

**CALENDAR ITEM  
C32**

A	Statewide	12/03/08 W9777.234 W9777.290
S	Statewide	N. Dobroski M. Falkner G. Gregory

**CONSIDER APPROVAL OF THE LEGISLATIVE REPORT TITLED  
2009 ASSESSMENT OF THE EFFICACY, AVAILABILITY AND ENVIRONMENTAL  
IMPACTS OF BALLAST WATER TREATMENT SYSTEMS  
FOR USE IN CALIFORNIA WATERS**

The Coastal Ecosystems Protection Act (Act) of 2006 expanded the Marine Invasive Species Act of 2003 to more effectively address the threat of nonindigenous species introduction through ballast water discharge. The Act charged the California State Lands Commission (Commission) to implement performance standards for the discharge of ballast water and to prepare a report assessing the efficacy, availability, and environmental impacts, including water quality, of currently available ballast water treatment technologies. The performance standards regulations were adopted in October 2007, and the first technology assessment report was approved by the Commission in December 2007 (see Dobroski et al. 2007). In response to the recommendations in the 2007 report, the California Legislature passed Senate Bill (SB) 1781 (Chapter 696, Statutes of 2008) which delayed the initial implementation of the performance standards from January 1, 2009 to January 1, 2010, and required an update of the technology assessment report by January 1, 2009.

Attached, as Exhibit A, is the report prepared by the Commission's Marine Facilities Division in compliance with Public Resources Code section 71205.3. The report summarizes the Commission's conclusions on the advancement of ballast water treatment technology development and evaluation during 2008, discusses future plans of the Commission's Marine Invasive Species Program regarding the implementation of California's performance standards for the discharge of ballast water, and makes recommendations to the Legislature.

In preparation of this report, Commission staff conducted a literature review, contacted technology vendors, held discussions regarding treatment system development and performance verification, and consulted a cross-interest, multidisciplinary panel (as required by Section 71205.3 and described in subdivision (b) Section 71204.9 of the PRC).

Significant progress has been made in the development of treatment systems since the previous technology assessment report (see Dobroski et al. 2007). Both the quantity and the quality of the recently received data on system performance attest to this fact. The field of

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treatment technology performance evaluation, however, has not kept pace with the rapidly evolving ballast water treatment industry. Scientific methods to assess the concentration of viable organisms present in ballast water discharge still must be developed so that Commission staff may rapidly assess vessel compliance with the ballast water performance standards.

California's standards for bacteria and viruses pose a significant challenge, as no widely accepted methods exist to both quantify and assess the viability of all bacteria and viruses in a sample of ballast water discharge. The best available technique for bacterial assessment involves the use of a subset or proxy group of organisms to represent treatment of bacteria as a whole. While this technique is not without some debate, it is scientifically supported by many experts in microbiology and technology assessment (see Appendix A in Exhibit A). The viruses pose a greater challenge. Without strong evidence for the selection of proxy organisms in this size class, Commission staff believes that there are no acceptable methods for verification of compliance with the total viral standard at this time, and that the Commission should proceed with assessment of technologies for the remaining organism size classes in the standards.

Based on the available information and using best assessment techniques, Commission staff reviewed 30 ballast water treatment systems for this report. Staff believes that at least two treatment systems have demonstrated the potential to comply with California's performance standards. Many additional systems are close to completing system performance verification testing and will soon have data available for review. Commission staff expects that before 2010 several systems will be ready to meet California standards.

Over 20 systems are anticipated to be commercially available by the end of 2009. Systems cannot clearly be deemed "available" for use, however, unless they have demonstrated the ability to meet California's performance standards. The treatment systems that met California's standards under the review for this report are commercially available at this time, and the several additional systems that are close to meeting all of California's standards are also commercially available.

Treatment vendors and vessel operators will also need to assess potential water quality impacts from treatment system usage in California waters. Commission staff, in consultation with the State Water Resources Control Board, has recently distributed to technology vendors a set of "Ballast Water Treatment Technology Testing Guidelines" that provides guidance on relevant water quality control plans and objectives for vessels intending to discharge treated effluent in State waters. Further guidance will be provided by the U.S. Environmental Protection Agency's National Pollution Discharge Elimination System (NPDES) Vessel General Permit for Discharges Incidental to the Normal Operation of Vessels, and the California-specific provisions added to the Vessel General Permit through the Clean Water Act Section 401 certification process. As of the writing of this report, however, those provisions are not available. Based on the available data it is clear that not all treatment systems will meet California's water quality objectives, particularly for chlorine residuals. Vessel owners and operators will need to consult with the Water Board to better assess the potential for water quality impacts from treatment system usage in California waters.

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Commission staff is preparing to implement the performance standards for new vessels with a ballast water capacity of less than 5000 MT in 2010. This review indicates that systems are or will soon be available to meet California's performance standards, particularly in light of the small number of new vessels that will likely need to meet the standards beginning in 2010. Commission staff is working closely with the shipping industry and treatment vendors to ensure a smooth transition to the new standards.

Staff is currently undertaking several projects to develop a comprehensive program for the implementation of California's performance standards including: 1) Developing protocols to verify vessel compliance with the performance standards; 2) Amending the performance standards regulations to bring the regulations inline with recent changes in statute and to specify requirements for ballast water sample collection and analysis; 3) Revising the Ballast Water Treatment Technology Testing Guidelines, as necessary; and 4) Supporting the development of performance standards and a technology assessment program at the federal level.

Staff will conduct another assessment of available treatment technologies by July 1, 2010 in anticipation of the 2012 implementation date for new vessels with a ballast water capacity greater than 5000 MT.

At this time, Commission staff recommends that legislation be adopted to: 1) Authorize the Commission to amend the ballast water reporting requirements via regulations, and 2) Support continued research promoting technology development and performance evaluation.

**STATUTORY AND OTHER REGULATIONS:**

- A. Public Resources Code sections 71200 through 71271.

**OTHER PERTINENT INFORMATION:**

Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (14 Cal. Code Regs. 10561), the Commission Staff has determined that this activity is exempt from the requirements of the CEQA because the activity is not a "project" as defined by the CEQA and the State CEQA Guidelines.

Authority: Public Resources Code Sections 21084 and 14 Cal. Code Regs. 15300.

**EXHIBIT:**

- A. "2009 ASSESSMENT OF THE EFFICACY, AVAILABILITY AND ENVIRONMENTAL IMPACTS OF BALLAST WATER TREATMENT SYSTEMS FOR USE IN CALIFORNIA WATERS"

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**IT IS RECOMMENDED THAT THE COMMISSION:**

1. FIND THAT THE ACTIVITY IS EXEMPT FROM THE REQUIREMENTS OF CEQA PURSUANT TO TITLE 14, CALIFORNIA CODE OF REGULATIONS, SECTION 15061 BECAUSE THE ACTIVITY IS NOT A PROJECT AS DEFINED BY PUBLIC RESOURCES CODE SECTION 21065 AND TITLE 14, CALIFORNIA CODE OF REGULATIONS, SECTION 15378
2. ACCEPT, AS THE CALIFORNIA STATE LANDS COMMISSION'S REPORT TO THE LEGISLATURE THE 2009 ASSESSMENT OF THE EFFICACY, AVAILABILITY AND ENVIRONMENTAL IMPACTS OF BALLAST WATER TREATMENT SYSTEMS FOR USE IN CALIFORNIA WATERS, THE DOCUMENT IN EXHIBIT A
3. AUTHORIZE THE COMMISSION STAFF, PRIOR TO SUBMISSION TO THE LEGISLATURE, TO MAKE SUCH NONSUBSTANTIVE CHANGES IN THE REPORT AS ARE NECESSARY TO CORRECT ERRORS OR CLARIFY THE INFORMATION PRESENTED.
4. DIRECT STAFF TO SUBMIT THE REPORT, SUBSTANTIALLY IN THE FORM ATTACHED AS EXHIBIT A, TO THE LEGISLATURE IN COMPLIANCE WITH SECTION 71205.3 OF THE PUBLIC RESOURCES CODE.