

GUIDELINES FOR THE CONTROL OF BALLAST WATER DISCHARGE FROM SHIPS IN WATERS UNDER CANADIAN JURISDICTION

1.0 Introduction

1.1 The purpose of these guidelines is the protection of waters under Canadian jurisdiction from non-indigenous aquatic organisms and pathogens that can be harmful to existing ecosystems. When a new organism is introduced to an ecosystem, negative and irreversible changes may result including a change in biodiversity. Ballast water has been associated with the unintentional introduction of a number of organisms in Canadian waters and several have been extremely harmful to both the ecosystem and the economic well-being of the nation. These guidelines are intended to minimize the probability of future introductions of harmful aquatic organisms and pathogens from ships' ballast water while protecting the safety of ships.

1.2 Various methods have been proposed for protecting waters under Canadian jurisdiction from harmful aquatic organisms and pathogens that may exist in ballast water. The methods employed must meet the following criteria:

1.2.1 Safety of the ship and its crew must not be compromised.

1.2.2 Techniques utilized shall be effective at minimizing the potential of introduction of harmful aquatic organisms and pathogens from discharged water.

1.3 These guidelines have been developed by Transport Canada and Fisheries and Oceans Canada under the auspices of the Canadian Marine Advisory Council and as such reflect wide consultation with groups such as shipowners, environmental organizations, government departments and the United States Coast Guard.

1.4 In developing these guidelines, consideration and recognition has also been given to the protection of neighboring ecosystems.

1.5 Comments on the guidelines should be addressed to the Ballast Water Working Group of the Canadian Marine Advisory Council at

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11th Floor
330 Sparks Street
Ottawa, Ont., Canada
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1.6 These guidelines should not be seen as adding to or detracting from existing statutory or regulatory requirements which will prevail in the case of conflict with these guidelines. Statutory provisions dealing with ship-source pollution are included in the *Canada Shipping Act*, the *Arctic Waters Pollution Prevention Act* and the *Fisheries Act*.

2.0 Short Title

2.1 These guidelines may be cited by the short title The Canadian Ballast Water Management Guidelines .

3.0 Definitions

3.1 For the purposes of these Guidelines:

exclusive economic zone consists of an area of the sea beyond and adjacent to the territorial sea of Canada that has as its inner limit the outer limit of the territorial sea of Canada and as its outer limit the line every point of which is at a distance of 200 nautical miles from the nearest point of the baselines of the territorial sea of Canada or as specified in the *Oceans Act*,

foreign voyage means a voyage extending beyond the area of a home-trade voyage and not being an inland or minor waters voyage,

harmful aquatic organisms or pathogens means non-indigenous aquatic organisms or pathogens which, if introduced into a particular sea area including estuaries or fresh water courses, may create hazards to human health, harm living resources or aquatic life, damage amenities, impair biological diversity or interfere with other legitimate uses of such areas,

"home-trade voyage" means a voyage, not being an inland or minor waters voyage, between places within the area following, namely, Canada, the United States other than Hawaii, St. Pierre and Miquelon, the West Indies, Mexico, Central America and the northeast coast of South America, in the course of which a ship does not go south of the sixth parallel of north latitude,

home trade voyage, class I has the same meaning as defined in the *Home-Trade, Inland and Minor Waters Voyages Regulations*, that is a home-trade voyage in the course of which a steamship goes anywhere within the limits of a home-trade voyage as defined in the Canada Shipping Act,

waters under Canadian jurisdiction means all internal waters of Canada, the territorial sea of Canada and waters in the exclusive economic zone of Canada, including the shipping safety control zones prescribed pursuant to the *Arctic Waters Pollution Prevention Act*.

4.0 Application

4.1 The Canadian Ballast Water Management Guidelines apply to all vessels subject to Vessel Traffic Services. These include the Eastern Canada Vessel Traffic Services Zone (ECAREG), the Arctic Canada Traffic Zone (NORDREG), and the Cooperative Vessel Traffic Services System on the west coast (CVTS Offshore).

4.2 The effective date for implementation of the guidelines is September 1, 2000.

4.3 These guidelines rescind and supercede the Voluntary Guidelines for the Control of Ballast Water Discharges from Ships Proceeding to the St. Lawrence River and Great Lakes .

5.0 Consistency with International Guidelines and Other Requirements

5.1 These guidelines are intended to implement the International Maritime Organization s resolution A.868(20), Guidelines for the Control and Management of Ships Ballast Water to Minimize the Transfer of Harmful Aquatic Organisms and Pathogens , in waters under Canadian jurisdiction.

5.2 Vessels transiting waters under Canadian jurisdiction bound for Great Lakes ports in compliance with the mandatory ballast water regime of the United States fulfill the requirements of these guidelines.

5.3 Vessels transiting waters under Canadian jurisdiction bound for non-Canadian ports and subject to other national ballast water regimes should complete any ballast water exchange outside waters under Canadian jurisdiction or, in exceptional circumstances, undertake such procedures in the designated alternative exchange zones. Vessels are reminded of the need to contact the appropriate authorities to ensure conformity with the laws of the country of destination.

6.0 Ballast Water Management Plan

6.1 As noted in section 7.1 of IMO resolution A.868(20), every ship that carries ballast water should be provided with a ballast water management plan. The intent of such a plan is to provide safe and effective procedures for ballast water management.

6.2 The ballast water management plan should be specific to each ship and should be reviewed on the basis IMO Resolution A.868(20) by the flag administration or a recognized organization.

6.3 For flow-through systems, the tank boundary structure for a tank head equivalent to the full distance to the top of the overflow is to be verified.

6.4 For sequential systems, the sequences indicated in the ship's ballast water management plan are to be approved for strength, stability, minimum draught forward and propeller immersion criteria. Sloshing, slamming and ballast inertia are to be dealt with as necessary. Where the criteria are not met, an operational envelope indicating the permissible significant wave heights for various speeds and headings is required to be developed as part of the ballast water management plan.

6.5 The ballast water management plan shall be included in the ship's operational documentation.

6.6 The Model Ballast Water Management Plan developed by the International Chamber of Shipping (ICS) and the International Association of Independent Tanker Owners (INTERTANKO) may be considered an appropriate reference document when developing the plan.

6.7 Canadian ships that carry ballast water and are making home trade voyage, class I or foreign voyages, should forward a copy of their ballast water management plans to the Regional Board of Steamship Inspection.

6.8 It should be noted that the stability of the ship, and any other safety considerations, remain the responsibility of the ship's master. Nothing in these Guidelines should be construed as an infringement upon that responsibility. In cases where ships are not provided with a Ballast Water Management Plan, masters should pay particular attention to the guidance on safety provided in Appendix 2 of IMO resolution A.868(20).

7.0 Reporting Requirements

7.1 With the exception of vessels not destined for a Canadian port, the Master of the vessel shall provide a fully completed ballast water report form as described in Annex 1 by facsimile transmission, or by other means as approved by the appropriate marine communications and traffic services officer.

7.1.1 The Master of the vessel shall provide the appropriate Marine Communication and Traffic Services Centre with the information as requested prior to entry into waters under Canadian jurisdiction.

7.2 Vessels subject to these guidelines that have not submitted a fully completed form in accordance with section 7.1 will be requested to provide the appropriate Marine Communication and Traffic Services Centre with the following information as part of the MCTS interrogative:

- (i) Whether a ballast water reporting form signed by the Master has been provided by facsimile to the appropriate agency (i.e. Transport Canada Marine Safety, port authorities or the U.S. Coast Guard) or has been submitted by electronic or other acceptable means.
- (ii) Whether ballast water is being carried.
- (iii) If the answer to (ii) is affirmative:
- (iv) Whether the vessel has a Ballast Water Management Plan appropriate to that ship.
- (v) Whether the Ballast Water Management Plan has been reviewed by a classification society or flag administration.
- (vi) Whether ballast water management procedures have been performed prior to entering Canada's exclusive economic zone
- (vii) If the answer to (vi) is negative — 1) What is the reason for non performance

- 2) What procedures, consistent with the appropriate Regional Ballast Water Annex are proposed to protect Canada's waters prior to discharge of ballast.

7.3 In order to monitor information provided in ballast water report forms under this section, vessels may be boarded and samples collected. Delays to the ship shall be minimized when taking such samples and the results of their analysis shall be made available to the ship's operator on request.

7.4 Under section 562.19 of the *Canada Shipping Act* it is an offence to refuse to provide information, or to knowingly provide false information to a marine communication and traffic services officer, where such information is requested for the promotion of environmental protection.

8.0 Discharge of Ballast Water

8.1 Subject to the appropriate regional ballast water annex as outlined in section 12, ballast water taken on in areas outside waters under Canadian jurisdiction should not be discharged in waters under Canadian jurisdiction, unless one of the ballast water management options specified in section 9 has been successfully performed.

8.2 In exceptional circumstances where the procedures in 8.1 can not be successfully performed, conditions of discharge may be specified by the appropriate regional authority as noted in Annexes II to V.

9.0 Ballast Water Management Options

9.1 Ballast Exchange

9.1.1 Vessels utilizing ballast exchange should conduct ballast exchange in locations where water depths are not less than 2000 metres, unless otherwise provided in the appropriate Regional Annex.

9.1.2 Alternative Exchange Zones — In exceptional circumstances, where it may not be possible to exchange ballast water due to weather sea or any other conditions the master feels may endanger human life or the safety of the vessel, alternative exchange zones may be utilized on notification of the appropriate marine communications and traffic services officer, as noted in section 7.3(vii). The use of alternative exchange zones may also be appropriate for vessels that are not able to comply with section 9.1.1 because they do not voyage into mid-ocean where water depths are greater than 2000 metres. Masters are advised to consult the appropriate Regional Ballast Water Management Annex.

9.1.3 Sequential Exchange - All of the ballast water should be discharged until suction is lost, and stripping pumps or eductors should be used if possible. Operations shall be logged.

9.1.4 Flow Through Exchange - If flow through methods are employed at least three times the tank volume should be pumped through the tank. Calculations indicating the amount of water to be utilized and pumping rates required to achieve this shall be recorded.

9.2 Non Release of Ballast Water

9.2.1 Ballast water may be retained on board.

9.3 Discharge to reception facilities

9.3.1 Vessels wishing to utilize this option should confirm procedures and availability of this service.

9.4 Alternative Methods

9.4.1 Environmentally sound methods of ballast water treatment that are acceptable to Transport Canada Marine Safety may be utilized. Any alternative method must be at least as effective in removing or killing harmful aquatic organisms and pathogens as the methods listed above.

10.0 **Research**

10.1 In order to further research into the effectiveness of ballast water management, vessels may be boarded and samples of ballast water may be collected for scientific analysis.

11.0 **Ballast Tank Sediment Disposal**

11.1 Disposal of sediments as a result of routine cleaning of ballast tanks should be carried out in mid ocean outside Canada's exclusive economic zone in accordance with the ship's ballast water management plan.

11.2 In waters under Canadian jurisdiction, sediments from the ballast tanks of ships trading on foreign voyages should be disposed of in land dumpsites approved for that purpose in accordance with the appropriate legislation or at sea.

11.3 Records shall be maintained of sediment removal in accordance with sections 11.1 and 11.2.

12.0 **Regional Implementation**

12.1 Recognizing that ecosystems are different within Canada, regional implementation of these guidelines is appropriate to account for differences in trade, ship type, geography, specific exotic species introduction risk, etc. Masters should be governed by the specific regional ballast water management procedures required for their vessel and voyage as outlined in annexes II, III, IV and V.

Annex II

Ballast Water Management Procedures for Vessels Proceeding to the West Coast of Canada

1.0 Ballast Water Reporting Forms shall be sent by facsimile to Western Canada Vessel Traffic Services

Facsimile	(604) 666-8453
Phone	(604) 666-6011

2.0 Ports of Vancouver, Nanaimo, and Fraser River

2.1 In addition, vessels entering the Ports of Vancouver, Nanaimo and Fraser River shall be subject to the Harbour Master Department Standing Operating Procedures.

2.2 Compliance with ballast management procedures as set out in section 9 are mandatory.

2.3 Procedures

2.3.1 Harbour Master's representatives when boarding vessel to conduct ballast checks will require to see one of the following:

- 1) Log book entry (in English)
- 2) Abstract of log book entry
- 3) Company or other administration form
- 4) Ballast Water Reporting form as per Appendix 1 giving details of the ballast water management procedure carried out. The details must include the following information:

- position of ballast water exchange - if utilized - giving latitude and longitude
- place where ballast water originally taken on board
- amount of ballast water
- ballast tanks which have had ballast management performed
- details if ballast water management not performed (see note).

Note — It will be a defense against not performing a ballast exchange (if that is the ballast management procedure utilized) at sea for the following reasons

- 1) Stress or weather
- 2) Stability or hull stress concerns — **safety is paramount and the Master shall only carry out the procedure if it is safe to proceed.**

A copy of the above may be faxed to the applicable Harbour Master's Office

Vancouver	(604) 665-9099
Fraser River	(604) 524-1127
Nanaimo	(250) 753-4899

2.3.2 In the event that the vessel is unable to supply the above information in the prescribed manner, then no ballast water will be allowed to be discharged until the following procedures have been undertaken:

- 1) Samples of ballast water will be drawn and analyzed by a Harbour Master representative.
- 2) Ballast water found not meeting test standards, will require the vessel depart the port and exchange ballast water in the outgoing current of the north side of Juan de Fuca Strait, west of Longitude 123 degrees 55 minutes west in at least 100 metres of water.

2.3.3 All charges for the movement and delay to the vessel will be for the vessel's account.

2.3.4 Vessels arriving from Ports in British Columbia, Alaska or the West Coast of the United States (North of Cape Mendocino) wishing to discharge ballast water are exempted from these provisions if the ballast water to be discharged originated from these waters. The Harbour Master's representative conducting the ballast check will require to see a log book entry showing where the ballast water originated.

2.3.5 These Procedures will not be applied to vessels wishing to discharge less than 1000 metric tonnes of ballast water. However a Port Representative must be in attendance prior to discharge.

3.0 Alternative Exchange Zone

3.1 In exceptional circumstances as noted in section 9.1.2 of these Guidelines, ballast water exchange may be made in accordance with section 2.3.2(2) of this Annex.

Annex III

Ballast Water Management Procedure for Vessels Proceeding to the Great Lakes or St. Lawrence River West of 63 degrees West Longitude

1.0 Ballast Water Reporting Forms shall be send by facsimile to Eastern Canada Vessel Traffic Services (ECAREG)

Facsimile	(902) 426-4483
Phone	(902) 426-4956
Telex	019 22510

2.0 Vessels are asked to carry out ballast water management procedures as set out in section 9 of these Guidelines.

3.0 Alternative Exchange Zone

3.1 In exceptional circumstances as noted in section 9.1.2 of these Guidelines, ballast water exchange may be made in the internal waters of Canada within the Laurentian Channel in depths exceeding 300 metres. Such internal waters exchanges shall be restricted to the area southeast of 63 degrees west longitude.

3.2 In addition to the requirements above - for those ships that have not left the North American Continental shelf on their inbound voyage, if the ballast management procedure utilized is exchange, such exchange may be made in the internal waters of Canada, within the Laurentian Channel in water depths exceeding 300 metres. As above, such internal waters exchanges shall be restricted to the area southeast of 63 degrees west longitude.

4.0 A record of the salinity of the ballast water to be discharged into the Great Lakes / St. Lawrence River west of 63 degrees West longitude shall be entered in the ships log book.

5.0 Ships entering the Great Lakes / St. Lawrence Seaway system should be aware of the U.S. mandatory ballast water regime and the likelihood of joint boarding at Montreal by representatives of the United States Coast Guard, Transport Canada and the St. Lawrence Seaway.

Annex IV

Ballast Water Procedures for Vessels Proceeding to Ports in Eastern Canada North of 60 degrees North Latitude

1.0 Ballast Water Reporting Forms shall be sent by facsimile to Northern Canada Vessel Traffic Services (NORDREG)

Facsimile	(867) 979-4236
Phone	(867) 979-5724

2.0 Alternative Exchange Zones

2.1 In exceptional circumstances as noted in section 9.1.2 of these Guidelines, ballast water exchange may be made:

- 1) for vessels proceeding to Hudson Bay ports - in Hudson Strait in depths exceeding 300 metres restricted to the areas southeast of 70 degrees west longitude.
- 2) for vessels proceeding to Higher Arctic ports — in Lancaster Sound in depths exceeding 300 metres restricted to the area southeast of 80 degrees west longitude.

Annex V

Ballast Water Procedures for Vessels Proceeding to Ports on the East Coast of Canada

1.0 Reporting

1.1 Reporting requirements under section 7 shall be fulfilled in accordance with the implementation of these guidelines.

1.2 Ballast Water Reporting Forms shall be sent by facsimile to Eastern Canada Vessel Traffic Services (ECAREG)

Facsimile	(902) 426-4483
Phone	(902) 426-4956
Telex	019 22510

1.3 Ballast water exchange and/ or ballast water management information provided to Marine Communications and Traffic Services (MCTS) will be verified on board the vessels, on a random basis.

2.0 Alternative Ballast Water Exchange Zones (ABWEZ)

2.1 The delineation of suitable alternative ballast water exchange zones and the determination of possible exemptions is subject to scientific studies and consultation with the appropriate scientific authorities. Locations for ABWEZ are being investigated and may be included in the Annex V at a future date. *In the meantime vessels are encouraged to comply with these guidelines as far as it is safe and practicable.*

3.0 Ballast water samples collection

3.1 The master of any vessel is asked to give a researcher collecting ballast water samples all reasonable assistance to enable the sampler to collect relevant ballast water samples and gather information in connection with the ballast water management program. *Information obtained during this process will be used in order to provide the scientific basis for the future development and implementation of Annex V.*