CALENDAR ITEM
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CONSIDER APPROVAL OF PROPOSED AMENDMENTS AND ADDITIONS TO THE CALIFORNIA CODE OF REGULATIONS, TITLE 2, DIVISION 3, CHAPTER 1, ARTICLE 4.8 – BIOFOULING MANAGEMENT TO MINIMIZE THE TRANSFER OF NONINDIGENOUS SPECIES FROM VESSELS ARRIVING AT CALIFORNIA PORTS

PROPOSAL:

Commission staff proposes to amend the California Code of Regulations, title 2, division 3, chapter 1 to:

- Repeal section 2297.1 under Article 4.7
- Repeal section 2298 under Article 4.8
- Adopt sections 2298.1, 2298.2, 2298.3, 2298.4, 2298.5, 2298.6, 2298.7, 2298.8, 2298.9, and 2298.9.1 under Article 4.8

This proposal would repeal three reporting requirements and establish biofouling management, recordkeeping, and reporting requirements for vessels arriving at a California port, as authorized by Public Resources Code section 71201.7. The proposed regulations are necessary to minimize the transfer of nonindigenous species from vessels to State waters.

BACKGROUND:

Nonindigenous species (NIS) are organisms that are introduced into areas where they do not occur naturally or historically. Once introduced, NIS can become invasive and create a variety of negative impacts, including the following:

- Economic impacts: NIS are responsible for $120 billion in losses and damages annually in the United States (Pimentel et al. 2005). Economic impacts to California's coastal economy are a major concern, as California has the second highest ocean-based gross state product in the U.S. (2013 data; National Ocean Economics Program 2016). In 2014, water hyacinth, a nonindigenous aquatic plant, caused significant negative impacts to the Port of Stockton and several San Francisco Bay-Delta marinas. The Port of Stockton spent $200,000 to mechanically remove the plant, and the shipping

industry lost an estimated $300,000 due to delays in cargo operations (Wingfield, J. pers. comm. 2015).

- Environmental impacts: Worldwide, 42 percent of threatened or endangered species are listed, in part, because of impacts from NIS (Pimentel et al. 2005). In San Francisco Bay, the nonindigenous overbite clam spread throughout the waterways within two years of first detection in 1986. The overbite clam is able to consume 80 percent to 90 percent of the microscopic animals from the water column in the shallow portions of the bay (Greene et al. 2011). By dramatically reducing the concentrations of these microscopic animals in the water, the clam is believed to be contributing to the decline of several native pelagic fish species in the Sacramento-San Joaquin River Delta, including the endangered delta smelt (Feyrer et al. 2003, Sommer et al. 2007).
- Human health impacts: Outbreaks of cholera, human intestinal pathogens, and parasites that cause "swimmers itch" have all been linked to vectors known to transport aquatic NIS into new environments.

Nonindigenous species reproduce and increase in numbers over time and are nearly impossible to eradicate once they become established. Prevention strategies to reduce introduction are therefore more successful and cost-efficient than "reactive" control or eradication attempts.

In coastal environments, commercial ships are the primary vectors responsible for the introduction of NIS (Hewitt and Campbell 2010). Ships transport and introduce NIS through two main mechanisms.

- Ballast water: Water taken onboard a vessel to maintain a vessel's trim and stability during cargo loading, transport, and unloading operations. Ballast water (and the millions of organisms contained in it) is typically loaded in one port and subsequently discharged into another port.
- Vessel biofouling: The community of organisms that attach to, or associate with, a vessel's underwater surfaces. Marine biofouling organisms colonize available hard surfaces in the ocean, including ships. The vessel's biofouling community is transported to every port that a vessel visits along its itinerary, potentially introducing these organisms as they drop off or spawn (i.e., reproduce) along the way.

In response to shipping-mediated NIS introductions to California, the State Legislature enacted the 1999 Ballast Water Management for Control of

Nonindigenous Species Act (Stats. 1999, ch. 849), which created a State program focused on NIS prevention through vector management (i.e., managing ships as vectors). This law was subsequently amended and reauthorized as the 2003 Marine Invasive Species Act (Act) (Stats. 2003, ch. 491), expanding the authority of the program and renaming it as the Marine Invasive Species Program.

Over the last 30 years, ballast water discharge has been considered the greatest risk for aquatic species introductions to coastal habitats. However, only 15 percent (on average) of the vessels arriving at California ports discharge ballast water and represent a risk of ballast water-mediated NIS introductions. In contrast, 100 percent of the vessels arriving at California ports have some amount of biofouling associated with their underwater surfaces, so every vessel carries a risk of introducing NIS through biofouling. Vessel biofouling communities are also likely to increase in extent and species diversity over time, as vessels visit different regional and international ports. Each port that a vessel visits during the typical five-year period between out-of-water maintenance activities (i.e., dry docking) represents an opportunity for more biofouling organisms to accumulate on a vessel's underwater surfaces. Therefore, evidence suggests that vessel biofouling is the most potent mechanism for the introduction of NIS into coastal waters, and is believed to be responsible for up to 60 percent of the currently established NIS in California's coastal and estuarine waters (Ruiz et al. 2011). These proposed regulations are designed to reduce the risk of biofouling-based NIS introductions.

Initially, ballast water management was the main focus of the MISP; however, the Act required the Commission to assess the risk of introducing NIS through non-ballast shipping mechanisms. After consultation with a Technical Advisory Group, the Commission submitted a report to the Legislature in 2006 describing *Commercial Vessel Fouling in California* (see Takata et al. 2006). The Legislature responded to the report's recommendations by amending the Act in 2007 (Stats. 2007, ch. 370) to require the Commission to develop and adopt regulations governing the management of vessel biofouling.

To prepare for and develop the proposed regulations, the MISP staff has:

- Created, and adopted via regulations, an annual reporting form (the *Hull Husbandry Reporting Form*) to collect information on existing vessel maintenance and operational practices known to influence biofouling accumulation and survival

- Funded several research studies to identify patterns of vessel biofouling on a variety of vessel types and vessel surfaces
- Consulted with shipping industry, scientist, and regulatory stakeholders by convening a Biofouling Technical Advisory Group (TAG) and meeting four times during 2010 – 2011
- Proposed regulations via a rulemaking action in 2011, including three revisions and eventual withdrawal in 2012 because the one-year limit for rulemaking actions under the Administrative Procedures Act was exceeded
- Reconvened and consulted with the Biofouling TAG in 2014 to revise draft regulations
- Released draft regulations for informal public comment in late 2014
- Proposed regulations via a rulemaking action in 2015, followed by withdrawal of that action because of procedural issues

The proposed regulations have been developed through an open, transparent, inclusive process, incorporating current best management practices used by the shipping industry to prevent biofouling-induced drag and associated fuel consumption.

OBJECTIVES OF THE PROPOSED REGULATIONS:

The proposed regulations include objectives to:

- *Encourage vessel owners and operators to create and implement vessel-specific strategies for comprehensive biofouling management.* The proposed regulations will achieve this objective by requiring Biofouling Management Plans and Biofouling Record Books that are aligned with International Maritime Organization guidance.
- *Codify current best management practices*. Most vessels use anti-fouling or foul-release coatings to prevent biofouling accumulation and the associated drag-induced fuel consumption. The proposed regulations will align regulatory expectations with these current best practices by encouraging vessel operators to ensure that their coatings are used in accordance with specifications.
- *Encourage ship owners and operators to manage all underwater surfaces*. Current shipping industry biofouling management efforts focus on flat surfaces of the hull (i.e., areas that affect drag and fuel consumption), but ignore or undermanage other underwater surfaces (e.g., recesses and

appendages collectively known as niche areas). The proposed regulations will require owners and operators to manage these often undermanaged niche areas in a manner that is most appropriate.

- *Address "high risk" vessel operational practices that increase a vessel's likelihood of introducing NIS into California waters*. Vessels that stay in the same location for prolonged periods of time (i.e., 45 days or more) are likely to accumulate extensive, diverse biofouling communities and represent a high risk of NIS introduction (Coutts 2002, Coutts et al. 2003, Coutts and Taylor 2004, Takata et al. 2006, Davidson et al. 2008, Floerl and Coutts 2009, National System for the Prevention and Management of Marine Pest Incursions 2009a, 2009b, Davidson et al. 2010, Sylvester and MacIsaac 2010, Hopkins and Forrest 2010, Sylvester et al. 2011). The proposed regulations place additional management requirements on the small number of vessels that are expected to fall into these categories (estimated in the Notice of Proposed Regulatory Action to be less than four percent of the vessels operating in California).
- *Provide mechanisms for vessel owners and operators to petition for alternative management options or safety exemptions*. The proposed regulations outline the steps to be taken to petition the Commission staff for approval of an alternative form of biofouling management, and the steps to be taken when claiming a safety exemption from the proposed regulations requirements.

SUMMARY OF NOTIFICATION AND RULEMAKING PROCESS:

The proposed regulations were published in the California Regulatory Notice Register (Register 2016, No. 48-Z) on November 25, 2016.

The proposed regulations are the result of over six years of consultation with the Commission's Biofouling Technical Advisory Group and the public, including industry stakeholders. This process has resulted in a set of regulations that meets the goal of the Legislative mandate while limiting the regulatory burden on the shipping industry. Many industry stakeholders voiced support and appreciation for the inclusive, transparent process in their comments for the Public Comment Period.

The initial Public Comment Period for the proposed regulations spanned 46 days, from November 25, 2016, through January 10, 2017, with a Public Hearing at the Port of Long Beach on January 10, 2017. Commission staff received 209 comments during this initial Public Comment Period and made several revisions

to the regulatory text and the reporting form incorporated by reference in response to these comments. The revisions were considered sufficiently related to the original text, warranting a 15-day Public Comment Period from January 20, 2017, through February 4, 2017. Commission staff accepted public comments through February 6, 2017, the following business day after the closing date.

During the 15-day Public Comment Period, several commenters commented on the necessity of the questions contained within the proposed Annual Vessel Reporting Form incorporated by reference in Section 2298.5. Most of these comments focused on whether the questions provided value to the Commission. The questions referenced by the commenters have been a part of an existing mandatory reporting form that is being replaced by the Annual Vessel Reporting Form. The questions themselves are necessary as they will be used to assess the vessel-specific risk of introducing NIS into California waters so the Commission's inspection and enforcement resources can be efficiently prioritized on the basis of risk. For example, one commenter questioned the necessity of asking for the previous ten ports of call prior to a vessel's first California arrival of a calendar year. This question is necessary as the vessel's itinerary immediately prior to a California arrival provides information about recent visits to ports with similar environmental conditions (e.g., salinity, temperature) to California ports (equates to greater NIS introduction risk) or recent visits to freshwater ports that may kill marine organisms on a vessel's hull (equates to lower NIS introduction risk). Vessels can be colonized by biofouling organisms at all ports that the vessel visits, not just the previous port of call, so extending back to the previous ten ports of call is necessary for appropriate risk profiling.

After reviewing the comments from the second Public Comment Period, staff recommends no additional changes to the proposed regulations are necessary. All of the comments received during both Public Comment Periods are addressed in the Final Statement of Reasons.

The proposed regulations are intended to become effective October 1, 2017. However, most provisions will not require individual vessels to take action until the first regularly scheduled out-of-water maintenance (i.e., dry docking) on or after January 1, 2018.

STAFF ANALYSIS AND RECOMMENDATION:

Authority:

Public Resources Code section 71201.7

Public Trust and the State's Best Interests Analysis:

The proposed regulations will further the interests of the Public Trust by providing greater protection to Public Trust resources. Currently, the introduction of nonindigenous species to California's waters threatens Public Trust resources and values, including ecosystem preservation and the promotion and protection of fishing, water-related recreation, maritime commerce, and water-dependent tourism. Although the proposed biofouling management regulations could serve as a minor limitation on navigation to California ports, the proposed regulations are necessary to protect these other Public Trust resources and values.

The proposed regulations satisfy the purpose of the Marine Invasive Species Act (Public Resources Code, section 71201, subdivision (d)) "to move the State expeditiously toward elimination of the discharge of nonindigenous species into the waters of the State." Thus, staff believes that adoption of the proposed regulations would further enhance and protect Public Trust resources and are in the State's best interests.

OTHER PERTINENT INFORMATION:

1. The proposed regulations would implement, interpret, and make specific Public Resources Code sections 71200, 71201, 71202, 71204, and 71205.

2. Staff recommends that the Commission find that this activity is exempt from the requirements of the California Environmental Quality Act (CEQA) as a categorically exempt project. The project is exempt under Class 8, Actions by Regulatory Agencies for Protection of the Environment; California Code of Regulations, title 14, section 15308.

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

3. This action is consistent with Strategic Goal 1, Key Action 1.1.3 of the Commission's Strategic Plan. This Key Action calls for staff to implement ballast water discharge standards and biofouling management strategies that prevent the introduction of nonindigenous species into State marine waters.

EXHIBITS:

A. Text of the proposed regulations
B. Marine Invasive Species Program Annual Vessel Reporting Form, incorporated by reference
C. References cited in staff report

RECOMMENDED ACTION:

It is recommended that the Commission:

CEQA FINDING:

Find that the activity is exempt from the requirements of CEQA pursuant to California Code of Regulations, title 14, section 15061 as a categorically exempt project, Class 8, Actions by Regulatory Agencies for Protection of the Environment; California Code of Regulations, title 14, section 15308.

PUBLIC TRUST AND STATE'S BEST INTERESTS:

Find that the adoption of the proposed regulations, or regulations substantially in the same form, will not substantially interfere with the public rights to navigation and fishing nor the Public Trust needs and values at this time, is consistent with the common law Public Trust Doctrine, and is in the best interests of the State.

AUTHORIZATION:

1. Find that no alternatives would be more effective in carrying out the purposes for which the regulations are proposed, or would be as effective as and less burdensome, or would lessen any adverse economic impact on small businesses or affected private persons, than the proposed regulations.

2. Adopt the repeal of section 2297.1 of the California Code of Regulations, title 2, division 3, chapter 1, Article 4.7, substantially in the form as set forth in the attached Exhibit A.

3. Adopt the repeal of section 2298 of the California Code of Regulations, title 2, division 3, chapter 1, Article 4.8, substantially in the form as set forth in the attached Exhibit A.

4. Adopt the addition of sections 2298.1, 2298.2, 2298.3, 2298.4, 2298.5, 2298.6, 2298.7, 2298.8, 2298.9, and 2298.9.1 of the

California Code of Regulations, title 2, division 3, chapter 1, Article 4.8, substantially in the form as set forth in the attached Exhibit A.

5. Authorize staff to make minor, non-substantive modifications to the proposed regulations and supporting materials in response to recommendations by the Office of Administrative Law or Department of Finance.

6. Authorize staff to take whatever action is necessary and appropriate to comply with provisions of the Government Code regarding the lawful adoption of the regulations and to ensure that the regulations become effective.

7. Authorize staff to take whatever action is necessary and appropriate to implement the regulations at such time as they become effective.

EXHIBIT A

TITLE 2. ADMINISTRATION
DIVISION 3. STATE PROPERTY OPERATIONS
CHAPTER 1. STATE LANDS COMMISSION
Article 4.8. ~~The Collection of Information Relating to Hull Husbandry Practices of Vessels for Control of Marine Invasive Species in Waters of California~~ BIOFOULING MANAGEMENT TO MINIMIZE THE TRANSFER OF NONINDIGENOUS SPECIES FROM VESSELS ARRIVING AT CALIFORNIA PORTS

~~**Section 2298. Hull Husbandry Reporting Form.**~~

~~(a) Section 71205(e) of the Public Resources Code requires the master, owner, operator, agent, or person in charge of a vessel carrying, or capable of carrying, ballast water into the coastal waters of the State to file the "Hull Husbandry Reporting Form" developed by the California State Lands Commission providing information regarding the hull husbandry practices relating to the vessel, within 60 days of receiving a written or electronic request from the Commission.~~

~~(b) The "Hull Husbandry Reporting Form" (revised June 6, 2008) is hereby incorporated by reference and shall be used by the master, owner, operator, agent, or person in charge of a vessel carrying, or capable of carrying, ballast water into the coastal waters of the State to comply with the provisions of Section 71205(e) of the Public Resources Code.~~

~~Authority cited: Sections 71201.7, 71204.6, and 71205(e), Public Resources Code~~

~~Reference: Sections 71204.6, 71205(e) and 71205(f), Public Resources Code~~

Section 2298.1. Purpose, Applicability, and Date of Implementation.

(a) The purpose of the regulations in Title 2, Division 3, Chapter 1, Article 4.8 of the California Code of Regulations is to move the State expeditiously toward elimination of the discharge of nonindigenous species into the waters of the State or into waters that may impact the waters of the State, based on the best available technology economically achievable.

(b) The provisions of Article 4.8 apply to all vessels carrying, or capable of carrying, ballast water that arrive at a California port, except those vessels that are exempt under Section 71202 of the Public Resources Code or those vessels that satisfy the requirements of the emergency exemption clause in 2 CCR § 2298.9.1.

(c) For the purposes of Article 4.8, all ports in the San Francisco Bay area East of the Golden Gate bridge, including the Ports of Stockton and Sacramento, shall be interpreted as the same "California port"; the Ports of Los Angeles, Long

Beach, and the El Segundo marine terminal shall be interpreted as the same "California port."

(d) The provisions of these regulations shall become effective ~~July~~October 1, 2017.

Authority Cited: Section 71201.7, Public Resources Code.

Reference Cited: Sections 71200, 71201, and 71202, Public Resources Code.

Section 2298.2. Definitions.

The following definitions shall govern the construction of this Article:

(a) "Anti-fouling coating" means any paint or other coating that prevents or deters the attachment and growth of biofouling organisms on the wetted portions of a vessel. Anti-fouling coatings may include biocidal or non-biocidal anti-fouling coatings.

(b) "Anti-fouling system" means a coating, paint, surface treatment, surface, or device that is used on a vessel to minimize or prevent attachment, growth, or association of biofouling.

(c) "Biocidal anti-fouling coating" means an anti-fouling coating containing one or more chemical substances that are toxic or act as a deterrent to the settlement of living organisms.

(d) "Biofouling," also referred to as hull fouling or marine growth, means the attachment or association of marine organisms to the wetted portions of a vessel or its appurtenances, including but not limited to sea chests, propellers, anchors and associated chains, and other niche areas. Biofouling includes microfouling and macrofouling.

(e) "CCR" means the California Code of Regulations.

(f) "Commission staff" means the staff of the California State Lands Commission.

(g) "Division Chief" means the Chief of the Marine Environmental Protection Division of the California State Lands Commission or any employee of the Marine Environmental Protection Division authorized by the Division Chief to act on her or his behalf.

(h) "Effective coating lifespan" means the expected age of an anti-fouling coating, as determined by the manufacturer and based on the vessel-specific application scheme (e.g. coating thickness) at the time of application, at which the coating is no longer expected to satisfactorily prevent or deter biofouling.

(i) “Extended residency period” means remaining in one port consecutively for forty-five days or longer.

(j) “Foul-release coating” means a non-biocidal anti-fouling coating with surface properties that minimize the adhesion of biofouling organisms, resulting in organism detachment by vessel movement.

(k) “Geographic location” means a port, anchorage, city and country, or latitude and longitude coordinates.

(l) “In-water cleaning” means the physical removal of biofouling from the wetted portions of a vessel while the vessel remains in the water.

(m) “In-water inspection” means underwater survey or inspection by diver(s) or with remotely operated vehicle(s). Inspections of a vessel’s hull and other underwater surfaces for purposes other than surveying biofouling may be considered opportunities for evaluating the extent of biofouling.

(n) “In-water treatment” means any method or process meant to kill or inactivate, but not remove, biofouling from the wetted portions of a vessel while the vessel remains in the water.

(o) “Macrofouling” means biofouling of large, distinct multicellular organisms visible to the human eye such as barnacles, tubeworms, or fronds of algae.

(p) “Marine Growth Prevention System” or “MGPS” means an anti-fouling system device used to reduce or prevent biofouling accumulation in internal seawater systems and sea chests. MGPS may include the use of anodes, injection systems, and electrolysis.

(q) “Microfouling” means biofouling of microscopic organisms such as bacteria and single-celled algae and the slimy substances that they produce. Microfouling is commonly referred to as a slime layer or biofilm.

(r) “Niche area” means an area on a vessel susceptible to biofouling due to variable hydrodynamic forces, susceptibility to coating system wear or damage, or inadequate protection by anti-fouling systems. Examples of niche areas include, but are not limited to, sea chests, bow thrusters, propeller shafts, inlet gratings, and out-of-water support strips.

(s) “Non-biocidal anti-fouling coating” means an anti-fouling coating that does not rely on one or more chemical substances intended to be toxic or act as a deterrent to organism settlement in order to achieve its anti-fouling properties. Non-biocidal anti-fouling coatings may include foul-release coatings.

(t) "Out-of-water maintenance" means removal of the vessel from the water and placement into a dry dock or slipway for inspection or maintenance. Out-of-water maintenance is commonly referred to as dry docking.

(u) "Out-of-water support blocks" means support blocks placed underneath the vessel while the vessel is undergoing out-of-water maintenance in a dry dock or slipway.

(v) "Out-of-water support strips" means sections of a vessel's hull that rest on out-of-water support blocks while the vessel is undergoing out-of-water maintenance in a dry dock or slipway. These areas are typically not cleaned or treated with fresh anti-fouling systems, resulting in reduced anti-fouling protection.

(w) "Port" means any port or place in which a vessel was, is, or will be anchored or moored, or where a vessel will transfer cargo.

(x) "Vessel" means a vessel of 300 gross registered tons (GRT) or more.

(y) "Wetted portion of a vessel" means all parts of a vessel's hull and structures that are either submerged in water when the vessel is loaded to the deepest permissible draft or associated with internal piping structures in contact with water taken onboard.

Authority Cited: Section 71201.7, Public Resources Code.

Reference Cited: Sections 71200 and 71201, Public Resources Code.

Section 2298.3. Biofouling Management Plan.

(a) The provisions described in this section apply to newly constructed vessels delivered into service on or after January 1, 2018, and to existing vessels beginning with completion of the first regularly scheduled out-of-water maintenance on or after January 1, 2018.

(b) The master, owner, operator, or person in charge of a vessel carrying, or capable of carrying, ballast water that arrives at a California port shall maintain a Biofouling Management Plan to be retained onboard and prepared specifically for that vessel. Upon request, the plan shall be made available to Commission staff for inspection and review. This plan shall provide a description of the biofouling management strategy for the vessel that is sufficiently detailed to allow a master or other appropriate ship's officer or crew member serving on that vessel to understand and follow the biofouling management strategy. At a minimum, this plan shall:

(1) Be regularly reviewed and revised to be current as of the last day of the most recent out-of-water maintenance or delivery if the vessel has never undergone out-of-water maintenance;

(2) Maintain consistency with the components of the Biofouling Management Plan described in the International Maritime Organization's "Guidelines for the Control and Management of Ships' Biofouling to Minimize the Transfer of Invasive Aquatic Species (adopted on July 15, 2011)," hereby incorporated by reference; and

(3) Describe the biofouling management practices and anti-fouling systems specifically used for the hull and each of the vessel's niche areas listed in 2 CCR § 2298.6(b)(1). For each anti-fouling system listed, include the following:

(A) Manufacturer name, model name, and product number, if applicable;

(B) Date each system was installed or applied;

(C) For anti-fouling coatings:

(1) Include the vessel's final specification document for the anti-fouling coating applied or a separate list documenting the information required by this subparagraph. The specification document or separate list shall include the parameters of the vessel's operating profile used for the specification of the anti-fouling system, including, at a minimum:

(a) The specified intended out-of-water maintenance or dry-docking interval of the vessel;

(b) The specified range of vessel operating speeds;

(c) The specified vessel activity level (e.g. percentage of time underway at sea compared with percentage of time berthed, anchored, moored, or adrift), if applicable;

(d) The specified vessel operating area or trading routes (e.g. coastal, deep-sea), if applicable.

(2) Specify the applied dry film thickness;

(3) Specify the manufacturer's expected effective coating lifespan (e.g. 60 months) at applied dry film thickness; and

(4) Include a copy of the vessel's International Anti-fouling System Certificate used to comply with the International Maritime Organization's Convention on the Control of Harmful Anti-Fouling Systems on Ships (also known as AFS Convention; entered into force on September 17, 2008), if applicable.

(D) For Marine Growth Prevention Systems (MGPS):

(1) Indicate where anodes or dosing outlets are installed (i.e. sea chest, strainer, or other location within seawater intake system); and

(2) Specify manufacturer's recommended doses and dosage frequency, if applicable.

(c) If a vessel does not have a Biofouling Management Plan consistent with subdivisions (a) and (b) of this section, and is arriving at a California port for the first time since the most recent regularly scheduled out-of-water maintenance or since delivery as a newly constructed vessel if no out-of-water maintenance has yet occurred, there shall be a 60-day grace period commencing on the date of arrival to enable the development of the required documents.

Authority Cited: Section 71201.7, Public Resources Code.

Reference Cited: Sections 71200, 71201, and 71205, Public Resources Code.

Section 2298.4. Biofouling Record Book.

(a) The provisions described in this section apply to newly constructed vessels delivered into service on or after January 1, 2018, and to existing vessels beginning with completion of the first regularly scheduled out-of-water maintenance on or after January 1, 2018.

(b) The master, owner, operator, or person in charge of a vessel carrying, or capable of carrying, ballast water that arrives at a California port shall maintain a Biofouling Record Book to be retained onboard the vessel. The Biofouling Record Book must contain details of all inspections and biofouling management measures undertaken on the vessel since the beginning of the most recent scheduled out-of-water maintenance or since delivery into service as a newly constructed vessel if no out-of-water maintenance has yet occurred. At a minimum, this record book shall:

(1) Maintain consistency with the components of the Biofouling Record Book described in the International Maritime Organization's "Guidelines for the Control and Management of Ships' Biofouling to Minimize the Transfer of Invasive Aquatic Species" (adopted on July 15, 2011);

(2) Include a description of all completed niche area management practices, as required in 2 CCR § 2298.6(b)(2).

(c) If a vessel does not have a Biofouling Record Book consistent with the requirements of subdivisions (a) and (b) of this section and is arriving at a California port for the first time since the most recent regularly scheduled out-of-water maintenance or since delivery as a newly constructed vessel if no out-of-water maintenance has yet occurred, there shall be a 60-day grace period commencing on the date of arrival to enable the development of the required documents. During the 60-day grace period, the master, owner, operator, or person in charge of a vessel subject to this subdivision shall:

(1) Maintain records containing details of all inspections and biofouling management measures undertaken on the vessel since the beginning of the most recent regularly scheduled out-of-water maintenance or since delivery into service as a newly constructed vessel if no out-of-water maintenance has yet occurred; and

(2) Make the records described in 2 CCR § 2298.4(c)(1) available to Commission staff upon request.

Authority Cited: Section 71201.7, Public Resources Code.

Reference Cited: Section 71205, Public Resources Code.

Section 2298.5. Marine Invasive Species Program Annual Vessel Reporting Form.

The form "Marine Invasive Species Program Annual Vessel Reporting Form" (SLC 600.12, Revised ~~08/16~~01/17) is hereby incorporated by reference. The master, owner, operator, agent or person in charge of a vessel carrying, or capable of carrying, ballast water that arrives at a California port shall submit the "Marine Invasive Species Program Annual Vessel Reporting Form" (SLC 600.12, Revised ~~08/16~~01/17) to the Commission in written or electronic form at least twenty-four hours in advance of the first arrival of each calendar year at a California port of call.

Authority Cited: Section 71201.7, Public Resources Code.

Reference Cited: Sections 71204 and 71205, Public Resources Code.

Section 2298.6. Biofouling Management for Wetted Surfaces.

The provisions described in this section apply to newly constructed vessels delivered into service on or after January 1, 2018, and to existing vessels beginning with completion of the first regularly scheduled out-of-water maintenance on or after January 1, 2018.

(a) The master, owner, operator, or person in charge of a vessel arriving at a California port shall manage biofouling on the wetted surfaces of the vessel, except those niche areas described in subdivision (b) of this section, in any of the following ways:

(1) If a vessel is using an anti-fouling coating, the coating shall not be aged beyond its effective coating lifespan, as documented in 2 CCR § 2298.3(b)(2)(C). If a vessel is using an anti-fouling coating and the coating is aged beyond its effective coating lifespan, as documented in 2 CCR § 2298.3(b)(2)(C), the master, owner, operator, or person in charge of a vessel shall document in the Biofouling Management Plan how biofouling on the wetted surfaces of the vessel, except those niche areas listed in subdivision (b)(1) of this section, shall be managed after the effective coating lifespan is exceeded. All biofouling management actions undertaken, and reports resulting from such actions, shall be documented in the Biofouling Record Book;

(2) If a vessel is not using an anti-fouling coating, the master, owner, operator, or person in charge of a vessel shall document in the Biofouling Management Plan how biofouling on the wetted surfaces of the vessel, except those niche areas listed in subdivision (b)(1) of this section, shall be managed in the absence of an anti-fouling coating. All biofouling management actions undertaken and reports resulting from such actions shall be documented in the Biofouling Record Book.

(b) The master, owner, operator, or person in charge of a vessel arriving at a California port shall manage biofouling on the niche areas listed in subdivision (b)(1) of this section, if present, in a manner consistent with the requirements listed in subdivision (b)(2) of this section. Any other niche areas should also be managed in a manner consistent with subdivision (b)(2) of this section.

(1) Biofouling management shall apply to the following niche areas, if present:

(A) Sea chests;

(B) Sea chest gratings;

(C) Bow and stern thrusters;

(D) Bow and stern thruster gratings;

(E) Fin stabilizers and recesses;

(F) Out-of-water support strips;

(G) Propellers and propeller shafts; and

(H) Rudders.

(2) Biofouling in niche areas must be managed using one or more biofouling management practices that are appropriate for the vessel and its operational profile, as determined by the master, owner, operator, or person in charge of a vessel, and subject to the following conditions:

(A) All niche area management practices to be employed as part of the overall biofouling management strategy shall be listed in the Biofouling Management Plan, as required by 2 CCR § 2298.3(b)(2).

(B) All completed niche area management practices shall be documented in the Biofouling Record Book, as required by 2 CCR 2298.4(b)(2).

(C) If any of the niche area management practices listed in the Biofouling Management Plan are not conducted as planned, the reason(s) why the practice(s) were not conducted shall be documented in the Biofouling Record Book.

Authority Cited: Section 71201.7, Public Resources Code.

Reference Cited: Section 71205, Public Resources Code.

Section 2298.7. Requirements for Vessels with Extended Residency Periods.

The provisions described in this section apply to newly constructed vessels delivered into service on or after January 1, 2018, and to existing vessels beginning with completion of the first regularly scheduled out-of-water maintenance on or after January 1, 2018.

The master, owner, operator, or person in charge of a vessel that has had an extended residency period since its most recent out-of-water maintenance, in-water treatment, or in-water cleaning must ensure that the vessel is compliant with the following requirements upon arrival to a California port:

(a) Manage biofouling in the niche areas listed in 2 CCR § 2298.6(b)(1), if present, in a manner that is consistent with the niche area management practices listed in the Biofouling Management Plan. All activities employed to manage biofouling in the niche areas described in 2 CCR § 2298.6(b)(1), if present, that accumulates as a result of the extended residency period shall be documented in the Biofouling Record Book.

(b) Any activities, including in-water inspection, in-water cleaning, in-water treatment, or out-of-water maintenance, to manage biofouling on the wetted surfaces of the vessel, except those niche areas listed in 2 CCR § 2298.6 (b)(1), that accumulates as a result of the extended residency period shall be documented in the Biofouling Record Book.

Authority Cited: Section 71201.7, Public Resources Code.

Reference Cited: Section 71205, Public Resources Code.

Section 2298.8. Propeller Cleaning in California Waters.

Propeller cleaning in California waters is not prohibited under this article.

Authority Cited: Section 71201.7, Public Resources Code.

Reference Cited: Section 71201, Public Resources Code.

Section 2298.9. Alternatives.

(a) Petitions for Alternatives.

(1) Any person subject to these regulations may submit a petition to the Division Chief for alternatives to the requirements of Article 4.8 as applied to the petitioner.

(2) All petitions for alternatives must be submitted in writing. A petition may be in any written form, but it must contain all data and information necessary to evaluate its merits to fulfill the purposes of these regulations to move the State expeditiously toward elimination of the discharge of nonindigenous species into the waters of the State, or into waters that may impact the waters of the State, based on the best available technology economically achievable.

(3) All petitions for alternatives must be submitted and must receive approval prior to the vessel's arrival to a California port.

(b) Response to Petitions.

The Division Chief shall respond in writing to any petition for alternatives within thirty days of receipt of the petition.

(c) Approval of Alternatives.

(1) The Division Chief may approve any proposed alternatives to the requirements of Article 4.8 if she or he determines that the proposed alternatives will fulfill the purpose of these regulations as outlined in 2 CCR § 2298.1(a).

(2) If the Division Chief approves any proposed alternatives under this section, a letter of approval shall be issued to the petitioner setting forth the findings upon which the approval is based.

(3) The Division Chief may withdraw the letter of approval of any alternative requirements at any time if he or she finds that the person or persons subject to these regulations have not complied with the approved alternative requirements.

(4) Withdrawal of a letter of approval under this section shall be effective upon receipt by the petitioner of written notification of the withdrawal from the Division Chief.

Authority Cited: Section 71201.7, Public Resources Code.

Reference Cited: Sections 71204 and 71205, Public Resources Code.

Section 2298.9.1. Emergency Exemptions.

A vessel will be exempt from the requirements contained within Article 4.8 if all of the following conditions are satisfied:

(a) The vessel makes an unscheduled arrival to a California port because of an emergency, where the safety of the vessel or crew is compromised;

Arrival for the sole purpose of scheduled bunkering is not an emergency under this clause;

(b) The master, owner, operator, agent, or person in charge of the vessel notifies the Division Chief, in written or electronic form, of the emergency, and provides details on the nature of the emergency, no later than twenty-four hours after the arrival and cessation of the emergency;

(c) The vessel has not arrived to another California port since the most recent of the:

(1) Previous out-of-water maintenance;

(2) Vessel's delivery into service; or

(3) Date when the vessel owner commenced ownership of the vessel.

(d) The vessel will remain in California waters for 21 days or less;

If the vessel remains in California waters for greater than 21 days, the Division Chief may require the master, owner, operator, or person in charge of a vessel to clean or treat the vessel to remove or inactivate macrofouling, using available in-water cleaning technologies, in-water treatment technologies, or out-of-water maintenance. The Division Chief will consider the biofouling extent, vessel port residency duration, and available in-water cleaning or treatment options when making this determination.

Authority Cited: Section 71201.7, Public Resources Code.

Reference Cited: Sections 71204 and 71205, Public Resources Code

Article 4.7. Performance Standards for the Discharge of Ballast Water for Vessels Operating in California Waters

~~**Section 2297.1. Ballast Water Treatment Technology Reporting Requirements.**~~

~~(a) Ballast Water Treatment Technology Annual Reporting Form~~

~~(1) The following form "Ballast Water Treatment Technology Annual Reporting Form (Revised July 1, 2010)" is hereby incorporated by reference, and shall be used to comply with the provisions of Public Resources Code Section 71205(g) by the master, owner, operator, agent, or person in charge of a vessel that has a ballast water treatment system installed on board and has discharged treated ballast in waters of the state.~~

~~(2) The "Ballast Water Treatment Technology Annual Reporting Form" shall be submitted to the Commission in written or electronic form within 60 days of receiving a written or electronic request from the Commission.~~

~~(b) Ballast Water Treatment Supplemental Reporting Form~~

~~(1) The following form "Ballast Water Treatment Supplemental Reporting Form (Revised July 1, 2010)" is hereby incorporated by reference, and shall be used to comply with the provisions of Public Resources Code Section 71205(g) by the master, owner, operator, agent, or person in charge of a vessel that has a ballast water treatment system installed on board and has discharged treated ballast in waters of the state.~~

~~(2) The "Ballast Water Treatment Supplemental Reporting Form" shall be submitted to the Commission in written or electronic form upon departure of that vessel from a California port or place of call if that vessel discharged treated ballast water into the waters of the state.~~

~~Authority cited: Sections 71201.7 and 71205, Public Resources Code.~~

~~Reference: Sections 71201.7 and 71205(g), Public Resources Code.~~

EXHIBIT B

STATE OF CALIFORNIA – STATE LANDS COMMISSION
MARINE INVASIVE SPECIES PROGRAM ANNUAL VESSEL REPORTING FORM
SLC 600.12 (Revised ~~08/16~~01/17)
Public Resources Code Sections 71201.7, 71205(g)

Vessel Name:
Official / IMO Number:
Responsible Officer's Name and Title:
Date Submitted (Day/Month/Year):

1. Does the vessel have a ballast water treatment system installed?

Yes ☐ IF "YES" Complete sections 1 and 2
No ☐ IF "NO" Complete section 1 only

Section 1: Hull Husbandry Maintenance and Operational Information

~~ALL VESSELS MUST COMPLETE SECTION 1~~

2. Since delivery, has this vessel ever been removed from the water for maintenance?

Yes ☐ No ☐

a. If Yes, enter the date and location of the most recent out-of-water maintenance.

Last date out of water (**Day/Month/Year**):	
Port or Position:	Country:

b. If No, enter the delivery date and location where the vessel was built:

Delivery Date (**Day/Month/Year**):	
Port or Position:	Country:

3. Were the submerged portions of the vessel coated with an anti-fouling treatment or coating during the **out-of-water** maintenance or shipbuilding process listed above?

Yes, full coat applied ☐
Yes, partial coat ☐ Date last full coat applied (**Day/Month/Year**)
No coat applied ☐ Date last full coat applied (**Day/Month/Year**)

Official / IMO Number_____

STATE OF CALIFORNIA – STATE LANDS COMMISSION
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4. For the most recent full coat application of anti-fouling treatment, what type of anti-fouling treatment was applied and to which specific sections of the submerged portion of the vessel was it applied?

Manufacturer/Company:
Product Name:
Applied on **(Check all that apply)**: Hull Sides ☐ Hull Bottom ☐ Sea Chests ☐ Sea Chest Gratings ☐ Propeller ☐ Rope Guard/Propeller Shaft ☐ Previous Docking Blocks ☐ Thrusters ☐ Rudder ☐ Bilge Keels ☐

Manufacturer/Company:
Product Name:
Applied on **(Check all that apply)**: Hull Sides ☐ Hull Bottom ☐ Sea Chests ☐ Sea Chest Gratings ☐ Propeller ☐ Rope Guard/Propeller Shaft ☐ Previous Docking Blocks ☐ Thrusters ☐ Rudder ☐ Bilge Keels ☐

Manufacturer/Company:
Product Name:
Applied on **(Check all that apply)**: Hull Sides ☐ Hull Bottom ☐ Sea Chests ☐ Sea Chest Gratings ☐ Propeller ☐ Rope Guard/Propeller Shaft ☐ Previous Docking Blocks ☐ Thrusters ☐ Rudder ☐ Bilge Keels ☐

5. Were the sea chests inspected and/or cleaned during the out-of-water maintenance listed above? If no out-of-water maintenance was performed since delivery, select Not Applicable.

(Check all that apply) Yes, sea chests inspected ☐	Yes, sea chests cleaned ☐
No, sea chests not inspected or cleaned ☐	Not Applicable ☐

6. Are Marine Growth Prevention Systems (MGPS) installed in the sea chest(s) ~~and/~~or sea strainer(s)

Yes ☐ Manufacturer:	Model:
If Yes, MGPS installed in (**check all that apply**): Sea Chest(s) ☐ Sea strainer(s) ☐	
No ☐	

Official / IMO Number________________

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Public Resources Code Sections 71201.7, 71205(g)

7. Has the vessel undergone in-water cleaning to the submerged portions of the vessel since the last out-of-water maintenance period? Yes ☐ No ☐

a. If Yes, when and where did the vessel most recently undergo **in-water** cleaning?
(Do not include cleaning performed during out-of-water maintenance period)

Date (**Day/Month/Year**):	
Port or Position:	Country:
Vendor providing cleaning service:	
Section(s) cleaned (**Check all that apply**): Hull Sides ☐ Hull Bottom ☐ Propeller ☐ Sea Chest Grating ☐ Sea Chest ☐ Bilge Keels ☐ Rudder ☐ Docking Blocks ☐ Thrusters ☐ Unknown ☐	
Cleaning method: Divers ☐ Robotic ☐ Both ☐	

8. Has the propeller been polished since the last **out-of-water** maintenance (including shipbuilding process) or **in-water** cleaning?

Yes ☐ Date of propeller polishing (**Day/Month/Year**):
No ☐

9. Are the anchor and anchor chains rinsed during retrieval? Yes ☐ No ☐

10. List the following information for this vessel averaged over the last four months:

a. **Average** Voyage Speed (knots):
b. **Average** Port Residency Time (hours or days): **Hours** or **Days**

11. Since the hull was last cleaned (out-of-water or in-water), has the vessel visited:

a. Fresh water ports (Specific gravity of less than 1.005)?

Yes ☐ How many times?
No ☐

b. Tropical ports (between 23.5° S and 23.5° N latitude)?

Yes ☐ How many times?
No ☐

c. Panama Canal?

Yes ☐ How many times?
No ☐

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Public Resources Code Sections 71201.7, 71205(g)

12. List the previous 10 ports visited by this vessel in the order they were visited (start with most recent). You do not have to use all 10 spaces if the vessel has a regular route that involves less than 10 ports. ~~Add more lines if regular route involves more than 10 ports.~~

Check here ☐ if the vessel visits the same ports on a regular route.

List dates as (**Day/Month/Year**).

Port or Position:	Country:
Arrival date:	Departure date:

Port or Position:	Country:
Arrival date:	Departure date:

Port or Position:	Country:
Arrival date:	Departure date:

Port or Position:	Country:
Arrival date:	Departure date:

Port or Position:	Country:
Arrival date:	Departure date:

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13. Since the most recent hull cleaning (out-of-water or in-water) or delivery, has the vessel spent 10 or more consecutive days in any single location? (Do not include time out-of-water or during in-water cleaning.)~~.~~

No ☐ Indicate the longest amount of time spent in a single location since the last hull cleaning

Number of Days:	Date of Arrival:
Port or Position:	Country:

Yes ☐ List all of the occurrences where the vessel spent 10 or more consecutive days in any single location since the last hull cleaning. List dates as (**Day/Month/Year**):

Number of Days:	Date of Arrival:
Port or Position:	Country:
Number of Days:	Date of Arrival:
Port or Position:	Country:
Number of Days:	Date of Arrival:
Port or Position:	Country:
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Public Resources Code Sections 71201.7, 71205(g)

Section 2: Ballast Water Treatment System Information

~~ONLY~~ COMPLETE ONLY IF VESSEL HAS A BALLAST WATER TREATMENT SYSTEM INSTALLED

Note: Complete a separate Section 2 for each installed ballast water treatment system.

14. Provide the following information about the vessel's installed ballast water treatment system:

Manufacturer/Company:
Product Name:
Model Number:
Date System Commissioned (**Day/Month/Year**):

15. Has the installed ballast water treatment system been used to treat ballast water in the last 12 months?

Yes ☐
Number of times the system was used in the last 12 months:
No ☐

16. Has the installed ballast water treatment system malfunctioned in the last 12 months?

Yes ☐	Date of Most Recent Malfunction (**Day/Month/Year)**
Describe all malfunctions during the previous 12 months:	
Describe all repairs for all malfunctions during the previous 12 months :	
No ☐	

17. Has an onboard test for biological performance of the vessel's installed ballast water treatment system been completed since the system was commissioned?

Yes ☐ If "YES", List the dates of the tests (**Day/Month/Year):**
No ☐

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Public Resources Code Sections 71201.7, 71205(g)

Instructions

California State Lands Commission
Public Resources Code Sections 71201.7, 71205(g)
~~August 2016~~January 2017

~~All vessels must submit the Marine Invasive Species Program Annual Vessel Reporting Form at least twenty-four hours in advance of the first arrival of the calendar year to a California port.~~ As used in this form, "vessel" has the same meaning as defined in California Code of Regulations, Title 2, section 2298.2. Applicability of this reporting requirement is defined in California Code of Regulations, Title 2, section 2298.5.

SUBMIT THE COMPLETED FORM AT LEAST TWENTY-FOUR HOURS IN ADVANCE OF THE FIRST ARRIVAL OF THE CALENDAR YEAR AT A CALIFORNIA PORT TO:

California State Lands Commission
Marine Environmental Protection Division
200 Oceangate, Suite 900
Long Beach, CA 90802
or
FAX: 562-499-6444
or
Email: bwform@slc.ca.gov

Report information using the following instructions:

Question 1: Check the appropriate box to indicate whether the vessel has an onboard ballast water treatment system installed.

- If Yes was selected, complete both Section 1 and Section 2
- If No was selected, complete only Section 1

Section 1: Hull Husbandry Maintenance and Operational Information

~~ALL VESSELS MUST COMPLETE SECTION 1~~

Question 2: Check the appropriate box to indicate whether, since delivery, the vessel has ever been removed from the water for maintenance.

- If "Yes" was selected, enter the date (Day/Month/Year) and location for the most recent out-of-water maintenance period (for example, if vessel was out of water for dry-dock from 1 January 2016 through 10 January 2016, list 10 January 2016 as the last date out of water)
- If "No" was selected, enter the vessel's delivery date (Day/Month/Year) and the location where the vessel was built

Question 3: Check the appropriate box to indicate whether the vessel's hull was coated with an anti-fouling treatment/coating during the out-of-water maintenance period or shipbuilding process described in Question 2.

- If "Yes, full coat applied" was selected, move on to Question 4

- If "Yes, partial coat" was selected, list completion date (Day/Month/Year) of most recent full coat application of an anti-fouling treatment/coating
- If "No coat applied" was selected, list completion date (Day/Month/Year) of most recent full coat application of an anti-fouling treatment/coating

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Question 4: For the most recent full coat application of anti-fouling treatment/coating, list the manufacturer(s)/company(ies) and product names of the treatment(s)/coating(s) and check the box next to the specific section(s) of the submerged portions of the vessel where each treatment was applied (check all sections that apply). List information for each anti-fouling treatment/coating if more than one was applied. Attach additional pages if necessary.

Question 5: Check the appropriate box to indicate whether the sea chest(s) were inspected and/or cleaned during the most recent out-of-water maintenance period described in Question 2. If no out-of-water maintenance since delivery, check Not Applicable.

Question 6: Marine Growth Protection Systems (MGPS) are systems installed in the sea chests or sea strainers to prevent the accumulation of fouling organisms within the sea chests and associated seawater circulation networks. Check the appropriate box to indicate if a Marine Growth Protection System is installed in the sea chest(s).

- If "Yes" was selected, list the Manufacturer and Model
- If "Yes" was selected, indicate whether MGPS is installed in sea chests or strainers (or both)
- If "No" was selected, move on to Question 7

Question 7: Check the appropriate box to indicate if the vessel has undergone in-water cleaning on the submerged portions of the vessel since the last out-of-water maintenance period. In-water cleaning does not include cleaning carried out during out-of-water maintenance but does include cleaning carried out during the Underwater Inspection in Lieu of Dry-Docking (UWILD). For this question, out-of-water maintenance includes the shipbuilding process.

- If "Yes' was selected, answer Question 7a
- If "No" was selected, move on to Question 8

Question 7a: Provide date (Day/Month/Year) and location of most recent in-water cleaning (do not include cleaning performed during out-of-water maintenance period) as well as the vendor that conducted the in-water cleaning. Check the box next to the appropriate sections to indicate those sections of the vessel that were cleaned during the in-water cleaning described in Question 7. Indicate whether in-water cleaning was conducted by divers, a robotic system, or both.

Question 8: Check the appropriate box to indicate whether the propeller has been polished since the most recent out-of-water maintenance or in-water cleaning. For this question, **out-of-water** maintenance includes the shipbuilding process.

- If "Yes" was selected, list the date of the most recent propeller polishing

If 'No" was selected, move on to Question 9.

Question 9: Check the appropriate box to indicate whether the anchor and anchor chains are rinsed during retrieval.

Question 10a: Over the past four months, list the average speed (knots) at which this vessel has traveled.

Question 10b: Over the past four months, list the average length of time (either hours or days) that this vessel has spent in any given port.

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Question 11a: Check the appropriate box to indicate whether this vessel has visited any freshwater ports (specific gravity of less than 1.005) since the hull was last cleaned (either in-water or out-of-water) or since delivery if the hull has never been cleaned.

- If "Yes" is selected, list the number of times that this vessel visited freshwater ports since the hull was last cleaned or since delivery if the hull has never been cleaned.

Question 11b: Check the appropriate box to indicate whether this vessel has visited any tropical ports between latitudes 23.5° S and 23.5° N since the hull was last cleaned (either in-water or out-of-water) or since delivery if the hull has never been cleaned.

- If "Yes" is selected, list the number of times that this vessel visited tropical ports since the hull was last cleaned or since delivery if the hull has never been cleaned.

Question 11c: Check the appropriate box to indicate whether this vessel has traversed the Panama Canal since the hull was last cleaned (either in-water or out-of-water) or since delivery if the hull has never been cleaned.

- If "Yes" is selected, list the number of times that this vessel has traversed the Panama Canal since the hull was last cleaned or since delivery if the hull has never been cleaned.

Question 12: Starting with the most recent port, list the last 10 ports visited by this vessel. Provide information on the port or place, country, and the dates of arrival and departure.

If this vessel follows a regular route, visiting the same ports routinely, place a check in the box provided and list the information for the most recently completed route. You do not have to use all ten spaces if the regular route involves less than 10 ports. Add more lines if the regular route involves more than ten ports.

Question 13: Check the appropriate box to indicate whether this vessel has spent 10 or more consecutive days in any single location since the last time the hull was cleaned (either in-water or out of water) or since delivery if the hull has never been cleaned. Do not include time spent out-of-water or time spent during in-water cleaning.

- If "No" is selected, enter the information for the single longest amount of time this vessel has spent in a single location since the last hull cleaning or since delivery if the hull has never been cleaned.
- If "Yes" is selected, list all of the occurrences where the vessel spent 10 or more consecutive days in any single location since the last hull cleaning or since delivery if the hull has never been cleaned.

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Public Resources Code Sections 71201.7, 71205(g)

Section 2: Ballast Water Treatment System Information

~~ONLY~~ COMPLETE ONLY IF VESSEL HAS A BALLAST WATER TREATMENT SYSTEM INSTALLED

If more than one treatment system is installed on board the vessel, Section 2 must be filled out separately for each system.

Question 14: Provide the following information for each ballast water treatment installed on the vessel:

- System manufacturer or company (For example - Acme Incorporated)
- Product name, if applicable (For example - Acme Ballast Water Treatment System)
- Model number, if applicable (For example - Acme Model # 5454). Do not provide the serial number.
- Date (Day/Month/Year) the ballast water treatment system was commissioned. This is the date that the system was determined to be ready for active service including:
  (1) Functionally ready for use, and
  (2) Has received all applicable use approvals.

Question 15: Provide the number of times the vessel's installed ballast water treatment system was used during the previous 12 months.

Question 16: Check the appropriate box to indicate whether the installed ballast water treatment system has malfunctioned during operation in the previous 12 month period. Attach additional pages as necessary.

- If "Yes" was selected:
  - List the date of the most recent malfunction
  - Describe the malfunction including the type of malfunction (for example software, chemical, operational, plumbing, etc.)
  - Describe all repairs that were completed as a result of each malfunction
- If "No" was selected, move on to Question 17

Question 17: Check the appropriate box next to indicate whether an onboard test for biological efficacy has been completed since the system was installed. Biological efficacy is the ability of the ballast water treatment system to reduce the number of viable organisms in water.

- If "Yes" was selected, list the dates (Day/Month/Year) for all tests of biological efficacy since the system was installed.
- If "No" was selected, this is the end of the form.

EXHIBIT C

REFERENCES CITED IN STAFF REPORT:

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Feyrer, F., H.B. Matern, and P.B. Moyle. 2003. Dietary shifts in a stressed fish assemblage: Consequences of a bivalve invasion in the San Francisco estuary. Environmental Biology of Fishes 67: 277-288.

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EXHIBIT C

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National System for the Prevention and Management of Marine Pest Incursions. 2009b. National biofouling management guidelines for non-trading vessels. Published by the Australian Department of Agriculture, Fisheries and Forestry. 60 Pgs.

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