

**CALENDAR ITEM  
C76**

A: Statewide

03/25/08  
W9777.243  
W9777.234  
M. Falkner  
D. Brown

S: Statewide

**REQUEST AUTHORITY TO ENTER INTO A CONTRACT TO SUPPORT VESSEL  
MODIFICATIONS AND CONDUCT SHIPBOARD BALLAST WATER TREATMENT  
RESEARCH**

**PARTY:**

California State Lands Commission  
100 Howe Avenue, Suite 100 South  
Sacramento, CA 95825-8202

**BACKGROUND:**

Introductions of non-native aquatic species are increasingly common worldwide in coastal habitats (Ruiz et al. 2002a,b). It is widely accepted that ballast water is an important vector responsible for transporting and introducing these non-native species (Carlton and Geller 1993; Cohen and Carlton 1998). To reduce the threat of species introductions via ballast water release, California currently requires ballast water exchange. However, the exchange process may be difficult or impossible to perform in bad weather, and more importantly, exchange is not 100% effective at eliminating the risk of species introductions (e.g. Cooper et al. 2002, Ruiz and Reid 2007). Because of the issues associated with ballast water exchange, it is viewed as an interim solution while shipboard ballast water treatment technologies are being developed.

The Coastal Ecosystem Protection Act of 2006 (Act) required the Commission to implement performance standards for the discharge of ballast water. California's standards, approved in October 2007, set specific limits for organism concentration, as a function of organism size class, in ballast water discharges. These standards provide treatment technology developers with a target for system performance. Beginning January 1, 2009, interim standards for organism discharge will be implemented on a

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graduated time schedule. A final standard of zero detectable living organisms will be implemented on January 1, 2020.

The Act also required the Commission to prepare a report for the Legislature assessing the efficacy, availability and environmental impacts, including water quality, of available ballast water treatment systems. This report, completed in December, 2007, reviewed 28 treatment systems for compliance with California standards. The report findings indicate that: 1) No technologies meet California's standards either due to numerical inability to meet the standards or due to testing in metrics inconsistent with the standards; 2) None of the systems have been evaluated with California's water quality requirements in mind; and 3) Only 11 of 28 systems had results of shipboard testing available for review. Clearly, treatment systems require further development and testing, particularly at the shipboard scale. More information is needed not only on the engineering and practical application of the different treatment systems, but also on the effectiveness in removing target organisms, environmental acceptability, safety, and practicality of monitoring.

The Marine Invasive Species Act requires the Commission to,

*"...sponsor pilot programs for the purpose of evaluating alternatives for treating and otherwise managing ballast water. The goal of this effort shall be the reduction or elimination of the discharge of nonindigenous species into the coastal waters of the state...Priority shall be given to projects to test and evaluate treatment technologies that can be used to prevent the introduction and spread of nonindigenous aquatic species into coastal waters of the state by ship-mediated vectors."* (Public Resources Code Section 71210)

Furthermore, the Marine Invasive Species Act mandates CSLC to,

*". . . identify and conduct any other research determined necessary to carry out the requirements of this division. The research may relate to the transport and release of nonindigenous species by vessels, the methods of sampling and monitoring of the nonindigenous species transported or released by vessels, the rate or risk of release or establishment of nonindigenous species in the waters of the state and resulting impacts, and the means by which to reduce or eliminate a release or establishment . . ."* (Public Resources Code Section 71213).

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**PROPOSED ACTIVITY:**

Accordingly, the Commission's Marine Facilities Division supports research that will evaluate the effectiveness of shipboard ballast water treatment systems for vessels operating in California waters. In recent years, Staff has worked with the maritime industry and technology vendors to help identify vessels and test platforms for the purpose of treatment system development. It is a challenge to find companies willing to commit to costly vessel retrofits in support of shipboard experimental testing of ballast water treatment systems. Identifying appropriate shipboard platforms for treatment system evaluations requires a unique combination of owner willingness, available funding, and engineering compatibilities.

The proposed effort will modify the *Training Ship Golden Bear*, berthed at the California Maritime Academy (CMA) campus in Vallejo, for the purpose of conducting ballast water treatment research. The Glosten Associates (Glosten) will perform project coordination, design and engineering, working closely with CMA and in conjunction with the Maritime Administration, the vessel owner. Glosten has conducted an engineering feasibility analysis that supports the modification of the *Golden Bear* to allow for the installation of a deck-mounted treatment system that will hook into the *Golden Bear's* ballast water system. This "plug-and-play model" not only significantly reduces costs associated with treatment system installation, but also allows for a relatively easy transition from testing on one system to the next. Glosten and CMA plan to market the *Golden Bear* test platform for both certification testing and basic research. Modification to the *Golden Bear*, including retrofit, beta testing and calibration is estimated to cost \$700,000. Glosten and CMA are jointly applying to the National Oceanic and Atmospheric Administration (NOAA) Sea Grant Ballast Water Management Demonstration Program for \$540,000. The grant application requires the remaining funds come from non-federal matching sources.

Staff proposes to assist this project financially by providing \$100,000 in matching money for this project, utilizing funds from the Marine Invasive Species Control Fund that are budgeted for conducting necessary research. Staff proposes that the Commission grant authority to Commission Staff to enter into contract with Glosten, as principal investigator, for up to \$100,000 to offset the engineering and evaluation costs of the vessel modifications. In exchange, CSLC staff will be provided with all non-confidential reports and data generated during system operation and testing. Additionally, a research team sponsored by CSLC will utilize the vessel to test protocols necessary to verify vessel compliance with California's performance standards. This work will provide valuable real time information about shipboard operation of ballast water treatment systems. This information is critical for the continued development of effective means to

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control nonindigenous aquatic species introduction through ballast water discharges. Specific funding for the purposes herein has been included in the Commission's 2008-09 budget.

**STATUTORY AND OTHER REFERENCES:**

- A. Public Resources Code section 6106 (Delegation to Execute written instruments)
- B. Coastal Ecosystems Protect Act of 2006, Chapter 292, Statutes of 2006
- C. Marine Invasive Species Act of 2003, Chapter 491, Statutes of 2003
- D. State Administrative Manual section 1200
- E. State Contracting Manual (rev 10/05)

**OTHER PERTINENT INFORMATION:**

- 1. Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (Title 14, California Code of Regulations, section 15061), the staff has determined that this activity is exempt from the requirements of the CEQA as a categorically exempt project. The project is exempt under Class 6, Information Collection Title 14, California Code of Regulations, section 15306.

Authority: Public Resources Code section 21084 and Title 14, California Code of Regulations, section 15300.

**RECOMMENDED ACTION:**

IT IS RECOMMENDED THAT THE COMMISSION:

- 1. FIND THAT THE ACTIVITY IS EXEMPT FROM THE REQUIREMENTS OF THE CEQA PURSUANT TO TITLE 14, CALIFORNIA CODE OF REGULATIONS, SECTION 15061 AS A CATEGORICALLY EXEMPT PROJECT, CLASS 6, INFORMATION COLLECTION; TITLE 14, CALIFORNIA CODE OF REGULATIONS, SECTION 15306.
- 2. AUTHORIZE THE EXECUTIVE OFFICER OR HIS DESIGNEE TO AWARD AND EXECUTE A CONTRACT, IN ACCORDANCE WITH

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STATE POLICIES AND PROCEDURES, IN AN AMOUNT NOT TO EXCEED \$100,000 WITH THE GLOSTEN ASSOCIATES, TO SUPPORT VESSEL MODIFCATIONS AND CONDUCT SHIPBOARD BALLAST WATER TREATMENT RESEARCH.

3. AUTHORIZE AND DIRECT THE EXECUTIVE OFFICER OR HIS DESIGNEE TO TAKE WHATEVER ACTION IS NECESSARY AND APPROPRIATE TO IMPLEMENT THE PROVISIONS OF THE CONTRACT WITH THE GLOSTEN ASSOCIATES.