Glosten

BALLAST WATER AND BIOFOULING REGULATORY GAP ANALYSIS

GAP ANALYSIS REPORT

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This project has been funded wholly or in part by the United States Environmental Protection Agency under assistance agreement PC 00J29801 to the Washington Department of Fish and Wildlife. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

Executive Summary

This study compares regulatory code requirements intended to prevent the introduction of aquatic introduced species to Washington State waters via commercial shipping vectors. Code requirements were compared between Washington State and federal-level authorities for the ballast water vector, and between Washington State, regional, and federal-level authorities for the biofouling vector.

The purpose of this gap analysis is to identify key regulatory code gaps, which may include code discrepancies, inconsistencies, and duplications, that may put Washington State waters at higher risk of nonindigenous species introductions by regulated vessels, and to identify areas where cooperative management between the regulatory agencies can be improved in order to avoid unnecessary duplication of effort. This report is not intended to prescribe specific regulatory or statutory actions or to evaluate all known or potential gaps in the regulations. An additional purpose of this report is to provide direction and guidance to the Washington Department of Fish and Wildlife (DFW) in future development of six-year strategic plans for ballast water and biofouling management programs.

The gaps identified in this report have particular importance to environmental protection and shipping commerce in state waters. In preparation of this report, DFW's primary role was to provide the institutional knowledge and historical context of the current regulatory language. Additionally, members of DFW's stakeholder Ballast Water Work Group (BWWG), which included a strong representation of the regulated community, identified gaps of concern to vessel operations.

Washington State regulates nonindigenous species through the DFW, and water quality issues related to ballast water and biofouling discharges through the Department of Ecology (ECY). Both agencies fall under the state's Revised Code of Washington (RCW) and Washington Administrative Code (WAC). DFW's legislative mandate is to protect state waters by preventing the harmful discharge of nonindigenous species. ECY's legislative mandate within the scope of ballast water and biofouling is to protect state waters by preventing the harmful discharge of any associated chemical and biological pollutants. Federal-level nonindigenous species regulations come from the U.S. Coast Guard (USCG) in the Code of Federal Regulations (CFR), and from the U.S. Environmental Protections Agency (EPA)'s Vessel General Permit (VGP). The regulatory codes of the aforementioned agencies were compared, along with the codes of regional and international agencies on certain topics. Protocol and policy documents were also compared for topics where implementation of the code was relevant.

This study compared ballast water and biofouling codes between Washington State agencies, the USCG, and the EPA. In combination with feedback from the BWWG, the study identified 14 primary regulatory gaps, which are summarized in the following table. Due to time lag since the state's last regulatory code changes in 2009 and changes made to federal-level codes since then, it is assumed that many DFW regulatory codes could be made more consistent with federal language to reduce confusion where provisions are substantively similar. This study addresses the gaps currently identified by DFW, BWWG, and the authors. As additional gaps are identified, the format and process within can serve as a template moving forward (see Appendix B).

Regulatory Gap	Analysis Result
1. Ballast Water Report Filing Requirements (WAC 220-150-030)	Gap: Inconsistency – difference in timing based on arrival for when vessel must file report. State: Requires filing report 24 hours prior to arrival. Federal: USCG requires filing report no later than 6 hours after arrival. Cost/Benefit: State asserts their requirement as necessary to reduce nonindigenous species risk; operators do not consider timing difference a significant cost.
2. Ballast Water Safety Exemption Requirements (WAC 220-150-030)	Gap: Discrepancy – state has additional requirements for vessels filing exemption. State: Approval required as well as administrative fee and mandatory inspection. Federal: Approval required only for USCG type-certified BWMS, not for exchange or AMS use. Cost/Benefit: Cost to vessels and state unquantified due to rare occurrence.. Benefit to state waters unquantified.
3. Ballast Water Vessel Inspection Selection Requirements (WAC 220-150-035)	Gap: Inconsistency – vessel inspections prioritized and conducted differently. State: Six risk factors evaluated to prioritize vessel inspections. Federal: USCG prioritizes vessel inspections based on security, safety, and environmental compliance history factors. Cost/Benefit: Risk-based inspection criteria targets risky vessels to minimize burden on compliant vessels, but implementation costly to state.
4. Compliance Plans (WAC 220-150-037)	Gap: Discrepancy – state has additional ability to require compliance plans. State: Can require risky or non-compliant vessels to agree to compliance plan. Federal: Has no compliance plan authority. Cost/Benefit: Costs are unknown due to lack of precedent, but expected to be significant. Benefit is opportunity to mitigate risk.
5. Coastal Voyage Exchange Requirements (WAC 220-150-040)	Gap: Discrepancy – difference in exchange requirements for nearshore voyages. State: Requires nearshore exchange for vessels not traveling outside 200 nm from shore. Federal: EPA matches state requirement, USCG does not require nearshore exchange. Cost/Benefit: High benefit due to risk reduction. Operators bear potentially high costs of time, operating costs, and penalty costs.

Regulatory Gap	Analysis Result
6. Interim Open Sea Exchange Alternatives (WAC 220-150-043)	Gap: Inconsistency – state and federal agencies have different acceptance criteria for foreign type-approved ballast water treatment systems. State: Accepts ballast water treatment systems approved by other authorities and requires additional evaluation by state for systems that use biocides. Federal: USCG requires the manufacturer of a foreign type-approved system to apply for a determination of acceptance. Cost/Benefit: Further analysis needs to be conducted to determine if current USCG and EPA acceptance processes are sufficient for systems that use biocides.
7. Treatment Requirements for Biological Efficacy (WAC 220-150-050)	Gap: Discrepancy – federal requirements have a discharge standard. State: Has no biological discharge standard. Federal: Has biological discharge standard. Cost/Benefit: Alignment with federal discharge standard would benefit state and vessels, but developing a more stringent state discharge standard could be of significant cost to industry.
8. Treatment Requirements Implementation Schedule (WAC 220-150-050)	Gap: Discrepancy – federal requirements have an implementation schedule. State: Has no schedule for treatment system implementation. Federal: Has phase-in schedule for type-approved systems. Cost/Benefit: Alignment with federal regulations would benefit vessels from consistency and state waters from phasing out exchange, costs to state could be minimized through cooperation.
9. Promising Treatment Technology (WAC 220-150-060)	Gap: Inconsistency – Each agency has a different method for accepting experimental treatment systems. State: Accepts many other agency certifications for promising technology. Federal: Each agency has own system of evaluation. Cost/Benefit: Separate approval is of minimal cost to state.
10. Treatment Requirements for Active Substances (WAC 220-150-060)	Gap: Duplication / Inconsistency – BWMS requirements are duplicated, but AMS requirements are inconsistent. State: Requires toxicity testing requirements for approval of BWMS and AMS. Federal: Until USCG type-approved systems are available, USCG has no rigorous toxicity testing requirements for AMS. EPA does for BWMS. Cost/Benefit: Until type-approved systems available, there is an unquantified risk to state waters from lack of rigorous testing. Alignment with EPA requirements could minimize additional costs to state and vessels.

Regulatory Gap	Analysis Result
11. Sediment Management (WAC 220-150-070)	Gap: Inconsistency – state allows discharges that EPA prohibits. State: Multiple options for sediment discharge including at location of origin. Federal: USCG no specific requirements, EPA prohibits discharge in waters of authority. Cost/Benefit: Current state requirements reduce risk and benefit vessels without high costs.
12. Biofouling Management Requirements	Gap: Discrepancy / Inconsistency – wide range in requirements. State: General requirements that vessels not pollute state waters. Federal: Biofouling must be periodically removed through best management practices. Cost/Benefit: Alignment with federal requirements would provide specific vector targeting and control costs, though additional cost of state program will be high.
13. Biofouling Recordkeeping and Reporting Requirements	Gap: Discrepancy – state agencies do not, but federal agencies do require biofouling management recordkeeping or reporting. State: No recordkeeping or reporting requirements. Federal: USCG requires limited recordkeeping through biofouling removal plan; EPA VGP has annual biofouling recordkeeping and reporting requirements. Cost/Benefit: Addition of state recordkeeping and reporting for biofouling would be beneficial by reducing risk as part of larger biofouling program implementation, but would add substantive costs to both state and vessels.
14. In-Water Hull Cleaning	Gap: Discrepancy – state does not have specific in-water hull cleaning regulations that the EPA does. State: Regulates in-water hull cleaning through several codes that do not prescribe specific acceptable practices. Federal: EPA has specific in-water hull cleaning requirements. Cost/Benefit: Regulations that are more specific would be costly to develop for vessel compliance but would reduce risk, close gap, clarify required practice, and potentially benefit vessels with increased opportunities to conduct in-water cleaning in state.

Section 1 Introduction

This report is provided to meet project scope of work requirements under Contract 16-05935 and incorporates stakeholder review comments provided by the Washington State Department of Fish and Wildlife's Ballast Water Work Group. This report was made possible by funding from the U.S. Environmental Protection Agency's Puget Sound Marine and Nearshore Grant Program.

1.1 Purpose

The overall purpose of this work is to assist the Washington State Department of Fish and Wildlife (DFW) in its mission to protect the ecological, economic, and human health of Puget Sound by preventing the intentional or unintentional introduction of marine and nearshore nonindigenous species (synonymous with aquatic invasive and aquatic nuisance species) through marine vessel related ballast water and biofouling pathways that are under Washington State jurisdiction.

The primary objective of this report is to provide DFW with a gap analysis of state, regional, and federal ballast water and biofouling management regulations to identify areas where there are regulatory gaps that put Washington State waters at higher risk of nonindigenous species introductions through the vessel-related ballast water and biofouling pathways. This report is not intended to prescribe specific regulatory or statutory actions or to evaluate all known or potential gaps in the regulations. The information provided in this report will then be incorporated into a separate strategic plan project that will provide long-term state ballast water and biofouling management recommendations.

1.2 State and Federal Regulatory Framework

The state and federal agencies with authority to regulate ballast water and biofouling vessel discharges in Washington State waters include:

- **Washington State Department of Fish and Wildlife (DFW)** – DFW regulates ballast water under Chapter 77.120 of the Revised Code of Washington (RCW) and under Chapter 220-150 of the Washington Administrative Codes (WAC). Policy interpretation of ballast water regulations is found under DFW Policy 5213 and the Fish Program Protocol implementing Policy 5213. DFW regulates biofouling under the general invasive species provisions of Chapter 77.135 RCW and enforcement provisions of RCW 77.15.809. The DFW authority for state regulation of nonindigenous species was delegated by Congress under the Nonindigenous Aquatic Nuisance Protection and Control Act (NANPCA) (16 U.S.C. §§ 4701-4751), as amended by the National Invasive Species Act (NISA).
- **Washington State Department of Ecology (ECY)** – ECY regulatory authorities within the scope of ballast water and biofouling are under RCW 90.48.020 and 90.48.080 for discharge of polluting matter in water, and WAC 173-201A-260 for surface water quality standards. The ECY authority for state regulation of water quality parameters was delegated by Congress under the Clean Water Act.
- **U.S. Coast Guard (USCG)** – USCG regulates ballast water in the Code of Federal Regulations (CFR). The USCG authority for federal regulation of nonindigenous species was granted by Congress under the Nonindigenous Aquatic Nuisance Protection and Control Act (NANPCA) (16 U.S.C. §§ 4701-4751), as amended by the National Invasive Species Act (NISA). USCG policy interpretations are issued in Navigation and Vessel

Inspection Circulars and Coast Guard Policy Letters, as well as through the Coast Guard Message System for Internet Releasable General Messages.

- **U.S. Environmental Protections Agency (EPA)** - EPA regulates ballast water and biofouling under a Vessel General Permit (VGP) issued pursuant to Section 402 - National Pollutant Discharge Elimination System (NPDES). The EPA authority for state regulation of vessel incidental discharges was granted by Congress under the Clean Water Act. The EPA established the Environmental Technology Verification (ETV) Program to evaluate new environmental technologies. The ETV program conducts verification of ballast water treatment technology through the Protocol for the Verification of Ballast Water Treatment Technologies, EPA/600/R-10/146.

For the sake of comparison where Washington State lacks substantive codes, some Pacific regional and international regulatory body documents were included in this analysis.

- **California Marine Invasive Species Program (MISP)** – MISP is a multi-agency program established by California State legislature through the Marine Invasive Species Act, with the mission to reduce nonindigenous species introductions to state waters. The MISP regulates ballast water through the California Code of Regulations (CCR) and Public Resources Code (PRC).
- **International Maritime Organization (IMO)** – IMO is a United Nations agency that issues guidelines and regulations to maintain international safety and pollution-prevention standards. The IMO's Marine Environmental Protection Committee (MEPC) will regulate ballast water through the International Convention for the Control and Management of Ships' Ballast Water and Sediments, which includes Regulation D-2, the Ballast Water Performance Standard, and adopted fourteen sets of guidelines to cover specific ballast water topics. The convention has not yet entered into force. The MEPC has also adopted biofouling guidelines, titled the 2011 Guidelines for the Control and Management of Ships' Biofouling to Minimize the Transfer of Invasive Aquatic Species.

The following Washington State definitions apply to this report:

- "**Ballast water**" means any water and matter taken on board a vessel to control or maintain trim, draft, stability, or stresses of the vessel, without regard to the manner in which it is carried. This includes matter suspended in such water per USCG regulations under Title 33 C.F.R., Part 151.1504 (WAC 220-150-020(3)).
- "**Biofouling**" means the community of marine organisms that adheres to wetted surfaces of vessels including sessile species that attach directly to surfaces and mobile species that can inhabit a matrix of sessile biofouling (Reference 3).
- "**Gap**" means either:
    a) A **discrepancy** in the regulatory code where *either* the state *or* the federal management authority has the requirement.
    b) An **inconsistency** within the regulatory code or between similar state and federal requirements. Inconsistencies typically manifest as similar requirements at both the state and federal level, but with differing parameters for compliance.
    c) A **duplication** within the regulatory code or between the same state and federal requirements.

  Gaps may be positive where they effectively delineate cooperative requirements between state and federal regulators, or where the state has a more stringent requirement to fill a

federal regulatory discrepancy in nonindigenous species protections. Gaps may be negative where they cause a regulatory void, which increases invasive species risk, or where they add a more stringent requirement that does not provide nonindigenous species protection.

- “"**Nonindigenous species**” means any species or other viable biological material that enters an ecosystem beyond its natural range. This also includes the seeds, eggs, spores, and other biological material capable of reproducing that species, or any other viable biological material that enters an ecosystem beyond its natural range (WAC 220-150-020(16)).
- **“Regulatory code” or “code”** means agency regulatory authority as provided in statute and/or rule language, but also includes agency policy, protocols, or other guidance documents issued to provide a formal interpretation of how codes should be applied, and/or how agency application of similar codes and interpretations are practiced by field staff in the regulation of vessels.
- “**Vessel**” means a ship, boat, barge, or other floating craft of three hundred gross tons or more, United States and foreign, carrying, or capable of carrying, ballast water into the coastal waters of the state after operating outside of the coastal waters of the state, except those vessels described in RCW 77.120.020 (WAC 220-150-020(24)).

Section 2 DFW Program Overview

The DFW Ballast Water Management Program has been in effect since 2000. In developing and implementing this program over the last 16 years, DFW has worked closely with its advisory Ballast Water Work Group (BWWG). The BWWG, as defined by rule under WAC 220-150-010(2), is comprised of invited stakeholder interests including: shipping vessel owners and operators, ports, shellfish growers, fisheries, environmental interests, citizens who have knowledge of the issues, and appropriate governmental representatives including USCG and tribes. The success of DFW's regulations through several legislative processes, rulemaking, and policymaking actions is due in large part to BWWG consensus and support. The common goal of DFW's and BWWG's efforts, as preserved in statute, has been to adopt only those more stringent state requirements necessary to fill nonindigenous protection gaps in federal laws in balance with the economic costs to the regulated industry. Development of the West Coast 50-mile open sea exchange zone is an excellent example of how the partnership provided a reasonable and balanced solution.

In general, DFW's ballast water management program regulations are divided into the following requirements:

- Reporting and recordkeeping.
- Vessel inspections.
- Vessels carrying high risk ballast water.
- Temporary compliance plans and alternative strategies.
- Temporary open sea exchange requirements.
- Temporary open sea exchange alternatives.
- Treatment requirements.
- Treatment notification and promising treatment waiver process.
- Ballast tank sediment.
- Penalties and enforcement.

DFW does not have a formal biofouling management program, but rather deals with heavily fouled vessels and in-water cleaning requests on a case-by-case basis. DFW manages vessel biofouling under the general invasive species authorities that prohibit the intended or unintended introduction into state waters of nonindigenous species classified as either prohibited or regulated. DFW (nonindigenous species authority) works jointly with ECY (water pollution control authorities) to evaluate and approve in-water cleaning requests.

Section 3 Methods

The Washington State DFW and ECY regulations and the federal EPA and USCG regulations can be compared on three levels (i.e. code, interpretation, and practice) and across three gap types (i.e. discrepancy, inconsistency, and duplication).

The subject of this analysis is the differences between the state and federal regulations at the code and implementation levels. Analysis at the practice level requires data collection, and is outside the scope of this report.

An initial list of significant gap analysis issues was identified through a comparison of the state and federal regulations in a matrix format (full matrix available in Appendix A). Significant gaps were selected based on objective differences in regulatory levels and subjective assessments of potential vessel cost and/or resource protection benefits. Initial identification of gaps was aided by DFW and Glosten experience with ballast water regulations and operations and anecdotal interviews by Glosten with vessel operators. Based on this information, an initial list of "primary" and "secondary" gap analysis issues were identified. The primary gap analysis issues were further explored in detail at both the code and interpretation levels, and were then presented to DFW's BWWG in a draft report (see process diagram in Figure 1).

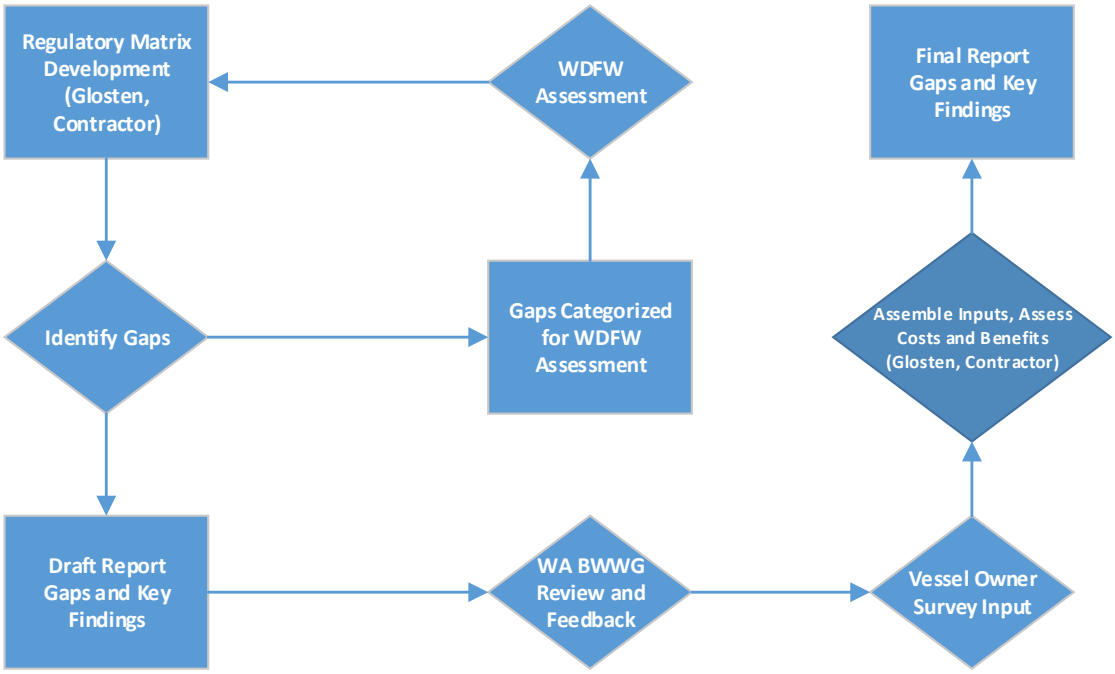

Figure 1 Gap analysis method

Following the presentation of the draft report, the BWWG provided feedback in a comment period, extended to more than 30 days by BWWG request. Glosten also used this review period to survey additional vessel operators regarding their views of gaps between state and federal regulations.

Using the BWWG and vessel operator inputs, the Glosten and DFW team expanded the list of gap topics to determine the final list for analysis in this report. The list of gaps is presented in general order as found in Washington State's regulatory sequence by rule, not by priority or significance. Each gap is discussed in a section below, beginning with a description and

qualitative assessment of each gap. Pertinent regulatory information is presented for each gap, followed by a discussion that considers the potential costs and benefits of the gap.

The Glosten and DFW team considered the potential costs and benefits of each gap as a method for evaluating the gaps in order to provide options for a path ahead. The team tried to consider costs and benefits to both vessels and the state, including issues such as administrative burden and operation costs to vessels for compliance, cost to state for implementation, benefits to vessels from the gap, and ability of the regulations to target risky vessels with science-based criteria. Following the discussion of the results, gap options are presented for each topic based on the discussion, and further gap analysis recommendations are provided where applicable.

Section 4 Gap Analysis

4.1 Ballast Water Report Filing Requirements (WAC 220-150-030)

Vessels are required to file ballast water reporting forms (BWRF) to both DFW by email and to USCG through their National Ballast Information Clearinghouse portal. EPA does not require BWRF submissions and defers to USCG for report filing requirements. DFW requires vessels to use the same BWRF as USCG and until recently, both the DFW and USCG required filing BWRFs 24 hours prior to arrival. However, as of February 22, 2016, the USCG updated the reporting requirements for vessels arriving to US ports so that ballast water "management reports" (term now used in place of BWRF) are not due until up to six hours after vessel arrival. This change has created a primary **inconsistency** in filing requirements. Table 1 provides a comparison of the relevant regulatory codes.

Table 1 Code-level language comparison

Washington	USCG	EPA
WAC 220-150-030(2) (b) … At least twenty-four hours prior to entering waters of the state, vessel owners or operators must file a reporting form with the department. If filing twenty-four hours prior is not possible due to voyage distance or change in destination, vessel owners or operators must file at the time of first known or predictable Washington port visit....	33 C.F.R. §151.2060 (b) (3) For any vessel that is equipped with ballast water tanks and bound for ports or places in the United States and not addressed in paragraphs (b)(1) and (2) [Great Lakes/Hudson River] of this section: Submit the ballast water report no later than 6 hours after arrival at the port or place of destination, or prior to departure from that port or place of destination, whichever is earlier.	VGP 4.3 …and must be submitted to the National Ballast Information Clearinghouse (NBIC) before arriving to U.S. ports as required by the U.S. Coast Guard…

4.1.1 Discussion

The state's requirement for earlier ballast water management reporting has the benefit of giving state inspectors extra time to assess reports, allowing them opportunity to target higher-risk vessels and ballast water, and to prevent unmanaged discharges. DFW has to spend a large proportion of staff time processing these reports, but the additional time and burden on vessels is low, since they can still report to USCG and WDFW simultaneously. Vessel operator feedback indicated that the gap in reporting requirements does not affect their operations.

4.1.2 Gap Options

A. No Change in Washington State Regulation: Vessel operator feedback indicated that the gap in reporting requirements does not affect their operations. DFW feedback was that the twenty-four hours prior to arrival reporting requirement appears to be a sufficient length of time. This duration respects DFW's ability to identify non-compliance in sufficient time for vessel to come into compliance without penalty, without requiring such early reporting that vessel knowledge of voyage operations is diminished.
B. Change at State Level: There was no information provided during review to support either increasing or decreasing these requirements.
C. Change to Federal Level: DFW feedback was that reducing state requirements to match the federal reporting requirement would put the state at increased risk for nonindigenous species

introductions and vessels at increased risk for non-compliance penalties. Vessel operator feedback indicated that the earlier state reporting requirement does not substantially affect vessel operations.

4.1.3 Further Gap Analysis Recommendations

The ability to fully assess whether DFW's 24-hour prior-to-arrival reporting requirement reduces nonindigenous species risk requires analysis of DFW reporting data for frequency of averting vessel non-compliance prior to arrival.

4.2 Ballast Water Safety Exemption Requirements (WAC 220-150-030)

Vessels may have design limitations that prevent proper ballast water management. Vessels also may be unable to properly manage ballast water if they encounter extraordinary situations during a voyage, such as adverse weather conditions or equipment failure, which could threaten the safety of the vessel, its crew, or its passengers. State and federal regulations both provide ballast water management exemptions to prevent a vessel operator from jeopardizing vessel safety. .

Though the state and federal regulations are organized differently, they contain essentially similar allowances. The key **discrepancies** subject to this analysis are two additional requirements the state imposes on any vessel claiming a safety exemption:

- Vessels are subject to a $500 fee.
- Vessels are subject to an inspection upon arrival.

By adding these requirements, the state originally intended to close a federal regulatory gap and to reduce nonindigenous species risk in instances where vessels could claim a safety exemption with minimal review.

Table 2 Code-level language comparison

Washington	USCG	EPA
RCW 77.120.030 (4) The master, operator, or person in charge of a vessel is not required to conduct an open sea exchange or treatment of ballast water if the master, operator, or person in charge of a vessel determines that the operation would threaten the safety of the vessel, its crew, or its passengers, because of adverse weather, vessel design limitations, equipment failure, or any other extraordinary conditions.	33 C.F.R. §151.2040 (a) The Coast Guard will allow the master, owner, operator, agent, or person in charge of a vessel that cannot practicably meet the requirements of §151.2025(a) of this subpart, either because its voyage does not take it into waters 200 nautical miles or greater from any shore for a sufficient length of time and the vessel retains ballast water onboard or because the master of the vessel has identified safety or stability concerns, to discharge ballast water in areas other than the Great Lakes and the Hudson River north of the George Washington Bridge.	VGP 2.2.3.6.6 Exemptions The operator or master of a vessel may elect not to exchange ballast water (or not conduct saltwater flushing if applicable) if the vessel meets one of the following conditions: • The master of the vessel determines, and justifies in writing, and documents in the log or record book, that it is unsafe to do so, in accordance with the Coast Guard Regulations at 33 CFR Part 151. If this exemption is claimed, the vessel operator must record the date, location, and reason for the claim in its recordkeeping documentation. Furthermore, the vessel owner/operator must report this information to EPA as part of its annual report.

Washington	USCG	EPA
WAC 220-150-030(4) (e) Safety exemption filing fee. The department will assess a safety exemption filing fee of five hundred dollars for administrative costs to assess compliance. WAC 220-150-030(4)… (d) Discharge authorization requirement. Except where discharging is necessary to prevent jeopardy to the vessel, crew or passengers, the vessel owner or operator shall not discharge unexchanged or untreated ballast water without department authorization. The department will determine and require the vessel owner or operator to conduct one or more of the following actions: (i) Hold its ballast water; (ii) Conduct an emergency ballast water treatment response; (iii) Discharge into a reception facility; (iv) Discharge into specified alternative waters; or (v) Discharge only the minimum amount necessary to complete a safe operation	33 C.F.R. §151.2040 (b) If the installed BWMS required by this subpart stops operating properly during a voyage, or the vessel's BWM method is unexpectedly unavailable, the person directing the movement of the vessel must ensure that the problem is reported to the nearest COTP or District Commander as soon as practicable. The vessel may continue to the next port of call, subject to the directions of the COTP or District Commander, as provided by part 160 of this chapter… (3) If the Coast Guard approves such an allowance, the vessel must discharge only that amount of ballast water operationally necessary to ensure the safety and stability of the vessel for cargo operations. Ballast water records must be made available to the local COTP upon request.	VGP 2.2.3.5.1.4 EPA notes that in the case of a shipboard emergency that endangers the safety of the vessel or its crew, ballast water may need to be pumped out quickly by bypassing the BWTS. In such cases, the provisions regarding the prohibition of bypassing treatment where unavoidable to prevent loss of life, personal injury of severe property damage may be applicable.

Table 3 Interpretation-level language comparison

Washington	Federal Regulations
Fish Program Protocol Implementing Pol-5213: Assessing And Enforcing Compliance With The State Ballast Water Management Code (Chapter 77.120 RCW) 5. General Frequency of BWI Compliance Audit Boardings. The general frequency of BWI compliance audit boardings is determined by vessel actions, known high risk listing, or by priority 1-3 risk classification (see Appendix A). General objectives for compliance audit boardings are as follows: B. Safety Exemption- 100% of vessel arrivals reporting a safety exemption claim should be boarded by BWI.	[Specific mention of safety exemptions not present in federal guidance documents]

4.2.1 Discussion

The benefit of the state's additional requirements for vessels requesting safety exemptions is that they target vessels that are posing a risk to state waters through their potential to discharge unmanaged ballast water. The extent to which the requirements effectively prevent or discourage the indiscriminant use of safety exemptions to avoid ballast water management costs was not within the scope of this report. The requirements do present additional administrative burden on vessels and on DFW for communication and inspections. Vessel operators stated that the

administrative fee was relatively insignificant, especially since these exemptions are only claimed in extraordinary situations.

4.2.2 Gap Options

A. No Change: DFW feedback supported maintaining these requirements as successful deterrents to indiscriminant use of safety exemption provisions. There was no BWWG or other vessel operator feedback provided during review that the fee and inspections requirements must be changed.
B. Change at State Level: There was no information provided during the review to support either increasing or decreasing these requirements.
C. Change to Federal Level: DFW feedback was that reducing their safety exemption requirements to match the federal standards would put the state at increased risk for nonindigenous species introductions. BWWG and other vessel operator feedback provided during review did not indicate a preference for aligning state safety exemption requirements with federal requirements, as the associated fee should not substantially affect vessel operations.

4.2.3 Further Gap Analysis Recommendations

The ability to fully assess whether DFW's fees and inspections of vessels claiming safety exemptions reduces nonindigenous species risk requires analysis of DFW reporting data and other state or federal reporting data, to compare rates of safety exemption claims.

4.3 Ballast Water Vessel Inspection Selection Requirements (WAC 220-150-035)

DFW prioritizes vessel inspections based specifically on six ballast water and nonindigenous species risk criteria as defined in both code and implementation regulatory levels. Using these criteria, DFW categorizes each day's vessel arrivals as Priority 1 (high), Priority 2 (moderate), or Priority 3 (low) risk with guidelines on selection for the day's boarding in practice to include priority level, vessel operational constraints, and avoiding USCG boarding activity. Vessels that are more likely to discharge unmanaged ballast water need to be prioritized for inspections and assistance in order to prevent the spread of nonindigenous species.

USCG prioritizes vessel inspections based on their Port State Control guidelines for vessel inspections that include a targeting matrix focused on vessel security, vessel safety, and environmental protection compliance. USCG does not select vessels for boarding based solely on ballast water or nonindigenous risk, but evidence of risk prior to (e.g. poor vessel compliance history) or during boarding may trigger an expanded investigation under their Navigation and Inspection Circular (NVIC) guidance document. The EPA's VGP compliance monitoring is conducted by the USCG (CG-543 Policy Letter 11-01), in accordance with their Memorandum of Understanding (MOU).

There is an **inconsistency** between the methods used to prioritize state and federal inspections the implementation of the inspections.

Table 4 Code- and interpretation-level language comparison

Washington Code	Washington Implementation	USCG Implementation	EPA Implementation
WAC 220-150-035 (1) In general. The department will identify, publish, and maintain a list of vessels that pose an elevated risk of discharging ballast water or sediment containing nonindigenous species into the waters of the state. Vessels on this list will be prioritized for evaluation and boarding under WAC 220-150-033 and may require completion of an approved temporary compliance plan and/or temporary alternative strategy under WAC 220-150-037.	Six vessel risk factors, based on WAC 220-150-035(2), are used by the BWS and BWI in determining priority classification including: • BWMC Compliance History • Arrival History and Discharge Intent • Intended Discharged Volume on Arrival • Cumulative Discharge Volume History • Ballast Water Source and Open Sea Exchange Area • Port Risk Based on Cumulative Arrival Frequency and Discharge Volume History	Enclosure 2 to NVIC 07-04 Coast Guard Marine Inspectors (MIs) and Boarding Officers (BOs) shall examine the onboard BWM records, make appropriate inquiries to assess adherence with the BWM recordkeeping requirements, and pursue appropriate enforcement actions when necessary. Coast Guard Headquarters may provide field units with BWM lookout lists that identify vessels with a history of either not reporting or submitting inaccurate or incomplete BWM reports to the NBIC. These vessels should undergo an expanded examination of their BWM records during regularly scheduled inspections and boardings. Appropriate enforcement action should be taken against all vessels listed on the BWM lookout lists unless reasonable evidence is provided by the master which disputes the reasons for the vessel being listed, or unless an enforcement activity has already been initiated in Marine Information for Safety and Law Enforcement (MISLE) database by another port for the same lookout listing.	CG-543 Policy Letter 11-01 Under the USCG/EPA VGP MOU, the Coast Guard's main role will be to assist the EPA with examining compliance with basic provisions of the VGP1 during routine inspections onboard U.S. vessels and during Port State Control exams on foreign vessels. The Coast Guard will report detected VGP deficiencies to the EPA. The EPA retains full responsibility and enforcement authority under the CWA to address VGP violations and unauthorized discharges, which includes issuance of administrative orders, administrative penalties, and judicial action.

4.3.1 Discussion

The state's inspection prioritization system is costly to implement, and inspections may delay vessel operations or require crew time and resources. Prioritization is intended to focus state enforcement efforts on vessels that pose a high risk to state waters, and to minimize inspection burdens on vessels that do not discharge or have lower risk ballast water. The state system for identifying high-risk vessels is based on scientific literature and the state's own research into ballast water exchange effectiveness.

Vessel operators were very concerned that the state was duplicating federal vessel inspections regardless of different vessel selection matrixes. However, determining the degree of duplication requires analysis of vessel boarding data between state and federal agencies; that analysis was outside the scope of this report. Where necessary, BWWG and vessel operator feedback indicated a preference for regulations that use risk metrics to ensure efficient use of resources. Risk-based criteria also minimize burden on low-risk, compliant vessels.

4.3.2 Gap Options

A. No Change: DFW feedback was that the current inspection prioritization system uses science-based criteria, but can be improved based on additional analysis of arrival and

boarding data.. Vessel operators provided feedback that additional data analysis should be conducted to resolve the question of the state duplicating federal vessel inspections.

B. Change at State Level: DFW feedback was that they intend to continue refining their vessel inspection prioritization protocols based on ballast water exchange research (Reference 2) and ballast water treatment equipment or other risk data as it evolves. Vessel operators provided feedback that additional data analysis should be conducted to resolve the question of the state duplicating federal vessel inspections.
C. Change to Federal Level: DFW feedback was that reducing state requirements to match the federal standards would remove the state's ability to target high-risk vessels, increasing the risk of nonindigenous species introduction and increasing the burden on less-risky vessels. Some vessel operator feedback stated that state inspections are unnecessary given USCG inspection regime.

4.3.3 Further Gap Analysis Recommendations

1. BWWG and vessel operator feedback indicated interest in a comparison between federal and state vessel inspection data to identify areas where interagency cooperation could minimize duplication of effort. Comparison of state and USCG inspection criteria, inspection rates, and compliance rates would help indicate any overlaps between management programs.
2. As the state continues to collect ballast water sampling data, results should be compared to the state's prioritization criteria to verify that the criteria can accurately predict vessels with a higher risk for introducing nonindigenous species.

4.4 Compliance Plans (WAC 220-150-037)

DFW regulation provides a special way to assist vessels in complying with ballast water regulations: through a cooperative compliance plan. Compliance plans are generally triggered by vessels that claim safety exemptions for design limitations or chronic equipment failures, or vessels listed as high risk. The scope, timeline, and reporting requirements associated with a compliance plan are arrived at in consultation between the state and the vessel operator. Plans may include a vessel needing to install treatment equipment earlier than required by federal requirements. In exchange, the plan provides a waiver for discharge of otherwise noncompliant ballast water during that period. At the interpretation level, DFW protocol includes higher fines for noncompliant vessels that are also failing to meet their compliance plan conditions, giving some extra incentive for vessels to comply with the plans.

Federal regulations do not include compliance plans, leaving a **discrepancy** in agency authority to assist vessels and reduce risks of nonindigenous species introduction. These extensions, however, do not address alternatives for vessels that cannot periodically utilize approved practices, i.e. exchange, or equipment, i.e. ballast water management systems. The USCG does grant extensions for vessels that cannot comply with the management requirements within the required timeline.

Table 5 Code-level language comparison

Washington	USCG	EPA
RCW 77.120.030 (5) For treatment technologies requiring shipyard modification, the department may enter into a compliance plan with the vessel owner. The compliance plan must include a timeline consistent with drydock and shipyard schedules for completion of the modification. The department shall adopt rules for compliance plans under this subsection.	33 C.F.R. §151.2036 The Coast Guard may grant an extension to the implementation schedule listed in §151.2035(b) of this subpart only in those cases where the master, owner, operator, agent, or person in charge of a vessel subject to this subpart can document that, despite all efforts, compliance with the requirement under §151.2025 is not possible. Any extension request must be made no later than 12 months before the scheduled implementation date listed in §151.2035(b) of this subpart and submitted in writing to the Commandant…	VGP 1.9.1 Regarding implementation dates of the limits found in Part 2.2.3.5 of the VGP, EPA advises that where the U.S. Coast Guard has granted or denied an extension request pursuant to 33 CFR 151.2036, that information will be considered by EPA, but is not binding on EPA.
WAC 220-150-037 Temporary compliance plans and alternative strategies. (1) In general. The department may require a vessel owner or operator to submit a temporary compliance plan or a temporary alternative strategy to bring its vessel into compliance with state ballast water management law. Temporary compliance plans and alternative strategies are only utilized when it is not feasible to otherwise comply with regulatory requirements, and then, only for the minimum time necessary to bring a vessel into compliance…	33 CFR 151.2036 … Extensions will be for no longer than the minimum time needed, as determined by the Coast Guard, for the vessel to comply with the requirements of §151.2030.	
WAC 220-150-030(4) (a) In general. Vessel owners or operators claiming a safety exemption under RCW 77.120.030(4) must file a reporting form and provide sufficient additional information for the department to evaluate the claim, determine whether an alternative exchange or emergency ballast water treatment strategy is warranted, and determine whether a temporary compliance plan is necessary to prevent or reduce the likelihood of future claims.		

4.4.1 Discussion

The state has not used its compliance plan provisions with a vessel operator to date. For this reason, costs to vessels and DFW are unknown, though if compliance plans are to be used, it is expected that it will require extensive state and vessel operator resources to implement. There are also higher vessel operator penalties associated with noncompliance after agreement to a compliance plan.

A benefit of the compliance plan program is that the plans can target specifically risky vessels to encourage compliant practices. They can also be beneficial to vessels to assist in planning for regulatory compliance or providing extensions in special circumstances.

4.4.2 Gap Options

A. No Change: DFW feedback was that the current state compliance plan system has the ability to provide benefits to both the state and vessels. It is only costly when implemented. There was no BWWG or other vessel operator feedback provided during review that the compliance plan requirements must be revoked.
B. Change at State Level: BWWG member feedback was that it is not clear whether or how compliance plans protect the environment or the regulated community.
C. Change to Federal Level: DFW feedback was that reducing state requirements to match the federal standards would remove a tool the state can use to reduce the risk of nonindigenous species introduction. Removing this ability would not lead to a significant cost savings, as costs are only accrued if a vessel elects to enter the program.

4.4.3 Further Gap Analysis Recommendations

No further analysis is recommended on this gap.

4.5 Coastal Voyage Exchange Requirements (WAC 220-150-040)

DFW requires vessels that do not travel more than 200 nm from shore to exchange their ballast water at least 50 nm from shore, in order to maintain some level of nonindigenous species reduction and protection. The VGP includes similar requirements, but exempts vessels from the exchange if it will cause them delay. The USCG code does not include this requirement, and only requires vessels to exchange if they venture beyond 200 nm from shore. There is a **discrepancy** between the USCG vessel exchange requirements, and the state and EPA exchange requirements.

Table 6 Code-level language comparison

Washington	USCG	EPA
WAC 220-150-040 (3) (c) Coastal voyages. A vessel owner or operator who does not voyage two hundred nautical miles or greater from any shore shall conduct ballast water exchange: (i) Before entering waters of the state; (ii) At least fifty nautical miles from any shore; and (iii) In water at least two hundred meters deep.	33 C.F.R. §151.2040 (a) The Coast Guard will allow the master, owner, operator, agent, or person in charge of a vessel that cannot practicably meet the requirements of §151.2025(a) of this subpart, either because its voyage does not take it into waters 200 nautical miles or greater from any shore for a sufficient length of time and the vessel retains ballast water onboard or because the master of the vessel has identified safety or stability concerns, to discharge ballast water in areas other than the Great Lakes and the Hudson River north of the George Washington Bridge.	VGP 2.2.3.6.2 Vessels Carrying Ballast Water Engaged in Pacific Nearshore Voyages Unless the vessel meets one of the exemptions in Part 2.2.3.6.6, any vessel engaged in Pacific nearshore voyages that carries ballast water that was taken on in areas less than 50 nautical miles from any shore must carry out an exchange of ballast water in accordance with this Part before discharging from any tanks that carry ballast water into waters subject to this permit if the vessel travels through more than one COTP zone as listed in 33 CFR Part 3 or the vessel crosses international boundaries… Ballast water exchange for vessels subject to this part must occur in waters more than 50 nautical miles from any shore (US or otherwise), and in waters more than 200 meters deep, prior to discharging ballast water into waters subject to this permit. Exchange should occur as far from the shore, major estuary and oceanic river plumes, subsurface physical features (e.g. seamounts), and known fishery habitats as practicable. VGP 2.2.3.6.6 Exemptions Additionally, except for vessels entering the Great Lakes or into Appendix G waters, a vessel is not required to deviate from its voyage, or delay the voyage to conduct ballast water exchange or saltwater flushing.

4.5.1 Discussion

The coastal voyage exchange requirement is particularly important for Washington waters, because vessels coming from other areas of the North American Pacific coast rarely venture 200 miles off the coast during their voyage to a Washington State port. In addition, vessels from Pacific coast ports are more likely to have higher risk ballast water containing invasive species – San Francisco Bay alone is reported to contain more than 200 (Reference 1). In general, the concentration of viable organisms in ballast water decreases as holding time within a ballast tank increases. Vessels on short Pacific coastal voyages usually hold ballast water for short periods, have high numbers of viable organisms in the water, and are some of the most common arrivals to Washington ports (Reference 3).

Coastal exchange costs vessels voyage time and operating costs, and has high penalty potential for noncompliance. It has the benefit of targeting a specifically risky demographic of vessels (frequent arrivals) and of ballast water (short hold times, high potential presence of invasive species).

4.5.2 Gap Options

A. No Change: DFW feedback was that the current state requirements fill a gap in USCG requirements that puts state waters at higher risk. There is a lack of data on whether EPA requirements are sufficiently filling that gap as well. There was no BWWG or other vessel operator feedback provided during review that the state coastal exchange requirements must be maintained.

B. Change at State Level: There was no information provided during the review to support either increasing or decreasing these requirements.
C. Change to Federal Level: The risk to state waters of reducing state requirements to match the federal standards depends on the current enforcement of EPA requirements. Aligning state and federal regulations gives vessels the benefit of only one standard to comply with, and could reduce the burden of enforcement on DFW. There was no BWWG or other vessel operator feedback provided during review that the state coastal exchange requirements must meet federal standards.

4.5.3 Further Gap Analysis Recommendations

1. An assessment of the ability of the state coastal exchange requirement to reduce invasive species risk would require comparison of federal nearshore exchange compliance rates with Washington State compliance rates.
2. The overlap between EPA and state requirements suggests that this may be an area for improved interagency cooperation. Communication with the USCG regarding enforcement of the EPA requirements would aid in decision-making on this subject.

4.6 Interim Open Sea Exchange Alternatives (WAC 220-150-043)

The state requires notification from vessels that intend to use a foreign type-approved ballast water treatment system as an alternative to conducting an open sea exchange. If accepted, the vessel would be granted a five-year grace period (waiver) for any more stringent state requirement. The state developed its Interim Open Sea Exchange Alternative requirements in 2009 to fill a then federal gap in approving the use of foreign type-approved ballast water treatment technology as an acceptable alternative to coastal ballast water exchange (BWE) (vessels arriving from outside 200 nm would still need to meet federal BWE requirements). This provision was also implemented as a means to encourage the development, installation, and use of treatment technologies.

Alternative technology use would be evaluated in coordination with ECY if the treatment system used a biocide. A toxicity report setting conditions necessary for the discharge (see Section 4.10) would be required in such cases.

USCG standards for use of an open sea exchange alternative became final in 2012; they are covered under USCG's "Alternative Management Systems" (AMS) provisions. USCG requires the AMS manufacturer of a foreign type-approved management system to apply for determination of acceptance. Accepted AMS may be used for a period of five years from the date vessels would otherwise be required to install a USCG type-approved system. EPA defers to USCG's acceptance requirements for AMS use.

Exchange Alternatives (or AMS) are allowed at both the state and federal level; however, the varying levels of regulation introduce an **inconsistency**.

Table 7 Code-level language comparison

Washington	USCG	EPA
WAC 220-150-043 Interim open sea exchange alternative. (1) In general. For purposes of this section, a vessel owner or operator may use an exchange alternative instead of conducting an open sea exchange, except for Columbia River ports unless specifically approved, provided:	33 C.F.R. §151.2025(a) (3) Perform complete ballast water exchange in an area 200 nautical miles from any shore prior to discharging ballast water, unless the vessel is required to employ an approved BWMS per the schedule found in §151.2035(b) of this subpart. An alternate management system (AMS) that meets the requirements of §151.2026 of this	VGP 2.2.3.5.1.1 Ballast Water Management using a Ballast Water Treatment System

Washington	USCG	EPA
(a) The vessel owner or operator is not otherwise required to meet discharge performance standards under WAC 220-150-050; and (b) The exchange alternative meets or exceeds the standards provided under Regulation D-2 of the International Convention for the Control and Management of Ships' Ballast Water and Sediment as signed on February 13, 2004. (2) Notification. Vessel owners or operators must file a signed notification form, as provided by the department, stating that they intend to use an exchange alternative to meet state ballast water exchange requirements. A single notification form may cover multiple vessels under the authority of a single vessel owner or operator. The form must include the minimum content as required in subsection (3) of this section. This notification does not release vessel owners or operators from meeting other federal or state ballast water reporting or discharge regulations. (3) Notification form contents. The department's notification of exchange alternative use will, at a minimum, require the following information: (a) Vessel name(s), identification number(s) (International Maritime Organization, Lloyds of London, or USCG registry number), owner, agent, and vessel type(s); (b) The manufacturer, brand name, model, and other information, as necessary, of the technology on board the vessel, and a brief description of the technology and its process for removing or inactivating organisms in ballast water; (c) The name of the flag state that has approved the exchange alternative system, a copy of IMO type approval certification or final approval documentation, or other information that reasonably documents how the exchange alternative was tested to ensure it meets state open sea exchange requirements; (d) If the exchange alternative will not be used on all ballast tanks, the number of tanks and the volume of each tank that will be managed using the exchange alternative; (e) A recommendation from the state department of ecology, based upon a	subpart may also be used, so long as it was installed on the vessel prior to the date that the vessel is required to comply with the BWDS in accordance with §151.2035(b) of this subpart. If using an AMS, the master, owner, operator, agent, or person in charge of the vessel subject to this subpart may employ the AMS for no longer than 5 years from the date they would otherwise be required to comply with the BWDS in accordance with §151.2035(b) of this subpart; 33.C.F.R. §151.2026 (a) A manufacturer whose ballast water management system (BWMS) has been approved by a foreign administration pursuant to the standards set forth in the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004, may request in writing, for the Coast Guard to make a determination that their BWMS is an alternate management system (AMS). Requests for determinations under this section must include: (1) The type-approval certificate for the BWMS. (2) Name, point of contact, address, and phone number of the authority overseeing the program; (3) Final test results and findings, including the full analytical procedures and methods, results, interpretations of the results, and full description and documentation of the Quality Assurance procedures (i.e., sample chain of custody forms, calibration records, etc.); (4) A description of any modifications made to the system after completion of the testing for which a determination is requested; and (5) A type approval application as described under 46 CFR 162.060-12. (i) Once ballast water management systems are type approved by the Coast Guard and available for a given class, type of vessels, or specific vessel, those vessels will no longer be able to install AMS in lieu of type approved systems. (ii) [Reserved] (b) Requests for determinations must be submitted in writing to the Commanding Officer (MSC), Attn: Marine Safety Center, U.S. Coast Guard Stop 7410, 4200 Wilson Boulevard, Suite 400, Arlington, VA 20598-7410. (c) If using an AMS that was installed on the vessel prior to the date that the vessel is required to comply with the ballast water discharge standard in accordance with	Vessel owner/operators utilizing a ballast water treatment system (BWTS) must use a system which has been shown to be effective by testing conducted by an independent third party laboratory, test facility or test organization. A system that has been type approved by the U.S. Coast Guard under 46 CFR Part 162.060 or received "Alternative Management System" designation by the U.S. Coast Guard under 33 CFR 151.2026 will be deemed to meet this "shown to be effective" provision.

Washington	USCG	EPA
toxicity report provided in accordance with Appendix H of ecology publication number WQ-R-95-80, setting conditions necessary for the environmentally safe discharge of biocide treated ballast water; (f) A statement that the vessel owner or operator will file a new notification if there are any changes in the information required in this subsection; (g) A statement that the vessel will conduct a valid open sea exchange under this section if they do not use the exchange alternative; and (h) The signature of the vessel owner or operator.	§151.2035(b), the master, owner, operator, agent, or person in charge of the vessel subject to this subpart may employ such AMS for no longer than 5 years from the date they would otherwise be required to comply with the ballast water discharge standard in accordance with the implementation schedule in §151.2035 (b) of this subpart. To ensure the safe and effective management and operation of the AMS equipment, the master, owner, operator, agent or person in charge of the vessel must ensure the AMS is maintained and operated in conformity with the system specifications. (d) An AMS determination issued under this section may be suspended, withdrawn, or terminated in accordance with the procedures contained in 46 CFR 162.060-18.	

4.6.1 Discussion

The DFW notification requirements for interim open sea exchange alternatives were developed prior to USCG's AMS application/acceptance provisions, and are now out of date. DFW provided feedback that these requirements could be amended for consistency with current federal provisions.

However, DFW may maintain additional requirements given the varying parameters of currently accepted AMS. USCG has acknowledged that of the 56 AMS currently accepted, 70% lacked any quality control, 50% lacked independent verification, and 80% did not scale their tests for different volume capacities during their IMO type-approval processes (Reference 4). These statistics represent a risk to state waters and additional state requirements would be necessary to identify which AMS manufacturers or AMS models these statistics represent so that the state could prioritize for inspections.

4.6.2 Gap Options

A. No Change: DFW provided feedback that this section needs to be amended to meet current needs and provide clarity. Currently, there is confusion among the regulated community regarding whether this WAC section would include a state-level "approval" process for AMS already accepted by USCG.
B. Change at State Level: DFW provided feedback that this section needs to be amended to meet current needs. The degree of more or less stringent requirements will be assessed in subsequent strategic planning and/or rulemaking in consultation with the BWWG. Vessel operator feedback was that any BWMS or AMS reporting or evaluation criteria should be the same as those used by USCG, EPA, and IMO.
C. Change to Federal Level: Vessel operator feedback was preference on bringing the state requirements into alignment with the USCG AMS acceptance standards as it would bring benefit to vessels by providing one standard to meet. DFW feedback was that state requirements might be met if USCG can provide identification of higher risk AMS manufactures and models.

4.6.3 Further Gap Analysis Recommendations

Communication between agencies to coordinate identification of high-risk AMS would be necessary to minimize costs to the state if they were to adopt the federal AMS acceptance standards.

4.7 Treatment Requirements for Biological Efficacy (WAC 220-150-050)

DFW has yet to adopt biological efficacy discharge standards for treated ballast water. The USCG and EPA have discharge standards that are aligned with the international (IMO) regulations. IMO regulations are included below for comparison with USCG and EPA standards.

There is a reserved section in the state regulations where the state could add a biological discharge standard, but that section is currently blank and there is a **discrepancy** between state and federal regulations.

Table 8 Code-level language comparison

Washington	USCG	EPA	IMO
RCW 77.120.030 (2) Discharge of ballast water into waters of the state is authorized only if there has been an open sea exchange, or if the vessel has treated its ballast water, to meet standards set by the department consistent with applicable state and federal laws. (3) The department, in consultation with a collaborative forum, shall adopt by rule standards for the discharge of ballast water into the waters of the state and their implementation timelines. The standards are intended to ensure that the discharge of ballast water poses minimal risk of introducing nonindigenous species. In developing these standards, the department shall consider the extent to which the requirement is technologically and practically feasible. Where practical and appropriate, the standards must be compatible with standards set by the United States coast guard, the federal clean water act (33 U.S.C. Sec. 1251-1387), or the international maritime organization. WAC 220-150-050 [Reserved]	33 CFR §151.2030 (a) (1) 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.	VGP 2.2.3.5 For organisms greater than or equal to 50 micrometers in minimum dimension: discharge must include fewer than 10 living organisms per cubic meter of ballast water.	Regulation D-2 Ballast Water performance standard 1 Ships conducting Ballast Water Management in accordance with this regulations shall discharge less than 10 viable organisms per cubic metre greater than or equal to 50 micrometres in minimum dimension and

Washington	USCG	EPA	IMO
	(2) For organisms less than 50 micrometers and greater than or equal to 10 micrometers: Discharge must include fewer than 10 organisms per milliliter (mL) of ballast water.	For organisms less than 50 micrometers and greater than or equal to 10 micrometers: discharge must include fewer than 10 living organisms per milliliter (mL) of ballast water	Less than 10 viable organisms per millilitre less than 50 micrometres in minimum dimension and greater than or equal to 10 micrometres in minimum dimension and
	(3) Indicator microorganisms must not exceed: (i) For toxicogenic Vibrio cholerae (serotypes O1 and O139): A concentration of less than 1 colony forming unit (cfu) per 100 mL.	Indicator microorganisms must not exceed: (i) For Toxicogenic Vibrio cholerae (serotypes O1 and O139): a concentration of less than 1 colony forming unit (cfu) per 100 mL.	Discharge of the indicator microbes shall not exceed the specified concentrations described in paragraph 2. 2 Indicator microbes, as a human health standard, shall include: .1 Toxicogenic *Vibrio cholerae* (O1 and O139*)* with less than 1 colony forming unit (cfu) per 100 millilitres or less than 1 cfu per 1 gram (wet weight) zooplankton samples;
	(ii) For Escherichia coli: a concentration of fewer than 250 cfu per 100 mL.	(ii) For *Escherichia coli*: a concentration of fewer than 250 cfu per 100 mL.	.2 *Escherichia coli* less than 250 cfu per 100 millilitres;
	(iii) For intestinal enterococci: A concentration of fewer than 100 cfu per 100 mL.	(iii) For intestinal enterococci: a concentration of fewer than 100 cfu per 100 mL.	.3 Intestinal Enterococci less than 100 cfu per 100 millilitres.

4.7.1 Discussion

The lack of state biological discharge standards has the benefit of giving vessels only one set of requirements to comply with at the cost of no state mechanism to enforce compliance for treatment equipment performance and biological standard compliance. DFW reserved adoption of ballast water discharge standards in 2009 in consensus with BWWG recommendations as vessels were not actively installing systems and USGS had not yet issued a federal standard. Costs to vessel operators for a more stringent state ballast water discharge standard could be significant and of great concern to industry.

4.7.2 Gap Options

A. No Change: DFW provided feedback that a missing section in Washington's regulatory code is not acceptable. Since vessels are increasingly installing new AMS and BWMS, this creates significant limitations on enforcement of BWMS performance and biological standard compliance capabilities. Vessel operator feedback was that the state does not need its own biological standards for ballast water, and that any adopted changes should be in alignment with federal standards.

B. Change at State Level: DFW provided feedback that the state needs to adopt a ballast water discharge standard to allow enforcement for protection of state waters. Data to support an increased benefit to state waters through addition of a state discharge standard more stringent than the federal standard has not been investigated. Vessel operator feedback was that a more stringent standard would bring new costs to vessels and state, and is not recommended without evidence that such standards would substantially reduce risks of nonindigenous species introduction. Vessel operators also expressed concern that equipment to meet standards that are more stringent is not commercially available or approved for vessel use by USCG.
C. Change to Federal Level: Introducing state requirements that match the federal standards would remove the gap between state and federal requirements, without additional compliance costs to vessels. State implementation could be coordinated with federal enforcement efforts to maximize the benefits and minimize any costs of adding this requirement.

4.7.3 Further Gap Analysis Recommendations

The addition of a state biological discharge standard would bring potential costs to the state for inspection and enforcement of the standard. Investigation of the opportunities for cooperation with the federal agencies to reduce the potential for duplication of inspection efforts would be beneficial to vessel operators.

4.8 Treatment Requirements Implementation Schedule (WAC 220-150-050)

The federal ballast water regulations contain implementation schedules indicating when exchange will no longer be a viable management option, and vessels will be required to treat ballast water with BWMS. EPA's VGP, which uses the term Ballast Water Treatment System (BWTS), defers to USCG's requirements. This schedule is also significant because it dictates the expiration of the validity of installed alternative management systems (AMS) for ballast water management, five years after the vessel would be required by this schedule to implement approved management methods.

It is worth noting that although the USCG implementation schedule for ballast water treatment standards indicates that vessels should now be installing type-approved systems at their next dry-docking, no systems have been type approved by the Coast Guard. As such, the Coast Guard is issuing extensions to vessels, and continuing to approve AMS.

Washington State has yet to adopt an implementation schedule to phase out ballast water exchange in favor of ballast water treatment, leaving a **discrepancy** between state and federal requirements.

Table 9 Code-level language comparison

Washington	USCG	EPA
RCW 77.120.030 (2) Discharge of ballast water into waters of the state is authorized only if there has been an open sea exchange, or if the vessel has treated its ballast water, to meet standards set by the	§151.2035 (b) *Implementation Schedule for the Ballast Water Management Discharge Standard for vessels using a Coast Guard approved BWMS to manage ballast water discharged to waters of the U.S.* After the dates listed in Table 151.2035(b), vessels may use a USCG-approved BWMS and comply with the discharge standard, use PWS per §151.2025(a)(2), or use a previously installed AMS per §151.2025(a)(3).	VGP 2.2.3.5.1.1 Ballast Water Management using a Ballast Water Treatment System Vessel owner/operators utilizing a ballast water treatment system (BWTS) must use a system which has been shown to be effective by testing conducted by an independent third party laboratory, test facility or test organization. A system that has been type approved by the U.S. Coast Guard under 46 CFR Part 162.060 or received "Alternative Management System" designation by the

Washington	USCG	EPA
department consistent with applicable state and federal laws. (3) The department, in consultation with a collaborative forum, shall adopt by rule		U.S. Coast Guard under 33 CFR 151.2026 will be deemed to meet this "shown to be effective" provision.
standards for the discharge of ballast water into the waters of the state and their implementation timelines. The standards are intended to ensure that the discharge of ballast water poses minimal risk of introducing nonindigenous species. In developing these standards, the department shall consider the extent to which the requirement is technologically and practically feasible. Where practical and appropriate, the standards must be compatible with standards set by the United States coast guard, the federal clean water act (33 U.S.C. Sec. 1251-1387), or the international maritime organization. WAC 220-150-040 (1) Purpose. Until otherwise required to meet performance standards under WAC 220-150-050 and prior to discharging ballast water into Washington waters, vessel owners or operators must exchange their	Table 151.2035(b)—Implementation Schedule for Approved Ballast Water Management Methods **Vessel's ballast water capacity** / **Date constructed** / **Vessel's compliance date** **New vessels** — All — On or after December 1, 2013 — On delivery. **Existing vessels** — Less than 1500 m^3 — Before December 1, 2013 — First scheduled drydocking after January 1, 2016. 1500-5000 m^3 — Before December 1, 2013 — First scheduled drydocking after January 1, 2014. Greater than 5000 m^3 — Before December 1, 2013 — First scheduled drydocking after January 1, 2016. §151.2026 Alternate management systems. (c) If using an AMS that was installed on the vessel prior to the date that the vessel is required to comply with the ballast water discharge standard in accordance with §151.2035(b), the master, owner, operator, agent, or person in charge of the vessel subject to this subpart may employ such AMS for no longer than 5 years from the date they would otherwise be required to comply with the ballast water discharge standard in accordance with the implementation schedule in §151.2035 (b) of this subpart.	2.2.3.5.2 Schedule for when Ballast Water Treatment Becomes BAT (and Therefore Required) Table 6 describes when BWTS will become the Best Available Technology Economically Achievable (BAT). Vessels must meet the requirements in Part 2.2.3.5.1 according to the schedule below in Table 6. Table 6: Ballast Water Treatment to BAT Schedule Vessel's **Ballast Water Capacity** / **Date Constructed** / **Vessel's Compliance Date** **New vessels** — After December 1, 2013 — On delivery **Existing vessels** — **Less than 1500 m3** — Before December 1, 2013 — First scheduled drydocking after January 1, 2016 **1500 - 5000 m3** — Before December 1, 2013 — First scheduled drydocking after January 1, 2014 **Greater than 5000 m3** — Before December 1, 2013 — First scheduled drydocking after January 1, 2016

Washington	USCG	EPA
ballast water to meet or exceed state interim open sea exchange requirements or use an approved exchange alternative. WAC 220-150-050 [Reserved]		

4.8.1 Discussion

DFW reserved adoption of a BWMS implementation schedule in 2009 in consensus with BWWG recommendations, as vessels were not actively installing systems (not a compliance issue). The agency planned to reassess once USGS issued a federal standard.

The cost to vessels of the addition of a state implementation schedule for exchange phase-out would be minimal since they are already subject to the federal schedule, which is in effect and a state could not adopt a standard that was less stringent. State enforcement costs for adding the schedule could be minimized through cooperation with federal agencies, but administrative costs to the state would increase as more vessels file notification of treatment system use. Vessel operator feedback was that they would benefit from having only one set of standards with which they must comply.

If state regulations come into alignment with USCG requirements for type approval (see Section 4.6), state enforcement costs for the addition of an implementation schedule could be minimized through interagency cooperation.

4.8.2 Gap Options

A. No Change: DFW feedback was that the lack of implementation schedule in the current state regulations leave a gap in requirements to phase out ballast water exchange, thereby providing no tool to implement a further decrease in potential risks of nonindigenous species introduction to state waters.
B. Change at State Level: Vessel operator feedback indicated that should the state adopt efficacy requirements or implementation schedule, these should be aligned with national standards and schedules..
C. Change to Federal Level: A state implementation schedule that matches the federal requirements would offer clarity for vessels attempting to comply with the regulations, and benefit state waters as phase-out of exchange better targets risky ballast water. Costs to the state for implementation could be minimized if interagency cooperation is utilized.

4.8.3 Further Gap Analysis Recommendations

Investigation of interagency cooperation feasibility is recommended to reduce state implementation costs and vessel operator costs in areas of duplication that do not reduce nonindigenous species introduction risks.

4.9 Promising Treatment Technology (WAC 220-150-060)

The state requires vessel operators apply for a waiver prior to use of promising treatment technology. DFW accepts systems that are undergoing review for approval in the STEP program, ETV, IMO, or another Pacific state. The application requires coordination with ECY if the

treatment system used a biocide to complete a toxicity report setting conditions necessary for the discharge (see Section 4.10). The state developed their promising treatment technology requirements in 2009 to fill a then federal gap in approving the use of ballast water treatment technology as an acceptable alternative to coastal ballast water exchange (BWE) (vessels arriving from outside 200 nm would still need to meet federal BWE requirements). This provision was also implemented as a means to encourage development and use of treatment technologies.

The USCG has a special waiver process for systems that are in testing, called the Shipboard Technology Evaluation Program (STEP), which involves a submittal of the details of the system design for review prior to approval into the program. The EPA has a separate system for treatment technology review, called Environment Technology Verification (ETV), which evaluates the performance of new treatment system technology.

The varying approval processes for promising treatment technologies in the different regulations introduce an **inconsistency**.

Table 10 Code-level language comparison

Washington	USCG	EPA
WAC 220-150-060 (3) (a) In general. Vessel owners or operators using promising treatment technology do not need to file a notification, but they must apply for a waiver to the interim open sea exchange requirements under WAC 220-150-040. (b) Criteria. The form must include the minimum content as required in subsection (4) of this section and be received by the department at least forty-five days prior to entering waters of the state. In addition, promising technology must meet one or more of the following criteria: (i) The same manufacturer's treatment technology is being tested on a vessel that is enrolled in the USCG Shipboard Technology Evaluation Program (STEP), United States Environmental Protection Agency Environmental Technology Verification (ETV) program, or other department-recognized regional or national program; (ii) The technology is approved as promising technology or a similar classification by the state of California, Oregon, Hawaii, or Alaska for use in their state waters; or (iii) The technology is being actively evaluated under the IMO final approval process.	NVIC 01-04 b. Documentation required for vessels accepted in the STEP is described in Enclosure (4) to this NVIC. d. U.S. vessel owners/operators must submit drawings, details and information on the interface between the proposed BWT system and the vessel's vital systems to the vessel's classification society or the USCG Marine Safety Center. This submittal must include documentation describing how the interface does not degrade existing systems or create dangerous conditions. e. Foreign vessel owners/operators must provide documentation that indicates that the proposed installation is to the satisfaction of the vessel's classification society or Administration.	Protocol for the Verification of Ballast Water Treatment Technologies 1.2 Objectives of Verification Testing The objective of ETV ballast water treatment technology testing is to evaluate the performance characteristics of commercial-ready treatment technologies with regard to specific verification factors, including biological treatment performance, predictability/reliability, cost, environmental acceptability, and safety. 1.4 Verification Testing Process Verification testing is a three-step process, consisting of planning, verification, and data assessment/reporting phases.

4.9.1 Discussion

The DFW waiver requirement for promising treatment technology is out of date. Amending these requirements would aid research efforts in ballast water treatment technologies (e.g. emergency treatment systems), and allow operation in the state for vessels already approved to operate experimental systems under the federal regulations. The additional state approval process is

rarely used so assessment of costs to vessels and DFW in administrative burden for approval is considered minor.

4.9.2 Gap Options

A. No Change: DFW provided feedback that this section needs to be amended to meet current needs.
B. Change at State Level: DFW provided feedback that this section needs to be amended to meet current needs. The degree of more or less stringent requirements should be assessed in subsequent strategic planning and/or rulemaking in consultation with the BWWG.
C. Change to Federal Level: DFW provided feedback that this section can be improved for consistency with federal requirements. Vessel operator feedback was preference on bringing the state requirements into alignment with federal requirements.

4.9.3 Further Gap Analysis Recommendations

No further analysis is recommended for this gap.

4.10 Notification Requirements for BWMSs Using Biocides (WAC 220-150-043; 220-150-060)

ECY requires ballast water from AMS and BWMS that use biocides or "active" substances for treatment to be neutralized before it can be discharged. Vessel operators seeking approval to use AMS and BWMS must conduct whole effluent toxicity (WET) tests as part of their notification/application process. These state provisions were implemented in 2009 prior to USCG and EPA issuing current federal biocide testing requirements.

The EPA VGP includes specific numeric standards for residual biocide discharge of common chemicals from BWTS/MS, and requires an assessment for systems that use other substances. The USCG type approval process requires that a system be assessed for impacts to the environment before it can be approved for use, but type-approved systems are not currently available. USCG approval of AMS does not include any requirements for toxicity testing. Until USCG type-approved systems become available, the EPA methods are the most comprehensive federal system for ensuring that AMS are safe for the environment.

There appears to be **duplication** in biocide testing between state and federal requirements for BWMS, and **inconsistency** in biocide testing requirements between ECY and EPA requirements for AMS.

Table 11 Code-level language comparison

Washington	USCG	EPA
WAC 220-150-060 (1) All vessels using treatment technologies designed to meet state ballast water discharge performance standards are required to notify the department prior to or within thirty days of their first use in waters of the state…. (b) Content. The department's notification of treatment technology use and application for promising treatment technology waiver forms will, at a minimum,	[Whole effluent toxicity testing is required for type approval but not for AMS approval]	VGP 2.2.3.5.1.1.5 Requirements and Effluent Limitations for BWTS that use Active Substances (e.g., biocides) 2.2.3.5.1.1.5.1 Authorization of Residual Biocides Associated with Ballast Water Treatment Systems Many ballast water treatment systems produce or use biocides as an agent to reduce living organisms present in the ballast water tank. In order to be eligible for coverage under this permit, any ballast water treatment system must not use any biocide that is a "pesticide" within the meaning of the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C §136 et seq.) unless that biocide has been registered for use in ballast water treatment under such Act. The

Washington	USCG	EPA
require the following information:… (v) A recommendation from the state department of ecology, based upon a toxicity report provided in accordance with Appendix H of ecology publication number WQ-R-95-80, setting conditions necessary for the environmentally safe discharge of biocide-treated ballast water; WAC 173-201A-260(2) Toxics and aesthetics criteria (a) Toxic, radioactive, or deleterious material concentrations must be below those which have the potential, either singularly or cumulatively, to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health. (b) Aesthetic values must not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste.		requirement in the preceding sentence does not apply if such biocide is generated solely by the use of a "device" on board the same vessel as the ballast water to be treated by the biocide, as the term "device" is defined in the Federal Insecticide, Fungicide, and Rodenticide Act. In addition, if the ballast water treatment system uses or generates biocides and you will discharge ballast water treated with biocides into waters subject to this permit, you must meet one of the following conditions to be eligible for permit coverage. The discharge of biocides or residuals may not exceed the following instantaneous maximum limits expressed as micrograms per liter (µg/l). Table 3: Maximum Ballast Water Effluent Limits for Residual Biocides **Biocide or Residual** / **Limit (instantaneous maximum)** Chlorine Dioxide / 200 µg/l Chlorine (expressed as Total Residual Oxidizers (TRO as TRC)) / 100 µg/l Ozone (expressed as Total Residual Oxidizers (TRO as TRC)) / 100 µg/l Peracetic Acid / 500 µg/l Hydrogen Peroxide (for systems using Peracetic Acid) / 1,000 µg/l Any other biocides or derivatives may not exceed acute water quality criteria listed in EPA's 2009 National Recommended Water Quality Criteria, and any subsequent revision, at the point of ballast water discharge. This document can be found at: http://water.epa.gov/scitech/swguidance/standards/criteria/current/upload/nrwqc-2009.pdf. Tables summarizing the subsequent revisions can be found at: http://water.epa.gov/scitech/swguidance/standards/criteria/current/. Discharges of biocide residuals or derivatives must also meet monitoring requirements under Part 2.2.3.5.1.1.1, and reporting and recordkeeping requirements in Part 2.2.3.5.1.1.6. If the biocide used or produced by your system and its derivatives is not listed in the previous table or found in EPA's National Recommended Water Quality Criteria, you must notify EPA at least 120 days in advance of its use and provide any associated aquatic toxicity data for that biocide or its derivatives of which you are aware. EPA may impose additional limitations on a treatment system-specific basis, or require you to obtain coverage under an individual

Washington	USCG	EPA
		permit, if necessary. EPA may inform the vessel owner/operator of specific requirements. You may also seek coverage under an individual NPDES permit pursuant to Part 1.8.2 of this permit. You may not discharge the biocide at issue until you receive a response from EPA to your notification.

4.10.1 Discussion

DFW and ECY feedback was that the biocide testing provision was only enforced for a few vessels applying to use promising treatment technology, but has not been enforced for vessels intending to use AMS or BWMS due to administrative costs and limited resource capacity. As noted in the discussion of interim open sea exchange alternative notification requirements (section 4.6.1), the state has significant concerns on USCG's acceptance criteria of foreign type-approved AMS. The lack of state enforcement of toxicity testing for AMS saves costs for DFW and for vessels. There are potential risks to state waters from not enforcing state provisions, however these have not been quantified. The cost of implementing state toxicity requirements would depend on the methods used.

USCG type-approval standards include rigorous toxicity testing requirements, so separate state toxicity testing will have little additional benefit once type-approved systems are installed on all vessels. However, the timeline for that is not clear, given the AMS expiration schedule and the lack of type-approved systems.

4.10.2 Gap Options

A. No Change: DFW and ECY provided feedback that this section needs to be amended to meet current needs and resources appropriated to implement biocide testing on AMS as necessary to fill any federal gaps.
B. Change at State Level: The addition of a state toxicity requirement would be costly to implement and comply with, but could reduce risk of toxic discharge to state waters. DFW and ECY provided feedback that this section needs to be amended to meet current needs. The degree of more or less stringent requirements should be assessed in subsequent strategic planning and/or rulemaking in consultation with the BWWG.
C. Change to Federal Level: Bringing the state requirements into alignment with the EPA effluent limitations could be conducted in a way to minimize any additional costs to vessels for compliance and to the state for implementation, through interagency cooperation. The state would benefit from gaining assurance as to whether toxic effluent is being discharged to state water.

4.10.3 Further Gap Analysis Recommendations

Communication between agencies to coordinate implementation would be necessary to minimize costs to vessels and the state if they were to align with the EPA effluent limitations. Investigation into the potential for simultaneous submittal to state and EPA authorities is recommended.

4.11 Sediment Management (WAC 220-150-070)

State regulations allow sediment discharge at the location of its origin, and otherwise offer a few specific allowable sediment discharge options. USCG regulations defer to local requirements, and the VGP completely prohibits all sediment discharge within the subject waters. There is

inconsistency between allowable state and federal sediment management practices at the code level.

Table 12 Code-level language comparison

Washington	USCG	EPA
WAC 220-150-070 (1) Purpose. A vessel owner or operator may not remove or discharge sediment or tank fouling organisms into waters of the state from spaces carrying ballast water unless that sediment or those organisms are discharged solely in the location from which they originated… (2) Ballast tank sediment removal options. (a) In general. Three options are provided for the effective removal of sediment and any fouling organisms in a vessel's ballast tanks, including saltwater flushing, upland disposal, or use of an approved reception facility. (b) Saltwater flushing. Ballast tanks must be cleaned as necessary in open sea exchange areas consistent with WAC 220-150-040(3) voyage requirements unless common water rules apply under WAC 220-150-040(4) except for ballast-related fouling organisms. Sediment may be removed by saltwater flushing of ballast water tanks by: (i) Adding open sea water to a ballast water tank that contains residual quantities of ballast waters; (ii) Mixing the open sea water with the residual ballast water and sediment in the tank through the motion of a vessel or alternative means so that the sediment becomes suspended; and (iii) Discharging the mixed water so that the salinity of the resulting residual ballast water in the tank exceeds thirty parts per thousand. (c) Upland disposal. Tank sediment and fouling organisms may be removed from the vessel under controlled arrangements in port or in drydock, and disposed of in accordance with local, state, and federal law.	33 C.F.R. §151.2050 (c) Clean the ballast tanks regularly to remove sediments. Sediments must be disposed of in accordance with local, State, and Federal regulations.	VGP 2.2.3.3 • Clean ballast tanks regularly to remove sediments in mid-ocean (when not otherwise prohibited by applicable law) or under controlled arrangements in port, or at drydock. • No discharge of sediments from cleaning of ballast tanks is authorized in waters subject to this permit.

4.11.1 Discussion

DFW feedback was that management for sediment discharge is primarily of minimal administrative cost to DFW, but is an important requirement to reduce the risk of nonindigenous species introductions. As DFW does not require sediment removal, vessels calling from outside of the state would be removing sediment to meet federal requirements, or their own commercial needs, e.g. remove dead weight to increase cargo capacity. The "seawater flushing" option is unique to the state, and the method of protection to state waters is unclear.

For sediment originating from within the state, DFW rules do not require additional management.

4.11.2 Gap Options

A. No Change: DFW provided feedback that current state requirements should not be less stringent than federal requirements.
B. Change at State Level: More stringent state sediment discharge requirements would bring higher costs to vessels. There was no information provided during the review to support increasing these requirements.
C. Change to Federal Level: Aligning state sediment discharge requirements with federal standards would be a change toward more stringent requirements, but would resolve the current conflict.

4.11.3 Further Gap Analysis Recommendations

1. The VGP prohibition of sediment discharge within US waters is out of alignment with state requirements. Examination of vessel records for rates of in-state sediment discharge would indicate whether vessels are truly gaining benefit from that state's discharge options, or whether they are negated by federal compliance requirements.
2. The conflict between state and federal requirements suggests that cooperation between agencies is needed in this area.

4.12 Biofouling Management Requirements

Biofouling on vessels hulls has been shown to be a vector for nonindigenous species with potential risks for species spread similar to those of ballast water discharge (Reference 3). Because the state and federal regulations do not include extensive biofouling management requirements, code and guidelines from other agencies with further development in biofouling regulations have been included in this assessment. There is a wide range in biofouling management requirements in code documents from the state to the international level. Washington State regulates biofouling through the general requirements that vessels do not pollute state waters (ECY authority) and do not release prohibited, regulated, or unlisted animal species (DFW authority under RCW 77.135.040(2)). California, in consultation with local and regional state, federal, vessel operator, and other stakeholders, is moving forward to adopt more stringent and detailed regulations than even the IMO. The USCG includes a few biofouling considerations in their ballast water management regulations. The VGP has regulations similar to ECY for preventing water pollution during biofouling removal, and suggests methods to minimize hull fouling. IMO anti-fouling guidelines are not codified, but they do offer some specific recommendations for reduction of risk.

California's biofouling code is the only one of the compared regulations that includes a detailed implementation guidance for inspection and enforcement of biofouling requirements.

The wide range in biofouling management requirements at the state, Pacific regional, federal, and international levels introduces **inconsistency** across the codes.

Table 13 Management guideline and code-level language comparison

California [pending]	USCG	EPA	IMO
PRC Section 2298.6. Biofouling Management for Wetted Surfaces. (a) The master, owner, operator, or person in charge of a vessel arriving at a California port or place shall manage biofouling on the wetted surfaces of the vessel… 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, …; (2) If a vessel is using an anti-fouling coating and the coating is aged beyond its effective coating lifespan…the biofouling on the wetted surfaces of the vessel… shall be managed so that macrofouling percentage cover is not significantly in excess of five percent of the surface area under investigation… Filamentous or turf algae on the bulbous bow and at the waterline… shall be excluded from this calculation; or (3) If a vessel is not using an anti-fouling coating, the biofouling on the wetted surfaces of the vessel… shall be managed so that macrofouling percentage cover is not significantly in excess of five percent of the surface area under investigation…(b) The master, owner, operator, or person in charge of a vessel arriving at a California port or place shall manage biofouling on the niche areas … (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) Fins 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 or strategies that are appropriate for the vessel and its operational profile.	33 CFR §151.2050 Additional requirements—nonindigenous species reduction practices. The master, owner, operator, agent, or person in charge of any vessel equipped with ballast water tanks that operates in the waters of the United States must follow these practices: (e) Rinse anchors and anchor chains when the anchor is retrieved to remove organisms and sediments at their places of origin. (f) Remove fouling organisms from the vessel's hull, piping, and tanks on a regular basis and dispose of any removed substances in accordance with local, State and Federal regulations.	VGP 2.2.23 Underwater Ship Husbandry and Hull Fouling Discharges Vessel owners/operators must minimize the transport of attached living organisms when traveling into U.S. waters from outside the U.S. economic zone or between Captain of the Port (COTP) zones. Management measures to minimize the transport of attached living organisms include selecting an appropriate anti-foulant management system and maintaining that system, in water inspection, cleaning, and maintenance of hulls, and thorough hull and other niche area cleaning when a vessel is in drydock…	2011 Guidelines For The Control And Management Of Ships' Biofouling To Minimize The Transfer Of Invasive Aquatic Species 6 ANTI-FOULING SYSTEM INSTALLATION AND MAINTENANCE 6.1 Anti-fouling systems and operational practices are the primary means of biofouling prevention and control for existing ships' submerged surfaces, including the hull and niche areas. An anti-fouling system can be a coating system applied to exposed surfaces, biofouling resistant materials used for piping and other unpainted components, marine growth prevention systems (MGPSs) for sea chests and internal seawater cooling systems, or other innovative measures to control biofouling.

4.12.1 Discussion

The addition of a specific state requirement for comprehensive biofouling management systems similar to the international guidelines or pending California regulations would bring extensive costs to the state to develop and implement new regulations, as well as to vessels to comply with the new standards. The benefit of the addition of these new regulations would be the ability to target a known vector for nonindigenous species introduction. A report commissioned by DFW

in 2014 and reviewed by the BWWG supports the need for state management of biofouling risks as similar to or exceeding the risk posed by ballast water (Reference 3). The fouling management requirements of the USCG and EPA represent a less-rigorous set of regulations, requiring a basic biofouling management system and periodic removal of fouling organisms from the hull. The addition of similar state requirements would bring some of the benefits of a more rigorous system, with lower implementation costs.

BWWG and vessel operator feedback indicated interest in maintaining consistency between regulatory authorities as new regulations are put into place.

4.12.2 Gap Options

A. No Change: DFW feedback was that lack of state biofouling management requirements continues to allow a substantial risk of nonindigenous species introduction. Savings to the state and vessel operators in administrative and operational costs would not be balanced with potential environmental and economic costs to the state from nonindigenous species impacts. Vessel operator feedback was to maintain the current system and focus state efforts on development of more robust federal requirements.
B. Change at State Level: Adopting the California or IMO biofouling management guidelines at the state level would require substantive funding. DFW feedback was that adopting California's requirements would have the benefit of increasing regional regulatory consistency. Vessel operator feedback was that regulatory consistency at the IMO, federal, and then regional level is their preferred order of priority.
C. Change to Federal Level: Adding state regulations that match the federal requirements would allow the state to begin reducing the risks of nonindigenous species introduction through biofouling. DFW feedback was that a phased approach could be viable if there were clear federal actions underway to improve federal biofouling requirements. Operator feedback was that current inconsistencies between IMO and Federal requirements should be investigated to reduce the impact of any state action.

4.12.3 Further Gap Analysis Recommendations

Communication between agencies on advancing biofouling management would be helpful in development of nationally consistent biofouling regulatory requirements.

4.13 Biofouling Recordkeeping and Reporting Requirements

DFW has no biofouling recordkeeping or reporting requirements so California's pending requirements have been included in this analysis as a potential model for regional consistency. The USCG requires limited recordkeeping through maintenance of a plan for biofouling removal procedures within a vessel's ballast water management plan, but does not have a reporting requirement. EPA's VGP has annual biofouling recordkeeping and reporting requirements. The proposed California requirements, being developed in consultation with local and regional state, federal, vessel operator, and other stakeholders, and the IMO guidelines are much more comprehensive and are included below. Similar to biofouling management requirements noted in section 4.12 above, biofouling recordkeeping and reporting requirements are inconsistent between all agencies.

IMO recommends a biofouling management plan and recordbook be carried on all applicable vessels. California requires these, as well as 24-hour advance reporting.

Given the existence of a biofouling recordkeeping and reporting requirement at the federal level, but the lack of a requirement at the state level, there is a **discrepancy** in biofouling management recordkeeping and reporting requirements.

Table 14 Reporting and recordkeeping guideline and code-level language comparison

California [pending]	USCG	EPA	IMO
PRC Section 2298.3. Biofouling Management Plan. (b) The master, owner, operator, or person in charge of a vessel arriving at a California port or place shall maintain a Biofouling Management Plan to be retained onboard and prepared specifically for that vessel. … 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. This plan shall be regularly reviewed and revised so as to be current as of the last day of the most recent out-of-water maintenance, or as of delivery if the vessel has never undergone out-of-water maintenance…	33 CFR §151.2050 (g) Maintain a ballast water management (BWM) plan that has been developed specifically for the vessel and that will allow those responsible for the plan's implementation to understand and follow the vessel's BWM strategy and comply with the requirements of this subpart. The plan must include— (3) Detailed fouling maintenance and sediment removal procedures;	4.1.3 Comprehensive Annual Vessel Inspections. Comprehensive vessel inspections must be conducted by qualified personnel at least once every 12 months… Comprehensive annual inspections must cover all areas of the vessel affected by the requirements in this permit that can be inspected safely and without forcing a vessel into drydock… Areas that inspectors must examine include, but are not limited to:… • The vessel hull, including niche areas, for fouling organisms, flaking anti-foulant paint, exposed TBT or other organotin surfaces; 4.2 Recordkeeping Vessels covered by this permit must keep records on the vessel or accompanying tug that include the following information (as applicable):… 6. Log of findings from comprehensive annual vessel inspections conducted under Part 4.1.3, including a discussion of any corrective actions planned or taken required by Part 3. Include date, inspector's name, findings, and a description of the corrective actions taken… 9. Additional maintenance and discharge information to	2011 Guidelines For The Control And Management Of Ships' Biofouling To Minimize The Transfer Of Invasive Aquatic Species Biofouling Management Plan 5.2 It is recommended that every ship should have a biofouling management plan. The intent of the plan should be to provide effective procedures for biofouling management. An example of a Biofouling Management Plan is outlined in appendix 1 of these Guidelines. The Biofouling Management Plan may be a stand-alone document, or integrated in part or fully, into the existing ships' operational and procedural manuals and/or planned maintenance system.

California [pending]	USCG	EPA	IMO
		be recorded and kept in a log on the vessel:…	
Section 2298.4. Biofouling Record Book. The master, owner, operator, or person in charge of a vessel that operates in the waters of the State 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 as a newly constructed vessel if no out-of-water maintenance has yet occurred Section 2298.5. Hull Husbandry Reporting Form. 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 "Hull Husbandry Reporting Form (Revised June 5, 2014)" to the Commission in written 9 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.		c. Paint application. Record dates, materials used, application process, etc. for any antifouling paint applied to the vessel.	Biofouling Record Book 5.5 It is recommended that a Biofouling Record Book is maintained for each ship. The book should record details of all inspections and biofouling management measures undertaken on the ship. This is to assist the shipowner and operator to evaluate the efficacy of the specific anti-fouling systems and operational practices on the ship in particular, and of the biofouling management plan in general. The record book could also assist interested State authorities to quickly and efficiently assess the potential biofouling risk of the ship, and thus minimize delays to ship operations.

Table 15 Implementation-level language

USCG
UNCLAS //N16700// A. Initial actions: The first vessels to which the new ballast water management requirements in 33 CFR 151.2025 will apply are new vessels constructed on or after December 1, 2013. Consequently, the only new requirement for vessels that comes into effect on June 21, 2012 is for the incorporation of vessel specific Biofouling Management and Sediment Management Plans in the already required vessel Ballast Water Management Plan, in accordance with 33 CFR 151.2050(g)(3). Inspectors and PSCOs shall verify a plan meeting these requirements is on board the vessel. Keeping separate Biofouling Management and Sediment Management Plans on board, and referencing them in the Ballast Water Management Plan, would comply with Coast Guard requirements under 33 CFR 151.2050(g)(3).

4.13.1 Discussion

The costs (e.g. administrative and data management) of adding state biofouling recordkeeping and reporting requirements would be incurred by vessel operators and DFW. Costs for biofouling recordkeeping and reporting may be moderated if state requirements are consistent with other states or at the national or international levels. In addition, costs are lower than ballast water reporting and recordkeeping as compliance is based on longer maintenance periods, not per each vessel arrival. Adding recordkeeping requirements for biofouling management would have the benefit of giving the state some method for inspection and enforcement of biofouling risks. New state recordkeeping and reporting requirements could be implemented with or without biofouling management requirements described in section 4.12, or implemented in a phased approach.

4.13.2 Gap Options

A. No Change: DFW feedback was that lack of state biofouling recordkeeping and reporting requirements continues to allow a substantial risk of nonindigenous species introduction to go unhindered. Savings to the state and vessel operators in administrative and operational costs would not be balanced with potential environmental and economic costs to the state from nonindigenous species impacts. Vessel operator feedback was to maintain the current system and focus state efforts on development of more robust federal requirements.
B. Change at State Level: Adopting the California or IMO biofouling recordkeeping and reporting requirements at the state level would require substantive funding. DFW feedback was that adopting California's requirements would have the benefit of increasing regional regulatory consistency. Vessel operator feedback was that regulatory consistency should be pursued between IMO and federal requirements first, and that any requirements adopted by the states should be aligned with these consistent federal and international rules.
C. Change to Federal Level: If the state were to add specific biofouling management requirements similar to the USCG and EPA requirements, as discussed in Section 4.12, then the state could benefit from the addition of biofouling recordkeeping requirements similar to those required in IMO guidelines, to enable state inspection and enforcement of biofouling management. The addition of these requirements would come with costs to vessels. Costs to the state for inspection efforts could be minimized by incorporating inspection of records with existing ballast water record inspections.

4.13.3 Further Gap Analysis Recommendations

The addition of state biofouling recordkeeping requirements similar to the federal requirements would offer an opportunity for minimizing duplication of effort through coordination of inspection and enforcement efforts. Investigation of interagency cooperation feasibility would inform the decision to adopt a standard to match federal requirements or leave the state requirements as they are.

4.14 In-Water Hull Cleaning

Vessels seeking to remove fouling organisms from their hulls may choose to scrub or scrape their hulls while the vessel is waterborne as opposed to cleaning their hulls in a drydock. In-water hull cleaning has the potential to release nonindigenous species or toxic substances from the hull coating. The state regulates in-water cleaning of vessel hulls through general regulations preventing the release of invasive species through DFW requirements or toxic materials through ECY requirements, and deals with vessel in-water cleaning requests on a case-by-case basis.

USCG does not have vessel in-water cleaning requirements. The EPA VGP has specific requirements regulating the practice of in-water hull cleaning, including prescriptions for

different cleaning methods, fouling severities, and coating types. There is a **discrepancy** between state and federal specificity and stringency in in-water hull cleaning regulations.

Table 16 Code-level language comparison

Washington	EPA
RCW 90.48.080 It shall be unlawful for any person to throw, drain, run, or otherwise discharge into any of the waters of this state, or to cause, permit or suffer to be thrown, run, drained, allowed to seep or otherwise discharged into such waters any organic or inorganic matter that shall cause or tend to cause pollution of such waters according to the determination of the department, as provided for in this chapter. RCW 90.48.020 Whenever the word "person" is used in this chapter, it shall be construed to include any political subdivision, government agency, municipality, industry, public or private corporation, copartnership, association, firm, individual, or any other entity whatsoever. Whenever the word "pollution" is used in this chapter, it shall be construed to mean such contamination, or other alteration of the physical, chemical or biological properties, of any waters of the state, including change in temperature, taste, color, turbidity, or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive, or other substance into any waters of the state as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life. WAC 173-201A-260(2) (a) Toxic, radioactive, or deleterious material concentrations must be below those which have the potential, either singularly or cumulatively, to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health. Aesthetic values must not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste. RCW 77.15.809 (1) A person is guilty of unlawful use of a invasive species in the second degree if the person: (d) Possesses, except in the case of trafficking, a prohibited level 1 or level 2 species without	VGP 2.2.23 Vessel owners/operators must minimize the transport of attached living organisms when traveling into U.S. waters from outside the U.S. economic zone or between Captain of the Port (COTP) zones. Management measures to minimize the transport of attached living organisms include selecting an appropriate anti-foulant management system and maintaining that system, in water inspection, cleaning, and maintenance of hulls, and thorough hull and other niche area cleaning when a vessel is in drydock. Whenever possible, rigorous hull-cleaning activities should take place in drydock, or at a land-based facility where the removal of fouling organisms or spent antifouling coatings paint can be contained. If water-pressure-based systems are used to clean the hull and remove old paint, you must use facilities which treat the washwater prior to discharging to waters subject to this permit in order to remove the antifouling compound(s) and fouling growth from the washwater. If mechanical means (scraping, etc.) are used to clean the hull and remove old paint, the materials removed from the hull during that process must be collected and disposed of properly (e.g., onshore). These materials must not be allowed to contaminate nearby waters. Vessel owners/operators who remove fouling organisms from hulls while the vessel is waterborne must employ methods that minimize the discharge of fouling organisms and antifouling hull coatings. These shall include: • Use of appropriate cleaning brush or sponge rigidity to minimize removal of antifouling coatings and biocide releases into the water column; • Limiting use of hard brushes and surfaces to the removal of hard growth; and • When available and feasible, use of vacuum or other control technologies to minimize the release or dispersion of antifouling hull coatings and fouling organisms into the water column. Vessel owners/operators must minimize the release of copper-based antifoulant paints during vessel cleaning operations. Cleaning of hull surfaces coated with copper-based antifoulant paint must not result in any visible cloud or plume of paint in the water; if a visible cloud or plume of paint develops, shift to a softer brush or less abrasive cleaning technique. A plume or cloud of paint can be noted by the presence of discoloration or other visible indication that is distinguishable from hull growth or sediment removal. Production of a plume or cloud of sediment or hull growth is normal in some cases during vessel hull cleaning, but this plume or cloud must be substantially paint free (e.g., paint should not be clearly identifiable in the plume or cloud). When feasible, attempts must be made to minimize the release of fouling organisms and

Washington	EPA
department authorization, a permit, or as otherwise provided by rule; (e) Possesses, introduces on or into a water body or property, or traffics in a prohibited level 3 species without department authorization, a permit, or as otherwise provided by rule; (f) Introduces on or into a water body or property a regulated type A, type B, or type C species without department authorization, a permit, or as otherwise provided by rule;	antifouling systems (including copper-based coatings) into surrounding waters. Vessels that use copper-based anti-fouling paint must not clean the hull in copper-impaired waters within the first 365 days after paint application unless there is a significant visible indication of hull fouling. EPA maintains a list of copper-impaired waters on its webpage at www.epa.gov/npdes/vessels. If you clean before 365 days after paint application in copper-impaired waters, you must document in your recordkeeping documentation why this early cleaning was necessary.

4.14.1 Discussion

The benefit of in-water cleaning for vessel operators is to reduce fuel costs due to increased drag from attached organisms. Reduced fuel consumption can minimize other environmental concerns such as exhaust emissions. A second benefit of in-water hull cleaning regulations is the reduction of the risk of nonindigenous species release and toxic material release. State costs (DFW and ECY) to add these requirements would primarily include new administrative and enforcement activities, but could include incentives to development of environmentally friendly cleaning systems. Vessels would also benefit from clarity as to their responsibilities and consistency between state and federal regulations, though compliance burden and penalty potentials could increase.

4.14.2 Gap Options

A. No Change: DFW feedback was that the current regulatory regime does not adequately protect state waters from biofouling-mediated species introductions.
B. Change at State Level: DFW and ECY provided feedback that the state needs to improve vessel in-water cleaning requirements to meet current needs. The degree of more or less stringent requirements should be assessed in subsequent strategic planning and/or rulemaking in consultation with the BWWG. Vessel operators provided feedback that the state needs to allow in-water cleaning of vessels as part of an environmentally and economically sound management rather than create a system that pushes vessels to clean in other states or countries without environmentally sound requirements.
C. Change to Federal Level: DFW feedback was that the degree of alignment with federal requirements should be assessed in subsequent strategic planning and/or rulemaking in consultation with the BWWG.

4.14.3 Further Gap Analysis Recommendations

The addition of specific state in-water hull cleaning requirements similar to the federal requirements would offer an opportunity for minimizing duplication of effort through coordination of inspection and enforcement efforts. Investigation of interagency cooperation feasibility would inform the decision to adopt a standard to match federal requirements or leave the state requirements as they are.

Section 5 Path Ahead

Fourteen primary gaps between state and federal regulations are presented in this analysis for future DFW and BWWG consideration as input to further research and the development of long-term ballast water and biofouling management strategic plans for DFW. Gap options and further analysis recommendations have been presented as objectively as possible based on information gathered during the analysis and feedback provided during development and from a formal BWWG review. The options and further recommendations, at the least, are intended to establish starting points for determining where state requirements can or should evolve to best protect state waters from nonindigenous species risks, and in some cases water quality risks.

To facilitate incorporation of this gap analysis report into DFW's ballast water and biofouling management strategic plan development, we recommend the following:

1) Distribute the report to the BWWG and more broadly as needed with a request to identify additional gaps beyond the 14 identified in this document that require regulatory or programmatic action. The comparative matrix provided in Appendix A can serve as a template for evaluating relevant regulatory language.
2) Evaluate, in consultation with the BWWG, the costs and benefits of the identified regulatory gaps as a means of prioritizing limited resources. The provided cost/benefit evaluation framework (Appendix B) is a possible model for performing such an assessment.

Section 6 References

1. Bax, N., et al., "Marine invasive alien species: a threat to global biodiversity," *Marine Policy*, Vol. 27, 2003.
2. Cordell, J., et al., *Effectiveness of BWE in Protecting Puget Sound from Invasive Species*, March 2015.
3. Davidson, et al., *An assessment of marine biofouling introductions to the Puget Sound region of Washington State*, Aquatic Bioinvasion Research & Policy Institute, May 2014.
4. USCG Ballast Water Management February 23, 2016 presentation. *https://homeport.uscg.mil/mycg/portal/ep/contentView.do?contentTypeId=2&channelId=-18366&contentId=530098&programId=13064&programPage=%2Fep%2Fprogram%2Feditorial.jsp&pageTypeId=13489&BV_SessionID=@@@@2086582338.1466611221@@@@&BV_EngineID=cccfadgjjifhfficfngcfkmdfhfdfgo.0*

Appendix A Regulatory Comparison Matrices

Ballast Water Gap Analysis Matrix

This state/federal gap analysis table compares the following ballast water regulations:

U.S. Coast Guard (USCG) Chapter 33 CFR 151 Subpart D (including uncodified ballast water and biofouling regulations);
U.S. Environmental Protection Agency (EPA) 2013 Vessel General Permit program;
Washington Department of Fish and Wildlife (WDFW) Chapter 77.120 RCW and Chapter 220-150 WAC; and
Washington Department of Ecology (ECY) RCW 90.48.080, 90.52.040, and Chapter 173-201A WAC.

Blue text denotes a broader or more protective regulation; and Red text denotes a narrower or less protective regulation. Yellow highlights denotes a gap. Notes (text that is not a direct quote) are in [brackets].

Definitions

Requirement	WDFW/ECY (RCW and WAC)	USCG	EPA
Definitions	RCW 77.120.010 (1) "Ballast tank" means any tank or hold on a vessel used for carrying ballast water, whether or not the tank or hold was designed for that purpose.		
	RCW 77.120.010 (3) "Empty/refill exchange" means to pump out, until the tank is empty or as close to empty as the master or operator determines is safe, the ballast water taken on in ports, estuarine, or territorial waters, and then refilling the tank with open sea waters WAC 220-150-040 (2)(b) Empty/refill exchange. Preferred - this type of exchange requires, for each ballast tank that contains ballast water to be discharged into waters of the state, at least one empty/refill cycle in an open sea exchange area designated by the department under subsection (3) of this section. Vessel owners or operators should remove as close to one hundred percent, but not less than ninety-five percent, of the ballast water as is safe to do so. If this is not possible, then perform a flow through exchange under (c) of this subsection. (3) (a) Ballast water exchanges must be conducted in open sea (also called midocean or mid-ocean) areas based upon originating port as defined herein.	33 C.F.R. §151.2005(b) (2) *Empty/refill exchange* means to pump out the ballast water taken on in ports, estuarine, or territorial waters until the pump(s) lose suction, then refilling the ballast tank(s) with mid-ocean water.	VGP Appendix A • "Empty/refill exchange" means to pump out the "ballast water" taken on in ports, estuarine, or territorial waters until the tank is empty, then refilling it with water from the "mid-ocean" or "coastal exchange zone" (as applicable); masters/operators should pump out as close to 100 percent of the "ballast water" as is safe to do so. . [modified from: 33 CFR §151.2025]
	RCW 77.120.010 (4) "Exchange" means to replace the water in a ballast tank using either flow through exchange, empty/refill exchange, or other exchange methodology recommended or required by the United States coast guard.	33 C.F.R. §151.2005(b) *Exchange* means to replace the water in a ballast tank using one of the following methods:	VGP Appendix A "Exchange" means to replace the water in a ballast tank using one of the following methods:
	RCW 77.120.010 (5) "Flow through exchange" means to flush out ballast water by pumping in midocean water at the bottom of the tank and continuously overflowing the tank from the top until three full volumes of water have been changed to minimize the number of original organisms remaining in the tank. WAC 220-150-040 (2) (c) Flow through exchange. This type of exchange requires, for each ballast tank that contains ballast water to be discharged into waters of the state, pumping or otherwise forcing a minimum of three times the total ballast tank capacity's volume in an open sea exchange area designated by the department under subsection (3) of this section. For example, a ballast tank with a one thousand cubic meter capacity, regardless of actual ballast water in the tank, would require pumping three thousand cubic meters of open sea water through the tank. In all flow through exchange operations, open sea water must be pumped into the bottom and discharged out the top of the tank. Where department evaluation determines more flow through volume is required to meet the ninety-five percent exchange requirements, a compliance plan or alternative strategy may be required under WAC 220-150-037.	33 C.F.R. §151.2005(b) (1) Flow-through exchange means to flush out ballast water by pumping in mid-ocean water at the bottom of the tank and continuously overflowing the tank from the top until three full volumes of water has been changed to minimize the number of original organisms remaining in the tank.	VGP Appendix A • "Flow through exchange" means to flush out "ballast water" by pumping in water from the "mid-ocean" or "coastal exchange zone" (as applicable) into the bottom of the tank and continuously overflowing the tank from the top until three full volumes of water has been changed to minimize the number of original organisms remaining in the tank.
	RCW 77.120.010 (7) Open sea exchange means an exchange that occurs fifty or more nautical miles offshore. If the United States coast guard requires a vessel to conduct an exchange further offshore, then that distance is the required distance for purposes of compliance with this chapter.		2.2.3.6.2 Vessels Carrying Ballast Water Engaged in Pacific Nearshore Voyages …any vessel engaged in Pacific nearshore voyages that carries ballast water that was taken on in areas less than 50 nautical miles from any shore must carry out an exchange of ballast water in accordance with this Part… … Ballast water exchange for vessels subject to this part must occur in waters

Requirement	WDFW/ECY (RCW and WAC)	USCG	EPA
	WAC 220-150-040 (2) Open sea exchange methodology. (a) In general. An open sea exchange must result in an efficiency of at least ninety-five percent volumetric exchange of the total ballast water capacity for each tank. An open sea exchange requires using either an empty/refill method or a flow through method….		more than 50 nautical miles from any shore (US or otherwise), and in waters more than 200 meters deep, prior to discharging ballast water into waters subject to this permit…
	WAC 220-150-040 (3) Open sea exchange areas. (a) In general. Ballast water exchanges must be conducted in open sea (also called midocean or mid-ocean) areas based upon originating port as defined herein.		2.2.3.6.2 …Exchange should occur as far from the shore, major estuary and oceanic river plumes, subsurface physical features (e.g. seamounts), and known fishery habitats as practicable.
	RCW 77.120.010 (12) "Voyage" means any transit by a vessel destined for any Washington port.	33 C.F.R. §151.2005(b) *Voyage* means any transit by a vessel destined for any United States port or place.	Appendix A …voyage begins when the vessel departs a dock or other location at which it has loaded or unloaded (in whole or in part) cargo or passengers, and ends after it has tied-up at another dock or location in order to again conduct either of such activities…
	WAC 220-150-020 (8) "Constructed" means a stage of vessel construction wherein: (a) The keel is laid; (b) Construction identifiable with a specific vessel begins; (c) Assembly of the vessel has commenced…; or (d) The vessel undergoes a major conversion.	33 C.F.R. §151.2005(b) *Constructed* in respect of a vessel means a stage of construction when— (1) The keel of a vessel is laid; (2) Construction identifiable with the specific vessel begins; (3) Assembly of the vessel has commenced and comprises at least 50 tons or 1 percent of the estimated mass of all structural material, whichever is less; or (4) The vessel undergoes a major conversion.	VGP Appendix A "Constructed' means a state of construction of a vessel at which— • "the keel is laid; • "construction identifiable with the specific vessel begins; • " assembly of the vessel has begun comprising at least 50 tons or 1 percent of the estimated mass of all structural material of the vessel, whichever is less; or • " the vessel undergoes a major conversion." [patterned after the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004, regulation A-1(4)]
	WAC 220-150-020 (18) "Port" means a terminal or group of terminals or any place or facility that has been designated as a port by a USCG captain of the port. For purposes of this chapter, port may also mean a commonly associated anchorage or a common anchorage in the Columbia river if the next destination port is not known to the vessel owner or operator.	33 C.F.R. §151.2005(b) *Port or place of departure* means any port or place in which a vessel is anchored or moored.	VGP Appendix A "Port or Place of Departure" means any port or place in which a vessel is anchored or moored. *[source: 33 CFR §151.2025]*
	WAC 220-150-020 (18) "Port" means a terminal or group of terminals or any place or facility that has been designated as a port by a USCG captain of the port...	33 C.F.R. §151.2005(b) *Port or place of destination* means any port or place to which a vessel is bound to anchor or moor.	VGP Appendix A "Port or Place of Destination" means any port or place to which a vessel is bound to anchor or moor. *[source: 33 CFR §151.2025]*
	["seagoing" not relevant for WDFW b/c they exempt vessels from common water area, and require coastal exchange for vessels not going 200 miles from shore.]	33 C.F.R. §151.2005(b) *Seagoing vessel* means a vessel in commercial service that operates beyond the boundary line established by 46 CFR part 7. It does not include a vessel that navigates exclusively on inland waters.	VGP 2.2.3.5.3 Seagoing Vessels are defined in 33 CFR 151.2005.
	[Compliance schedule withheld from state regs, so not applicable]	Not defined in CFR. Marine Safety Information Bulletin No. 13-15 provides: • In all cases, a vessel's "first scheduled drydocking" date for the purposes of compliance with the BWM implementation schedule is the date the vessel enters a drydock. For example, if a vessel enters drydock on or before December 31, 2015 and does not leave drydock until after January 1, 2016, the drydock is not considered the "first scheduled drydocking after January 1, 2016" for purposes of compliance; • A drydocking begun after the date specified in either Table 151.1512(b) or 151.2035(b), as applicable, which is necessary for emergency repairs is not considered the first scheduled drydocking. However, if	VGP Appendix A Drydocking" or "next drydocking" for purposes of the VGP, means the next scheduled drydocking, consistent with the requirements of 46 CFR 31.10-21 (typically, at least every five years or sooner). In the context of ballast water implementation schedule, it means hauling out of a vessel or placing a vessel in a drydock or slipway for an examination of all accessible parts of the vessel's underwater body and all through-hull fittings and does not include emergency drydocking and emergency hull repairs

Requirement	WDFW/ECY (RCW and WAC)	USCG	EPA
		this drydocking satisfies the Administration for endorsing the Certificate of Inspection, passenger ship safety certificate, cargo ship safety certificate, or cargo ship safety construction certificate as the required survey of the bottom of the ship, this drydocking date is considered the first scheduled drydocking; • A scheduled drydocking begun after the date specified in either Table 151.1512(b) or 151.2035(b), as applicable, to satisfy a statutory bottom survey requirement or to accomplish planned work (such as a drydocking to install exhaust gas cleaning equipment or to install a new bottom coating system), as opposed to emergency work, is considered the "first scheduled drydocking"	
			VGP Appendix A "Devices for which high quality data are available" means either: a) any ballast water treatment system type approved by the United States Coast Guard under 46 CFR Part 162.060 or granted alternate management system status by the US Coast Guard under 33 CFR 151.2026; or b) any ballast water treatment system: (i) type approved by a foreign administration; (ii) for which efficacy testing was conducted by an independent third party testing organization, either in accordance with the ETV protocol or in a manner consistent with the ETV protocol with respect to QA/QC procedures, the use of validated methods including appropriate volumes of representative samples, and full description and documentation of test procedures, results and analyses; and (iii)all "Active Substance" or "Biocide" data (e.g., the full data package as submitted to the International Maritime Organization for approval) have all been made available to the US EPA.
			VGP Appendix A "Saltwater Flushing" means the addition of "Mid-Ocean" (in the case of 2.2.3.7) or "Coastal Exchange Zone" (in Part 2.2.3.8) water to empty ballast water tanks; the mixing of the added water with residual ballast water and sediment through the motion of the vessel; and the discharge of the mixed water until loss of suction, such that the resulting residual water remaining in the tank has either a salinity greater than or equal to 30 parts per thousand (ppt) or a salinity concentration equal to the ambient salinity of the location where the uptake of the added water took place.

Application and Exemptions

Requirement	WDFW	USCG	EPA
Vessel Application	RCW 77.120.020 Application of chapter. (1) This chapter applies to all vessels transiting into the waters of the state from a voyage, except…" RCW 77.120.010 Definitions (11) "'Vessel' means a ship, boat, barge, or other floating craft of three hundred gross tons or more, United States and foreign, carrying, or capable of carrying ballast water…"	33 C.F.R. §151.2010 This subpart applies to all non-recreational vessels, U.S. and foreign, that are equipped with ballast tanks and operate in the waters of the United States…	VGP Part 1.2.1 …most vessels seeking coverage under this permit will be greater than 79 feet in length; however, commercial fishing vessels and other non-recreational vessels less than 79 feet are also eligible…

Requirement	WDFW	USCG	EPA
Vessel Application Exemptions	RCW 77.120.020 (1) This chapter applies to all vessels transiting into the waters of the state from a voyage, except… (a) "A vessel of the United States department of defense or United States coast guard … any vessel of the armed forces…"	33 C.F.R. §151.2015(a) (1) Any Department of Defense or Coast Guard vessel …; or any vessel of the Armed Forces... (2) Any warship, naval auxiliary, or other vessel owned or operated by a foreign state and used, for the time being, only on government non-commercial service."	VGP Part 1.2.1 "…vessel of the Armed Forces as defined in section 312(a)(14) of the CWA." CWA 312 (a)(14) (14) ''vessel of the Armed Forces'' means— (A) any vessel owned or operated by the Department of Defense, other than a time or voyage chartered vessel; and (B) any vessel owned or operated by the Department of Transportation that is designated by the Secretary of the department in which the Coast Guard is operating as a vessel equivalent to a vessel described in subparagraph (A).
	RCW 77.120.020 (1) This chapter applies to all vessels transiting into the waters of the state from a voyage, except… (b)A vessel that discharges ballast water or sediments only at the location where the ballast water or sediments originated, if the ballast water or sediments do not mix with ballast water or sediments from areas other than open sea waters; and	33 C.F.R. §151.2015(d) (d) The following vessels are exempt only from the requirements of §151.2025 (BWM requirements) of this subpart: (3) Vessels that operate in more than a single COTP Zone and take on and discharge ballast water exclusively in a single COTP Zone."	Part 4.3 Except for vessels operating exclusively within one Captain of the Port Zone, for vessels equipped with ballast tanks that are bound for a port or place in the United States, you must meet the recordkeeping requirements of 33 CFR Part 151. 2.2.3.5.3 Vessels Not Required to Meet Part 2.2.3.5 Treatment Standards… 2.2.3.5.3.1 Vessels Engaged in Short-Distance Voyages Vessels engaged in short distance voyages means vessels that: • Operate or take on and discharge ballast water exclusively in one Coast Guard Captain of the Port (COTP) Zone, or • Vessels which do not travel more than 10 nm and cross no physical barriers or obstructions (e.g., locks), whether or not they operate within one U.S. Coast Guard COTP zone.
	RCW 77.120.020 (1) This chapter applies to all vessels transiting into the waters of the state from a voyage, except… (c) A vessel in innocent passage, merely traversing the territorial sea of the United States and not entering or departing a United States port, or not navigating the internal waters of the United States, and that does not discharge ballast water into the waters of the state.	33 C.F.R. §151.2020 "Vessels in innocent passage…" A foreign vessel that is merely traversing the territorial sea of the United States (unless bound for, entering or departing a U.S. port or navigating the internal waters of the U.S.) does not fall within the applicability of this subpart	[innocent passage exempt by default] Part 4.3 "Except for vessels operating exclusively within one Captain of the Port Zone, for vessels equipped with ballast tanks that are **bound for a port or place in the United States**, you must meet the recordkeeping requirements of 33 CFR Part 151."
	RCW 77.120.020 (2) This chapter does not authorize the discharge of oil or noxious liquid substances in a manner prohibited by state, federal, or international laws or regulations. Ballast water containing oil, noxious liquid substances, or any other pollutant shall be discharged in accordance with the applicable requirements.	33 C.F.R. §151.2025(d) This subpart does not authorize the discharge of oil or noxious liquid substances (NLS) in a manner prohibited by United States or international laws or regulations. Ballast water carried in any tank containing a residue of oil, NLS, or any other pollutant must be discharged in accordance with applicable laws and regulations.	VGP 2.2.3 Ballast Water … All discharges of ballast water may not contain oil, noxious liquid substances (NLSs), or hazardous substances in a manner prohibited by U.S. laws, including section 311 of the Clean Water Act.
	RCW 77.120.020 (3) The master or operator in charge of a vessel is responsible for the safety of the vessel, its crew, and its passengers. Nothing in this chapter relieves the master or operator in charge of a vessel of the responsibility for ensuring the safety and stability of the vessel or the safety of the crew and passengers.	33 C.F.R. §151.2040 (c) Nothing in this subpart relieves the master, owner, operator, agent, or person in charge of a vessel of any responsibility, including ensuring the safety and stability of the vessel and the safety of the crew and passengers.	
[See Exchange table for further details]	WAC 220-150-040 (4) Common water exemption. Vessels voyaging from a port within the common water zone to a port in Washington state are exempt from having to	33 C.F.R. §151.2015(c) Vessels that operate exclusively on voyages between ports or places within a single COTP Zone are exempt	Part 4.3 "Except for vessels operating exclusively within one Captain of the Port Zone, for vessels equipped with ballast tanks that are bound for a port or place in the United States, you must meet the recordkeeping requirements of 33 CFR Part

Requirement	WDFW	USCG	EPA
	conduct a ballast water exchange if the ballast water and sediment originated solely from a valid exchange prior to entering the common waters or from uptake within an area that includes only the waters of Washington state, the Oregon portions of the Columbia River system, and the internal waters of British Columbia south of latitude fifty degrees north, including the waters of the Straits of Georgia and Juan de Fuca…	from the requirements of §§151.2025 (ballast water management (BWM) requirements), and 151.2070 (recordkeeping) of this subpart.	151." 2.2.3.5.3 Vessels Not Required to Meet Part 2.2.3.5 Treatment Standards… 2.2.3.5.3.1 Vessels Engaged in Short-Distance Voyages Vessels engaged in short distance voyages means vessels that: • Operate or take on and discharge ballast water exclusively in one Coast Guard Captain of the Port (COTP) Zone, or • Vessels which do not travel more than 10 nm and cross no physical barriers or obstructions (e.g., locks), whether or not they operate within one U.S. Coast Guard COTP zone. 2.2.3.6.6 Exemptions [for vessels already exempt from treatment options and subject only to exchange] The operator or master of a vessel may elect not to exchange ballast water (or not conduct saltwater flushing if applicable) if the vessel meets one of the following conditions: • The vessel is not engaged in an international voyage and does not traverse more than one U.S. Coast Guard COTP Zone.
		33 C.F.R. §151.2015(b) Crude oil tankers engaged in coastwise trade are exempt from the requirements of §§151.2025 (ballast water management (BWM) requirements), 151.2060 (reporting), and 151.2070 (recordkeeping) of this subpart."	4.3 … In addition, crude oil tankers engaged in the Coast Wise trade are also required to submit their ballast water reporting forms to the NBIC as a requirement of this permit…
			2.2.3.5.3 Vessels Not Required to Meet Part 2.2.3.5 Treatment Standards The following vessel types are not required to meet Part 2.2.3.5 ballast water management measures (however, note that these vessels must meet all other requirements of Part 2.2.3 of the permit [HCL notes – reports/records are part of the exempted section, but the "other requirements" they are subject to include BW exchange]). Additionally, EPA encourages vessels in these categories to use additional management measures to reduce the number of living organisms in their ballast water discharges, including use of any of the measures found in Part 2.2.3.5, use of potable water generators, or other measures to reduce the volume of their ballast water discharges: 2.2.3.5.3.2 Unmanned, Unpowered Barges Unmanned, unpowered barges such as hopper barges are not required to meet the ballast water management measures of Part 2.2.3.5.
	WAC 220-150-040 (4) Common water exemption. Vessels voyaging from a port within the common water zone to a port in Washington state are exempt from having to conduct a ballast water exchange if the ballast water and sediment originated solely from a valid exchange prior to entering the common waters or from uptake within an area that includes only the waters of Washington state, the Oregon portions of the Columbia River system, and the internal waters of British Columbia south of latitude fifty degrees north, including the waters of the Straits of Georgia and Juan de Fuca…	33 C.F.R. §151.2015(d) The following vessels are exempt only from the requirements of §151.2025 (BWM requirements) of this subpart: (1) Seagoing vessels that operate in more than one COTP Zone, do not operate outside of the Exclusive Economic Zone (EEZ), and are less than or equal to 1,600 gross register tons or less than or equal to 3,000 gross tons…	Part 4.3 "Except for vessels operating exclusively within one Captain of the Port Zone, for vessels equipped with ballast tanks that are bound for a port or place in the United States, you must meet the recordkeeping requirements of 33 CFR Part 151." 2.2.3.5.3 Vessels Not Required to Meet Part 2.2.3.5 Treatment Standards… 2.2.3.5.3.4 Inland and Seagoing Vessels less than 1600 Gross Registered Tons (3000 Gross Tons) Inland and Seagoing Vessels less than 1600 Gross Registered Tons (3000 Gross Tons) are not required to meet the numeric treatment limits in Section 2.2.3.5. Seagoing Vessels are defined in 33 CFR 151.2005. EPA encourages inland and seagoing vessels in this size class to use alternate measures to reduce the number of living organisms in their ballast water discharges.
			2.2.3.6.6 Exemptions [for vessels already exempt from treatment options and subject only to exchange] The operator or master of a vessel may elect not to exchange ballast water (or not conduct saltwater flushing if applicable) if the vessel meets one of the following conditions: • The vessel is not engaged in an international voyage and does not traverse more than one U.S. Coast Guard COTP Zone.

Requirement	WDFW	USCG	EPA
		33 C.F.R. §151.2015(d) (d) The following vessels are exempt only from the requirements of §151.2025 (BWM requirements) of this subpart: (2) Non-seagoing vessels.	2.2.3.5.3 Vessels Not Required to Meet Part 2.2.3.5 Treatment Standards… 2.2.3.5.3.3 Vessels That Operate Exclusively on the Laurentian Great Lakes (Commonly Known as Lakers) Built Before January 1, 2009 Existing Lakers built before January 1, 2009 confined exclusively to the Laurentian Great Lakes (i.e., existing vessels that operates upstream of the waters of the St. Lawrence River west of a rhumb line drawn from Cap de Rosiers to West Point, Anticosti Island, and west of a line along 63 W. longitude from Anticosti Island to the north shore of the St. Lawrence River) are not required to meet the requirements of Part 2.2.3.5. Lakers built on or after January 1, 2009 must meet the treatment limits found in Part 2.2.3.5 of the permit.
	RCW 77.120.120 The department may issue a special operating authorization for passenger vessels conducting or assisting in research and testing activities to determine the presence of invasive species in ballast water collected in the waters of southeast Alaska north of latitude fifty-four degrees thirty minutes north to sixty-one degrees ten minutes north, extending to longitude one hundred forty-nine degrees thirty minutes west. The department may adopt rules for defining special operating authorization conditions, requirements, limitations, and fees as necessary to implement this section, consistent with the intent of this chapter.		2.2.3.8 Vessels in the U.S. Coast Guard Shipboard Technology Evaluation Program (STEP) Owner/operators of vessels are not required to meet the requirements of Parts 2.2.3.5 [BW management] (except Parts 2.2.3.5.1.1.5 (*Requirements and Effluent Limitations for BWTS that use Active Substances (e.g., biocides*)) and 2.2.3.5.1.1.6 (*Ballast Water Treatment System Recordkeeping and Reporting*)) and 2.2.3.6 [exchange] of this permit if either: • The vessel is accepted by the U.S. Coast Guard into the Shipboard Technology Evaluation Program (STEP), • The technology is operated in accordance with requirements of that program, and • The acceptance has not been withdrawn. Owner/operators of these vessels are required to meet the requirements of Parts 2.2.3.5.1.1.5 (*Requirements and Effluent Limitations for BWTS that use Active Substances (e.g., biocides*)) and 2.2.3.5.1.1.6 (Ballast Water Treatment System Recordkeeping and Reporting) of this permit.
			4.3 …In addition, all vessels which conduct saltwater flushing as required by Part 2.2.3.6.3 and Part 2.2.3.6.4 of the permit, but do not report saltwater flushing to the NBIC, must instead keep a record of saltwater flushing to meet the requirements of this permit.
Exemptions from requirement to exchange			*2.2.3.6.6 Exemptions* The operator or master of a vessel may elect not to exchange ballast water (or not conduct saltwater flushing if applicable) if the vessel meets one of the following conditions: … • The vessel is not engaged in an international voyage and does not traverse more than one U.S. Coast Guard COTP Zone… Additionally, except for vessels entering the Great Lakes or into Appendix G waters, a vessel is not required to deviate from its voyage, or delay the voyage to conduct ballast water exchange or saltwater flushing..
	RCW 77.120.030 (8) The requirements of this section do not apply to a vessel discharging ballast water or sediments that originated solely within the waters of Washington, the Columbia river system, or the internal waters of British Columbia south of latitude fifty degrees north, including the waters of the Straits of Georgia and Juan de Fuca.		

Vessel Exemption Table – [Interpretation not necessarily reg. language]

	RCW 77.120.030 (Authorized discharge)	**RCW 77.120.040 (Reporting)**	**WAC 220-150-030 Logbook**	**WAC 220-150-030 Onboard BWMP (includes training)**	**33 CFR 151.2025 (Mngmt)**	**33 CFR 151.2060 (Report)**	**33 CFR 151.2070 (Record)**	**33 CFR 151.2050 (BWMP**	**VGP 2.2.3.5 Mngmt** (BWTS, PWS, onshore trmnt, or no dschrg)	**VGP Exchange**	**VGP 4.3 Reporting**	**VGP 4.4.1 Records**	**VGP 2.2.3.1 Training**	**VGP 2.2.3.2 BWMP**
Under 3000 gross tons	Exempt	Exempt	Exempt	Exempt	Applicable unless recreational, or does not leave EEZ	Applicable unless recreational	Applicable unless recreational	Applicable unless recreational	Exempt	Applicable	Applicable unless w/o bw tanks or recreational. Annual report may be combined	Applicable unless w/o bw tanks or recreational	Applicable unless w/o bw tanks or recreational	Applicable unless w/o bw tanks or recreational
Equipped with ballast tanks	Applicable unless incapable of carrying ballast water (welded shut)	Applicable unless incapable of carrying ballast water (welded shut)	Applicable unless incapable of carrying ballast water (welded shut)	Applicable unless incapable of carrying ballast water (welded shut)	Applicable	Applicable	Applicable	Applicable	Applicable unless recreational	N/A	Applicable unless recreational	Applicable unless recreational	Applicable unless recreational	Applicable unless recreational
Recreational vessels	Applicable (>3000gt)	Applicable(>3000gt)	Applicable(>3000gt)	Applicable(>3000gt)	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
Department of Defense or Coast Guard vessel subject to 46 U.S.C. 4713	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt.	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
Vessel of the Armed Forces subject to the "Uniform National Discharge Standards for Vessels of the Armed Forces" (33 U.S.C. 1322(n))	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt.	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
Crude oil tankers engaged in coastwise trade	Applicable	Applicable	Applicable	Applicable	Exempt	Exempt	Exempt.	Applicable	Applicable	N/A	Applicable	Applicable	Applicable	Applicable
Vessel operates exclusively on voyages between ports or places within a single COTP Zone	Exempt (b/c stays in common water zone)	Applicable	Applicable	Applicable	Exempt	Applicable (annual rpt, not per-visit)	Exempt.	Applicable	Exempt	Applicable	Exempt	Exempt	Applicable	Applicable
Seagoing vessel operates on voyages between ports or places in more than a single COTP Zone, does not operate outside of EEZ, and ≤1600 gross register tons or ≤3000 gross tons (ITC)	Exempt (due to size)	Exempt (due to size)	Exempt (due to size)	Exempt (due to size)	Exempt	Applicable	Applicable.	Applicable	Exempt (due to size)	Applicable	Applicable	Applicable	Applicable	Applicable
Non-seagoing vessel	Exempt (b/c stays in common water zone)	Applicable	Applicable	Applicable	Exempt	Applicable	Applicable (unless operating exclusively within a single COTP Zone).	Applicable	Applicable unless discharges w/in 1 COTP	N/A	Applicable (unless operating exclusively within a single COTP Zone).	Applicable (unless operating exclusively within a single COTP Zone).	Applicable	Applicable
Vessel operates between ports or places in more than a single COTP Zone and takes on and discharges ballast water exclusively in a single	Exempt	Applicable	Applicable	Applicable	Exempt	Applicable	Applicable.	Applicable	Exempt	Applicable	Applicable	Applicable	Applicable	Applicable

	RCW 77.120.030 (Authorized discharge)	**RCW 77.120.040 (Reporting)**	**WAC 220-150-030 Logbook**	**WAC 220-150-030 Onboard BWMP (includes training)**	**33 CFR 151.2025 (Mngmt)**	**33 CFR 151.2060 (Report)**	**33 CFR 151.2070 (Record)**	**33 CFR 151.2050 (BWMP**	**VGP 2.2.3.5 Mngmt** (BWTS, PWS, onshore trmnt, or no dschrg)	**VGP Exchange**	**VGP 4.3 Reporting**	**VGP 4.4.1 Records**	**VGP 2.2.3.1 Training**	**VGP 2.2.3.2 BWMP**
COTP Zone														
Vessels that do not normally discharge	Exempt	Applicable, unless waiver filed	Applicable	Applicable	Applicable (not discharging is a compliance option)	Applicable	Applicable (unless operating exclusively within a single COTP Zone)	Applicable	Applicable (no discharge is an option)	Exempt	Applicable (unless operating exclusively within a single COTP Zone).	Applicable (unless operating exclusively within a single COTP Zone).	Applicable	Applicable
Vessels discharging in the port water originated from	Exempt	Exempt	Exempt	Exempt	Exempt	Applicable (unless operating exclusively within a single COTP Zone)	Applicable (unless operating exclusively within a single COTP Zone)	Applicable	Exempt	Applicable (unless operating exclusively within a single COTP Zone)	Applicable (unless operating exclusively within a single COTP Zone).	Applicable (unless operating exclusively within a single COTP Zone).	Applicable	Applicable
Vessels discharging tap water	Can apply for exemption as an exchange alternative	Applicable unless discharging in the port the water originated from	Applicable	Applicable	Applicable (tap water is a compliance option)	Applicable	Applicable (unless operating exclusively within a single COTP Zone)	Applicable	Applicable (PWS is an option)	N/A	Applicable (unless operating exclusively within a single COTP Zone).	Applicable (unless operating exclusively within a single COTP Zone).	Applicable	Applicable
Unmanned, unpowered barges	Applicable	Applicable	Applicable	Applicable – may be on tug	Applicable	Applicable	Applicable	Applicable	Exempt	Applicable	Applicable, annual report may be combined	Applicable(unless operating exclusively within a single COTP Zone).	Applicable	Applicable

Management Requirements and Discharge Standard

Requirement	WDFW	USCG	EPA
Liability	RCW 77.120.030 (1) The owner or operator in charge of any vessel covered by this chapter is required to ensure that the vessel under their ownership or control does not discharge ballast water into the waters of the state except as authorized by this section. WAC 220-150-020 (25) "Vessel owner" or "operator" means the owner, operator, master, or person-in-charge of a vessel.	33 C.F.R. §151.2075 (d) In this subpart, wherever multiple entities are responsible for compliance with any requirement of the rule, each entity is jointly liable for a violation of such requirement.	
	RCW 77.120.030 (1) The owner or operator in charge of any vessel covered by this chapter is required to ensure that the vessel under their ownership or control does not discharge ballast water into the waters of the state except as authorized by this section. RCW 90.52.040 Wastes to be provided with available methods of treatment prior to discharge into waters of the state. Except as provided in RCW 90.54.020(3)(b), in the administration of the provisions of chapter 90.48 RCW, the director of the department of ecology shall, regardless of the quality of the water of the state to which wastes are discharged or proposed	33 C.F.R. §151.2025 Ballast water management requirements (a) The master, owner, operator, agent, or person in charge of a vessel equipped with ballast tanks that operates in the waters of the United States must employ one of the following ballast water management methods:	VGP 2.2.3 Ballast Water All discharges of ballast water must comply with the requirements in this permit as described below. Additionally, owner/operators of all vessels subject to coverage under this permit which are equipped with Ballast Tanks must comply with any additional BMPs in this section. In addition, as a condition of this permit, all discharges of ballast water must also comply with applicable U.S. Coast Guard regulations found in 33 CFR Part 151. 2.2.3.3 Mandatory Ballast Water Management Practices: Management measures required of all vessel owner/operators • Minimize the discharge of ballast water essential for vessel operations while in the waters subject to this permit.

Requirement	WDFW	USCG	EPA
	for discharge, and regardless of the minimum water quality standards established by the director for said waters, require wastes to be provided with all known, available, and reasonable methods of treatment prior to their discharge or entry into waters of the state.		2.2.3.5.1 Ballast Water Management Measures …Vessel owner/operators may use one of the four following ballast water management methods to meet the numeric discharge limits in Part 2.2.3.5
		33 C.F.R. §151.2025(a)… (2) Use only water from a U.S. public water system (PWS), as defined in 40 CFR 141.2, that meets the requirements of 40 CFR parts 141 and 143 as ballast water. Vessels using water from a PWS as ballast must maintain a record of which PWS they received the water from as well as a receipt, invoice, or other documentation from the PWS indicating that water came from that system. Furthermore, they must certify that they have met the conditions in paragraphs (a)(2)(i) or (ii) of this section, as applicable, and describe in the BWM plan the procedures to be used to ensure compliance with those conditions, and thereafter document such compliance in the BW record book. Vessels using water from a PWS must use such water exclusively unless the usage is in accordance with §151.2040 of this subpart. Vessels using PWS water as ballast must have either— (i) Previously cleaned the ballast tanks (including removing all residual sediments) and not subsequently introduced ambient water; or (ii) Never introduced ambient water to those tanks and supply lines.	2.2.3.3 Mandatory Ballast Water Management Practices: Management measures required of all vessel owner/operators …Another option is to use public water supply water for ballast or, for vessels not subject to the numeric limits in Part 2.2.3.5 of this permit, use water from a potable water generator as ballast. EPA notes that vessels not subject to the numeric limits in Part 2.2.3.5 of this permit should endeavor to take all reasonable steps to minimize or eliminate the discharge of untreated ballast water. 2.2.3.5.1.3 Use of Public Water Supply Water Vessels may meet the requirements of Part 2.2.3.5 by using only water from a U.S. public water system or Canadian drinking water system (both referred to as "PWS" in this permit), as defined in a) 40 CFR 141.2 and subject to the requirements of 40 CFR parts 141 and 143 or b) Health Canada's "Guidelines on Canadian Drinking Water Quality," as ballast water. Vessels using water from a PWS as ballast must maintain a record of which PWS they received the water and a receipt, invoice, or other documentation from the PWS indicating that water came from that system. To avoid contamination of the ballast water tank, vessels using PWS water in any given tank as ballast must have: • Previously cleaned the ballast tank (including removing all residual sediments) and not subsequently introduced ambient water; • Never introduced ambient water to the tank and supply lines Vessels utilizing water from a PWS as ballast water must certify in their recordkeeping documentation that they have met all the requirements of this section, including maintaining certification by the master or NOI certifier that one of the above conditions are met regarding contamination. For vessels that use PWS water in some ballast water tanks, but ambient treated water as ballast in others, records must clearly indicate which tanks use PWS water as ballast versus those that use ambient treated water (or both), and indicate what measures the vessel operator has implemented to avoid cross contamination between tanks. In the event a vessel that normally uses PWS water as ballast is forced for purposes of vessel safety to take on untreated ballast water from a sea, estuary, lake or river source, such vessel may not return to using PWS water until the tanks and supply lines have been cleaned, including removal of all residual sediments.
BW Discharge Standard (BWDS)	RCW 77.120.030 (2) Discharge of ballast water into waters of the state is authorized only if there has been an open sea exchange, or if the vessel has treated its ballast water, to meet standards set by the department… (3) The department…shall adopt by rule standards for the discharge of ballast water into the waters of the state and their implementation timelines…[and where] practical and appropriate, the standards must be compatible with standards set by the United States coast guard, the federal clean water act (33 U.S.C. Sec. 1251-1387), or the international maritime organization.	33 C.F.R. §151.2030 (a) Vessels employing a Coast Guard-approved ballast water management system (BWMS) must meet the following BWDS by the date listed in §151.2035(b) of this subpart:	VGP 2.2.3.5 Ballast Water Numeric Discharge Limitations Owners/operator must meet the following ballast water discharge limits (expressed as instantaneous maximum) consistent with the schedule found in Part 2.2.3.5.2, unless you are excluded from these requirements by Parts 2.2.3.5.3 or 2.2.3.8 of this permit: [Part 2.2.3.5.3 excludes short distance voyages (keep water w/in 1COTP or w/in 10 nm without barrier), unmanned unpowered barges, lakers, and vessels under 300 gross tons] [Part 2.2.3.8 excludes ships in the STEP program] These limits may be met by using one of the ballast water management measures in Parts 2.2.3.5.1.1, 2.2.3.5.1.2, 2.2.3.5.1.3, or 2.2.3.5.1.4.
	RCW 77.120.030 (2) Discharge of ballast water into waters of the state is authorized only if there has been an open sea exchange, …	§151.1510 Ballast water management requirements. (a) The master of each vessel subject to this subpart shall employ one of the following ballast water management practices:	2.2.3.6 Interim requirements for vessels not meeting the ballast water management measures in Part 2.2.3.5 Vessel owner/operators not subject to the requirements of Part 2.2.3.5 of the

Requirement	WDFW	USCG	EPA
		(1) Carry out an exchange of ballast water on the waters beyond the Exclusive Economic Zone (EEZ),	permit must meet the exchange and flushing requirements of this part as applicable.
	WAC 220-150-050 Treatment requirements [Reserved]	33 C.F.R. §151.2030(a)… (1) 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.	VGP 2.2.3.5 1. For organisms greater than or equal to 50 micrometers in minimum dimension: discharge must include fewer than 10 living organisms per cubic meter of ballast water.
	WAC 220-150-050 Treatment requirements [Reserved]	33 C.F.R. §151.2030(a)… (2) For organisms less than 50 micrometers and greater than or equal to 10 micrometers: Discharge must include fewer than 10 organisms per milliliter (mL) of ballast water.	VGP 2.2.3.5 2. For organisms less than 50 micrometers and greater than or equal to 10 micrometers: discharge must include fewer than 10 living organisms per milliliter (mL) of ballast water.
	WAC 220-150-050 Treatment requirements [Reserved]	33 C.F.R. §151.2030(a)… (3) Indicator microorganisms must not exceed: (i) For toxicogenic Vibrio cholerae (serotypes O1 and O139): A concentration of less than 1 colony forming unit (cfu) per 100 mL. (ii) For Escherichia coli: a concentration of fewer than 250 cfu per 100 mL. (iii) For intestinal enterococci: A concentration of fewer than 100 cfu per 100 mL.	VGP 2.2.3.5 3. Indicator microorganisms must not exceed: (i) For Toxicogenic Vibrio cholerae (serotypes O1 and O139): a concentration of less than 1 colony forming unit (cfu) per 100 mL. (ii) For Escherichia coli: a concentration of fewer than 250 cfu per 100 mL. (iii) For intestinal enterococci: a concentration of fewer than 100 cfu per 100 mL.
[See Extraordinary Circumstances table for further details]	RCW 77.120.030 (4) The master, operator, or person in charge of a vessel is not required to conduct an open sea exchange or treatment of ballast water if the master, operator, or person in charge of a vessel determines that the operation would threaten the safety of the vessel, its crew, or its passengers, because of adverse weather, vessel design limitations, equipment failure, or any other extraordinary conditions.	33 C.F.R. §151.2040 (a) The Coast Guard will allow the master, owner, operator, agent, or person in charge of a vessel that cannot practicably meet the requirements of §151.2025(a) of this subpart, either because its voyage does not take it into waters 200 nautical miles or greater from any shore for a sufficient length of time and the vessel retains ballast water onboard or because the master of the vessel has identified safety or stability concerns, to discharge ballast water in areas other than the Great Lakes and the Hudson River north of the George Washington Bridge.	2.2.3.6.6 Exemptions The operator or master of a vessel may elect not to exchange ballast water (or not conduct saltwater flushing if applicable) if the vessel meets one of the following conditions: • The master of the vessel determines, and justifies in writing, and documents in the log or record book, that it is unsafe to do so,
[See Implementation Schedule table for further details]	RCW 77.120.030 (5) For treatment technologies requiring shipyard modification, the department may enter into a compliance plan with the vessel owner. The compliance plan must include a timeline consistent with drydock and shipyard schedules for completion of the modification. The department shall adopt rules for compliance plans under this subsection.	33 C.F.R. §151.2036 The Coast Guard may grant an extension to the implementation schedule listed in §151.2035(b) of this subpart only in those cases where the master, owner, operator, agent, or person in charge of a vessel subject to this subpart can document that, despite all efforts, compliance with the requirement under §151.2025 is not possible.	VGP 1.9.1 Regarding implementation dates of the limits found in Part 2.2.3.5 of the VGP, EPA advises that where the U.S. Coast Guard has granted or denied an extension request pursuant to 33 CFR 151.2036, that information will be considered by EPA, but is not binding on EPA.
Reservation for more stringent standards in the future	RCW 77.120.030 (WDFW) Authorized ballast water discharge—Adoption of standards by rule. (3) The department, in consultation with a collaborative forum, shall adopt by rule standards for the discharge of ballast water into the waters of the state and their implementation timelines. The standards are intended to ensure that the discharge of ballast water poses minimal risk of introducing nonindigenous species. In developing these standards, the department shall consider the extent to which the requirement is technologically and practically feasible. Where practical and appropriate, the standards must be compatible with standards set by the United States coast guard, the federal clean water act (33 U.S.C. Sec. 1251-1387), or the international maritime organization. 90.48.035 (ECY) Rule-making authority. The department shall have the authority to, and shall promulgate, amend, or rescind such rules and regulations as it shall deem necessary to carry out the provisions of this chapter, including but not limited to rules and regulations relating to standards of quality for waters of the state and for substances discharged therein in order to maintain the highest possible standards of all waters	33 C.F.R. §151.2030(a)… (c) The Coast Guard will conduct a practicability review as follows: (1) No later than January 1, 2016, the Coast Guard will publish the results of a practicability review to determine— (i) Whether technology to comply with a performance standard more stringent than that required by paragraph (a) of this section can be practicably implemented, in whole or in part, and, if so, the Coast Guard will schedule a rulemaking to implement the more stringent standard; and (ii) Whether testing protocols that can assure accurate measurement of compliance with a performance standard more stringent than that required by paragraph (a) of this section can be practicably implemented. (2) If the Coast Guard determines on the basis of a practicability review conducted under paragraph (c)(1) of this section that technology to achieve a significant improvement in ballast water treatment efficacy could be practicably implemented, the Coast Guard will report this finding and will, no later than January 1, 2017, initiate a rulemaking that would establish performance standards	VGP 2.2.3.5 Ballast Water Numeric Discharge Limitations Note: EPA will continue to explore new technologies with industry and states, and when warranted, will make this numeric limit more stringent in the future (see discussion in section 4.4.3.5.1 of the fact sheet). Additionally, EPA encourages and anticipates, as part of this process, that states will continue to work with industry to test and provide opportunities for new technologies.

Requirement	WDFW	USCG	EPA
	of the state in accordance with the public policy as declared in RCW 90.48.010.	and other requirements or conditions to ensure to the maximum extent practicable that aquatic nuisance species are not discharged into waters of the United States from vessels. If the Coast Guard subsequently finds that it is not able to meet this schedule, the Coast Guard will publish a notice in the Federal Register so informing the public, along with an explanation of the reason for the delay, and a revised schedule for rule making that shall be as expeditious as practicable. (3) When conducting the practicability review as described in paragraph (c)(1) of this section, the Coast Guard will consider— (i) The capability of any identified technology to achieve a more stringent BWDS, in whole or in part; (ii) The effectiveness of any identified technology in the shipboard environment; (iii) The compatibility of any identified technology with vessel design and operation; (iv) The safety of any identified technology; (v) Whether the use of any identified technology may have an adverse impact on the environment; (vi) The cost of any identified technology; (vii) The economic impact of any identified technology, including the impact on shipping, small businesses, and other uses of the aquatic environment; (viii) The availability, accuracy, precision, and cost of methods and technologies for measuring the concentrations of organisms, treatment chemicals, or other pertinent parameters in treated ballast water as would be required under any alternative discharge standards; (ix) Any requirements for the management of ballast water included in the most current version of the Environmental Protection Agency's Vessel General Permit and any documentation available from the EPA regarding the basis for these requirements; and (x) Any other factor that the Coast Guard considers appropriate that is related to the determination of whether identified technology is performable, practicable, and/or may possibly prevent the introduction and spread of non-indigenous aquatic invasive species.	
	RCW 77.120.030 (7) The department shall make every effort to align ballast water standards with adopted international and federal standards while ensuring that the goals of this chapter are met.		
	RCW 77.120.030 (8) The requirements of this section do not apply to a vessel discharging ballast water or sediments that originated solely within the waters of Washington, the Columbia river system, or the internal waters of British Columbia south of latitude fifty degrees north, including the waters of the Straits of Georgia and Juan de Fuca.		

Extraordinary Circumstances

Requirement	WDFW	USCG	EPA
BW Discharge: Extraordinary Circumstances	RCW 77.120.030 (4) The master, operator, or person in charge of a vessel is not required to conduct an open sea exchange or treatment of ballast water if the master, operator, or person in charge of a vessel determines that the operation would threaten the safety of the vessel, its crew, or its passengers, because of adverse weather, vessel design limitations, equipment failure, or any other extraordinary conditions. A master, operator, or person in charge of a vessel who relies on this exemption must file documentation defined by the department, subject to: (a) Payment of a fee not to exceed five thousand dollars; (b) discharging only the minimal amount of ballast water operationally necessary; (c) ensuring that ballast water records accurately reflect any reasons for not complying with the mandatory requirements; and (d) any other requirements identified by the department by rule as provided in subsections (3) and (6) of this section. (6) For an exemption claimed in subsection (4) of this section, the department shall adopt rules for defining exemption conditions, requirements, compliance plans, or alternative ballast water management strategies to meet the intent of this section. WAC 220-150-040 (5) Safety exemptions. Nothing in this chapter relieves the vessel owner or operator from ensuring the safety and stability of the vessel, its crew, or its passengers. A vessel owner or operator is not required to conduct an open sea exchange, in part or in full, if the vessel owner or operator determines that the operation would threaten the safety of the vessel, its crew, or its passengers. In these situations, the vessel operator must file a ballast water reporting form and is subject to all other provisions under WAC 220-150-030(4).	33 C.F.R. §151.2040 (a) The Coast Guard will allow the master, owner, operator, agent, or person in charge of a vessel that cannot practicably meet the requirements of §151.2025(a) of this subpart, either because its voyage does not take it into waters 200 nautical miles or greater from any shore for a sufficient length of time and the vessel retains ballast water onboard or because the master of the vessel has identified safety or stability concerns, to discharge ballast water in areas other than the Great Lakes and the Hudson River north of the George Washington Bridge.	2.2.3.6.6 Exemptions [for vessels already exempt from treatment options and subject only to exchange] The operator or master of a vessel may elect not to exchange ballast water (or not conduct saltwater flushing if applicable) if the vessel meets one of the following conditions: • The master of the vessel determines, and justifies in writing, and documents in the log or record book, that it is unsafe to do so, in accordance with the Coast Guard Regulations at 33 CFR Part 151. If this exemption is claimed, the vessel operator must record the date, location, and reason for the claim in its recordkeeping documentation. Furthermore, the vessel owner/operator must report this information to EPA as part of its annual report.
	RCW 77.120.030 (4) A master, operator, or person in charge of a vessel who relies on this exemption must file documentation defined by the department, subject to: (c) ensuring that ballast water records accurately reflect any reasons for not complying with the mandatory requirements; and (d) any other requirements identified by the department by rule as provided in subsections (3) and (6) of this section. WAC 220-150-030(4) (a) In general. Vessel owners or operators claiming a safety exemption under RCW 77.120.030(4) must file a reporting form and provide sufficient additional information for the department to evaluate the claim, determine whether an alternative exchange or emergency ballast water treatment strategy is warranted, and determine whether a temporary compliance plan is necessary to prevent or reduce the likelihood of future claims. (b) Reporting requirements. Vessel owners or operators claiming a safety exemption must notify the department of their intent to do so on the ballast water reporting form as required in subsection (2) of this section. Notification requires writing the words "SAFETY EXEMPTION" on the form where it asks "If no ballast treatment conducted, state reason why not:" and stating the cause	33 C.F.R. §151.2040 (b) If the installed BWMS required by this subpart stops operating properly during a voyage, or the vessel's BWM method is unexpectedly unavailable, the person directing the movement of the vessel must ensure that the problem is reported to the nearest COTP or District Commander as soon as practicable. The vessel may continue to the next port of call, subject to the directions of the COTP or District Commander, as provided by part 160 of this chapter…	4.4.4 Additional Reporting In addition to the reporting requirements stipulated in Part 4 of this permit, you are also subject to the standard permit reporting provisions referenced in Part 1.13. Where applicable, you must submit the following information to the appropriate EPA Regional Office listed in Appendix B for the location in which the instance(s) of noncompliance occurred: • 24-hour reporting – You must report any noncompliance which may endanger health or the environment. Any information must be provided orally within 24 hours from the time you become aware of the circumstances. • 5-day follow-up reporting to the 24-hour reporting – A written submission must also be provided within five days of the time you become aware of the circumstances. If you report to the NRC as referenced in Part 4.4.3 of the permit, you do not need to complete reporting under this part.

Requirement	WDFW	USCG	EPA
	as either "ADVERSE WEATHER," "VESSEL DESIGN LIMITATION," "EQUIPMENT FAILURE," or "EXTRAORDINARY CONDITION"…		
	WAC 220-150-030(4) (a)The intent of these rules is to prevent or minimize the discharge of unexchanged or untreated ballast water.		
	RCW 77.120.100 The department may assess a fee for any exemptions allowed under this chapter. Such a fee may not exceed five thousand dollars… RCW 77.120.030 A master, operator, or person in charge of a vessel who relies on this exemption must file documentation defined by the department, subject to: (a) Payment of a fee not to exceed five thousand dollars; WAC 220-150-030(4) (e) Safety exemption filing fee. The department will assess a safety exemption filing fee of five hundred dollars for administrative costs to assess compliance.		
	WAC 220-150-030(4)(b)… (iii) Vessel owners or operators required to meet discharge performance standards under WAC 220-150-050 and claiming a safety exemption due to equipment failure must conduct an open sea exchange or provide evidence to establish why that was not possible.	33 C.F.R. §151.2040(a)… (1) The Coast Guard will not allow such a discharge if the vessel is required to have a Coast Guard-approved ballast water management system (BWMS) per the implementation schedule found in §151.2035(b) of this subpart.	[Exchange exemption above applies only to vessels already exempt from treatment options and subject only to exchange]
	WAC 220-150-030(4) (a) In general. Vessel owners or operators claiming a safety exemption under RCW 77.120.030(4) must file a reporting form and provide sufficient additional information for the department to evaluate the claim, determine whether an alternative exchange or emergency ballast water treatment strategy is warranted, and determine whether a temporary compliance plan is necessary to prevent or reduce the likelihood of future claims. WAC 220-150-030(4)(b)… (iii) Vessel owners or operators required to meet discharge performance standards under WAC 220-150-050 and claiming a safety exemption due to equipment failure must conduct an open sea exchange or provide evidence to establish why that was not possible. WAC 220-150-030(4)… (d) Discharge authorization requirement. Except where discharging is necessary to prevent jeopardy to the vessel, crew or passengers, the vessel owner or operator shall not discharge unexchanged or untreated ballast water without department authorization. The department will determine and require the vessel owner or operator to conduct one or more of the following actions: (i) Hold its ballast water; (ii) Conduct an emergency ballast water treatment response; (iii) Discharge into a reception facility; (iv) Discharge into specified alternative waters; or…	33 C.F.R. §151.2040(b)… (1) The Coast Guard will normally allow a vessel that cannot practicably meet the requirements of §151.2025(a)(1) of this subpart because its installed BWMS is inoperable, or the vessel's BWM method is unexpectedly unavailable, to employ one of the other ballast water management (BWM) methods listed in §151.2025(a) of this subpart. (2) If the master of the vessel determines that the vessel cannot employ other BWM methods due to the voyage or safety concerns listed in paragraph (a) of this section, the Coast Guard will normally allow the vessel to discharge ballast water in areas other than the Great Lakes and the Hudson River north of the George Washington Bridge.	2.2.3.5.1.4 Vessels may meet the requirements of Part 2.2.3.5 of this permit by not discharging any ballast water into waters subject to this permit. EPA notes that any discharge of untreated ballast water, including for reasons of unscheduled voyages, loading of unexpected cargo, etc., do not qualify as an acceptable reason to discharge untreated ballast water into waters subject to this permit, and therefore constitute a permit violation. EPA notes that in the case of a shipboard emergency that endangers the safety of the vessel or its crew, ballast water may need to be pumped out quickly by bypassing the BWTS. In such cases, the provisions regarding the prohibition of bypassing treatment where unavoidable to prevent loss of life, personal injury of severe property damage may be applicable. See 40 CFR 122.41(m)(4)(A) and Part 1.13 of this permit.
	RCW 77.120.030(4)… (b) discharging only the minimal amount of ballast water operationally necessary…	33 C.F.R. §151.2040(b)… (3) If the Coast Guard approves such an allowance, the vessel must discharge only that amount of ballast water operationally necessary to ensure the safety and stability of the vessel for cargo operations. Ballast water records must be	[not specific to safety exemptions] VGP 2.2.3.3 • Minimize the discharge of ballast water essential for vessel operations while in the waters subject to this permit.

Requirement	WDFW	USCG	EPA
	WAC 220-150-030(4)(d)… …(v) Discharge only the minimum amount necessary to complete a safe operation.	made available to the local COTP upon request.	

Implementation Schedule

Requirement	WDFW	USCG	EPA
BWDS Implementation Schedule	RCW 77.120.030 (3) The department…shall adopt by rule standards for the discharge of ballast water into the waters of the state and their implementation timelines…[and where] practical and appropriate, the standards must be compatible with standards set by the United States coast guard, the federal clean water act (33 U.S.C. Sec. 1251-1387), or the international maritime organization.	33 C.F.R. §151.2035 (a) To discharge ballast water into waters of the United States, the master, owner, operator, agent, or person in charge of a vessel subject to §151.2025 of this subpart must either ensure that the ballast water meets the ballast water discharge standard as defined in §151.2030(a), use an AMS as described in §151.2025(a)(3) or ballast with water from a U.S. public water system, as described in §151.2025(a)(2), according to the schedule in paragraph (b) of this section.	
	WAC 220-150-043 Interim open sea exchange alternative. (1) In general. For purposes of this section, a vessel owner or operator may use an exchange alternative instead of conducting an open sea exchange, except for Columbia River ports unless specifically approved, provided: (a) The vessel owner or operator is not otherwise required to meet discharge performance standards under WAC 220-150-050;…	(b) Implementation Schedule for the Ballast Water Management Discharge Standard for vessels using a Coast Guard approved BWMS to manage ballast water discharged to waters of the U.S. After the dates listed in Table 151.2035(b), vessels may use a USCG-approved BWMS and comply with the discharge standard, use PWS per §151.2025(a)(2), or use a previously installed AMS per §151.2025(a)(3).	2.2.3.5.2 Schedule for when Ballast Water Treatment Becomes BAT (and Therefore Required) Table 6 describes when BWTS will become the Best Available Technology Economically Achievable (BAT). Vessels must meet the requirements in Part 2.2.3.5.1 according to the schedule below in Table 6.
	WAC 220-150-050 Treatment requirements [Reserved]	33 C.F.R. §151.2035 [Table 151.2035(b)] (b) New vessels: Vessel's ballast water capacity – All Date constructed – On or after Dec. 1, 2013 Vessel's compliance date – On delivery	2.2.3.5.2 Schedule for when Ballast Water Treatment Becomes BAT (and Therefore Required) Table 6 New vessels: [Vessel's ballast water capacity – all] Date constructed – After Dec. 1, 2013 Vessel's compliance date – On delivery
	WAC 220-150-050 Treatment requirements [Reserved]	33 C.F.R. §151.2035 [Table 151.2035(b)] (b) Existing vessels: Vessel's ballast water capacity – < 1500 m^3 Date constructed – Before Dec. 1, 2013 Vessel's compliance date – 1st scheduled drydocking after Jan. 1, 2016	2.2.3.5.2 Schedule for when Ballast Water Treatment Becomes BAT (and Therefore Required) Table 6 Existing vessels: Vessel's ballast water capacity – < 1500 m3 Date constructed – Before Dec. 1, 2013 Vessel's compliance date – 1st scheduled drydocking after Jan. 1, 2016
	WAC 220-150-050 Treatment requirements [Reserved]	33 C.F.R. §151.2035 [Table 151.2035(b)] (b) Existing vessels: Vessel's ballast water capacity – 1500-5000 m3 Date constructed – Before Dec. 1, 2013 Vessel's compliance date – 1st scheduled drydocking after Jan. 1, 2014	2.2.3.5.2 Schedule for when Ballast Water Treatment Becomes BAT (and Therefore Required) Table 6 Existing vessels: Vessel's ballast water capacity – 1500-5000 m3 Date constructed – Before Dec. 1, 2013 Vessel's compliance date – 1st scheduled drydocking after Jan. 1, 2014
	WAC 220-150-050 Treatment requirements [Reserved]	33 C.F.R. §151.2035 [Table 151.2035(b)] (b) Existing vessels: Vessel's ballast water capacity – > 5000 m3 Date constructed – Before Dec. 1, 2013 Vessel's compliance date – 1st scheduled drydocking after Jan. 1, 2016	2.2.3.5.2 Schedule for when Ballast Water Treatment Becomes BAT (and Therefore Required) Table 6 Existing vessels: Vessel's ballast water capacity – > 5000 m3 Date constructed – Before Dec. 1, 2013 Vessel's compliance date – 1st scheduled drydocking after Jan. 1, 2016
BWDS Implementation Schedule: Extension	RCW 77.120.030 (5) For treatment technologies requiring shipyard modification, the department may enter into a compliance plan with the vessel owner. The compliance plan must include a timeline consistent with drydock and shipyard schedules for completion of the modification. The department shall adopt rules for compliance plans under this subsection.	33 C.F.R. §151.2036 The Coast Guard may grant an extension to the implementation schedule listed in §151.2035(b) of this subpart only in those cases where the master, owner, operator, agent, or person in charge of a vessel subject to this subpart can document that, despite all efforts, compliance with the requirement under §151.2025 is not possible. Any extension request must be made no later than	VGP 1.9.1 Regarding implementation dates of the limits found in Part 2.2.3.5 of the VGP, EPA advises that where the U.S. Coast Guard has granted or denied an extension request pursuant to 33 CFR 151.2036, that information will be considered by EPA, but is not binding on EPA.

Requirement	WDFW	USCG	EPA
		12 months before the scheduled implementation date listed in §151.2035(b) of this subpart and submitted in writing to the Commandant (CG-OES), Attn: Office of Operating and Environmental Standards, U.S. Coast Guard Stop 7509, 2703 Martin Luther King Jr. Avenue SE., Washington, DC 20593-7509. Summary information concerning all extension decisions, including the name of the vessel and vessel owner, the term of the extension, and the basis for the extension will be promptly posted on the Internet.	
BWDS Compliance Plans and Alternative Strategies	WAC 220-150-037 Temporary compliance plans and alternative strategies. (1) In general. The department may require a vessel owner or operator to submit a temporary compliance plan or a temporary alternative strategy to bring its vessel into compliance with state ballast water management law. Temporary compliance plans and alternative strategies are only utilized when it is not feasible to otherwise comply with regulatory requirements, and then, only for the minimum time necessary to bring a vessel into compliance…	33 CFR 151.2036 … Extensions will be for no longer than the minimum time needed, as determined by the Coast Guard, for the vessel to comply with the requirements of §151.2030.	

Reporting and Sampling Requirements

Requirement	Washington	USCG	EPA
[See Reporting table for further details]	RCW 77.120.040 The owner or operator in charge of any vessel covered by this chapter is required to ensure that the vessel under their ownership or control complies with the reporting and sampling requirements of this section. (1) Vessels covered by this chapter must report ballast water management information to the department using ballast water management forms that are acceptable to the United States coast guard. The frequency, manner, and form of such reporting shall be established by the department by rule. Any vessel may rely on a recognized marine trade association to collect and forward this information to the department.	33 C.F.R. §151.2060 (a) Ballast water reporting requirements exist for each vessel subject to this subpart	4.3 …The ballast water reporting forms must be kept on board the vessel and must be submitted
[See Monitoring table for further details]	RCW 77.120.040 (2) In order to monitor the effectiveness of national and international efforts to prevent the introduction of nonindigenous species, all vessels covered by this chapter must submit nonindigenous species ballast water monitoring data. The monitoring, sampling, testing protocols, and methods of identifying nonindigenous species in ballast water shall be determined by the department by rule. A vessel covered by this chapter may contract with a recognized marine trade association to randomly sample vessels within that association's membership, and provide data to the department.	33 C.F.R. §151.2070 (d) The master, owner, operator, agent, or person in charge of a vessel subject to this section must retain the monitoring records required in 46 CFR 162.060-20(b) for 2 years. These records may be stored on digital media but must be viewable for Coast Guard inspection.	4.3 The master, owner, operator, or person in charge of a vessel bound for a port or place in the United States must keep written records that include the following information: c. Specific records pertaining to treated ballast water (see Part 2.2.3.5 of the permit).
[See Monitoring table for further details]	RCW 77.120.040 (3) Vessels that do not belong to a recognized marine trade association must submit individual ballast tank sample data to the department for each voyage.	33 C.F.R. §151.2070 (d) The master, owner, operator, agent, or person in charge of a vessel subject to this section must retain the monitoring records required in 46 CFR 162.060-20(b) for 2 years. These records may be stored on digital media but must be viewable for Coast Guard inspection.	4.3 The master, owner, operator, or person in charge of a vessel bound for a port or place in the United States must keep written records that include the following information: c. Specific records pertaining to treated ballast water (see Part 2.2.3.5 of the permit).
[See Monitoring table for further details]	RCW 77.120.040 (4) All data submitted to the department under subsection (2) of this section shall be consistent with sampling and testing protocols as adopted by the department by rule.		

Reporting

Requirement	WDFW	USCG	EPA

Requirement	WDFW	USCG	EPA
BW Reporting Form (BWRF)	WAC 220-150-030(2) (a) Vessel owners or operators shall file ballast water management information using a Ballast Water Reporting Form (reporting form) that is acceptable to the USCG and prior to entering waters of the state whether or not they intend to discharge ballast water…. Once within waters of the state, vessel owners or operators shall file reporting forms for voyages between state ports. This is necessary for timely enforcement of regulations and to allow risk analysis by port.	33 C.F.R. §151.2060 (a) Ballast water reporting requirements exist for each vessel subject to this subpart bound for ports or places of the United States regardless of whether a vessel operated outside of the Exclusive Economic Zone (EEZ), unless exempted in §151.2015 of this subpart. (b) Unless operating exclusively on voyages between ports or places within a single COTP Zone, the master, owner, operator, agent, or person in charge of a vessel subject to this subpart and this section must submit a ballast water report to the National Ballast Information Clearinghouse (NBIC) by electronic ballast water report format using methods specified at NBIC's Web site at http://invasions.si.edu/nbic/submit.html. The ballast water report will include the information listed in paragraph (c) of this section and must be submitted as follows:	4.3 …The ballast water reporting forms must be kept on board the vessel and must be submitted to the National Ballast Information Clearinghouse (NBIC) before arriving to U.S. ports as required by the U.S. Coast Guard…
	WAC 220-150-030(2) (a) Reporting forms will be used by the department to identify both random and high risk vessels for inspection and to monitor overall compliance, quantities, distribution, voyage patterns and other information associated with potential vessel-related introductions of nonindigenous species.		
When to report	WAC 220-150-030(2) (b) … At least twenty-four hours prior to entering waters of the state, vessel owners or operators must file a reporting form with the department. If filing twenty-four hours prior is not possible due to voyage distance or change in destination, vessel owners or operators must file at the time of first known or predictable Washington port visit…. (c) …a new reporting form must be filed by the vessel owner or operator for each subsequent port, if any, in waters of the state..."	33 C.F.R. §151.2060 (b) (3) *For any vessel that is equipped with ballast water tanks and bound for ports or places in the United States and not addressed in paragraphs (b)(1) and (2) [Great Lakes/Hudson River] of this section:* Submit the ballast water report no later than 6 hours after arrival at the port or place of destination, or prior to departure from that port or place of destination, whichever is earlier.	4.3 …and must be submitted to the National Ballast Information Clearinghouse (NBIC) before arriving to U.S. ports as required by the U.S. Coast Guard… [but USCG just amended]
	WAC 220-150-030(2) (b) …The reporting form should be completed according to the following instructions: (i) The reporting form should only have information related to discharges expected into Washington state waters. (ii) If submitting a USCG reporting form, it must be completed per USCG regulation under Title 33 CFR, Part 151.2041, for each port visit. (iii) If submitting an IMO reporting form, it must be completed per USCG regulation under Title 33 CFR, Part 151.2045(11), and additional information must be included, showing the total number of tanks being discharged. [FROM WDFW Letter: " Vessels are still required to file BWMRs or BWRFs by email to ballastwater@dfw.wa.gov at least 24 hours prior to arrival at a Washington Port per WAC 220-150-030(2)(b)."]		
Frequency of reports	WAC 220-150-030(2) (c) Within waters of the state. After meeting the requirements of (b) of this subsection, a new reporting form must be filed by the vessel owner or operator for each subsequent port, if any, in waters of the state. Vessel owners or operators must file a new reporting form at least twenty-four hours prior to arrival at the next Washington port or at the time of first known or predictable port visit if filing twenty-four hours prior is not possible due to voyage distance or change in destination. A new reporting form does not need to be filed where: (i) A vessel moves multiple times between an anchorage and the same port for which the discharge is accurately attributed on the reporting form; or (ii) The ballast water or sediment to be discharged was taken up at the same port from where it originated within a single port visit and did not mix with ballast water or sediment from areas other than open sea waters.	33 C.F.R. §151.2060 (a) Ballast water reporting requirements exist for each vessel subject to this subpart bound for ports or places of the United States regardless of whether a vessel operated outside of the Exclusive Economic Zone (EEZ), unless exempted in §151.2015 of this subpart. (b) Unless operating exclusively on voyages between ports or places within a single COTP Zone, the master, owner, operator, agent, or person in charge of a vessel subject to this subpart and this section must submit a ballast water report	

Requirement	WDFW	USCG	EPA
Amended reports	WAC 220-150-030(2) (d) …file an amended reporting form where there are information errors or where the results of actual operations are different from the information contained in their last filed reporting form …filed at the time of first known or predictable change of destination, and immediately upon the completion of discharge operations resulting in changes to actual volume of ballast water discharged."	33 C.F.R. §151.2060 (d) If the information submitted in accordance with paragraph (c) of this section changes, the master, owner, operator, agent, or person in charge of the vessel must submit an amended report before the vessel departs the waters of the United States or not later than 24 hours after departure from the port or place, whichever is earlier.	
Digital Submittal	WAC 220-150-030(2) … (e) Submission. Reporting forms must be submitted in a standard electronic format to the department…	33 C.F.R. §151.2060 (b)…submit a ballast water report to the National Ballast Information Clearinghouse (NBIC) by electronic ballast water report format using methods specified at NBIC's Web site at http://invasions.si.edu/nbic/submit.html...	4.3 …and must be submitted to the National Ballast Information Clearinghouse (NBIC) before arriving to U.S. ports as required by the U.S. Coast Guard…
	[same as USCG]	33 C.F.R. §151.2060 (c) The ballast water report required by paragraph (b) of this section must include the following information: (1) Vessel information. This includes the vessel's name, International Maritime Organization (IMO) number or other vessel identification number if an IMO number is not issued, country of registry, owner or operator, type and tonnage.	
	[same as USCG]	(2) Voyage information. This includes the port and date of arrival, name and contact information of the person submitting the form, last port and country of call, and next port and country of call.	
	[same as USCG]	(3) Ballast water information. This includes the vessel's total ballast water capacity, total number of ballast water tanks, total volume of ballast water onboard, total number of ballast water tanks in ballast, …	4.3 1. Total ballast water information. Include the total ballast water capacity, total volume of ballast water on board, total number of ballast water tanks, and total number of ballast water tanks in ballast. Use units of measurements such as metric tons (MT), cubic meters (m3), long tons (LT), and short tons (ST).
	[same as USCG]	…and the identification of ballast water management method used.	4.3 2. Ballast water management…. …Indicate whether the vessel has a ballast water management plan and IMO guidelines on board, and whether the ballast water management plan is used.
	[same as USCG]	(4) Information on ballast water tanks that are to be discharged into the waters of the United States or to a reception facility. Include the following for each tank discharged: (i) The numerical designation, type and capacity of the ballast tank. (ii) The source of the ballast water. This includes date(s), location(s), and volume(s). If a tank has undergone ballast water exchange, provide the loading port of the ballast water that was discharged during the exchange.	4.3 2. …Include the total number of ballast tanks/holds that are to be discharged into the waters of the United States or to a reception facility. 3. Information on ballast water tanks that are to be discharged into waters subject to this permit or to a reception facility. Include the following: a. The origin of ballast water. This includes date(s), locations(s) (including latitude and longitude and port [if relevant]), volume(s), and temperatures(s). If a tank has been exchanged, list the loading port of the ballast water that was discharged during the exchange.

Requirement	WDFW	USCG	EPA
	[same as USCG]	(iii) The date(s), starting location(s), ending location(s), volume(s), and method(s) of ballast water management.	4.3 b. The date(s), location(s) (including latitude and longitude), volume(s), method, thoroughness (percentage exchanged if exchange conducted), sea height at time of exchange if exchange conducted, of any ballast water exchanged or otherwise managed.
	[same as USCG]	(iv) The date(s), location(s), and volume(s) of any ballast water discharged into the waters of the United States or to a reception facility.	4.3 d. The expected date, location, volume, and salinity of any ballast water to be discharged into the waters of the United States or a reception facility.
	[same as USCG]	(5) *Certificate of accurate information.* Include the name and title of the individual (*i.e.,* master, owner, operator, agent, person in charge) attesting to the accuracy of the information provided and that the activities were in accordance with the ballast water management plan required by §151.2050(g). If exceptional circumstances required deviation from the plan, the details surrounding the need for deviation and associated actions must be explained.	
Exchange/flushing reporting	WAC 220-150-040 (3) (a) …In all exchange situations, the vessel owner or operator must file a ballast water reporting form per WAC 220-150-030(2).		4.3 …In addition, all vessels which conduct saltwater flushing as required by Part 2.2.3.6.3 and Part 2.2.3.6.4 of the permit, but do not report saltwater flushing to the NBIC, must instead keep a record of saltwater flushing to meet the requirements of this permit.
	WAC 220-150-030(2) (a)Vessel owners or operators who do not regularly discharge ballast water may apply for a reporting form waiver as directed in subsection (3) of this section. WAC 220-150-030 (3) Ballast Water Reporting Form waiver. (a) In general. Vessel owners or operators who do not, under normal operating conditions, discharge ballast water may request a reporting form waiver from the department. A waiver request form letter, as provided by the department, may be requested for multiple vessels under the authority of a single vessel owner or operator. The waiver request must be received by the department at least thirty days prior to a vessel entering Washington waters and does not release the vessel owners or operators from meeting other federal or state ballast water reporting laws. (b) Contents. The waiver becomes effective upon department approval. The department will approve or deny approval of the request within thirty days of receipt. The letter must include the following information: (i) Vessel name(s), identification number(s) (International Maritime Organization, Lloyds of London, or USCG registry number), owner, agent, and vessel type(s); (ii) A statement that the vessel owner or operator will not discharge ballast water into Washington state waters; (iii) A statement that the vessel owner or operator will comply with the requirements in subsection (2) of this section if discharge becomes necessary; (iv) A statement that the vessel owner or operator of the vessel(s) will file for a new waiver if there are any changes in the information required in this subsection; and (v) The signature of the vessel owner or operator. (c) Submission. Send the	33 C.F.R. §151.2065 "Equivalent reporting methods for vessels other than those entering the Great Lakes or Hudson River after operating outside the U.S. Exclusive Economic Zone or Canadian equivalent. For vessels required to report under §151.2060(b)(3) of this subpart, the Chief, Environmental Standards Division (CG-5224), acting for the Assistant Commandant for Marine Safety, Security, and Stewardship (CG-5), may, upon receipt of a written request, consider and approve alternative methods of reporting if— (a) Such methods are at least as effective as those required by §151.2060 of this subpart; and (b) Compliance with §151.2060 of this subpart is economically or physically impractical. The Chief, Environmental Standards Division (CG-5224), will approve or disapprove a request submitted in accordance with this section within 30 days of receipt of the request…." [Equivalent reporting *program*, on USCG website, is for vessels operating exclusively w/in EEZ and never been on Lookout List. Then, can submit batch monthly reports. This may not be the same option exactly as listed above because they are described differently.]	

Requirement	WDFW	USCG	EPA
	completed form to the department by e-mail to ballastwater@dfw.wa.gov or, if e-mail is not possible, by fax to 360-902-2845, or by U.S. mail to: WDFW, AIS Unit, 600 Capitol Way N., Olympia, Washington 98501-1090, USA. Incomplete forms will be returned and waiver approval denied until a completed form has been received. (d) Availability. Vessel owners or operators shall maintain a copy of the waiver in the vessel's ballast water management plan.		

Annual Report

Requirement	WDFW	USCG	EPA
Annual Report		33 C.F.R. §151.2060 (e) The master, owner, operator, agent, or person in charge of a vessel operating on voyages exclusively between ports or places within a single COTP Zone, and subject to this subpart and this section, must submit the information required by paragraph (f) of this section to NBIC by electronic Annual Ballast Water Summary Report...	4.4 Reporting 4.4.1 Annual Report For each vessel, owners/operators are required to submit an Annual Report for each year that they have active permit coverage. For vessels which must file NOIs, this means for as long as they have an active NOI. For vessels which need not file an NOI, they maintain active coverage as long as they are operating in waters subject to this permit, provided they have signed and maintain a copy of the PARI form…
			4.4.1 …The vessel owner/operator shall respond to all questions accurately and completely, and provide the necessary information and/or data to support each response…
		33 C.F.R. §151.2060 (e) …submit the information required by paragraph (f) of this section to NBIC by electronic Annual Ballast Water Summary Report format using methods specified at NBIC's Web site at *http://invasions.si.edu/nbic/submit.html*...	4.4.1 …The vessel owner/operator shall complete the Annual Report form provided in Appendix H of this permit and submit it to EPA electronically. It can be completed online by accessing EPA's main NPDES vessel webpage (available via www.epa.gov/npdes/vessels or through EPA's eNOI system (www.epa.gov/npdes/vessels/eNOI)...
			4.4.1 Unless one of the exceptions in Part 1.14 is met, the vessel owner/operator must submit each Annual Report electronically in accordance with the procedures described in Part 1.14 of this permit. If you are eligible to submit a hard copy of the Annual Report, you must send your completed annual report to EPA HQ (Attn: Vessel Annual Report, Mail Code 4203M, 1200 Pennsylvania Ave. NW, Washington, DC 20460). Hard copy reports must be postmarked by February 21 of 2015)…
		33 C.F.R. §151.2060 (e) …The Annual Ballast Water Summary Report is required for a period of three years on the following schedule: (1) Report on the vessel's ballasting practices for calendar year 2016 due no later than March 31, 2017. (2) Report on the vessel's ballasting practices for calendar year 2017 due no later than March 31, 2018. (3) Report on the vessel's ballasting practices for calendar year 2018 due no later than March 31, 2019.	4.4.1 …Annual Reports must be completed each calendar year and submitted by February 28 of the following year (e.g., the 2014 annual report will be due by February 28, 2015). A separate 2013 annual report will not be required; instead, any relevant information from December 19, 2013 – December 31, 2013 (if applicable) must be included in the annual report for the 2014 calendar year. Permittees covered under the 2008 VGP must submit reports of all instances of noncompliance which occur before December 18, 2013 to EPA consistent with the terms of that permit…
		33 C.F.R. §151.2060 (f) The Annual Ballast Water Summary Report will include the following information: (1) Vessel information. This includes name, identification number, vessel type, operator, tonnage, call sign and COTP Zone of operation.	Appendix H - Annual Report Owner/Operator and Vessel Information: • Date Submitted • Vessel NOI Number • Vessel Owner/Operator, Phone, Address, E-mail • Vessel Name • Vessel Type • Length • Gross Tonnage • Date of Vessel Construction • Calendar Year for which you are submitting the report • Did your vessel operate in waters subject to this permit during the previous calendar year? 1. Please list your vessel's primary geographical regions of operation in U.S. waters last year and report the approximate percentage of time was your vessel in each region? 2a. Did you conduct the following inspections in the last year (and list dates of most recent)?

Requirement	WDFW	USCG	EPA
			• Drydock Inspections • Annual Inspections • All Required Routine Inspections • Below Water Hull Inspection 2b. On average, how often did you conduct routine inspections in the last year?
		(2) Ballast information. This includes the number of ballast tanks and total ballast water capacity.	3a. Did your vessel discharge ballast water in U.S. waters? What is the capacity of your vessel's ballast tanks? How many ballast tanks are present on your vessel (include holds or other areas that were used to carry ballast water)? For each tank or hold used to carry ballast, list type, capacity, and identifier Does your vessel have a ballast water treatment system? If you answered yes, please attach analytical monitoring data for treated ballast water discharges required by Parts 2.2.3.5.1.1 of the permit (see VGP Ballast Water DMR below). Did you operate outside the EEZ and enter the Great Lakes? If yes, did you discharge ballast water? If yes, did you conduct ballast water exchange and/or flushing as applicable?
		(3) Operational information. This includes the estimated number of times ballast water is discharged, estimated volume of ballast water discharged each time, primary port of ballast water loading, primary port of ballast water discharge, and certification of compliance with §151.2050.	
			4.4.1 …The Annual Report replaces the annual noncompliance report and one-time report requirements found in the 2008 VGP. All instances of noncompliance must be reported as part of the Annual Report.
Monitoring Annual Report			2.2.3.5.1.1.6 Ballast Water Treatment System Recordkeeping and Reporting Records of sampling and testing results required under Part 2.2.3.5.1.1 must be retained onboard for a period of three years in the vessel's recordkeeping documentation. Vessels must also submit the testing results to EPA as part of the vessel's annual report (Appendix H) on the VGP ballast water DMR. Records of monitoring information shall include: [see Recordkeeping table]
			4.4.1 …All analytical monitoring results must be submitted to EPA as part of the Annual Report…
Unmanned, Unpowered Barges or Vessels less than 300 Gross Tons			4.4.2 Combined Annual Reports for Unmanned, Unpowered Barges or Vessels less than 300 Gross Tons Operators of unmanned, unpowered barges or other vessels less than 300 gross tons (e.g., small tug boats) may submit a single annual report (referred to as the Combined Annual Report) for multiple vessels and/or barges, provided all of the following conditions are met: • The answers for each barge or vessel for which the report is to be submitted are the same; • Each barge or vessel was not required to conduct any analytical monitoring; • The Combined Annual Report is submitted electronically; • There were no instances of noncompliance for any barge or vessel and no instances of identified deficiencies by EPA or its authorized representatives during any inspections during the previous 12 months; and • Each barge or vessel has an NOI permit number or, if not required to submit an NOI, a commonly used unique identifier (e.g., registration number) so EPA can identify the vessel. For vessels less than 300 gross tons which have not submitted an NOI, the unique identifier numbers must be entered on the combined annual report. Vessel owners/operators of unmanned, unpowered barges or vessels less than 300 gross tons may submit a Combined Annual Report for some or most of their fleet, or submit individual Annual Reports if they prefer. Individual Annual Reports are required for any barges or other vessels which are not eligible for the Combined Annual Report, as specified above.

Management Plans

Requirement	WDFW	USCG	EPA
Management	WAC 220-150-030(5)	33 C.F.R. §151.2050	VGP 2.2.3.2 Ballast Water Management Plans

Requirement	WDFW	USCG	EPA
Plans	(a) In general. Vessel owners or operators shall develop, and maintain on board, a ballast water management plan that has been developed specifically for the vessel and that will allow those responsible for the plan's implementation to understand and follow the vessel's ballast water management strategy... (b) Contents. At a minimum, the plan should include:	(g) Maintain a ballast water management (BWM) plan that has been developed specifically for the vessel and that will allow those responsible for the plan's implementation to understand and follow the vessel's BWM strategy and comply with the requirements of this subpart. The plan must include—	All owner/operators of vessels equipped with ballast water tanks must maintain a ballast water management plan that has been developed specifically for the vessel that will ensure that those responsible for the plan's implementation understand and follow the vessel's ballast water management strategy. … Vessel owner/operators must assure that the master and crew members who actively take part in the management of the discharge or who may affect the discharge understand and follow the management strategy laid out in the plan. … The plan must also include how vessels will comply with training requirements of 2.2.3.1 and meet all requirements in Parts 2.2.3.3 through 2.2.3.8 [Management Practices, Discharge Limits, Interim Requirements, Great Lakes Requirements, Shipboard Technology Evaluation Program], as applicable. EPA notes that a Ballast Water Management Plan is also required by the United States Coast Guard by 33 CFR Part 151. Provided owner/operators meet the requirements discussed above, EPA expects that vessels will need one ballast water management plan to meet both EPA and USCG requirements.
	WAC 220-150-030(5)(b)… (i) Detailed ballast water management safety procedures;	33 C.F.R. §151.2050(g)… (1) Detailed safety procedures;	
	WAC 220-150-030(5)(b)… (ii) Actions for implementing the mandatory ballast water management requirements and practices;	33 C.F.R. §151.2050(g)… (2) Actions for implementing the mandatory BWM requirements and practices;	VGP 2.2.3.2 …At a minimum, all vessels must have a plan which outlines how they will meet the requirements of Part 2.2.3.3 of this permit…
	WAC 220-150-030(5)(b)… (iii) Detailed fouling maintenance and sediment removal procedures for areas on the vessel where ballast water can be carried;	33 C.F.R. §151.2050(g)… (3) Detailed fouling maintenance and sediment removal procedures;	
	N/A [plan required to be available, see below, but not required to include a procedure for making it "coordinated"]	33 C.F.R. §151.2050(g)… (4) Procedures for coordinating the shipboard BWM strategy with Coast Guard authorities;	[plan required to be available, see below, but not required to include a procedure for making it "coordinated"]
	WAC 220-150-030(5)(b)… (iv) Identification of the designated officer(s) in charge of ensuring that the plan is properly implemented;	33 C.F.R. §151.2050(g)… (5) Identification of the designated officer(s) in charge of ensuring that the plan is properly implemented;	
	WAC 220-150-030(5)(b)… (v) Detailed reporting requirements and procedures for ports in Washington state where the vessel may visit; and	33 C.F.R. §151.2050(g)… (6) Detailed reporting requirements and procedures for ports and places in the United States where the vessel may visit; and	
	WAC 220-150-030(5)(b)… (vi) A translation of the plan into English if the ship's working language is another language.	33 C.F.R. §151.2050(g)… (7) A translation of the plan into English, French, or Spanish if the vessel's working language is another language.	
	WAC 220-150-030(5) (c)Training. The vessel owners or operators and appropriate crew must be trained in the application of the vessel's ballast water and sediment management strategies.		
	WAC 220-150-030(5) (d) Availability. Vessel owners or operators shall make the ballast water management plan readily available for examination by the department at all reasonable times…	33 C.F.R. §151.2050(g)… (4) Procedures for coordinating the shipboard BWM strategy with Coast Guard authorities;	VGP 2.2.3.2 …Owner/operators must make that plan available upon request to EPA or its authorized representative….
	WAC 220-150-030(5) (e) Alternative means of recordkeeping. The ballast water management plan may be an electronically recorded system or integrated into another management plan or system. At a minimum, any alternative method shall meet the provisions of this subsection.		

Recordkeeping

Requirement	WDFW	USCG	EPA
BW Recordkeeping Requirements	WAC 220-150-030(6) Ballast water log or record book. (a) In general. Vessel owners or operators shall record all ballast water and sediment management operations in the vessel's ballast water log, record book, or other suitable documentation system. This information is used by the department to assess compliance, review ballast water and sediment management history, and recommend practices that can improve ballast water management compliance and efficiency.	33 C.F.R. §151.2070 Recordkeeping requirements. (a) The master, owner, operator, agent, or person in charge of a vessel bound for a port or place in the United States, unless specifically exempted by §151.2015 of this subpart, must ensure the maintenance of written written or digital records that include the information required to be reported by §151.2060 of this subpart and the sediment information in paragraph (a)(1) of this section.	4.3 Additional Recordkeeping for Vessels Equipped with Ballast Tanks Except for vessels operating exclusively within one Captain of the Port Zone, for vessels equipped with ballast tanks that are bound for a port or place in the United States, you must meet the recordkeeping requirements of 33 CFR Part 151. The master, owner, operator, or person in charge of a vessel bound for a port or place in the United States must keep written records that include the following information: … [see Reporting table (so recordkeeping includes all reporting information)] …The ballast water reporting forms must be kept on board the vessel …
Contents	WAC 220-150-030(6) (b) Content. Vessel owners or operators shall maintain a version of the ballast water log, record book, or other suitable documentation system in English on board the vessel that, at a minimum: (i) Records each operation involving ballast water or sediment management;	[each report kept in record book will contain a BW operation]	[each report kept in record book will contain a BW operation]
Contents	WAC 220-150-030(6) (ii) Describes each such operation, including the location and circumstances of, and the reason for, the operation; (iii) Records the exact time and position of the start and stop of ballast water exchange or treatment operations for each tank;	[each report kept in record book will contain a BW operation]	[each report kept in record book will contain a BW operation]
Record of safety exemptions	(WAC 220-150-030(6) (iv) Describes the nature and circumstances of any situation under which any operation was conducted under a safety exemption set forth in subsection (4) of this section; and	33 C.F.R. §151.2070 (a) (2) … If exceptional circumstances required deviation from the plan, the details surrounding the need for deviation and associated actions must be explained….	2.2.3.6.6 The operator or master of a vessel may elect not to exchange ballast water (or not conduct saltwater flushing if applicable) if the vessel meets one of the following conditions: • The master of the vessel determines, and justifies in writing, and documents in the log or record book, that it is unsafe to do so, in accordance with the Coast Guard Regulations at 33 CFR Part 151. If this exemption is claimed, the vessel operator must record the date, location, and reason for the claim in its recordkeeping documentation. Furthermore, the vessel owner/operator must report this information to EPA as part of its annual report.
Record of training	WAC 220-150-030(6) (v) Records ballast water and sediment management training.		4.2 …11. Record of training completed as required by this permit, and where applicable, strategy for passenger training. For purposes of this part, if vessel owners/operators include their training plans as part of their ISM or similar environmental management plans, and they can document that they fully implement those plans, they will meet the recordkeeping requirements of this part.
Record availability	WAC 220-150-030(6) (c) Availability. Vessel owners or operators shall make the ballast water log or record book readily available for examination by the department at all reasonable times. The vessel owner or operator shall transmit such information to the department regarding the ballast operations of the vessel as the department may require.	33 C.F.R. §151.2070 (d) These records may be stored on digital media but must be viewable for Coast Guard inspection.	4.2 Recordkeeping Vessels covered by this permit must keep records on the vessel or accompanying tug… … The vessel master, owner/operator, or person in charge shall make available to EPA or an authorized representative from EPA all records kept under this part upon request. 4.3 The ballast water reporting forms must be kept on board the vessel and must be submitted to the National Ballast Information Clearinghouse (NBIC) before arriving to U.S. ports as required by the U.S. Coast Guard.
Digital format	WAC 220-150-030(6) (c) Availability. Vessel owners or operators shall make the ballast water log or record book readily available for examination by the department at all reasonable times…	33 C.F.R. §151.2070 (d) These records may be stored on digital media but must be viewable for Coast Guard inspection.	4.2.1 Electronic Recordkeeping For purposes of the VGP, records may be kept electronically if the records are: • In a format that can be read in a similar manner as a paper record, • Legally dependable with no less evidentiary value than their paper equivalent, and

Requirement	WDFW	USCG	EPA
	…(f) Alternative means of recordkeeping. The ballast water log or record book may be an electronically recorded system or integrated into another record book or system. At a minimum, any alternative method shall meet the provisions of this subsection.		• Accessible to the inspector during an inspection to the same extent as a paper copy stored on the vessel would be, if the records were stored in paper form.
Retention	WAC 220-150-030(6) Ballast water log or record book. (d) Retention period. The ballast water log or record book shall be retained on board the vessel for a minimum of two years after the date on which the last entry in the book is made.	33 C.F.R. §151.2070 (b) The master, owner, operator, agent, or person in charge of a vessel subject to this section must retain a signed copy of this information onboard the vessel for 2 years.	2.2.3.5.1.1.6 Ballast Water Treatment System Recordkeeping and Reporting Records of sampling and testing results required under Part 2.2.3.5.1.1 must be retained onboard for a period of three years in the vessel's recordkeeping documentation. 4.2 Recordkeeping Vessels covered by this permit must keep records on the vessel or accompanying tug… …The vessel owner/operator must retain copies of all reports, certifications, records, monitoring data, and other information required by this permit, and records of all data used to complete the NOI to be covered by this permit, for a period of at least 3 years from the date that your coverage under this permit expires or is terminated. Operators may choose how these records will be maintained, but must retain these records on the vessel for a period of 3 years.
Signatures	WAC 220-150-030(6) Ballast water log or record book. (e) Required signatures. The department will require, at a minimum, that each completed page and each completed vessel exchange or treatment operation in the ballast water log or record book be signed and dated by the vessel owner or operator or responsible officer; and that such owner, operator, or responsible officer attests to the accuracy of the information provided and certifies compliance with the requirements of this subsection.	33 C.F.R. §151.2070 (a) (2) Include the master, owner, operator, agent, person in charge, or responsible officer's printed name, title, and signature attesting to the accuracy of the information provided and that the activities were in accordance with the ballast water management plan required by §151.2050(g).	4.2 … Certification of accurate information is required for all NOIs, NOTs, the PARI form, and any report (including any monitoring data) submitted to EPA, pursuant to Parts 1.7 of this permit and 40 CFR §122.22…
Burden of recordkeeping	WAC 220-150-030(6) Ballast water log or record book. (f) Alternative means of recordkeeping. The ballast water log or record book may be an electronically recorded system or integrated into another record book or system. At a minimum, any alternative method shall meet the provisions of this subsection.	33 C.F.R. §151.2070 (c) The recordkeeping requirements in this section may be met by maintaining a copy of the reporting form completed pursuant to §151.2060 of this subpart, in addition to maintaining a record of the sediment information in paragraph (a)(1) of this section. These records may be stored on digital media but must be readily viewable by the Coast Guard during an inspection.	4.2 …It is not the intention of this permit to require separate records for the Coast Guard and EPA. Rather, vessels can harmonize their recordkeeping practices, where appropriate, so that records are not unnecessarily duplicative. For example, information can be logged with maintenance records, the ship's log, in existing ISM/SMS plans or recordkeeping, the oil record book, shipboard oil pollution emergency plan, or other additional recordkeeping documentation as appropriate but must be provided to EPA or its authorized representative if requested… 4.3 Additional Recordkeeping for Vessels Equipped with Ballast Tanks The master, owner, operator, or person in charge of a vessel bound for a port or place in the United States must keep written records that include the following information:… [see Reporting table (so recordkeeping includes all reporting information)]
Sediment records	WAC 200-150-070 (3) Reporting. Sediment cleaning and discharges must be recorded in the vessel's ballast water log or record book…	33 C.F.R. §151.2070 (a) (1) *Discharge of sediment.* If sediment was discharged within the jurisdiction of the United States, include the name and location of the facility where sediment disposal took place.	4.3 4. Discharge of sediment. If sediment is to be discharged into a facility within the jurisdiction of the United States, include the location of the facility where the disposal will take place. [Required in reporting as well]
			4.3 …In addition, all vessels which conduct saltwater flushing as required by Part 2.2.3.6.3 and Part 2.2.3.6.4 of the permit, but do not report saltwater flushing to the NBIC, must instead keep a record of saltwater flushing to meet the requirements of this permit.

Inspections

Requirement	WDFW	USCG	EPA

	WAC 220-150-033 (1) In general. Department employees shall have the right to board and inspect vessels, without advance notice, to provide technical assistance, assess compliance, and enforce the requirements of this chapter as provided in RCW 77.120.070…	33 C.F.R. §151.2075 (a) The master, owner, operator, agent, or person in charge of a vessel must provide the Captain of the Port (COTP) with access to the vessel in order to take samples of ballast water and sediment, examine documents, and make other appropriate inquiries to assess the compliance of any vessel subject to this subpart. CG-543 Policy Letter 11-01, VGP Deficiencies. . MI/PSC Officers must take the following action upon discovering any VGP deficiencies as guided by the VGP Job Aid provided in enclosure (1) as well as any other observed VGP deficiencies: i. Encourage vessel operators to correct VGP deficiencies by the conclusion of the vessel inspection / PSC exam, if feasible, i.e. "corrected on the spot."	Special Washington Section 6.24.4 State Inspection Authority 1.In accordance with RCW 90.48.090, Department of Ecology inspectors shall have access to the ship at reasonable times and locations for the purpose of sampling discharges covered by the VGP, interviewing crew members, and inspecting log books and other relevant records. 2.In accordance with WAC 220-150-033, WDFW inspectors shall have access at any time to any vessel carrying or capable of carrying ballast water in order to provide technical assistance, assess compliance, and enforce the requirements of Chapter 220-150 WAC. [VGP only requires self-inspections for compliance. USCG inspects VGP-related logs during routine inspections] USCG/EPA MOU: EPA and the USCG will work together to develop and disseminate outreach materials to inform the public of the existence of the VGP and its requirements, and to assist in compliance outreach.
	WAC 220-150-033 (2) Conditions. Department inspections shall be conducted under the following conditions: (a) Authorized department inspectors: Inspections shall be conducted only by department employees, agents, or contractors specifically authorized by the department to conduct such inspections. (b) Time: Inspections may be conducted at any time, due to the twenty-four hour nature of the regulated industry. In general, the department will not unduly interrupt normal cargo operations of the vessel. However, the department may interrupt vessel cargo operations where facts indicate that the discharge of unexchanged or untreated ballast water or sediment is occurring or is likely imminent. (c) Location: Inspections may be conducted when the vessel is at anchor within waters of the state or in port within waters of the state. (d) Scope of inspection: The department inspector shall limit inspection of the vessel to those areas reasonably necessary to inspect management plans, logs, or other ballast water and sediment-related records required by these rules and maintained on board the vessel, and to areas in which ballast water or sediment is contained, pumped, or treated. Inspectors may examine records related to ballast water management plans, logs, or other ballast water and sediment-related records and make copies of such records. (e) Identification: Department inspectors must have official identification, announce their presence and intent at the time of inspection, perform their duties in a safe and professional manner, and follow all appropriate ship safety requirements. (f) Vessel escort: The vessel owner or operator will provide an employee to escort the department inspector to those areas of the vessel that are subject to inspection under these rules. (g) Safety: Nothing in this section relieves the vessel owner or operator of the responsibility for ensuring the safety and stability of the vessel or the safety of the crew and passengers.	NVIC 04-07 Enclosure 2 A. Coast Guard Implementation. Coast Guard Marine Inspectors (MIs) and Boarding Officers (BOs) shall examine the onboard BWM records, make appropriate inquiries to assess adherence with the BWM recordkeeping requirements, and pursue appropriate enforcement actions when necessary.	
	WAC 220-150-033 (3) Technical assistance. Technical assistance is generally provided during every vessel boarding by a department ballast water inspector, but may also be the sole reason for a boarding. The purpose is to explain and provide details of state law to the officers and crew responsible for implementing the vessel's ballast water management plan. Based on the crew's familiarity with state law and ballast water management practices, the department inspector may provide a thorough overview or a brief update and be available to answer any questions they might have regarding the ballast management on board their specific vessel. The inspector will leave a state ballast water management		

	information pamphlet with contact information on board so the vessel may contact the department directly to address any other questions that may come up regarding state requirements.		
	WAC 220-150-033 (4) Ballast water management audit. The department inspector may board a vessel and conduct an audit of its ballast water management documentation to verify compliance with state laws. An audit consists of reviewing the vessel's ballast water reporting form, management plan, and record book as required in this section. In addition, the inspector may request and review any other records that relate to ballast management operations, including: The Deck Log, GPS Log, Soundings Log, Stability Reports, Engine Room Log, and Oil Record Book. A vessel owner or operator who maintains a concise record of its ballast water management will expedite the audit. The department will provide a copy of a vessel audit checklist and findings to the vessel owner or operator prior to leaving the vessel.	33 C.F.R. §151.2075 (b) The master, owner, operator, agent, or person in charge of a vessel subject to this section must provide the records to the COTP upon request, as required by §151.2070 of this subpart.	
	WAC 220-150-033 (5) Sampling ballast tanks. Department inspectors may take samples from a vessel's ballast tanks in addition to the audit. These samples are used to help evaluate the risk that vessel poses for introducing nonindigenous species into waters of the state… (6) Exchange alternative and discharge standard performance inspections and testing. The department may review operations data and take ballast water or sediment samples from a vessel's equipment that is used to meet exchange alternative requirements under WAC 220-150-043 or discharge performance standards under WAC 220-150-050. Vessel owners or operators must provide in-line discharge sampling ports that allow for this testing.	33 C.F.R. §151.2075 (c) Vessels with installed ballast water management systems are subject to Coast Guard inspection. Every vessel must have a sampling port(s) designed and installed in accordance with 46 CFR 162.060-28(f) and (f)(2) at each overboard discharge point.	

High Risk Vessels

Requirement	WDFW and ECY	USCG	EPA
	WAC 220-150-035 (1) In general. The department will identify, publish, and maintain a list of vessels that pose an elevated risk of discharging ballast water or sediment containing nonindigenous species into the waters of the state. Vessels on this list will be prioritized for evaluation and boarding under WAC 220-150-033 and may require completion of an approved temporary compliance plan and/or temporary alternative strategy under WAC 220-150-037. (2) Listing. The department will identify vessels that are carrying high risk ballast water using factors including but not limited to: (a) A nonindigenous species profile of originating waters; (b) The volume and frequency of exchanged ballast water normally discharged; (c) Design limitations in vessels that prevent effective exchanges; (d) Frequency of voyages within coastal areas where exchange outside fifty nautical miles is not a viable option; (e) Frequency and severity of vessel or vessel owner or operator violation history; and (f) Frequency of vessel claims for safety exemptions. (3) Delisting. The department will delist a vessel on the high risk list where the vessel owner or operator: (a) Demonstrates that its management operations meet or exceed interim open sea exchange requirements under WAC 220-150-040 or 220-150-043, unless WAC 220-150-050 applies; or (b) Demonstrates that its management operations meet or exceed the discharge performance standards under WAC 220-150-050; or (c) Completes an approved compliance	Enclosure 2 to NVIC 07-04 Coast Guard Marine Inspectors (MIs) and Boarding Officers (BOs) shall examine the onboard BWM records, make appropriate inquiries to assess adherence with the BWM recordkeeping requirements, and pursue appropriate enforcement actions when necessary. Coast Guard Headquarters may provide field units with BWM lookout lists that identify vessels with a history of either not reporting or submitting inaccurate or incomplete BWM reports to the NBIC. These vessels should undergo an expanded examination of their BWM records during regularly scheduled inspections and boardings. Appropriate enforcement action should be taken against all vessels listed on the BWM lookout lists unless reasonable evidence is provided by the master which disputes the reasons for the vessel being listed, or unless an enforcement activity has already been initiated in Marine Information for Safety and Law Enforcement (MISLE) database by another port for the same lookout listing.	CG-543 Policy Letter 11-01 Under the USCG/EPA VGP MOU, the Coast Guard's main role will be to assist the EPA with examining compliance with basic provisions of the VGP1 during routine inspections onboard U.S. vessels and during Port State Control exams on foreign vessels. The Coast Guard will report detected VGP deficiencies to the EPA. The EPA retains full responsibility and enforcement authority under the CWA to address VGP violations and unauthorized discharges, which includes issuance of administrative orders, administrative penalties, and judicial action.

Requirement	WDFW and ECY	USCG	EPA
	plan and/or alternative strategy per WAC 220-150-037..		
	WAC 220-150-037 Temporary compliance plans and alternative strategies. (1) In general. The department may require a vessel owner or operator to submit a temporary compliance plan or a temporary alternative strategy to bring its vessel into compliance with state ballast water management law. Temporary compliance plans and alternative strategies are only utilized when it is not feasible to otherwise comply with regulatory requirements, and then, only for the minimum time necessary to bring a vessel into compliance. If the department approves, at its sole discretion, a compliance plan or alternative strategy, the department will issue a formal waiver exempting the vessel owner or operator from specified provisions in these rules for a specified period of time, not to exceed two years from the approval date of the waiver, to allow the vessel owner or operator to implement corrective action to bring the vessel into full compliance with the statute and rules. Forms and guidance may be adopted by department policy to assist in the implementation of this subsection. (2) Compliance plan. A temporary compliance plan describes how the vessel owner or operator plans to correct vessel equipment problems causing ballast water or sediment discharges that are not in compliance with state law. These temporary compliance plans are generally related to vessels that claim safety exemptions for design limitations or equipment failure, and vessels that are listed as carrying high risk ballast water and require accelerated implementation of WAC 220-150-050 to meet the state discharge performance standard. At a minimum, a temporary compliance plan will document the responsible vessel representative, objectives and expectations, scope of work to be performed, tasks to be completed by timeline, any deliverables, interim ballast water and sediment management plan, reporting requirements, and the total time period for which a waiver is requested, up to two years. Additional information may be required by the department on a case-by-case basis. An extension of the plan beyond two years may be granted by the department in its sole discretion. (3) Alternative strategy. A temporary alternative strategy describes how the vessel owner or operator plans to conduct ballast management operations to sufficiently reduce the risk of introducing nonindigenous species into waters of the state to a level determined acceptable by the department. These temporary alternative strategies are generally related to vessels that cannot otherwise meet the full regulatory requirements due to extenuating circumstances. At a minimum, a temporary alternative strategy will document the responsible vessel owner or operator, objectives and expectations, scope of actions to be performed, tasks to be completed by timeline, any deliverables or reporting requirements, and the total time period for which a waiver is requested, not to exceed two years. Additional information may be required by the department on a case-by-case basis. An extension of the strategy beyond two years may be granted by the department, in its sole discretion. (4) Submission. To seek a waiver of specified rules, a vessel owner or operator shall submit to the department a completed and signed temporary compliance plan or temporary alternative strategy at their convenience if not required by the department, or within sixty days of department notice under either WAC 220-150-030(4) or 220-150-035, to avoid being in violation of these rules. Additional time may be allowed on a case-by-case basis. The department will notify the ballast water work group when a submission has been received and provide a copy if requested. (5) Review and approval. The department will review a vessel's proposed temporary compliance plan or alternative strategy within sixty days of receipt, for completeness and suitability in accomplishing objectives. The department will then make one of the following determinations: (a) Approval - the compliance plan or alternative strategy is acceptable for the period of time noted in the document. The department will then return the approved plan or strategy to the vessel owner or operator, attached to a waiver signed by the department; (b) Incomplete - the document will be returned to the vessel owner or operator for revision or additional information under the original sixty-day review timeline unless otherwise extended; or (c) Deny approval - the department determines, in its sole discretion, that the document is not suitable for meeting its regulatory objectives. The department may also deny the request if the parties do not come to agreement on an acceptable plan or strategy within sixty days of receipt of the plan by the department, unless such time frame is extended by the department in its sole discretion. (6) Availability. Vessel owners or operators shall make a copy of the signed temporary compliance plan or alternative strategy document readily available for examination by the department as part of the vessel's ballast water management plan per WAC 220-150-030(5). The department will make all approved compliance plans and alternative strategies available on the department's web site or electronically, as requested. (7) Revocation of approval. The department may revoke the waiver if the vessel owner or operator is not meeting the terms of the temporary compliance plan or alternative strategy. The department may agree to revise the temporary compliance plan or alternative strategy if appropriate, reasonable, and practical. In the event the department issues a notice of revocation, the vessel owner or operator will cease discharging ballast water into waters of the state unless it can meet the applicable regulations. The vessel owner or operator may appeal the decision to revoke the waiver. The appeal must be made to the director within twenty days of notice, by electronic or hard copy written form, according to the procedures set forth in chapter 34.05 RCW, Part IV, and chapter 10.08 WAC.		

Exchange

Requirement	WDFW	USCG	EPA
	WAC 220-150-040 (1) Until otherwise required to meet performance standards under WAC 220-150-050 and prior to discharging ballast water into Washington waters,	33 C.F.R. §151.2025(a)(3) …unless the vessel is required to employ an approved BWMS per the schedule found in §151.2035(b) of this subpart.	2.2.3.6 …Ballast water exchange may not be used in lieu of meeting the numeric effluent limits in Part 2.2.3.5 of the permit once a vessel is required to meet these limits…
BW Exchange	WAC 220-150-040 (1) … vessel owners or operators must exchange their ballast water to meet or exceed state interim open sea exchange requirements or use an approved exchange alternative. An open sea exchange is intended to reduce the number of higher risk coastal organisms in a ballast tank by replacing them with open sea organisms that are less likely to invade waters of the state, and by changing the salinity and other ambient water conditions to further reduce populations of remaining coastal species.	§151.1510 Ballast water management requirements. (a) The master of each vessel subject to this subpart shall employ one of the following ballast water management practices: (1) Carry out an exchange of ballast water on the waters beyond the Exclusive Economic Zone (EEZ),	2.2.3.6 Interim requirements for vessels not meeting the ballast water management measures in Part 2.2.3.5 Vessel owner/operators not subject to the requirements of Part 2.2.3.5 of the permit must meet the exchange and flushing requirements of this part as applicable. Conversely, vessel owner/operators meeting the numeric effluent limits in Part 2.2.3.5 before they are required to do so by the implementation schedule in Part 2.2.3.5.2 are not required to meet the exchange and flushing requirements of Part 2.2.3.6.
	WAC 220-150-040 (1) …Vessel owners or operators who do not discharge ballast water into waters of the state are exempt from this section but must continue to meet the reporting and other requirements under WAC 220-150-030.		

Requirement	WDFW	USCG	EPA
	WAC 220-150-040 (2) (a) In general. An open sea exchange must result in an efficiency of at least ninety-five percent volumetric exchange of the total ballast water capacity for each tank. An open sea exchange requires using either an empty/refill method or a flow through method. (b) Empty/refill exchange. Preferred - this type of exchange requires,		
	WAC 220-150-040 (2)(b) Empty/refill exchange. Preferred - this type of exchange requires, for each ballast tank that contains ballast water to be discharged into waters of the state, at least one empty/refill cycle in an open sea exchange area designated by the department under subsection (3) of this section. Vessel owners or operators should remove as close to one hundred percent, but not less than ninety-five percent, of the ballast water as is safe to do so. If this is not possible, then perform a flow through exchange under (c) of this subsection. (3) (a) Ballast water exchanges must be conducted in open sea (also called midocean or mid-ocean) areas based upon originating port as defined herein.	33 C.F.R. §151.2005(b) (2) *Empty/refill exchange* means to pump out the ballast water taken on in ports, estuarine, or territorial waters until the pump(s) lose suction, then refilling the ballast tank(s) with mid-ocean water.	VGP Appendix A • "Empty/refill exchange" means to pump out the "ballast water" taken on in ports, estuarine, or territorial waters until the tank is empty, then refilling it with water from the "mid-ocean" or "coastal exchange zone" (as applicable); masters/operators should pump out as close to 100 percent of the "ballast water" as is safe to do so. . [modified from: 33 CFR §151.2025]
	WAC 220-150-040 (2) (c) Flow through exchange. This type of exchange requires, for each ballast tank that contains ballast water to be discharged into waters of the state, pumping or otherwise forcing a minimum of three times the total ballast tank capacity's volume in an open sea exchange area designated by the department under subsection (3) of this section. For example, a ballast tank with a one thousand cubic meter capacity, regardless of actual ballast water in the tank, would require pumping three thousand cubic meters of open sea water through the tank. In all flow through exchange operations, open sea water must be pumped into the bottom and discharged out the top of the tank. Where department evaluation determines more flow through volume is required to meet the ninety-five percent exchange requirements, a compliance plan or alternative strategy may be required under WAC 220-150-037.	33 C.F.R. §151.2005(b) (1) Flow-through exchange means to flush out ballast water by pumping in mid-ocean water at the bottom of the tank and continuously overflowing the tank from the top until three full volumes of water has been changed to minimize the number of original organisms remaining in the tank.	VGP Appendix A • "Flow through exchange" means to flush out "ballast water" by pumping in water from the "mid-ocean" or "coastal exchange zone" (as applicable) into the bottom of the tank and continuously overflowing the tank from the top until three full volumes of water has been changed to minimize the number of original organisms remaining in the tank.
	WAC 220-150-040 (3)(a) Ballast water exchanges must be conducted in open sea (also called midocean or mid-ocean) areas based upon originating port as defined herein. In all exchange situations, the vessel owner or operator must file a ballast water reporting form per WAC 220-150-030(2).	33 C.F.R. §151.2005(b) …pumping in mid-ocean water… ...refilling the ballast tank(s) with mid-ocean water…	VGP Appendix A …refilling it with water from the "mid-ocean"…
	WAC 220-150-040 (3) (b) Voyages from outside the United States Exclusive Economic Zone (EEZ). A vessel owner or operator en route to a state of Washington port or place, from a port or place outside the United States EEZ, shall conduct an open sea exchange: (i) Before entering waters of the state; (ii) At least two hundred nautical miles from any shore; and (iii) In waters greater than two thousand meters deep.	§151.1510 (a) The master of each vessel subject to this subpart shall employ one of the following ballast water management practices: (1) Carry out an exchange of ballast water on the waters beyond the Exclusive Economic Zone (EEZ), from an area more than 200 nautical miles from any shore, and in waters more than 2,000 meters (6,560 feet, 1,093 fathoms) deep, 33 C.F.R. §151.2025(a) (3) Perform complete ballast water exchange in an area 200 nautical miles from any shore prior to discharging ballast water,	2.2.3.6.1 Requirements for Oceangoing Voyages While Carrying Ballast Water Any vessel that carries ballast water that was taken on in areas less than 200 nautical miles from any shore that will subsequently operate beyond the Exclusive Economic Zone (EEZ) and more than 200 nm from any shore must carry out an exchange of ballast water for any tanks that will discharge ballast water into waters subject to this permit unless the vessel meets one of the exemptions in Part 2.2.3.6.6. This exchange must be conducted in compliance with the following standards prior to discharging ballast water into waters subject to this permit: • The exchange must occur in waters beyond the U.S. EEZ; • The exchange must occur in an area more than 200 nautical miles from any shore; and • The exchange must be commenced as early in the vessel voyage as possible, as long as the vessel is more than 200 nm from any shore.
	WAC 220-150-040	33 C.F.R. §151.2040	2.2.3.6.2 Vessels Carrying Ballast Water Engaged in Pacific Nearshore Voyages

Requirement	WDFW	USCG	EPA
	(3) (c) Coastal voyages. A vessel owner or operator who does not voyage two hundred nautical miles or greater from any shore shall conduct ballast water exchange: (i) Before entering waters of the state; (ii) At least fifty nautical miles from any shore; and (iii) In water at least two hundred meters deep.	(a) The Coast Guard will allow the master, owner, operator, agent, or person in charge of a vessel that cannot practicably meet the requirements of §151.2025(a) of this subpart, either because its voyage does not take it into waters 200 nautical miles or greater from any shore for a sufficient length of time and the vessel retains ballast water onboard or because the master of the vessel has identified safety or stability concerns, to discharge ballast water in areas other than the Great Lakes and the Hudson River north of the George Washington Bridge.	Unless the vessel meets one of the exemptions in Part 2.2.3.6.6, any vessel engaged in Pacific nearshore voyages that carries ballast water that was taken on in areas less than 50 nautical miles from any shore must carry out an exchange of ballast water in accordance with this Part before discharging from any tanks that carry ballast water into waters subject to this permit if the vessel travels through more than one COTP zone as listed in 33 CFR Part 3 or the vessel crosses international boundaries. [Exemptions in 2.2.3.6.6 are for vessels already exempt from treatment systems and include safety exemptions, USCG approved AMS, do not discharge, or stay w/in 1 COTP] Vessels engaged in Pacific nearshore voyages are: • Vessels engaged in the Pacific coastwise trade and vessels transiting between Pacific ports that travel between more than one Captain of the Port Zone, and • All other vessels that sail from foreign, non-U.S Pacific, Atlantic (including the Caribbean Sea), or Gulf of Mexico ports, which do not sail further than 200 nm from any shore, and that discharge or will discharge ballast water into the territorial sea or inland waters of Alaska or off the west coast of the continental United States. Ballast water exchange for vessels subject to this part must occur in waters more than 50 nautical miles from any shore (US or otherwise), and in waters more than 200 meters deep, prior to discharging ballast water into waters subject to this permit. Exchange should occur as far from the shore, major estuary and oceanic river plumes, subsurface physical features (e.g. seamounts), and known fishery habitats as practicable. Vessels engaged in voyages that take them further than 200 nm from any shore and who will remain outside 200 nm for a sufficient period to conduct exchange, are not allowed to exchange ballast water between 50 and 200 nm from shore to meet the requirements of Part 2.2.3.6.1 (unless the master determines that exchange farther than 200 nm from shore would interfere with essential vessel operations or safety of the vessel but the master determines that the vessel is able to safely exchange more than 50 nm from shore) and instead, must conduct exchange more than 200 nm from shore in accordance with Part2.2.3.6.1 of this permit. Vessels engaged in Pacific Nearshore Voyages who are not outside 200 nm for a sufficient period to conduct exchange may conduct exchange outside 50 nm (even if they voyage beyond 200 nm) to meet the requirements of this part.
[See Application and Exemption table for further details]	WAC 220-150-040 (4) **Common water exemption.** Vessels voyaging from a port within the common water zone to a port in Washington state are exempt from having to conduct a ballast water exchange if the ballast water and sediment originated solely from a valid exchange prior to entering the common waters or from uptake within an area that includes only the waters of Washington state, the Oregon portions of the Columbia River system, and the internal waters of British Columbia south of latitude fifty degrees north, including the waters of the Straits of Georgia and Juan de Fuca (Figure 1). The common waters area relates only to vessels voyaging to a Washington state port or place from another Washington state port or place, or from designated Canadian and Oregon waters to waters of the state. It does not imply or provide any regulatory authority for vessels voyaging from waters of the state to Oregon and Canadian waters, or voyages to or between Canada and Oregon.		
[See Extraordinary	WAC 220-150-040		

Requirement	WDFW	USCG	EPA
Circumstances table for further details]	(5) Safety exemptions. Nothing in this chapter relieves the vessel owner or operator from ensuring the safety and stability of the vessel, its crew, or its passengers. A vessel owner or operator is not required to conduct an open sea exchange, in part or in full, if the vessel owner or operator determines that the operation would threaten the safety of the vessel, its crew, or its passengers. In these situations, the vessel operator must file a ballast water reporting form and is subject to all other provisions under WAC 220-150-030(4).		
	WAC 220-150-040 (6) Alternative discharge areas. The department, in consultation with states of concurrent waters, may identify alternative discharge areas as promulgated by department policy.		
	(7) Prohibited discharge areas. A vessel may not discharge ballast water or sediment within a marine protected or conservation area as designated under chapter 220-16 WAC	33 C.F.R. §151.2050 The master, owner, operator, agent, or person in charge of any vessel equipped with ballast water tanks that operates in the waters of the United States must follow these practices: (a) Avoid the discharge or uptake of ballast water in areas within, or that may directly affect, marine sanctuaries, marine preserves, marine parks, or coral reefs.	VGP 2.2.3.3 Mandatory Ballast Water Management Practices: Management measures required of all vessel owner/operators Masters, owners, operators, or persons-in-charge of all vessels equipped with ballast water tanks that operate in waters of the U.S. must: • Avoid the discharge or uptake of ballast water in areas / into waters subject to this permit within, or that may directly affect, marine sanctuaries, marine preserves, marine parks, or coral reefs or other waters listed in Appendix G waters.
	N/A	33 C.F.R. §151.2050… (b) Minimize or avoid uptake of ballast water in the following areas and situations: (1) Areas known to have infestations or populations of harmful organisms and pathogens (e.g., toxic algal blooms).	VGP 2.2.3.3 • Minimize or avoid uptake of ballast water in the following areas and situations: — Areas known to have infestations or populations of harmful organisms and pathogens (e.g., toxic algal blooms).
	N/A	33 C.F.R. §151.2050(b)… (2) Areas near sewage outfalls.	VGP 2.2.3.3 — Areas near sewage outfalls.
	N/A	33 C.F.R. §151.2050(b)… (3) Areas near dredging operations.	VGP 2.2.3.3 — Areas near dredging operations.
	N/A	33 C.F.R. §151.2050(b)… (4) Areas where tidal flushing is known to be poor or times when a tidal stream is known to be turbid.	VGP 2.2.3.3 — Areas where tidal flushing is known to be poor or times when a tidal stream is known to be turbid.
	N/A	33 C.F.R. §151.2050(b)… (5) In darkness, when bottom-dwelling organisms may rise up in the water column.	VGP 2.2.3.3 — In darkness, when bottom-dwelling organisms may rise up in the water column.
	N/A	33 C.F.R. §151.2050(b)… (6) Where propellers may stir up the sediment.	VGP 2.2.3.3 — Where propellers may stir up the sediment.
	N/A	33 C.F.R. §151.2050(b)… (7) Areas with pods of whales, convergence zones, and boundaries of major currents.	VGP 2.2.3.3 — Areas with pods of whales, convergence zones, and boundaries of major currents
		33 C.F.R. §151.2025(c) A vessel engaged in the foreign export of Alaskan North Slope Crude Oil must comply with §§151.2060 and 151.2070 of this subpart, as well as with the provisions of 15 CFR 754.2(j)(1)(iii). Section 15 CFR 754.2(j)(1)(iii) requires a mandatory program of deep water ballast exchange unless doing so would endanger the safety of the vessel or crew.	
Deviation From Planned Voyage	N/A	33 C.F.R. §151.2055 As long as ballast water exchange (BWE) is an allowable ballast water management option under §§151.2025 and 151.2035 of this subpart, the Coast	2.2.3.6.6 Exemptions [for vessels already exempt from treatment options and subject only to exchange] …Additionally, except for vessels entering the Great Lakes or into Appendix G

Requirement	WDFW	USCG	EPA
		Guard will not require a vessel to deviate from its voyage or delay the voyage in order to conduct BWE. A vessel may be required to deviate from its voyage or delay the voyage if BWE is directed by a Captain of the Port pursuant to §151.2040(b) of this subpart.	waters, a vessel is not required to deviate from its voyage, or delay the voyage to conduct ballast water exchange or saltwater flushing.
		VGP 2.2.3.6.3 Vessels with any Ballast Water Tanks that are Empty or have Unpumpable Residual Water For vessels that travel between more than one COTP Zone while undertaking voyages described in Part 2.2.3.6.1 and which either reported No Ballast on Board (NOBOB) in accordance with Coast Guard regulations or which have any ballast water tank that is empty or contains unpumpable residual water, you must follow the applicable requirements in Part 2.2.3.6.1 for those tanks with ballast water. EPA notes that when the term "empty" tank is used, the Agency is also referring to tanks that contain unpumpable residual water. For those tanks which are empty or contain unpumpable residual water, you must either seal the tank so that there is no discharge or uptake and subsequent discharge of ballast water within waters subject to this permit or conduct saltwater flushing of such tanks in an area 200 nm from any shore prior to the discharge or uptake and subsequent discharge of any ballast water to any waters subject to this permit, unless you meet one of the exemptions in Part 2.2.3.6.6. For the purposes of Part 2.2.3.6.3, saltwater flushing means the addition of mid-ocean water to empty ballast water tanks; the mixing of the added water with residual ballast water and sediment through the motion of the vessel; and the discharge of the mixed water until loss of suction, such that the resulting residual water remaining in the tank has either a salinity greater than or equal to 30 parts per thousand or a salinity concentration equal to the ambient salinity of the location where the uptake of the added water took place. In order to conduct saltwater flushing, the vessel should take on as much mid-ocean water into each tank as is safe (for the vessel and crew). For all vessel owner/operators subject to this section that contain some empty ballast water tanks and some full ballast water tanks, if you elect to seal those empty tanks, you must not allow water that will be discharged into waters subject to this permit to commingle with waters from the empty tanks if you have not conducted saltwater flushing as specified above. 2.2.3.6.4 Vessels Engaged in Pacific Nearshore Voyages with Unpumpable Ballast Water and Residual Sediment (including NOBOBs) Unless the vessel meets one of the exemptions in Part 2.2.3.6.6, any vessel engaged in Pacific Nearshore Voyages as defined in Part 2.2.3.6.2 which the owner/operator has reported as having No Ballast on Board in accordance with Coast Guard regulations, or which have any ballast water tank that is empty or contains unpumpable residual water, must follow the applicable requirements in Part 2.2.3.6.2 for those tanks with ballast water and Part 2.2.3.6.4.1 for those tanks which are empty or contain unpumpable residual water. 2.2.3.6.4.1 Nearshore Saltwater Flushing Requirements For those tanks which are empty or contain unpumpable residual water, you must either seal the tank so that there is no discharge or uptake and subsequent discharge of ballast water within waters subject to this permit or conduct saltwater flushing of such tanks in an area 50 nm from any shore and in waters at least 200 meters deep prior to the discharge or uptake and subsequent discharge of any ballast water to or from any waters subject to this permit. For purposes of Part 2.2.3.6.4, saltwater flushing means the addition of water from the "coastal exchange zone" to empty ballast water tanks; the mixing of the flush water with residual water and sediment through the motion of the vessel; and the discharge of the mixed water, such that the resulting residual water remaining in the tank has either a salinity greater than or equal to 30 parts per thousand or a salinity concentration equal to the ambient salinity of the location where the uptake of the added water took place. In order to conduct saltwater flushing, the vessel should take on as much coastal exchange zone water into each tank as is safe (for the vessel and crew). Vessels engaged in voyages that take them further than 200 nm from any shore and who will remain outside 200 nm for a sufficient period to flush ballast water, are not allowed to exchange ballast water between 50 and 200 nm from shore to meet the requirements of Part 2.2.3.6.3 (unless the master determines that flushing farther than 200 nm from shore would interfere with essential vessel operations or safety of the vessel but the master determines that the vessel is able to safely flush more than 50 nm from shore) and instead, must conduct flushing more than 200 nm from shore in accordance with Part 2.2.3.6.3 of this permit. Vessels engaged in the coastwise trade who are not outside 200 nm for a sufficient period to conduct flushing may flush outside 50 nm (even if they voyage beyond 200 nm) to meet the requirements of this permit. For all vessel owner/operators subject to this part that contain some empty ballast water tanks and some full ballast water tanks, if you elect to seal those empty tanks, you must not allow water from the full tanks to commingle with watersfrom the empty tanks if it will subsequently be discharged into waters subject to this permit. 2.2.3.6.5 Discharge Prohibitions Vessels referenced in Parts 2.2.3.6.1, 2.2.3.6.2, 2.2.3.6.3, and 2.2.3.6.4 may not discharge unexchanged or untreated ballast water or sediment in waters subject to this permit referenced in Appendix G. These waters include all National Parks and National Marine Sanctuaries.	

Alternative Management

Requirement	WDFW	USCG	EPA
BW Alternative	WAC 220-150-043	33 C.F.R. §151.2025 (a) (3)	2.2.3.6.6 Exemptions [for vessels already exempt from treatment options and

Requirement	WDFW	USCG	EPA
Management Systems	(1) In general. For purposes of this section, a vessel owner or operator may use an exchange alternative instead of conducting an open sea exchange, except for Columbia River ports unless specifically approved, provided:…	… An alternate management system (AMS) that meets the requirements of §151.2026 of this subpart may also be used… 33 C.F.R. §151.2026 (a) A manufacturer whose ballast water management system (BWMS) has been approved by a foreign administration …may request in writing, for the Coast Guard to make a determination that their BWMS is an alternate management system (AMS)…	subject only to exchange] The operator or master of a vessel may elect not to exchange ballast water (or not conduct saltwater flushing if applicable) if the vessel meets one of the following conditions: …• The master uses an alternative, environmentally sound method of ballast water management that has been approved by the Commandant of the Coast Guard prior to the vessel's voyage in accordance with 33 C.F.R. Part 151…
	WAC 220-150-043 …(a) The vessel owner or operator is not otherwise required to meet discharge performance standards under WAC 220-150-050; and	33 C.F.R. §151.2025 (a) (3) …so long as it was installed on the vessel prior to the date that the vessel is required to comply with the BWDS in accordance with §151.2035(b) of this subpart…	[Exchange exemption above applies only to vessels already exempt from treatment options and subject only to exchange]
	WAC 220-150-043 …(b) The exchange alternative meets or exceeds the standards provided under Regulation D-2 of the International Convention for the Control and Management of Ships' Ballast Water and Sediment as signed on February 13, 2004.	33 C.F.R. §151.2026 (a) … pursuant to the standards set forth in the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004, …	
	WAC 220-150-043 (2) Notification. Vessel owners or operators must file a signed notification form, as provided by the department, stating that they intend to use an exchange alternative to meet state ballast water exchange requirements… (3) Notification form contents. The department's notification of exchange alternative use will, at a minimum, require the following information: (a) Vessel name(s), identification number(s) (International Maritime Organization, Lloyds of London, or USCG registry number), owner, agent, and vessel type(s); (b) The manufacturer, brand name, model, and other information, as necessary, of the technology on board the vessel, and a brief description of the technology and its process for removing or inactivating organisms in ballast water; (c) The name of the flag state that has approved the exchange alternative system, a copy of IMO type approval certification or final approval documentation, or other information that reasonably documents how the exchange alternative was tested to ensure it meets state open sea exchange requirements; (d) If the exchange alternative will not be used on all ballast tanks, the number of tanks and the volume of each tank that will be managed using the exchange alternative;	33 C.F.R. §151.2026 (a) … Requests for determinations under this section must include: (1) The type-approval certificate for the BWMS. (2) Name, point of contact, address, and phone number of the authority overseeing the program; (3) Final test results and findings, including the full analytical procedures and methods, results, interpretations of the results, and full description and documentation of the Quality Assurance procedures (i.e., sample chain of custody forms, calibration records, etc.); (4) A description of any modifications made to the system after completion of the testing for which a determination is requested; and (5) A type approval application as described under 46 CFR 162.060-12…	
[see Monitoring table for more information]	WAC 220-150-043 (3) (e) A recommendation from the state department of ecology, based upon a toxicity report provided in accordance with Appendix H of ecology publication number WQ-R-95-80, setting conditions necessary for the environmentally safe discharge of biocide treated ballast water;	46 CFR § 162.060-32 (b) The manufacturer of a BWMS that uses an active substance or preparation that is not a pesticide, or that uses a pesticide that is generated solely by the use of a device (as defined under FIFRA) onboard the same vessel as the ballast water to be treated, must prepare an assessment demonstrating the effectiveness of the BWMS for its intended use, appropriate dosages over all applicable temperatures, hazards of the BWMS, and means for protection of the environment, and public health. This assessment must accompany the application package submitted to the Coast Guard.	VGP 2.2.3.5.1.1.5.1 The discharge of biocides or residuals may not exceed the following instantaneous maximum limits expressed as micrograms per liter (µg/l). Table 3: Maximum Ballast Water Effluent Limits for Residual Biocides Biocide or Residual Limit (instantaneous maximum) Chlorine Dioxide 200 µg/l Chlorine (expressed as Total Residual Oxidizers (TRO as TRC)) 100 µg/l Ozone (expressed as Total Residual Oxidizers (TRO as TRC)) 100 µg/l Peracetic Acid 500 µg/l Hydrogen Peroxide (for systems using Peracetic Acid) 1,000 µg/l Any other biocides or derivatives may not exceed acute water quality criteria listed

Requirement	WDFW	USCG	EPA
			in EPA's 2009 National Recommended Water Quality Criteria, and any subsequent revision, at the point of ballast water discharge. This document can be found at: http://water.epa.gov/scitech/swguidance/standards/criteria/current/upload/nrwqc-2009.pdf. Tables summarizing the subsequent revisions can be found at: http://water.epa.gov/scitech/swguidance/standards/criteria/current/. Discharges of biocide residuals or derivatives must also meet monitoring requirements under Part 2.2.3.5.1.1.1, and reporting and recordkeeping requirements in Part 2.2.3.5.1.1.6. If the biocide used or produced by your system and its derivatives is not listed in the previous table or found in EPA's National Recommended Water Quality Criteria, you must notify EPA at least 120 days in advance of its use and provide any associated aquatic toxicity data for that biocide or its derivatives of which you are aware. EPA may impose additional limitations on a treatment system-specific basis, or require you to obtain coverage under an individual permit, if necessary. EPA may inform the vessel owner/operator of specific requirements. You may also seek coverage under an individual NPDES permit pursuant to Part 1.8.2 of this permit. You may not discharge the biocide at issue until you receive a response from EPA to your notification.
	WAC 220-150-043 (3) (f) A statement that the vessel owner or operator will file a new notification if there are any changes in the information required in this subsection; (g) A statement that the vessel will conduct a valid open sea exchange under this section if they do not use the exchange alternative; and (h) The signature of the vessel owner or operator. (6) Notification conditions. To maintain acceptance, the vessel owner or operator must meet all of the following conditions: (a) All notification form content in subsection (3) of this section remains accurate; (b) Vessel owners or operators shall maintain a copy of the accepted notification of exchange alternative use in the vessel's ballast water management plan … …(d) The exchange alternative equipment is otherwise used as defined in WAC 220-150-050 for installed equipment; and (e) The department determines through inspections, sampling, investigations, or other methods, that the exchange alternative continues to meet, or is likely to continue to meet, open sea exchange standards.		
	WAC 220-150-043 (4) Submission. The department will accept notification application forms up to eighteen months prior to the implementation date for that type of vessel under WAC 220-150-050, or a subsequent, delayed implementation date. Applications received within the eighteen-month period may be accepted, but will not be granted the full grace period as provided in subsection (6)(c) of this section. Send the completed form to the department by e-mail to ballastwater@dfw.wa.gov, or if e-mail is not possible, by fax to 360-902-2845, or by U.S. mail to: WDFW, AIS Unit, 600 Capitol Way N., Olympia, Washington 98501-1090, USA. The vessel owner or operator will be notified of the department's receipt of the form within ten working days.	33 C.F.R. §151.2026 (b) Requests for determinations must be submitted in writing to the Commanding Officer (MSC), Attn: Marine Safety Center, U.S. Coast Guard Stop 7410, 4200 Wilson Boulevard, Suite 400, Arlington, VA 20598-7410.	
	WAC 220-150-043 (5) Acceptance. The department will make a final decision on acceptance within forty-five days of receipt. If the notification is illegible or incomplete, it will be returned to the vessel owner or operator as unacceptable, with an		

Requirement	WDFW	USCG	EPA
	explanation of the deficiencies. The notification is effective upon department verification of acceptance by e-mail or in writing to the vessel owner or operator.		
	WAC 220-150-043 (6) Notification conditions. To maintain acceptance, the vessel owner or operator must meet all of the following conditions: (a) All notification form content in subsection (3) of this section remains accurate; (b) Vessel owners or operators shall maintain a copy of the accepted notification of exchange alternative use in the vessel's ballast water management plan under WAC 220-150-030(5);		
	WAC 220-150-043 (6) Notification conditions. To maintain acceptance, the vessel owner or operator must meet all of the following conditions: (c) Vessel owners or operators may use the exchange alternative for a period of five years from the date on which the equipment was first placed into service or until the vessel must meet discharge performance standards under WAC 220-150-050, whichever is longer; …	33 C.F.R. §151.2025 (a) (3) …If using an AMS, the master, owner, operator, agent, or person in charge of the vessel subject to this subpart may employ the AMS for no longer than 5 years from the date they would otherwise be required to comply with the BWDS in accordance with §151.2035(b) of this subpart. 33 C.F.R. §151.2026 (c) If using an AMS that was installed on the vessel prior to the date that the vessel is required to comply with the ballast water discharge standard in accordance with §151.2035(b), the master, owner, operator, agent, or person in charge of the vessel subject to this subpart may employ such AMS for no longer than 5 years from the date they would otherwise be required to comply with the ballast water discharge standard in accordance with the implementation schedule in §151.2035 (b) of this subpart.	
	WAC 220-150-043 (6) Notification conditions. To maintain acceptance, the vessel owner or operator must meet all of the following conditions: (d) The exchange alternative equipment is otherwise used as defined in WAC 220-150-050 for installed equipment; and	33 C.F.R. §151.2026 (c) … To ensure the safe and effective management and operation of the AMS equipment, the master, owner, operator, agent or person in charge of the vessel must ensure the AMS is maintained and operated in conformity with the system specifications.	
	WAC 220-150-043 (6) Notification conditions. To maintain acceptance, the vessel owner or operator must meet all of the following conditions: (e) The department determines through inspections, sampling, investigations, or other methods, that the exchange alternative continues to meet, or is likely to continue to meet, open sea exchange standards.	33 C.F.R. §151.2026 (a) (5) …(i) Once ballast water management systems are type approved by the Coast Guard and available for a given class, type of vessels, or specific vessel, those vessels will no longer be able to install AMS in lieu of type approved systems.	

Treatment System Approval

Requirement	WDFW	USCG	EPA
Management System Approval	WAC 220-150-060 (1) All vessels using treatment technologies designed to meet state ballast water discharge performance standards are required to notify the department prior to or within thirty days of their first use in waters of the state. A prior notification is preferred to assess compliance with state regulations in using treatment technology to meet discharge performance standards and to assist vessel owners or operators in avoiding the discharge of ballast water that does not meet those standards or that poses other potential violations. It is the responsibility of the vessel owner or operator to show that the installed equipment meets state discharge performance standards. Vessel owners or operators wishing to use	33 C.F.R. §151.2025(b) Requests for approval of BWMS must be submitted to the Commanding Officer (MSC), Attn: Marine Safety Center, U.S. Coast Guard Stop 7410, 4200 Wilson Boulevard, Suite 400, Arlington, VA 20598-7410, or by email to msc@uscg.mil, in accordance with 46 CFR part 162. **46 CFR** **§ 162.060-10 Approval procedures** **§ 162.060–12 Use and acceptance of existing test data.** **§ 162.060–14 Information requirements for the BWMS application.**	2.2.3.5.1.1 Ballast Water Management using a Ballast Water Treatment System Vessel owner/operators utilizing a ballast water treatment system (BWTS) must use a system which has been shown to be effective by testing conducted by an independent third party laboratory, test facility or test organization. A system that has been type approved by the U.S. Coast Guard under 46 CFR Part 162.060 or received “Alternative Management System” designation by the U.S. Coast Guard under 33 CFR 151.2026 will be deemed to meet this “shown to be effective” provision. Once the effluent limits in Part 2.2.3.5 become applicable to a vessel (see part 2.2.3.5.2 for applicability timeframes for specified categories of vessels), owners/operators of vessels utilizing a ballast water treatment system to meet the

Requirement	WDFW	USCG	EPA
	treatment technology that does not meet state standards may apply for a waiver to use the technology as promising technology under subsection (3) of this section. (2) Notification. Vessel owners or operators using treatment technology must file a signed notification form, as provided by the department, stating that their vessel meets state discharge performance standards under WAC 220-150-050… (4) Notification and waiver application form content. … (a) In general. Standard notification application and promising technology waiver forms are provided by the department and must be used for this subsection. A single waiver form may cover multiple vessels under the authority of a single vessel owner or operator. (b) Content. The department's notification of treatment technology use and application for promising treatment technology waiver forms will, at a minimum, require the following information: (i) Vessel name(s), identification number(s) (International Maritime Organization, Lloyds of London, or USCG registry number), owner, agent, and vessel type(s); (ii) The manufacturer and brand name of the technology on board the vessel and a brief description of the technology and process for removing or inactivating organisms in ballast water; (iii) The name of the organization or flag state that has approved the ballast water treatment technology, and the approval or certification number of the technology or other information that reasonably documents how the technology was tested to ensure it meets, or is likely to meet in the case of promising treatment technology, state discharge performance standards for the vessel type on which it is being used; (iv) If the treatment technology will not be used on all ballast tanks, the number of tanks and the volume of each tank that will be managed using the treatment technology; (v) A recommendation from the state department of ecology, based upon a toxicity report provided in accordance with Appendix H of ecology publication number WQ-R-95-80, setting conditions necessary for the environmentally safe discharge of biocide-treated ballast water; (vi) A statement that the vessel owner or operator will file a new notification if there are any changes in the information required in this subsection; (vii) A statement that the vessel will conduct a valid ballast water exchange, under WAC 220-150-040, if it does not use the treatment technology; and (viii) The signature of the vessel owner or operator.	**§ 162.060–16 Changes to an approved BWMS.** **§ 162.060–18 Suspension, withdrawal, or termination of approval.** **§ 162.060–20 Design and construction requirements.** **§ 162.060–22 Marking requirements.** **§ 162.060–24 Test Plan requirements.** **§ 162.060–26 Land-based testing requirements.** **§ 162.060–28 Shipboard testing requirements.** **§ 162.060–30 Testing requirements for BWMS components.** **§ 162.060–32 Testing and evaluation requirements for active substances, preparations, and relevant chemicals.** **§ 162.060–34 Test Report requirements.** **§ 162.060–36 Quality Assurance Project Plan (QAPP) requirements.** **§ 162.060–38 Operation, Maintenance, and Safety Manual (OMSM).** **§ 162.060–40 Requirements for Independent Laboratories (ILs).**	requirements of Part 2.2.3.5 of this permit must meet those limits as an instantaneous maximum.
	WAC 220-150-060 (3) (a) In general. Vessel owners or operators using promising treatment technology do not need to file a notification, but they must apply for a waiver to the interim open sea exchange requirements under WAC 220-150-040. (b) Criteria. …promising technology must meet one or more of the following criteria: (i) The same manufacturer's treatment technology is being tested on a vessel that is enrolled in the USCG Shipboard Technology Evaluation Program (STEP), United States Environmental Protection Agency Environmental Technology Verification (ETV) program, or other department-recognized regional or national program; (ii) The technology is approved as promising technology or a similar classification by the state of California, Oregon, Hawaii, or Alaska for use in their state waters; or (iii) The technology is being actively evaluated under the IMO final approval process.		2.2.3.8 Vessels in the U.S. Coast Guard Shipboard Technology Evaluation Program (STEP) Owner/operators of vessels are not required to meet the requirements of Parts 2.2.3.5 (except Parts 2.2.3.5.1.1.5 (Requirements and Effluent Limitations for BWTS that use Active Substances (e.g., biocides)) and 2.2.3.5.1.1.6 (Ballast Water Treatment System Recordkeeping and Reporting)) and 2.2.3.6 of this permit if either: • The vessel is accepted by the U.S. Coast Guard into the Shipboard Technology Evaluation Program (STEP), • The technology is operated in accordance with requirements of that program, and • The acceptance has not been withdrawn. Owner/operators of these vessels are required to meet the requirements of Parts

Requirement	WDFW	USCG	EPA
			2.2.3.5.1.1.5 (Requirements and Effluent Limitations for BWTS that use Active Substances (e.g., biocides))and 2.2.3.5.1.1.6 (Ballast Water Treatment System Recordkeeping and Reporting) of this permit.
	WAC 220-150-060 (6) **Acceptance.** (a) Notification. The department will make a final decision on acceptance of a notification application form within forty-five days of receipt. If the notification is illegible or incomplete, it will be returned to the vessel owner or operator as unacceptable, with an explanation of the deficiencies. The notification is effective upon department verification of acceptance by e-mail or in writing to the vessel owner or operator.		
	WAC 220-150-060 (6) (b) Waiver for promising treatment technology use. The department will make a final decision on acceptance for a waiver within forty-five days of receipt. If the application is illegible or incomplete, it will be returned to the vessel owner or operator as incomplete, with an explanation of the deficiencies. The waiver is effective upon department verification of acceptance by e-mail or in writing to the vessel owner or operator.		
	WAC 220-150-060 (7) Notification and waiver acceptance conditions. (a) In general. To maintain acceptance, the vessel owner or operator must meet a minimum set of conditions. (b) Conditions. Minimum conditions include: (i) All acceptance form content in subsection (4) of this section remains accurate; (ii) Vessel owners or operators shall maintain a copy of the accepted notification of treatment technology use or waiver form for promising treatment technology use in the vessel's ballast water management plan under WAC 220-150-030(5); (iii) The technology is used as defined in subsection (8) of this section for installed treatment technology; and (iv) The department determines through inspections, sampling, investigations, or other methods that the technology continues to meet, or is likely to continue to meet, ballast water discharge performance standards under WAC 220-150-050.	33 C.F.R. §151.2026 (d) An AMS determination issued under this section may be suspended, withdrawn, or terminated in accordance with the procedures contained in 46 CFR 162.060-18.	
	(8) Installed treatment technology. (a) In general. If ballast water treatment technology used for purposes of complying with the regulations under this subsection is installed on a vessel, maintained in good working order and used by the vessel, the vessel may use that technology for the shortest of: (i) Federal requirements; (ii) The life of the vessel on which the technology is used; or (iii) The manufacturer's equipment life specifications. (b) Incremental improvements. Vessel owners and operators are encouraged to incrementally improve installed treatment technology to meet higher discharge performance standards and reduce the risk of introducing nonindigenous species. The expectation is these improvements would take advantage of regular maintenance and upgrade schedules. (c) Record or log book. All information regarding compliance with this subsection must be recorded in the vessel's ballast water record or log book per WAC 220-150-030(6).		
	WAC 220-150-060 (9) Other laws. Nothing in these rules or laws authorizes the discharge of other pollutants or assures that the technology is safe to operate or that it meets other state, federal, and international laws governing business, marine applications, or		

Requirement	WDFW	USCG	EPA
	other elements.		

Ballast Tank Sediment

Requirement	WDFW	USCG	EPA
	WAC 220-150-070 (1) Purpose. A vessel owner or operator may not remove or discharge sediment or tank fouling organisms into waters of the state from spaces carrying ballast water unless that sediment or those organisms are discharged solely in the location from which they originated… (2) Ballast tank sediment removal options. (a) In general. Three options are provided for the effective removal of sediment and any fouling organisms in a vessel's ballast tanks… (b) Saltwater flushing. Ballast tanks must be cleaned as necessary in open sea exchange areas consistent with WAC 220-150-040(3) voyage requirements unless common water rules apply under WAC 220-150-040(4) except for ballast-related fouling organisms. Sediment may be removed by saltwater flushing of ballast water tanks by: (i) Adding open sea water to a ballast water tank that contains residual quantities of ballast waters; (ii) Mixing the open sea water with the residual ballast water and sediment in the tank through the motion of a vessel or alternative means so that the sediment becomes suspended; and (iii) Discharging the mixed water so that the salinity of the resulting residual ballast water in the tank exceeds thirty parts per thousand. (c) Upland disposal. Tank sediment and fouling organisms may be removed from the vessel under controlled arrangements in port or in drydock, and disposed of in accordance with local, state, and federal law. (d) Sediment reception facilities. The department, in consultation with the department of ecology, will adopt department policies as necessary for sediment reception facilities… (3) Reporting. Sediment cleaning and discharges must be recorded in the vessel's ballast water log or record book…	33 C.F.R. §151.2050 (c) Clean the ballast tanks regularly to remove sediments. Sediments must be disposed of in accordance with local, State, and Federal regulations.	VGP 2.2.3.3 • Clean ballast tanks regularly to remove sediments in mid-ocean (when not otherwise prohibited by applicable law) or under controlled arrangements in port, or at drydock.
	WAC 220-150-070 (1) Purpose. A vessel owner or operator may not remove or discharge sediment or tank fouling organisms into waters of the state from spaces carrying ballast water unless that sediment or those organisms are discharged solely in the location from which they originated…		VGP 2.2.3.3 • No discharge of sediments from cleaning of ballast tanks is authorized in waters subject to this permit.
			VGP 2.2.3.3 • Where feasible, utilize the high sea suction when the clearance is less than 5 meters (approximately 15 feet) to the lower edge of the seachest or the vessel is dockside to reduce sediment intake. • When feasible and safe, you must use your ballast water pumps instead of gravity draining to empty your ballast water tanks, unless you meet the treatment limits found in Part 2.2.3.5 of this permit.
	RCW 77.120.030(4)… (b) discharging only the minimal amount of ballast water operationally necessary… WAC 220-150-030(4)(d)…	33 C.F.R. §151.2050 (d) Discharge only the minimal amount of ballast water essential for vessel operations while in the waters of the United States.	VGP 2.2.3.3 • Minimize the discharge of ballast water essential for vessel operations while in the waters subject to this permit.

Requirement	WDFW	USCG	EPA
	…(v) Discharge only the minimum amount necessary to complete a safe operation.		
	N/A	33 C.F.R. §151.2050 (e) Rinse anchors and anchor chains when the anchor is retrieved to remove organisms and sediments at their places of origin.	
	N/A	33 C.F.R. §151.2050 (f) Remove fouling organisms from the vessel's hull, piping, and tanks on a regular basis and dispose of any removed substances in accordance with local, State and Federal regulations.	
	WAC 220-150-030BWMP (5)(c) Training. The vessel owners or operators and appropriate crew must be trained in the application of the vessel's ballast water and sediment management strategies.	33 C.F.R. §151.2050 (h) Train the master, operator, person in charge, and crew on the application of ballast water and sediment management and treatment procedures.	VGP 2.2.3.1 Training All owner/operators of vessels equipped with ballast water tanks must train the master, operator, person-in-charge, and crew members who actively take part in the management of the discharge or who may affect the discharge, on the application of ballast water and sediment management and treatment procedures. As part of Ballast Water Management Plans under 2.2.3.2, a stand-alone training plan, or other recordkeeping documentation, owner/operators must maintain a written training plan describing the training to be provided and a record of the date of training provided to each person trained. Persons required to be trained must be trained promptly upon installation of treatment technology and in the event of a significant change in ballast water treatment practices or technology. VGP 2.2.3.2 Ballast Water Management Plans The plan must also include how vessels will comply with training requirements of 2.2.3.1
	N/A	33 C.F.R. §151.2050 (i) When discharging ballast water to a reception facility in the United States, discharge only to reception facilities that have an NPDES permit to discharge ballast water.	

Enforcement and Compliance

Requirement	WDFW and ECY	USCG	EPA
	RCW 77.120.070 (1) The department may establish by rule schedules for any penalty allowed in this chapter. The schedules may provide for the incremental assessment of a penalty based on criteria established by rule.		
	RCW 77.120.070 (2) The director or the director's designee may impose a civil penalty or warning for a violation of the requirements of this chapter on the owner or operator in charge of a vessel who fails to comply with the requirements imposed under RCW 77.120.030 and 77.120.040. The penalty shall not exceed twenty-seven thousand five hundred dollars for each day of a continuing violation. In determining the amount of a civil penalty, the department shall set standards by rule that consider if the violation was intentional, negligent, or without any fault, and shall consider the quality and nature of risks created by the violation. The owner or operator subject to such a penalty may contest the determination by requesting an adjudicative proceeding within twenty days. Any determination not timely contested is final and may be reduced to a judgment enforceable in any court with jurisdiction. If the department prevails using any judicial process to collect a penalty under this section, the department shall also be awarded its costs and reasonable attorneys' fees.		
	RCW 77.120.070 (3) The department, in cooperation with the United States coast guard, may enforce the requirements of this chapter.		
	RCW 77.120.100 The department may assess a fee for any exemptions allowed under this chapter. Such a fee may not exceed five thousand dollars. The department may establish by rule schedules for any fee allowed in this chapter. The schedules may provide for the incremental assessment of a penalty based on criteria established by rule.		
Penalties	WAC 220-150-080 (1) Purpose. The department may issue a verbal warning, notice of correction, or notice of civil penalty up to twenty-seven thousand five	33 C.F.R. §151.2080 (a) A person who violates this subpart is liable for a	

Requirement	WDFW and ECY	USCG	EPA
	hundred dollars for each day of a continuing violation of the requirements of ballast water management regulations pursuant to RCW 77.120.070. Each and every such violation will be a separate and distinct violation. The department may also seek criminal penalties where warranted. (2) Notice of correction. (a) In general. If, in the course of carrying out their duties under chapter 77.120 RCW or this chapter, a department employee becomes aware that a vessel owner or operator is not in compliance with applicable laws and rules enforced by the department, the department may issue a notice of correction as provided in RCW 43.05.100 to the vessel owner or operator. (b) Content. A notice of correction, at a minimum, will include: (i) A description of the condition that is not in compliance, and the text of the specific section or subsection of the applicable state law or rule; (ii) A statement of what is required to achieve compliance; (iii) The date and time by which the department requires compliance to be achieved; (iv) Notice of the means to contact any technical assistance services provided by the department; and (v) A description of when, where, and from whom to request an extension of time to achieve compliance for good cause. (c) Context. A notice of correction is not a formal enforcement action, is not subject to appeal, and is a public record. (d) Compliance. If the department issues a notice of correction, it shall not issue a civil penalty for the violations identified in the notice of correction unless the responsible party fails to comply with the notice. (3) Notice of penalty. (a) In general. If, in the course of carrying out their duties under chapter 77.120 RCW or this chapter, a department employee becomes aware that a vessel owner or operator is not in compliance with applicable laws and rules enforced by the department, the department may issue a notice of penalty as provided in RCW 43.05.110 to the vessel owner or operator. (b) Conditions. The department may issue a notice of penalty without first issuing a notice of correction under subsection (2) of this section to the vessel owner or operator where: (i) The vessel owner or operator has previously been subject to an enforcement action for the same or a similar type of violation of the same statute or rule or has previously been given a notice of correction for the same or similar type of violation of the same statute or rule; (ii) Compliance is not achieved by the date established in a previously issued notice of correction, whereupon every day's continuance thereafter will be a separate and distinct violation; (iii) The violation has a probability of, or actually resulted in, the discharge of ballast water and/or sediments that do not meet the requirements set forth in WAC 220-150-040, 220-150-043, 220-150-050, or 220-150-070; or (iv) The violation was committed by a business that employs fifty or more employees on at least one day in each of the preceding twelve months. (c) Context. A notice of penalty is a formal enforcement action, is subject to appeal, and is a public record. (d) Compliance. If the department issues a notice of penalty, it shall calculate a civil penalty for the violation(s) as provided in subsection (4) of this section. (4) Calculation and payment of civil penalties. (a) In general. The department will assess civil penalties for each separate and distinct violation for each day of a continuing violation of the requirements of ballast water management regulations. (b) Base penalty. There are three base civil penalties: (i) Two thousand dollars for violations that are not related to or do not result in the discharge of ballast water that does not meet open sea exchange or discharge performance standards; (ii) Five thousand dollars for failing to comply with a notice of correction issued under subsection (2) of this section; and (iii) Five thousand dollars for violations that result in a discharge of ballast water that does not meet open sea exchange or discharge performance standards. (c) Level of intent. Evidence of intent to violate the laws and rules governing ballast water and sediment management may result in an increase in the base penalty up to twenty-seven thousand five hundred dollars for each separate and distinct violation for each day of a continuing violation. Evidence includes, but is not limited to: (i) Intention. In making a determination of intent, the department will consider, but not be limited to, the following considerations: The vessel owner or operator knowingly violated state laws and rules; whether precautions were taken to avoid the violation; and/or whether an inspection, warning, notice of correction, or enforcement action was served on the violator prior to the violation. For this factor, up to double the base penalty may be added. (ii) Cooperation. The department will consider whether the violator did or did not make any attempt to correct the problem. Timeliness of action(s) and/or ignoring or evading agency contacts or directives will determine whether the penalty will be increased. For this factor, up to double the base penalty may be added. (iii) Previous violation(s). The department will consider whether the violator has previous violations of a ballast water rule or regulation as documented in an enforcement action. The department may consider company organizations and assignment of operational responsibilities when evaluating previous violations. A substantially larger penalty will result if the violator has a history of violations with adverse impacts	civil penalty not to exceed $35,000. Each day of a continuing violation constitutes a separate violation. A vessel operated in violation of the regulations is liable in rem for any civil penalty assessed under this subpart for that violation.	

Requirement	WDFW and ECY	USCG	EPA
	or the potential for adverse impacts or that shows a pattern of ignoring the rules or the act. Enforcement actions for the purposes of this section will include notices of penalty, the amounts of those civil penalties, and criminal citations when those enforcement actions are associated with ballast water violations. For this factor, up to quadruple the base penalty may be added. (d) Quality and quantity of risk. Evidence showing the potential or actual discharge of high risk ballast water or sediment may result in an increase in the base penalty up to twenty-seven thousand five hundred dollars for each separate and distinct violation for each day of a continuing violation. Evidence includes, but is not limited to: (i) Vessels carrying high risk ballast water and/or sediment listed under in WAC 220-150-035. For this factor, up to double the base penalty may be added. (ii) Volume of ballast water and sediment discharged or potentially discharged. For this factor, up to quadruple the base penalty may be added. (e) Payment. Unless a timely appeal is filed, all civil penalties imposed must be paid to the department within thirty days after the date of the written notice imposing the civil penalty. If a timely appeal is filed, then all civil penalties imposed must be paid upon the completion of all administrative and judicial review proceedings and the issuance of a final notice affirming the penalty in whole or in part. (f) Failure to pay. Any determination not timely contested is final and may be reduced to a judgment enforceable in any court with jurisdiction. Where the department prevails, using any judicial process to collect a penalty under this section, the department shall also be awarded its costs and reasonable attorneys' fees.		
	WAC 220-150-080 (5) Appeals. (a) In general. A person who is subject to a notice of penalty shall have the rights provided by this section to request an adjudicative proceeding to contest the notice. No person other than the recipient of the notice or the recipient's legal representative shall have standing to request an adjudicative proceeding. The adjudicative proceeding shall be in compliance with provisions of chapter 34.05 RCW, the Administrative Procedure Act, except as modified herein by the department. (b) Timing for request. An adjudicative proceeding to contest a notice of penalty must be requested no later than twenty days from the date of service of the notice. To be timely, the request must be physically received by the department director in Olympia, Washington, during normal business hours on or before the twentieth day following the date of service of the order, except that if the twentieth day falls on a Saturday, Sunday, or state holiday, then the request for hearing shall be timely if received on the next business day. The person requesting an adjudicative proceeding may prove that it was timely requested by obtaining a written receipt of service from the department director, or by providing an affidavit showing personal service on the department director, or by a U.S. mail return receipt requested service showing receipt by the department on or before the last day set by this rule. (c) Manner and content of request. Each request for adjudicative proceeding shall substantially comply with this subsection. (i) The request shall be in writing; (ii) The request shall identify the notice of penalty that the person seeks to contest. This can be done by reference to the number of the notice, by reference to the subject and date of the notice, or by reference to a copy of the notice attached to the request; (iii) The request shall state the grounds upon which the person contests the notice of penalty. If the person contests the factual basis for the notice, the person shall allege the facts that the person contends are relevant to the appeal; and (iv) The request shall identify the relief that the person seeks from the adjudicative proceeding by specifying whether the person asks to have the notice vacated, or provisions of the notice corrected.		
	(6) **Coordination with United States Coast Guard (USCG).**The department will report state violations, penalties and enforcement actions taken on vessels, as requested by cooperative agreement, to the appropriate sector representative of the USCG. The department will also report suspected federal violations to the USCG.		
	WAC 220-150-033 (7) Investigation of violations. Where there is evidence that a violation has occurred, the department may investigate those suspected violations. In doing so, the department may use all appropriate and practical measures of detection and environmental monitoring. Where the department determines that a violation has occurred, the department will follow the protocols under WAC 220-150-080.		
	WAC 220-150-033 (8) Petition for civil enforcement. If a department inspector is denied access to any vessel where access was sought for the purposes of this subsection, the department may file a petition for civil enforcement pursuant to RCW 77.120.070(3) and 34.05.578.		
	WAC 220-150-080 (1)…The department may also seek criminal penalties where warranted.	33 C.F.R. §151.2080 (b) A person who knowingly violates the regulations of this subpart is guilty of a class C felony.	
Pollution Jurisdiction	RCW 90.48.030 (ECY) The department shall have the jurisdiction to control and prevent the pollution of streams, lakes, rivers, ponds, inland waters, salt waters,		FROM USCG/EPA MOU: Sections 308 and 309 of the CWA, 33 U.S.C. §§ 1318 & 1319, authorize EPA

Requirement	WDFW and ECY	USCG	EPA
	water courses, and other surface and underground waters of the state of Washington.		to obtain information and investigate noncompliance with permits issued pursuant to this authority, to enforce against violations of such permits and take action to require a violator to return to compliance. VGP Part 3 CORRECTIVE ACTIONS The corrective action requirements in Part 3 in no way impair EPA's or an authorized representative acting on EPA's behalf to require remedies to bring a vessel owner/operator into compliance with this permit as soon as possible. On a case-by-case basis, EPA may take enforcement action to require any remedy or corrective action necessary to achieve compliance as quickly as possible, including more stringent time tables than those listed in this part.
Pollution Enforcement	RCW 90.48.037 (ECY) Authority of department to bring enforcement actions. The department, with the assistance of the attorney general, is authorized to bring any appropriate action at law or in equity, including action for injunctive relief, in the name of the people of the state of Washington as may be necessary to carry out the provisions of this chapter or chapter 90.56 RCW. [90.56 regards oil spills]		
Pollution Violation Notice	90.48.120 (ECY) Notice of department's determination that violation has or will occur—Report to department of compliance with determination—Order or directive to be issued—Notice. (1) Whenever, in the opinion of the department, any person shall violate or creates a substantial potential to violate the provisions of this chapter or chapter 90.56 RCW, or fails to control the polluting content of waste discharged or to be discharged into any waters of the state, the department shall notify such person of its determination by registered mail. Such determination shall not constitute an order or directive under RCW 43.21B.310. Within thirty days from the receipt of notice of such determination, such person shall file with the department a full report stating what steps have been and are being taken to control such waste or pollution or to otherwise comply with the determination of the department. Whereupon the department shall issue such order or directive as it deems appropriate under the circumstances, and shall notify such person thereof by registered mail. (2) Whenever the department deems immediate action is necessary to accomplish the purposes of this chapter or chapter 90.56 RCW, it may issue such order or directive, as appropriate under the circumstances, without first issuing a notice or determination pursuant to subsection (1) of this section. An order or directive issued pursuant to this subsection shall be served by registered mail or personally upon any person to whom it is directed.		
Pollution Penalty	90.48.140 (ECY) Penalty. Any person found guilty of willfully violating any of the provisions of this chapter or chapter 90.56 RCW, or any final written orders or directive of the department or a court in pursuance thereof is guilty of a gross misdemeanor, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars and costs of prosecution, or by imprisonment in the county jail for up to three hundred sixty-four days, or by both such fine and imprisonment in the discretion of the court. Each day upon which a willful violation of the provisions of this chapter or chapter 90.56 RCW occurs may be deemed a separate and additional violation. 90.48.142 Violations—Liability in damages for injury or death of fish, animals, vegetation—Action to recover. (1) Any person who: (a)(i) Violates any of the provisions of this chapter or chapter 90.56 RCW; (ii) Fails to perform any duty imposed by this chapter or chapter 90.56 RCW; (iii) Violates an order or other determination of the department or the director made pursuant to the provisions of this chapter or chapter 90.56 RCW; (iv) Violates the conditions of a waste discharge permit issued pursuant to RCW 90.48.160; or (v) Otherwise causes a reduction in the quality of the state's waters below the standards set by the department or, if no standards have		

Requirement	WDFW and ECY	USCG	EPA
	been set, causes significant degradation of water quality, thereby damaging the same; and (b) Causes the death of, or injury to, fish, animals, vegetation, or other resources of the state; shall be liable to pay the state and affected counties and cities damages in an amount determined pursuant to RCW 90.48.367. (2) No action shall be authorized under this section against any person operating in compliance with the conditions of a waste discharge permit issued pursuant to RCW 90.48.160. 90.48.144 Violations—Civil penalty—Procedure. Except as provided in RCW 43.05.060 through 43.05.080 and 43.05.150, every person who: (1) Violates the terms or conditions of a waste discharge permit issued pursuant to RCW 90.48.180 or 90.48.260 through 90.48.262, or (2) Conducts a commercial or industrial operation or other point source discharge operation without a waste discharge permit as required by RCW 90.48.160 or 90.48.260 through 90.48.262, or (3) Violates the provisions of RCW 90.48.080, or other sections of this chapter or chapter 90.56 RCW or rules or orders adopted or issued pursuant to either of those chapters, shall incur, in addition to any other penalty as provided by law, a penalty in an amount of up to ten thousand dollars a day for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be and be deemed to be a separate and distinct violation. Every act of commission or omission which procures, aids or abets in the violation shall be considered a violation under the provisions of this section and subject to the penalty herein provided for. The penalty amount shall be set in consideration of the previous history of the violator and the severity of the violation's impact on public health and/or the environment in addition to other relevant factors. The penalty herein provided for shall be imposed pursuant to the procedures set forth in RCW 43.21B.300.		
Pollution Permiting	90.48.160 Waste disposal permit—Required—Exemptions. Any person who conducts a commercial or industrial operation of any type which results in the disposal of solid or liquid waste material into the waters of the state, including commercial or industrial operators discharging solid or liquid waste material into sewerage systems operated by municipalities or public entities which discharge into public waters of the state, shall procure a permit from either the department or the *thermal power plant site evaluation council as provided in RCW 90.48.262(2) before disposing of such waste material: PROVIDED, That this section shall not apply to any person discharging domestic sewage only into a sewerage system. The department may, through the adoption of rules, eliminate the permit requirements for disposing of wastes into publicly operated sewerage systems for: (1) Categories of or individual municipalities or public corporations operating sewerage systems; or (2) Any category of waste disposer; if the department determines such permit requirements are no longer necessary for the effective implementation of this chapter. The department may by rule eliminate the permit requirements for disposing of wastes by upland finfish rearing facilities unless a permit is required under the federal clean water act's national pollutant discharge elimination system.		VGP Part 1.5.1.1 "…vessel is greater than or equal to 300 gross tons or the vessel has the capacity to hold or discharge more than 8 cubic meters (2,113 gallons) of ballast water… must submit a signed and certified, complete and accurate NOI…"
Pollution Immediate Action	90.48.240 Water pollution orders for conditions requiring immediate action—Appeal. Notwithstanding any other provisions of this chapter or chapter 90.56 RCW, whenever it appears to the director that water quality conditions exist which require immediate action to protect the public health or welfare, or that a person required by RCW 90.48.160 to obtain a waste discharge permit prior to discharge is discharging without the same, or that a person conducting an operation which is subject to a permit issued pursuant to RCW 90.48.160 conducts the same in violation of the terms of said permit, causing water quality conditions to exist which require immediate action to protect the public health or welfare, the director may issue a written order to the person or persons responsible without prior notice or hearing, directing and affording the person or persons responsible the alternative of either (1) immediately discontinuing or modifying the discharge into the waters of the state, or (2) appearing before the department at the time and place specified in said written order for the purpose of providing to the department information pertaining to the violations and conditions alleged in said written order. The responsible person or persons shall be afforded not less than twenty-four hours notice of such an information meeting. If following such a meeting the department determines that water quality conditions exist which require immediate action as described herein, the department may issue a written order requiring immediate discontinuance or modification of the discharge into the waters of the state. In the event an order is not immediately complied with the attorney general, upon request of the department, shall seek and obtain an order of the superior court of the county in which the violation took place directing compliance with the order of the department. Such an order is appealable pursuant to RCW 43.21B.310.		

Requirement	WDFW and ECY	USCG	EPA
Pollution Monitoring	90.48.250 Agreements or contracts to monitor waters and effluent discharge. The department is authorized to make agreements and enter into such contracts as are appropriate to carry out a program of monitoring the condition of the waters of the state and the effluent discharged therein, including contracts to monitor effluent discharged into public waters when such monitoring is required by the terms of a waste discharge permit or as part of the approval of a sewerage system, if adequate compensation is provided to the department as a term of the contract.		
Pollution Exceptions for AIS control	90.48.445 and 447 allow herbicide use for controlling aquatic noxious weeds.		
Pollution Monitoring	**(ECY)** WAC 173-201A-520 Monitoring and compliance. A continuing surveillance program, to ascertain whether the regulations, waste disposal permits, orders, and directives promulgated and/or issued by the department are being complied with, will be conducted by the department staff as follows: (1) Inspecting treatment and control facilities. (2) Monitoring and reporting waste discharge characteristics. (3) Monitoring receiving water quality.		
Pollution Enforcement	WAC 173-201A-530 Enforcement. To insure that the provisions of chapter 90.48 RCW, the standards for water quality promulgated herein, the terms of waste disposal permits, and other orders and directives of the department are fully complied with, the following enforcement tools will be relied upon by the department, in cooperation with the attorney general as it deems appropriate: (1) Issuance of notices of violation and regulatory orders as provided for in RCW 90.48.120. (2) Initiation of actions requesting injunctive or other appropriate relief in the various courts of the state as provided for in RCW 90.48.037. (3) Levying of civil penalties as provided for in RCW 90.48.144. (4) Initiation of a criminal proceeding by the appropriate county prosecutor as provided for in RCW 90.48.140. (5) Issuance of regulatory orders or directives as provided for in RCW 90.48.240.		

Pilot project—Private sector ballast water treatment operation.

Requirement	Washington	USCG	EPA
	RCW 77.120.050 The shipping vessel industry, the public ports, and the department shall promote the creation of a pilot project to establish a private sector ballast water treatment operation that is capable of servicing vessels at all Washington ports. Federal and state agencies and private industries shall be invited to participate. The project will develop equipment or methods to treat ballast water and establish operational methods that do not increase the cost of ballast water treatment at smaller ports. The legislature intends that the cost of treatment required by this chapter is substantially equivalent among large and small ports in Washington.	33 C.F.R. §151.2025(a)… (5) Discharge to a facility onshore or to another vessel for purposes of treatment Any vessel owner/operator discharging ballast water to a facility onshore or to another vessel must ensure that all vessel piping and supporting infrastructure up to the last manifold or valve immediately before the dock manifold connection of the receiving facility or similar appurtenance on a reception vessel prevents untreated ballast water from being discharged into waters of the United States.	2.2.3.5.1.2 Onshore Treatment of Ballast Water For those vessels whose design and construction safely allows for the transfer of ballast water to shore, if compatible onshore treatment for ballast water is available, the vessel owner/operator may use onshore treatment for any ballast water discharges to meet the requirements of 2.2.3.5. EPA notes that the lack of availability of adequate reception facilities is not an acceptable reason to discharge ballast water which does not meet the treatment requirements found in Part 2.2.3.5.1.1 into waters subject to this permit, and such discharges would therefore constitute a permit violation. Any vessel owner/operator utilizing onshore treatment must ensure that all piping and supporting infrastructure up to the last manifold or valve immediately before the dock manifold connection of the receiving facility or similar appurtenance on a reception vessel are fully free from any leaks or other avenues whereby untreated ballast may be discharged into waters subject to this permit. EPA notes that transferring ballast water to a treatment barge for eventual

Requirement	Washington	USCG	EPA
			treatment and discharge could constitute “on-shore treatment” for purposes of Part 2.2.3.5.1.2 The discharge of treated ballast water (transferred from other vessels) from a treatment barge is not eligible for coverage under the VGP as this is a discharge from an industrial operation, not a discharge incidental to the normal operation of a vessel. Instead, these vessels must apply for individual NPDES permit coverage from the appropriate NPDES permitting authority, generally the State in which they are operating.

Management Requirements other than Treatment

Requirement	Washington	USCG	EPA
		33 C.F.R. §151.2025(a)… (1) …Following installation, the master, owner, operator, agent, or person in charge of the vessel subject to this subpart must properly maintain the BWMS in accordance with all manufacturer specifications.	2.2.3.5.1.1 Ballast Water Management using a Ballast Water Treatment System …Additionally, following installation of a BWTS, the master, owner, operator, agent, or person in charge of the vessel must maintain the BWTS in accordance with all manufacturer specifications. Furthermore, all treatment must be conducted in accordance with the BWTS manufacturer’s instructions.
		33 C.F.R. §151.2025(a)… (1) …Unless otherwise expressly provided for in this subpart, the master, owner, operator, agent, or person in charge of vessels employing a Coast Guard-approved BWMS must meet the applicable ballast water discharge standard (BWDS), found in §151.2030 of this subpart, at all times of discharge into the waters of the United States.	2.2.3.5.1 Ballast Water Management Measures In addition to the other requirements of this permit, owner/operators of vessels subject to the numeric discharge limits in Part 2.2.3.5 of this permit must meet those limits… 2.2.3.5.1.1 Ballast Water Management using a Ballast Water Treatment System …The BWTS must be used prior to any discharge of ballast water to waters of the U.S, either at uptake, in tank, or during discharge according to the treatment system manufacturer’s instructions. EPA notes that compliance with these provisions does not ensure compliance with applicable Coast Guard regulations found in 33 CFR Part 151.
		33 C.F.R. §151.2025(a)… (2)…Vessels using water from a PWS as ballast must maintain a record of which PWS they received the water from as well as a receipt, invoice, or other documentation from the PWS indicating that water came from that system. Furthermore, they must certify that they have met the conditions in paragraphs (a)(2)(i) or (ii) of this section, as applicable, and describe in the BWM plan the procedures to be used to ensure compliance with those conditions, and thereafter document such compliance in the BW record book.	2.2.3.5.1.3 …Vessels using water from a PWS as ballast must maintain a record of which PWS they received the water and a receipt, invoice, or other documentation from the PWS indicating that water came from that system…. …Vessels utilizing water from a PWS as ballast water must certify in their recordkeeping documentation that they have met all the requirements of this section, including maintaining certification by the master or NOI certifier that one of the above conditions are met regarding contamination. For vessels that use PWS water in some ballast water tanks, but ambient treated water as ballast in others, records must clearly indicate which tanks use PWS water as ballast versus those that use ambient treated water (or both), and indicate what measures the vessel operator has implemented to avoid cross contamination between tanks.
			2.2.3.5.1.3 …In the event a vessel that normally uses PWS water as ballast is forced for purposes of vessel safety to take on untreated ballast water from a sea, estuary, lake or river source, such vessel may not return to using PWS water until the tanks and supply lines have been cleaned, including removal of all residual sediments.
	RCW 77.120.030 (2) Discharge of ballast water into waters of the state is authorized only if there has	33 C.F.R. §151.2025(a)… (4) Do not discharge ballast water into waters of the United States.	2.2.3.3 Mandatory Ballast Water Management Practices: Management measures required of all vessel owner/operators

Requirement	Washington	USCG	EPA
	been an open sea exchange, or if the vessel has treated its ballast water… [no discharge is an approved management by default]		…Suggested control measures to minimize the discharge of ballast water include, but are not limited to, transferring ballast water between tanks within the vessel in lieu of ballast water discharge. 2.2.3.5.1.4 No Discharge of Ballast Water Vessels may meet the requirements of Part 2.2.3.5 of this permit by not discharging any ballast water into waters subject to this permit. EPA notes that any discharge of untreated ballast water, including for reasons of unscheduled voyages, loading of unexpected cargo, etc., do not qualify as an acceptable reason to discharge untreated ballast water into waters subject to this permit, and therefore constitute a permit violation. EPA notes that in the case of a shipboard emergency that endangers the safety of the vessel or its crew, ballast water may need to be pumped out quickly by bypassing the BWTS. In such cases, the provisions regarding the prohibition of bypassing treatment where unavoidable to prevent loss of life, personal injury of severe property damage may be applicable. See 40 CFR 122.41(m)(4)(A) and Part 1.13 of this permit. *2.2.3.6.6 Exemptions* [for vessels already exempt from treatment options and subject only to exchange] The operator or master of a vessel may elect not to exchange ballast water (or not conduct saltwater flushing if applicable) if the vessel meets one of the following conditions: • The master retains all ballast water on board the vessel for the duration of the vessel's voyage in waters subject to this permit.
	RCW 77.120.050 The shipping vessel industry, the public ports, and the department shall promote the creation of a pilot project to establish a private sector ballast water treatment operation that is capable of servicing vessels at all Washington ports.	33 C.F.R. §151.2025(a)… (5) Discharge to a facility onshore or to another vessel for purposes of treatment Any vessel owner/operator discharging ballast water to a facility onshore or to another vessel must ensure that all vessel piping and supporting infrastructure up to the last manifold or valve immediately before the dock manifold connection of the receiving facility or similar appurtenance on a reception vessel prevents untreated ballast water from being discharged into waters of the United States.	2.2.3.5.1.2 Onshore Treatment of Ballast Water For those vessels whose design and construction safely allows for the transfer of ballast water to shore, if compatible onshore treatment for ballast water is available, the vessel owner/operator may use onshore treatment for any ballast water discharges to meet the requirements of 2.2.3.5. EPA notes that the lack of availability of adequate reception facilities is not an acceptable reason to discharge ballast water which does not meet the treatment requirements found in Part 2.2.3.5.1.1 into waters subject to this permit, and such discharges would therefore constitute a permit violation. Any vessel owner/operator utilizing onshore treatment must ensure that all piping and supporting infrastructure up to the last manifold or valve immediately before the dock manifold connection of the receiving facility or similar appurtenance on a reception vessel are fully free from any leaks or other avenues whereby untreated ballast may be discharged into waters subject to this permit. EPA notes that transferring ballast water to a treatment barge for eventual treatment and discharge could constitute "on-shore treatment" for purposes of Part 2.2.3.5.1.2 The discharge of treated ballast water (transferred from other vessels) from a treatment barge is not eligible for coverage under the VGP as this is a discharge from an industrial operation, not a discharge incidental to the normal operation of a vessel. Instead, these vessels must apply for individual NPDES permit coverage from the appropriate NPDES permitting authority, generally the State in which they are operating.
	WAC 220-150-080 (7) Other laws. These regulations are in addition to any other state or federal laws related to ballast water management.	33 C.F.R. §151.2025(e) This subpart does not affect or supersede any requirement or prohibition pertaining to the discharge of ballast water into the waters of the United States under the Federal Water Pollution Control Act (33 U.S.C. 1251 to 1376).	VGP 2.2.3 Ballast Water …In addition, as a condition of this permit, all discharges of ballast water must also comply with applicable U.S. Coast Guard regulations found in 33 CFR Part 151.

Requirement	Washington	USCG	EPA
	WAC 220-150-040 (7) Prohibited discharge areas. A vessel may not discharge ballast water or sediment within a marine protected or conservation area as designated under chapter 220-16 WAC.	33 C.F.R. §151.2025(f) This subpart does not affect or supersede any requirement or prohibition pertaining to the discharge of ballast water into the waters of the United States under the National Marine Sanctuaries Act (16 U.S.C. 1431 et seq.).	VGP 2.2.3.3 Mandatory Ballast Water Management Practices: Management measures required of all vessel owner/operators Masters, owners, operators, or persons-in-charge of all vessels equipped with ballast water tanks that operate in waters of the U.S. must: • Avoid the discharge or uptake of ballast water in areas / into waters subject to this permit within, or that may directly affect, marine sanctuaries, marine preserves, marine parks, or coral reefs or other waters listed in Appendix G waters.
		33 C.F.R. §151.2025(g) Vessels with installed BWMS for testing and evaluation by an Independent Laboratory in accordance with the requirements of 46 CFR 162.060-10 and 46 CFR 162.060-28 will be deemed to be in compliance with paragraph (a)(1) of this section.	2.2.3.5.1.1 Ballast Water Management using a Ballast Water Treatment System Vessel owner/operators utilizing a ballast water treatment system (BWTS) must use a system which has been shown to be effective by testing conducted by an independent third party laboratory, test facility or test organization.

Monitoring

Requirement	WDFW	USCG	EPA
Monitoring	RCW 77.120.040 (2) In order to monitor the effectiveness of national and international efforts to prevent the introduction of nonindigenous species, all vessels covered by this chapter must submit nonindigenous species ballast water monitoring data. The monitoring, sampling, testing protocols, and methods of identifying nonindigenous species in ballast water shall be determined by the department by rule. A vessel covered by this chapter may contract with a recognized marine trade association to randomly sample vessels within that association's membership, and provide data to the department. (3) Vessels that do not belong to a recognized marine trade association must submit individual ballast tank sample data to the department for each voyage. (4) All data submitted to the department under subsection (2) of this section shall be consistent with sampling and testing protocols as adopted by the department by rule.	33 C.F.R. §151.2070 (d) The master, owner, operator, agent, or person in charge of a vessel subject to this section must retain the monitoring records required in 46 CFR 162.060-20(b) for 2 years. These records may be stored on digital media but must be viewable for Coast Guard inspection.	4.3 The master, owner, operator, or person in charge of a vessel bound for a port or place in the United States must keep written records that include the following information: c. Specific records pertaining to treated ballast water (see Part 2.2.3.5 of the permit).
			2.2.3.5.1.1.1 Monitoring From Vessels Using Ballast Water Treatment Systems The monitoring requirements in Part 2.2.3.5.1.1 apply to ballast water discharges from vessels employing ballast water treatment systems that are used to achieve the effluent limitations of Part 2.2.3.5.
			1.14 EPA intends to make any ballast water monitoring information transmitted to the Agency in electronic form available to the public in electronic form.
	WAC 220-150-060 (1) All vessels using treatment technologies designed to meet state ballast water discharge performance standards are required to notify the department prior to or within thirty days of their first use in waters of the state…		
			2.2.3.5.1.1.2 Ballast Water System Functionality Monitoring To assess the BWTS functionality, monitoring indicators of the BWTS functionality is required at least once per month for specific parameters that are applicable to your system.
	RCW 77.120.040 (4)(b) The department shall adopt ballast water sampling and testing protocols for monitoring the biological components of ballast water that may be discharged into the waters of the state under this chapter. Monitoring data is intended to assist the department in evaluating the risk of new, nonindigenous species introductions from the discharge of ballast water, and to evaluate the accuracy of ballast water exchange practices. The sampling and testing	46 CFR 162.060-20(b) Each BWMS must have control and monitoring equipment that— (1) Automatically monitors and adjusts necessary treatment dosages, intensities, or other aspects required for proper operation;	2.2.3.5.1.1.2 Ballast Water System Functionality Monitoring … The required parameters to be monitored, with appropriate monitoring approaches are contained in Appendix J. For example, if your system uses a filter and chlorine dioxide, you must meet the requirements for systems using both filters and chlorine dioxide. If your system uses cavitation, UV, and hypochlorite generation, you must monitor conditions for all three treatment units. EPA expects that most ballast water treatment systems will make use of at least two physical and/or chemical processes. Most ballast water treatment systems have control and self diagnostic equipment such as sensors that continuously

<table>
<tr><td></td><td>protocols must consist of cost-effective, scientifically verifiable methods that, to the extent practical and without compromising the purposes of this chapter, utilize easily measured indices, such as salinity, or check for species that indicate the potential presence of nonindigenous species or pathogenic species. The department shall specify appropriate quality assurance and quality control for the sampling and testing protocols.</td><td>46 CFR 162.060-20
(h) For any BWMS that incorporates the use of or generates active substances, preparations, or chemicals, the BWMS must be equipped with each of the following, as applicable:
(4) A means of monitoring all active substances and preparations and relevant chemicals in the treated discharge.</td><td>measure treatment parameters to verify performance. The metrics to be monitored are based on common approaches used in ballast water treatment systems. As new approaches become commonly available, EPA will develop new monitoring parameters as appropriate.

[Appendix J is a table indicating the parameters that must be reported, depending on the type of treatment system agent.]</td></tr>
<tr><td></td><td></td><td>46 CFR 162.060-20(b)
(2) Incorporates a continuous self-monitoring function during the period in which the BWMS is in operation;</td><td></td></tr>
<tr><td></td><td></td><td>46 CFR 162.060-20(b)
(3) Records proper functioning and failures of the BWMS;</td><td></td></tr>
<tr><td></td><td></td><td>46 CFR 162.060-20(b)
(4) Records all events in which an alarm is activated for the purposes of cleaning, calibration, or repair;</td><td>2.2.3.5.1.1.3 Ballast Water monitoring equipment calibration
At a minimum, all applicable sensors and other equipment must be calibrated annually. Additionally, all applicable sensors and other control equipment must be calibrated no less frequently than recommended by the sensor or other equipment manufacturer, or by the ballast water treatment system manufacturer or when warranted based on device drift from a standard or calibrated setting. EPA expects many sensor types (e.g., pH probes, TRO sensors, turbidity sensors) will need to be calibrated on a more frequent basis. Calibration of the sensors and equipment can be conducted on-board the vessel or they can be removed and shipped to the manufacturer or other vendor for calibration. During the period when the sensors are not installed (or otherwise inoperable thus significantly compromising the performance of the ballast water treatment system), the vessel must not discharge ballast water</td></tr>
<tr><td></td><td></td><td>46 CFR 162.060-20(b)
(5) Is able to store data for at least 6 months and to display or print a record for official inspections as required; and</td><td></td></tr>
<tr><td></td><td></td><td>46 CFR 162.060-20(b)
(6) In the event that the control and monitoring equipment is replaced, actions must be taken to ensure the data recorded prior to replacement remain available onboard for a minimum of 24 months.</td><td></td></tr>
<tr><td></td><td>RCW 77.120.040
(2) In order to monitor the effectiveness of national and international efforts to prevent the introduction of nonindigenous species, all vessels covered by this chapter must submit nonindigenous species ballast water monitoring data. The monitoring, sampling, testing protocols, and methods of identifying nonindigenous species in ballast water shall be determined by the department by rule. A vessel covered by this chapter may contract with a recognized marine trade association to randomly sample vessels within that association's membership, and provide data to the department.

RCW 90.48.080
Discharge of polluting matter in waters prohibited.
It shall be unlawful for any person to throw, drain, run, or otherwise discharge into any of the waters of this state, or to cause, permit or suffer to be thrown, run, drained, allowed to seep or otherwise discharged into such waters any organic or inorganic matter that shall cause or tend to cause pollution of such waters according to the determination of the department, as provided for in this chapter.</td><td></td><td>2.2.3.5.1.1.4 Effluent Biological Organism Monitoring
Once a ballast water treatment system is required to be installed onboard a vessel (see part 2.2.3.5.2 for applicability and timeframe for installation of such vessels), any ballast water discharges from such vessels will be subject to the effluent limitations in Part 2.2.3.5 of this permit. To ascertain compliance with the effluent limitation in that section, EPA is establishing the following biological indicator compliance monitoring. These samples can be taken by collecting a small volume sample from the ballast water discharge (consistent with the sampling guidance found in EPA's Generic Protocol for the Verification of Ballast Water Treatment Technology) and analyzing the sample for concentrations of certain biological indicator parameters. Analysis of concentrations of indicator organisms must include monitoring for the parameters in Table 2 below utilizing the methods in that table, or other EPA Part 136 methods as applicable.
Table 2: Indicator Organism Monitoring Parameters
<table>
<tr><th>Measurement</th><th>Instrument or Analysis</th><th>EPA Method</th><th>Standard Method</th><th>ASTM</th><th>ISO</th><th>Other</th></tr>
<tr><td>Total heterotrophic bacteria</td><td>Plate counts</td><td></td><td>SM 9215</td><td>ASTM D5465</td><td>ISO 6222:1999</td><td></td></tr>
<tr><td>E. coli</td><td>Selective substrate</td><td>EPA Metho</td><td>SM 9223B</td><td>ASTM D5392 – 93</td><td>ISO 9308-1:2000</td><td>Colilert®</td></tr>
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<tr><td></td><td></td><td>d 1103.1 and 1603</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Enterococci</td><td>Selective substrate</td><td>EPA Method 1106.1 and 1600</td><td>SM 9230C</td><td>ASTM D5259 – 92(2006)</td><td>ISO 7899-2:2000</td><td>Enterolert®</td></tr>
</table>
Biological indicator compliance monitoring sampling of ballast water effluent must be conducted 2 times during the first year the system is installed or used for vessels with devices for which high quality data are available. For vessels with high quality data, if sampling results are below permit limits for two consecutive events, the vessel owner/operator may reduce monitoring to one time per year after the first year. However, if the vessel owner/operator exceeds a permit limit on any sampling event, they must return to monitoring two times per year until they have two additional results below permit limits. For vessels for which high quality data are not available, monitoring must be conducted 4 times per year. For all vessels, one of those samples may be conducted as part a vessel's annual or other survey, and during the first year, one of those sampling events may be conducted as part of the installation of the system to ensure it is functioning properly. Records of the sampling and testing results must be retained onboard for a period of 3 years in the vessel's recordkeeping documentation consistent with Part 4.2. Each sample must be tested independently and the individual results must be reported and not averaged. Monitoring must be conducted at least 14 days apart from different discharge events.</td></tr>
<tr><td>Monitoring Recordkeeping</td><td>RCW 77.120.040
(2) In order to monitor the effectiveness of national and international efforts to prevent the introduction of nonindigenous species, all vessels covered by this chapter must submit nonindigenous species ballast water monitoring data.

[Tank sampling and discharge testing are in Enforcement and Compliance table]</td><td>(d) The master, owner, operator, agent, or person in charge of a vessel subject to this section must retain the monitoring records required in 46 CFR 162.060-20(b) for 2 years. These records may be stored on digital media but must be readily viewable by the Coast Guard during an inspection.</td><td>2.2.3.5.1.1.6 Ballast Water Treatment System Recordkeeping and Reporting
Records of sampling and testing results required under Part 2.2.3.5.1.1 must be retained onboard for a period of three years in the vessel's recordkeeping documentation. Vessels must also submit the testing results to EPA as part of the vessel's annual report (Appendix H) on the VGP ballast water DMR.
Records of monitoring information shall include:
• The ballast water treatment system used, any type approval certificate, and records of whether the system meets the high quality data criteria as stated in part 2.2.3.5.1.1.4 (a) or (b);
• The individual(s) who performed the sampling, measurements, and/or inspections;
• The date(s) analyses and/or inspections were performed;
• Any sensor or other control equipment calibration and functional tests conducted during the inspection as applicable;
• The techniques or methods used for any sensor or other control equipment calibration and functional tests as applicable;
• The date and time of all monitoring results (monitoring in Parts 2.2.3.5.1.1.2, 2.2.3.5.1.1.4, and 2.2.3.5.1.1.5, as applicable);
• The analytical techniques or methods used as applicable, and
• The results of such analyses.
You must submit your monitoring data as part of your annual report. For systems already in use as of the effective date of this permit, initial sampling data must be submitted with the first annual report. For systems which are not already in use as of the effective date of this permit, initial sampling data must be submitted on the annual report following the calendar year of the system's first use. Data must be submitted on the Ballast Water Treatment System Report form attached to the annual report available in Appendix H of this permit or electronically submitted to EPA: the system is scheduled to be available at www.epa.gov/npdes/vessels/eNOI.</td></tr>
<tr><td></td><td></td><td></td><td>2.2.3.5.1.1.4 Effluent Biological Organism Monitoring
Devices for which high quality data are available means either:
a) any ballast water treatment system type approved by the United States Coast Guard under 46 CFR Part 162.060 or granted alternate management system status by the US Coast Guard under 33 CFR 151.2026; or

b) any ballast water treatment system: (i) type approved by a foreign administration;

(ii) for which efficacy testing was conducted by an independent third party testing organization, either in accordance</td></tr>
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<td>with the ETV protocol or in a manner consistent with the ETV protocol with respect to QA/QC procedures, the use of validated methods including appropriate volumes of representative samples, and full description and documentation of test procedures, results and analyses; and

(iii)all Active Substance or Biocide data (e.g., the full data package as submitted to the International Maritime Organization for approval) have all been made available to the US EPA.</td>
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<td>RCW 90.48.080
Discharge of polluting matter in waters prohibited.
It shall be unlawful for any person to throw, drain, run, or otherwise discharge into any of the waters of this state, or to cause, permit or suffer to be thrown, run, drained, allowed to seep or otherwise discharged into such waters any organic or inorganic matter that shall cause or tend to cause pollution of such waters according to the determination of the department, as provided for in this chapter.

RCW 90.52.040
Wastes to be provided with available methods of treatment prior to discharge into waters of the state.
Except as provided in RCW 90.54.020(3)(b), in the administration of the provisions of chapter 90.48 RCW, the director of the department of ecology shall, regardless of the quality of the water of the state to which wastes are discharged or proposed for discharge, and regardless of the minimum water quality standards established by the director for said waters, require wastes to be provided with all known, available, and reasonable methods of treatment prior to their discharge or entry into waters of the state.

WAC 173-201A-260(2) Toxics and aesthetics criteria
(a) Toxic, radioactive, or deleterious material concentrations must be below those which have the potential, either singularly or cumulatively, to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health.
(b) Aesthetic values must not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste.</td>
<td>46 CFR § 162.060-32 Testing and evaluation requirements for active substances, preparations, and relevant chemicals.
(a) A ballast water management system (BWMS) may not use an active substance or preparation that is a pesticide unless the sale and distribution of such pesticide is authorized under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) for use in ballast water treatment prior to submission to the Coast Guard for approval of the BWMS. This requirement does not apply to the use of active substances or preparations generated solely by the use of a device (as defined under FIFRA) onboard the same vessel as the ballast water to be treated.

(b) The manufacturer of a BWMS that uses an active substance or preparation that is not a pesticide, or that uses a pesticide that is generated solely by the use of a device (as defined under FIFRA) onboard the same vessel as the ballast water to be treated, must prepare an assessment demonstrating the effectiveness of the BWMS for its intended use, appropriate dosages over all applicable temperatures, hazards of the BWMS, and means for protection of the environment, and public health. This assessment must accompany the application package submitted to the Coast Guard.</td>
<td>2.2.3.5.1.1.5 Requirements and Effluent Limitations for BWTS that use Active Substances (e.g., biocides)
2.2.3.5.1.1.5.1 Authorization of Residual Biocides Associated with Ballast Water Treatment Systems
Many ballast water treatment systems produce or use biocides as an agent to reduce living organisms present in the ballast water tank. In order to be eligible for coverage under this permit, any ballast water treatment system must not use any biocide that is a “pesticide” within the meaning of the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C §136 et seq.) unless that biocide has been registered for use in ballast water treatment under such Act. The requirement in the preceding sentence does not apply if such biocide is generated solely by the use of a “device” on board the same vessel as the ballast water to be treated by the biocide, as the term “device” is defined in the Federal Insecticide, Fungicide, and Rodenticide Act. In addition, if the ballast water treatment system uses or generates biocides and you will discharge ballast water treated with biocides into waters subject to this permit, you must meet one of the following conditions to be eligible for permit coverage.
The discharge of biocides or residuals may not exceed the following instantaneous maximum limits expressed as micrograms per liter (µg/l).
Table 3: Maximum Ballast Water Effluent Limits for Residual Biocides
<table>
<tr><th>Biocide or Residual</th><th>Limit
(instantaneous maximum)</th></tr>
<tr><td>Chlorine Dioxide</td><td>200 µg/l</td></tr>
<tr><td>Chlorine (expressed as Total Residual Oxidizers (TRO as TRC))</td><td>100 µg/l</td></tr>
<tr><td>Ozone (expressed as Total Residual Oxidizers (TRO as TRC))</td><td>100 µg/l</td></tr>
<tr><td>Peracetic Acid</td><td>500 µg/l</td></tr>
<tr><td>Hydrogen Peroxide (for systems using Peracetic Acid)</td><td>1,000 µg/l</td></tr>
</table>
Any other biocides or derivatives may not exceed acute water quality criteria listed in EPA’s 2009 National Recommended Water Quality Criteria, and any subsequent revision, at the point of ballast water discharge. This document can be found at: http://water.epa.gov/scitech/swguidance/standards/criteria/current/upload/nrwqc-2009.pdf. Tables summarizing the subsequent revisions can be found at: http://water.epa.gov/scitech/swguidance/standards/criteria/current/. Discharges of biocide residuals or derivatives must also meet monitoring requirements under Part 2.2.3.5.1.1.1, and reporting and recordkeeping requirements in Part 2.2.3.5.1.1.6.
If the biocide used or produced by your system and its derivatives is not listed in the previous table or found in EPA’s National Recommended Water Quality Criteria, you must notify EPA at least 120 days in advance of its use and provide any associated aquatic toxicity data for that biocide or its derivatives of which you are aware. EPA may impose additional limitations on a treatment system-specific basis, or require you to obtain coverage under an individual permit, if necessary. EPA may inform the vessel owner/operator of specific requirements. You may also seek coverage under an individual NPDES permit pursuant to Part 1.8.2 of this permit. You may not discharge the biocide at issue until you receive a response from EPA to your notification.</td>
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</table>

WAC 173-201A-260(2) Toxics and aesthetics criteria
(a) Toxic, radioactive, or deleterious material concentrations must be below those which have the potential, either singularly or cumulatively, to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health.
(b) Aesthetic values must not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste.

2.2.3.5.1.1.5.2 Residual Biocide and Derivative Monitoring
For vessels subject to Part 2.2.3.5.1.1.1, you must conduct monitoring of the vessel ballast water discharge for any residual biocides or derivatives used in the treatment process, in part to demonstrate compliance with the conditions in Part 2.2.3.5.1.1.5.1. For instance, if chlorine is the biocide used in the ballast water treatment, you must test for residual chlorine in the vessel ballast water discharge to see if it complies with the standards in Part 2.2.3.5.1.1.5.1.
In order to demonstrate that residual biocides or derivatives are in compliance with this permit, that substantial quantities of harmful byproducts are not produced, and provide EPA with needed information about system functionality, the vessel operator initially must take samples according to the following:
Table 4: Monitoring Schedule for Residual Biocides or Derivatives of the Residual Biocide

	Devices for which high quality type approval data are available	Devices for which high quality data are not available
Initial Monitoring	3 times in the first 10 discharge events (not to exceed a 180 day period)	5 times in the first 10 discharge events (not to exceed a 180 day period)
Maintenance monitoring	2 times per year	4 times per year

Devices for which high quality data are available means either:
a) any ballast water treatment system type approved by the United States Coast Guard under 46 CFR Part 162.060 or granted alternate management system status by the US Coast Guard under 33 CFR 151.2026; or

b) any ballast water treatment system:

(i) type approved by a foreign administration;

(ii) for which efficacy testing was conducted by an independent third party testing organization, either in accordance with the ETV protocol or in a manner consistent with the ETV protocol with respect to QA/QC procedures, the use of validated methods including appropriate volumes of representative samples, and full description and documentation of test procedures, results and analyses; and

(iii)all Active Substance or Biocide data (e.g., the full data package as submitted to the International Maritime Organization for approval) have all been made available to the US EPA.

Each sample must be tested independently and the individual results must be reported and not averaged. Samples must be tested as soon as possible after sampling, and may not be held longer than recommended for each tested constituent as given in 40 CFR Part 136. Sampling and testing shall be conducted using a sufficiently sensitive method according to 40 CFR Part 136 or may use an alternate method if allowed in Table 5 below.

Table 5: Residual Biocides and Biocide Derivative Monitoring Requirements

Biocide	**Analyte**	**Analytical Methods**	**Minimum Sample Volume**	**Sample Holding Time**	**MDL**	**Effluent Limit or Action**	**Limit Type**
Alkylamines	Alkylamines	EPA Method 8360B and 8270D	25 mL (8260B)	14 days (8260B)	Varies by compound (8260D); 10 µg/L (8270C)	Report	NA
Chlorine or Chlorine dioxide	Chlorine dioxide	EPA Method 327.0-1; SM 4500 ClO2 E	16 mL (327.0-1)	4 hours (327.0-1); As soon as possible (SM)	Varies (327.0-1); 10 to 100 mg/L (SM)	200 µg/L	Instantaneous Maximum

				Total Residual Oxidizers (TRO) as Cl2	SM 4500-Cl G; ISO 7393/2	50 mL	15 minutes	10 µg/L, under ideal conditions	100 µg/L	Instantaneous Maximum
				Chlorite*	EPA Method 300.1	250 mL	14 days	Varies	Report	NA
				Chlorate*	EPA Method 300.1	250 mL	28 days	Varies	Report	NA
				Total trihalomethanesa*	EPA Method 8260	25 mL	14 days	Varies	Report	NA
				Haloacetic acidsb*	EPA Method 552.2	40 mL	14 days	Varies by compound	Report	NA
			Menadione	Menadione	NA	Report	NA	Menadione	NA	Report
			Ozone	Total Residual Oxidizers (TRO) as Cl2	SM 4500-Cl G; ISO 7393/2	50 mL	15 minutes	10 µg/L, under ideal conditions	100 µg/L	NA
				Bromate*	EPA Method 317 ; EPA Method 300.1; ASTM D 6581-00	250 mL	28 days (317; 300.1)	Varies (317; 300.1)	Report	NA
				Bromoform*	EPA Method 8260	25 mL	14 days	Varies	Report	NA
				Total trihalomethanesa*	EPA Method 8260	25 mL	14 days	Varies	Report	NA
				Haloacetic acidsb*	EPA Method 552.2	40 mL	14 days	Varies by compound	Report	NA
			Peracetic Acid	pH	SM 4500 H+	25 mL	As soon as possible		6.5 – 9 s.u.	Instantaneous Maximum
				Peracetic acid	Photometric analysis (Pinkernell, 1997; EMD Chemicals, 2011; CHEMetrics 2010)	25 mL	As soon as possible	500 µg/L	Report	NA
				peroxide/	Titimetric analysis (JIS K 1463:2007; EMD Chemicals, 2011; CHEMetrics 2010))	25 mL	As soon as possible	500 µg/L	Report	NA

* Potential byproduct or derivative
a. Total trihalomethanes is the sum of the concentrations of chloroform, bromodichloromethane, dibromochloromethane, and bromoform.
b. Haloacetic acids is the sum of the concentrations of mono-, di-, and trichloroacetic acids and mono- and

			dibromoacetic acids. ISO: International Organization for Standardization SM: Standard Methods MDL: Method detection limit NA: Not applicable

Collaboration

Requirement	WDFW	USCG	EPA
	WAC 220-150-010 (3) Cooperative ballast water management. The department communicates and cooperates with the USCG and other federal and state agencies to standardize regulations to the extent practical and appropriate, minimize duplication of efforts, and share information. The goal is to provide transparency and accountability in the regulatory process, protect state resources, and facilitate collaboration among federal and state agencies. The department also communicates and cooperates to the extent practical and appropriate with international ballast water management entities. Agencies that the department works with directly include: [ECY, Dept. of Health, Puget Sound partnership, tribes, State of Oregon, USCG, EPA, Pacific States, Canada, IMO]		
	RCW 77.120.030 (3) Where practical and appropriate, the standards must be compatible with standards set by the United States coast guard, the federal clean water act (33 U.S.C. Sec. 1251-1387), or the international maritime organization. WAC 220-150-010 (1) Third, the rules were developed to complement, to the extent practical and appropriate, current ballast water management regulations of the United States Coast Guard (USCG), the International Maritime Organization (IMO), and the state of Oregon. WAC 220-150-010 (4) Other state and federal laws. Nothing in this chapter shall supersede more stringent state or federal regulations, including public health and Clean Water Act criteria. Nothing in these regulations negates the need to comply with other state and federal regulations regarding the management of ballast water or any other vessel-related discharges	From USCG/EPA MOU: Section 501 of the CWA, 33 U.S.C. § 1361, authorizes the Administrator of EPA, with the consent of the head of any other agency of the United States, to utilize such officers and employees of such an agency as may be found necessary to assist in carrying out the purpose of the CWA. 14 U.S.C. § 141 authorizes the USCG to utilize its personnel and facilities to assist any federal agency, such as EPA, to perform any activity for which such personnel and facilities are especially qualified. 14 U.S.C. § 93(a)(20) authorizes the Commandant of the USCG to enter into cooperative agreements with other Federal agencies. Section 104 of the CWA, 33 U.S.C. § 1254, instructs the Administrator of EPA to, among other things, cooperate with other Federal, State and local agencies to conduct and promote the coordination and acceleration of investigations, training, demonstrations, surveys and studies relating to the causes, effects, extent, prevention, reduction, and elimination of pollution.	4.2 …It is not the intention of this permit to require separate records for the Coast Guard and EPA. Rather, vessels can harmonize their recordkeeping practices, where appropriate, so that records are not unnecessarily duplicative. For example, information can be logged with maintenance records, the ship's log, in existing ISM/SMS plans or recordkeeping, the oil record book, shipboard oil pollution emergency plan, or other additional recordkeeping documentation as appropriate but must be provided to EPA or its authorized representative if requested…
	RCW 77.120.070 (WDFW) (3) The department, in cooperation with the United States coast		

Requirement	WDFW	USCG	EPA
	guard, may enforce the requirements of this chapter.		
	WAC 220-150- 080 (6) Coordination with United States Coast Guard (USCG). The department will report state violations, penalties and enforcement actions taken on vessels, as requested by cooperative agreement, to the appropriate sector representative of the USCG. The department will also report suspected federal violations to the USCG.		
			VGP 2.2.3.2 EPA expects that vessels will need one ballast water management plan to meet both EPA and USCG requirements.

Biofouling Gap Analysis Matrix

This state/federal gap analysis table compares the following biofouling regulations:

- U.S. Coast Guard (USCG) Chapter 33 CFR 151 Subpart D (including uncodified ballast water and biofouling regulations);
- U.S. Environmental Protection Agency (EPA) 2013 Vessel General Permit program;
- Washington Department of Fish and Wildlife (WDFW) Chapter 77.120 RCW and Chapter 220-150 WAC; and
- Washington Department of Ecology (ECY) RCW 90.48.080, 90.52.040, and Chapter 173-201A WAC.
- California regulation: Biofouling Management to Minimize the Transfer of Nonindigenous Species from Vessels Operating in California Waters [PENDING]
- International Maritime Organization 2011 Guidelines For The Control And Management Of Ships' Biofouling To Minimize The Transfer Of Invasive Aquatic Species

Biofouling Management Requirement

Requirement	California (revoked)	USCG	EPA	IMO
	Section 2298.6. Biofouling Management for Wetted Surfaces. (a) The master, owner, operator, or person in charge of a vessel arriving at a California port or place shall manage biofouling on the wetted surfaces of the vessel… 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, …; (2) If a vessel is using an anti-fouling coating and the coating is aged beyond its effective coating lifespan…the biofouling on the wetted surfaces of the vessel… shall be managed so that macrofouling percentage cover is not significantly in excess of five percent of the surface area under investigation… Filamentous or turf algae on the bulbous bow and at the waterline… shall be excluded from this calculation; or (3) If a vessel is not using an anti-fouling coating, the biofouling on the wetted surfaces of the vessel… shall be managed so that macrofouling percentage cover is not significantly in excess of five percent of the surface area under investigation…(b) The master, owner, operator, or person in charge of a vessel arriving at a California port or place shall manage biofouling on the niche areas … (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) Fins 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 or strategies that are appropriate for the vessel and its operational profile.	33 CFR §151.2050 Additional requirements—nonindigenous species reduction practices. The master, owner, operator, agent, or person in charge of any vessel equipped with ballast water tanks that operates in the waters of the United States must follow these practices: (e) Rinse anchors and anchor chains when the anchor is retrieved to remove organisms and sediments at their places of origin. (f) Remove fouling organisms from the vessel's hull, piping, and tanks on a regular basis and dispose of any removed substances in accordance with local, State and Federal regulations.	VGP 2.2.23 Underwater Ship Husbandry and Hull Fouling Discharges Vessel owners/operators must minimize the transport of attached living organisms when traveling into U.S. waters from outside the U.S. economic zone or between Captain of the Port (COTP) zones. Management measures to minimize the transport of attached living organisms include selecting an appropriate anti-foulant management system and maintaining that system, in water inspection, cleaning, and maintenance of hulls, and thorough hull and other niche area cleaning when a vessel is in drydock…	2011 Guidelines For The Control And Management Of Ships' Biofouling To Minimize The Transfer Of Invasive Aquatic Species 6 ANTI-FOULING SYSTEM INSTALLATION AND MAINTENANCE 6.1 Anti-fouling systems and operational practices are the primary means of biofouling prevention and control for existing ships' submerged surfaces, including the hull and niche areas. An anti-fouling system can be a coating system applied to exposed surfaces, biofouling resistant materials used for piping and other unpainted components, marine growth prevention systems (MGPSs) for sea chests and internal seawater cooling systems, or other innovative measures to control biofouling.

Biofouling Management Plan

Requirement	ECY	California (revoked)	USCG	EPA	IMO
	N/A	Section 2298.3. Biofouling Management Plan. (b) The master, owner, operator, or person in charge of a vessel arriving at a California port or place shall maintain a Biofouling Management Plan to be retained onboard and prepared specifically for that vessel. … 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. This plan shall be regularly	33 CFR §151.2050 (g) Maintain a ballast water management (BWM) plan that has been developed specifically for the vessel and that will allow those responsible for the plan's implementation to understand and follow the vessel's BWM strategy and comply with the requirements of this subpart. The plan must include— (3) Detailed fouling maintenance and sediment removal		2011 GUIDELINES FOR THE CONTROL AND MANAGEMENT OF SHIPS' BIOFOULING TO MINIMIZE THE TRANSFER OF INVASIVE AQUATIC SPECIES Biofouling Management Plan 5.2 It is recommended that every ship should have a biofouling management plan. The intent of the plan should be to provide effective procedures for biofouling management. An example of a Biofouling Management Plan is outlined in appendix 1 of these Guidelines. The Biofouling Management Plan may be a stand-alone document, or integrated in part or fully, into the existing ships' operational and procedural manuals and/or planned maintenance system.

		reviewed and revised so as to be current as of the last day of the most recent out-of-water maintenance, or as of delivery if the vessel has never undergone out-of-water maintenance…	procedures;		5.3 The biofouling management plan should be specific to each ship and included in the ship's operational documentation. Such a plan should address, among other things, the following: .1 relevant parts of these Guidelines; .2 details of the anti-fouling systems and operational practices or treatments used, including those for niche areas; .3 hull locations susceptible to biofouling, schedule of planned inspections, repairs, maintenance and renewal of anti-fouling systems; .4 details of the recommended operating conditions suitable for the chosen anti-fouling systems and operational practices; .5 details relevant for the safety of the crew, including details on the anti-fouling system(s) used; and .6 details of the documentation required to verify any treatments recorded in the Biofouling Record Book as outlined in appendix 2. 5.4 The biofouling management plan should be updated as necessary.

Biofouling Record Book and Reporting

Requirement	Washington	California (revoked)	USCG	IMO
	N/A	Section 2298.4. Biofouling Record Book. The master, owner, operator, or person in charge of a vessel that operates in the waters of the State 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 as a newly constructed vessel if no out-of-water maintenance has yet occurred		Biofouling Record Book 5.5 It is recommended that a Biofouling Record Book is maintained for each ship. The book should record details of all inspections and biofouling management measures undertaken on the ship. This is to assist the shipowner and operator to evaluate the efficacy of the specific anti-fouling systems and operational practices on the ship in particular, and of the biofouling management plan in general. The record book could also assist interested State authorities to quickly and efficiently assess the potential biofouling risk of the ship, and thus minimize delays to ship operations. The Biofouling Record Book may be a stand-alone document, or integrated in part, or fully, into the existing ships' operational and procedural manuals and/or planned maintenance system. 5.6 It is recommended that the Biofouling Record Book be retained on the ship for the life of the ship. 5.7 Information that should be recorded in a Biofouling Record Book includes the following: .1 details of the anti-fouling systems and operational practices used (where appropriate as recorded in the Anti-fouling System Certificate), where and when installed, areas of the ship coated, its maintenance and, where applicable, its operation; MEPC 62/24/Add.1 Annex 26, page 7 I:\MEPC\62\24-Add-1.doc .2 dates and location of dry-dockings/slippings, including the date the ship was re-floated, and any measures taken to remove biofouling or to renew or repair the anti-fouling system; .3 the date and location of in-water inspections, the results of that inspection and any corrective action taken to deal with observed biofouling; .4 the dates and details of inspection and maintenance of internal seawater cooling systems, the results of these inspections, and any corrective action taken to deal with observed biofouling and any reported blockages; and .5 details of when the ship has been operating outside its normal operating profile including any details of when the ship was laid-up or inactive for extended periods of time. 5.8 An example of a Biofouling Record Book and information to be recorded is included as appendix 2 to these Guidelines.
	Washington Guidance Document: Ship operators must also contact Allen Pleus (Allen.Pleus@dfw.wa.gov, or 360-902-2724) at the Washington Department of Fish and Wildlife (WDFW) prior to in-water hull cleaning of a ship covered under the VGP or sVGP. WDFW may allow the in-water cleaning of hulls with only slime and sea grass growth	Section 2298.5. Hull Husbandry Reporting Form. 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 “Hull Husbandry Reporting Form (Revised June 5, 2014)” to the Commission in written 9 or electronic form at least twenty-four hours in advance of the first		

	(microfouling organisms), but does not allow the in-water cleaning of hulls with juvenile or adult aquatic species such as barnacles, mussels, and tube worms (macrofouling organisms). Vessels requesting in-water cleaning must provide suitable proof that the areas to be cleaned consist of only microfouling organisms.	arrival of each calendar year to a California port or place of call.		
	Washington Guidance Document: Ship operators having permit coverage under the VGP or sVGP should contact Randall Marshall (rmar461@ecy.wa.gov, or 360-407-6445) at least 7 days prior to in-water hull cleaning with information on the hull coating, its contents, cleaning method, and date/time. An inspector might come out to observe, photograph, and take samples during the hull cleaning if the coating contains copper or any other toxic substance. Randall Marshall can also provide guidance on performing toxicity testing to verify that the discharge from a particular coating will be nontoxic during cleaning. The testing makes approval easier.			

Seawater Piping Biofouling

Requirement	USCG	EPA	WDFW	ECY
Seawater Piping Biofouling		VGP 2.2.20 Seawater Piping Biofouling Prevention Seawater piping biofouling chemicals subject to FIFRA registration (see 40 CFR §152.15) must be used in accordance with their FIFRA label. No pesticides or chemicals banned for use in the United States may be discharged into waters subject to this permit. Vessel owner/operators must use the minimum amount of biofouling chemicals needed to keep fouling under control. Discharges containing active agents must contain as little chlorine as possible. Vessel owner/operators must remove fouling organisms from seawater piping on a regular basis and dispose of removed substances in accordance with local, state, and federal regulations. Removed fouling organisms shall not be discharged into waters subject to this permit and EPA recommends that if discharged into any waters, should be discharged more than 50 nm from shore. Vessel owner/operators should remove any organisms while at sea where technically feasible to reduce the risk of invasive species introduction in ports.	RCW 77.15.253 Unlawful use of prohibited aquatic animal species —Penalty. (1) A person is guilty of unlawful use of a prohibited aquatic animal species if he or she possesses, imports, purchases, sells, propagates, transports, or releases a prohibited aquatic animal species within the state, except as provided in this section. (4) A person is guilty of unlawful release of a regulated aquatic animal species if he or she releases a regulated aquatic animal species into state waters, unless allowed by the commission*. (6) A person is guilty of unlawful release of an unlisted aquatic animal species if he or she releases an unlisted aquatic animal species into state waters without requesting a commission* designation under RCW 77.12.020. *Fish and Wildlife Commission directing WDFW	RCW 90.48.080 Discharge of polluting matter in waters prohibited. It shall be unlawful for any person to throw, drain, run, or otherwise discharge into any of the waters of this state, or to cause, permit or suffer to be thrown, run, drained, allowed to seep or otherwise discharged into such waters any organic or inorganic matter that shall cause or tend to cause pollution of such waters according to the determination of the department, as provided for in this chapter.

Underwater Ship Husbandry

Requirement	USCG	EPA	WDFW	ECY

Underwater Ship Husbandry		VGP 2.2.23 Underwater Ship Husbandry and Hull Fouling Discharges Vessel owners/operators must minimize the transport of attached living organisms when traveling into U.S. waters from outside the U.S. economic zone or between Captain of the Port (COTP) zones. Management measures to minimize the transport of attached living organisms include selecting an appropriate anti-foulant management system and maintaining that system, in water inspection, cleaning, and maintenance of hulls, and thorough hull and other niche area cleaning when a vessel is in drydock. Whenever possible, rigorous hull-cleaning activities should take place in drydock, or at a land-based facility where the removal of fouling organisms or spent antifouling coatings paint can be contained. If water-pressure-based systems are used to clean the hull and remove old paint, you must use facilities which treat the washwater prior to discharging to waters subject to this permit in order to remove the antifouling compound(s) and fouling growth from the washwater. If mechanical means (scraping, etc.) are used to clean the hull and remove old paint, the materials removed from the hull during that process must be collected and disposed of properly (e.g., onshore). These materials must not be allowed to contaminate nearby waters. Vessel owners/operators who remove fouling organisms from hulls while the vessel is waterborne must employ methods that minimize the discharge of fouling organisms and antifouling hull coatings. These shall include: • Use of appropriate cleaning brush or sponge rigidity to minimize removal of antifouling coatings and biocide releases into the water column; • Limiting use of hard brushes and surfaces to the removal of hard growth; and • When available and feasible, use of vacuum or other control technologies to minimize the release or dispersion of antifouling hull coatings and fouling organisms into the water column. Vessel owners/operators must minimize the release of copper-based antifoulant paints during vessel cleaning operations. Cleaning of hull surfaces coated with copper-based antifoulant paint must not result in any visible cloud or plume of paint in the water; if a visible cloud or plume of paint develops, shift to a softer brush or less abrasive cleaning technique. A plume or cloud of paint can be noted by the presence of discoloration or other visible indication that is distinguishable from hull growth or sediment removal. Production of a plume or cloud of sediment or hull growth is normal in some cases during vessel hull cleaning, but this	RCW 77.15.253 Unlawful use of prohibited aquatic animal species —Penalty. (1) A person is guilty of unlawful use of a prohibited aquatic animal species if he or she possesses, imports, purchases, sells, propagates, transports, or releases a prohibited aquatic animal species within the state, except as provided in this section. (4) A person is guilty of unlawful release of a regulated aquatic animal species if he or she releases a regulated aquatic animal species into state waters, unless allowed by the commission*. (6) A person is guilty of unlawful release of an unlisted aquatic animal species if he or she releases an unlisted aquatic animal species into state waters without requesting a commission* designation under RCW 77.12.020. *Fish and Wildlife Commission directing WDFW	RCW 90.48.080 Discharge of polluting matter in waters prohibited. It shall be unlawful for any person to throw, drain, run, or otherwise discharge into any of the waters of this state, or to cause, permit or suffer to be thrown, run, drained, allowed to seep or otherwise discharged into such waters any organic or inorganic matter that shall cause or tend to cause pollution of such waters according to the determination of the department, as provided for in this chapter. RCW 90.52.040 Wastes to be provided with available methods of treatment prior to discharge into waters of the state. Except as provided in RCW 90.54.020(3)(b), in the administration of the provisions of chapter 90.48 RCW, the director of the department of ecology shall, regardless of the quality of the water of the state to which wastes are discharged or proposed for discharge, and regardless of the minimum water quality standards established by the director for said waters, require wastes to be provided with all known, available, and reasonable methods of treatment prior to their discharge or entry into waters of the state. WAC 173-201A-240 Toxic substances. (1) Toxic substances shall not be introduced above natural background levels in waters of the state which have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic toxicity to the most sensitive biota dependent upon those waters, or adversely affect public health, as determined by the department. WAC 173-201A-260(2) Toxics and aesthetics criteria (a) Toxic, radioactive, or deleterious material concentrations must be below those which have the potential, either singularly or cumulatively, to adversely affect characteristic water uses, cause acute or chronic conditions

		plume or cloud must be substantially paint free (e.g., paint should not be clearly identifiable in the plume or cloud). When feasible, attempts must be made to minimize the release of fouling organisms and antifouling systems (including copper-based coatings) into surrounding waters. Vessels that use copper-based anti-fouling paint must not clean the hull in copper-impaired waters within the first 365 days after paint application unless there is a significant visible indication of hull fouling. EPA maintains a list of copper-impaired waters on its webpage at www.epa.gov/npdes/vessels. If you clean before 365 days after paint application in copper-impaired waters, you must document in your recordkeeping documentation why this early cleaning was necessary.		to the most sensitive biota dependent upon those waters, or adversely affect public health. (b) Aesthetic values must not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste. WAC 173-201A-310 Tier I—Protection and maintenance of existing and designated uses. (1) Existing and designated uses must be maintained and protected. No degradation may be allowed that would interfere with, or become injurious to, existing or designated uses, except as provided for in this chapter. … (3) Whenever the natural conditions of a water body are of a lower quality than the assigned criteria, the natural conditions constitute the water quality criteria. Where water quality criteria are not met because of natural conditions, human actions are not allowed to further lower the water quality, except where explicitly allowed in this chapter.
		VGP Special Washington State section The release of nonnative aquatic animal species from in-water cleaning of vessel hulls, niche areas, and running gear without approval from the Washington Department of Fish and Wildlife (WDFW) is forbidden by RCW 77.15.253. The state VGP/sVGP webpage described in Condition 6.24.5. contains contact information and instructions for seeking WDFW approval. Allowing biofouling to accumulate and mature without hull cleaning can also be interpreted as an illegal release. Operators of vessels with hulls which have not been cleaned for months or that are involved in extended unmanned periods or other layups as described in VGP Part 4.1.1.2 should conduct a hull inspection. A hull inspection under these circumstances is especially needed before leaving on a voyage to Washington State waters or a voyage between COTP zones within the state. In accordance with VGP Part 3, hull cleaning must be conducted when needed		
		VGP section - 1.11 State Laws Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under		

		authority preserved by section 510 of the Clean Water Act.		
		VGP section - 2.3.1 Water Quality-Based Effluent Limitations Your discharge must be controlled as necessary to meet applicable water quality standards in the receiving water body or another water body impacted by your discharges.		RCW 90.48.080 Discharge of polluting matter in waters prohibited. It shall be unlawful for any person to throw, drain, run, or otherwise discharge into any of the waters of this state, or to cause, permit or suffer to be thrown, run, drained, allowed to seep or otherwise discharged into such waters any organic or inorganic matter that shall cause or tend to cause pollution of such waters according to the determination of the department, as provided for in this chapter.

NIS Reduction Practices

Requirement	USCG	EPA	WDFW	ECY
NIS Reduction Practices				
	33 C.F.R. §151.2050 (c) Clean the ballast tanks regularly to remove sediments. Sediments must be disposed of in accordance with local, State, and Federal regulations.		WAC 220-150-070 (1) Purpose. A vessel owner or operator may not remove or discharge sediment or tank fouling organisms into waters of the state from spaces carrying ballast water unless that sediment or those organisms are discharged solely in the location from which they originated… (2) Ballast tank sediment removal options. (a) In general. Three options are provided for the effective removal of sediment and any fouling organisms in a vessel's ballast tanks… (b) Saltwater flushing. Ballast tanks must be cleaned as necessary in open sea exchange areas consistent with WAC 220-150-040(3) voyage requirements unless common water rules apply under WAC 220-150-040(4) except for ballast-related fouling organisms. Sediment may be removed by saltwater flushing of ballast water tanks by: (i) Adding open sea water to a ballast water tank that contains residual quantities of ballast waters; (ii) Mixing the open sea water with the residual ballast water and sediment in the tank through the motion of a vessel or alternative means so that the sediment becomes suspended; and (iii) Discharging the mixed water so that the salinity of the resulting residual ballast water in the tank exceeds thirty parts per thousand. (c) Upland disposal. Tank sediment and fouling organisms may be removed from the vessel under controlled arrangements in port or in drydock, and disposed of in accordance with local, state, and federal law. (d) Sediment reception facilities. The department, in	RCW 90.52.040 Wastes to be provided with available methods of treatment prior to discharge into waters of the state. Except as provided in RCW 90.54.020(3)(b), in the administration of the provisions of chapter 90.48 RCW, the director of the department of ecology shall, regardless of the quality of the water of the state to which wastes are discharged or proposed for discharge, and regardless of the minimum water quality standards established by the director for said waters, require wastes to be provided with all known, available, and reasonable methods of treatment prior to their discharge or entry into waters of the state.

Requirement	USCG	EPA	WDFW	ECY
			consultation with the department of ecology, will adopt department policies as necessary for sediment reception facilities… (3) Reporting. Sediment cleaning and discharges must be recorded in the vessel's ballast water log or record book…	
	33 C.F.R. §151.2050 (e) Rinse anchors and anchor chains when the anchor is retrieved to remove organisms and sediments at their places of origin.		N/A	
	33 C.F.R. §151.2050 (f) Remove fouling organisms from the vessel's hull, piping, and tanks on a regular basis and dispose of any removed substances in accordance with local, State and Federal regulations.		N/A	
	33 C.F.R. §151.2050 (g) Maintain a ballast water management (BWM) plan that has been developed specifically for the vessel and that will allow those responsible for the plan's implementation to understand and follow the vessel's BWM strategy and comply with the requirements of this subpart. The plan must include—		WAC 220-150-030(5) (a) In general. Vessel owners or operators shall develop, and maintain on board, a ballast water management plan that has been developed specifically for the vessel and that will allow those responsible for the plan's implementation to understand and follow the vessel's ballast water management strategy... (b) Contents. At a minimum, the plan should include:	
	33 C.F.R. §151.2050(g)… (1) Detailed safety procedures;		WAC 220-150-030(5)(b)… (i) Detailed ballast water management safety procedures;	
	33 C.F.R. §151.2050(g)… (2) Actions for implementing the mandatory BWM requirements and practices;		WAC 220-150-030(5)(b)… (ii) Actions for implementing the mandatory ballast water management requirements and practices;	
	33 C.F.R. §151.2050(g)… (3) Detailed fouling maintenance and sediment removal procedures;		WAC 220-150-030(5)(b)… (iii) Detailed fouling maintenance and sediment removal procedures for areas on the vessel where ballast water can be carried;	
	33 C.F.R. §151.2050(g)… (4) Procedures for coordinating the shipboard BWM strategy with Coast Guard authorities;		N/A	
	33 C.F.R. §151.2050(g)… (5) Identification of the designated officer(s) in charge of ensuring that the plan is properly implemented;		WAC 220-150-030(5)(b)… (iv) Identification of the designated officer(s) in charge of ensuring that the plan is properly implemented;	
	33 C.F.R. §151.2050(g)… (6) Detailed reporting requirements and procedures for ports and places in the United States where the vessel may visit; and		WAC 220-150-030(5)(b)… (v) Detailed reporting requirements and procedures for ports in Washington state where the vessel may visit; and	
	33 C.F.R. §151.2050(g)… (7) A translation of the plan into English, French, or Spanish if the vessel's working language is another language.		WAC 220-150-030(5)(b)… (vi) A translation of the plan into English if the ship's working language is another language.	
	33 C.F.R. §151.2050 (h) Train the master, operator, person in charge, and crew on the application of ballast water and sediment management		WAC 220-150-030(5) (c) Training. The vessel owners or operators and appropriate crew must be trained in the application of the vessel's ballast	

Requirement	USCG	EPA	WDFW	ECY
	and treatment procedures.		water and sediment management strategies.	
	33 C.F.R. §151.2050 (i) When discharging ballast water to a reception facility in the United States, discharge only to reception facilities that have an NPDES permit to discharge ballast water.		N/A	
			WAC 220-150-030(5) (d) Availability. Vessel owners or operators shall make the ballast water management plan readily available for examination by the department at all reasonable times… (e) Alternative means of recordkeeping. The ballast water management plan may be an electronically recorded system or integrated into another management plan or system. At a minimum, any alternative method shall meet the provisions of this subsection.	

Biofouling/Pollution-Specific Enforcement and Compliance

Requirement	USCG	EPA	Washington (ECY)
Enforcement and Compliance	33 C.F.R. §151.2075 (a) The master, owner, operator, agent, or person in charge of a vessel must provide the Captain of the Port (COTP) with access to the vessel in order to take samples of ballast water and sediment, examine documents, and make other appropriate inquiries to assess the compliance of any vessel subject to this subpart.		WAC 173-201A-520 Monitoring and compliance. A continuing surveillance program, to ascertain whether the regulations, waste disposal permits, orders, and directives promulgated and/or issued by the department are being complied with, will be conducted by the department staff as follows: (1) Inspecting treatment and control facilities. (2) Monitoring and reporting waste discharge characteristics. (3) Monitoring receiving water quality.
Penalty			90.48.140 (ECY) Penalty. Any person found guilty of willfully violating any of the provisions of this chapter or chapter 90.56 RCW, or any final written orders or directive of the department or a court in pursuance thereof is guilty of a gross misdemeanor, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars and costs of prosecution, or by imprisonment in the county jail for up to three hundred sixty-four days, or by both such fine and imprisonment in the discretion of the court. Each day upon which a willful violation of the provisions of this chapter or chapter 90.56 RCW occurs may be deemed a separate and additional violation.
	90.48.142 Violations—Liability in damages for injury or death of fish, animals, vegetation—Action to recover. (1) Any person who: (a)(i) Violates any of the provisions of this chapter or chapter 90.56 RCW; (ii) Fails to perform any duty imposed by this chapter or chapter 90.56 RCW; (iii) Violates an order or other determination of the department or the director made pursuant to the provisions of this chapter or chapter 90.56 RCW; (iv) Violates the conditions of a waste discharge permit issued		

Requirement	USCG	EPA	Washington (ECY)
	pursuant to RCW 90.48.160; or (v) Otherwise causes a reduction in the quality of the state's waters below the standards set by the department or, if no standards have been set, causes significant degradation of water quality, thereby damaging the same; and (b) Causes the death of, or injury to, fish, animals, vegetation, or other resources of the state; shall be liable to pay the state and affected counties and cities damages in an amount determined pursuant to RCW 90.48.367. (2) No action shall be authorized under this section against any person operating in compliance with the conditions of a waste discharge permit issued pursuant to RCW 90.48.160.		

< END >

Appendix B Proposed Gap Assessment Framework

Cost and Benefit Ranking Framework

The following framework is presented as a potential method to prioritize which gaps should be addressed based on relative cost and benefits. Given limited resources, ranking the costs and benefits of gaps can focus future efforts.

The method relies on a team's assessing each gap to a set of cost and benefit questions. Typically, a ranking of one to three is used. For benefits, three is a positive score. For costs, three is a negative score. Possible questions are listed below.

For instance, in comparing state and federal ballast water and biofouling regulations, a number of criteria could be used to assess each gap. Questions that assess costs include:

- Does this cause delay to vessel or port?
- Does this cause administrative burden (time/cost) to vessels?
- Does this cause capital/operating cost to vessels (e.g., new equip, run pumps, etc.)?
- Does this cost time and/or money to DFW?
- Does this have penalties for non-compliance?

Questions that assess benefits include:

- Does this have scientific basis?
- Does this target high-risk vessels?
- Does this target high-risk ballast water?
- Does this benefit the industry?

The resulting costs and benefits are next plotted in a table (Figure 2). Those with high benefit and low cost (green section) would be selected as gaps to review further. Those with low benefit and high cost are not further pursued (red section). Those in the middle require more evaluation prior to pursuit (yellow section).

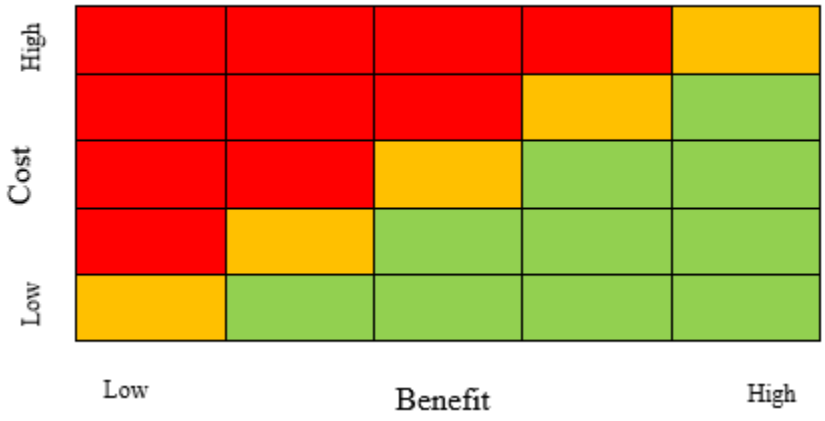

Figure 2 Cost/benefit table.