables:** To date, Review and Resource Documents containing the project workgroup’s recommendations to the Coast Guard and intended for use in two comment periods (see **APPENDIX B2** for a copy of the Resource Document delivered to the states, March 2019). Versions of these items were initially delivered to the NASBLA Executive Board, full ERAC, and Coast Guard BSX leadership for a first review, and then to the states for a more extended comment period using a

dedicated community on NASBLA Connect to receive submissions. The consensus products reflect the workgroup’s recommendations to inform the Coast Guard’s development of revised regulatory and policy provisions regarding the reporting structure, reporting thresholds, vessel determinations, report data elements, conditions for determining which incidents require reporting to the Coast Guard, report input format, roles and responsibilities, vessel safety defect and recall notifications, and the future reporting system. See **Status** for detail.

Status: The workgroup recommendations developed during phase one of this project were released to stakeholders outside the group for review and comment periods conducted during the first two quarters of CY 2019. The first release was to the NASBLA Executive Board, full ERAC, and CG-BSX leadership on Feb. 22 for initial review through March 8. A report on the workgroup’s disposition of first review comments can be downloaded as an attachment to a “General Comments” thread posted March 18 in the NASBLA Connect online community “[OPEN COMMENT -- Recreational Boating Incident Reporting Policy Project](#)” (click [here](#)).

A second, wider release to all states—primarily via the BLAs—was initiated following the workgroup’s resolution of comments from the first review (see **APPENDIX B2** for a copy of the Resource Document containing all recommendations and background information). The states’ “open comment” period began March 27 with an original deadline of May 10; however, in order to accommodate state respondents and gather more feedback for workgroup consideration, the deadline was extended through June. Prior to the kickoff of the states’ comment period, the state BLAs had received working copies of the recommendations document and a briefing (March 1) as part of NASBLA’s 2019 State RBS Workshop in Lexington (see **APPENDIX B1** for a copy of the presentation). [National teleconferences](#) were conducted April 30 and May 2, with representatives from 22 states, members of the project workgroup, ERAC, NASBLA staff, and additional CG-BSX personnel participating.

For the record and the sake of transparency, as well as to promote conversation on the topics, commenters were asked to post their feedback (or send it via email or phone for posting) in the discussion area at the NASBLA Connect Community dedicated to this project. The same forum was used for both comment periods (and all posts from the first were retained), but the forum was renamed to “[OPEN COMMENT -- Recreational Boating Incident Reporting Policy Project](#)” when the second review was initiated.

Across both comment periods, representatives from 43 states, two NASBLA associate members, and USCG personnel¹ posted feedback of some sort on some or all of the project recommendations. Many of the responding BLAs and other state personnel expressed overall support for the project without offering specific comments or suggestions for modifying proposed recommendations; others, along with expressing general support, also identified areas of disagreement and offered alternatives; yet others took the opportunity to offer “testimony” as to why they agreed with the proposed recommendations. No state that submitted comments outright dismissed the project, though California noted, as it has in comments associated with past reporting improvement efforts, that the state cannot comply with aspects of the revised reporting structure if policy action is taken absent federal statutory or regulatory change.

STATES REPRESENTED AMONG THE COMMENTERS

Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan,

¹ During the initial comment period, two USCG representatives who were not members of the immediate workgroup offered comments. On Aug. 5, official feedback from CG-BSX in the form of a letter from Verne Gifford, Chief, Boating Safety Division, (beyond the input of CG representatives during the project workgroup deliberations) was delivered to the workgroup for consideration.

Mississippi, Missouri, Montana, Nevada, New Hampshire, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin, Wyoming.

Nearly 170 comments and questions affecting 76 of the recommendations require some consideration and action on the part of the project workgroup before a revised product can be delivered to the states for final consideration. **[UPDATE: As of this revised report issuance, the project workgroup has conducted six (6) teleconferences and made one complete pass through all feedback received during the second comment period. In cases where the feedback touched on a minor issue or need for clarification, the workgroup has already drafted preliminary adjustments.]** Upon completion of all discussions and necessary revisions, the workgroup will advise the NASBLA Executive Board on a revised timeline for achieving consensus among the stakeholders and formal acceptance by the NASBLA membership (see **APPENDIX B3** for a description of the process).

- ✓ **Measures of effectiveness:** Short term: Consensus achieved among workgroup members; the full committee, Coast Guard and NASBLA leadership; and the full NASBLA state membership regarding policy and regulatory recommendations. Long-term: 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.
- ✓ **Preliminary recommendation for 2019-2020 cycle:** Continue this consensus project into the next cycle. Complete outstanding project work from this first phase. Initiate and complete work on phase 2—that is, developing recommendations for the future online reporting system and database to accommodate the policy and regulatory recommendations, and identifying best practices and guidance for implementation (especially for policy-based recommendations).

Roll out BARD-based, State-level statistical report template (ERAC_IR&A 2019-2)

In coordination with the USCG, complete outstanding work resulting from the beta test of the latest iteration of the BARD-based template and facilitate rollout of the product for use by the States in creating their own accident statistics reports. Refine the product and instructions based on user experiences and need. Assist States in report development upon request. Maintain instructional materials 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 seek ways to improve their products and reduce production time and effort. Working with the Coast Guard, ERAC developed the contents for a template to give states the ability to more easily and accurately generate state-level statistical reports from the accident report data they enter into BARD. The report template allows users to generate an editable Microsoft® Word document with narrative, summary statistics, and detailed tables.
- ✓ **Deliverables:** The original Template working document was delivered to the Coast Guard mid-cycle 2015; at that time, a [statistical report template subpage](#) on Lighthouse was developed as part of the initial charge assignment. The finalized, ready-to-use report template went live in BARD at the end of

October 2018. A copy of the template User Manual v1.1, as released and posted to the Lighthouse webpage Oct. 29, 2018, is presented in **APPENDIX C** of this report.

- ✓ **Status:** This product was in development for a few years and had already undergone beta testing by select state users prior to an early-2017 transition in BARD vendors and some system stability issues (as detailed in the [2017-2018 cycle report](#) released August 2018). The product finally went live in BARD at the end of October 2018 with initial announcements to BARD administrators leading some states to generate the report as a standalone or as a way of validating data in their existing reports. In this cycle, instructional webinars would have been beneficial to publicizing the benefits and appropriate applications of this product. However, such instructional activities depended on the availability of Coast Guard personnel, and during this cycle other projects—notably, the annual national boating statistics report and activity on **USCG/ERAC IR&A 2019-1**—were higher priorities.
- ✓ **Measures of effectiveness:** Short term: 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 recreational boating incidents 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.
- ✓ **Preliminary recommendation for 2019-2020 cycle:** Continue this charge for another cycle to develop and conduct instructional webinars; to refine the product and instructions based on user experiences and need; and to assist states in report development upon request.

Continue pilot program / refine best practices for collection & analysis of human factors data (ERAC_IR&A 2019-3)

Continue working with Florida and Oregon in applying aspects of the [human performance investigation guidance](#) and [supplemental report form](#) (v. 2016). Evaluate the resulting data, resolve any data collection issues, and recommend refinements to the guidance and form as needed. For practical application among the pilot and any other States, determine how best to analyze and apply the results. Continue building the [human factors product webpage](#) in the Lighthouse and the resources in the [Lighthouse Library](#).

- ✓ **Why it's important:** Getting to more conclusive evidence about the role of human performance 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. Over five 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 and investigators in states that want to augment their investigations. Now, as the public health approach to injury prevention is being introduced to recreational boating safety program planning and initiatives at the national and state levels, the collection and analysis of information that reveals underlying characteristics and distinguishable patterns of boaters' behavior becomes even more critical.
- ✓ **Deliverables:** (most recent issuance) [HFACS-Lite Applied to a Sample of Florida Recreational Boating Accident Cases](#) (authored by the late Dr. Dan Maxim, Aug. 5, 2017).

- ✓ **Status:** Implementation is in different stages in the current pilot states of Florida and Oregon. For example, while Florida could not get the field fully involved in the real time collection of the human factors data (applying the supplemental form or portions thereof) in this cycle, ERAC Vice Chair Seth Wagner (FL) began applying elements of the form to fatality reports from past investigations, especially pulling information from report narratives; that work continues. One side benefit noted when investigators did employ elements of the human factors form was a marked improvement in the quality of the report narratives. As other states use the human factors supplemental form or apply elements of it into their training, the hope is for feedback to determine whether the guidance or anything on the form needs to change or be streamlined for more effective collection. The challenge, to date, however, has been in actually soliciting and attaining the involvement of pilot states. Securing states' commitments to collect and use the human performance information might be facilitated if there is consensus on the report data elements recommendations (especially regarding inattention and related distractions coding) associated with the **USCG/ERAC IR&A 2019-1** reporting project.
- ✓ **Measures of effectiveness:** Short-term: Human performance supplemental tool or portions thereof adopted by at least three additional test states. Long-range: More consistent, in-depth information on human performance, especially as pertains to operator distractions, gathered in incident investigations.
- ✓ **Preliminary recommendation for 2019-2020 cycle:** Continue a charge in this area, with changes to the scope and approach, as warranted.

RBS STATISTICS & RESEARCH

Identifying and working to improve accident and other boating statistics for the purpose of identifying risk factors, patterns, and trends

Collaborate with the NASBLA Paddlesports Committee and partnering organizations on collecting and analyzing paddlesports-related data and trends (ERAC_S&R 2019-1)

Continue collaborative work in this area to develop a comprehensive knowledge base on paddlesports accidents and related statistics. Continue refining data elements as part of the USCG/ERAC policy workgroup's efforts (see **USCG/ERAC_IR&A 2019-1**). Expand into review and feedback on data collection and analysis of accident data and the survey results from the Paddlesports Statistical Analysis grant project (NASBLA partnering with USCG non-profit grant recipient ACA).

- ✓ **Why it's important:** There is strong interest in paddlecraft, paddlecraft risks and the increasing number of accidents as boating safety issues—coming in at #3 of the 10 most wanted boating safety improvements as identified by NASBLA members in 2018, and in the top five of priorities as identified by members of NBSAC and the Coast Guard BSX-2 / RBS Specialists, in a separate issue ranking conducted most recently in the fall of 2016. In 2017, what was originally an ad hoc group to engage NASBLA members in dialogue with a diverse group of stakeholders, was elevated to a standing policy committee on Paddlesports. In areas of mutual data and research interests and trends identification, ERAC will continue to partner with this committee.

- ✓ **Status:** In the 2017-2018 cycle, during the March 2018 committee meetings in Lexington, Ky., ERAC and Paddlesports conducted a joint session on two charges—this charge and one on flotation issues (currently, **ERAC_E&E-2019-1**). The recommendation to the Paddlesports Committee at that time was to identify information that members deemed important for building profiles on paddlesports’ participants and to deliver their suggested data fields to the USCG/ERAC reporting project workgroup associated with **USCG/ERAC_IR&A-2019-1**; the workgroup would, in turn, take the input into consideration in identifying data elements to be collected nationally. Paddlesports Committee members took up the challenge and submitted several items which the project workgroup considered and adapted in the report data elements’ recommendations released for external review and comments in the first two quarters of CY 2019. One of the more notable recommendations, if accepted, would involve the collection of safety equipment and gear recorded at the scene of incidents involving paddlecraft—this in order to help determine whether the equipment available was appropriate for mitigating the risks associated with canoes, kayaks, and stand up paddleboards (recommendation 5.3.17). Also, in the early days of the 2018-2019 cycle, ERAC staff participated in a collaborative effort to draft questions about paddlers’ participation and behaviors for possible use in the Outdoor Industry Association’s (OIA’s) special survey module on paddlesports. This activity was undertaken through a partnership between the American Canoe Association (ACA), NASBLA, and the Outdoor Foundation (the non-profit arm of OIA) toward completion of a non-profit grant project awarded to ACA by the U.S. Coast Guard. Other than ERAC staff’s participation in the survey module development and limited review of some of the OIA’s drafts, however, there was no opportunity for involvement by ERAC members in the analyses of the participation or incident data for the [special report that was released in August 2019](#). Although NASBLA is in receipt of the module data for purposes of constructing dashboard products, given the data’s limitations, it is unlikely that ERAC will be able to play a meaningful role in further analyses.

- ✓ **Preliminary recommendation for 2019-2020 cycle:** ERAC should continue to collaborate with the Paddlesports Committee in areas of mutual data and research interests; however, it is unclear as of this report issuance what, if anything, would be a focus for a formal charge in the new cycle.

ENGINEERING & EQUIPMENT

Identifying and examining engineering issues, equipment design and related efforts that could mitigate risk factors identified through the committee’s activities.

Continue examining basic flotation issues associated with canoes and kayaks and assisting the NASBLA Paddlesports Committee regarding flotation standards (to work with ABYC on updating H-29) (ERAC_E&E 2019-1)

- ✓ **Why it’s important:** Interest in this topic 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 those involved may not have had an alternative other than to swim away. Such reports, coupled with reviews of limited data, raised questions about vessel materials and the manufacture of some canoes and kayaks, as well as the efficacy of education on the use of PFDs and of devices for flotation, generally.

- ✓ **Status:** In the 2017-2018 cycle, during the March 2018 committee meetings in Lexington, Ky., ERAC and Paddlesports conducted a joint session on two charges—this charge and the one on data and trends (currently, **ERAC_S&R 2019-1**). In the wake of those discussions, a subgroup of Paddlesports and ERAC members began working with a few manufacturers to collect comments for possible updates to the American Boat & Yacht Council’s (ABYC) H-29 standard on Canoes and Kayaks. Getting manufacturers involved in the standards process and on the front end of discussions about the appropriate level of flotation was deemed very important, not only for the immediate purposes of identifying potential updates to the standard, but also, more generally, for raising awareness of it and the need to increase flotation. For the most part, the subgroup felt that the ABYC H-29 standard itself was adequate regarding flotation, although it did cite a need to update the warning labels for canoes and kayaks. The biggest challenge likely involves the legacy products not built to the standard in the first place.
- ✓ **Preliminary recommendation for 2019-2020 cycle:** As there is not much more for the subgroup or full committee to do on this charge, the recommendation is to forego its continuation as a formal ERAC charge in the next cycle. However, the committee will continue to informally monitor this issue via updates from the ABYC representative serving on ERAC and awareness of any data on incidents involving vessels (especially more recent, not legacy) that do not meet the ABYC H-29 standard or sinking/flooding/swamping incidents that might be suspect.

Legislative guidance regarding marine carbon monoxide detection systems (ERAC_E&E 2019-2, added March 2019)

The primary products associated with ERAC’s **E&E 2018-2** charge to develop resources on CO incidents and detection systems—investigative guidance and a resource webpage patterned after similar work on [Electric Shock Drownings](#)—were completed in the 2017-2018 cycle. The original intent for the 2018-2019 cycle was not to carry over this topic as a formal charge, but to continue identifying resources and populating the resource webpage at <https://www.nasbla.org/nasblamain/lighthouse/get-equipped/co-resources> as part of the ongoing maintenance of the Lighthouse.

However, as some states continued to propose or express interest in legislative mandates regarding detection systems on recreational vessels—and as the U.S. Coast Guard has had to evaluate the actions of states in light of [46 U.S. Code Section 4306 Federal Preemption](#) and the ABYC A-24 Standard for marine carbon monoxide detection systems—ERAC was asked to reinstate the charge for the purpose of developing an additional informational/educational product—during the 2019 cycle (similar to the product developed for Electric Shock Drownings).

- ✓ **Why it’s important:** Each year, boaters are injured or killed by exposure to carbon monoxide (CO). Most incidents occur on older boats and within the cabin or other enclosed areas. Exhaust leaks, the leading cause of death by carbon monoxide, can allow carbon monoxide to migrate throughout the boat and into enclosed areas. Additional areas of concern are the rear deck near the swim platform with the generator or engines running; teak surfing or dragging behind a slow-moving boat; and backdraft effect on many vessel types. All of this speaks to how critical it is that boaters be made aware of the hazards and ensure the installation and proper use of functioning marine CO detectors in each accommodation space **and** how important it is that officers, investigators, and other first

responders accurately recognize, assess, and report CO incidents. In 2018, ERAC developed a resource webpage and a checklist for officers and investigators to use toward those efforts. However, another issue has emerged as states have attempted legislative remediations to the CO risks, notably by establishing mandates for CO detection systems on recreational vessels. They may find their legislation is in conflict with federal law—in this case, [46 U.S. Code Section 4306](#) (federal preemption)—and/or out of sync with the current version of the American Boat & Yacht Council's (ABYC) [A-24 standard](#) widely followed by boat manufacturers. ERAC was asked to extend its work in this area and develop an informational/educational document intended to make the states, and especially the state Boating Law Administrators, aware of the issues that could arise in drafting and attempting passage of legislation in this area.

- ✓ **Deliverables:** In this cycle, ***Carbon Monoxide Detection Systems on Recreational Watercraft: Legislative Considerations for the State Boating Law Administrator*** (see **APPENDIX D**), which will be added to the [Carbon Monoxide \(CO\) Incidents and Information Resource](#) webpage at the NASBLA Lighthouse Get Equipped portal. In 2018, ***Carbon Monoxide Incident Response and Investigation Checklist*** was developed to assist officers, investigators, and other first responders in the accurate recognition and reporting of CO incidents.
- ✓ **Status:** This charge was renewed mid-cycle, but as the intended product could be patterned after a similar one developed in 2015 for Electric Shock Drownings, the charge team (which included representation from states, ABYC, industry, and the U.S. Coast Guard) was able to complete the assignment.
- ✓ **Preliminary recommendation for 2019-2020 cycle:** As of this report issuance, unless there is direction from the NASBLA Executive Board to pursue any additional products in this area, the recommendation is for no carryover of a formal charge into the next cycle. However, in 2019-2020, there should be a deliberate effort to ensure that the state BLAs and officers/investigators are made aware of the availability and content of both the legislative considerations document and the response/investigation checklist. Moreover, the resource webpage and related library holdings should be updated as part of the maintenance of the Lighthouse.

2018-2019 ENGINEERING, REPORTING & ANALYSIS COMMITTEE (ERAC), designated Oct. 2018

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