



## BALLAST WATER SCIENCE AND FACTS

**Findings of two scientific studies contribute to public discussions**

**T**he summer of 2011 may well become recognized as the moment in time when a comprehensive (and consistent) approach to regulating ballast water discharges in the United States finally began to emerge. The framework for the approach will be due in no small part to the findings of two scientific studies that were released this summer from the National Research Council (NRC) and from the Science Advisory Board (SAB). The results of the NRC and the SAB studies are crucial components to forging a realistic way ahead to protect the Great Lakes against aquatic nuisance species, as well as preserve the many benefits of commercial navigation. They represent authoritative and objective contributions to the public discussion on ballast water.

Since 2008, the public discourse over ballast water discharges has focused on a number of key questions, including:

- How effective are the various ballast water discharge standards being proposed?
- What treatment technologies are currently available to meet the IMO or higher standards?
- Are there recognized procedures to verify compliance with these various standards?

The NRC and the SAB studies took on these questions and have provided either direct, well-supported answers or at least detailed what further inquiry is needed to obtain the answers.

On June 2, 2011, the NRC of the National Academies released a report entitled: "Assessing the Relationship Between Propagule Pressure and Invasion Risk in Ballast Water." The U.S. Coast Guard and the U.S. Environmental Protection Agency (EPA) requested the report. The study validated the scientific research that is underway assessing the risk of the introduction of aquatic nuisance species into the Great Lakes. Significantly, however, it noted that it is currently impossible, due to a "profound lack of data and information," for

anyone to claim that they can determine what is an effective discharge limit. The report singled out California's "no detectable living organism" standard as having significant shortcomings since it focuses not on the actual protectiveness of such a standard, but merely the ability to count organisms at low densities.

The results of the NRC and the SAB studies are crucial components to forging a realistic way ahead to protect the Great Lakes against aquatic nuisance species, as well as preserve the many benefits of commercial navigation.

Most importantly, in my view, the NRC study supported the use of the IMO standard as an excellent baseline—in the here and now—for determining what an effective discharge standard should look like. The study cited:

- The widespread familiarity with the IMO standard, the fact that it provides a "significant reduction in concentrations beyond ballast water exchange."
- A recognition that a significant amount of testing has already been done around that standard.
- Notes the current scientific and practical limitations of going beyond that limit.

In effect, the NRC study recognizes what a lot of people have been saying for a while: "We have to start somewhere and the IMO standard is the place to start." You can find a copy of the NRC study at: [http://www.epa.gov/npdes/pubs/nas\\_final\\_report\\_prepublication\\_version.pdf](http://www.epa.gov/npdes/pubs/nas_final_report_prepublication_version.pdf).

On July 12, 2011, the SAB, which reports to the U.S. Environmental Protection Agency, released its report entitled: "Efficacy of Ballast Water Treatment Systems." The EPA Office of Water requested that the SAB provide advice regarding the effectiveness of existing technologies for shipboard treatment of vessel ballast water, how these technologies might be improved in the future and how to overcome limitations in existing data. The SAB concluded: "there are currently ballast water treatment systems that are able to comply with the least stringent standard proposed by the USCG" (i.e., the IMO standard). However, due to technological, logistical and personnel constraints imposed by shipboard operations, the SAB also concluded that "wholly new systems would need to be developed in order to meet more stringent proposed standards" (i.e., standards that are 100 times or 1000 times more stringent than IMO).

It is particularly important to note that the SAB concluded that there are currently no procedures to verify compliance with standards more stringent than IMO. As a way forward, the authors provide suggestions on how to improve current limitations of ballast water management using available ballast water treatment technology and verification protocols. You can find a link to a copy of the SAB report at: <http://cfpub.epa.gov/npdes/vessels/programdevelopment.cfm>.

Other notable developments in the ballast water regulatory arena occurred over the summer.

When the House Appropriations Committee considered the Fiscal Year 2012 Interior-Environment Appropriations bill in July, they approved on a voice vote an

amendment offered by Congressman Steven LaTourette (R-OH) that would bar EPA funding for Great Lakes states that have enacted ballast water regulations that are more stringent than U.S. Coast Guard and International Maritime Organization standards.

In addition, two subcommittees of the House Transportation and Infrastructure Committee held a joint hearing in July to focus attention on varying state ballast water regulations. The Subcommittee on Coast Guard and Maritime Transportation and the Subcommittee on Water Resources and Environment heard testimony from the Coast Guard, EPA, the chairs of the NRC and SAB studies and shipping industry representatives. The purpose of the hearing, entitled "Reducing Regulatory Burdens, Ensuring the Flow of Commerce and Protecting Jobs: A Common Sense Approach to Ballast Water Regulation," was to focus on options to improve current regulations governing ballast water and other incidental discharges to ensure the free flow of commerce, grow maritime jobs and protect the environment. Following the hearing, the Committee issued a press release calling for a uniform national ballast water standard and indicated its intent to develop a new ballast water legislative initiative.

Lastly, a number of foreign governments in addition to Canada have now officially registered their complaints about New York's proposed ballast water requirements. The governments of Denmark and the Netherlands have written to the U.S. Department of State and Norway has officially contacted the U.S. Department of Commerce. The consistent concern of these governments is that no individual state should be allowed to interfere with international trade by imposing standards that are currently not achievable.

Thanks to the two new studies, the ballast water debate can finally be governed by science and fact rather than conjecture and wishful thinking. The findings of these long-awaited studies are worth your review and attention. Furthermore, as Congress takes a renewed interest in the ballast water arena, it is important that you communicate your views on the need for a uniform national standard, one that can be supported by science. ■



**COLLISTER ("TERRY") JOHNSON, JR.**  
*Administrator*  
Saint Lawrence Seaway Development Corporation