

**INFORMATIONAL
CALENDAR ITEM**

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**STAFF REPORT ON THE DEVELOPMENT OF BIOFOULING MANAGEMENT
REGULATIONS FOR VESSELS OPERATING IN CALIFORNIA WATERS**

Vessel biofouling is one of the most significant mechanisms (vectors) for the introduction of nonindigenous species into coastal and estuarine environments, accounting for 42.6% of established nonindigenous species in these environments worldwide (Hewitt and Campbell 2010) and up to 60% in California (Ruiz et al. 2011). Once established, these species can cause significant environmental, economic, and human health impacts. A recent estimate suggests that invasive species are responsible for \$120 billion in losses and damages annually in the United States (Pimental et al. 2005). In recognition of this risk, the California Legislature adopted Assembly Bill 740 (Chapter 370, Statutes of 2007), requiring the Commission to develop and adopt regulations governing the management of biofouling by January 1, 2012.

In order to fulfill this mandate, the Commission's staff has undertaken a four-year process to develop regulations that incorporate the best available science as well as input from the affected industry. In 2008, Commission staff began collecting annual hull husbandry information and voyage characteristics from vessels operating in California, in order to better understand characteristics of the fleet which contribute to biofouling accumulation. Since 2008, the Commission has also funded targeted research to complement the hull husbandry dataset with biological data on priority characteristics that contribute to the transfer of organisms via biofouling.

Beginning in August 2010, Commission staff convened a Technical Advisory Group (TAG) to bring together scientific, industry, technical, and regulatory experts to discuss the current state of biofouling and bioinvasion science, the current status of biofouling management technologies, and to develop biofouling management regulations that would be protective of California's waters by January 1, 2012. Specifically, the TAG included shipping industry trade groups (e.g. Pacific Merchant Shipping Association (PMSA) and Cruise Lines International Association), ship owners and operators (e.g. Chevron, Maersk, Matson, Seaspan), anti-fouling system manufacturers and distributors (e.g. International Paints, Farwest Corrosion Control Company), and hull husbandry companies (e.g. Propulsion Dynamics, Muldoon Marine Services, BAE Systems San Francisco Ship Repair, Bay Ship & Yacht). TAG participants also included several of the world's leading scientists from the Smithsonian Institution, Portland State University/Aquatic Bioinvasions Research and Policy Institute, Biofouling Solutions (Australia), National Institute of Water and Atmospheric Research (New Zealand), and LimnoMar (Germany) who have spent their careers focusing on bioinvasions and biofouling. Finally, many

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state, federal and international regulatory authorities were represented on the TAG (e.g. California State Water Resources Control Board; San Francisco Estuary Partnership; US Navy; US Coast Guard; representatives from Oregon, Washington, Hawaii; Transport Canada; Australia's Department of Agriculture, Fisheries, and Forestry; Biosecurity New Zealand; and the International Maritime Organization's Ballast Water and Biofouling Working Group).

This TAG met formally four times between August 2010 and April 2011. The first two meetings focused on discussing and sharing the available biofouling and bioinvasion scientific knowledge, including data collected by the Marine Invasive Species Program (MISP), and biological research funded by the MISP. These meetings also focused on the current biofouling management regulations and guidelines in effect and/or in development in California, New Zealand, Australia, and at the International Maritime Organization (IMO). The final two meetings were dedicated towards discussing evolving drafts of the biofouling management regulatory text. Three separate drafts were circulated and/or discussed openly with TAG members, with each consecutive draft incorporating additional input from all members.

Following incorporation of TAG input, the official Notice for the proposed regulations was published in California's Notice Register on September 16, 2011, beginning the 45-day public comment period required under California's Administrative Procedures Act (APA). During this initial public comment period, Commission staff accommodated multiple requests by the industry to alter the regular public comment period process, including an extension of the comment period from the minimum 45 days to 66 days, multiple meetings to discuss the concerns of members of the affected industry (including Maersk, PMSA, World Shipping Council, American President Lines and Wallenius Marine), and a request for a public hearing (held in Oakland on November 16, 2011).

After consideration of all comments and concerns, Commission staff revised the proposed regulatory text. Revisions were intended for release in mid-December but were delayed two weeks to again accommodate a request by PMSA. The modified proposed regulations (Exhibit A) were released to the public on December 30, 2011 for an additional public comment period. Although the APA only requires the second comment period to be at least fifteen days in length, Commission staff extended the comment period for a total of 30 days due to the intervening New Year's holiday. Public comment on the proposed revisions will be accepted until January 30, 2012.

The overall goal of the proposed biofouling management regulations is to establish a comprehensive strategy for ship owners to maintain consistently clean ships, and thereby minimize the transfer of organisms to California and any other port a vessel may visit. These regulations are designed to be enforceable and quantifiable, and will encourage effective planning for more holistic biofouling management based not only on fiscal incentives, but also on a strategy to minimize the transfer of organisms all over the world. The major components of the proposed regulations are:

- A **Biofouling Management Plan** that details the vessel-specific biofouling management strategy and normal operating profile that the strategy is based upon. The most effective strategies for minimizing biofouling will differ from ship to ship, depending on the physical and operational characteristics of individual vessels such as size, speed, voyage routes, in-service period, and a suite of other characteristics that should play an important role in the

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selection of appropriate biofouling management technologies and practices. A biofouling management strategy is the foundation for the entire set of proposed regulations and will be documented within each vessel's Biofouling Management Plan. Thus, the Management Plan will encourage ship owners to select anti-fouling strategies that are best suited for each vessel's ship-specific characteristics.

- A **Biofouling Record Book** that centralizes documentation detailing how the vessel's Biofouling Management Plan is implemented. This will ensure that a vessel operator and crew follow through on the ship-specific management strategy and will allow Commission staff to evaluate vessel compliance.

The Biofouling Record Book will include details of the application or installation of anti-fouling systems as well as routine inspection and maintenance reports. It will document how well the vessel-specific Biofouling Management Plan is being implemented and will allow the vessel operator, Master, and Commission staff to identify any situations that may increase bioinvasion risk and warrant mitigation. The Biofouling Management Plan and Biofouling Record Book are both included in the recently adopted IMO Biofouling Guidelines as well as biofouling management regulations under development in other countries.

- **Performance standards for biofouling management** that set upper thresholds for biofouling that are allowable on a vessel's wetted surfaces. These are intended to provide a protective limit to the accumulation of biofouling on a vessel to minimize species release, and to ensure that an appropriate management strategy has been developed and implemented.

The performance standards are quantifiable, enforceable, and are protective of California waters, and would encourage vessel operators to develop strong Biofouling Management Plans and apply or install appropriate anti-fouling systems. The performance standard for the majority of the hull would set an upper threshold that is protective of state waters (as required by statute) and would allow for small amounts of localized macrofouling resulting from the normal mechanical damage of a vessel's anti-fouling coating that occurs under typical operation. More leeway is provided for the fouling-prone nooks and crannies or "niche areas" of the ship. These niche areas are sheltered from external hydrodynamic forces and therefore provide refuge for biofouling to accumulate. Niche areas are currently often unprotected or inadequately protected with anti-fouling coatings, and are cleaned less frequently because they do not affect the fuel consumption of the vessel. The scientific literature includes many examples describing the elevated potential for species introduction due to these niche areas.

- A **provision for vessels that experience an extended residency period** of 90 days or greater in a single location that requires management of accumulated biofouling. Vessels with extended residency periods are very likely to accumulate very heavy amounts of biofouling, and this requirement is to ensure that such vessels are properly managed before arriving to California. The scientific literature contains many examples of heavy biofouling associated with vessels that experience extended stationary periods and this provision is designed to address such biofouling before it results in the introduction of nonindigenous species to California. Data collected from the California fleet by the MISP indicates that roughly 2% of the fleet will fall into this category per year.

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Commission staff has undertaken an exhaustive process to fill information gaps, convene worldwide experts, and develop protective regulations that are aligned, where possible, with the IMO Biofouling Guidelines and with other regulations currently under development in other countries around the world. Commission staff believes that maintaining international consistency will not only present minimal burden to the regulated community but will also facilitate data collection and sharing between California's MISP and our international colleagues. Commission staff will continue the public and transparent rulemaking process as required under the APA and will bring the final set of proposed regulations before the Commission as a regular calendar item for consideration later this year.

EXHIBIT:

- A. Title 2, Division 3, Chapter 1, Article 4.8. Biofouling Management Regulations for Vessels Operating in California Waters (proposed December 30, 2011).

Title 2, Division 3, Chapter 1,

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 Regulations for Vessels Operating in California Waters

~~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 following form "Hull Husbandry Reporting Form" 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: Public Resources Code Sections 71201 and 71204.6~~

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

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 operate in the waters of the state except those that are exempt under Section 71202 of the Public Resources Code.
- (c) The provisions of these regulations become effective January 1, ~~2013~~ 2014.

Authority Cited: Sections 71201, 71201.7, 71202 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71202, 71204.6, 71205 and 71207, Public Resources Code

Section 2298.2. Definitions.

Unless the context otherwise requires, the following definitions shall govern the construction of this Article:

- (a) “Anti-fouling system” means a coating, paint, surface treatment, surface, or device that is used on a vessel to minimize or prevent attachment or association of biofouling.
- ~~(1) “Marine Growth Prevention System (MGPS)” means an anti-fouling system device used to reduce or prevent biofouling accumulation in internal seawater systems and sea chests and can include the use of anodes, injection systems and electrolysis.~~
- (b) “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 can include microfouling and macrofouling.
- (c) “Commission staff” means the staff of the State Lands Commission.
- (d) “Division Chief” means the Chief of the Marine Facilities Division of the State Lands Commission or any employee of the Marine Facilities Division authorized by the Chief to act on his or her behalf.
- (e) “Extended residency period” means remaining in one port, place or shared waters for ninety days or longer.
- (f) “In-water cleaning” means the physical removal of biofouling from the wetted portions of a vessel while the vessel remains in the water.
- (g) “In-water inspection” means underwater survey or inspection by divers (including inspections conducted with remotely operated vehicles). Inspections for purposes other than surveying biofouling may be considered opportunities for evaluating biofouling extent.
- (h) “In-water treatment” means any method or process that is aimed at sterilizing biofouling from the wetted portions of a vessel while the vessel remains in the water. Sterilization may render organisms inactive, but any ~~hard parts or~~ remnants that remain may serve as suitable substrate to facilitate further biofouling and will still be considered biofouling for the purposes of Article 4.8 unless successful in-water treatment occurs no more than twenty days prior to arrival to a California port or place.

- (i) “Macrofouling” means large, distinct multicellular organisms visible to the human eye such as barnacles, tubeworms or fronds of algae.
- (j) “Marine Growth Prevention System (MGPS)” means an anti-fouling system device used to reduce or prevent biofouling accumulation in internal seawater systems and sea chests and can include the use of anodes, injection systems and electrolysis.
- ~~(j)~~(k) “Microfouling” means microscopic organisms including, but not limited to, bacteria, single-celled algae and the slimy substances that they produce. Biofouling comprised of only microfouling is commonly referred to as a slime layer.
- ~~(k)~~(l) “Niche area” means an area on a vessel that may be more susceptible to biofouling due to variable hydrodynamic forces, susceptibility to coating system wear or damage, or due to inadequate protection by anti-fouling systems. Examples of niche areas include sea chests, bow thrusters, propeller shafts, inlet gratings, and out-of-water support strips.
- ~~(l)~~(m) “Out-of-water maintenance” means removal of the vessel from the water and into a dry dock or slipway for inspection or maintenance.
- ~~(m)~~(n) “Out-of-water support strips” means sections of the hull that rested on support blocks while the vessel was out of water in a dry dock or slipway. These areas are typically not cleaned and or treated with fresh anti-fouling systems, resulting in reduced anti-fouling protection.
- ~~(n)~~(o) “Percentage cover” means the percentage of the total surface area under examination that is occupied by biofouling.
- ~~(o)~~(p) “Shared waters” means either of the following:
- (1) All ports and places in the San Francisco Bay area east of the Golden Gate bridge including the Ports of Stockton and Sacramento; or
 - (2) The Ports of Los Angeles, Long Beach and the El Segundo marine terminal.
- ~~(p)~~(q) “Vessel” means a vessel of 300 gross registered tons or more.
- ~~(q)~~(r) “Waterline” means the area along the external hull of a vessel where the surface of the water interfaces with the air. The waterline is not a fixed location; its placement is dependent on loading and ballasting operations.

~~(s)~~ “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 legal draft or associated with internal piping structures in contact with water taken onboard.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6, 71205 and 71207, Public Resources Code

Section 2298.3. Performance Standards for Biofouling Management.

~~(a)~~ Performance standards for biofouling management shall be based on the following Level of Fouling Ranking Scale:

~~(1)~~ Rank 0 (zero) — No visible biofouling. Wetted portions of the vessel are entirely clean with no observable microfouling.

~~(2)~~ Rank 1 (one) — Microfouling only. Wetted portions of the vessel are partially or entirely covered in microfouling with no observable macrofouling.

~~(3)~~ Rank 2 (two) — Light biofouling. Wetted portions of the vessel are covered in microfouling with small patches of macrofouling covering no more than five percent of the wetted surface being evaluated.

~~(4)~~ Rank 3 (three) — Considerable biofouling. Wetted portions of the vessel are covered in microfouling with patchy but clearly visible macrofouling covering greater than five percent but no more than fifteen percent of the wetted surface being evaluated.

~~(5)~~ Rank 4 (four) — Extensive biofouling. Wetted portions of the vessel are covered in microfouling with abundant macrofouling covering greater than fifteen percent but no more than forty percent of the wetted surface being evaluated.

~~(6)~~ Rank 5 (five) — Very heavy biofouling. Wetted portions of the vessel are covered in microfouling with abundant macrofouling assemblages covering greater than forty percent of the wetted surface being evaluated.

~~(b)~~ For new vessels delivered on or after January 1, 2013, for existing vessels beginning with completion of the first out of water maintenance on or after January 1, 2013, and for all vessels subject to 22CGR§2298.6, the master, owner, operator, or person in charge of a vessel arriving to a California port or place shall:

The performance standards described in this section apply to new vessels delivered on or after January 1, 2014, existing vessels beginning with completion of the first out-of-water maintenance on or after January 1, 2014, and all vessels subject to 2 CCR §2298.6.

(a) The master, owner, operator, or person in charge of a vessel arriving to a California port or place shall:

(1) Maintain or clean the vessel in accordance with the schedule prescribed in 2 CCR §2298.3(a)(3) so that ~~upon arrival,~~ macrofouling covers no more than five percent of the wetted surfaces of each of the following niche areas ~~are at or below Rank 2 (two) on the Level of Fouling Ranking Scale described in 2CCR§2298.3(a)~~ after inspection or cleaning:

(A) Sea chests and sea chest gratings:

(i) A sea chest shall be presumed to be in compliance with this requirement if all of the following occur:

(i.1) The sea chest is fully coated with an anti-fouling coating; and

(i.2) The sea chest has a functioning MGPS installed directly within the sea chest (i.e. not in sea strainer) and is operated as directed by the manufacturer. MGPS use must be logged within the Biofouling Record Book described in 2 CCR §2298.5; and

(i.3) The sea strainer is inspected according to the schedule prescribed in 2 CCR §2298.3(a)(3) and does not exceed five percent macrofouling cover. Inspection report and photographs (which may include DVD of video or closed-circuit television) must be recorded in Biofouling Record Book described in 2 CCR §2298.5.

(ii) If a sea chest does not meet the provisions of subpart (a)(1)(A)(i) of this section, then the sea chest shall have been directly accessed for inspection and, if necessary, cleaning in accordance with 2 CCR §2298.3.

(B) Bow and stern thrusters, including gratings;

(C) Fin Stabilizers, if present;

(D) Out-of-water support strips;

(E) Propeller and propeller shaft; and

(F) Rudder;

(2) Maintain or clean the vessel in accordance with the schedule prescribed in 2 CCR §2298.3(a)(3) so that upon arrival, macrofouling covers no more than one percent of the wetted portions of the vessel, except those niche areas described in 2 CCR §2298.3(a)(1) after inspection or cleaning. ~~2 CCR §2298.3(b)(1), are at or below Rank 1 (one) on the Level of Fouling Ranking Scale described in 2 CCR §2298.3(a).~~ Filamentous or turf algae at the waterline, including one meter above and one meter below the waterline, shall be excluded from this ~~Level of Fouling Rank~~ requirement; and

(3) Maintain documentation that the niche areas described in ~~2 CCR §2298.3(b)(1)~~ 2 CCR §2298.3(a)(1) and other wetted portions of the vessel have been evaluated and cleaned if necessary, according to the following schedule, to ensure compliance with Subparts (1) and (2) of this section upon arrival to a California port or place:

(A) No longer than six months prior to arrival to a California port or place; or

(B) No longer than twelve months prior to arrival to a California port or place if:

(i) The vessel was delivered as new within the twelve months prior to arrival; or

(ii) The vessel underwent full application of one or more anti-fouling coatings during out-of-water maintenance and was refloated within the twelve months prior to arrival.

(C) If an evaluation or cleaning cannot take place due to safety concerns for the vessel, its crew, contractor, or inspector, a safety postponement of one month may be claimed. If the safety postponement is claimed, documentation certified by the master shall be included in the Biofouling Record Book described in ~~2 CCR §2298.5~~ 2 CCR §2298.5 and shall, upon request, be made available to the Commission staff for inspection. Safety postponement documentation must include:

(i) Port, country, and date of postponed evaluation;

(ii) Specific reasons for the safety postponement (e.g. elevated current speed, decreased visibility);

(iii) Port, country, and dates of the two preceding port calls, prior to the postponed evaluation;

(iv) Port, country, and date of rescheduled evaluation;

(v) Signature of vessel master certifying the safety postponement.

(b) A vessel must not be in gross exceedance, as defined in 2 CCR §2298.3(c), upon arrival to a California port or place. If upon inspection, Commission staff detects gross exceedance, the master, owner, operator, or person in charge of a vessel shall be:

(A) In violation of 2 CCR §2298.3(b),

(B) Required to clean the vessel to comply with the performance standards described in 2 CCR §2298.3(a) by the later of either of the following:

(i) Within 21 days following the inspection, or

(ii) Prior to the vessel's next arrival to a California port or place; and

(C) Required to maintain documentation providing evidence of such cleaning and the resulting biofouling extent within the vessel's Biofouling Record Book described in 2 CCR §2298.5.

(c) Gross exceedance is defined as:

(A) Macrofouling covering more than fifteen percent of the wetted surface of any of the niche areas described in 2 CCR §2298.3(a)(1), or

(B) Macrofouling covering more than five percent of the wetted portions of the vessel, except those niche areas described in 2 CCR §2298.3(a)(1).

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71203, 71204.6, 71205 and 71207 Public Resources Code

Section 2298.4. Biofouling Management Plan.

The master, owner, operator, or person in charge of a vessel carrying, or capable of carrying, ballast water that operates in the waters of the state shall:

- (a) Maintain a biofouling management plan that was prepared specifically for the vessel and that shall, upon request, be made available to the Commission staff for inspection and review. This plan shall be specific to each vessel and 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. This plan shall, at a minimum, include a:
- (1) Copy of the vessel's General Arrangement, including diagram;
 - (2) Copy of the vessel's docking plan from the two most recent out-of-water maintenance operations;
 - (3) List of the vessel's niche areas that are susceptible to biofouling;
 - (4) Description of anti-fouling systems used, including those used for niche areas. Description shall include, at a minimum:
 - (A) Manufacturer name, model name, and product number;
 - (B) Recommended operating conditions suitable for the antifouling system;
 - (5) Description of the vessel's normal operating profile used to determine the performance specifications of the antifouling systems, including but not limited to:
 - (A) Operating speeds;
 - (B) Percent of time underway at sea compared with percent of time berthed, anchored, moored, or adrift;
 - (C) Operating areas or trading routes;
 - (D) Planned duration between anti-fouling coating renewals; and
 - (6) Schedule of planned inspections, repairs, maintenance and renewal of antifouling systems;
- (b) Train, and maintain records of training for, the master, operator, person in charge, and those members of the crew who have responsibilities under the vessel's biofouling management plan, on the application of biofouling management and treatment procedures, as well as procedures described in this section, in order to minimize other releases of nonindigenous species from vessels.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6, 71205 and 71207, Public Resources Code

Section 2298.5. Biofouling Record Book.

The master, owner, operator, or person in charge of a vessel carrying, or capable of carrying, ballast water that operates in the waters of the state shall maintain a biofouling record book to be retained onboard the vessel. This record book must record details of all inspections and biofouling management measures undertaken on the vessel, including, at a minimum:

(a) A description of the anti-fouling systems installed or applied, including, but not limited to:

(1) Specific location on vessel where installed or applied, including niche areas;

(A) For MGPS, indicate whether installed in sea chest or strainer;

(2) Date installed or applied;

(3) Dates and description of planned or unplanned maintenance;

(4) Dates and description of any occurrences where the system was malfunctioning or out of service;

(5) Where applicable, instructions on its operation, including frequency and duration of use; ~~and~~

(A) For MGPS, record and maintain a log of use as recommended by manufacturer, but no less than once per week; and

(6) For anti-fouling coatings, a copy of the International Maritime Organization's International Anti-fouling System Certificate;

(b) Information from the most recent out-of-water maintenance, which shall include, at a minimum, the following:

(1) Dates and geographic location of dry docking or slipping;

(2) Description of the measures and methods taken to remove biofouling or to renew or repair the anti-fouling system;

(3) Date the vessel was re-floated;

(c) Copies of reports from all in-water inspections or surveys undertaken since the most recent out-of-water maintenance. Reports shall include, at a minimum, the following:

- (1) Dates and locations of in-water inspections or surveys;
- (2) Description of the areas of the vessel inspected or surveyed for biofouling;
- (3) Methods used for inspection or survey (e.g. divers, remotely operated vehicles);
- (4) Description of biofouling samples collected, if any;
- (5) Description of the observed percentage cover of biofouling on the hull and niche areas described in ~~2CCRS2298.3(b)~~ 2 CCR §2298.3(a);
- (6) Photographs (which may include DVD of video or closed-circuit television) of the wetted surfaces of the hull and niche areas described in ~~2CCRS2298.3(b)~~ 2 CCR §2298.3(a);
- (7) Indication of whether any corrective action taken to address observed biofouling was necessary;

(d) Copies of reports from all in-water treatment, in-water cleaning and propeller polishing activities undertaken since the most recent out-of-water maintenance. Reports shall include, at a minimum, the following:

- (1) Dates and locations of in-water treatment, in-water cleaning and propeller polishing;
- (2) Description of the areas of the vessel that are treated or cleaned;
- (3) Description of reason(s) for treatment, cleaning or polishing;
- (4) Description of the method of treatment or cleaning used (e.g. number of brushes, brush type);
- (5) If applicable, description of debris capture and/or waste disposal method;
- (6) Description of the post-cleaning percentage cover of biofouling on the hull and niche areas described in ~~2CCRS2298.3(b)~~ 2 CCR §2298.3(a);
- (7) Post-cleaning photographs (which may include DVD of video or closed-circuit television) of the wetted surfaces of the hull and niche areas described in ~~2CCRS2298.3(b)~~ 2 CCR §2298.3(a);

- (e) Details of inspection and maintenance of sea chests and internal seawater systems that have been undertaken since the most recent out-of-water maintenance. Details shall include, but are not limited to, the following:
 - (1) Dates of inspection or maintenance;
 - (2) Description of reason(s) for inspection or maintenance;
 - (3) Description of maintenance performed, and whether system is operating normally post-maintenance;
 - (4) Corrective action taken to address observed biofouling and any reported blockages;
- (f) Description of any occurrences since the most recent out-of-water maintenance when the vessel has been operating outside of its normal operating profile described in the biofouling management plan; and
- (g) Description of any occurrences since the most recent out-of-water maintenance when the vessel remained in the same port, place or shared waters for ten days or more. Details shall include, at a minimum:
 - (1) Geographic location where vessel remained for ten days or more;
 - (2) Date of arrival to port, place, or shared waters where vessel remained for ten days or more;
 - (3) Date of departure from port, place, or shared waters where vessel remained for ten days or more;
 - (4) Any biofouling maintenance undertaken prior to, during and following ten day (or more) residency period.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6, 71205 and 71207, Public Resources Code

Section 2298.6. Requirements for Vessels with Extended Residency Periods.

The master, owner, operator, or person in charge of a vessel arriving to a California port or place after an extended residency period must ensure that the vessel completes one of the following prior to arrival:

- (a) Undergo in-water inspection following the extended residency period to ensure compliance with the performance standards described in ~~2CCR§2298.3~~ 2 CCR §2298.3 upon arrival to a California port or place.
- (1) If in-water inspection reveals that performance standards described in ~~2CCR§2298.3~~ 2 CCR §2298.3 will not be met, then vessel must satisfy either subdivision (b) or subdivision (c) of this section;
- (2) In-water inspection report must be kept in Biofouling Record Book described in ~~2CCR§2298.4~~ 2 CCR §2298.4 and must include, at a minimum, all of the following for the vessel hull and each of the niche areas described in ~~2CCR§2298.3(b)~~ 2 CCR §2298.3(a):
- (A) Written description of the percentage cover of biofouling;
- (B) Photographs (may include DVD of video or closed-circuit television) of the wetted surfaces; or
- (b) Undergo in-water cleaning following the extended residency period to ensure compliance with the performance standards described in ~~2CCR§2298.3~~ 2 CCR §2298.3 upon arrival to a California port or place.
- (1) In-water cleaning report must be kept in Biofouling Record Book described in ~~2CCR§2298.4~~ 2 CCR §2298.4 and must include, at a minimum, all of the following for the vessel hull and each of the niche areas described in ~~2CCR§2298.3(b)~~ 2 CCR §2298.3(a):
- (A) Written description of the percentage cover of biofouling post-cleaning;
- (B) Photographs (which may include DVD of video or closed-circuit television) of the wetted surfaces post-cleaning; or
- (c) Undergo out-of-water dry docking or slipping and removal of biofouling from the niche areas and other wetted portions of the vessel following the extended residency period to ensure compliance with the performance standards described in ~~2CCR§2298.3~~ 2 CCR §2298.3 upon arrival to a California port or place.
- (1) Documentation from the out-of-water maintenance facility must be kept in Biofouling Record Book described in ~~2CCR§2298.5~~ 2 CCR §2298.5 and must include, at a minimum, all of the following for the vessel hull and each of the niche areas described in ~~2CCR§2298.3(b)~~ 2 CCR §2298.3(a):
- (A) Written description of the percentage cover of biofouling post-cleaning;

(B) Photographs (which may include video or closed-circuit television) of the wetted surfaces post-cleaning.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6 and 71205, Public Resources Code

Section 2298.7. Hull Husbandry Reporting Form.

The form “Hull Husbandry Reporting Form (Revised August 18, 2011)” is hereby incorporated by reference. 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 shall submit the form “Hull Husbandry Reporting Form (Revised August 18, 2011)” to the Commission staff in written or electronic form at least twenty-four hours in advance of the first arrival of each calendar year to a California port or place of call.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6, 71204, 71205 and 71207, Public Resources Code

Section 2298.8. Propeller Cleaning in California Waters.

Propeller cleaning shall be allowed in California waters.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6, 71204, 71205 and 71207, Public Resources Code

Section ~~2298.8~~ 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 form, but it must contain all data and information necessary to evaluate its merits in order to fulfill the purposes of these regulations.

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

(b) Response to Petitions.

(1) 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 he or she determines that the proposed alternatives will fulfill the purpose of these regulations as outlined in ~~2 CCR § 2298.1(a)~~ 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: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6, 71204, 71205 and 71207, Public Resources Code