

Title 2. ADMINISTRATION
DIVISION 3. STATE PROPERTY OPERATIONS
CHAPTER 1. STATE LANDS COMMISSION
ARTICLE 4.7 PERFORMANCE STANDARDS AND COMPLIANCE ASSESSMENT
FOR THE DISCHARGE OF BALLAST WATER FOR VESSELS OPERATING IN
CALIFORNIA WATERS

Staff has illustrated changes to the original text in the following manner: proposed language is underlined; deletions from the original text are shown in strikeout using a “-”.

Section 2291. Purpose, Applicability, and Date of Implementation.

- (a) The purpose of the regulations in Title 2, Division 3, Chapter 1, Article 4.7 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 4.7 apply to all vessels, 300 gross registered tons or more, carrying, or capable of carrying ~~that discharge ballast water, in California waters~~ except those that are exempt under Section 71202, Public Resources Code.
- (c) The provisions of Article 4.7 are effective on January 1, 2022.

Note: Authority cited: Sections 71201.7, 71202 and 71205.3, Public Resources Code.
Reference: Sections 71201, 71201.7, 71202 and 71205.3, Public Resources Code.

Section 2292. Definitions.

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

- (a) “Ballast Water Capacity” means the total volumetric capacity of any tanks, spaces, or compartments on a vessel used for carrying, loading or discharging ballast water, including any multi-use tank, space or compartment designed to allow carriage of ballast water.
- (b) “Ballast Water Sample” means a unit of ballast water that may be collected ~~and assessed for compliance~~ assessment or research ~~verification~~ purposes.

(c) “Ballast Water Treatment System,” also referred to as a “Ballast Water Management System,” means any system that processes ballast water to remove, kill, or render nonviable organisms in ballast water prior to discharge or to avoid the uptake or discharge of organisms.

~~(c) “Board” means the State Water Resources Control Board~~

(d) “Colony Forming Unit” means a measure of viable bacteria in a sample. ~~bacterial numbers.~~

(e) “Commission” means the California State Lands Commission.

~~(f) “Constructed” means a stage of vessel construction where:~~

~~(1) the keel is laid; or~~

~~(2) construction identifiable with a specific vessel begins; or~~

~~(3) assembly of the vessel has commenced comprising at least 50 tonnes or 1 percent of the estimated mass of all structural material, whichever is less; or~~

~~(4) the vessel undergoes a major conversion.~~

~~(g) “Isokinetic Sampling Facility” means a sampling apparatus in which the velocity (or speed) of the sample stream does not change from the pipe being sampled to the sample pipe itself.~~

~~(h) “Isokinetic Diameter” assumes a circular main flow pipe and circular sampling pipe of which the diameter is designed to maintain the fluid velocity from the main flow to the sample flow.~~

~~(i) “Major Conversion” means a conversion of a vessel;~~

~~(1) which changes its ballast water carrying capacity by 15 percent or greater; or~~

~~(2) which changes the vessel type; or~~

~~(3) which, in the opinion of the Commission, is projected to prolong its life by ten years or more; or~~

~~(4) which results in modifications to its ballast water system other than component replacement in-kind. Conversion of a vessel to meet the provisions of this Article shall not be deemed to constitute a major conversion for the purposes of this Section.~~

~~(j) “Sampling Facilities” means the equipment installed to take the ballast water sample.~~

(f) “Detailed Analysis” means a direct measurement of the organism’s concentration in a representative sample to assess compliance with the discharge standards.

- (g) “Functionality Monitoring” means monitoring of the applicable operational performance parameters to verify that the ballast water treatment system is operating according to the manufacturers’ specifications.
- (h) “Indicative Analysis” means a rapid preliminary assessment of the organism concentration in a representative sample of the ballast water volume of interest using biological, chemical, or physical parameters.
- (i) “mL” means milliliter.
- (j) “Public Water System” means a U.S. system for the provision of water to the public for human consumption, as defined in Title 40 of the Code of Federal Regulations, section 141.2. and subject to the requirements of 40 CFR parts 141 and 143, or a Canadian drinking water system that meets Health Canada’s “Guidelines on Canadian Drinking Water Quality.”
- (k) “Sampling PointPort” means the equipment installed in the ballast water piping through which representative samples of the ballast water being discharged are extractedthat place in the ballast water piping where the sample is taken.
- (l) “System Design Limitations or SDLs” are the physical or operational parameters important to the proper operation of the ballast water treatment system and designed to achieve the discharge performance standards (for example minimum and maximum flow rates, time between ballast uptake and discharge, water quality limitations, operating environmental conditions, filter pressure, or ultraviolet transmittance).
- ~~(m)~~ (m) “Vessel” means a vessel of 300 gross registered tons or more. has the same meaning as in Section 71200, Public Resources Code, subdivision (r).

Note: Authority cited: Sections 71201.7 and 71205.3, Public Resources Code.
Reference: Sections 71200, 71201.7, 71204, 71206 and 71205.3, Public Resources Code.

Section 2293. Interim Performance Standards for Ballast Water Discharges.

The provisions under this Section apply only to vessels that discharge ballast water in California waters.

(a) Federal Performance Standards for Ballast Water Discharges.

(1) Notwithstanding section 2296, the master, owner, operator, or person in charge of a vessel shall not discharge ballast water in California waters unless the following ballast water discharge performance standards, which are set forth in Section 151.2030 of Title 33 of the Code of Federal Regulations or as that regulation may be amended, are met:

- (A) For organisms greater than or equal to 50 micrometers in minimum dimension: discharge must include fewer than 10 organisms per cubic meter of ballast water.
- (B) For organisms less than 50 micrometers and greater than or equal to 10 micrometers: discharge must include fewer than 10 organisms per mL of ballast water.
- (C) Indicator microorganisms must not exceed:
 - (1) For toxicogenic *Vibrio cholerae* (serotypes O1 and O139): a concentration of less than 1 colony forming unit (cfu) per 100 mL.
 - (2) For *Escherichia coli*: a concentration of fewer than 250 cfu per 100 mL.
 - (3) For intestinal enterococci: a concentration of fewer than 100 cfu per 100 mL.

(2) The performance standards in Section 2293, subdivision (a)(1), must be met according to the following implementation schedule unless the master, owner, operator, or person in charge of a vessel has been granted an extension to the vessel's compliance date by the United States Coast Guard pursuant to Section 151.2036 of Title 33 of the Code of Federal Regulations, or unless the vessel is using water from a Public Water System as ballast water pursuant to Section 2296.

	<u>Vessel's ballast water capacity in cubic meters (m³)</u>	<u>Date constructed</u>	<u>Vessel's compliance date</u>
<u>New vessels</u>	<u>All</u>	<u>On or after December 1, 2013</u>	<u>On delivery</u>

<u>Existing vessels</u>	<u>Less than 1,500 m³</u>	<u>Before December 1, 2013</u>	<u>First scheduled drydocking after January 1, 2016</u>
	<u>1,500-5,000 m³</u>	<u>Before December 1, 2013</u>	<u>First scheduled drydocking after January 1, 2014</u>
	<u>Greater than 5,000 m³</u>	<u>Before December 1, 2013</u>	<u>First scheduled drydocking after January 1, 2016</u>

(b) Interim California Performance Standards for Ballast Water Discharges.

Subject to the Implementation Schedule in Section 2294, ~~before discharging ballast water in waters subject to the jurisdiction of California, No later than January 1, 2030,~~ the master, owner, operator, or person in charge of a vessel ~~to which this section applies shall conduct ballast water treatment so~~ must comply with the interim California performance standards for the discharge of ballast water. The interim performance standards for the discharge of ballast water in California require that ballast water discharged will contain:

- (a) ~~(1)~~ (1) No detectable living organisms that are greater than or equal to 50 micrometers in minimum dimension;
- (b) ~~(2)~~ (2) ~~Less~~ Fewer than 0.01 living organisms per ~~milliliter~~ mL that are less than 50 micrometers in minimum dimension and greater than or equal to ~~more than~~ 10 micrometers in minimum dimension;
- (c) ~~(3)~~ (3) For living organisms that are less than 10 micrometers in minimum dimension:
- (1) (A) ~~less~~ fewer than 1,000 bacteria per 100 ~~milliliter~~ mL;
- (2) (B) ~~less~~ fewer than 10,000 viruses per 100 ~~milliliter~~ mL;
- (3) (C) concentrations of microbes that are less than:
- (A) 1.126 colony forming units per 100 ~~milliliters~~ mL of *Escherichia coli*;
- (B) 2.33 colony forming units per 100 ~~milliliters~~ mL of Intestinal enterococci; and
- (C) 3.1 colony forming unit per 100 ~~milliliters~~ mL or 1 colony forming unit per gram of wet weight of zoological samples of Toxicogenic *Vibrio cholerae* (serotypes θ O1 and θ O139).

(c) Final California Performance Standards for Ballast Water Discharges.

No later than January 1, 2040, the master, owner, operator, or person in charge of a vessel to which this Article applies, must implement and meet the final performance standards for the discharge of ballast water. The final performance standards for the discharge of ballast water in California waters require that the ballast water discharged must have zero detectable living organisms for all organism size classes.

Note: Authority cited: Sections 71201.7 and 71205.3, Public Resources Code.

Reference: Sections 71201.7 and 71205.3, Public Resources Code.

~~Section 2294. Implementation Schedule for Interim Performance Standards for Ballast Water Discharges.~~

~~Sections 2293 and 2297 apply to vessels in accordance with the following schedule:~~

- ~~(a) Beginning January 1, 2010, for vessels constructed on or after that date with a ballast water capacity of less than or equal to 5,000 metric tons.~~
- ~~(b) Beginning January 1, 2012, for vessels constructed on or after that date with a ballast water capacity greater than 5,000 metric tons.~~
- ~~(c) Beginning January 1, 2014, for vessels constructed before January 1, 2010, with a ballast water capacity of 1,500 metric tons or more but not more than 5,000 metric tons.~~
- ~~(d) Beginning January 1, 2016, for vessels constructed before January 1, 2010, with a ballast water capacity of less than 1,500 metric tons, and for vessels constructed before January 1, 2012, with a ballast water capacity greater than 5,000 metric tons.~~

~~Note: Authority cited: Sections 71201.7 and 71205.3, Public Resources Code.~~

~~Reference: Sections 71201.7 and 71205.3, Public Resources Code.~~

~~Section 2295. Implementation Schedule for Final Performance Standards for Ballast Water Discharges.~~

~~Beginning January 1, 2020, before discharging ballast water in waters subject to the jurisdiction of California, the master, owner, operator, or person in charge of a vessel to which this section applies shall conduct ballast water treatment so that ballast water discharged will contain zero detectable living organisms for all organism size classes.~~

~~Note: Authority cited: Sections 71201.7 and 71205.3, Public Resources Code.~~

~~Reference: Section 71201.7 and 71205.3, Public Resources Code.~~

~~Section 2296. Delay of Application for Vessels Participating in Promising Technology Evaluations.~~

~~If an owner or operator of a vessel applies to install an experimental ballast water treatment system, and the Commission approves that application on or before January 1, 2008, the Commission shall deem the system to be in compliance with any future treatment standard adopted, for a period not to exceed five years from the date that the interim performance standards would apply to that vessel.~~

~~(a) — The Commission may rescind its approval of the system at any time if the Commission, in consultation with the Board and the United States Coast Guard, and after an opportunity for administrative appeal with the executive officer of the Commission, determines that the system has not been operated in accordance with conditions in the agreed upon application package, or that there exists a serious deficiency in performance, human safety, or environmental soundness relative to anticipated performance, or that the applicant has failed to provide the Commission with required test results and evaluations.~~

~~Note: Authority cited: Sections 71201.7, 71204.7, and 71205.3, Public Resources Code. Reference: Sections 71201.7, 71204.7, and 71205, Public Resources Code.~~

~~Section 2297~~ 2294. Collection and Analysis of Ballast Water and Sediment Samples.

~~Subject to the implementation schedule in Section 2294 and taking into account the following considerations, a vessel to which this section applies shall install sampling facilities to enable collection of ballast water samples in order to assess compliance with Section 2293.~~

~~(a) — Technical specifications for design of in-line sampling facilities:~~

~~(1) — The sampling facility shall not damage and/or induce substantial incidental mortality to organisms to be collected in ballast water.~~

~~(2) — The isokinetic sample port diameter shall be determined according to the equation:~~

~~Image 1 within Section 2297. Collection of Ballast Water Samples. where D_{iso} and D_m are the diameters of the sample port opening and the main flow in the discharge line, respectively; and Q_{iso} and Q_m represent the respective volumetric flow rates through the two pipes.~~

Sample port size shall be based on the combination of maximum sample flow rate and minimum ballast flow rate that yields the largest isokinetic diameter.

- ~~(3) The opening of the sampling pipe shall be chamfered to provide a smooth and gradual transition between the inside and outside pipe diameters.~~
 - ~~(4) The length of the straight sample pipe facing into the flow can vary, but shall not be less than one diameter of the sampling pipe. The sampling port shall be oriented such that the opening is facing upstream and its lead length is parallel to the direction of flow and concentric to the discharge pipe, which may require sampling pipes to be "L" shaped with an upstream-facing leg if installed along a straight section of discharge pipe.~~
 - ~~(5) The design of the sample facility shall allow for the servicing and/or cleaning of the sampling facility without impacting the safety of the vessel. The sampling pipe should be retrievable either manually or mechanically, or it should be in a system which can be isolated.~~
 - ~~(6) The sample facility and all associated parts of the sampler that come into contact or near proximity with the ballast piping shall be constructed of galvanically compatible materials and generally corrosion resistant.~~
 - ~~(7) When control of the sample flow rate is required, appropriate valves shall be used that do not result in organism mortality due to sharp velocity transitions. Ball, gate or butterfly valves shall not be used.~~
 - ~~(8) If a pump must be used to sample the discharge side of a tank, an appropriate sampling pump shall be used to minimize organism mortality.~~
 - ~~(9) The Master of the vessel must maintain positive control (e.g. tamper evident lockout seals) over the ballast water sampling facility when compliance verification or scientific sampling is not being conducted.~~
- ~~(b) — Technical specifications for installation of a sample point in the ballast water discharge line:~~
- ~~(1) The sampling point shall be safely accessible to Commission staff, and shall not be in a confined space.~~
 - ~~(2) The sampling point shall be installed in a straight part of the discharge line, downstream of the last treatment process, as near to the ballast water overboard discharge as practicable.~~
 - ~~(3) The sample shall be removed from the main pipeline at a location where the flowing stream at the sample point is representative of the contents of the stream. The sample facility should be placed at a point where the flow in the main pipe is fully mixed and fully developed.~~

~~(4) As many sample points shall be provided as necessary to draw a ballast water sample during typical deballasting of the vessel.~~

~~(5) In cases where the ballast system design does not enable sampling from the discharge line, other arrangements for a sampling point may be made on a vessel-specific basis with prior approval of Commission staff.~~

(c) ~~Existing sampling facilities~~

~~Vessels may use existing sampling facilities, installed prior to January 1, 2010, to fulfill the requirements of this Section with prior approval of Commission staff.~~

The Commission may collect and analyze ballast water and sediment samples from vessels that discharge in California waters, in accordance with the following provisions:

(a) Collection and Analysis of Samples for Compliance Assessment

(1) The Commission may collect ballast water samples to assess compliance of ballast water discharges with the performance standards set forth in Section 2293.

(2) To facilitate the Commission's collection of ballast water samples for compliance assessment, the Commission must be provided access to all sampling ports unless access is restricted due to safety concerns.

(3) Compliance assessment may be performed in two steps:

(A) An indicative analysis of a ballast water discharge sample may be performed prior to detailed analysis to establish whether the ballast water discharge is potentially non-compliant with the applicable ballast water discharge performance standards.

(B) If non-compliance is suspected, a detailed analysis may be performed to determine if the ballast water meets the applicable ballast water discharge performance standards.

(4) All methods used to analyze any ballast water discharge sample for compliance with the performance standards in Section 2293 shall follow scientifically reliable and verifiable quality assurance and quality control procedures.

(a) Collection and Analysis of Samples for Research Purposes

(1) The Commission may collect and analyze ballast water and sediment samples for research purposes.

(2) The Commission must be given access to ballast water tanks and sampling ports when feasible.

Note: Authority cited: Sections 71201.7, 71205.3 and 71206, Public Resources Code. Reference: Sections 71201.7, 71204, 71205.3, and 71206 and 71213, Public Resources Code.

Section 2295. Monitoring, Calibration, and Functionality of Shipboard Ballast Water Treatment Systems

The master, owner, operator, or person in charge of a vessel using a ballast water treatment system approved by the United States Coast Guard or designated as an "Alternate Management System" by the United States Coast Guard to comply with the performance standards in Section 2293 shall not discharge ballast water from a vessel in California waters unless:

- (a) The system must be operated in accordance with the System Design Limitations stipulated by the manufacturer or set forth in the United States Coast Guard approval certification or the "Alternate Management System" acceptance letter.
- (b) The operational parameters of the equipment have been monitored no less frequently than is recommended by the manufacturer.
- (c) All the applicable sensors and other ballast water treatment system control equipment have been calibrated no less frequently than recommended by the manufacturer.

Note: Authority cited: Sections 71201.7, 71204.3 and 71204.5 Public Resources Code. Reference: Sections 71204.3 and 71204.5, Public Resources Code.

Section 2296. Alternative Ballast Water Management Methods

To comply with the performance standards in Section 2293, the master, owner, operator, or person in charge of a vessel may use water from a Public Water System as an alternative ballast water management method if they:

- (a) Exclusively use water from a Public Water System for ballast.
- (b) Maintain a record of which Public Water System the water was received from, including any receipt, invoice, or other documentation from the Public Water System indicating that water came from that system.
- (c) Either clean the ballast tanks (including removing all residual sediments) and supply lines to the tanks prior to using Public Water System water or have never previously introduced ambient water.

Note: Authority cited: Sections 71201.7, 71204.3, 71204.5 and 71205.3, Public Resources Code. Reference: Sections 71204.3, 71204.5 and 71205.3, Public Resources Code.

Section 2297. Recordkeeping

In addition to the information required by Public Resources Code section 71205, subdivision (h), the master, owner, operator, or person in charge of a vessel shall maintain on board the vessel all the following documentation to demonstrate the proper functionality of the vessel's ballast water treatment system:

- (a) Printed or electronic records of applicable functionality monitoring, including calibration records, shall be kept on board the vessel for a minimum of two (2) years.
- (b) Printed or electronic records of any biological monitoring performed, from at least the past two (2) years, including dates of the monitoring, the individuals or entities who performed the tests, and methods used.
- (c) The ballast water treatment system type approval certificate or "Alternate Management System" letter issued by the United States Coast Guard, as applicable.
- (d) Procedures in case of equipment malfunction.

Note: Authority cited: Section 71201.7, Public Resources Code.
Reference: Sections 71205 and 71206, Public Resources Code.