United States Environmental Protection Agency (EPA)
National Pollutant Discharge Elimination System (NPDES)

VESSEL GENERAL PERMIT FOR DISCHARGES INCIDENTAL TO THE NORMAL OPERATION OF VESSELS (VGP)

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act (CWA), as amended (33 U.S.C. 1251 *et seq.*), any owner or operator of a vessel being operated in a capacity as a means of transportation who:

- Is eligible for permit coverage under Part 1.2;
- If required by Part 1.5.1, submits a complete and accurate Notice of Intent (NOI)

is authorized to discharge in accordance with the requirements of this permit.

General effluent limits for all eligible vessels are given in Part 2. Further vessel class or type specific requirements are given in Part 5 for select vessels and apply in addition to any general effluent limits in Part 2. Specific requirements that apply in individual States and Indian Country Lands are found in Part 6. Definitions of permit-specific terms used in this permit are provided in Appendix A.

This permit becomes effective on December 19, 2008 for all jurisdictions except Alaska and Hawaii.

This permit and the authorization to discharge expire at midnight, December 19, 2013

Signed and issued this 18th day of December, 2008
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Regional Administrator, EPA Region 1

Signed and issued this 18th day of December, 2008
Barbara A. Finazzo, Director
Division of Environmental Planning, and Protection, EPA Region 2

Signed and issued this 18th day of December, 2008
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Signed and issued this 18th day of December, 2008
Nancy Woo, Associate Director
Water Division, EPA Region 9

Signed and issued this 18th day of December, 2008
Michael Gearheard, Director
Office of Water and Watersheds, EPA Region 10

This permit becomes effective on February 6, 2009 for Alaska and Hawaii.

Signed and issued this 2nd day of February, 2009
Alexis Strauss, Director
Water Division, EPA Region 9

Signed and issued this 2nd day of February, 2009
Michael A. Bussell, Director
Office of Water and Watersheds, EPA Region 10

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1. Coverage under this Permit

1.1 Permit Structure

This permit is structured as follows:

- General requirements that apply to all eligible vessel discharges are found in Parts 1 through 4;
- Specific additional requirements that apply to particular vessel classes are found in Part 5; and
- Specific additional requirements that apply in individual States or Indian Country Lands are found in Part 6.

The Appendices, listed here as Parts 7 through 15, include definitions, the Notice of Intent form, the Notice of Termination form, additional permit requirements, and supplemental information.

Additionally, note that:

- All requirements in this permit to comply with statutes and regulations, other than Clean Water Act section 402 and its implementing regulations, refer to those authorities as codified as of the date of Federal Register notice announcing availability of draft permit on June 17, 2008. Furthermore, with respect to references to class society or flag State requirements, all references to requirements are to those as of June 17, 2008.
- All requirements to comply with specified statutes include the requirement to comply with any applicable implementing regulations.
- Provisions stating that "EPA recommends" certain actions, or that you "should" take certain actions, constitute recommendations by the Agency and thus are not mandatory requirements of this permit.
- EPA intends to implement the VGP in accordance with the Clean Water Act as well as U.S. international legal obligations, including those obligations associated with a vessel's right to innocent passage as provided for under customary international law.
- Notwithstanding any other requirement of this permit, with the exception of any condition imposed by Section 1.13 (Standard Permit Conditions), requirements for inspections, training, recordkeeping and reporting, imposed by EPA in today's permit are required to be met as of February 19, 2009.

1.2 Eligibility

You must meet the following provisions to be eligible for coverage under this permit.

1.2.1 General Scope of this Permit

This permit is applicable to discharges incidental to the normal operation of a vessel identified in Part 1.2.2 into waters subject to this permit. These waters are "waters of the United States" as defined in 40 CFR 122.2 (extending to the outer reach of the 3 mile territorial sea as defined in section 502(8) of the CWA). This includes all navigable waters of the Great Lakes subject to the jurisdiction of the United States. Recreational vessels as defined in section 502(25) of the Clean Water Act are not subject to this permit. Such vessels are not subject to NPDES permitting under Section 402 of the Clean Water Act, and are instead subject to regulation under Section 312(o) of the Clean Water Act. In addition, with the exception of ballast water discharges, non-recreational vessels less than 79 feet (24.08 meters) in length, and all commercial fishing vessels, regardless of length, are not subject to this permit. See P.L. 110-299. Commercial fishing vessels and other non-recreational vessels less than 79 feet are eligible for permit coverage under this permit for their ballast water discharges. If auxiliary vessels or craft, such as lifeboats, rescue boats, or barges onboard larger vessels require permit coverage (i.e. they are greater than 79 feet in length), they are eligible for coverage under this permit and are covered by submission of the Notice of Intent for the larger vessels. Nothing in this permit shall be interpreted to apply to a vessel of the Armed Forces as defined in § 312(a)(14) of the Clean Water Act.

1.2.2 Vessel Discharges Eligible for Coverage

Unless otherwise made ineligible under Part 1.2.3, the following discharge types are eligible for coverage under this permit:

1.2.2.1 Deck Runoff and Above Water Line Hull Cleaning

1.2.2.2 Bilgewater/Oily Water Separator Effluent

1.2.2.3 Ballast Water

1.2.2.4 Anti-fouling Leachate from Anti-Fouling Hull Coatings/Hull Coating Leachate

1.2.2.5 Aqueous Film Forming Foam (AFFF)

1.2.2.6 Boiler/Economizer Blowdown

1.2.2.7 Cathodic Protection

1.2.2.8 Chain Locker Effluent

1.2.2.9 Controllable Pitch Propeller and Thruster Hydraulic Fluid and other Oil Sea Interfaces including Lubrication Discharges from Paddle Wheel Propulsion, Stern Tubes, Thruster Bearings, Stabilizers, Rudder Bearings, Azimuth Thrusters, and Propulsion Pod Lubrication

1.2.2.10 Distillation and Reverse Osmosis Brine

1.2.2.11 Elevator Pit Effluent

1.2.2.12 Firemain Systems

1.2.2.13 Freshwater Layup

1.2.2.14 Gas Turbine Wash Water

1.2.2.15 Graywater

Except that Graywater from commercial vessels operating in the Great Lakes within the meaning of CWA section 312 is excluded from the requirement to obtain an NPDES permit (see CWA section 502(6)), and thus is not within the scope of this permit.

1.2.2.16 Motor Gasoline and Compensating Discharge

1.2.2.17 Non-Oily Machinery Wastewater

1.2.2.18 Refrigeration and Air Condensate Discharge

1.2.2.19 Seawater Cooling Overboard Discharge (Including Non-Contact Engine Cooling Water; Hydraulic System Cooling Water, Refrigeration Cooling Water)

1.2.2.20 Seawater Piping Biofouling Prevention

1.2.2.21 Boat Engine Wet Exhaust

1.2.2.22 Sonar Dome Discharge

1.2.2.23 Underwater Ship Husbandry

1.2.2.24 Welldeck Discharges

1.2.2.25 Graywater Mixed with Sewage from Vessels

1.2.2.26 Exhaust Gas Scrubber Washwater Discharge

1.2.3 Limitations on Coverage

1.2.3.1 Discharges Not Subject to Former NPDES Permit Exclusion and Vessel Discharges Generated from Vessels when they are Operated in a Capacity Other than as a Means of Transportation

Discharges that are outside the scope of the exclusion from NPDES permitting for discharges incidental to the normal operation of a vessel as set out in 40 Code of Federal Regulations (CFR) 122.3(a), as in effect on December 18, 2008, are ineligible for coverage under this permit. This permit does not apply to any vessel when it is operating in a capacity other than as a means of transportation. For any discharges identified in this permit, discharges are not

eligible if they contain materials resulting from industrial or manufacturing processes onboard or other materials not derived from the normal operations of a vessel.

Vessels when they are being used as an energy or mining facility, a storage facility, a seafood processing facility, or when secured to the bed of waters subject to this permit or to a buoy for the purpose of mineral or oil exploration or development are not eligible for coverage under this permit. Furthermore, "floating" craft that are permanently moored to piers, such as "floating" casinos, hotels, restaurants, bars etc. are not covered by the current vessel exclusion and thus would not be covered by this draft vessel permit.

1.2.3.2 Sewage

Discharges of sewage from vessels, as defined in the Clean Water Act section 502(6) and 40 C.F.R. 122.2, are not required to obtain NPDES permits. Instead, these discharges are regulated under section 312 of the Clean Water Act and 40 CFR Part 140 and 33 CFR Part 159.

1.2.3.3 Used or Spent Oil

Discharges of used or spent oil no longer being used for their intended purposes are not eligible for coverage under this permit.

1.2.3.4 Garbage or Trash

Discharges of rubbish, trash, garbage, or other such materials discharged overboard are not eligible for coverage under this permit. "Garbage" discharges include discharges of bulk dry cargo residues as defined at 33 CFR 151.66(b) (73 Fed. Reg. 56492 (September 29, 2008)) and agricultural cargo residues. Discharges of garbage continue to be subject to regulation under 33 CFR Part 151, Subpart A.

1.2.3.5 Photo processing effluent

Discharges from photo-processing operations are not eligible for coverage under this permit.

1.2.3.6 Effluent from Dry Cleaning Operations

Discharges of spent or unused effluent from dry cleaning operations are not eligible for coverage. This includes any spent or unused tetrachloroethylene from these operations.

1.2.3.7 Discharges of Medical Waste and Related Materials

Discharges of medical waste as defined in 33 U.S.C. 1362(20) are not eligible for coverage under this permit. Discharges of spent or unused pharmaceuticals, formaldehyde or other biohazards no longer being used for their intended purposes are not eligible for coverage under this permit.

For purposes of the VGP, the liquid produced by dialysis treatment of humans is not deemed to be "medical waste," and, like other human body waste, is subject to regulation under

CWA § 312 if introduced into marine sanitation devices, or under VGP Part 2.2.25 if added to a blackwater system combined with a graywater system. The direct overboard discharge of such liquid without treatment is not authorized by the VGP.

1.2.3.8 Discharges of Noxious Liquid Substance Residues

Discharges of noxious liquid substance residues subject to 33 CFR Part 151, Subpart A are not eligible for coverage under this permit.

1.2.3.9 Tetrachloroethylene (Perchloroethylene) Degreasers

Discharges of tetrachloroethylene degreasers or other products containing tetrachloroethylene are not eligible for coverage under this permit.

1.2.3.10 Discharges Currently or Previously Covered by NPDES Permits

The following discharges are not eligible for coverage under this permit:

- Vessel discharges covered, as of the effective date of this permit, under an individual NPDES permit or another NPDES general permit, unless EPA specifically allows coverage under Part 1.8.2; or
- Discharges from vessels covered by any NPDES permit that has been or is in the process of being denied, terminated, or revoked by EPA or state permitting authorities (this does not apply to the routine reissuance of permits every five years).

1.3 Reserved

1.4 Permit Compliance

The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both. In addition, false statements or representations, as well as alterations or false entries in documents, may be punishable by more severe criminal penalties pursuant to 18 U.S.C. §1001 or 18 U.S.C. §1519.

Any noncompliance with the requirements of this permit constitutes a violation of the Clean Water Act. Each day a violation continues is a separate violation of this permit. Where requirements and schedules for taking corrective actions are included in this permit, the time intervals provided are not grace periods, but schedules considered reasonable for making repairs

and improvements. They are included in this permit to ensure that the conditions prompting the need for these corrective actions are not allowed to persist indefinitely. You must return to compliance as promptly as possible, but no later than the time period specified in this permit. For provisions specifying a time period to remedy noncompliance, the initial and continuing failure, such as a violation of numeric or non-numeric effluent limit, constitutes a violation of this permit and the Clean Water Act. As such, any time periods specified for remedying noncompliance do not relieve parties of the initial underlying noncompliance.

To provide clarity for the permittee, there are additional reminders in certain sections of this permit about what constitutes a permit violation. The absence of such a reminder in a particular section does not mean that failure to meet that requirement is not a permit violation.

1.5 Authorization under this Permit

1.5.1 How to Obtain Authorization

To obtain authorization under this permit, you must meet the Part 1.2 eligibility requirements. If your vessel meets the requirements under Part 1.5.1.1, you must submit a Notice of Intent (NOI) to receive permit coverage beginning on June 19, 2009. Prior to NOI submission, owner/operators of these vessels are authorized to discharge under this permit. This automatic authorization extends until owner/operators of vessels that meet the requirements under Part 1.5.1.1 submit NOIs, but shall not extend beyond 9 months after permit issuance. Owner/operators of vessels that meet the requirements under Part 1.5.1.2 are automatically authorized to discharge under this permit and are not required to submit NOIs.

1.5.1.1 Vessels Required to Submit Notices of Intent (NOIs)

If your 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 (2113 gallons) of ballast water, you must submit a complete and accurate NOI in accordance with the requirements of Part 10 of this permit beginning on June 19, 2009 if you seek coverage under this permit. Submission must be in accordance with the deadlines in Table 1.

If you submit an NOI, EPA strongly encourages you to prepare and submit your NOI using EPA's Electronic Notice of Intent (eNOI) system (www.epa.gov/npdes/vessels/eNOI). EPA will post on the Internet, at www.epa.gov/npdes/noisearch, all NOIs received. Late NOIs will be accepted, but authorization to discharge will not be retroactive.

Table 1: NOI Submission Deadlines/Discharge Authorization Dates

Category	NOI Deadline	Discharge Authorization Date*
Vessels delivered to owner or operator on or before September 19, 2009	No later than September 19, 2009	Authorization granted until September 19, 2009. If EPA receives an NOI on or before September 19, 2009, uninterrupted coverage continues.
New Owner/Operator of Vessel – transfer of ownership and/or operation of a vessel whose discharge is previously authorized under this permit	By date of transfer of ownership and/or operation	Date of transfer or date EPA receives NOI, whichever is later
New vessels delivered to owner or operator after September 19, 2009	30 days prior to discharge into waters subject to this permit	30 days after complete NOI received by EPA
Existing vessels delivered to owner or operator after September 19, 2009 that were not previously authorized under this permit	30 days prior to discharge into waters subject to this permit	30 days after complete NOI received by EPA

* Based on a review of your NOI or other information, EPA may delay the discharge authorization date for further review, or may deny coverage under this permit and require submission of an application for an individual NPDES permit, as detailed in Part 1.8. In these instances, EPA will notify you in writing of the delay or the request for submission of an individual NPDES permit application. If EPA requires an individual permit for an existing vessel previously covered by this general permit, EPA will allow the permittee a reasonable amount of time to obtain individual permit coverage before their general permit coverage terminates.

1.5.1.2 Vessels Not Required to Submit Notices of Intent (NOIs)

If your vessel is less than 300 gross tons and your vessel does not have the capacity to hold or discharge more than 8 cubic meters (2113 gallons) of ballast water, you do not need to submit an NOI; you automatically receive coverage under this permit and are authorized to discharge in accordance with the conditions set forth within.

1.5.2 Continuation of this Permit

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with section 558(c) of the Administrative Procedure Act (5 U.S.C. 558(c)) and EPA's implementing regulations at 40 CFR 122. 6 and remain in force and effect for discharges that were covered prior to expiration. If you were granted permit coverage prior to the expiration date, you will automatically remain covered by this permit until the earliest of:

- Your authorization for coverage under a reissuance or replacement of this permit, following your timely and appropriate submittal of a complete NOI requesting authorization to discharge under the new permit and compliance with the requirements of the new permit; or
- Your submittal of a Notice of Termination; or

- Issuance of a new general permit that covers your vessel discharges or vessel type and provides you coverage without requiring you to submit a Notice of Intent to obtain coverage; or
- Issuance or denial of an individual permit for the vessel's discharges; or
- A formal permit decision by EPA not to reissue this general permit, at which time EPA will identify a reasonable time period for covered dischargers to seek coverage under an alternative general permit or an individual permit. Coverage under this permit will cease at the end of this time period.

1.6 Terminating Coverage

1.6.1 Terminating Coverage for Vessels Required to Submit a Notice of Intent (NOI)

1.6.1.1 Submitting a Notice of Termination (NOT)

If you wish to terminate coverage under this permit, and you were required to file an NOI, you must submit your Notice of Termination in accordance with Part 11. If you were required to file an NOI by section 1.5.1, you may use the eNOI system to file your Notice of Termination, available at www.epa.gov/npdes/vessels/eNOI. Your authorization to discharge under this permit terminates at 11:59 pm on the day that a complete Notice of Termination is processed and posted on EPA's website (www.epa.gov/npdes/vessels/eNOI). If you submit a Notice of Termination without meeting at least one of the conditions identified in Part 1.6.1.2, then your Notice of Termination is not valid. You will continue to be responsible for discharges from your vessel until you have submitted a valid Notice of Termination and it is posted on EPA's website, unless permit coverage is terminated without a NOT pursuant to Part 1.8.

1.6.1.2 When to Submit a Notice of Termination

If you were required to submit an NOI by section 1.5.1, in order to be released from the requirements of this permit, you must submit a NOT within 30 days after one or more of the following conditions have been met:

- A new owner or operator has taken over responsibility for the vessel; or
- You have permanently ceased operating the vessel in waters subject to this permit and there are no longer vessel discharges; or
- You have obtained coverage under an individual or alternative general permit for all discharges required to be covered by an NPDES permit, unless you were directed to obtain this coverage by EPA in accordance with Part 1.8.

1.6.2 Terminating Coverage for Vessels not Required to Submit a Notice of Intent (NOI)

For vessels that are not required to submit an NOI under Part 1.5.1.2, termination of coverage is automatic if any of the following conditions are met:

- A new owner or operator has taken over responsibility for the vessel; or

- You have permanently ceased operating the vessel in waters subject to this permit and there are no longer vessel discharges; or
- You have obtained coverage under an individual or alternative general permit for all discharges required to be covered by an NPDES permit.

1.7 Certification

The NOI, NOT, and any reports (including any monitoring data) submitted to EPA, must include the following certification:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

All other documentation required under this permit must be signed and dated by the person preparing the documentation.

1.8 Alternative Permits

1.8.1 EPA Requiring Coverage under an Alternative Permit

Pursuant to 40 CFR section 122.28(b)(3), EPA may require you to apply for an individual NPDES permit or an alternative NPDES general permit. Any interested person may petition EPA to take action under this paragraph. If EPA requires you to apply for an individual NPDES permit, EPA will notify you in writing that a permit application is required. This notification will include a brief statement of the reasons for this decision and will provide application information. In addition, if you are an existing permittee authorized to discharge under this permit, the notice will set a deadline to file the permit application, and will include a statement that on the effective date of the individual NPDES permit, or the alternative general permit as it applies to you, coverage under this general permit will terminate. EPA may grant additional time to submit the application if you request it. If you are covered under this permit and fail to submit an individual NPDES permit application as required by EPA, then your coverage under this permit is terminated at midnight on the day specified by EPA as the deadline for application submittal. In addition, if EPA denies your application for an individual NPDES permit, you are also not authorized to discharge under this general permit. EPA may take enforcement action for any unpermitted discharge.

When an individual NPDES permit is issued to you or you are authorized to discharge under an alternative NPDES general permit, your coverage under this permit is terminated on the effective date of the individual permit or the date of authorization of coverage under the

alternative general permit. In this case (where EPA requires you to obtain coverage under an individual or alternative general permit), you are not required to file a Notice of Termination as discussed above.

1.8.2 Permittee Requesting Coverage under an Alternative Permit

You may request to be excluded from coverage under this general permit by applying for an individual permit. In such a case, you must submit an individual permit application in accordance with the requirements of 40 CFR 122.21 with reasons supporting the request, to EPA at the appropriate EPA Regional Office(s) listed in Part 13 of this permit, no later than 90 days after March 31, 2009. The request may be granted by issuance of an individual permit or authorizing coverage under an alternative general permit if your reasons are adequate to support the request. A source excluded from this general permit solely because it already has an individual permit may request that the individual permit be revoked, and that it be covered by this general permit. Upon revocation of the individual permit, the general permit shall apply to the source.

When an individual NPDES permit is issued to you or you are authorized to discharge under an alternative NPDES general permit, your authorization to discharge under this permit is terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit.

1.9 Permit Reopener Clause

1.9.1 Procedures for Modification or Revocation

Permit modification or revocation will be conducted according to 40 CFR 122.62, 122.63, 122.64, and 124.5.

1.9.2 Water Quality Protection

EPA may require you to obtain an individual permit in accordance with Part 1.8 of this permit for cause. This may happen, for example, if there is evidence that the discharges authorized by this permit cause, have the reasonable potential to cause or contribute to an excursion above any applicable water quality standard. Similarly, EPA may modify this permit to include different limitations and/or requirements for cause.

1.9.3 Timing of Permit Modification

EPA may elect to modify the permit prior to its expiration (rather than waiting for a new permit cycle) to comply with any new statutory or regulatory requirements, such as for effluent limitation guidelines, that may be promulgated in the course of the current permit cycle. Furthermore, EPA may modify the permit if new pollution control technologies for vessels or discharge types become available.

1.10 Severability

Invalidation of a portion of this permit does not necessarily render the whole permit invalid. EPA's intent is that the permit remains in effect to the extent possible; in the event that any part of this permit is invalidated, EPA will advise the regulated community as to the effect of such invalidation.

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.

1.12 Federal Laws

Nothing in this permit shall be construed to affect, supersede, or relieve the vessel owner or operator of any otherwise applicable requirements or prohibitions under other provisions of Federal law or regulations.

1.13 Standard Permit Conditions

As provided by the introductory text of 40 CFR 122.41 and the regulation at 40 CFR 122.43(c), all of the standard permit conditions published in federal regulations at 40 CFR 122.41 (2008) are hereby incorporated by reference.

2. Effluent Limits and Related Requirements

In the limits below and throughout this permit, the term "minimize" means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best marine practice.

You may not add any constituents to any discharge that are not incidental to the normal operation of a vessel.

You may not dilute discharges eligible for coverage under this permit prior to their discharge in order to meet limits set forth in this permit.

2.1 Technology-based Effluent Limits and Related Requirements Applicable to all Vessels

You are required to meet the following effluent limits, regardless of the type of vessel you own or operate:

2.1.1 Material Storage

For cargoes or other onboard materials which might wash overboard or dissolve as a result of contact with precipitation or surface water spray, or which may be blown overboard by air currents, minimize the amount of time these items are exposed to such conditions. Locate storage areas on the vessel for such items in covered areas where feasible and consistent with any applicable regulations promulgated by the Secretary of the Department in which the Coast Guard is operating that establish specifications for safe transportation, handling, carriage, and storage of pollutants (see Part 2.1.5). If water draining from storage areas comes in contact with oily materials, you must:

- Use dry cleanup methods or absorbents to clean up the wastewater;
- Store the water for onshore disposal;
- Run the water through an oily water separator when so required by Coast Guard regulations, or if not subject to such requirement, use other effective methods to comply with Part 2.1.4 of this permit to prevent the discharge into waters subject to this permit of any oils, including oily materials, in quantities which may be harmful as defined in 40 CFR Part 110.

2.1.2 Toxic and Hazardous Materials

Where consistent with vessel design and construction, you must locate toxic and hazardous materials in protected areas of the vessel unless the master determines this would interfere with essential vessel operations or safety of the vessel or doing so would violate any applicable regulations promulgated by the Secretary of the Department in which the Coast Guard is operating that establish specifications for safe transportation, handling, carriage, and storage of pollutants (see Part 2.1.5). Any discharge which is made for safety reasons must be documented

as part of the requirements in Part 4.2. This includes ensuring that toxic and hazardous materials are in appropriate sealed containers constructed of a suitable material, labeled, and secured. Containers must not be overfilled and incompatible wastes should not be mixed. Exposure of containers to ocean spray or precipitation must be minimized. Jettisoning of containers holding toxic or hazardous material is not authorized by this permit.

2.1.3 Fuel Spills/Overflows

Fuel spills or overflows must not result in a discharge of oil in quantities that may be harmful, pursuant to 40 CFR Part 110. You must conduct all fueling operations using control measures and practices designed to minimize spills and overflows and ensure prompt containment and cleanup if they occur. Vessel operators must not overfill fuel tanks. For vessels with interconnected fuel tanks, fueling must be conducted in a manner that prevents overfilling and release from the system to the environment.

Vessels with air vents from fuel tanks must use spill containment or other methods to prevent or contain any fuel or oil spills. Large scale fuel spills or overflows are not incidental to the normal operation of the vessel and are not authorized by this permit.

The following requirements apply to fueling of auxiliary vessels such as lifeboats, tenders or rescue boats deployed from “host” vessels subject to this permit:

- While fueling, examine the surrounding water for the presence of a visible sheen. If a visible sheen is observed, as a result of your fueling, it must be cleaned up immediately.
- It is important to know the capacity of the fuel tanks before you begin fueling in order to prevent unintentionally overfilling the tank.
- Prevent overfilling and do not top off your fuel tanks.
- When possible, fill fuel tanks while boat is on shore or recovered from the water.
- When possible, fill portable tanks on shore or on the host vessel, not on the auxiliary vessel.
- Use an oil absorbent material or other appropriate device while fueling the auxiliary vessel to catch drips from the vent overflow and fuel intake.
- Regularly inspect the fuel and hydraulic systems for any damage or leaks.

Owner/operators shall ensure that any crew responsible for conducting fueling operations are trained in methods to minimize spills caused by human error and/or the improper use of equipment.

2.1.4 Discharges of Oil Including Oily Mixtures

All discharges of oil, including oily mixtures, from ships subject to Annex I of the International Convention for the Prevention of Pollution from Ships as implemented by the Act to Prevent Pollution from Ships and U.S. Coast Guard regulations found in 33 CFR 151.09 (hereinafter referred to as “MARPOL vessels”) must have concentrations of oil less than 15 parts

per million (ppm) (as measured by EPA Method 1664 or other appropriate method for determination of oil content as accepted by the International Maritime Organization (IMO) (e.g. ISO Method 9377) or U.S. Coast Guard) before discharge. All MARPOL vessels must have a current International Oil Pollution Prevention Certificate (IOPP) issued in accordance with 33 CFR 151.19 or 151.21. All other discharges of oil including oily mixtures must not contain oil in quantities that may be harmful, pursuant to 40 CFR Part 110.

2.1.5 Compliance with other Statutes and Regulations

As required by 40 C.F.R 122.44(p), you must comply with any applicable regulations promulgated by the Secretary of the Department in which the Coast Guard is operating, that establish specifications for safe transportation, handling, carriage, and storage of pollutants.

Any discharge from your vessel must comply with sections 311 (33 U.S.C. 1321) of the Federal Water Pollution Control Act (the Clean Water Act), the Act to Prevent Pollution from Ships (APPS 33 USC §§ 190-1915), the National Marine Sanctuaries Act, (16 U.S.C. 1431 *et seq.*) and implementing regulations found at 15 CFR Part 922 and 50 CFR Part 404, the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA, 7 U.S.C. § 136 *et seq.*), and the Oil Pollution Control Act (OPA ’90, 33 U.S.C. § 2701-2720).

The US Code of Federal Regulations containing these provisions can be found at: www.gpoaccess.gov/ECFR.

2.2 Technology-based Effluent Limits and Related Requirements for Specific Discharge Categories

2.2.1 Deck Washdown and Runoff and Above Water Line Hull Cleaning

Vessel owner/operators must minimize the introduction of on-deck debris, garbage, residue and spill into deck washdown and runoff discharges. When required by their class societies (e.g., oil tankers), their flag Administrations, or the U.S. Coast Guard, vessels must be fitted with and use perimeter spill rails and scuppers to collect the runoff for treatment. Where feasible, machinery on deck must have coamings or drip pans to collect any oily water from machinery and prevent spills. The drip pans must be drained to a waste container for proper disposal and/or periodically wiped and cleaned. The presence of floating solids, visible foam, halogenated phenol compounds, and dispersants, or surfactants in deck washdowns must be minimized. Vessel operators must minimize deck washdowns while in port.

Vessel operators must maintain their topside surface and other above water line portions of the vessel to minimize the discharge of rust (and other corrosion by-products), cleaning compounds, paint chips, non-skid material fragments, and other materials associated with exterior topside surface preservation. Furthermore, vessel owner/operators must minimize residual paint droplets from entering waters subject to this permit whenever they are conducting maintenance painting. Possible minimization techniques include, but are not limited to, avoiding paint spraying in windy conditions or avoiding overapplication of paint. This permit does not authorize the disposal of unused paint into waters subject to this permit.

If deck washdowns or above water line hull cleaning will result in a discharge, they must be conducted with non-toxic and phosphate free cleaners and detergents. Furthermore, cleaners and detergents should not be caustic or only minimally caustic and should be biodegradable.

2.2.2 Bilgewater

All bilgewater discharges must be in compliance with the regulations in 40 CFR Parts 110 (Discharge of Oil), 116 (Designation of Hazardous Substances), and 117 (Determination of Reportable Quantities for Hazardous Substances) and 33 CFR §151.10 (Control of Oil Discharges). In addition:

- Vessel operators may not use dispersants, detergents, emulsifiers, chemicals or other substances to remove the appearance of a visible sheen in their bilgewater discharges.
- Except in the case of flocculants or other required additives (excluding any dispersants or surfactants) used to enhance oil/water separation during processing (after bilgewater has been removed from the bilge), vessel operators may not add substances that drain to the bilgewater that are not produced in the normal operation of a vessel. The use of oil solidifiers, flocculants, or other required additives are allowed only as part of an oil water separation system provided they do not alter the chemical make-up of the oils being discharged and they are not discharged into waters subject to this permit. Routine cleaning and maintenance activities associated with vessel equipment and structures are considered to be normal operation of a vessel if those practices fall within normal marine practice.
- All vessels must minimize the discharge of bilgewater into waters subject to this permit. This can be done by minimizing the production of bilgewater, disposing of bilgewater on shore where adequate facilities exist, or discharging into waters not subject to this permit (i.e., more than 3 nautical miles (nm) from shore) for vessels that regularly travel into such waters. Though not regulated under this permit, EPA notes that discharges of bilgewater outside waters subject to this permit (i.e. more than 3 nm from shore) are regulated under Annex I of the International Convention for the Prevention of Pollution from Ships as implemented by the Act to Prevent Pollution from Ships and U.S. Coast Guard regulations found in 33 CFR 151.09.
- Vessels greater than 400 gross tons shall not discharge untreated oily bilgewater into waters subject to this permit.
- Vessels greater than 400 gross tons that regularly sail outside the territorial sea (at least once per month) shall not discharge treated bilgewater within 1 nm of shore if technologically feasible (e.g. holding would not impact safety and stability, would not contaminate other holds or cargo, would not interfere with essential operations of the vessel). Any discharge which is not technologically feasible to avoid must be documented as part of the requirements in Part 4.2.
- Vessels greater than 400 gross tons shall not discharge treated bilgewater into waters referenced in Part 12.1 unless the discharge is necessary to maintain the safety and stability of the ship. Any discharge of bilgewater into these waters must be documented as part of the recordkeeping requirements in Part 4.2 and vessel operators must document whether this bilgewater discharge was made for safety reasons.

- For vessels greater than 400 gross tons that regularly sail outside the territorial sea (at least once per month), if treated bilgewater is discharged into waters subject to this permit, it must be discharged when vessels are underway (sailing at speeds greater than 6 knots), unless doing so would threaten the safety and stability of the ship. EPA notes that vessel operators may also choose to dispose of bilgewater on shore where adequate facilities exist. Any discharge which is made for safety reasons must be documented as part of the requirements in Part 4.2.

2.2.3 Discharges of Ballast Water

All discharges of ballast water must comply with the Coast Guard regulations found in 33 CFR Part 151. Vessels that operate solely within one Captain of the Port (COTP) zone are exempt from certain requirements, as described in 33 CFR 151.2010(b). 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.

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.

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.

2.2.3.2 Ballast Water Management Plans

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 allow those responsible for the plan's implementation to understand and follow the vessel's ballast water management strategy. Owner/operators must make that plan available upon request to any EPA representative. 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.

EPA notes that these plans are being imposed as "conditions to assure compliance" with effluent limitations under CWA 402(a)(2) and 40 CFR 122.43(a).

2.2.3.3 Mandatory and Suggested Ballast Water Management Practices

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 of ballast water into waters subject to this permit that are within or that may directly affect marine sanctuaries, marine preserves, marine parks, shellfish beds, or coral reefs or other waters listed in Part 12.1.
- 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., algal blooms).
  - Areas near sewage outfalls.
  - Areas near dredging operations.
  - Areas where tidal flushing is poor or when a tidal stream is known to be more turbid.
  - In darkness when bottom dwelling organisms may rise up in the water column.
  - In shallow water or where propellers may stir up the sediment.
  - Areas with pods of whales, convergence zones and boundaries of major currents
- Clean ballast tanks regularly to remove sediments in mid-ocean or under controlled arrangements in port or at dry dock.
- No discharge of sediments from cleaning of ballast tanks is authorized in waters subject to this permit.
- Discharge only the minimal amount of ballast water essential for vessel operations while in the waters subject to this permit.

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. Another option for minimizing the potential for spread of aquatic nuisance species (ANS) via ballast water discharges might be using treated graywater (only in areas where treated graywater may be discharged) for those vessels that generate substantial quantities of graywater (e.g. cruise ships). Yet another option is to use potable water for ballast.

2.2.3.4 On-shore 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 and economically practicable and achievable, the vessel owner/operator must use this treatment for any ballast water discharges, unless they use an onboard ballast water treatment system approved by the Commandant of the Coast Guard. If vessels use on-shore treatment at one port, and they will not discharge ballast water into any other waters subject to this permit for their entire duration in waters subject to this permit, then it is not necessary to meet the requirements of 2.2.3.5, 2.2.3.6, 2.2.3.7, and 2.2.3.8.

2.2.3.5 Requirements for Ocean Going Voyages While Carrying Ballast Water

Any vessels that carry 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 2.2.3.11.

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;
- 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.

2.2.3.6 Vessels Carrying Ballast Water Engaged in Pacific Nearshore Voyages

Unless the vessel meets one of the exemptions in Part 2.2.3.11, any vessel engaged in Pacific nearshore voyages that carry 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.

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 from 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 2.2.3.5 (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 exchange more than 200 nm from shore in accordance with Part 2.2.3.5 of this permit. For vessels engaged in the coastwise trade who are not outside 200 nm for a sufficient period to conduct exchange, they may conduct exchange outside 50 nm (even if they voyage beyond 200 nm) to meet the requirements of this permit.

2.2.3.7 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 2.2.3.5 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 2.2.3.5 for those tanks with ballast 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 nautical miles from any shore prior to the discharge or uptake and subsequent discharge of any ballast water to any U.S. waters subject to this permit, unless you meet one of the exemptions in Part 2.2.3.11. For the purposes of Part 2.2.3.7, 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 (ppt) 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.

2.2.3.8 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 2.2.3.11, any vessel engaged in Pacific Nearshore Voyages as defined in Part 2.2.3.6 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 for those tanks with ballast water and Part 2.2.3.8.1 for those tanks which are empty or contain unpumpable residual water.

2.2.3.8.1 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 nautical miles 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 2.2.3.8, 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 (ppt) 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). These requirements apply to all vessels carrying ballast water that will enter any US port in the states of Alaska, California, Oregon, or Washington and that travels through more than one COTP zone.

Vessels engaged in voyages that take them further than 200 nm from any shore and who will remain outside 200 nm from 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 2.2.3.7 (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 2.2.3.7 of this permit. For vessels engaged in the coastwise trade who are not outside 200 nm for a sufficient period to conduct flushing, they 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 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 from the full tanks to commingle with waters from the empty tanks if it will subsequently be discharged into waters subject to this permit.

2.2.3.9 Vessels Entering the Great Lakes

In addition to complying with the requirements of this permit, all vessels that are equipped to carry ballast water and enter the Great Lakes must comply with 33 CFR Part 151, Subpart C titled: "Ballast Water Management for Control of Nonindigenous Species in the Great Lakes and Hudson River." Vessels that operate outside the EEZ and more than 200 nm from any shore and then enter the Great Lakes via the Saint Lawrence Seaway System must also comply with 33 CFR Part 401.30, which requires oceangoing vessels to conduct saltwater flushing of ballast water tanks 200 nautical miles from any shore before entering either the U.S. or Canadian waters of the Seaway System.

2.2.3.10 Discharge Prohibitions

Vessels referenced in Parts 2.2.3.5, 2.2.3.6, 2.2.3.7, and 2.2.3.8 may not discharge unexchanged or untreated ballast water or sediment in waters subject to this permit referenced in Part 12.1.

2.2.3.11 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 151.2030. If this exemption is claimed, the vessel operator must record the date, location, and reason for the claim in its recordkeeping documentation.
- 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.
- 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.
- The master retains all ballast water on board the vessel for the duration of the vessel's voyage in waters subject to this permit.
- The vessel is not engaged in an international voyage and does not traverse more than one COTP zone.
- In the case of Pacific nearshore voyages, the vessel need not comply with Parts 2.2.3.6 or 2.2.3.8 of this permit if the ballast water consists of water drawn exclusively from treated municipal or similar water supplies (e.g. potable water), provided that such ballast water is not mixed with any ballast water or sediments from other sources.

Additionally, except for vessels entering the Great Lakes, a vessel is not required to deviate from its voyage, or delay the voyage to conduct ballast water exchange or saltwater flushing.

2.2.4 Anti-Fouling Hull Coatings

- All anti-fouling hull coatings subject to registration under FIFRA (see 40 CFR 152.15) must be registered, sold or distributed, applied, maintained, and removed in a manner consistent with applicable requirements on the coatings' FIFRA label.
- For anti-fouling hull coatings not subject to FIFRA registration (i.e. not produced for sale and distribution in the United States), hull coatings must not contain any biocides or toxic materials banned for use in the United States (including those on EPA's List of Banned or Severely Restricted Pesticides). This requirement applies to all vessels, including those registered and painted outside the United States.

At the time of initial application or scheduled reapplication of anti-fouling coatings, you must give consideration, as appropriate for vessel class and vessel operations, to the use of hull coatings with the lowest effective biocide release rates, rapidly biodegradable components (once separated from the hull surface), or non-biocidal alternatives, such as silicone coatings.

Some ports and harbors are impaired by copper. These waters include Shelter Island Yacht Basin in San Diego, California and waters in and around the ports of Los Angeles/Long Beach. A complete list of such waters may be found at www.epa.gov/npdes/vessels. When vessels spend considerable time in these waters (defined as spending more than 30 days per

year), or use these waters as their home port (i.e. house boats, ferries or rescue vessels), vessel owner/operators shall consider using antifouling coatings that rely on a rapidly biodegradable biocide or another alternative rather than copper based coatings. If after consideration of alternative biocides, vessel operators continue to use copper based antifoulant paints, they must document in their recordkeeping documentation how this decision was reached.

The discharge of Tributyltin (TBT) or any other organotin compound is prohibited by this permit. Therefore, vessel operators covered by this permit have a zero discharge standard for TBT or any other organotin compound. You may not use an antifoulant coating containing TBT or any other organotin compound. If the vessel has previously been covered with a hull coating containing TBT or any other organotin compound, vessels must be effectively overcoated so that no TBT or other organotin leaches from the vessel hull or the TBT or other organotin coating must have been removed from the vessel's hull.

2.2.5 Aqueous Film Forming Foam (AFFF)

Discharges of AFFF are authorized for emergency purposes when needed to ensure the safety and security of the vessel and her crew.

For all vessels that sail outside of the territorial sea more than once per month, maintenance and training discharges of fluorinated AFFF are not authorized within waters subject to this permit (any such discharges should be collected and stored for onshore disposal or scheduled when the vessel is outside such waters). Discharge volumes associated with regulatory certification and inspection must be minimized and a substitute foaming agent (i.e. non-fluorinated) must be used if possible within waters subject to this permit.

For vessels that do not leave the territorial sea more than once per month, if maintenance and training discharges are required, AFFF must be collected and stored for onshore disposal if technologically feasible unless the vessel uses non-fluorinated or alternative foaming agent. For those vessels for which it is not technologically feasible to collect and store the fluorinated AFFF foam, vessel owner/operators must limit the discharge to that amount necessary to conduct legally required tests. Training should be conducted as far from shore as is practicable. Maintenance and training discharges are not allowed in port.

For all vessels, AFFF discharges may not occur in or within 1 nm of a water referenced in Part 12.1 unless they are discharged:

- For emergency purposes,
- By rescue vessels such as fireboats for firefighting purposes,
- By vessels owned or under contract to do business exclusively in or within 1 nm of those protected areas by the United States government or state or local governments.

If AFFF discharge occurs in waters in Part 12.1 for emergency purposes, a written explanation must be kept in the ship's log or other vessel recordkeeping documentation consistent with Part 4.2 of this permit.

2.2.6 Boiler/Economizer Blowdown

Minimize the discharge of boiler/economizer blowdown in port if chemicals or other additives are used to reduce impurities or prevent scale formation. For vessels greater than 400 gross tons which leave the territorial sea at least once per week, boiler/economizer blowdown may not be discharged in waters subject to this permit, unless:

- The vessel remains within waters subject to this permit for a longer period than the necessary duration between blowdown cycles,
- The vessel needs to conduct blowdown immediately before entering drydock, or
- For safety purposes.

For all vessels, boiler/economizer blowdown may not be discharged in waters referenced in Part 12.1 except for safety purposes. Furthermore, boiler/economizer blowdown should be discharged as far from shore as practical.

2.2.7 Cathodic Protection

Cathodic protection must be maintained to prevent the corrosion of the ship's hull. The discharge of zinc, magnesium, and aluminum are expected from properly functioning cathodic protection sacrificial electrodes. However, vessel operators must minimize the flaking of large, corroded portions of these anodes. Sacrificial anodes must not be used more than necessary to adequately prevent corrosion of the vessel's hull, sea chest, rudder, and other exposed areas of the vessel. Vessel operators must appropriately clean and/or replace these anodes in periods of maintenance (such as drydocking), so that release of these metals to waters is minimized.

Vessel operators should be cognizant that magnesium is less toxic than aluminum, which is less toxic than zinc. If vessel operators use sacrificial electrodes, they must use the metals that are less toxic to the extent technologically feasible and economically practicable and achievable.

EPA recommends the use of Impressed Current Cathodic Protection (ICCP) in place of or to reduce the use of sacrificial electrodes when technologically feasible (e.g. adequate power sources, appropriate for vessel hull size and design), safe, and adequate to protect against corrosion, particularly for new vessels. If vessel operators use ICCP, they must maintain dielectric shields to prevent flaking.

2.2.8 Chain Locker Effluent

The anchor chain must be carefully and thoroughly washed down (*i.e.*, more than a cursory rinse) as it is being hauled out of the water to remove sediment and marine organisms. In addition, chain lockers must be cleaned thoroughly during dry docking to eliminate accumulated sediments and any potential accompanying pollutants. For vessels that regularly sail outside waters subject to this permit, if technically feasible, periodically clean, rinse, and/or pump out the space beneath the chain locker prior to entering waters subject to this permit (preferably mid ocean) if the anchor has been lowered into any nearshore waters. Furthermore, for vessels that leave waters subject to this permit at least once per month, chain lockers may not be rinsed or

pumped out in waters subject to this permit, unless not emptying them would compromise safety. Such a safety claim must be documented in the vessel's recordkeeping documentation consistent with Part 4.2.

2.2.9 Controllable Pitch Propeller and Thruster Hydraulic Fluid and other Oil to Sea Interfaces including Lubrication Discharges from Paddle Wheel Propulsion, Stern Tubes, Thruster Bearings, Stabilizers, Rudder Bearings, Azimuth Thrusters, Propulsion Pod Lubrication, and Wire Rope and Mechanical Equipment Subject to Immersion.

The protective seals on controllable pitch propellers, azimuth thrusters, propulsion pods, rudder bearings, or any other oil to sea interfaces must be maintained in good operating order to minimize the leaking of hydraulic oil or other oils. The vessel owner/operator must not discharge oil in quantities that may be harmful as defined in 40 CFR Part 110 from any oil to sea interface. If possible, maintenance activities on controllable pitch propellers, thrusters and other oil-to-sea interfaces should be conducted when a vessel is in drydock.

Minimize maintenance activities on stern tube seals when a vessel is outside of drydock. If maintenance or emergency repair must occur on stern tubes or other oil-to sea interfaces which have a potential to release oil in quantities that may be harmful as defined in 40 CFR Part 110, appropriate spill response resources (e.g. oil booms) must be used to contain any oil leakage. Operators of the vessel must have ready access to any spill response resources to clean any potential oil spills.

After applying lubrication to wire rope and mechanical equipment subject to immersion, wire ropes and other equipment must be thoroughly wiped down to remove excess lubricant.

Owner/operators should use an environmentally preferable lubricant, including vegetable oil, synthetic ester, or polyalkylene glycol as a base for these applications when feasible. Use of an environmentally preferable lubricant does not authorize the discharge of any lubricant in a quantity that may be harmful as defined in 40 CFR Part 110.

2.2.10 Distillation and Reverse Osmosis Brine

Brine from the distillation system and reverse osmosis reject water shall not contain or come in contact with machinery or industrial equipment (other than that necessary for the production of potable water), toxic or hazardous materials, or wastes.

2.2.11 Elevator Pit Effluent

Discharges of untreated elevator pit effluent are not authorized within waters subject to this permit except in cases of emergency. Elevator pit effluent may be discharged into waters subject to this permit if it is managed with the vessel's bilgewater and meets all the requirements of Part 2.2.2 of this permit or it must otherwise be treated with an oily-water separator and discharged with an oil content below 15 ppm as measured by EPA Method 1664 or other appropriate method for determination of oil content as accepted by the International Maritime Organization (IMO) (e.g. ISO Method 9377) or U.S. Coast Guard. Emergency discharges must

be documented in the ship's log or other vessel recordkeeping documentation consistent with Part 4.2.

2.2.12 Firemain Systems

Discharges from firemain systems are authorized for emergency purposes when needed to ensure the safety and security of the vessel and her crew, other emergency situations, and for testing and inspection purposes as may be required to assure its operability in an emergency. Firemain systems may be discharged in port for certification, maintenance, and training requirements if the intake comes directly from the surrounding waters or potable water supplies and there are no additions to the discharge. Furthermore, firemain discharges may be discharged for deck washdown or other secondary uses if the intake comes directly from the surrounding waters or potable water supplies and the discharge meets all relevant effluent limitation associated with that activity. When feasible, maintenance and training should be conducted outside port and/or outside waters subject to this permit.

Do not discharge firemain systems in waters listed in Part 12.1 except in emergency situations or when washing down the anchor chain to comply with anchor wash down requirements in Part 2.2.8.

2.2.13 Freshwater Layup

Minimize the amount of disinfection agents used in freshwater layup to the minimum required to prevent aquatic growth.

2.2.14 Gas Turbine Wash Water

Gas turbine wash water must not be directly discharged within waters subject to this permit. Where feasible, such washwater must be prevented from commingling with bilgewater that will be discharged in waters subject to this permit, for example by collecting it separately and properly disposing of it onshore. Under no circumstances may oils, including oily mixtures, from gas turbine wash water be discharged in waters subject to this permit in quantities that may be harmful as determined in accordance with 40 CFR Part 110.

2.2.15 Graywater

All vessels must minimize the discharge of graywater while in port. For those vessels that cannot store graywater, the owner or operator and their crews should minimize the production of graywater in port. All vessels that have the capacity to store graywater shall not discharge that graywater in waters listed in Part 12.1. For vessels that cannot store graywater, vessel operators must minimize the production of graywater while in waters listed in Part 12.1.

For vessels greater than 400 gross tons that regularly travel more than 1 nm from shore that have the capacity to store graywater for a sufficient period, graywater must be discharged greater than 1 nm from shore while the vessel is underway, unless the vessel meets the treatment standards and other requirements contained under Parts 5.1.1 and 5.1.2 or 5.2.1 and 5.2.2 of this permit. Additional specific requirements for graywater apply to cruise vessels (Parts 5.1 and 5.2) and large ferries (Part 5.3).

Vessels that do not travel more than 1 nm from shore shall minimize the discharge of graywater and, provided the vessel has available graywater storage capacity, must dispose of graywater on shore if appropriate facilities are available and such disposal is economically practicable and achievable unless the vessel meets the treatment standards and other requirements contained under Parts 5.1.1 and 5.1.2 or 5.2.1 and 5.2.2 of this permit. Minimize the discharge of graywater when the vessel is not underway.

If graywater will be discharged in waters subject to this permit, the introduction of kitchen oils must be minimized to the graywater system. When cleaning dishes, you must remove as much food and oil residue as practicable before rinsing dishes. Oils used in cooking shall not be added to the graywater system. Oil from the galley and scullery shall not be discharged in quantities that may be harmful as defined in 40 CFR Part 110.

Vessel owner/operators must use phosphate free and non-toxic soaps and detergents for any purpose if they will be discharged into waters subject to this permit. These detergents must be free from toxic or bioaccumulative compounds and not lead to extreme shifts in receiving water pH.

If you are underway in a nutrient impaired water, or a water that is impaired as a result of nutrient enrichment (such as waters listed as impaired for phosphorus, nitrogen, or for hypoxia or anoxia (low dissolved oxygen concentrations)) you must follow these additional steps:

When the vessel has adequate graywater storage capacity, the vessel owner/operator shall not discharge graywater into nutrient impaired waters subject to this permit (e.g., the Chesapeake Bay). A complete list of such waters can be found at www.epa.gov/npdes/vessels. Where the vessel does not have adequate storage capacity to eliminate such discharges, graywater production and discharge must be minimized in such waters. Any such discharge must be conducted while the vessel is underway in areas with significant circulation and depth to the extent feasible. Graywater stored while in such waters can later be disposed of on shore or discharged in accordance with the other requirements of this permit.

2.2.16 Motor Gasoline and Compensating Discharge

The discharge of motor gasoline and compensating effluent must not have oil in quantities that may be harmful as defined in 40 CFR 110.3, which includes discharges resulting in a visible sheen, or an oil concentration that exceeds 15 ppm. Determination of oil concentration may be measured by EPA Method 1664 or other appropriate method for determination of oil content as accepted by the International Maritime Organization (IMO) (e.g. ISO Method 9377) or U.S. Coast Guard. Compliance with the 15 ppm oil concentration limitation may be established with visual monitoring for an oily sheen. Minimize discharge of motor gasoline and compensating discharge in port. If an oily sheen is observed, the vessel operator must deploy appropriate oil containment practices. Vessels shall not discharge motor gasoline and compensating discharge in waters subject to this permit listed in Part 12.1.

2.2.17 Non-Oily Machinery Wastewater

If discharged directly overboard, non-oily machinery wastewater must be free from oils (in quantities that may be harmful pursuant to 40 CFR Part 110) and any additives that are toxic or bioaccumulative in nature. Non-oily machinery wastewater may also be drained to the bilge.

2.2.18 Refrigeration and Air Condensate Discharge

You must not allow refrigeration and air condensate discharge to come into contact with oily or toxic materials if it is discharged directly overboard. Refrigeration and air conditioning condensate that is collected and plumbed for internal recycling (e.g. recycled as "technical water") is allowed to commingle with oily water; however, the commingled discharge must meet all requirements of Part 2.1.4 of this permit and Part 2.2.2 of this permit if applicable.

2.2.19 Seawater Cooling Overboard Discharge (including Non-Contact Engine Cooling Water; Hydraulic System Cooling Water, Refrigeration Cooling Water)

When possible, seawater cooling overboard should be discharged when the vessel is underway so that any thermal impacts are dispersed.

To reduce the production and discharge of seawater cooling overboard discharge, EPA recommends that vessel owner/operators use shore based power when the vessel is in port if:

- Shore power is readily available for vessel owner/operators from utilities or port authorities,
- Shore based power supply systems are capable of providing all needed electricity required for vessel operations; and
- The vessel is equipped to connect to shore-based power and such systems are compatible with the available shore power.

Maintenance of all piping and seawater cooling systems must meet the requirements of Part 2.2.20 (Seawater-Piping Biofouling Prevention).

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 waters, should be discharged more than 50

nm from shore. Vessel owner/operators should remove any organisms while at sea to reduce the risk of invasive species introduction in ports.

2.2.21 Boat Engine Wet Exhaust

Vessels generating wet exhaust must be maintained in good operating order, well tuned, and functioning according to manufacturer specifications if available to decrease pollutant contributions to wet exhaust. Vessel owner/operators should use low sulfur or alternative fuels for their vessels to reduce the concentration of pollutants in their discharge.

EPA encourages vessel operators to consider four stroke versus two stroke engines for vessels generating wet exhaust that are covered under this permit. Use of a four stroke engine may minimize the discharge of pollutants to US waters.

2.2.22 Sonar Dome Discharge

The water inside the sonar dome shall not be discharged within waters subject to this permit for maintenance purposes. Vessel operators should not use biofouling chemicals that are bioaccumulative for the exterior of sonar domes when other viable alternatives are available.

2.2.23 Underwater Ship Husbandry Discharges

Vessel owner/operators must minimize the transport of attached living organisms when they travel into U.S. waters from outside the U.S. economic zone or when traveling between COTP zones.

Whenever possible, rigorous hull-cleaning activities should take place in drydock, or another 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, use facilities which treat the washwater prior to discharge to remove the antifouling compound(s) and fouling growth from the washwater.

Vessel owner/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:

- Selection 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.
- When available and feasible, use of vacuum control technologies to minimize the release or dispersion of antifouling hull coatings and fouling organisms into the water column.

Vessel owner/operators must minimize the release of copper based antifoulant paint into the water column when they clean their vessel. Cleaning of copper based antifoulant paints 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 should be substantially paint free (e.g. paint should not be clearly identifiable in the plume or cloud).

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.

2.2.24 Welldeck Discharges

Welldeck discharges that contain graywater from smaller vessels should not be discharged within waters subject to this permit except in cases of emergency. Welldeck discharges from washdown of gas turbine engines may not be discharged within waters subject to this permit. Welldeck discharges from equipment and vehicle washdowns must be free from garbage and must not contain oil in quantities that may be harmful as defined in 40 CFR Part 110.

2.2.25 Graywater Mixed with Sewage from Vessels

The commingled discharge of graywater mixed with sewage from vessels must comply with the effluent limits for graywater discharge in Part 2 or Part 5 of this permit if applicable. Though not a requirement of this permit, vessel owner/operators are advised that all discharges commingled with sewage must meet the requirements set forth in section 312 of the Clean Water Act and its implementing regulations found at 40 CFR Part 140 and 33 CFR Part 159. Hence, discharges of graywater mixed with sewage must meet both standards to be in compliance with the Clean Water Act.

2.2.26 Exhaust Gas Scrubber Washwater Discharge

Exhaust gas scrubber washwater discharge must not contain oil, including oily mixtures, in quantities that may be harmful as determined in accordance with 40 CFR Part 110. Sludge generated from exhaust gas scrubber washwater discharge must not be discharged in waters subject to this permit. In addition, EPA recommends that owner/operators of vessels with exhaust gas cleaning systems that result in washwater discharges follow the guidelines set out in section 10 for Exhaust Gas Cleaning Systems (resolution MEPC.170(57)).

2.3 Water Quality Based Effluent Limits

The requirements in Part 2.3 constitute the water quality-based effluent limitations in this permit. These water quality-based effluent limitations supplement this permit's technology-based limitations in Parts 2.1, 2.2, 2.3.2 and 5 of this permit.

2.3.1 Water Quality-Based Effluent Limitations

Your discharge must be controlled as necessary to meet applicable water quality standards in the receiving waterbody or another waterbody impacted by your discharges.

EPA generally expects that compliance with the other conditions in this permit, including Parts 2.1, 2.2, and 5, will control discharges as necessary to meet applicable water quality standards. If at any time you become aware, or EPA determines, that your discharge causes or contributes to an exceedance of applicable water quality standards, you must take corrective actions as required in Part 3; you must also report the exceedance(s) to EPA as required in Parts 1.13 and 4.4.1.

Additionally, EPA may impose additional water quality-based limitations on a site-specific basis, or require you to obtain coverage under an individual permit, if information in your NOI (if applicable), required reports, or from other sources indicates that, after meeting the water quality-based limitations in this section, your discharges are not controlled as necessary to meet applicable water quality standards, either in the receiving waterbody or another waterbody impacted by your discharges. EPA or an authorized representative of EPA may inform vessel owner/operators of specific requirements via dock side postings at marinas and ports or by specifically contacting the owner/operator of a vessel.

2.3.2 Dischargers to Water Quality Impaired Waters

Impaired waters or "water quality limited segment[s]" are those which have been identified by a State or EPA pursuant to Section 303(d) of the CWA as not meeting applicable State water quality standards. Impaired waters may include both waters with EPA-approved or EPA-established Total Maximum Daily Loads (TMDLs), and those for which EPA has not yet approved or established a TMDL.

2.3.2.1 Discharges to Impaired Waters without an EPA-Approved or Established TMDL

If you discharge to an impaired water without an EPA-approved or established TMDL, you are required to comply with the requirements in Part 2.3.1, including any additional requirements that EPA may impose pursuant to that section. Note that this provision also applies to situations where EPA determines that your discharge is not controlled as necessary to meet water quality standards in another waterbody, even if your discharge is to a receiving water that is not specifically identified on a Section 303(d) list.

2.3.2.2 Discharges to Impaired Waters with an EPA-Approved or Established TMDL

If you discharge to an impaired water with an EPA-approved or established TMDL and EPA or state TMDL authorities have informed you that a Waste Load Allocation (WLA) has been established that applies specifically to your vessel's discharges, to discharges from vessels in your vessel class or type, or to discharges from vessels in general if applicable, your discharge must be consistent with the assumptions and requirements of that WLA. If such a WLA exists, EPA will inform you if any additional limits or controls are necessary for your discharge to be consistent with the assumptions of any available WLA in the TMDL, or whether an individual permit application is necessary in accordance with Part 1.8.1. Note that this provision also applies to situations where EPA determines that your discharges are covered by the WLA in an EPA approved or established TMDL for another waterbody, even if your discharge is to a receiving water that is not specifically identified on a Section 303(d) list.

If an applicable TMDL exists either individually or categorically for your vessel or vessel class (including disallowing discharges from your vessel), EPA and/or state TMDL agencies will inform vessel owner/operators of specific requirements via dock side postings, or by specifically contacting the owner/operator of a vessel.

3. Corrective Actions

This corrective action section in no way impairs EPA's or an authorized representative acting on EPA's behalf ability to require remedies to bring vessel owner/operators into compliance. EPA may take enforcement action to require any remedy necessary to achieve compliance as quickly as possible, including more stringent time tables than those listed in this section.

3.1 Problems Triggering the Need for Corrective Action

If any of the following problems are identified, you must take action to ensure that the problem is eliminated and will not be repeated in the future:

- You violate one or more effluent limits in Part 2 or Part 5 or any other requirement of this permit, or an inspection or evaluation of your vessel by an EPA official or an official agent acting on EPA's behalf determines that modifications to the control measures are necessary to meet the effluent limit;
- You become aware, or EPA determines, that your measures do not control discharges as stringently as necessary to meet applicable water quality standards; or
- You find, or EPA determines, that your pollution control measures or best management practices are not being properly operated and maintained, or are not having the intended effect in minimizing pollutant discharges.

Problems might be identified through: the routine visual inspections or comprehensive annual inspections required by this permit under Part 4; any other inspection or evaluation of your operations by you, a government official, or anyone else; or through any other means.

3.2 Corrective Action Assessment

Following the identification of any of the problems listed in Part 3.1, you must conduct a corrective action assessment into the nature, cause, and potential options for eliminating these problems. The assessment must include the following:

- A description of the problem(s) discovered (e.g., the release of untreated ballast water not meeting the effluent limit, spilling oil in quantities that may be harmful as defined in 40 CFR Part 110), including the date, time and locations on the vessel where it occurred, the types of impacts observed, and the name, title and signature of the person who identified the problem and of the person who recorded the problem;
- An explanation of the cause of the problem(s), if known. If unknown at the time of the assessment, provide an indication of what steps will be taken to determine the cause;
- A description of the corrective actions to be taken necessary to eliminate the problem(s), and a schedule of activities for completing such actions within the timeframes established in Part 3.3;
- An indication whether the corrective action requires the vessel to be in dry dock and, if so, the next planned date the vessel will be drydocked; and

- Once the corrective action is implemented, record the date(s) and time(s) of the action, a description of the corrective action implemented, and the name, title and signature of the person recording this information.

You must retain the findings of your corrective action assessment in your recordkeeping documentation or in your ship's log (pursuant to Part 4.2.3), signed and certified in accordance with Part 1.7 of this permit.

3.3 Deadlines for Eliminating Problem

Compliance with many permit requirements can be accomplished immediately. These requirements include, but are not limited to housekeeping and certain operation and maintenance requirements. In these situations, you must return to compliance immediately.

Compliance with some permit requirements may require additional time for the vessel owner/operator to reasonably correct the problem. The following deadlines apply for eliminating the problem identified in Part 3.1 depending on the type of corrective action that must be taken:

- Corrective actions that can be accomplished with relatively simple adjustments to your control measures, using existing personnel and resources, and not requiring the vessel to be in dry dock: as soon as possible but no later than 2 weeks after the discovery of the problem, or, if leaving waters subject to this permit, before the expiration of the two-week period or before re-entering waters subject to this permit, whichever is later;
- Corrective actions that require new parts or the installation of new equipment, not requiring the vessel to be in dry dock: you must address the underlying cause of the noncompliance and return to compliance and/or complete necessary repairs no later than 3 months after the discovery of the problem, or, if leaving waters subject to this permit, before the expiration of the three-month period or before re-entering waters subject to this permit, whichever is later. However, if completing repairs within 3 months is impracticable, you must complete repairs as soon as possible after 3 months and document the reason why more time is needed as part of your corrective action assessment;
- For corrective actions that require large or comprehensive renovations, alterations, or repairs to the vessel that can only be achieved while the vessel is in dry dock: you must address the underlying cause of the noncompliance and return to compliance and/or complete necessary renovations or repairs prior to re-launching the vessel from dry dock.

3.4 Effect of Corrective Action

The initial occurrence of the problem in Part 3.1 constitutes a violation of the permit. Conducting the Part 3.2 assessment and correcting the problem according to Part 3.3 does not absolve you of liability for this original violation. However, failure to comply with Parts 3.2 and/or 3.3 constitutes an additional permit violation. EPA will consider the appropriateness and promptness of corrective action in determining enforcement responses to permit violations.

EPA may impose additional requirements and schedules of compliance, including requirements to submit additional information concerning the condition(s) triggering corrective action or schedules and requirements more stringent than specified in this permit. Those requirements and schedules will supersede those of Part 3.3 if such requirements conflict. EPA may also notify you that an individual permit application is necessary in accordance with Part 1.8.1.

4. Inspections, Monitoring, Reporting, and Recordkeeping

4.1 Self Inspections and Monitoring

You must conduct the following inspections of your vessel.

4.1.1 Routine Visual Inspections

Conduct routine visual inspections of all areas addressed in this permit, including, but not limited to cargo holds, boiler areas, machinery storage areas, welldecks, and other deck areas. Ensure these areas are clear of garbage, exposed raw materials, oil, any visible pollutant or constituent of concern that could be discharged in any waste stream, and that pollution prevention mechanisms are in proper working order. At a minimum, the routine inspection must verify that requirements of Part 2.1 are being met and document any instances of non-compliance. Routine inspections should be conducted on a schedule that coincides with other routine vessel inspections if feasible. At least once per week or per voyage, whichever is more frequent, you must conduct a visual inspection of safely accessible deck and cargo areas and all accessible areas where chemicals, oils, dry cargo or other materials are stored, mixed, and used, whether or not the areas have been used since the last inspection. If operators engage in multiple voyages per day, they need not conduct inspections on every voyage, but must conduct inspections at least once per day. Furthermore, the inspection should verify whether all monitoring, training, and inspections are logged according to permit requirements. A ship's watch must include visual monitoring of the water around and behind the vessel for visible sheens, dust, chemicals, abnormal discoloration or foaming, and other indicators of pollutants or constituents of concern originating from the vessel. Particular attention should be paid to deck runoff, ballast water, and bilgewater. If you identify or are made aware that pollutants or constituents of concern are originating from your vessel, you must initiate corrective actions in Part 3. Vessel owner/operators may conduct these inspections as part of meeting their existing (or updated) international safety management code (ISM) safety management system (SMS) plan obligations, provided that those inspections meet the minimum requirements discussed above.

At least once per quarter, you must sample any discharge stream such as bilgewater or graywater if accessible that is not readily visually inspected, such as effluent streams discharged below the water line. Inspect the sample for any signs of visible pollutants or constituents of concern, including discoloration, visible sheens, suspended solids, floating solids, foam, or changes to clarity. If you discover signs of oil, other pollutants, or other constituents of concern exceeding the applicable effluent limit, you must record the steps you have taken to prevent the continued discharge of these pollutants or constituents of concern and what corrective actions were taken to remediate the problem(s). Sampling of readily visible discharges is not required, but is recommended if the inspector cannot easily view their discharge characteristics (such as clarity or discoloration, presence of oily sheens, presence of foams, etc.). The vessel owner/operator and master are responsible for assuring that all discharges comply with the effluent limits in Part 2 of this permit and these visible inspections are one such tool a Master or owner/operator may use.

4.1.1.1 Documentation of the Routine Vessel Inspection

You must document the findings of each routine vessel inspection in the official ship logbook or as a component of other recordkeeping documentation referenced in Part 4.2. You must document the date and time of inspection, ship locations inspected, personnel conducting the inspection, location of any visual sampling and observations, note any potential problems and sources of contamination found, and it must be signed by the person conducting the inspection, if not the Master. The person conducting the inspection must be a signatory under 40 Part 122.22. A signatory includes the person in charge (e.g. the Master), or his duly authorized representative. The records of routine visual inspections must be made available to EPA or its authorized representative upon request. Vessel operators must initiate corrective actions, as required under Part 3 of this permit, for problems noted in their inspections.

4.1.2 Analytical Monitoring

Analytical monitoring requirements are identified in Part 5 of this permit.

4.1.3 Comprehensive Annual Vessel Inspections

Comprehensive vessel inspections must be conducted by qualified personnel at least once every 12 months. Qualified personnel include the master or owner/operator of the vessel, if appropriately trained, or appropriately trained marine or environmental engineers or technicians or an appropriately trained representative of a vessel's class society acting on behalf of the owner/operator.

Comprehensive annual inspections must cover all areas of the vessel affected by the requirements in this permit that can be inspected without forcing a vessel into drydock. Special attention should be paid to those areas most likely to result in a discharge likely to cause or contribute to exceedances of water quality standards or violate effluent limits established in this permit. Areas that inspectors must examine include, but are not limited to:

- Vessel hull for attached living organisms, flaking antifoulant paint, exposed TBT or other organotin surfaces,
- Ballast water tanks, as applicable,
- Bilges, pumps, and oily water separator (OWS) sensors, as applicable,
- Protective seals for lubrication and hydraulic oil leaks,
- Oil and chemical storage areas, cargo areas, and waste storage areas, and
- All visible pollution control measures to ensure that they are functioning properly.

If any of these portions of the vessel are not inspectable without the vessel entering drydock, the vessel owner/operator must inspect these areas during their drydock inspection and their results must be documented in their drydock inspection reports. Furthermore, vessel owner/operators must document which portions of the vessel are not inspectable for the annual inspection in their recordkeeping documentation.

The annual inspections must also include a review of monitoring data collected in accordance with Part 5 if applicable, and routine maintenance records to ensure that required maintenance is being performed (e.g., annual tune-ups for small boats that have wet exhaust). Inspectors must also consider the results of the past year's visual and analytical monitoring when planning and conducting inspections.

When comprehensive vessel inspection schedules overlap with routine vessel inspections required under Part 4.1.1, your annual comprehensive vessel inspection may also be used as one of the routine inspections, as long as components of both types of inspections are included.

If inspections revealed flaws that would result in a violation of the effluent limits in Parts 2 and 5, or that indicated that control measures are not functioning as anticipated or are in need of repair or upgrade, you must take corrective action to resolve such flaws in accordance with Part 3. You must record all results from your annual inspection in your vessel's recordkeeping documentation or logbook.

4.1.4 Drydock Inspection Reports

Vessel owner/operators must make any drydock reports prepared by the class society or their flag administrations available to EPA or an authorized representative of EPA upon request. If you do not have a drydock report from either of these entities, you must prepare your own drydock report and it must be made available to EPA or an authorized representative of EPA upon request. The drydock report must note that:

- The chain locker has been cleaned for both sediment and living organisms,
- The vessel hull, propeller, rudder, thruster gratings, sea chest, and other surface areas of the vessel have been inspected for attached living organisms and those organisms have been removed or neutralized,
- Any antifoulant hull coatings have been applied, maintained and removed consistent with the FIFRA label if applicable; any exposed existing or any new coating does not contain biocides or toxics that are banned for use in the United States,
- For all cathodic protection, anodes or dialectic coatings have been cleaned and/or replaced to reduce flaking, and
- All pollution control equipment is properly functioning.

4.2 Recordkeeping

For all vessels covered by this permit, you must keep written records on the vessel or accompanying tug that include the following information:

1) Owner/Vessel information
   - i) Name,
   - ii) International Maritime Organization (IMO) Number (official number if IMO number not issued),
   - iii) Vessel type,

iv) Owner or operator company name,
v) Owner or operator certifying official's name,
vi) Address of owner/operator,
vii) Gross tonnage,
viii) Call sign, and
ix) Port of Registry (Flag).

2) Voyage Log. Include the dates and ports of arrival, vessel agent(s), last port and country of call, and next port and country of call (when known).

3) If you have any violation of any effluent limit, you must document the violation. You must also record:
   i) A description of the violation,
   ii) Date of the violation,
   iii) Name, title and signature of the person who identified the violation,
   iv) Name, title and signature of the person who is recording the violation (if different from person who identified the violation),
   v) If a Corrective Action Assessment pursuant to Part 3.2 is needed, attach a copy or indicate where the corrective action assessment is stored, and
   vi) If a Corrective Action Assessment was previously conducted pursuant to Part 3.2 (and revisions are not needed for this violation of the effluent limit), a reference to that previous corrective action assessment.

4) Log of deficiencies and problems found during routine inspections conducted under Part 4.1.1, including a discussion of any corrective actions required by Part 3 if applicable. Include date, inspector's name, findings, and corrective actions planned or taken. If no deficiencies or problems are found during a routine inspection, record that the inspection was completed with the inspector's name and date. Routine visual inspections must be recorded as completed according to Part 4.1.1.

5) Analytical results of all monitoring conducted under Part 4.1.2, including sample documentation, results, and laboratory QA documentation.

6) Log of findings from annual 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 corrective actions taken.

7) Record of any specific requirements in Part 2.3 given to your vessel by EPA, or clearly posted by state agencies and how you have met those requirements.

8) Additional maintenance and discharge information to be recorded and kept in a log on the vessel.
   i) Deck maintenance. Record dates, materials used, application process, etc. for any significant maintenance of the deck surface(s) (e.g. more than routine, daily cleaning activities, such as sweeping).

ii) Bilgewater. Record dates, location, oil concentration (for MARPOL vessels) or visible sheen observation (non-MARPOL vessels), and estimated volume of bilgewater discharges. Record the same information for bilgewater disposed at onshore locations.

iii) Paint application. Record dates, materials used, application process, etc. for any antifouling paint applied to the vessel.

iv) AFFF. Record dates, estimated volumes, and constituents of any discharges of AFFF.

v) Chain locker inspections. Dates of inspections and any rinsing conducted within waters subject to this permit.

vi) Controllable pitch propeller, stern tube, and other oil-to-sea interface maintenance. Record dates and locations of any maintenance of controllable pitch propellers that occurs while the vessel is in waters subject to this permit.

vii) Any emergencies requiring discharges otherwise prohibited to waters listed in Part 12.1.

viii) Gas Turbine Water Wash. Record dates and estimated volume of any discharge of gas turbine wash water within waters subject to this permit. If hauled or disposed onshore, record log hauler and volume.

ix) Estimated volume and location of graywater discharged while in waters subject to this permit.

9) All other documentation requirements stated in the permit.

10) Record of training completed as required by this permit.

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, or other additional recordkeeping documentation as appropriate but must be provided to EPA or its authorized representative if requested. Operators may choose how these records will be maintained, but must retain these records on the vessel for a period of 3 years.

Certification of accurate information is required, pursuant to the certification and signatory requirements referenced in Parts 1.7 of this permit and 40 CFR 122.22. You 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.

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 section upon request.

4.3 Additional Recordkeeping for Vessels Equipped with Ballast Tanks

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:

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 (m^3), long tons (LT), and short tons (ST).

2) Ballast water management. 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. If an alternative ballast water management method is used, please note the number of tanks that were managed using an alternative method, as well as the type of method used. Indicate whether the vessel has a ballast water management plan and IMO guidelines on board, and whether the ballast water management plan is used.

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:
   i) 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.
   ii) 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.
   iii) 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.

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.

The ballast water reporting forms must be kept on board the vessel and must be submitted to the National Ballast Information Clearinghouse before arriving to US ports if required by the US Coast Guard. In addition, all vessels which conduct saltwater flushing as required by Part 2.2.3.7 and Part 2.2.3.8 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.

4.4 Reporting

4.4.1 Reporting Noncompliance

You must report all instances of noncompliance with this permit at least once per year to the regional offices listed in Part 8. Vessel operators must report the noncompliance to the regional office responsible for the waters in which the noncompliance occurred. If vessels have multiple occurrences of noncompliance, they must report all noncompliance to the regional office where either: 1) the greatest number of noncompliance events occurred, or 2) if the same number of noncompliance events occurred, to the regional office responsible for waters where the vessel spent the most time.

4.4.2 Reportable Quantities of Hazardous Substances or Oil

Although not a requirement of this permit, if a discharge contains a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under 40 CFR 110, 40 CFR 117, or 40 CFR 302, during a 24-hour period, the National Response Center (NRC) must be notified (dial 800-424-8802 or 202-426-2675 in the Washington, DC area). Also, within 14 calendar days of knowledge of the release, the date and description of the release, the circumstances leading to the release, responses to be employed for such releases, and measures to prevent reoccurrence of such releases must be recorded in your recordkeeping documentation consistent with Part 4.2 of this permit.

Where a discharge of hazardous substances or oil in excess of reportable quantities occurs, such discharge is not authorized by this permit and may also be a violation of Section 311 of the CWA, 33 USC § 1321. Note that these spills must be reported as described above. Also applicable are Section 311 of the CWA and certain provisions of Sections 301 and 402 of the CWA.

4.4.3 Additional Reporting

In addition to the reporting requirements stipulated in Part 4, you are also subject to the standard permit reporting provisions referenced in Part 1.13.

Where applicable, you must submit the following reports to the appropriate EPA Regional Office listed in Part 8 as applicable.

- 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.

4.4.4 One-Time Permit Report

For each vessel, owner/operators are required to submit a one-time report between 30 months and 36 months after obtaining permit coverage. This report should take less than 30

minutes to complete and will assist EPA in developing the next round of general permits covering vessel discharges. The report form, included in Part 13 of this Permit, will be available for printing as a file on EPA's website (www.epa.gov/npdes/vessels within two years of finalization of this permit, or through EPA's eNOI system (www.epa.gov/npdes/vessels/eNOI). Please respond to the questions and submit any necessary data that support your responses. EPA encourages all owner/operators to submit their reports electronically. If you print out a hard copy of the report, you may send your completed report to EPA HQ (Attn: Vessel One Time Report, Mail Code 4203M, 1200 Pennsylvania Ave. NW, Washington, DC 20460)

5. Vessel Class Specific Requirements

You must comply with Part 5 vessel-specific requirements associated with your vessel class in addition to any requirements specified elsewhere in this permit.

5.1 Large Cruise Ships (authorized to carry 500 people or more for hire).

The requirements in Part 5.1 apply to vessel discharges from cruise ships providing overnight accommodations (has onboard sleeping facilities) to passengers authorized to carry 500 people or more for hire.

5.1.1 Additional Effluent Limits

5.1.1.1 Graywater Management

5.1.1.1.1 Graywater Discharge Location and Rate

Pierside Limits – While pierside, appropriate reception facilities for graywater must be used, if reasonably available unless the vessel treats graywater with a device to meet the standards in Part 5.1.1.1.2. If such facilities are not reasonably available, you must treat graywater with a device to meet the standards in Part 5.1.1.1.2 or hold the graywater for discharge while the vessel is underway and discharge according to the operational limits below. Appropriate reception facilities are those authorized for use by the port authority or municipality and that treat the discharge in accordance with its NPDES permit.

Operational Limits – You must meet the following restrictions:

- While operating within 1 nm from shore, discharges of graywater are prohibited unless they meet the effluent standards in Part 5.1.1.1.2.
- If you operate between 1 nm and 3 nm from shore, discharges of graywater must either: (1) meet the effluent standards in Part 5.1.1.1.2, or (2) be released while the Cruise Ship is sailing at a speed of at least 6 knots in a water that is not listed in Part 12.1.

Limits Applicable to Operation in Nutrient Impaired Waters – If you operate in nutrient impaired waters including the Chesapeake Bay or the territorial Sea surrounding the mouth of the Mississippi River in the Gulf of Mexico, you must:

- Not discharge any graywater in nutrient impaired waters subject to this permit unless the length of voyage in that water exceeds the vessel's holding capacity for graywater; and
- Minimize the discharge of any graywater into nutrient impaired waters subject to this permit, which may require minimizing the production of graywater; and
- If your vessel's holding capacity for graywater is exceeded, treat such excess graywater (above the vessel holding capacity) by a device meeting the standards in Part 5.1.1.1.2 prior to discharge into nutrient impaired waters subject to this permit or
- Dispose of the graywater properly on shore.

A list of nutrient impaired waters is available at www.epa.gov/npdes/vessels.

5.1.1.1.2 Graywater Treatment Standards

The discharge of treated graywater must meet the following standards:

1) The discharge must satisfy the minimum level of effluent quality specified in 40 CFR 133.102,

2) The geometric mean of the samples from the discharge during any 30-day period may not exceed 20 fecal coliform/100 milliliters (ml) and not more than 10 percent of the samples exceed 40 fecal coliform/100 ml, and

3) Concentrations of total residual chlorine may not exceed 10.0 micrograms per liter (µg/l).

5.1.1.1.3 Sculleries and Galleys

Cruise ship owner/operators must use detergents that are phosphate free. Degreasers must be non-toxic if they will be discharged as part of any waste stream.

5.1.1.1.4 Other Materials

Waste from mercury containing products, dry cleaners or dry cleaner condensate, photo processing labs, medical sinks or floor drains, chemical storage areas, and print shops using traditional or non-soy based inks and chlorinated solvents must be prevented from entering the ship's graywater, blackwater, or bilgewater systems if water from these systems will ever be discharged into waters subject to this permit. Preventing these wastes from entering these systems can be accomplished by plugging all drains that flow to the graywater, blackwater, or bilge systems in areas where these wastes are produced and creating alternate waste receptacles or replumbing drains to appropriate holding tanks.

Vessel owner/operators must not discharge any toxic or hazardous materials, including products containing acetone, benzene, or formaldehyde into salon and day spa sinks or floor drains if those sinks or floor drains lead to any system which will ever be discharged into waters subject to this permit. This includes using these materials on passengers (or crew) and rinsing residuals into these sinks. Alternate waste receptacles or holding tanks must be used for these materials. Additions of these materials to any systems which will discharge into waters subject to this permit is a permit violation.

5.1.1.2 Pool and Spa Discharges

Discharges of pool or spa water are not authorized into waters listed in Part 12.1 of this permit. Discharges from pools and spas are authorized into other waters subject to this permit, provided they are dechlorinated and/or debrominated, and discharged while the vessel is underway. To be considered dechlorinated, the total residual chlorine in the pool or spa effluent must be less than 100µg/l if the pool or spa water is discharged without treatment through an advanced wastewater treatment system. To be considered debrominated, the total residual

oxidant in the pool or spa effluent must be below 25µg/l if the pool or spa water is discharged without going through an advanced wastewater treatment system. Pool and spa water may be added to the graywater treatment systems, however any resultant discharge must meet all standards and requirements found in Part 5.1.1.1 and must be debrominated.

5.1.2 Monitoring Requirements

5.1.2.1 Untreated Graywater

The owner/operator must maintain records estimating all discharges of untreated graywater into waters subject to this permit, including date, location and volume discharged and speed of the vessel at the time of discharge in their recordkeeping documentation. These records can be maintained as part of the vessel's sewage and graywater discharge record book required under 33 CFR §159.315.

5.1.2.2 Treated Graywater

Prior to entering waters of the U.S., vessel operators must demonstrate that they have an effective treatment system that complies with the standards in Part 5.1.1.1.2 if they will discharge graywater:

1) Within 1 nm of shore, or
2) Within 3 nm of shore and sailing less than 6 knots.

5.1.2.2.1 Initial Monitoring

In order to demonstrate the effectiveness of the treatment system, the vessel operator must take at least five (5) samples taken from the vessel on different days over a 30-day period that are representative of the treated effluent to be discharged. Initial monitoring must be done within the first 90 days of permit coverage, within 90 days of AWTS installation onboard the vessel, or before vessels discharge into waters subject to this permit, whichever is later. Samples must be taken for biochemical oxygen demand (BOD), fecal coliform, suspended solids, pH, and total residual chlorine. Sampling and testing shall be conducted according to 40 CFR Part 136. If the measured samples meet the standards specified in Part 5.1.1.1.2, then the owner/operator has demonstrated the effectiveness of their treatment system for controlling their graywater discharge. Records of the sampling and testing results must be retained onboard for a period of 3 years in the vessel's recordkeeping documentation.

Records of monitoring information shall include:

- The date, exact place, and time of sampling or measurements,
- The individual(s) who performed the sampling or measurements,
- The date(s) analyses were performed,
- The individual(s) who performed the analyses;

- The analytical techniques or methods used; and
- The results of such analyses.

Analytical results for total residual chlorine below the method detection limit shall be deemed compliant with the effluent limits, provided the permittee uses a testing method with a detection limit no higher than 10.0 µg/L under ideal conditions. EPA recommends method SM4500-CL G (DPD Colorimetric Method) for these purposes as it is able to reach 10 µg/L under ideal conditions and so meets these requirements. SM4500-Cl G is typically the method that ADEC/USCG uses for compliance monitoring.

Testing and reporting for total residual chlorine is not required if chlorine is not used as disinfectant in the wastewater treatment works process and no water is drained to the graywater system from water with onboard chlorine additions (e.g. swimming pools, spas. . .).

If a permittee has already received certification for continuous discharges from AWTS by the United States Coast Guard to meet the requirements of Section 1411(b) of Title XIV, Pub. L. 106-554 (Dec. 31, 2000, 114 Stat. 2763) [Certain Alaska Cruise Ship Operations] (codified at 33 U.S.C. 1901 note), the vessel need not conduct initial monitoring and may commence conducting maintenance monitoring.

5.1.2.2.2 Maintenance Monitoring

After demonstrating the effectiveness of their system, vessel owner/operators must collect and analyze one sample per quarter for each of the constituents analyzed in Part 5.1.2.2.1 to demonstrate treatment equipment maintenance and compliance with this permit. Records of the sampling and testing results must be retained onboard for a period of 3 years in the vessel's recordkeeping documentation.

5.1.2.2.3 Monitoring Reporting

Unless the vessel meets the conditions in the following paragraph, the operator must submit data showing that the graywater standards are achieved by their treatment system to EPA's e-reporting system or to EPA, 1200 Pennsylvania Ave., MC 4203M, Washington, DC 20460. Initial sampling data must be submitted at least 7 days before entering waters subject to this permit, within 90 days of obtaining permit coverage, or within 90 days of AWTS installation onboard the vessel, whichever is later. Maintenance monitoring data must be submitted at least once per year within 30 days of the fourth sample collection. Data must be submitted on Discharge Monitoring Reports available in Appendix I of this permit or submitted to EPA's e-reporting system available at www.epa.gov/vessels/eNOI, which will be available within two years of finalization of this permit.

If the vessel operates in Alaskan waters and submits or has already submitted the above information to the COTP to meet the requirements of Section 1411(b) of Title XIV, Pub. L. 106-554 (Dec. 31, 2000, 114 Stat. 2763) [Certain Alaska Cruise Ship Operations] (codified at 33 U.S.C. 1901 note), that submission will serve to satisfy these requirements. EPA will obtain the data from the COTP in order to minimize duplicative requirements.

5.1.2.2.4 Reserved Authority

Even if owner/operators have demonstrated their system meets the standards in Part 5.1.1.1.2, if EPA, its authorized representative, or the Coast Guard sample their graywater effluent and find that they are not meeting these standards, the cruise ship owner/operators are liable for violating their effluent limits.

5.1.2.2.5 Treated Graywater Records

The owner/operator must maintain records estimating all discharges of treated graywater into waters subject to this permit, including date, location and volume discharged in their recordkeeping documentation. These records can be maintained as part of or in combination with the vessel's sewage and graywater discharge record book required under 33 CFR 159.315.

5.1.2.3 Treated Pool and Spa Discharges

Vessel owner/operators must monitor chlorine or bromine concentrations (as applicable) in pool or spa water before every discharge event using Part 136 methods if they will discharge these streams directly into waters subject to this permit to assure that the dechlorination process is complete. If vessel owner/operators are monitoring bromine concentrations, they may use a field test kit which uses the colorimetric method in lieu of Part 136 methods to assure waters have been debrominated, provided that test kit has method detection limit no higher than 50 µg/L. You must record the location of the discharge, the estimated volume of the discharge, and the concentration of chlorine or bromine (as applicable). Records of this monitoring must be kept with other graywater monitoring records.

For chlorine, analytical results below the method detection limit shall be deemed compliant with the effluent limits, provided the permittee uses a testing method with a detection limit no higher than 10.0 µg/L under ideal conditions. EPA recommends method SM4500-CL G (DPD Colorimetric Method) for these purposes as it is able to reach 10 µg/L under ideal conditions and so meets these requirements. SM4500-Cl G is typically the method that ADEC/USCG uses for compliance monitoring. For bromine, analytical results below the method detection limit shall be deemed compliant with the effluent limits, provided the permittee uses a testing method with a detection limit no higher than 50.0 µg/L.

5.1.3 Educational and Training Requirements

The crews of cruise ships play a key role in minimizing the discharge of pollutants from cruise ship operations and passengers. Therefore cruise ship operators are subject to the following requirements:

- The ship's crew members who actively take part in the management of a discharge or who may affect any discharge must receive training regarding shipboard environmental procedures and must be able to demonstrate proficiency in implementing these procedures.
- Advanced training in shipboard environmental management procedures must be provided for those directly involved in managing specific discharge types or areas of the ship and

these crew members must be able to demonstrate proficiency in implementing these procedures.

- Appropriate reprimand procedures must be developed for crew whose actions lead to violations of any effluent limit set forth in this permit or procedures established by the cruise ship operator to minimize the discharge of pollutants.

Cruise ships must also educate passengers on their potential environmental impacts. The goals of these education efforts should include preventing trash from entering any waste stream, eliminating the addition of unused soaps, detergents, and pharmaceuticals to the graywater or blackwater systems and minimizing production of graywater. This can be accomplished in a variety of ways including, but not limited to posting signage and informational material in guestrooms and common areas, incorporating environmental information passenger orientation presentations or packages at the start of cruises, incorporating this information into additional lectures and seminars, or broadcasting information via loudspeakers.

5.2 Medium Cruise Ships (authorized to carry 100 to 499 people for hire)

The requirements in Part 5.2 apply to vessel discharges from cruise ships providing overnight accommodations (has onboard sleeping facilities) to passengers authorized to carry between 100 and 499 people for hire.

5.2.1 Additional Effluent Limits

5.2.1.1 Graywater Management

5.2.1.1.1 Graywater Discharge Location and Rate

All medium cruise ships must meet the requirements of Parts 5.2.1.1.1 unless they are a vessel unable to voyage more than 1 nm from shore. Vessels unable to voyage 1 nm from shore must meet the requirements of Part 5.2.1.1.1 if they are constructed on or after the issuance date of this permit.

Pierside Limits – While pierside, appropriate reception facilities for graywater must be used, if reasonably available unless the vessel treats graywater with a device to meet the standards in Part 5.2.1.1.2. If such facilities are not reasonably available, you must treat graywater with a device to meet the standards in Part 5.2.1.1.2 or hold the graywater for discharge while the vessel is underway and discharge according to the Operational Limits below. Appropriate reception facilities are those authorized for use by the port authority or municipality and that treat the discharge in accordance with its NPDES permit.

Operational Limits – You must meet the following restrictions:

- While operating within 1 nm from shore, discharges of graywater are prohibited unless they meet the effluent standards in Part 5.2.1.1.2.

- If you operate between 1 nm and 3 nm from shore, discharges of graywater must either: (1) meet the effluent standards in Part 5.2.1.1.2, or (2) be released while the cruise ship is sailing at a speed of at least 6 knots in a water that is not listed in Part 12.1.

Limits Applicable to Operation in Nutrient Impaired Waters – If you operate in nutrient impaired waters including the Chesapeake Bay or the territorial sea surrounding the mouth of the Mississippi River in the Gulf of Mexico, you must:

- Not discharge any graywater in nutrient impaired waters subject to this permit unless the length of voyage in that water exceeds the vessel's holding capacity for graywater, and
- Minimize the discharge of any graywater into nutrient impaired waters subject to this permit, which may require minimizing the production of graywater, and
- If your vessel's holding capacity for graywater is exceeded, treat such excess graywater (above the vessel holding capacity) by a device meeting the standards in Part 5.2.1.1.2 prior to discharge into nutrient impaired waters subject to this permit, or
- Dispose of the graywater properly on shore, or
- Discharge the graywater while the cruise ship is sailing at a speed of at least 6 knots.

A list of nutrient impaired waters is available at www.epa.gov/npdes/vessels.

5.2.1.1.2 Graywater Treatment Standards

The discharge of treated graywater must meet the following standards:

1) The discharge must satisfy the minimum level of effluent quality specified in 40 CFR 133.102,

2) The geometric mean of the samples from the discharge during any 30-day period may not exceed 20 fecal coliform/100 milliliters (ml) and not more than 10 percent of the samples exceed 40 fecal coliform/100 ml, and

3) Concentrations of total residual chlorine may not exceed 10.0 micrograms per liter (µg/l).

5.2.1.1.3 Sculleries and Galleys

Cruise ship owner/operators must use detergents that are phosphate free. Degreasers must be non-toxic if they will be discharged as part of any waste stream.

5.2.1.1.4 Other Materials

Waste from mercury containing products, dry cleaners or dry cleaner condensate, photo processing labs, medical sinks or floor drains, chemical storage areas, and print shops using traditional or non-soy based inks and chlorinated solvents must be prevented from entering the ship's graywater, blackwater, or bilgewater systems if water from these systems will ever be discharged into waters subject to this permit. Preventing these wastes from entering these

systems can be accomplished by plugging all drains that flow to the graywater, blackwater, or bilge systems in areas where these wastes are produced and creating alternate waste receptacles or replumbing drains to appropriate holding tanks.

Vessel owner/operators must not discharge any toxic or hazardous materials, including products containing acetone, benzene, or formaldehyde into salon and day spa sinks or floor drains if those sinks or floor drains lead to any system which will ever be discharged into waters subject to this permit. This includes using these materials on passengers (or crew) and rinsing residuals into these sinks. Alternate waste receptacles or holding tanks must be used for these materials. Additions of these materials to any systems which will discharge into waters subject to this permit is a permit violation.

5.2.1.2 Pool and Spa Discharges

Discharges of pool or spa water are not authorized into waters listed in Part 12.1 of this permit. Discharges from pools and spas are authorized into other waters subject to this permit, provided they are de-chlorinated and/or debrominated, and discharged while the vessel is underway. To be considered dechlorinated, the total residual chlorine in the pool or spa effluent must be less than 100µg/l if the pool or spa water is discharged without treatment through an advanced wastewater treatment system. To be considered debrominated, the total residual oxidant in the pool or spa effluent must be below 25µg/l if the pool or spa water is discharged without going through an advanced wastewater treatment system. Pool and spa water may be added to the graywater treatment systems, however any resultant discharge must meet all standards and requirements found in Part 5.2.1.1 and must be debrominated.

5.2.2 Monitoring Requirements

5.2.2.1 Untreated Graywater

The owner/operator must maintain records estimating all discharges of untreated graywater into waters subject to this permit, including date, location and volume discharged in their recordkeeping documentation. These records can be maintained as part of the vessel's sewage and graywater discharge record book required under 33 CFR 159.315.

5.2.2.2 Treated Graywater

Prior to entering waters of the U.S., vessel operators must demonstrate that they have an effective treatment system that complies with the standards in Part 5.1.1.1.2 if they will discharge graywater:

1) Within 1 nm of shore, or
2) Within 3 nm of shore and sailing less than 6 knots.

5.2.2.2.1 Initial Monitoring

In order to demonstrate the effectiveness of the treatment system, the vessel operator must take at least five (5) samples taken from the vessel on different days over a 30-day period that are representative of the treated effluent to be discharged. Initial monitoring must be done

within the first 90 days of permit coverage, within 90 days of AWTS installation onboard the vessel, or before vessels discharge into waters subject to this permit, whichever is later. Samples must be taken for BOD, fecal coliform, suspended solids, pH, and total residual chlorine. Sampling and testing shall be conducted according to 40 CFR Part 136. If the measured samples meet the standards specified in Part 5.1.1.1.2., then the owner/operator has demonstrated the effectiveness of their treatment system for controlling their graywater discharge. Records of the sampling and testing results must be retained onboard for a period of 3 years in the vessel's recordkeeping documentation.

Records of monitoring information shall include:

- The date, exact place, and time of sampling or measurements,
- The individual(s) who performed the sampling or measurements,
- The date(s) analyses were performed,
- The individual(s) who performed the analyses,
- The analytical techniques or methods used, and
- The results of such analyses.

Analytical results for total residual chlorine below the method detection limit shall be deemed compliant with the effluent limits, provided the permittee uses a testing method with a detection limit no higher than 10.0 µg/L under ideal conditions. EPA recommends method SM4500-CL G (DPD Colorimetric Method) for these purposes as it is able to reach 10 µg/L under ideal conditions and so meets these requirements. SM4500-Cl G is typically the method that ADEC/USCG uses for compliance monitoring.

Testing and reporting for total residual chlorine is not required if chlorine is not used as disinfectant in the wastewater treatment works process and no water is drained to the graywater system from water with on board chlorine additions (e.g. swimming pools, spas. . .).

5.2.2.2.2 Maintenance Monitoring

After demonstrating the effectiveness of their system, vessel owner/operators must collect and analyze one sample per quarter for each of the constituents analyzed in Part 5.1.2.2.1 to demonstrate treatment equipment maintenance and compliance with this permit. Records of the sampling and testing results must be retained onboard for a period of 3 years in the vessel's recordkeeping documentation.

5.2.2.2.3 Monitoring Reporting

Unless the vessel meets the conditions in the following paragraph, the operator must submit data showing that the graywater standards are achieved by their treatment system to EPA's e-reporting system or to EPA, 1200 Pennsylvania Ave., MC 4203M, Washington, DC 20460. Initial sampling data must be submitted at least 7 days before entering waters subject to this permit, within 90 days of obtaining permit coverage, or within 90 days of AWTS installation onboard the vessel, whichever is later. Maintenance monitoring data must be submitted at least

once per year within 30 days of the fourth sample collection. Data must be submitted on Discharge Monitoring Reports available in Appendix I of this permit or submitted to EPA's e-reporting system available at www.epa.gov/vessels/enoi , which will be available within two years of finalization of this permit.

5.2.2.2.4 Reserved Authority

Even if owner/operators have demonstrated their system meets the standards in Part 5.1.1.1.2, if EPA, its authorized representative, or the Coast Guard sample their graywater effluent and find that they are not meeting these standards, the cruise ship owner/operators are liable for violating their effluent limits.

5.2.2.2.5 Treated Graywater Records

The owner/operator must maintain records estimating all discharges of treated graywater into waters subject to this permit, including date, location and volume discharged in their recordkeeping documentation.

5.2.2.3 Treated Pool and Spa Discharges

Vessel owner/operators must monitor chlorine or bromine concentrations (as applicable) in pool or spa water before every discharge event using Part 136 methods if they will discharge these streams directly into waters subject to this permit to assure that the dechlorination process is complete. If vessel owner/operators are monitoring bromine concentrations, they may use a field test kit which uses the colorimetric method in lieu of Part 136 methods to assure waters have been debrominated, provided that test kit has method detection limit no higher than 50 µg/L. You must record the location of the discharge, the estimated volume of the discharge, and the concentration of chlorine or bromine (as applicable). Records of this monitoring must be kept with other graywater monitoring records.

For chlorine, analytical results below the method detection limit shall be deemed compliant with the effluent limits, provided the permittee uses a testing method with a detection limit no higher than 10.0 µg/L under ideal conditions. EPA recommends method SM4500-CL G (DPD Colorimetric Method) for these purposes as it is able to reach 10 µg/L under ideal conditions and so meets these requirements. SM4500-Cl G is typically the method that ADEC/USCG uses for compliance monitoring. For bromine, analytical results below the method detection limit shall be deemed compliant with the effluent limits, provided the permittee uses a testing method with a detection limit no higher than 50.0 µg/L.

5.2.3 Educational and Training Requirements

The crews of cruise ships play a key role in minimizing the discharge of pollutants from cruise ship operations and passengers. Therefore cruise ship operators are subject to the following requirements:

- The ship's crew members who actively take part in the management of the discharge or who may affect the discharge must receive training regarding shipboard environmental

procedures and must be able to demonstrate proficiency in implementing these procedures.

- Advanced training in shipboard environmental management procedures must be provided for those directly involved in managing specific discharge types or areas of the ship and these crew members must be able to demonstrate proficiency in implementing these procedures.
- Appropriate reprimand procedures must be developed for crew whose actions lead to violations of any effluent limit set forth in this permit or procedures established by the cruise ship operator to minimize the discharge of pollutants.

Cruise ships must also educate passengers on their potential environmental impacts. The goals of these education efforts should include preventing trash from entering any waste stream, eliminating the addition of unused soaps, detergents, and pharmaceuticals to the graywater or blackwater systems, and minimizing production of graywater. This can be accomplished in a variety of ways including, but not limited to posting signage and informational material in guestrooms and common areas, incorporating environmental information passenger orientation presentations or packages at the start of cruises, incorporating this information into additional lectures and seminars, or broadcasting information via loudspeakers.

5.3 Large Ferries

Ferries are vessels for hire that are designed to carry passengers and/or vehicles between two ports, usually in inland, coastal, or near-shore waters. “Large Ferry” means a “ferry” that: a) has a capacity greater than or equal to 100 tons of cargo, e.g., for cars, trucks, trains, or other land-based transportation or b) is authorized by the Coast Guard to carry 250 or more people. All large ferries authorized to carry more than 100 tons of cars, trucks, trains, or other land-based transportation must meet the requirements in section 5.3.1.1 (Deck Water) and section 5.3.2 (Education and Training). Large ferries authorized by the Coast Guard to carry 250 or more people must meet the requirements of section 5.3.1.2 (Graywater management) and section 5.3.2 (Education and Training).

5.3.1 Additional Authorized Discharges

5.3.1.1 Coal Ash from Coal Fired Propulsion Systems on Ferries

The discharge of coal ash slurry from coal fired propulsion systems on a ferry is authorized in waters subject to this permit until December 19, 2012. All coal ash slurry discharges must comply with effluent limits in Part 5.3.2.3 of this permit.

5.3.2 Additional Effluent Limits

5.3.2.1 Deck Water

Large ferries may not discharge untreated below deck water from parking areas or other storage areas for motor vehicles or other motorized equipment into waters subject to this permit without first treating the effluent with an oily water separator or other appropriate device. Large

ferry operators must use oil absorbent cloths or other appropriate spill response resources to clean oily spills or substances from deck surfaces. Any effluent created by washing the decks may not be discharged into the waters subject to this permit listed in Part 12.1.

5.3.2.2 Graywater Management

5.3.2.2.1 Graywater Discharge Location and Rate

Pierside Limits – While pierside, appropriate reception facilities for Graywater must be used, if reasonably available. If such facilities are not reasonably available, you must hold the graywater if the vessel has the holding capacity and discharge the effluent while the vessel is underway. Appropriate reception facilities are those authorized for use by the port authority or municipality and that treat the discharge in accordance with its NPDES permit.

Operational Limits – You must also meet the following restrictions:

- If you operate within 3 nm from shore, discharges of graywater must be released while the ferry is sailing at a speed of at least 6 knots if feasible.

5.3.2.3 Coal Ash Effluent Limits and Related Requirements

5.3.2.3.1 Minimization of Coal Ash Slurry Discharge

Vessel owner/operators must minimize the discharge of coal ash slurry into waters subject to this permit. Minimization techniques shall include:

- Efficient combustion of coal,
- Minimize the ash content of the coal used onboard, but in no event may the ash content exceed 9.5 % (by weight and as received), and
- Limiting discharge quantities to those necessary for the safe and efficient operation of the vessel.

5.3.2.3.2 Coal Sulfur Content

Vessel owner/operators must minimize the sulfur content of all coal ash slurry discharged into waters subject to this permit by using coal with the lowest sulfur concentration technologically feasible and economically practicable and achievable, but in no event may the sulfur content of the coal exceed 1.023% (by weight and as received).

5.3.2.3.3 Limitations on Coal Ash Discharge Locations

Except in emergency situations, as determined and documented in the ship's log by the vessel's master, coal ash discharge may only occur when the vessel is:

- If in waters subject to this permit, more than 5 nm from any shore and in waters over 100 feet in depth, and

- Underway at a speed of at least 6 knots.

5.3.3 Educational and Training Requirements

The crews of ferries play a key role in minimizing the discharge of pollutants from ferry operations and its passengers. Therefore ferry operators are subject to the following requirements:

- The ship's crew members who actively take part in the management of the discharge or who may affect the discharge must receive training regarding shipboard environmental procedures and must be able to demonstrate proficiency in implementing these procedures.
- Advanced training in shipboard environmental management procedures must be provided for those directly involved in managing specific discharge types or areas of the ship and these crew must be able to demonstrate proficiency in implementing these procedures.
- Appropriate reprimand procedures must be developed for crew whose actions lead to violations of any effluent limit set forth in this permit or procedures established by the Cruise Ship operator to minimize the discharge of pollutants.

Ferry operators must also educate passengers on their potential environmental impacts. The goals of these education efforts should include eliminating the discharge of trash overboard, minimizing the production of trash from parking areas or other storage areas, eliminating the addition of unused soaps, detergents, and pharmaceuticals to the graywater or blackwater systems, and minimizing production of graywater. This can be accomplished in a variety of ways including, but not limited to posting signage and informational material in common areas, incorporating environmental information into orientation presentations, or broadcasting information via loudspeakers.

5.4 Barges (such as hopper barges, chemical barges, tank barges, fuel barges, crane barges, dry bulk cargo barges)

You must comply with Part 5 vessel-specific requirements associated with your vessel class in addition to any requirements specified elsewhere in this permit.

The requirements in Part 5.4 apply to vessel discharges from barges.

5.4.1 Additional Effluent Limits

Barges must minimize the contact of below deck condensation with oily or toxic materials, and any materials containing hydrocarbon. Whenever barges are pumping water from below deck, the discharge shall not contain oil in quantities that may be harmful as defined in 40 CFR Part 110. If a visible sheen is noted, vessel operators must initiate corrective action in accordance with Part 3 and meet recordkeeping requirements in Part 4.2 of this permit.

All tank barges must have spill rails and must plug their scuppers before any cargo operations if required by the vessel class society. If any spills result during loading or unloading

of cargo, vessel owner/operators must completely clean up spills or residue before scuppers are unplugged. Once all spills and residue have been cleaned, scuppers may be unplugged.

Vessel owner/operators must clean out cargo residues such that any remaining residue is minimized before washing the cargo compartment or tank and discharging wash water overboard.

5.4.2 Supplemental Inspection Requirements

After every instance of pumping water from areas below decks, or immediately following washing down the decks, you must conduct a visual sheen test. The visual sheen test is used to detect free oil by observing the surface of the receiving water for the presence of an oily sheen. The operator should focus the inspection on the area surrounding the vessel where discharges from below deck or deck washings are discharged into the receiving water. A visible sheen is defined in Part 7 of this permit. If a visible sheen is observed, you must initiate corrective actions required in Part 3 of this permit and meet recordkeeping requirements in Part 4.2 of this permit.

5.5 Oil Tankers or Petroleum Tankers

The requirements in Part 5.5 apply to vessel discharges from oil tankers or petroleum tankers.

5.5.1 Additional Authorized Discharges

For vessels which have an inert gas system, the effluent produced from inert gas scrubbers (IGS) may be discharged into waters subject to this permit.

The discharges of water from deck seals are authorized when such seals are installed as an integral part of an IGS system.

5.5.2 Additional Effluent Limits

Owner/operators of oil tankers must plug scuppers during cargo loading and unloading operations to prevent the discharge of oil into waters subject to this permit. Any oil spilled must be cleaned with oil absorbent cloths or another appropriate approach. Additionally, owner/operators of oil tankers must comply with applicable requirements of 33 CFR 155.310.

Vessel owner/operators must minimize the discharge of effluent produced from inert gas scrubbers if feasible for their vessel design.

5.5.3 Supplemental Inspection Requirements

After every instance of loading or unloading operations or immediately following washing down the decks, you must conduct a visual sheen test. The visual sheen test is used to detect free oil by observing the surface of the receiving water for the presence of an oily sheen. The owner/operator should focus the inspection on the area surrounding the vessel where effluent from loading operations or deck washings discharge into the receiving water. A sheen is defined in Part 7 of this permit. If a visible sheen is observed, you must comply with all

requirements contained in Part 4.4 of this permit and initiate corrective actions required in Part 3 of this permit.

5.5.4 Educational and Training Requirements

The crews of oil tankers play a key role in minimizing the discharge of pollutants from vessel operations. Therefore oil tanker operators are subject to the following requirements:

- The ship's crew members who actively take part in the management of the discharge or who may affect the discharge must receive training regarding shipboard environmental procedures and must be able to demonstrate proficiency in implementing these procedures.
- Advanced training in shipboard environmental management procedures must be provided for those directly involved in managing specific discharge types or areas of the ship and these crew must be able to demonstrate proficiency in implementing these procedures.
- Appropriate reprimand procedures must be developed for crew actions that lead to violations of any effluent limit set forth in this permit or procedures established by the vessel operator to minimize the discharge of pollutants.

5.6 Research Vessels

The requirements in Part 5.6 apply to vessel discharges from research vessels. Research vessels are those that are engaged in investigation or experimentation aimed at discovery and interpretation of facts, revision of accepted theories or laws in the light of new facts, or practical application of such new or revised theories or laws.

5.6.1 Supplemental Authorized Discharges

In addition to the discharges incidental to the normal operation of a vessel authorized elsewhere in this permit, owner/operators of research vessels are authorized to discharge tracers (dyes, fluorescent beads, SF6), drifters, tracking devices and the like, and expendable bathythermograph (XBT) probes, into waters subject to this permit, provided such discharges are for the sole purpose of conducting research on the aquatic environment or its natural resources in accordance with generally recognized scientific methods, principles, or techniques.

5.6.2 Additional Effluent Limits

Owner/operators of research vessels must discharge only the minimal amount of materials referenced in Part 5.6.1 necessary to conduct research on the aquatic environment or its natural resources in accordance with generally recognized scientific methods, principles, or techniques.

5.7 Emergency Vessels (Fire Boats, Police Boats)

The requirements in Part 5.7 apply to vessel discharges from emergency and rescue boats.

5.7.1 Supplemental Authorized Discharges

In addition to the discharges incidental to the normal operation of a vessel authorized elsewhere in this permit, vessel owner/operators of emergency vessels are authorized to discharge waste streams in conjunction with training, testing, and maintenance operations, provided that they comply with all additional requirements of the Clean Water Act (e.g. section 311) and the National Contingency Plan (40 CFR 300). This section does not relieve vessel operators of any additional responsibilities under the CWA and the National Contingency Plan which prohibits the discharge of oil for research or demonstration purposes without Administrator approval. The use of foaming agents for oil or chemical fire response must be implemented in accordance with the National Contingency Plan (40 CFR 300).

5.7.2 Additional Effluent Limits

Owner/operators are strongly encouraged to seek alternative formulations of AFFF that are less harmful to the aquatic environment, such as non-fluorinated foam, while maintaining their effectiveness in emergency operations. Furthermore, operators are encouraged to not use AFFF or discharge toxic substances in areas near active commercial or recreational fisheries, near swimmable waters, or in high traffic areas for maintenance or training purposes. Emergency vessel owner/operators are also encouraged to perform training, testing, and maintenance operations outside of port and as far from shore as possible. The use of foaming agents for oil or chemical fire response, and the control of their discharge from a vessel, must be implemented in accordance with the National Contingency Plan (40 CFR 300).

5.8 Vessels Employing Experimental Ballast Water Treatment Systems

For the purposes of this first-iteration permit only, any vessel employing a ballast treatment system which uses biocides to treat organisms in the ballast water is considered experimental.

The requirements in Part 5.8 apply to ballast water discharges from vessels employing experimental ballast water treatment systems that make use of biocides.

5.8.1 Authorization of Residual Biocides Associated with Experimental Ballast Water Treatment Systems

Some experimental 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 technology must not use any biocide that is a “pesticide” within the meaning of the Federal Insecticide, Fungicide, 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,” as that term is defined in the Federal Insecticide, Fungicide, and Rodenticide Act, on board the same vessel as the ballast water to be treated by the biocide. 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:

5.8.1.1 Analytical Monitoring

The discharge of Total Residual Chlorine (TRC) as a biocide or derivative may not exceed 100 micrograms per liter (µg/l) as an instantaneous maximum. Any other biocides or derivatives may not exceed acute water quality criteria listed in EPA's 1986 Quality Criteria for Water [the Gold Book], and any subsequent revision, at the point of ballast water discharge. The Gold Book can be found at: www.epa.gov/waterscience/criteria/library/goldbook.pdf. Tables summarizing the subsequent revisions can be found at: http://www.epa.gov/waterscience/criteria/wqctable/index.html. Discharges of biocide residuals or derivatives must also meet monitoring requirements under Part 5.8.2.1, and reporting and recordkeeping requirements in Part 5.8.3.

5.8.1.2 WET testing

The permittee shall conduct whole effluent toxicity (WET) testing on samples of the discharges from shipboard ballast water treatment systems to establish and annually verify the appropriateness of methods for treating ballast water with biocides lacking EPA Water Quality Criteria or known to produce chemical biocides or derivatives lacking EPA Water Quality Criteria.

The procedures for such WET testing are set forth in Part 15 (Appendix J) of this permit. The annual verification testing must demonstrate, for each organism tested, that the WET in the ballast water discharges, without allowance for mixing, does not exceed a chronic toxicity of 1.6 TUc as a daily maximum or 1.0 TUc as a monthly median.

If the toxicity of the treatment system results in a discharge which exceeds 1.0 TUc as a monthly median or 1.6 TUc as a daily maximum, EPA may require the owner/operator to cease discharging from the treatment system until they obtain coverage under an individual NPDES permit.

5.8.2 Monitoring Requirements

5.8.2.1 Residual Biocide or Derivative Monitoring

For vessels subject to Part 5.8.1.1, above: you must conduct monitoring of the vessel ballast water discharge for any residual biocides or derivatives used in the treatment process to demonstrate compliance with the conditions in Part 5.8.1.1. For instance, if chlorine is the biocide used in the ballast water treatment, you must test for chlorine in the vessel ballast water discharge to see if it complies with the standards in Part 5.8.1.1. If there are no Part 136 test methods for the residual biocide or derivatives of the residual biocide, you must comply with Part 5.8.1.2 or seek coverage under an individual NPDES permit pursuant to Part 1.8 of this permit. In order to demonstrate that residual biocides or derivatives are in compliance with this permit, the vessel operator initially must take at least five (5) samples on different days over a 90-day period that are representative of the treated ballast water discharge. 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 according to 40 CFR Part 136.

Records of monitoring information shall include:

- The date, exact place, and time of sampling or measurements,
- The individual(s) who performed the sampling or measurements,
- The date(s) analyses were performed,
- The individual(s) who performed the analyses,
- The analytical techniques or methods used, and
- The results of such analyses.

Thereafter, you must conduct maintenance sampling and analysis at least quarterly (4 times per year) of the vessel ballast water discharge in order to demonstrate continued compliance with the standards in Part 5.8.1.1. If any of the initial or maintenance samples exceed the standards specified in Part 5.8.1.1, then the owner/operator must immediately undertake steps necessary to achieve compliance and take and submit samples demonstrating such compliance.

5.8.2.2 Whole Effluent Toxicity (WET) monitoring

For vessels subject to 5.8.1.2, above: you must initially conduct whole effluent toxicity (WET) testing consistent with Part 15 (Appendix J) of this permit using samples from the ballast water treatment system at the end of pipe for assessing the environmental safety of the resulting ballast water discharges. Two sets of WET tests must be done as set forth in Part 15 of this permit (Appendix E) using different ballast water discharge events separated by at least no less than 14 days, for initial testing followed by annual verification testing for each year of permit coverage. Initial WET testing must be done in the first 90 days of permit coverage or the first 90 days of using the ballast water treatment system after permit issuance.

Thereafter, you must conduct maintenance sampling and analysis at least once per year of the vessel ballast water discharge in order to demonstrate continued compliance with the standards in Part 5.8.1.2. If any of the initial or maintenance samples exceed the standards specified in Part 5.8.1.2, then the owner/operator must immediately undertake steps necessary to achieve compliance and take and submit samples demonstrating such compliance.

5.8.3 Recordkeeping and Reporting Requirements

Records of the sampling and testing results must be retained onboard for a period of 3 years in the vessel's recordkeeping documentation.

You must submit your monitoring data to EPA HQ, Attn: Ballast Water Treatment System Test Results -Mail Code 4203M, 1200 Pennsylvania Ave., Washington DC 20460 at least once per year. For systems already in use as of the effective date of this permit, initial sampling data must be submitted within 6 months of this permit's effective date. For systems which are not already in use as of the effective date of this permit, initial sampling data must be submitted within 6 months of the system's first use. Maintenance monitoring data must be submitted at least once per year within 30 days of the final sample collection. Data must be submitted on Discharge Monitoring Reports available in Appendix I of this permit or submitted

to EPA's e-reporting system available at www.epa.gov/npdes/vessels/eNOI, which will be available within two years of finalization of this permit.

6. Specific Requirements for Individual States or Indian Country Lands

Section 401(d) of the CWA provides that any certification under the Act "shall set forth any effluent limitations and other limitations, and monitoring requirements" necessary to assure that any applicant for a federal license or permit will comply with any applicable CWA-based effluent limitations and other limitations, standards of performance, prohibitions, effluent standards, or pretreatment standards, and with any other appropriate requirements of State and Tribal law. Section 401(d) further provides that such additional limitations and monitoring requirements "shall become a condition on any Federal license or permit subject to the provisions of this section." Pursuant to section 401(d), EPA has attached provisions provided by States and Tribes in their CWA § 401 certifications; those that constitute effluent or other limitations or monitoring requirements are enforceable conditions of this permit.

The VGP is effective in every State and Indian Country Land except in Taos Pueblo Tribal Lands (New Mexico). States and Indian Tribes which are not listed below have either certified without conditions or waived.

The following States or Tribes included additional permit requirements in their CWA § 401 certification:

6.1 Bishop Paiute Tribe:

The Bishop Paiute Tribe certified the VGP with the following additional permit condition:

Copies of Notice of Intents for proposed VGP and RGP must be submitted to the Bishop Paiute Tribe's Environmental Management office for review and comment.

6.2 California:

California certified the VGP with the following additional permit conditions:

1. Deleted.

2. Deleted.

3. Vessel discharges must be in accordance with the requirements of PRC section 72400 et seq. None of the 26 discharges covered by the VGP may contain hazardous waste as defined under California law, as well as hazardous substances listed in Attachment 2 of this document. The following other wastes are prohibited from discharge: sewage sludge, used or spent oil, garbage or trash (including plastic), photo-developing wastes, dry cleaning wastes, noxious liquid substance residues, and medical wastes. The vessel owner or operator must submit a certification stating that hazardous wastes as defined under California law, and prohibited wastes, will not be discharged.

4. Vessel discharges must comply with California State Lands Commission (SLC) requirements for ballast water discharges and hull fouling to control and prevent the introduction of nonindigenous species, found in PRC section 71200 et seq. and in the CCR sections 2270 through 2291, inclusive (See Attachment 3 of this document).

5. Deleted.

6. Propeller cleaning is allowed until January 1, 2012, after which, propeller cleaning is allowed as specified in regulations adopted by SLC. All other in-water hull cleaning is prohibited unless conducted using the best available technologies economically feasible, as determined by both SLC and the State Water Board. This prohibition includes underwater ship husbandry discharges (Discharge #25).

7. Deleted.

8. Deleted.

9. Deleted.

10. Deleted.

11. There must be no oily sheen from any discharge, and oil and grease must not exceed 15 milligrams per liter (mg/L) from any discharge.

12. Detergents must not be used to disperse hydrocarbon sheens in any waste streams. To ensure this practice is implemented for all state waters, and additionally to protect drinking water sources in the Sacramento and San Joaquin Delta, methylene blue active substances (MBAS) should not exceed 0.5 mg/L in all waterbodies.

13. Deleted.

14. Deleted.

15. Deleted.

16. All monitoring and reporting information shall be submitted to USEPA. Vessels entering the State of California shall also submit reports using the following forms:

    - 7.1 - Deleted.

    - 7.2 - Deleted.

    - **7.3 – SLC Marine Invasive Species Program Hull Husbandry Reporting Form**
      Submit annually within 60 days of receiving a written or electronic request from the California State Lands Commission.

- **7.4 – SLC Ballast Water Reporting Form**
  Upon departure from each port or place in California waters.

  California State Lands Commission
  Marine Facilities Division
  200 Oceangate, Suite 900
  Long Beach, CA 90802

17. This Certification includes Attachments 1-7[1]. Following is a description of these attachments:
    - Attachment 1 – Signatory Requirements;
    - Attachment 2 – List of Chemical Names and Common Names for Hazardous Wastes and Hazardous Materials, Title 22, Chapter 11, Appendix X, California Code of Regulations
    - Attachment 3 – California State Lands Commission's Ballast Water Performance Standards; and
    - Attachment 4 – Deleted;
    - Attachment 5 –Deleted;
    - Attachment 6 – Deleted;
    - Attachment 7 – Vessel Discharge Reporting Forms.

6.3 Connecticut:

Connecticut certified the VGP with the following additional permit conditions:

1. Rights. This certificate is subject to and does not derogate any present or future property rights or other rights or powers of the State of Connecticut, and conveys no property rights in real estate or material nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state, or local laws or regulations pertinent to the property or activity affected hereby. This certification does not comprise the permits or approvals as may be required by Chapters 440, 446i, 446j and 446k of the Connecticut General Statutes.

2. **Expiration of Certificate.** This Section 401 Water Quality Certification shall be valid for five (5) years or until such time as the VGP issued by EPA on or about December 19, 2008 expires or is modified, suspended, revoked or reissued.

3. Compliance with Certificate. All work and all activities authorized herein conducted by the permittees in accordance with the VGP shall be consistent with the terms and conditions of this certificate. Any regulated activities carried out in a manner inconsistent with the Best Management Practices identified in the VGP constitute a violation of this certificate.

4. Reliance on Application. In evaluating the EPA's application for this certificate, the Commissioner has relied on information provided by the EPA. If such information subsequently

[1] These attachments are available as a PDF file with California's full 401 certification letter. This information is available by linking to EPA's website at: www.epa.gov/npdes/vessels.

proves to be false, deceptive, incomplete or inaccurate, this certificate may be modified, suspended or revoked.

5. Best Management Practices. In conducting the activities authorized by the VGP, the permittees shall employ all applicable best management practices, consistent with the terms and conditions of the VGP and this certificate as applicable.

6. Ballast Water Management Requirements. The ballast water management requirements in the Draft VGP section 2.2.3 shall be the minimum standard for covered vessels operating in Connecticut waters. All vessels covered by the VGP that have a ballast water treatment system installed for any reason, including but not limited to compliance with the conditions of any VGP 401 Water Quality Certificate issued by any other jurisdiction, or compliance with International Marine Organization (IMO) standards, shall utilize such treatment system to treat ballast water to the highest level afforded by such installed treatment system prior to discharge into Connecticut waters.

7. Effective upon issuance of the VGP, graywater as defined in 33 USC § 1322 (a)(11) shall not be discharged into Connecticut waters from a vessel covered under the VGP unless such vessel is not equipped to hold such graywater for processing ashore or for discharge outside Connecticut waters.

Effective January 1, 2012, graywater from any vessel covered under the VGP operating in Connecticut waters shall not be discharged into such waters unless such discharge is granted an extension under the limited circumstances described herein. This prohibition shall be in effect regardless of a vessel's traveling speed.

No extensions will be made to the above implementation date, unless an entity covered under the VGP makes a request for an extension to the Commissioner and can provide sufficient justification for such a request. Any such extension request shall state and demonstrate that: (1) there is a shortage in supply of the technology necessary to meet the limits set forth in this certification, or a vessel-specific engineering constraint or other factor related to the availability and installation of technology beyond the vessel owner/operator's control, that delays the technology being available and installed in time to comply with this standard; (2) the unavailability of supply or installation constraint is the only reason the January 1, 2012 date cannot be met; and (3) the vessel has exhausted all other options to comply with this standard. Any extension request must be made no later than June 30, 2010, and the extension request shall indicate when the vessel will come into compliance with this deadline.

6.4 Florida:

Florida certified VGP with the following additional permit conditions:

"Effluent limitations established in Section 2.1.4 Discharges of Oil Including Oily Mixtures, and Section 2.2.16 Motor Gasoline and Compensating Discharge of the VGP, are not as stringent as the State of Florida Requirements. Florida's surface water quality standard for oil and grease in

Rule 62-302-.530(50) F.A.C., state that dissolved or emulsified oils and greases shall not exceed 5.0 mg/L."

6.5 Georgia:

Georgia certified the VGP with the following additional permit conditions:

Except for ocean going vessels of 20 tons displacement or more, the discharge of graywater shall be through a marine sanitation device that is in compliance with the Federal standards of performance and regulations for marine sanitation devices promulgated pursuant to Section 312 of the Clean Water Act.

6.6 Guam:

Guam certified the VGP with the following additional permit condition:

We note that discharges to coral spawning areas during coral mass spawning shall be avoided.

In regards to the Clean Water Act Section 401 Water Quality Certification (WQC) for this activity, we find these proposed NPDES permits tentatively to be acceptable, in accordance with the Guam Water Quality Standards, as amended in 2001. Based on the proposed numerical criteria, permit narrative, monitoring requirements, and the current Guam Water Quality Standards, Guam Environmental Protection Agency believes that there is reasonable assurance that the NPDES permitted discharge activity will not violate applicable water quality standards. Therefore, we hereby issue Section 401 Water Quality Certification for the proposed NPDES for VGP.

6.7 Hawaii

Hawaii certified the VGP with the following additional permit conditions:

> This conditional Section 401 WQC covers effluent discharges into waters of the State of Hawaii incidental to the normal operation of applicable commercial vessels (operated in a capacity as a means of transportation) and commercial fishing vessels that are eligible for permit coverage under Part 1.2 of the proposed VGP and to be authorized under the provisions of Section 402 of the CWA (33 U.S.C. 1342).
>
> Effluent discharges evaluated under this conditional Section 401 WQC are limited to the following that are currently excluded from obtaining the National Pollutant Discharge Elimination System (NPDES) permit under 40 CFR §122.3 requirements:
>
> > (1) Ballast water discharges incidental to normal operations of all commercial vessels including commercial fishing vessels; and
> >
> > (2) Twenty-seven (27) types of effluent discharges incidental to commercial vessels 79-ft or longer, but not including commercial fishing vessels:

(A) Deck Runoff
(B) Bilgewater Oily Water Separator Effluent
(C) Anti-fouling Leachate from Anti-Fouling Hull Coatings/Hull Coating Leachate
(D) Aqueous Film Forming Foam (AFFF)
(E) Boiler/Economizer Blowdown
(F) Cathodic Protection
(G) Chain Locker Effluent
(H) Controllable Pitch Propeller Hydraulic Fluid
(I) Distillation and Reverse Osmosis Brine
(J) Elevator Pit Effluent
(K) Firemain Systems
(L) Freshwater Layup
(M) Gas Turbine Wash Water
(N) Graywater Except that Graywater from commercial vessels operating in the Great Lakes within the meaning of CWA section 312 is excluded from the requirement to obtain an NPDES permit (see CWA Section 502(6), and thus is not within the scope of this permit.
(O) Motor Gasoline and Compensating Discharge
(P) Non-Oily Machinery Wastewater
(Q) Refrigeration and Air Condensate Discharge
(R) Rudder Bearing Lubrication Discharge
(S) Seawater Cooling Overboard Discharge (Including Non-Contact Engine Cooling Water; Hydraulic System Cooling Water, Refrigeration Cooling Water)
(T) Seawater Piping Biofouling Prevention
(U) Small Boat Engine Wet Exhaust
(V) Sonar Dome Discharge
(W) Sterntube Oily Discharge
(X) Underwater Ship Husbandry
(Y) Welldeck Discharges
(Z) Graywater Mixed with Sewage from Vessels
(AA) Exhaust Gas Scrubber Washwater Discharge

Geographical Area Exclusions:

(1) There shall be no waste discharges into natural freshwater lakes, saline lakes and anchialine pools. Waste means sewage, industrial and agricultural matter, and all other liquid, gaseous, or solid substance, including radioactive substance, whether treated or not, which may pollute or tend to pollute the waters of the State.

(2) Sewage, whether commingled with graywater or not, shall be disposed at pier side collection or treatment system or outside of estuaries or embayments. No new treated sewage discharges shall be permitted within estuaries. [HAR,

Paragraph 11-54-3(b)(2)] No new sewage discharges will be permitted within embayments. [HAR, Paragraph 11-54-3(c)(2)]

Limitations on Coverage

This conditional Section 401 WQC does not apply to any of the following:

(1) The discharge(s) that is regulated under CWA, Section 404.

(2) Discharge activity(ies), to be authorized under the EPA proposed VGP, which is inconsistent with criteria established in HAR, Subsection 11-54-1.1.

(3) When the Director finds that it is more appropriate to evaluate the project impacts under an individual application for a Section 401 WQC.

Discharge Limitations

a. All waters shall be free of substances attributable to the activities authorized under this conditional Section 401 WQC and EPA VGP, including:

(1) Materials that will settle to form objectionable sludge or bottom deposits.

(2) Floating debris, oil, grease, scum, or other floating materials.

(3) Substances in amounts sufficient to produce taste in the water or detectable off-flavor in the flesh of fish, or in amounts sufficient to produce objectionable color, turbidity or other conditions in the receiving waters.

(4) High or low temperatures; biocides; pathogenic organisms; toxic, radioactive, corrosive, or other deleterious substances at levels or in combinations sufficient to be toxic or harmful to human, animal, plant, or aquatic life, or in amounts sufficient to interfere with any beneficial use of the water.

(5) Substances or conditions or combinations thereof in concentrations which produce undesirable aquatic life.

(6) Soil particles resulting from erosion on land involved in earthwork, such as the construction of public works; highways; subdivisions; recreational, commercial, or industrial developments; or the cultivation and management of agricultural lands.

b. The following conditions as proposed in the letter of September 12, 2008, are hereby incorporated into this conditional Section 401 WQC and shall also be incorporated into Part 6 of the Final Region 9 VGP for discharges into Waters of the State of Hawaii "incidental to the normal operation of commercial vessels":

(1) Any discharge which would be unlawful under HRS, Section 342D-51 (or Section 30l(a) of the Clean Water Act) must be reported to the Director, Water Division, EPA Region 9, 75 Hawthorne Street, San Francisco, CA 94105, and to the Director of Health, Hawaii Department of Health, 919 Ala Moana Blvd., Rm. 301, Honolulu, Hawaii 96814-4920 within 24 hours of the discharge, unless a valid NPDES permit issued under HRS, Section 342D-6 (or Section 402 of the Clean Water Act) specifies another reporting period for the specific discharge.

(2) Enterococcus shall be added to the list of analytes for which samples shall be taken in accordance with Parts 5.1.2.2.1, 5.1.2.2.2, 5.2.2.2.1 and 5.2.2.2.2 of the VGP. Monitoring results shall be reported to the Director of Health, Hawaii Department of Hea1th, 919 Ala Moana Blvd, Rm. 301, Honolulu, Hawaii 96814-4920 in addition to EPA's Washington DC office.

(3) Receiving waters of the State of Hawaii shall be free of substances attributable to the discharges including high or low temperatures; biocides; pathogenic organisms; toxic, radioactive, corrosive, or other deleterious substances at levels or in combinations sufficient to be toxic or harmful to humans, animal, plant, or aquatic life, or in amounts sufficient to interfere with any beneficial use of the water.

(4) Receiving waters of the State of Hawaii shall be free of substances attributable to the discharges including floating debris, oil, grease, scum, or other floating materials.

c. Ballast water discharges from "Qualifying Vessels" shall also comply with the provisions of HAR, Chapter 13-76.

The term "Qualifying Vessels", as defined in HAR, Section 13-76-12, means all vessels, United States or foreign flagged, carrying ballast water into state marine waters after operating outside the EEZ.

The term "EEZ", as defined in HAR, Section 13-76-12, means the United States exclusive economic zone established by Presidential Proclamation No. 5030, dated March 10, 1983, which extends from the baseline of the territorial sea of the United States seaward 200 nautical miles, substantially as defined in federal law 33 CFR 151.2025, dated July 1, 2005.

d. Discharges from "Commercial Passenger Vessels" shall comply with requirements specified in HRS, Sections 342D-I02, 342D-I03, 342D-I04, 342D-105 and 342-106 of PART VI of HRS, Chapter 342D titled "DISCHARGES FROM COMMERCIAL PASSENGER VESSELS." "Commercial passenger vessel," as defined in HRS, Section 342D-I 0I, means a vessel that carries passengers for hire. The term does not include a vessel:

(1) Authorized to carry fewer than fifty passengers;

(2) That does not provide overnight accommodations for at least fifty passengers for hire, determined with reference to the number of lower berths and based on an average of two persons per cabin; or

(3) Operated by the United States or a foreign government.

e. Concentration of Total Residual Chlorine (TRC) in et11uent discharges shall not exceed an acute concentration of 13.0 ug/I in salt water or an acute concentration of 19.0 mcg/l in fresh water

g. State waters affected by the applicable discharge activities are subject to monitoring and to the standards for acute and chronic toxicity and the protection of human health as specified in HAR, Subsection 11-54-4(b).

h. The discharge incidental to normal operation of commercial vessels and commercial fishing vessels permitted under the authorization of EPA VGP shall not interfere with or become injurious to any assigned uses made of (designated uses, as defined in BAR, Section 11-54-1, and specified in BAR, Section 11-54-3), or presently in (existing uses, as defined in BAR, Section 11-54-1, and specified in BAR, Subsection 11-54-1.1), those waters.

It shall constitute a violation under HRS, Chapter 342D; HAR, Chapter 11-54; and this WQC if any discharges resulting from the activities authorized under the EPA VGP, resulting in any noncompliance to terms, requirements, restrictions, or limitations as specified in this WQC. The DOH reserves the right to take enforcement actions authorized by law.

After consideration of the expressed views of all interested persons and agencies and pertinent State statutes and rules, the DOH hereby issues this conditional Section 401 WQC to the EPA, Region 9, for the proposed VGP for listed discharges incidental to the normal operation of commercial vessels.

6.8 Hualapai Tribe:

Hualapai Tribe certified with the following conditions:

In response to the U.S. Environmental Protection Agency (EPA) request for certification of two National Pollutant Discharge Elimination System (NPDES) general permits: The Vessel General Permit (VGP) and Recreational Vessel General Permit (RGP) for Discharges Incidental to the Normal Operation of Commercial and Large Recreational Vessels. Water bodies within the jurisdiction of the Hualapai Tribe, the Hualapai Tribes water quality standards and corresponding mitigation measures will be adhered to in accordance with all rights and obligations stemming from tribal sovereignty and Treatment as a State under the Clean Water Act. The Tribe requires that all permits issued in close proximity to Hualapai waters, be consistent with the Tribes' water quality standards set forth in the Hualapai Environmental Review Code, Subtitle I. Water Resources and Wetlands, Part 1. Water Resources Ordinance; 401 certification is hereby given.

6.9 Idaho:

Idaho certified the VGP with the following additional permit conditions:

Reporting of Discharges Containing Hazardous Substances or Oil
Any discharges containing hazardous substances or oil must be reported to the Idaho State Communications Center (1-800-632-8000) or to the appropriate DEQ Regional Office (IDAPA 58.01.02.850).

Regional Office	Phone Number	Regional Office	Phone Number
Boise	(208) 373-0550	Lewiston	(208) 799-4370
Coeur d'Alene	(208) 769-1422	Pocatello	(208) 236-6168
Idaho Falls	(208) 528-2650	Twin Falls	(208) 736-2190

Regulations Prohibiting Discharges on Certain Water Bodies
Owners or operators of vessels covered by this general permit must be aware of and comply with applicable Idaho Administrative Code provisions governing discharges from vessels. The discharge of graywater or a sewage/graywater mixture otherwise authorized under this general permit is prohibited in certain regions of the state pursuant to IDAPA 41.01.01.200.01(c). Those areas include Boundary, Bonner, Kootenai, Benewah, and Shoshone counties in northern Idaho. (IDAPA 41.01.01.200.01 *et seq.*)

6.10 Illinois:

Illinois certified the VGP with the following additional permit conditions:

1. Discharges of wastestreams containing Bioaccumulative Chemicals of Concern (BCCs) from vessels covered by the Vessel General Permit shall be consistent with the provisions of 35 Ill. Adm. Code 302.520, 302,521, and 302.530.

2. All discharges to Waters of the State from vessels covered by the Vessel General Permit shall not cause a violation of Illinois Water Quality Standards, as found at 35 Ill. Adm. Code Part 302 or effluent standards, as found at 35 Ill. Adm. Code Part 304.

3. No effluent from any vessel covered by the Vessel General Permit shall contain settleable solids, floating debris, visible oil, grease, scum or sludge solids. Color, odor and turbidity must be reduced to below obvious levels, pursuant to 35 Ill. Adm. Code 304.106.

4. Any vessel covered by the Vessel General Permit discharging ballast water employing ballast water treatment systems using chlorine shall not exceed a maximum total residual chlorine limit of 0.05 mg/l. The usage of other biocides shall not cause a violation of applicable water quality standards and shall not be discharged in concentrations considered to be toxic or harmful to aquatic life, pursuant to 35 Ill Adm. Code 302.210, 302.410, and 302.540.

5. The discharge from any vessel covered by the Vessel General Permit shall be free from any substances or combination of substances in concentrations toxic or harmful to human

health, or to animal, plant or aquatic life, pursuant to 35 Ill Adm. Code 302.210, 302.410, and 302.540.

6. No bilge or ballast water from vessels covered by the Vessel General Permit which fails to meet the effluent standards of Part 304 shall be discharged to waters of the State pursuant to 35 Ill. Adm. Code 308.103.

7. Except as provided in Condition No. 8, discharges of ballast water from vessels covered by the Vessel General Permit to the Illinois portion of Lake Michigan must meet the International Maritime Organization certified treatment standard according to the following schedule:
    a. For vessels constructed prior to January 1, 2012, meeting the applicability criteria in the federal NPDES permit, treatment shall be installed an operational to meet the performance standards for organisms included in Table A by January 1, 2016.
    b. For vessels constructed after January 1, 2012, meeting the applicability criteria in the federal NPDES permit, treatment stall be installed and operational to meet the performance standards for organisms included in Table A prior to commencement of vessel operation.

Table A. Biological Performance Standards for Ballast Water Treatment Technology

Parameter	Limit	Limit Type	Sample Type
Organisms > 50um in minimum dimension	<10 viable/m^3	Daily Average	Composite
Organisms 10-50 um in minimum dimension	<10 viable/ml	Daily Average	Composite
Escherichia coliform	<250 cfu/100ml	Daily Average	Composite
Intestinal enterococci	<100 cfu/100 ml	Daily Average	Composite

Analysis required by the above table shall be performed consistent with current protocols.

8. If ballast water treatment technologies, standards or limitations are adopted or approved by the USEPA, the U.S. Coast Guard, or other duly authorized Federal Agency and incorporated into the Vessel General Permit, the Agency will review the new or modified Vessel General Permit to ensure compliance with applicable Illinois laws and regulations. Based on that review, the Agency will waive, modify the existing certification or issue a new certification pursuant to Section 401 of the Clean Water Act.

9. If the IEPA determines that vessel discharges covered by the Vessel General Permit cannot comply with the conditions of this certification or the Illinois Water Quality Standards, then this certification may be amended to include different limitations, conditions, or requirements which are consistent with applicable laws, regulations, or judicial orders. The Agency will public notice any proposed amendments to the certification.

10. The issuance or this certification pursuant to Section 401 of the Clean Water Act does not release any dischargers from responsibilities or liabilities for past or future violations of federal, state, or local laws or regulations, nor does it release any potential dischargers from the responsibility of obtaining permits, including any from the IEPA, or other approvals from other units of government as may be required by law.

6.11 Indiana:

Indiana certified the VGP with the following additional permit conditions:

The following conditions shall apply to any activity that qualifies under this general permit.

1. Permittee shall allow the commissioner or an authorized representative of the commissioner (including an authorized contractor), upon the presentation of credentials:
    a. to enter and inspect covered vessels;
    b. to have access to and copy at reasonable times any records that must be kept under the conditions of this certifications;
    c. to inspect, at reasonable times, any monitoring or operational equipment or method; collections, treatment, pollution management or discharge facility or device; practices required by this certification; and
    d. to sample or monitor any discharge of pollutants from covered vessels.
2. This granting of WQC does not relieve permittee from the responsibility of obtaining any other permits or authorizations that may be required for the project or related activities from the IDEM or any other agency or person.
3. This certification does not:
    a. Authorize impacts or activities outside the scope of this certification;
    b. Authorize any injury to permittees or private property or invasion of other private rights, or any infringement of federal, state, or local laws or regulations;
    c. Convey any property rights of any sort, or any exclusive privileges; or
    d. Preempt any duty to obtain federal, state or local permits or authorizations required by law.
4. The IDEM, for any vessel that qualifies under the terms and conditions of this certifications, may choose to require an individual WQC if it determines that the vessel would have more than minimal impacts to water quality, either viewed individually or collectively with other activities that may affect the same waterbody.
5. Activities authorized by the general permit shall **not** violate or exceed Indiana's Water Quality Standards at 327 IAC 2.
6. Discharges of ballast water to the Indiana portion of Lake Michigan must meet the International Maritime Organization certified treatment standard according to the following schedule:
    a. For ocean-going vessels constructed prior to January 1, 2012, and meeting the applicability criteria in the federal NPDES permit, treatment shall be installed and operational to meet the performance standards for organisms included in Table 1 by January 1, 2016.
    b. For ocean-going vessels constructed after January 1, 2012, and meeting the applicability criteria in the federal NPDES permit, treatment shall be installed and

operational to meet the performance standards for organisms included in Table 1 prior to commencement of vessel operation in Indiana State waters.

Analysis required by Table 1 shall be performed consistent with the protocols currently being validated by the EPA Environmental Technology Verification Program (EPA/U.S. Coast Guard/Naval Research Laboratory) and/or the following Great Ships Initiative protocols: The Procedure for Algae/Small Protozoan Sample Analysis, the Procedure for Zooplankton Sample Analysis, the Procedure for the Detection and Enumeration of E. coli by Membrane Filtration available online at http://www.nemw.org/GSI/protocols.htm

c. If the federal government adopts treatment standards more stringent than IMO, then those standards shall replace those in Table 1 for new treatment systems installed after the date those federal standards go into effect.

Table 1. Biological performance standards for ballast water treatment technology

Parameter	Limit	Limit Type	Sample Type
Organisms > 50um in minimum dimension	<10 viable[2]/m[3]	Daily Average	Composite[3]
Organisms 10-50 um in minimum dimension	<10 viable/ml	Daily Average	Composite
Escherichia coliform	<250 cfu/100ml	Daily Average	Composite
Intestinal enterococci	<100 cfu/100 ml	Daily Average	Composite

7. Any ocean-going vessel discharging ballast water employing ballast water treatment systems using chlorine, shall not exceed a maximum total residual chlorine limit of .02 mg/l. The usage of other biocides shall not be discharged in concentrations considered to be toxic or harmful to aquatic life or in concentrations that would violate applicable water quality standards.

6.12 Iowa:

Iowa certified the VGP with the following additional permit conditions:

Conditions:

1. Permittee is responsible for securing and for compliance with such other permits or approvals as may be required by the IDNR, federal, state, or local governmental agencies for the project activities described.

[2] "Viable organism" means organisms that are living and able to reproduce.
[3] "Composite" sample type is a combination of individual grab samples taken at periodic intervals over the specified time period. Either samples taken at equal time intervals shall be combined using a volume of each sample that is proportional to the flow that sample represents, or equal volume samples shall be combined that are taken at intervals of equal flow volumes.

2. **If the vessel discharges oil or hazardous substances in the water, immediately call the U.S. Coast Guard at 1-800-424-8802 and the IDNR Emergency Response Unit at 1-515-281-8694.**
3. Deleted.
4. It is illegal for anglers to possess, introduce, purchase, sell, or transport aquatic invasive species in Iowa except when a species is being removed from watercraft or equipment, is caught and immediately killed or returned to the water from which it came, or is being transported in a sealed container for identification purposes. It is also illegal to introduce any live fish, except for hooked bait, into public waters.
5. It is illegal to dump trash into federally controlled or state waters.
6. It is illegal to discharge oil or hazardous substances into the water.
7. Oil may not be dumped into the bilge of the vessel without means for proper disposal.
8. Oil waste must be disposed of at an approved reception facility. On recreational vessels, a bucket or bailer is adequate for temporary storage.
9. Recreational vessels with installed toilets must have an operable marine sanitation device on board. All installed devices must be U.S. Coast Guard-certified.
10. The United States Coast Guard's Mandatory Practices for all vessels with ballast tanks on all waters of the United States, regardless of Exclusive Economic Zone (EEZ) Entry (33 CFR 151.2035(a)) must be followed.
11. Deleted.

6.13 Kansas:

Kansas certified the VGP with the following conditions:

The permittee shall not cause or contribute to a violation of the following narrative Kansas Surface Water Quality Standards [KAR 28-16-28e(B)]:

(1) Surface waters shall be free, at all times, from the harmful effects of substances that originate from artificial sources of pollution and that produce any public health hazard, nuisance condition, or impairment of a designated use.
(2) Hazardous materials derived from artificial sources, including toxic substances, radioactive isotopes, and infectious microorganisms derived directly or indirectly from point or nonpoint sources, shall not occur in surface waters at concentrations or in combinations that jeopardize the public health or the survival or well-being of livestock, domestic animals, terrestrial wildlife, or aquatic or semiaquatic life.
(3) Surface waters shall be free of all discarded solid materials, including trash, garbage, rubbish, offal, grass clippings, discarded building or construction materials, car bodies, tires, wire, and other unwanted or discarded materials. The placement of stone and concrete rubble for bank stabilization shall be acceptable to the department, if all other required permits are obtained before placement.
(4) Surface waters shall be free of floating debris, scum, foam, froth, and other floating materials directly or indirectly attributable to artificial sources of pollution.
(5) Oil and grease from artificial sources shall not cause any visible film or sheen to form upon the surface of the water or upon submerged substrate or adjoining shorelines, nor shall these materials cause a sludge or emulsion to be deposited beneath the surface of the water or upon the adjoining shorelines.

(6) Surface waters shall be free of deposits of sludge or fine solids attributable to artificial sources of pollution.
(7) Taste-producing and odor-producing substances of artificial origin shall not occur in surface waters at concentrations that interfere with the production of potable water by conventional water treatment processes, that impart an unpalatable flavor to edible aquatic or semiaquatic life or terrestrial wildlife, or that result in noticeable odors in the vicinity of surface waters.
(8) The natural appearance of surface waters shall not be altered by the addition of color-producing or turbidity-producing substances of artificial origin.

6.14 Maine:

Maine certified the VGP with the following additional permit conditions:

1. Large Commercial Passenger Vessels that provide overnight accommodations for 250 or more overnight passengers are prohibited from discharging graywater or a mixture of graywater and blackwater to the coastal waters unless they first obtain authorization to discharge through Maine Department of Environmental Protection General Permit #W008222-5Y-A-N dated December 22, 2005.[4]
2. Large Commercial Passenger Vessels are prohibited from discharging graywater into No Discharge Areas designated pursuant to Section 312 of the Act, 33 CFR Part 159 and 40 CFR Part 140.
3. Large Commercial Passenger Vessels must report discharges of blackwater or graywater not authorized through Permit #W008222-5Y-A-N, or discharges to No Discharge Areas, to the Department.[5]
4. No vessel covered by the VGP may discharge pollutants to Class GPA or class SA waters.[6]
5. No vessel covered by the VGP may conduct underwater hull cleaning except as part of emergency hull repairs necessary to secure the vessel or saving a life at sea. The Maine Department of Environmental Protection has determined that removal of biological growth, debris, or scrubbing the hull to reveal fresh antifouling coatings will invariable release pollutants at levels potential toxic to the marine environment.

6.15 Massachusetts:

Massachusetts certified the VGP subject to the following conditions:

Unnumbered section
The discharge of tetrachloroethylene (TCE) from all activities (not just drycleaning) is prohibited.

Section 2.2.3.8 Vessels Engaged in Pacific Nearshore Voyages with Unpumpable Ballast Water and Residual Sediment (including NOBOBs)

[4] 38 MRSA §423-D
[5] 38 MRSA §423-D
[6] 38 MRSA §465-A (1) and 38 MRSA §465-B(1)

Ballast water exchange requirements similar to those proposed for Pacific near- shore voyages (section 2.2.3.8) are required for vessels engaged in coastwise trade on the Atlantic or Gulf Coasts that will discharge to waters subject to this permit.

Section 2.2.15 Graywater
Vessels that have the capacity to store graywater are prohibited from discharging it in areas listed in Part 12.1. In Massachusetts these areas include: the Boston Harbor Islands National Recreation Area, the Cape Cod National Seashore, and the Essex National Heritage Area.

Section 2.2.15 Graywater
The discharge of untreated graywater within 3 nautical miles (nm) for vessels greater than 400 gross tons is prohibited, regardless of the speed of the vessel. Treated graywater must meet the graywater treatment standards included in Section 5.1.1.1.2 of the VGP.

Section 2.2.21 Seawater Piping Biofouling Prevention
All seawater piping biofouling discharges shall meet the same chlorine discharge limit of 10 µg/l as is proposed in the graywater treatment standards (e.g., Section 5.1.1.1.2).

Section 2.2.25 Underwater Ship Husbandry Discharges
Discharges associated with Underwater Ship Husbandry are prohibited in waters within 3 nm. Specifically, the removal of fouling organisms is prohibited within 3 nm in order to prevent the spread of invasive species. In addition, all hull cleaning shall occur while a vessel is in drydock or at another landside facility so that wash water and hull cleaning residuals can be collected and disposed of properly.

Section 2.2.27 Graywater Mixed with Sewage from Vessels
Graywater commingled with sewage is not allowed to be discharged in No Discharge Areas. As of December 2008, three quarters of Massachusetts' coastal waters have been designated as NDAs. A map of No Discharge Areas in Massachusetts can be found at http://www.epa.gov/region01/eco/nodiscrg/index.html.

Section 5.1.1.1.1 Graywater Discharge Location and Rate (for large cruise ships)
The discharge of all (treated and untreated) graywater from large cruise ships is prohibited within 3 nm of shore unless the discharge meets the graywater treatment standards in Section 5.1.1.1.2.

Sections 5.1.1.1.2 Graywater Treatment Standards (for large cruise ships)
All discharges of graywater for large cruise ships shall meet the state water quality standard for fecal coliform of 14 fecal coliform colony forming units (cfu) per 100 ml with not more than 10 percent of the samples exceeding 28 fecal coliform cfu per 100 ml.

Section 5.2.1.1.1 Graywater Discharge Location and Rate (for medium cruise ships)
The discharge of all (treated and untreated) graywater from medium-sized cruise ships (those authorized to carry 100-499 passengers) is prohibited within 3 nm of shore unless the discharge meets the graywater treatment standards in Section 5.2.1.1.2.

Sections 5.2.1.1.2 Graywater Treatment Standards (for medium cruise ships)

All discharges of graywater from medium cruise ships shall meet the state water quality standard for fecal coliform of 14 fecal coliform cfu per 100 ml with not more than 10 percent of the samples exceeding 28 fecal coliform cfu per 100 ml.

Section 5.3.1.2.1 Graywater Discharge Location and Rate (for large ferries)
The discharge of all (treated and untreated) graywater from large ferries (those authorized to carry more than 100 tons of land transportation vehicles or greater than 250 people) is prohibited with 3 nm of shore unless the discharge meets the graywater treatments standards in Section 5.2.1.1.2.

Section 5.8.1 Authorization of Residual Biocides Associated with Experimental Ballast Water Treatment Systems
All discharges from experimental ballast water treatment systems shall contain no more than 10 ug/l total residual chlorine (TRC, as is proposed in the graywater treatment standards (e.g., Sections 5.1.1.1.2 and 5.2.1.1.2).

6.16 Michigan:

Michigan certified the VGP with the following additional permit conditions:

1. Discharges of blackwater and graywater from vessels covered by the USEPA's VGP are prohibited in Michigan waters. (Part 95, Watercraft Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, [NREPA])
2. Oceangoing vessels covered by the USEPA's VGP are prohibited from discharging ballast water in Michigan waters, unless the vessel has obtained a Certificate of Coverage under the Ballast Water Control General Permit (Permit No. MIG140000) or an Individual Permit from the MDEQ and is in full compliance with the discharge limitations, monitoring requirements, and other conditions set forth in that General Permit or Individual Permit. (Section 3112[6]of Part 31, Water Resources Protection, of the NREPA)
3. Non-oceangoing vessels covered by the USEPA's VGP that operate experimental ballast water treatment systems are prohibited from discharging ballast water in Michigan waters with total residual chlorine concentrations above 38 micrograms per liter (µg/l) when the ballast water discharge duration exceeds 160 minutes, or above 200 µg/l when the ballast water discharge duration is less than or equal to 160 minutes. Non-oceangoing vessels covered by the USEPA's VGP that operate experimental ballast water treatment systems are prohibited from discharging ballast water in Michigan waters with chlorite concentrations above 13 µg/l. (R 323.1057 of the MWQS)
4. Each vessel required to operate a ballast water treatment system pursuant to Condition No. 2 of the Certification shall allow the MDEQ reasonable entry onto the vessel for inspection, access to records, and collection of a ballast water discharge sample(s) for determining compliance with this Certification and applicable laws. In the event ballast water monitoring results indicate the discharge of aquatic nuisance species to Michigan waters is not being effectively prevented as determined by the MDEQ, the vessel operator shall cease any further discharges of ballast water until an aquatic nuisance species discharge prevention plan, submitted to, and approved by the MDEQ, is implemented. (R

323.2149 of the Part 21 rules, Wastewater Discharge Permits, promulgated under Part 31 of the NREPA)

5. All vessels covered by the USEPA's VGP are prohibited from lowering the water quality of Michigan's Outstanding State Resource Waters or their tributaries. The following water bodies in Michigan are designated as Outstanding State Resource Waters: (R 323.1098 of the MWQS)
    - The Carp River (Mackinac County) – The 7.5 mile segment from Michigan State Highway 123, T42N, R5W, Section 2, to one-quarter mile upstream from Forest Development Road 3119, T42N, R4W, Section 4.
    - The Carp River (Mackinac County)- the 4.9-mile segment from one-quarter mile downstream of Forest Development Road 3119, T42N, R4W, Section 3 to McDonald Rapids.
    - The east branch of the Ontonagon River (Houghton and Ontonagon Counties) – the 25.5 mile segment from the east branch of the Ontonagon River's confluence with and unnamed stream in T48N, R37W, Section 30, to the Ottawa National Forest boundary, T50W, R38W, Section 33.
    - The middle branch of the Ontonagon River (Ontonagon County)- the 17.4 mile segment from Trout Creek, T48N, R38W, Section 20, to the northern boundary of the Ottawa National Forest, T48N, R39W, Section 12.
    - The Sturgeon River (Baraga and Houghton Counties) – The 16.5 mile segment from the Sturgeon River's entry into the Ottawa National Forest, T48N, R35W, Section 12, to Prickett Lake.
    - The east branch of the Tahquamenon River (Chippewa County) – the 3.2 mile segment from the center of T46, R6W, Sections 20, to the boundary of the Hiawatha National Forest, T46N, R6W, Section 19.
    - The Yellow Dog River (Marquette County) – the 4 mile segment from the Yellow Dog River's origin at the outlet of Bulldog Lake Dam, T50N, R29W, Section 31, to the boundary of the Ottawa National Forest. T50N, R29W, Section 17.
    - The main, north, south, east, and west branches of the Two Hearted River and Dawson Creek from their headwaters to the mouth of the river at Lake Superior.
    - Water bodies within the designated boundaries of the following national parks or lakeshores: Sleeping Bear Dunes National Lakeshore, Picture Rocks National Lakeshore, and Isle Royale National Park.
6. All Discharges in Michigan waters from vessels covered by the USEPA's VGP are prohibited from causing or contributing to exceedances of the MWQS. (Part 4 rules)
7. No condition in the USEPA's VGP may be made less restrictive because such action may violate the requirements of Michigan state law, including the MWQS.
8. Nothing in this Certification diminishes, negates, or precludes the state of Michigan from bringing civil and/or criminal actions for violations of state law and/or state issued permits. (Part 31 of the NREPA)
9. If the MDEQ determines that vessel discharges covered by this Certification can no longer comply with this Certification, the MDEQ may revoke or modify the Certification after appropriate public notice. (CWA, Section 401)
10. The MDEQ reserves the right to modify this Certification, after appropriate public notice, to require non-oceangoing vessels covered by the USEPA's VGP to install and operate ballast water treatment systems to prevent the discharge of aquatic nuisance species to

Michigan waters, if a determination is made by the MDEQ's Director that such ballast water treatment systems are necessary, available, and cost effective.

11. All conditions of this Certification apply in all Michigan waters regardless of their distance from shore. (Part 4 rules)
12. The issuance of this Certification does not authorize violation of any Federal, state, or local laws or regulations, nor does it obviate the necessity of obtaining such permits, including any other MDEQ permits, or approvals from other units of government as may be required by law. (Part 31 of the NREPA)
13. The contact point for consultation, submittals, an approvals as referred to in this Certification is:
    MDEQ Chief, Surface Water Assessment Section
    P.O Box 30273
    Lansing, Michigan 48909-7773
    Phone: 517-335-4121

6.17 Minnesota:

Minnesota certified the VGP with the following additional permit conditions:

1. Vessels covered by the EPA's VGP must obtain any permits required by the state of Minnesota for vessel discharges. (Minn. Stat. § 115.07). The MPCA's ballast water discharge general permit MNG300000 requires vessels meeting the permit's applicability criteria to comply with the following biological performance standards and implementation schedule:
   a. Table A Biological Performance Standards for Ballast Water Treatment Technology

Parameter	Limit	Limit Type	Sample Type
Organisms >50um in minimum dimension	<10 viable /m^3	Daily average	Composite
Organisms 10-50 um in minimum dimension	<10 viable / ml	Daily average	Composite
Escherichia coliform	<250 cfu / 100 ml	Daily average	Composite
Intestinal enterococci	<100 cfu / 100 ml	Daily average	Composite

   b. For vessels constructed prior to January 1, 2012, and meeting the applicability criteria in the permit, treatment shall be installed and operational to meet the performance standards for organisms included in Table A by January 1, 2016.
   c. For vessels constructed after January 1, 2012, and meeting the applicability criteria in the permit, treatment shall be installed and operational to meet the performance standards for organisms included in Table A prior to commencement of vessel operation in the Minnesota state waters of Lake Superior.

2. Vessels covered by the EPA's VGP must comply with a ballast water and sediment management plan approved by the MPCA and maintain a ballast record book meeting the requirements prescribed by the MPCA. (Minn. Stat. § 115.0306, 115.0307).

3. Discharge of ballast water from vessels employing ballast water treatment systems using chlorine must meet a maximum total residual oxidants limit, measured as total residual chlorine, of 0.038 mg/L. (Minn. R. 7050.0220).
4. Each condition in the proposed permit cannot be made less stringent without potentially violating the requirements of Minnesota State law, including water quality standards.
5. If the MPCA determines that vessel discharges covered by this Certification can no longer comply with Section 401 of the Clean Water Act or Minnesota laws and regulations, then this Certification may be revoked or modified. (Minn. R. 7001.1450, Minn. R. ch. 7050, 7052, and 7053).

6.18 Missouri:

Missouri certified the VGP with the following additional permit conditions:

1. The National Pollutant Discharge Elimination System (NPDES) permit is written such that limitations do not cause the general or numeric criteria to be exceeded nor impair beneficial uses established in the Water Quality Standards, 10 CSR 20-7.031.
2. Representatives from the department shall be allowed to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the letters and conditions of the permit.
3. This Water Quality Certification shall not be construed or interpreted to imply the requirements for other permits are replaced or superceded. Any NPDES Permits, Land Disturbance General Permits, or other requirements shall be complied with.

6.19 Nebraska:

Nebraska certified the VGP with the following permit conditions:

Chapter 6, § 004 of Title 117 – Nebraska's Surface Water Quality Standards, states that:

> "No discharge of wastewater from domestic, municipal, or industrial sources shall be allowed directly into lakes or impounded waters except:
>
> > "004.01 Wastewater from sources authorized by NPDES permits to discharge to these waters prior to May 10, 1982 which have operated under active NPDES permits since then.
> >
> > "004.02 Noncontact cooling waters from sources authorized by NPDES permits to discharge to these waters.
> >
> > "004.03 Stormwater from sources authorized by NPDES permits to discharge to these waters."
>
> This precludes allowing discharges into lakes and reservoirs of greywater, bilge water, or any sewage commingled with any other discharge as described in the permits and in Federal Register Vol. 73, No. 117, pp 34296 through 34304. Vessels on these waters will need to discharge to these wastewaters into sanitary dump stations that do not result in discharge to

lakes or impounded waters. Cooling water discharges are allowed. Use of these General Permits for vessels operating on streams of the State of Nebraska is acceptable.

With that condition observed, use of these General Permits for vessels operating on streams of the State of Nebraska is acceptable.

We therefore, by this letter, provide Section 401 Water Quality Certification. This certification does not constitute authorization to conduct your project. It is a statement of compliance with the Surface Water Quality Standards only, which is one requirement to gain authorization from the U.S. Army Corps of Engineers in the form of a Section 404 permit.

6.20 Nevada:

Nevada certified the VGP with the following additional permit conditions:

1. The proposed discharges permitted by the VGP will comply with all applicable State, Local, Interstate Agency and Federal laws, policies and regulations governing the protection of the beneficial uses of the State's Waters.

2. If in the opinion of the State the Final VGP does not adequately protect the Waters of the State or does not achieve compliance with the Nevada Water Quality Standards and other applicable provisions of state law, the 401 WQC may be modified or revoked.

3. This 401 WQC is valid until the VGP is modified, reissued, suspended or revoked. EPA must reapply for a new 401 WQC if any of these actions occur.

6.21 New Hampshire:

New Hampshire certified the VGP with the following additional permit conditions:

Upon final issuance by the federal EPA, the New Hampshire Department of Environmental Services assumes EPA will include the following provision: "On September 30, 2005, the State of New Hampshire was granted permission by EPA for a No Discharge Area. The No Discharge Area consists of all tidal and estuarine waters, including all bays and rivers to the tidal dams, and all ocean waters within three miles of the New Hampshire shoreline and Isles of Shoals. In the No Discharge Area, all boat sewage discharge, whether treated or untreated, is prohibited."

6.22 New York:

New York certified the VGP with the following additional permit conditions:

DEC certifies there is a reasonable assurance that discharges from vessels covered by the United States Environmental Protection Agency General Permit for discharges incidental to the normal operation of commercial vessels and large recreational vessels (VGP) will comply with the applicable provisions of 33 U.S.C §§ 1311, 1312, 1313, 1316, 1317 and 1341, (CWA §§ 301, 302, 303, 306, 307 and 401), and that permittees and their activities will not contravene

applicable limitations, standards and other appropriate requirements of State law, provided the following conditions set forth in the Certification are met.

The CWA's "objective . . . is to restore and maintain the chemical, physical and biological integrity of the Nation's waters (and) [i]n order to achieve this objective . . .

> (1) it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985;
> (2) it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983;
> (3) it is the national policy that the discharge of toxic pollutants in toxic amount be prohibited.

33 U.S.C. § 1251 (a). In addition, the Act requires that "[i]n order to carry out (its) objective . . . there shall be achieved

> – not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title) or any other Federal law or regulation, or required to implement any applicable water quality standard established pursuant to this chapter.

33 U.S.C. § 1311 (b)(1)(C). The CWA further requires that "water quality standard(s) shall consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based on such uses." 33 U.S.C. § 1313(c)(2)(A). Moreover, EPA regulations implementing the Act's requirements to "maintain" the chemical, physical, and biological integrity of the nation's waters require States to include in their water quality standards an antidegradation policy. 40 C.F.R. 131.6(d); 40 C.F.R. 131.12. Among other aspects of the required antidegradation policy is the protection of existing uses, 40 C.F.R. 131.12(a)(1), defined as "those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards." 40 C.F.R. 131.3(e).

New York Environmental Conservation Law (ECL) Article 17 is entitled "Water Pollution Control." Its declaration of policy states:

> It is declared to be the public policy of the state of New York to maintain reasonable standards of purity of waters of the state consistent with public health and public enjoyment thereof, the propagation and protection of fish and wild life, including birds, mammals and other terrestrial and aquatic life, and the industrial development of the state, and to that end requires the use of all known available and reasonable methods to prevent and control the pollution of the waters of the state of New York.

ECL § 17-0101. Department regulations adopted pursuant to ECL Article 17 define "pollution" as follows:

> Pollution means the presence in the environment of conditions and/or contaminants in quantities of characteristics that are or may be injurious to human, plant or animal life or to property or that unreasonably interfere with the comfortable enjoyment of life and property throughout such areas of the State as shall be affected thereby.

6 NYCRR § 700.1(a)(47). Both the CWA and the ECL define "pollutant" to include "biological materials". 33 U.S.C. § 1362 (6); ECL § 17-0105 (17). The ECL further defines "pollutant" to include "ballast". Id.

Pursuant to ECL Section 17-0301, DEC has developed water quality standards for the waters of New York State. Title 5 of ECL Article 17 makes unlawful any discharges that violate those water quality standards, providing that:

> [i]t shall be unlawful for any person, directly or indirectly, to throw, drain, run or otherwise discharge into such waters organic or inorganic matter that shall cause or contribute to a condition in contravention of the standards adopted by the department pursuant to section 17-0301.

ECL § 17-0501. Department regulations adopted pursuant to ECL Article 17 broadly define effluent limitations that serve to, inter alia, control the discharges prohibited under ECL § 17-0501.

> Effluent limitations mean any restriction on quantities, qualities, rates and concentrations of chemical, physical, biological, and other constituents of effluents that are discharged into or allowed to run from an outlet or point source or any other discharge within the meaning of section 17-0501 of the Environmental Conservation Law into surface waters, groundwater or unsaturated zones.

6 NYCRR § 700.1(a)(15).

New York's water quality standards establish classifications and designated uses of New York waters. 6 NYCRR Part 701. New York's water quality standards also include the water quality criteria set forth at 6 NYCRR Part 703. Included therein is the criteria, that, for numerous identified classes of waters, limits the discharge of "toxic or other deleterious substances" to "none in amounts that will . . . impair the waters for their best usages." 6 NYCRR § 703.2. The best usages of the classes of waters specified in 6 NYCRR § 703.2 include fish, shellfish and wildlife propagation and survival, fishing, drinking water supply, and primary and secondary contact recreation. Further, consistent with the requirements of the CWA, New York's Water Quality Antidegradation Policy, implemented through State laws including ECL Article 17 and Department regulations adopted pursuant thereto, operates to ensure existing instream water uses and the level of water quality necessary to maintain and protect those existing uses. See DEC Organization and Delegation Memorandum No. 85-40, Water Quality Antidegradation Policy, September 9, 1985.

As further explained herein, Conditions #1-6 of this Certification are needed to assure compliance with the CWA and the provisions of New York State law set forth above. In

accordance with 40 CFR § 124.53(e)(2), the CWA and State law provisions cited above form the basis for each of Conditions #1-6 of this Certification. In accordance with 40 CFR § 124.53 (e)(3) these conditions cannot be made less stringent and still comply with the requirements of State law, including State water quality standards. Since the requirements of New York State law, including water quality standards, are more stringent than the protections the VGP would provide, this water quality certification is necessary.

This certification shall expire five years after the date of issuance of the EPA's VGP.

Note that all studies, reports, authorities and other documents cited herein are incorporated into this Certification by reference.

Certification Conditions for the VGP

1. The operator of any vessel covered under the VGP whose voyage originates from within the exclusive economic zone[7] and enters New York waters with ballast on board, shall conduct ballast water exchange at least 50 nautical miles from shore and in water at least 200 meters in depth. Such vessels that carry only residual amounts of ballast water and/or sediments shall conduct saltwater flushing of their ballast water tanks, at least 50 nautical miles from shore and in water at least 200 meters in depth.

Ballast water exchange is defined as at least 1 empty and refill cycle of each ballast tank that contains ballast water, resulting in a salinity level of at least 30 parts per thousand (ppt). If the master of a vessel determines that such exchange is impracticable, a sufficient number of flow-through exchanges of ballast water may be conducted to achieve replacement of at least 95 percent of ballast water in ballast tanks of the vessel, resulting in a salinity level of at least 30 ppt.

Saltwater flushing is defined as the addition of ocean water to ballast water tanks, the mixing of the flushwater with residual water and sediment through the motion of the vessel, and the discharge of the mixed water, such that the resulting residual water has a salinity level of at least 30 ppt.

All vessels entering New York waters must maintain the ability to measure salinity levels in each tank onboard the vessel so that salinities of at least 30 ppt can be ensured.

This condition does not apply to vessel(s):
(i) that operate exclusively in the Great Lakes - St. Lawrence Seaway System upstream of a line drawn from Cap-de-Rosiers to West Point, Anticosti Island and then to the north shore of the St. Lawrence River along a meridian of longitude 63 degrees West, or
(ii) operating exclusively within waters of New York Harbor and Long Island Sound, or
(iii) entering New York waters from ports of call within New Jersey and Connecticut waters which are included in the definition of "waters of New York Harbor and

[7] "Exclusive Economic Zone" (EEZ) means the area established by Presidential Proclamation Number 5030, dated March 10, 1983 (48 FR 10605, 3 CFR, 1983 Comp., p. 22) which extends from the base line of the territorial sea of the United States seaward 200 miles, and the equivalent zone of Canada. [source: 33 C.F.R. 151.2025]

Long Island Sound," provided that the vessel has met the requirements of this condition prior to entering the waters of New York Harbor and Long Island Sound, or
(iv) that have met the requirements of Condition #2 or Condition #3, or
(v) that carry only permanent ballast water, all of which is in sealed tanks that are not subject to discharge, or
(vi) of the National Defense Reserve Fleet that are scheduled to be disposed of through scrapping or sinking.

This condition does not apply to the discharge of ballast water if the master of the vessel determines that compliance with this condition would threaten the safety or stability of the vessel, its crew, or its passengers because of adverse weather, equipment failure, or any other relevant condition. If a vessel is unable to conduct ballast water exchange, or flushing, as specified, due to serious safety concerns as specified above, the operator of any vessel with ballast on board shall take reasonable measures to avoid discharge of organisms in ballast water and shall inform the Department in writing of the measures taken.

For purposes of this condition, “waters of New York Harbor and Long Island Sound” means waters in and around New York City, consisting of the waters, tributaries, bays, harbors, inlets, coves, channels, and other waterways within Lower and Upper New York Bay, Jamaica Bay, Raritan Bay, Newark Bay, Hudson River south of the Tappan Zee Bridge, Harlem River, East River, Gravesend Bay, Flushing Bay, Eastchester Bay, the Kills, and Long Island Sound.

2. By not later than January 1, 2012, each vessel covered under the VGP that operates in New York waters, shall have a ballast water treatment system that meets the following standards, subject to the exceptions listed below.

(A) *Standard for organisms 50 or more micrometers in minimum dimension*: Any ballast water discharged shall contain less than 1 living organism per 10 cubic meters.

(B) *Standard for organisms less than 50 micrometers in minimum dimension and more than 10 micrometers in minimum dimension*: Any ballast water discharged shall contain less than 1 living organism per 10 milliliters.

(C) *Standards for indicator microbes*:
(i) Any ballast water discharged shall contain less than 1 colony-forming unit of toxicogenic *Vibrio cholera* (serotypes O1 and O139) per 100 milliliters or less than 1 colony-forming unit of that microbe per gram of wet weight of zoological samples;
(ii) Any ballast water discharged shall contain less than 126 colony-forming units of *escherichia coli* per 100 milliliters; and
(iii) Any ballast water discharged shall contain less than 33 colony-forming units of intestinal enterococci per 100 milliliters.

(D) This condition does not apply to vessel(s):

(i) operating exclusively within waters of New York Harbor and Long Island Sound. For purposes of this condition, "waters of New York Harbor and Long Island Sound" has the same meaning as in Condition #1, or
(ii) that carry only permanent ballast water, all of which is in sealed tanks that are not subject to discharge, or
(iii) of the National Defense Reserve Fleet that are scheduled to be disposed of through scrapping or sinking.

No extensions will be made to this implementation date, unless an entity covered under the permit makes a request for an extension to the Department and can provide sufficient justification for such a request. Any such extension request shall state and demonstrate that: (1) there is a shortage in supply of the technology necessary to meet the limits set forth in this certification, or a vessel-specific engineering constraint, or other factor related to the availability and installation of technology beyond the vessel owner/operator's control, that delays the technology being available and installed in time to comply with this standard; (2) the unavailability of supply or installation constraint is the only reason the January 1, 2012 date cannot be met; and (3) the vessel has exhausted all other options to comply with this standard. Any extension request must be made no later than June 30, 2010, and the extension request shall indicate when the vessel will come into compliance with this deadline.

3. Each vessel constructed on or after January 1, 2013 that is covered under the VGP and operates in New York waters, shall have a ballast water treatment system that meets the following standards, subject to the exceptions listed below.

(A) *Standard for organisms 50 or more micrometers in minimum dimension*: Any ballast water discharged shall contain no detectable living organisms.

(B) *Standard for organisms less than 50 micrometers in minimum dimension and more than 10 micrometers in minimum dimension*: Any ballast water discharged shall contain less than 0.01 living organism per milliliter.

(C) *Standards for indicator microbes*:
(i) Any ballast water discharged shall contain less than 1 colony-forming unit of toxicogenic *Vibrio cholera* (serotypes O1 and O139) per 100 milliliters or less than 1 colony-forming unit of that microbe per gram of wet weight of zoological samples,
(ii) Any ballast water discharged shall contain less than 126 colony-forming units of *escherichia coli* per 100 milliliters, and
(iii) Any ballast water discharged shall contain less than 33 colony-forming units of intestinal enterococci per 100 milliliters.

(D) *Standard for bacteria*: Any ballast water discharged shall contain less than 1,000 bacteria per 100 milliliters.

(E) *Standard for viruses*: Any ballast water discharged shall contain less than 10,000 viruses per 100 milliliters.

(F) For purposes of this condition, "Constructed" means a stage of vessel construction where:
(i) the keel is laid; or
(ii) construction identifiable with a specific vessel begins; or
(iii) assembly of the vessel has commenced comprising at least 50 tonnes or 1 percent of the estimated mass of all structural material, whichever is less; or
(iv) the vessel undergoes a major conversion.

(G) In the context of this condition, "Major Conversion" means a conversion of a vessel;
(i) which changes its ballast water carrying capacity by 15 percent or greater; or
(ii) which changes the vessel type; or
(iii) which, in the opinion of the Department, is projected to prolong its life by ten years or more; or
(iv) which results in modifications to its ballast water system other than component replacement-in-kind.

(H) This condition does not apply to vessel(s):
(i) operating exclusively within waters of New York Harbor and Long Island Sound. For purposes of this condition, "waters of New York Harbor and Long Island Sound" has the same meaning as in Condition #1, or
(ii) that carry only permanent ballast water, all of which is in sealed tanks that are not subject to discharge, or
(iii) of the National Defense Reserve Fleet that are scheduled to be disposed of through scrapping or sinking.

No extensions will be made to this implementation date, unless an entity covered under the permit makes a request for an extension to the Department and can provide sufficient justification for such a request. Any such extension request shall state and demonstrate that: (1) there is a shortage in supply of the technology necessary to meet the limits set forth in this certification or other factor related to the availability and installation of technology beyond the vessel owner/operator's control, that delays the technology being available and installed in time to comply with this standard; (2) the unavailability of supply is the only reason the January 1, 2013 date cannot be met; and (3) the vessel has exhausted all other options to comply with this standard. Any extension request must be made no later than June 30, 2011, and the extension request shall indicate when the vessel will come into compliance with this deadline.

4. Effective January 1, 2012, any vessel covered under the VGP that operates in New York waters may not discharge treated or untreated graywater into New York waters within 3 nautical miles of shoreline, or within Long Island Sound or New York Harbor. This limit is in effect regardless of a vessel's traveling speed.

No extensions will be made to this implementation date, unless an entity covered under the permit makes a request for an extension to the Department and can provide sufficient justification for such a request. Any such extension request shall state and demonstrate that: (1) there is a shortage in supply of the technology necessary to meet the limits set forth in this certification, or a vessel-specific engineering constraint or other factor related to the availability and installation of technology beyond the vessel owner/operator's control, that delays the

technology being available and installed in time to comply with this standard; (2) the unavailability of supply or installation constraint is the only reason the January 1, 2012 date cannot be met; and (3) the vessel has exhausted all other options to comply with this standard. Any extension request must be made no later than June 30, 2010, and the extension request shall indicate when the vessel will come into compliance with this deadline.

5. Effective January 1, 2012, any vessel covered under the VGP that operates in New York waters may not discharge treated or untreated bilge water into New York Waters.

This condition does not apply to the discharge of bilge water if the master of the vessel determines that compliance with this condition would threaten the safety or stability of the vessel, its crew, or its passengers because of adverse weather, equipment failure, or any other relevant condition.

No extensions will be made to this implementation date, unless an entity covered under the permit makes a request for an extension to the Department and can provide sufficient justification for such a request. Any such extension request shall state and demonstrate that: (1) there is a shortage in supply of the technology necessary to meet the limits set forth in this certification, or a vessel-specific engineering constraint or other factor related to the availability and installation of technology beyond the vessel owner/operator's control, that delays the technology being available and installed in time to comply with this standard; (2) the unavailability of supply or installation constraint is the only reason the January 1, 2012 date cannot be met; and (3) the vessel has exhausted all other options to comply with this standard. Any extension request must be made no later than June 30, 2010, and the extension request shall indicate when the vessel will come into compliance with this deadline.

6. Pursuant to the Clean Water Act, the inclusion of a state water quality certification requirement in the draft VGP appropriately preserves the lawful authority of the individual States to implement more protective ballast water pollution controls as part of the EPA general permit within their respective waters. Pursuant to the Clean Water Act, the States also have the authority to adopt more stringent ballast water requirements than currently proposed under the draft VGP.

As part of New York's certification of the draft VGP, DEC finds that the additional discharge standards set forth as conditions in this certification letter are necessary to reduce the unintentional discharge of invasive species, disease organisms and other pollutants that have the potential to disrupt the ecological balance of New York's waters and negatively impact the fish and wildlife resources of the State, as well as other states, and to comply with the requirements of federal and State law, including State water quality standards.

The additional discharge standards set forth as conditions in this certification letter are necessary for the following reasons. First, there is overwhelming evidence that water quality, including fish, shellfish, and wildlife propagation and survival, has been impaired in recent decades in New York's waters by invasive species. Second, there is evidence that direct discharge of invasive species into New York waters is not a necessary condition for impairment by invasive species; discharges into adjacent, connected waters have severely impaired New York waters for their best usage such as fish, shellfish, and wildlife propagation and survival. Third, the above points

provide a reasonable basis for inferring that water quality will be further impaired by additional, future introductions of invasive species and that impairments to New York's water quality will be caused by discharges of such species to adjacent, connected waters.

The ability of various invasive species to spread into adjacent, connected waters is well known. The zebra mussel is a prime example. This mussel, introduced in or near Lake St. Clair where it was discovered in 1988,[8] quickly spread into New York waters and throughout the Great Lakes and beyond. The rapid spread of the zebra mussel during the past twenty years can be seen, for example, on a series of maps available on the website of Sea Grant's National Aquatic Nuisance Species Clearinghouse.[9] As another example, the round goby was introduced into the St. Clair River in 1990, "probably via contaminated ballast water of transoceanic ships."[10] Following this discharge in adjacent, connected waters, the round goby has moved into New York waters and contributed to the impairment of these waters for their best usage such as fish, shellfish, and wildlife propagation and survival.[11] Round gobies "have shown a rapid range of expansion through the Great Lakes"[12] and have been found in the upper St. Lawrence River and the lower Genesee River, among other New York waters.[13] Yet another example is the spiny water flea, "first found in Lake Huron in 1984 – probably imported in the ballast water of a trans-oceanic freighter. Since then, populations have exploded and the animal can now be found throughout the Great Lakes and in some inland lakes,"[14] including New York waters.

As recognized by EPA,[15] the predominant pathway for aquatic invasive species entry into the Great Lakes is the ballast water of oceangoing ships.[16] Invasive species introduced into the Great Lakes from vessels' untreated ballast water discharges have created serious, damaging impacts that threaten the resource's ecological and economic health.[17]
Because the Great Lakes contain fresh water, some of the most damaging ballast water- induced species are native to other fresh or brackish waters, particularly those in the

[8] NOAA, National Center for Research on Aquatic Invasive Species, Great Lakes Aquatic Nonindigenous Species List (www.glerl.noaa.gov/res/Programs/ncrais/great_lakes_list.html).
[9] New York Sea Grant, National Aquatic Nuisance Species Clearinghouse (www.aquaticinvaders.org).
[10] Great Lakes Information Network, "Goby in the Great Lakes Region" (www.great-lakes.net/envt/florafauna/invasive/goby.html).
[11] U.S. Geological Survey, Nonindigenous Aquatic Species (NAS) Program, Species Fact Sheet, "Apollonia (Neogobius) melanostomus (Pallas 1814); Common Name: round goby," (http://nas.er.usgs.gov/queries/FactSheet.asp?speciesID=713); M. Walsh et al., Occurrence and Food Habits of the Round Goby in the Profundal Zone of Southwestern Lake Ontario, 33 J. of Great Lakes Research 83 (2007).
[12] U.S. Geological Survey, Species Fact Sheet, op. cit..
[13] U.S. Geological Survey, Nonindigenous Aquatic Species (NAS) Program (http://nas.er.usgs.gov/AlertSystem/default.asp), NAS Alert System results for New York.
[14] Great Lakes Information Network, "Spiny Water Flea in the Great Lakes Region" (www.greatlakes.net/envt/flora-fauna/invasive/spinyflea.html).; DEC, Spiny Flea Confirmed in First "Inland" Water (October 30, 2008).
[15] EPA, Aquatic Nuisance Species in Ballast Water Discharges: Issues and Options, 4, 6 (September 10, 2001), identified at 66 Fed. Reg. 49381 (September 27, 2001).
10 E. Mills, et al., Exotic Species in the Great Lakes: A History of Biotic Crises and Anthropogenic Introductions, 19 J. of Great Lakes Research 1 (1993).
[16] E. Mills, et al., Exotic Species in the Great Lakes: A History of Biotic Crises and Anthropogenic Introductions, 10 J. of Great Lakes Research 1 (1993).
[17] 16 U.S.C. §4701(a)

Ponto-Caspian region (the Black, Caspian and Azov Seas).[18] These Ponto-Caspian invaders are now abundant in European waters used extensively by ships destined for the Great Lakes, and their continued invasion into the Lakes is considered highly probable.[19]

Such invasive species have competed with, preyed upon and otherwise altered the Great Lakes' environment, resulting in population declines and compromised species viability of the region's native plants, fish and wildlife.[20] They have harmed the region's commercial and recreational fishing industries and damaged its public water and energy generating infrastructure.[21] The insidious effects of these species have been costly to deal with and show no signs of dissipating. The harm caused by exotic nuisance species such as the zebra mussel, round goby, and spiny water flea in the Great Lakes is widespread.

For example, large zebra mussel populations reduce food and oxygen for native fauna, and have been observed completely covering native mussels and snails, threatening their survival.[22] The zebra mussel readily attaches to submerged hard surfaces including rocky shoals, water intake pipes and docks, forming dense layered colonies that have approached one million mussels per square meter.[23] Power companies and others must repeatedly remove mats of these mussels from their infrastructure. In addition, selective feeding by zebra mussels has been implicated in recurring nuisance algae blooms in the Great Lakes, causing taste and odor problems and increased treatment costs for municipal water supplies.[24] Congress estimates that the economic disruption to communities, just from the zebra mussel, has already cost billions of dollars.[25] The round goby, an invader from the Black and Caspian Seas, feeds on mollusks, crustaceans, and lake trout eggs and fry, injuring Great Lakes native species through competition for food and predation.[26]

Another exotic invader from the Black and Caspian Seas, the spiny water flea, rarely more than a centimeter in length, competes with newly hatched Great Lakes native fish populations by feeding on zooplankton. The sharp spines characteristic of the spiny water flea prevent most small fish from swallowing it, thereby allowing this invader to reach a disproportionate population abundance.[27]

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[18] A. Ricciardi and H. MacIsaac, Recent Mass Invasion of the North American Great Lakes by Ponto-Caspian Species, 15 Trends in Ecology and Evolution 62 (2000).
[19] Id.
[20] 16 U.S.C. §4701(a).
[21] Id.
[22] U.S. Dept. of the Interior, National Biological Survey, A. Benson, et al., "Invasion of the Zebra Mussel into the United States," Our Living Resources: A Report to the Nation on the Distribution, Abundance, and Health of U.S. Plants, Animals and Ecosystems, 445-46 (1995).

[23] Id.; D. Pimentel, et al., Environmental and Economic Costs of Non-Indigenous Species in the United States, 50 Bioscience 53, 58 (2000).
[24] National Oceanic and Atmospheric Administration, Great Lakes Environmental Research Laboratory, Aquatic Invasive Species (AIS) and the Great Lakes: Simple Questions, Complex Answers, (September 2002).
[25] 16 U.S.C. §4701(a)(4).
[26] M.L. Corn et al., "Invasive Non-Native Species: Background and Issues for Congress," Congressional Research Service, Report for Congress, RL30123 (updated November 25, 2002); Michigan Dept. of Natural Resources, Annual Report, State of the Great Lakes, 32 (1993).
[27] Corn et al., op. cit.; Michigan Dept. of Natural Resources, op. cit.

Since 2000, significant mortality of lake sturgeon, Common Loon, Red-breasted Merganser, and other fish and waterbirds have been documented on Lake Erie. More recently, since 2002, similar mortality events have been noted, with increasing regularity, distribution and magnitude on Lake Ontario. Over the last three years Caspian Tern, and several other waterbird species, have been impacted. Nonnative invasive species, the quagga mussel and round goby, appear to be the biological transport mechanism bringing deadly Type E botulism toxin from the benthic environment to within foraging range of nesting and migrating waterbirds.[28]

Aquatic invasive species also pose a serious threat to the ecological health and biodiversity of native ecosystems of Long Island Sound and can affect the economic interests and public health of residents. To date, more than 50 non-native and 40 cryptogenic species have been identified in Long Island Sound.[29] The Asian shore crab, believed to have been introduced via ballast water discharge, was first found in the U.S. in 1988 in southern New Jersey and is now found from Maine to North Carolina.[30] The Asian shore crab arrived in New York Harbor and Long Island Sound in 1994 or 1995, and has since become the dominant crab in the intertidal zone in these areas, reaching densities greater than 300 per square meter in western Long Island Sound and causing population declines of native crabs such as common mud crab, green crab, and Atlantic rock crab. Atlantic rock crab has not been found since 1998, green crab densities have decreased 50% from 1998 to 2001, and common mud crab densities are down 96%. Overall, the diversity of the intertidal crab community in portions of western Long Island Sound have dropped greatly since 1998.[31]

In the Hudson River basin, at least 113 nonindigenous species have established populations.[32] Most came from Eurasia or the Mississippi-Great Lakes basin, and some are ballast-water invaders, many of which cause large economic damage and irreversible ecological changes. The best-known of these is the zebra mussel, which appeared in the Hudson in 1991 following introduction to the Great Lakes via ballast water. Zebra mussels now constitute more than half of consumer biomass in the river, and have completely altered the river's ecosystem by consuming 80% of the plankton in the river,[33] causing large declines in valuable open-water fish species such as American shad[34] and the destruction of hundreds of millions of native bivalves.[35]

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[28] K. Roblee, W. Stone and D. Adams, "Waterbird Mortality as a Result of Type E Botulism in Lake Erie and Lake Ontario," Northeast Natural History Conference IX, New York State Museum, Albany, NY (2006).

[29] Balcom, Nancy. 2007. Long Island Sound Interstate Aquatic Invasive Species Management Plan. New England Interstate Water Pollution Control Commission, US Environmental Protection Agency, Long Island Sound Study, State of Connecticut and New York State.

[30] Science Daily, Japanese Shore Crabs Invade Penobscot Bay, Maine, http://www.sciencedaily.com/releases/2002/07/020719073146.htm (July 19, 2002).

[31] Long Island Sound Study, 2001 Fall Update, http://www.longislandsoundstudy.net/pubs/news/fall01txt.htm.

[32] Mills, E., M. Scheuerell, D. Strayer and J. Carlton. 1996. Exotic Species in the Hudson River Basin: A History of Invasions and Introductions. 18 Estuaries 814-823.

[33] Strayer, D.L., N.F. Caraco, J.J. Cole, S. Findlay, and M.L. Pace. 1999. Transformation of freshwater ecosystems by bivalves: a case study of zebra mussels in the Hudson River. 49 BioScience 19-27.

[34] Strayer, D.L., K. Hattala, and A. Kahnle. 2004. Effects of an invasive bivalve (Dreissena polymorpha) on fish populations in the Hudson River estuary. 61 Canadian Journal of Fisheries and Aquatic Sciences

Economic costs of the zebra mussel invasion to water intakes alone have been estimated at $267 million in North America[36] and in the range of $100,000-$1,000,000 per year in the Hudson River alone.[37]

Other invaders that are thought to have arrived in ballast water have caused large ecological changes in the Hudson River; these include the Asian shore crab, now very common along the lower Hudson, where it displaces native crabs, the wedge rangia (Rangia cuneata), which dominates the waters of the lower Hudson, and the Chinese mitten crab, which appeared in numbers in the Hudson for the first time in 2008, and which has the potential to damage infrastructure (levees and embankments) as well as harm native populations of plants and shellfish.[38] Many other species now traveling around the world in ballast water (e.g., the golden mussel Limnoperna fortunei, the amphipod Corophium curvispinum, and the ruffe Gymnocephalus cernuus) would be able to survive and prosper in the Hudson, where they could contribute to further economic and ecological damage.[39]

Less stringent conditions than those set forth in this certification letter are not sufficient to prevent the impairment of New York's waters for their best usage such as fish, shellfish, and wildlife propagation and survival for the following reasons. As stated in a recent California report on ballast water standards, "Reports submitted as part of the IMO Convention suggest that the standards adopted by IMO would only be a marginal improvement on current management practices of ballast water exchange for the largest organisms (>50 µm) and may be similar to unmanaged ballast water for the smaller organisms (<50 µm) (Table V-1, MEPC 49/2/12003) (Section VII 'Scientific Considerations')."[40] These IMO standards – considered to be no more than a marginal improvement over the practice of ballast water exchange – are not included in this certification. The IMO standards are concentration-based, which is beneficial, yet they are not sufficiently protective. More stringent concentration-based standards are needed to protect New York's waters and are specified as conditions in this certification.

924-941.

[35] Strayer, D.L., and H.M. Malcom. 2007. Effects of zebra mussels (Dreissena polymorpha) on native bivalves: the beginning of the end or the end of the beginning? Journal of the North American Benthological Society 26: 111-122.

[36] Connelly, N.A.; O'Neill, C.R.; Knuth, B.A. and Brown, T.L. 2007. Economic impacts of zebra mussels on drinking water treatment and electric power generation facilities. 40 Environ. Mgmt. 105-112.

[37] Strayer, D.L. 2006. Alien species in the Hudson River, pp. 296-310 in: J.S. Levinton and J.R. Waldman (eds.). The Hudson River estuary. Cambridge University Press.

[38] Id.; MacDonald, J.A., R. Roudez, T. Glover, and J.S. Weis, 2007, The invasive green crab and Japanese shore crab: behavioral interactions with a native crab species, the blue crab. 9 Biological Invasions 837-848; NOBANIS, 2008, Invasive species fact sheet. Eriocheir sinensis. http://www.nobanis.org/files/factsheets/Eriocheir_sinensis.pdf.

[39] Ricciardi, A., 1998, Global range expansion of the Asian mussel Limnoperna fortunei (Dunker, 1857) (Bivalvia: Mytilidae): another fouling threat to freshwater systems, 13 Biofouling 97-106; Ricciardi, A., and J.B. Rasmussen, 1998, Predicting the identity of future biological invaders: a priority for aquatic resource management, 55 Canadian Journal of Fisheries and Aquatic Sciences 1759-1765.

[40] M. Falkner et al., "California State Lands Commission Report on Performance Standards for Ballast Water Discharges in California Waters," California State Lands Commission, Marine Facilities Division, January 2006, at 34.

In general, concentration-based numerical discharge standards are needed as a replacement for ballast water exchange because the results of ballast water exchange are so highly variable[41] and therefore unprotective as an ongoing permit condition. As stated in the California report, "Concentration based standards...would specify a specific concentration of organisms that could be discharged following treatment, regardless of source port concentrations.... Concentration based standards allow for the consideration of both a protection level to reduce risk, as well as technical consistency, such as detection limits."[42] Both New York and California routinely use concentration-based standards for protection of water and air quality.

The State of California recently promulgated relatively stringent concentration-based standards[43] that "encompass several...desirable characteristics: they are significantly better than ballast water exchange, they are in-line with the best professional judgment from the scientific experts participating in the IMO Convention, and they do approach a protective zero discharge standard."[44] These standards are based primarily on recommendations made by U.S. government representatives participating in the IMO Convention[45] and were subsequently recommended by the California Performance Standards Advisory Panel in its Majority Report.[46] The standards, considered to be approximately a 1000-fold improvement over ballast water exchange,[47] provide a reasonable basis for protection of New York waters and are adopted as a condition (Condition #3) for new ships constructed after January 1, 2013 that operate in New York waters. New York finds that the standards set forth in Condition #3 are needed to prevent impairment of waters for their best usage and are thus needed to comply with the New York State statutes and regulations set forth above. In accordance with 40 CFR 124.53 (e)(3), this condition cannot be made less stringent and still comply with State water quality standards.

New York has set a reasonable compliance schedule for ships operating in New York waters and has allowed an additional year or more beyond the California implementation schedule. This additional time is intended to alleviate possible congestion problems for shipyards or possible supply problems for equipment vendors that might occur if simultaneous compliance were required in New York and California.

Other standards, considered to be approximately a 100-fold improvement over ballast water exchange, are adopted as a condition that must be met by all ships covered by the VGP that operate in New York waters after January 1, 2012. These standards are based partly on recommendations made by the International Study Group on Ballast Water and Other Ship Vectors[48] and partly on the widely discussed numeric limits proposed in the recent House of Representatives bill #H.R. 2830. The standards, which provide a reasonable basis for protection

[41] Id., esp. Fig. VII-1 at 18.
[42] Id. at 16.
[43] California Title 2, Division 3, Chapter 1, Article 4.7, Performance Standards for the Discharge of Ballast Water For Vessels Operating in California Waters (2007).
[44] M. Falkner et al., op. cit., at 36-37.
[45] Id. at 19; Submission by the United States to IMO on Ballast Water Discharge Standards, Regulation D-2, document BWM/CONF/14 (2004).
[46] M. Falkner et al., op. cit., at 32; Report and Recommendations of the California Advisory Panel on Ballast Water Performance Standards, October 2005.
[47] M. Falkner et al., op. cit., at 19.
[48] Id.

of New York waters and are implemented on a reasonable compliance schedule, are adopted as Condition #2 in this certification. New York finds that the standards set forth in Condition #2 are needed to prevent impairment of waters for their best usage and are thus needed to comply with the New York State statutes and regulations set forth above. In accordance with 40 CFR 124.53 (e)(3), this condition cannot be made less stringent and still comply with State water quality standards.

It should be noted that this certification is only effective for the next five years. Since some period of time is required to allow vessels to install the technology needed to meet the conditions of this certification, the Department has sought to provide reasonable notice and time allowance. It is the Department's intention to apply the relatively stringent standards set forth in Condition #3 to all ships operating in New York waters in the next water quality certification to be filed after the expiration of this one.

Ballast water exchange or flushing, as already required by the VGP for many vessels, is widely recognized as a beneficial but imperfect way to reduce invasive species introductions in ballast water discharges. Condition #1 extends the requirement of exchange or flushing to certain other vessels that enter New York waters on coastal voyages, thereby reducing the likelihood of invasions from other coastal waters such as Chesapeake Bay. New York finds that the standards set forth in Condition #1 are needed to prevent impairment of waters for their best usage and are thus needed to comply with the New York State statutes and regulations set forth above. In accordance with 40 CFR 124.53 (e)(3), this condition cannot be made less stringent and still comply with State water quality standards.

Condition #4 and Condition #5 restrict discharges of bilge water and graywater in order to protect New York's coastal waters from contaminants, nutrients, and bacterial and viral agents. New York finds that the standards set forth in Condition #4 and Condition #5 are needed to prevent impairment of waters for their best usage and are thus needed to comply with the New York State statutes and regulations set forth above. In accordance with 40 CFR 124.53 (e)(3), these conditions cannot be made less stringent and still comply with State water quality standards. It should be noted that the discharge of sewage is not covered by either this certification or the VGP because sewage discharge is governed by the Marine Sanitation Devices requirements of the Clean Water Act, 33 U.S.C. 1322.

6.23 Ohio:

Ohio certified the VGP with the following additional permit conditions:

I. WATER QUALITY STANDARDS AND IMPACTS

a. <u>Ohio Narrative Water Quality Standards and Nuisance Species</u>:
Ohio Water Quality Standards (WQS) contain narrative conditions to prohibit nuisance conditions in waters of the state. The specific standard states that "To every extent practical and possible as determined by the director, these waters shall be … Free from materials entering the waters as a result of human activity producing color, odor or other conditions in such a degree as to create a nuisance;" [Ohio Administrative Code 3745-1-04(C)].

In this rule, the term materials is not defined or limited; Ohio considers that this condition applies to non-indigenous nuisance species. The federal NPDES permit does not adequately prevent the introduction of new non-indigenous species.

b. Ohio Narrative Water Quality Standards for Toxicity:
The narrative WQS also contain a provision prohibiting toxicity: "To every extent practical and possible as defined by the director, these waters shall be….Free from substances entering the waters as a result of human activity in concentrations that are toxic or harmful to human, animal or aquatic life and/or are rapidly lethal in the mixing zone;" [Ohio Administrative Code 3745-1-04(D)].

The Federal NPDES permit requirement for salt water ballast exchange means that ballast water discharges to fresh water will contain large concentrations of dissolved solids; these solids have the potential to be toxic to fresh water aquatic life, and discharges must meet the narrative toxicity standard.

c. Chlorine Limits, Biocides and Experimental Ballast Water Treatment:
The discharge limits for residual chlorine do not meet Ohio WQS for continuous discharges. The federal NPDES permit's total residual chlorine discharge standard is 100 ug/l for discharges from experimental ballast water treatment systems. This limit meets Ohio WQS for 2 hour/day discharges, but does not meet WQS for continuous discharges.

Ohio has used its authority to establish site-specific WQS to establish a separate inside-mixing-zone maximum criterion for short-term exposures to chlorine (less than 2 hours/day). This criterion for exposures less than 2 hours/day is 200 ug/l; the otherwise applicable criterion is 38 ug/l. [OAC 3745-1-35 and -36]

Discharges of other biocides must meet the narrative water quality standard for toxicity noted above. [OAC 3745-1-04(D)].

II. SPECIFIC CONDITIONS

a. Ballast Water Controls
Given the number of invasive species already in the Great Lakes, the number of recent introductions, and the likelihood of increased ship traffic, the existing program of ballast water control is not effective in preventing the introduction of invasive non-native organisms, and therefore does not meet Ohio's narrative WQS. A system of ballast water treatment would reduce the number of live organisms in ballast water, and is the most effective approach to meeting the nuisance WQS. [OAC 3745-1-04(C)]

Treatment systems to reduce the number of live organisms discharged in ballast water exist and are continuing to be developed. These treatment systems are intended to kill and/or filter all organisms from ballast water so that they are not discharged. Several of the treatment systems being designed to meet the discharge standards of the International Maritime Organization (IMO) can remove a large percentage, if not all, organisms. Ohio

EPA is certifying IMO standards because they are the most widely accepted and tested standards in the world. These treatment systems shall be operated to maximize the destruction and/or removal of organisms in the ballast water, with the object of discharging no viable organisms.

Ohio EPA believes that the IMO certification is sufficient demonstration that these treatment standards are "practical and possible" methods for meeting ballast water treatment standards for ocean-going ships. More restrictive standards proposed or adopted by certain other states (such as California and New York) have not been demonstrated to be "practical and possible", and can not be applied at this time.

Ohio EPA also believes that there are reasons to treat existing vessels that operate exclusively within the Great Lakes differently than those that operate outside the Lakes. The effluent flows of ballast water are larger than ocean-going vessels, are discharged more rapidly than the ballast water of ocean-going vessels, and space for treatment equipment is limited on existing lake vessels. These factors affect the practicability of treatment. Ohio EPA believes that IMO treatment standards is not "practical and possible" at this time for existing vessels operating exclusively within the Great Lakes;

These factors may or may not apply to new vessels in the Great Lakes. Ohio EPA is extending the schedule for treatment on new Great Lakes-only vessels to gain extra time to evaluate these discharges for treatment. The schedule for these new vessels is given below.

The treatment standards in Table A apply to vessels operating exclusively in the Great Lakes, launched after January 1, 2016.

Discharges of ballast water from vessels that operate outside of the Great Lakes must meet an International Maritime Organization-certified treatment standard according to the following schedule:

For vessels launched prior to January 1, 2012, and meeting the applicability criteria in the federal NPDES permit, treatment shall be installed and operational to meet the performance standards for organisms included in Table A by January 1, 2016.

For vessels launched after January 1, 2012, and meeting the applicability criteria in the federal NPDES permit, treatment shall be installed and operational to meet the performance standards for organisms included in Table A prior to commencement of vessel operation in Ohio State waters of Lake Erie.

Table A Biological Performance Standards for Ballast Water Treatment Technology

Parameter	Limit	Limit Type	Sample Type
Organisms >50 microns in minimum dimension	<10 viable /m^3	Daily average	Composite

Organisms 10-50 microns in minimum dimension	<10 viable / ml	Daily average	Composite
Escherichia coliform	<250 cfu / 100 ml	Daily average	Composite
Intestinal enterococci	<100 cfu / 100 ml	Daily average	Composite

Note 1- Analysis required by the above table shall be performed consistent with the protocols currently being validated by the EPA Environmental Technology Verification Program (EPA/U.S. Coast Guard/Naval Research Laboratory) and/or the following Great Ships Initiative protocols:

- Procedure for Algae/Small Protozoan Sample Analysis, Procedure for Zooplankton Sample Analysis, Procedure for the Detection and
- Enumeration of Enterococci by Membrane Filtration, Procedure for Microbial Analysis using the Heterotrophic Plate Count Method, and
- Procedure for the Detection and Enumeration of E. coli by Membrane Filtration available online at http://www.nemw.org/GSI/protocols.htm

"Composite" sample type is a combination of individual grab samples taken at periodic intervals over the specified time period. Either samples taken at equal time intervals shall be combined using a volume of each sample that is proportional to the flow that sample represents, or equal volume samples shall be combined that are taken at intervals of equal flow volumes.

"Viable organism" means organisms that are living and able to reproduce.

Until these standards are effective, all vessels shall meet the Best Management Practices (BMP) requirements of the federal NPDES Permit, including the salt water ballast exchange or salt water flushing requirements for ocean-going vessels.

In addition to the discharge standards in Table A, discharges of any biocide or toxic chemical shall not be toxic to organisms in ambient waters, or rapidly lethal within the mixing zone [OAC 3745-1-04(D)]:

If the federal government adopts treatment standards more stringent than IMO, then those standards shall replace the above treatment standards for new treatment systems installed after the date those Federal standards go into effect.

The Director will evaluate treatment standards equivalent to IMO or more restrictive standards for all vessel classes covered by the federal general permit (including both ocean-going vessels and vessels that operate only in the Great Lakes) when he issues the next certification on this permit. The decision to require IMO or more restrictive treatment standards will be based on treatment system availability and costs, and other considerations required by law.

b. Salt Water Discharges

It is likely that discharges of ballasted sea water will not meet the toxicity narrative water quality standard if discharge in the relatively shallow water of Ohio's Lake Erie ports, due

to the dissolved solids levels in sea water. Discharges in the open waters of the Lake minimize the risk of toxicity, and will allow the standard to be met. In order to prevent toxicity to ambient organisms or rapidly lethal conditions, discharges of ballasted sea water within the breakwalls of Ohio's Lake Erie Ports is prohibited.

c. Ballast Treatment - Chlorine Discharge Limits
For experimental ballast water treatment systems using chlorine, discharges must meet a maximum chlorine limit of 38 micrograms per liter (ug/l) if the discharge lasts for more than 2 hours/day; the limit is 200 ug/l if the discharge is 2 hours/day or less. [OAC 3745-1-07 (inside-mixing-zone maximum water quality standards, definition and applicability), OAC 3745-1-35, (site-specific WQS, exposure time-based criteria), OAC 3745-1-36 (aquatic life criteria calculation procedures, equivalency of IMZM with FAV criteria), OAC 3745-2-05(B)(3) (maximum limits for discharges to lakes)] These standards apply to all ballast water treatments – both experimental and those treatments installed to meet IMO standards.

Ohio EPA acknowledges that the limit of 38 ug/l is less than the Ohio EPA practical quantification level for residual chlorine analysis (50 ug/l). Analyses less than or equal to 50 ug/l are judged to be in compliance with this certification.

d. Ballast Treatment- Other Biocides
Biocides other than chlorine used in ballast water treatment must meet Ohio's narrative toxicity water quality standard. To meet the 'no rapidly lethal conditions' narrative, discharges of all biocides must meet inside-mixing zone water quality standards (Final Acute Values) as determined by the OAC Rule 3745-1-36 [Great Lakes Initiative rule procedures]. The discharge of organic quaternary ammonium compounds is prohibited.

6.24 Pennsylvania:

Pennsylvania certified the VGP with the following additional permit conditions:

This certification shall expire five years after the date of issuance of the EPA's VGP. However, the Department reserves the right to amend, modify or withdraw certification of the VGP in order to protect the waters of the Commonwealth or if for any reason further changes to the draft VGP are made upon issuance of the final VGP. Furthermore, the Department reserves the right to modify this Certification to require vessels covered by the VGP to install and operate ballast water treatment systems to prevent the discharge of aquatic nuisance species to Pennsylvania waters provided a determination is made by the Department that such ballast water treatment systems are necessary, available and cost effective.

The issuance of the Certification does not authorize violation of any federal, state and local laws or regulations, nor does it rule out the necessity of obtaining applicable permits, including any other Department permits, or approvals from other units of government as may be required by law.

Certification Conditions for the VGP

1. Deleted.

2. Deleted.

3. Deleted.

4. The permittee may not discharge floating materials, oil, grease, scum, foam, sheen and substances which produce color, taste, turbidity or settle to form deposits in concentrations or amounts sufficient to be, or creating a danger of being, inimical to the water uses to be protected or to human, animal, plant or aquatic life.

The conditions set forth in this certification letter are necessary to ensure compliance with the requirements of the Pennsylvania Clean Streams Law (35 P.S. §§ 691.1 – 691.1011) as well as to reduce water degradation, unintentional discharge of invasive species, nutrient loading, disease organisms and other pollutants discharged from vessels covered by the VGP that have the potential to disrupt the ecological balance of Pennsylvania's waters and the Great Lakes and negatively impact the fish and wildlife resources of this Commonwealth.

6.25 Rhode Island:

Rhode Island certified the VGP with the following additional permit conditions:

1. In accordance with the Rhode Island Water Quality Regulations (including but not limited to Rule 17) and all other applicable laws and regulations, the Director may modify, suspend, or revoke, in whole or in part this water quality certification for a specific vessel that is authorized or is seeking authorization to discharge under the VGP.

2. In accordance with the Rhode Island Water Quality Regulations (including but not limited to Rule 17) and all other applicable laws and regulations, the Director may modify, suspend, or revoke, in whole or in part this water quality certification for the VGP.

3. Nutrient impaired waters shall be those referenced in the State's most current 303D list.

4. A map identifying all nutrient impaired waters and biodiversity-impaired waters within the State of Rhode Island shall be included in all permits issued under this general permit.

5. This Water Quality Certificate shall expire five (5) years from the date of issuance.

6.26 Utah:

Utah certified the VGP subject to the following additional permit conditions:

The 2008 Utah Legislature passed the Aquatic Invasive Species Interdiction Act (S.B. 238) and subsequently the Utah Wildlife Board passed associated rule (R657-60, Aquatic Invasive Species Interdiction), both with a purpose to define procedures and regulations designed to prevent and control the spread of aquatic invasive species, particularly Dreissena mussels, within the State of Utah. The aforementioned act and rule establish a situation in Utah that is

more restrictive than the Vessel General Permits. It is unlawful to possess or transport Dreissena mussels within the State of Utah. Additionally, all boats having been used anywhere within the last 30 days on a Dreissena mussel infested water, either marine or fresh, and subsequently launching on any waters in Utah must certify prior to launch that they have been properly decontaminated. Launch is denied until certification can be met. The only two accepted decontamination protocols in Utah as per Rule R657-60 are as follows:

Do-it-yourself Decontamination

- Clean all plants, fish, mussels and mud from boat or equipment before leaving water body area (discard unused bait in the trash where you fished);
- Drain all water from boat (equipment storage areas, ballast tanks, bilge, livewells and motor) before leaving water body area;
- Dry boat and equipment at home or at suitable storage area (7 days summer, 18 days spring and fall, and 30 days winter or expose boat and equipment to freezing conditions for a continuous 72 hour period) prior to another launch.

Professional Decontamination

- Use a professional to apply scalding water (140^0 Fahrenheit)to wash equipment, boat and trailer and to flush equipment storage areas, ballast tanks, bilge, livewells and motor or other raw water circulation systems.

Either of the aforementioned decontamination protocols will kill aquatic invasive species either already inhabiting Utah or threatening to arrive, including adult, juvenile and microscopic life forms.

In the State of Utah it is unlawful to discharge any volume of water, which is laden with viable aquatic invasive species, into any waters within the State of Utah. Thus, any discharge for any volume of ballast, bilge or other raw water suspected of harboring aquatic invasive species must not occur unless it has been heated to at least 140^0 Fahrenheit. Since ballast and bilge waters frequently contain other undesirable materials (e.g. oil and grease, solvents and soaps, etc.), it is preferable that such water discharges be made onshore into an appropriate, approved wastewater treatment system. If there are any questions regarding these procedures related to the control of invasive aquatic species please contact the Utah Division of Wildlife Resources.

Lake Powell has been designated as a "no discharge" waterbody by the National Park Service. As such, there will be no discharge of wastewater, treated or untreated, within the legal boundary of Lake Powell.

6.27 Vermont:

Vermont certified the VGP subject to the following additional permit conditions:

1. This Certification is valid only for those activities that fully comply with all terms and conditions of the Vessel General Permit and all other state laws applicable to such discharges. The Department reserves the authority to enforce any violation of the

Vermont Water Quality Standards that results from any discharge and to enforce all other state laws applicable to such discharges.

2. Discharges that are not eligible for coverage under the Vessel General Permit and that require an individual permit must obtain an individual Water Quality Certification or waiver from the Department.

3. This Water Quality Certification shall be valid until such time as the Vessel General Permit is modified, suspended, revoked or reissued.

4. The issuance of this Certification does not authorize violation of any federal, state or local laws or regulations, nor does it obviate the necessity of obtaining such permits, including any Department permits, or approvals from other governmental entities.

5. This Water Quality Certification may be revoked or modified if it is found, in the opinion of the Department, that the process and conditions of the Vessel General Permit do not achieve compliance with the Vermont Water Quality Standards and other applicable provisions of state law.

6.28 Wyoming:

Wyoming certified the VGP subject to the following additional conditions:

In accordance with the provisions of the state certification program for boating activities and discharges incidental to the normal operation of vessels, this office has reviewed the proposed nationwide permits and had made the following determinations:

In view of the current state water quality standards and regulations, we have found that the nationwide permits are acceptable as written with the stipulation that certification of permits for eligible large (over 79 feet in length) and commercial vessels operating within Class 1 waters must be deferred for agency review and public notice. For all eligible small recreational vessels and those large and commercial vessels operating outside of Class 1 waters, we waive our right to individually certify.

DEFERAL OF CERIFICATION ON CLASS 1 WATERS

Class 1 waters are defined in Chapter 1 of the Wyoming Water Quality Rules and Regulations as those in which no further water quality degradation by point source discharges other than from dams will be allowed. Nonpoint source discharges will be controlled by the implementation of the best management practices designed to maintain existing water quality. Because of the high level of protection afforded to these waters by the regulations, authorization of the activities covered by the above Nation Wide Permits (NWPs) requires individual departmental review.

Therefore, 401 certification for NWP, Vessel General Permit Discharges Incidental to the Normal Operation of Commercial Vessels and Large Recreational Vessels (VGP) is deferred when operation occurs on Wyoming Class 1 waters. This nationwide permit is certified for use

on Wyoming class 2, 3, and 4 waters (all other waters) provided that the general conditions, management practices, and other provisions of the nationwide program are strictly followed.

The following is a listing of current class 1 waters in Wyoming:

1. All surface waters located within the boundaries of national parks and congressionally designated wilderness areas as of January 1, 1999;
2. The main stem of the Snake River through its entire length about U.S. Highway 22 Bridge (Wilson Bridge);
3. The main stem of the Green River, including the Green River Lakes from the mouth of the New Fork River upstream to the wilderness boundary;
4. The main stem of the Wind River from the Wedding of the Waters upstream to Boysen Dam;
5. The main stem of the North Platte River from the mouth of Sage Creek (approximately 15 stream miles downstream of Saratoga, Wyoming) upstream to the Colorado state line;
6. The main stem of the North Platte River from the headwaters of Pathfinder Reservoir upstream to Kortes Dam (Miracle Mile segment);
7. The main stem of the North Platte River from the Natrona County Road 309 bridge (Goose Egg bridge) upstream to Alcova Reservoir;
8. The main stem of Sand Creek above the U.S. Highway 14 bridge;
9. The main stem of the Middle Fork of the Powder River through its entire length above the mouth of Buffalo Creek;
10. The main stem of the Tongue River, the main stem of the North Fork of the Tongue River, and the main stem of the South Fork of the Tongue River above the U.S. Forest Service Boundary;
11. The main stem of the Sweetwater River above the mouth of Alkali Creek;
12. The main stem of the Encampment River from the northern U.S. Forest Service boundary upstream to the Colorado state line;
13. The main stem of the Clarks Fork River from the U.S. Forest Service Boundary upstream to the Montana state line;
14. All waters within the Fish Creek (near Wilson, Wyoming) drainage;
15. The main stem of Granite Creek (tributary to the Hoback River) through its entire length;
16. Fremont Lake;
17. Wetlands adjacent to the above listed Class 1 waters.

WAIVED 401 CERTIFICATION

State Certification of General Permit for Discharges Associated with Recreational Vessels is waived. The Wyoming Department of Environmental Quality certifies that these permits are acceptable as described above. The Department also reserves the right to amend, modify, suspend or revoke this certification or any of its terms or conditions as may be appropriate or necessary to protect water quality and associated beneficial uses. Upon adoption of updated standards, this certification may be revoked and modified appropriately.

Please be aware that this letter constitutes state certification of these permits as required by Section 401 of the federal Clean Water Act. It does not provide an exemption from any other

federal, state or local laws or regulations, nor does it provide exemption from legal action by private citizens for damage to property which the activity may cause.

7. Appendix A definitions:

The following definitions apply to this permit. Terms not defined in this Appendix have the meaning given by 40 CFR Part 122.2. When a defined term appears in a definition, the defined term is placed in quotation marks as an aid to readers.

"Appropriate Regional Office" means the regional office listed in Part 8 of the Permit responsible for the waters where the vessel spends the most time or is based in a home port.

"Aqueous Film-Forming Foam" means the firefighting foam and seawater mixture discharged during training, testing, or maintenance operations. *[source: 40 C.F.R 1700.4]*

"Atlantic or Gulf Coastwise Trade" means vessels engaged in coastwise trade along the Atlantic coast or Gulf of Mexico coast of the United States, or in between those coasts, operating in and between ports on these coasts.

"Atlantic or Gulf Nearshore Voyages" means voyages by any vessels engaged in the Atlantic or Gulf Coastwise trade and vessels transiting between Atlantic ports (including those in the Caribbean Sea) or Gulf of Mexico ports that travel between more than one Captain of the Port Zone, and all other vessels that sail from foreign, Atlantic, 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 ports on the Atlantic or Gulf coasts.

"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. *[source: 33 C.F.R. 151.2025]*

"Ballast Water Exchange" see "Exchange".

"Ballast Water" means any water and suspended matter taken on board a vessel to control or maintain, trim, draught, stability, or stresses of the vessel, regardless of how it is carried. *[source: 33 C.F.R 151.1504]*

"Ballast Water Capacity" means the total volumetric capacity of any tanks, spaces, or compartments for carrying, loading, or discharging "ballast water", including any multi-use tanks, space or compartment designed to allow carriage of "ballast water".

"Bilgewater means the wastewater from a variety of sources that accumulates in the lowest part of the vessel (the bilge).

"Biocide" means a substance or organism, including a virus or a fungus, that is introduced into, or produced by, ballast water treatment systems to kill or eliminate organisms as part of the ballast water treatment process.

"Boat Engine Wet Exhaust" means the seawater that is mixed and discharged with small boat propulsion engine exhaust to cool the exhaust and quiet the engine. *[source: 40 C.F.R 1700.4]*

"Captain of the Port" (COTP) means the Coast Guard officer designated as the COTP, or a person designated by that officer, for the COTP zone covering the U.S. port of destination. These COTP zones are listed in 33 C.F.R. part 3. *[source: 33 C.F.R. 151.2025]*

"Chain Locker Effluent" means the accumulated precipitation and seawater that is emptied from the compartment used to store the vessel's anchor chain. *[source: 40 C.F.R 1700.4]*

"Coastal Exchange Zone" means an area greater than 50 nm from shore and greater than 200 meters in depth.

"Commercial fishing vessel" means any vessel which is documented under the laws of the United States or, if under five net tons, registered under the laws of any State, and used for commercial fishing or activities directly related to commercial fishing. *(source: modified from 50 CFR 296.2)*

"Commercial vessel" means any "vessel" other than a "recreational vessel" or a vessel of the U.S. armed forces.

"Constructed' means a state of construction of a vessel at which—

> "(A) the keel is laid;
> "(B) construction identifiable with the specific vessel begins;
> "(C) 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
> "(D) the vessel undergoes a major conversion;" *[patterned after the February 2004 Ballast Water Treaty, regulation A1(4)]*

"Control measure" means any BMP or other method (including effluent limitations) used to prevent or reduce the discharge of pollutants to waters of the United States.

"Controllable Pitch Propeller Hydraulic Fluid" means the hydraulic fluid that discharges into the surrounding seawater from propeller seals as part of normal operation, and the hydraulic fluid released during routine maintenance of the propellers. *[source: 40 C.F.R 1700.4]*

"Cruise ship" means a passenger ship used commercially for pleasure cruises that provides overnight accommodations to passengers.

"Darkness" means sunset to sunrise.

"Deck" means a horizontal surface or part thereof serving as a floor or structural support over the upper section of the hull and which is exposed to weather and sea such as freeboard and superstructure decks from which runoff may originate.

"Deck Runoff" means the precipitation, washdowns, and seawater falling on the weather deck of a vessel and discharged overboard through deck openings.
[source: 40 C.F.R 1700.4]

"Delivered" means the date of the owner/operator's formal acceptance of the ship from the builder or another seller or the point in time when custody or ownership of the vessel officially transfers from the shipbuilder or other seller to the owner/operator.

"Discharge incidental to the normal operation of a vessel" means those discharges that were excluded from the NPDES permitting program by operation of 40 C.F.R. 122.3(a) as in effect on September 29, 2008.

"Distillation and Reverse Osmosis Brine" means the concentrated seawater (brine) produced as a byproduct of the processes used to generate freshwater from seawater. *[source: 40 C.F.R 1700.4]*

"Elevator Pit Effluent" means the liquid that accumulates in, and is discharged from, the sumps of elevator wells on vessels. *[source: 40 C.F.R 1700.4]*

"Exchange" means to replace the water in a ballast tank using one of the following methods:

> "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 C.F.R. 151.2025]*
>
> "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.

"Exclusive Economic Zone" (EEZ) means the area established by Presidential Proclamation Number 5030, dated March 10, 1983 (*48 FR 10605*, 3 CFR, 1983 Comp., p. 22) which extends from the base line of the territorial sea of the United States seaward 200 miles, and the equivalent zone of Canada. *[source: 33 C.F.R. 151.2025]*

"Ferry" means a vessel having provisions for deck passengers and/or vehicles operating between two points over the most direct water route, operating on a frequent schedule, and offering a public service of a type normally attributed to a bridge or tunnel. *[modified from:* 46 C.F.R. §70.10-1]

"Firemain Systems" means the seawater pumped through the firemain system for firemain testing, maintenance, and training, and to supply water for the operation of certain vessel systems. *[source: 40 C.F.R 1700.4]*

"Fouling organisms" means any aquatic flora and/or fauna which attach to, associate with, and/or grow on or in the vessel.

"Freshwater Layup" means the potable water or freshwater taken from surrounding waters that is discharged from the water cooling system while the vessel is in port, and the cooling system is in

lay-up mode (a standby mode where seawater in the system is replaced with potable water for corrosion protection). *[modified from: 40 C.F.R 1700.5(d)]*

"Gas Turbine Water Wash" means the water released from washing gas turbine components. *[source: 40 C.F.R 1700.4]*

"Graywater" means galley, bath, and shower water, as well as wastewater from lavatory sinks, laundry, and water fountains. *[modified from 40 C.F.R 1700.4 but removed shop sinks]*

"Gross Ton" means the size of the vessel as calculated using the formula set by the International Convention on Tonnage Measurement of Ships, 1969. $GT = K * V$ where V = total volume in m^3 and K = a figure from 0.22 up to 0.32, depending on the ship's size (calculated by : $K = 0.2 + .02 * \log_{10}V$).

"Hull Coating Leachate" the constituents that leach, dissolve, ablate, or erode from the paint on the hull into the surrounding seawater. *[source: 40 C.F.R 1700.4]*

"IMO Guidelines" mean the Guidelines for the Control and Management of Ships' Ballast Water to Minimize the Transfer of Harmful Aquatic Organisms and Pathogens (IMO Resolution A.868 (20), adopted November 1997). *[source: 33 C.F.R. 151.2025]*

"In Port" means, for the purposes of this permit, anchored, moored, or otherwise secured while located in waters subject to this permit which are inside the baseline of the US territorial sea.

"Large cruise ship" means a passenger ship, used commercially for pleasure cruises, that provides overnight accommodations to passengers, and is authorized by the Coast Guard to carry 500 or more passengers.

"Large Ferry" means a "ferry" that: a) has a capacity greater than or equal to 100 tons of cargo, e.g., for cars, trucks, trains, or other land-based transportation or b) is authorized by the Coast Guard to carry 250 or more people.

"Major conversion" means a conversion of a vessel, that—

(A) substantially alters the dimensions or carrying capacity of the vessel;
(B) changes the type of the vessel; or
(C) the intent of which, in the opinion of the director, is substantially to prolong its life
[modified from 33 CFR 151.05 with the exception language specific to MARPOL is removed].

"MARPOL 73/78" means the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto. [*[source: modified from 40 C.F.R 110.1]*

"MARPOL vessel" means a ship subject to Annex I of the International Convention for the Prevention of Pollution from Ships as implemented by the Act to Prevent Pollution from Ships and the oil pollution provisions of U.S. Coast Guard regulations in 33 CFR Part 151, Subpart A.

"Master" means captain, person-in-charge, or other party responsible for operation of the vessel.

"Medium Cruise Ship" means a passenger ship, used commercially for pleasure cruises, that provides overnight accommodations to passengers, and is authorized by the Coast Guard to carry 100 to 499 passengers.

"Mid-Ocean" means waters greater than 200 nm from any shore.

"Mile" means nautical mile as used in this permit, or 6076.1 feet or 1.852 kilometers.

"Motor Gasoline and Compensating Discharge" means the seawater taken into, and discharged from, motor gasoline tanks to eliminate free space where vapors could accumulate. *[source: 40 C.F.R 1700.4]*

"NANPCA" means the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990. *[source: 33 C.F.R. 151.2025]*

"NBIC" means the National Ballast Water Information Clearinghouse operated by the Coast Guard and the Smithsonian Environmental Research Center as mandated under NISA. *[source: 33 C.F.R. 151.2025]*

"NISA" means the National Invasive Species Act of 1996, which reauthorized and amended NANPCA. *[source: 33 C.F.R. 151.2025]*

"Non-Oily machinery wastewater" means the combined wastewater from the operation of distilling plants, water chillers, valve packings, water piping, low- and high-pressure air compressors, propulsion engine jacket coolers, fire pumps, and seawater and potable water pumps. *[modified from: 40 C.F.R 1700.4]*

"Non-toxic" soaps, cleaners, and detergents means these materials which do not exhibit potentially harmful characteristics as defined by the Consumer Product Safety Commission regulations found at 16 CFR Chapter II, Subchapter C, Part 1500.

"Noxious Liquid Substance" ("NLS") has the same meaning given that term by 33 CFR Part 151, Subpart A.

"Oil" means oil of any kind or in any form, including but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil. *[source: 33 CFR 154.105]*

"Oil in quantities that may be harmful" means any discharge of oil having the effects identified in 40 CFR 110.3, provided that this term does not include those discharges specified in 40 CFR 110.5(a) – (c).

"Oily mixture" means a mixture, in any form, with any oil content, including, but not limited to: (1) slops from bilges; (2) slops from oil cargoes (such as cargo tank washings, oily waste, and oily refuse; (3) oil residue; and (4) oily Ballast Water from cargo or fuel oil tanks. *[source: 33 CFR 151.05]*

"Owner or operator" and "Owner/Operator" mean the owner or operator of any facility or activity subject to regulation under the NPDES program. For purposes of this permit, an "operator" means a party, including a charterer by demise, who:

(1) has operational control over vessel activities, including the ability to modify those activities; or

(2) has day-to-day operational control of those activities that are necessary to ensure compliance with the permit or to direct workers to carry out activities required to comply with the permit.

“Pacific Coastwise Trade” means vessels engaged in coastwise trade along the Pacific Coast of the United States, operating in and between ports in Alaska, California, Oregon, and Washington.

“Pacific Nearshore Voyages” means voyages by any 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, 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 of the West Coast of the continental United States.

“Person” means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof. *[source – 40 CFR Part 122.2]*

“Phosphate Free” soaps, cleaners, and detergents means these materials which contain, by weight, 0.5% or less of phosphates or derivatives of phosphates.

“Photographic Laboratory Drains” means the drains containing laboratory wastewater resulting from processing of photographic film. *[adapted from: 40 C.F.R 1700.4]*

“Port” see “In Port”

“Port or place of departure” means any port or place in which a vessel is anchored or moored. *[source: 33 C.F.R. 151.2025]*

“Port or place of destination” means any port or place to which a vessel is bound to anchor or moor. *[source: 33 C.F.R. 151.2025]*

“Recreational vessel” means a “vessel” being manufactured or operated primarily for pleasure or leased, rented, or chartered to another for the latter's pleasure. *[source: 46 USC 2101(25)]*

“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.

"Seawater Cooling Overboard Discharge" means the discharge of seawater from a dedicated system that provides noncontact cooling water for other vessel systems. *[source: 40 C.F.R 1700.4]*

"Seawater Piping Biofouling Prevention" means the discharge of seawater containing additives used to prevent the growth and attachment of biofouling organisms in dedicated seawater cooling systems on selected vessels. *[source: 40 C.F.R 1700.4]*

"Sewage" means human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes that are discharged from vessels, except that with respect to commercial vessels on the Great Lakes, this term includes galley, bath, and shower water.

"Sonar Dome Discharge" means the leaching of antifoulant materials into the surrounding seawater and the release of seawater or freshwater retained within the sonar dome. *[source: 40 C.F.R 1700.4]*

"Surface Vessel Bilgewater/Oily Water Separator Effluent" means the wastewater from a variety of sources that accumulates in the lowest part of the vessel (the bilge), and the effluent produced when the wastewater is processed by an oil water separator. *[source: 40 C.F.R 1700.4]*

"Technical Water" means water that is collected, generated or managed on board for uses other than potable water.

"Territorial sea" has the meaning assigned by section 502(8) of the Federal Water Pollution Control Act (33 U.S.C. 1362(8)).

"Treated Bilgewater" means bilgewater treated with an oily water separator and having oil concentrations less than 15 ppm and that does not result in a discharge of oil in quantities that may be harmful, pursuant to 40 CFR Part 110.

"Toxic and hazardous materials" means, for purposes of the VGP: any substance identified in 40 CFR 116.4; any toxic pollutant identified in 40 CFR 401.15; and any hazardous material as defined in 49 CFR 171.8""

"United States" means the States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands. *[source: 33 C.F.R. 151.2025]*

"Underwater Ship Husbandry Discharges" means the materials discharged during the inspection, maintenance, cleaning, and repair of hulls or hull appendages performed while the vessel is waterborne. *[modified from: 40 C.F.R 1700.4]*

"Untreated Bilgewater" means bilgewater that is not treated.

"Vessel" means every description of watercraft or other artificial contrivance being used as a means of transportation on "waters subject to this permit." *[modified from CWA § 312(a)]*

"Vessels unable to voyage more than 1 mile from shore" means vessels operating in waters which do not physically allow them to voyage more than 1 nm from shore (e.g. underway on inland river systems) or vessels which do not possess required certifications from the Coast Guard to operate more than 1 nm from shore.

"Visible Sheen" means a "silvery" or "metallic" sheen, gloss, or increased reflectivity; visual color; iridescence, or oil slick on the surface. *[Source: 58 FR 12507].*

"Waters subject to this permit" means "waters of the US" as defined in as 40 CFR 122.2 and extends to the outer reach of the 3 mile territorial sea as defined in section 502(8) of the CWA, unless otherwise excluded from coverage by Part 6 of the permit.

"Welldeck Discharges" means the water that accumulates from seawater flooding of the docking well (welldeck) of a vessel used to transport, load, and unload amphibious vessels, and from maintenance and freshwater washings of the welldeck and equipment and vessels stored in the welldeck. *[source: 40 C.F.R 1700.4]*

"You" means the "owner" or "operator**"** of a permitted vessel.

8. Appendix B – EPA Regional Contacts

Region 1 – CT, ME, MA, NH, RI, VT, and 10 Tribal Nations
1 Congress St, Suite 1100
Boston, MA 02114-2023
New England States: (888) 372-7341
Outside New England: (617) 918-1111

Region 2 – NJ, NY, PR, VI, and 7 Tribal Nations
290 Broadway, 24th Floor
New York, NY 10007-1866
Phone: (212) 637-3660

Region 3 – DE, DC, MD, PA, VA, WV
1650 Arch St
Philadelphia, PA 19103
Phone: 215-814-5000
Toll Free w/in Region 3: (800) 438-2474

Region 4 – AL, FL, GA, KY, MS, NC, SC, TN, and 2 Tribes
Atlanta Federal Center
61 Forsyth St SW
Atlanta, GA 30303-3104
Phone: (404) 562-9390
Phone: (404) 562-9900
Toll Free: 1-800-241-1754

Region 5 – IL, IN, MI, MN, OH, WI, and 35 Tribes
Ralph Metcalfe Federal Building
77 W Jackson Blvd
Chicago, IL 60604-3507
Phone: (312) 353-2000

Region 6 – LA, AR, OK, NM, TX, and 65 Tribes
1445 Ross Ave
Dallas, TX 75202-2733
Phone: (214) 665-6444

Region 7 – IA, KS, MO, NE, and 9 Tribes
901 N 5th St
Kansas City, KS 66101
Phone: (913) 551-7003
Toll-Free: 1-800-223-0425

Region 8 - CO, MT, ND, SD, UT, WY, and 27 Tribal Nations
1595 Wynkoop St
Denver, CO 80202-1129
Phone: (303) 312-6312
Toll Free w/in Region 8: (800) 227-8917

Region 9 – AZ, CA, HI, NV, and Pacific Islands
75 Hawthorne St
San Francisco, CA 94105-3901
Phone: (415) 947-8000
Toll Free: (866) EPA-WEST

Region 10 – AK, ID, OR, WA, and Native Tribes
1200 6th Ave, Suite 900
Seattle, WA 98101-1128
Phone: (206) 553-1200
Toll Free: (800) 424-4EPA

9. Appendix C – Areas Covered

This permit is effective in Waters of the United States for any State, Territory, Indian Country, or the District of Columbia listed as covered under Part 6 of this permit. As states or tribes seek authorization to issue vessel permits, areas covered by this permit could change.

9.1 Appendix D Reserved

Reserved.

10. Appendix E – Notice of Intent (NOI)

10.1 Draft NOI Instructions

Who Must File an NOI Form

Under the provisions of the Clean Water Act, as amended (33 U.S.C. 1251 et. seq.), federal law prohibits discharges incidental to the normal operation of a vessel unless that discharge is covered under a National Pollutant Discharge Elimination System (NPDES) Permit. To obtain authorization under this permit, operators must meet the eligibility requirements found in Part 1.2 of the Permit and, if required by Part 1.5.1.1 of the Permit, submit a complete and accurate NOI according to the requirements in Part 10/Appendix E. NOIs must be signed in accordance with 40 CFR 122.22.

An owner/operator is required to submit an NOI if the vessel meets either of the following two criteria:

- The vessel is greater or equal to 300 gross tons,

  Or

- The vessel has the capacity to hold or discharge more than 8 cubic meters (2113 gallons) of Ballast Water.

10.1.1.1.1 Owner/Operators required to submit NOIs

For owner/operators required to submit an NOI for their vessel, they must submit an NOI in accordance with the following table.

NOI Submission Deadlines/Discharge Authorization Dates

Category	NOI Deadline	Discharge Authorization Date*
Vessels delivered to owner or operator on or before September 19, 2009	No later than September 19, 2009	Authorization granted until September 19, 2009. If EPA receives an NOI on or before September 19, 2009, uninterrupted coverage continues.
New Owner/Operator of Vessel – transfer of ownership and/or operation of a vessel whose discharge is previously authorized under this permit	By date of transfer of ownership and/or operation	Date of transfer or date EPA receives NOI, whichever is later
New vessels delivered to owner or operator after September 19, 2009	30 days prior to discharge into waters subject to this permit	30 days after complete NOI received by EPA

NOI Submission Deadlines/Discharge Authorization Dates

Category	NOI Deadline	Discharge Authorization Date*
Existing vessels delivered to owner or operator after September 19, 2009 that were not previously authorized under this permit	30 days prior to discharge into waters subject to this permit	30 days after complete NOI received by EPA

* Based on a review of your NOI or other information, EPA may delay the discharge authorization date for further review, or may deny coverage under this permit and require submission of an application for an individual NPDES permit, as detailed in Part 1.8. In these instances, EPA will notify you in writing of the delay or the request for submission of an individual NPDES permit application. If EPA requires an individual permit for an existing vessel previously covered by this general permit, EPA will allow the permittee a reasonable amount of time to obtain individual permit coverage before their general permit coverage terminates.

10.1.1.1.2 Owner/Operators not Required to Submit NOIs

An operator of a vessel is not required to submit an NOI pursuant to Part 1.5.1.2 of the permit if the vessel is less than 300 tons and does not have the capacity to hold or discharge more than 8 cubic meters of ballast water. Owner/Operators that are not required to submit an NOI automatically receive coverage under this permit for their vessel and are authorized to discharge in accordance with the permit requirements.

Where to File NOI Form

All NOIs must be completed and filed using the eNOI system at www.epa.gov/vessels/enoi or send your completed NOI to the Notice Processing Center at EPA Headquarters, EPA Vessel Notice Processing Center, Mail Code 4203M, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Processing will be available after June 19, 2009.

If you have questions about whether you need to file an NOI or questions about completing the form, refer to www.epa.gov/vessels/enoi after June 19, 2009 or contact the NOI center at 1-866-352-7755.

Completing the Form

Section I: Owner/Operator Information

Provide the full legal name of the person, firm, public organization, or other entity that is the owner/operator of the vessel, as well as the name of the certifying official. Include the complete contact information for the owner/operator. The mailing address, city, state, and zip code, as well as phone number are required. The fax number and email address are optional.

Section II: Vessel Information

Provide the vessel name, registered identification number, call sign, and port of registry. Select the type of vessel by checking the appropriate box. Only the vessel types required to meet additional, vessel type-specific Permit standards are listed; all other vessel types should select

"other" and enter the vessel type in the space provided. Enter the vessel weight in gross tons, the length in feet, and the ballast water capacity in gallons or m^3. Indicate whether the vessel currently holds or has ever held a NPDES permit. Include the Permit number and dates of permit coverage. If the vessel is covered under this General Permit and this NOI is being submitted for a transfer of ownership to continue coverage, check the appropriate box, and include the date of transfer.

Section III: General Voyage Information

Enter the vessel home port, or if it does not have a home port, enter the US port it most frequently visits. Provide the name of each US port the vessel may visit during the Permit term. This list does not need to be exhaustive, but should be based on ports visited in the past and should be representative of the geographic area in which the vessel travels. Provide the Crew Capacity, that is, the number of crew needed for or normally used for operating the vessel. Also, select the appropriate box to indicate if the vessel will travel in ocean waters seaward of the US EEZ.

Section IV: Discharge Information

From the list provided, select each applicable discharge type that your vessel may create. All discharges incidental to the normal operation of a vessel are included in permit coverage; you do not have to select each discharge type for your vessel to receive coverage for all discharges you may have; however, when completing the NOI, vessel owner/operators should list all discharge types they expect from their vessels. Commercial fishing vessels and vessels less than 79 feet in length will only receive permit coverage for ballast water discharges and do not need to check other types of discharges in the NOI. Select the appropriate box to indicate whether the vessel ever engages or has the capacity to engage in industrial operations, such as seafood processing, energy exploration, or mining. If the vessel will be using a ballast water treatment system, check the appropriate box and answer the questions related to the discharge of residual biocides. The requirements for vessels using a ballast water treatment system can be found in section 5.8 of the Permit. Indicate whether the vessel currently has any onboard treatment systems for any waste stream listed in the permit, such as an Advanced Wastewater Treatment System (AWTS) used for graywater or an Oily Water Separator (OWS) used for bilgewater. Describe the treatment system, including what waste stream it treats, the type and design of the system, and treatment capacity. Provide information on the frequency and method of ballast tank sediment disposal and whether the vessel currently has a ballast water management plan. Indicate whether the vessel has an anti-foulant coating applied to the hull, what type of coating, when it was last applied, and briefly describe the vessel hull husbandry practices, including frequency of hull cleaning and method usually used.

Section V: Certification

Carefully read the certification language. To indicate your acceptance of these terms, check the "accept" box. Checking this box acts as a virtual signature on the NOI and indicates the operators consent to adhere to all the applicable terms of the Permit. By completing and submitting the NOI, the owner/operator certifies that every applicable General permit requirement will be met. Include the name and title of the person completing the eNOI. The

person completing the eNOI will have a box to check for “accept” which will act as virtual signature.

NOI Form

NPDES Form _ _ _ _ - _

EPA United States Environmental Protection Agency
Washington, DC 20460 Form Approved
Notice of Intent (NOI) for Discharges Incidental to the Normal Operation
Of a Vessel under the NPDES Vessel General Permit

OMB No. 2040-0004

Submission of this completed Notice of Intent (NOI) constitutes notice that the entity in Section A intends to be authorized to discharge pollutants to waters of the United States, from the vessel identified in Section B, under EPA's Vessel General Permit (VGP). Submission of the NOI also constitutes notice that the party identified in Section B of this form has read, understands, and meets the eligibility conditions of Part 1 of the VGP; agrees to comply with all applicable terms and conditions of the VGP; and understands that continued authorization under the VGP is contingent on maintaining eligibility for coverage. In order to be granted coverage, all information required on this form must be completed. Please read and make sure you comply with all permit requirements.

A. Vessel Owner/Operator Information

1. Name: _____
2. IRS Employer Information Number: _ _ - _ _ _ _ _ _ _
3. Name of Certifying Official _____
4. Mailing Address: a. Street: _____

b. City: _____ c. State: _ _ d. Zip code: _ _ _ _ _ - _ _ _ _

d. Country: _____

e. Phone: _ _ _ - _ _ _ - _ _ _ _ f. Fax (Optional): _ _ _ - _ _ _ - _ _ _ _

g. E-mail: _____

B. Vessel Information

1. Vessel Name: _____
2. Vessel ID/Registered Number/IMO number _____
3. Vessel Call Sign _____
4. Flag State/Port of Registry _____
5. Type of Vessel (select one)

□ Commercial Fishing Vessel with Ballast Water
□ Medium Cruise Ship (100 to 499 passengers)
□ Large Cruise Ship (500+ passengers)
□ Large Ferry (250+ passengers or more than 100 tons of cargo, e.g., cars, trucks, trains, or other land- based transportation.)
□ Barge
□ Oil or Gas Tanker
□ Research Vessel
□ Rescue Vessel
□ Other: _____

6. Vessel Dimensions: a. Weight: _____ gross tons

b. Length: _____ feet

7. Ballast Water Capacity: _____ gallons or meters³
8. Year Vessel Built: _____
9. a. Date of last dry-dock: _____ b. Date of next scheduled/anticipated dry-dock: _____
10. Does the vessel have onboard treatment systems for any other waste stream covered by this permit (e.g. Advanced Wastewater Treatment System for Graywater, Oily Water Separator)?

□ Yes □ No

If yes, please complete the following for each treatment system:

Waste stream: _____

Treatment system type/design and manufacturer: _____

Treatment System Capacity: _____

11. Ballast Water –

a. How often if the ballast tank cleaned and sediment disposed of? _____

b. How and where do you typically dispose of ballast tank sediment? _____

c. Does vessel have an existing ballast water management plan? □ Yes □ No

12. a. Type of anti-fouling hull coating on the vessel: _____

b. When anti-fouling hull coating was last applied: _____

c. Describe hull husbandry practices, such as frequency of cleaning, method used, etc: _____

_____

13. Does vessel currently have, or has vessel ever held, an NPDES permit, for any part, discharge, or operation of the vessel?
□ Yes □ No

a. If yes, please provide the following:

Permit Number: _____

Dates of coverage: _____

b. Is this a transfer of ownership? □ Yes □ No

If Yes, provide date of transfer: _____

C. Vessel Voyage Information

1. Home Port/Most Frequented US Port: _____

2. US Ports Vessel Anticipates Visiting During Permit Term: _____

3. Number of overnight berths: a. Passengers _____ b. Crew _____

a. Maximum passenger capacity _____ b. Crew _____

4. Does vessel travel beyond the US EEZ **and** more than 200 nm from any shore? □ Yes □ No

5. Is the vessel engaged in Pacific Nearshore Voyages? □ Yes □ No

D. Discharge Information (commercial fishing vessels and vessels < 79 feet in length need only select Ballast Water; if such vessels have no ballast water discharges they do not need coverage under this permit):

1. Select all applicable discharges vessel may generate:

□ Deck Washdown and Runoff
□ Bilgewater/Oily Water Separator Effluent
□ Ballast Water
□ Anti-fouling hull coatings
□ Aqueous Film Forming Foams (AFFF)
□ Boiler/Economizer Blowdown
□ Cathodic Protection
□ Chain Locker Effluent
□ Controllable Pitch Propeller Hydraulic Fluid and other Oil-to-Sea Interfaces
□ Distillation or Reverse Osmosis Brine
□ Elevator Pit Effluent
□ Firemain Systems
□ Freshwater layup
□ Gas Turbine Wash Water
□ Graywater
□ Motor Gasoline and Compensating Discharge
□ Non-Oily Machinery Wastewater
□ Refrigeration and Air Condensate Discharge
□ Seawater Cooling Overboard Discharge
□ Seawater Piping Biofouling Prevention
□ Small Boat Engine Wet Exhaust
□ Sonar Dome Discharge
□ Underwater Ship Husbandry
□ Welldeck Discharges
□ Graywater Mixed with Sewage
□ Exhaust Gas Scrubber Washwater Discharge

2. Does Vessel ever engage in or have capacity to engage in industrial operations? □ Yes □ No

a. If yes, please select appropriate box:

□ Seafood processing
□ Energy Exploration
□ Mining
□ Other: _____

3. Will the vessel be using an experimental ballast water treatment system which discharges residual biocides?
□ Yes □ No

b. If yes, are biocide concentrations below those listed in Part 5.8 of the Permit? □ Yes □ No

c. List the biocide residuals or derivatives that may be discharged by the ballast water treatment system: _____

_____

_____

_____

E. Certifier Name and Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name: _____

Title: _____

Signature: _____

Email: _____

NOI Preparer (Complete if NOI was prepared by someone other than the certifier)

Prepared By: _____

Organization: _____

Phone: _____ Ext: _____

Email: _____

Date: _ _ - _ _ - _ _

11. Appendix F – Notice of Termination (NOT)

11.1 NOT Instructions

Who Must File an NOT Form

Any owner/operator who was required to submit an NOI under Part 1.5.1.1 and meets the conditions of Part 1.6.1.2 of the General Permit is required to submit an NOT to end coverage under this permit.

If you have questions about whether you need to file an NOT or questions about completing the form, refer to (website will be inserted after finalization of this permit) or contact the NOI center at 1-866-352-7755.

Where to File NOT Form

All NOIs must be completed and filed using the eNOI system at www.epa.gov/vessels/enoi or send your completed NOI to the Notice Processing Center at EPA Headquarters, EPA Vessel Notice Processing Center Mail Code 4203M, U.S. EPA, 1200 Pennsylvania Avenue, NW, Washington, DC 20460.

Completing the Form

Section I: Owner/Operator Information

Provide the full legal name of the person, firm, public organization, or other entity that is the owner/operator of the vessel, as well as the name of the certifying official. Include the complete contact information for the owner/operator. The mailing address, city, state, and zip code, as well as phone number are required. The fax number and email address are optional. Provide the date permit coverage began under the applicable NOI. Select the appropriate box to indicate why you are submitting an NOT to end permit coverage. There are three options to choose from: because you have sold or transferred the vessel and are no longer the owner or operator, because the vessel is no longer traveling in or discharging to waters subject to this permit, or because you have obtained individual or alternative permit coverage. If you have sold or transferred the vessel, please provide the date of transfer as well as the name and contact information of the new owner. If you have obtained an individual or alternative permit, please provide the permit number and date permit coverage begins in the space given.

Section II: Vessel Information

Provide the vessel name, registered identification number, call sign, and port of registry.

Section III: Certification

Carefully read the certification language. To indicate your acceptance of these terms, check the “accept” box. Checking this box acts as a virtual signature on the NOT and indicates that you understand these vessel discharges will longer be authorized under the general permit,

and that any discharge of these effluent streams without a permit is a violation of the Clean Water Act. Include the name and title of the person completing the eNOI. The person completing the eNOI will have a box to check for “accept” which will act as virtual signature.

NOT Form

NPDES FORM
_ _ _ _ - _

Form Approved. OMB No 2040-0004
Please See Instructions Before Completing This Form

EPA Notice of Termination (NOT) of Coverage under NPDES General Permit for Discharges Incidental to Normal Vessel Operation

Submission of this Notice of Termination constitutes notice that the party identified in Section II of this form is no longer authorized to discharge any discharge incidental to the normal operation of a vessel under the NPDES program for the vessel identified in Section III of this form. All necessary information must be included on this form. Refer to the instructions at the end of this form.

A. Permit Information

1. NPDES Permit Tracking Number: _ _ _ _ _ _ _ _ _
2. Reason for Termination (check one only):
a. □ You transferred operational control to another operator.
Date of transfer: _____
b. □ You terminated vessel operations in waters subject to the General Permit.
c. □ You obtained coverage under an individual or alternative NPDES permit.
Permit Number: _____
Effective Date: _____

B. Vessel Owner/Operator Information

1. Name: _____
2. IRS Employer Information Number: _ _ - _ _ _ _ _ _ _
3. Name of Certifying Official:
_____
4. Mailing Address:
a. Street: _____
b. City: _____
c. State: _ _ d. Zip code: _ _ _ _ _ - _ _ _ _
e. Phone: _ _ _ - _ _ _ - _ _ _ _
f. Fax (Optional): _ _ _ - _ _ _ - _ _ _ _
g. E-mail: _____

C. Vessel Information

1. Vessel Name: _____
2. Vessel ID/Registered Number _____
3. Vessel Call Sign _____
4. Port of Registry _____

D. Certifier Name and Title:

I certify under penalty of law that the information contained in this form is, to the best of my knowledge and belief, true, accurate and complete. I understand that by submitting this Notice of Termination, I am no longer authorized to discharge any effluent associated with normal vessel operation under this general permit, and that discharging pollutants related to the normal operation of a vessel in to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this Notice of Termination does not release an operator from liability for any violations of this permit or the Clean Water Act.

Furthermore, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name: _____
Title: _____
Signature: _____ Date: _ _ - _ _ - _ _

12. Appendix G – Waters Federally Protected wholly or in part for Conservation Purposes

The list provided in Part 12 is a complete list of marine sanctuaries, units of the National Park System, units of the National Wildlife Refuge System, National Wilderness areas, and national wild and scenic rivers system components. EPA notes that this is a complete list gathered from sources maintained by the administrative agency. EPA did not filter this list: in many cases, the listed areas are terrestrial. Where the area is terrestrial (e.g. The Washington Monument), the requirements to comply with specific effluent limits do not apply. However, whenever any of these areas are aquatic or marine, the requirements discussed in Part 12.1 apply if they are applicable to a given vessel.

12.1 Waters Federally Protected Wholly or in Part for Conservation Purposes

You must comply with the specific effluent limits in Parts 2.2.2, 2.2.3.10, 2.2.5, 2.2.6, 2.2.12, 2.2.15, 2.2.16 and 5.1.1.1.1 [etc.] affecting the following federally protected waters to the extent located in waters subject to this permit:

- Marine Sanctuaries designated under the National Marine Sanctuaries Act (16 U.S.C. 1431 et seq.) and implementing regulations found at 15 CFR Part 922 and 50 CFR Part 404 or Marine national monuments designated under the Antiquities Act of 1906 (see Part 12.1.1 for a list of such areas);
- A unit of the National Park System, including National Preserves and National Monuments (see Part 12.1.2 for a list of such areas);
- A unit of the National Wildlife Refuge System, including Wetland Management Districts, Waterfowl Production Areas, National Game Preserves, Wildlife Management Area, and National Fish and Wildlife Refuges (see Part 12.1.3 for a list of such areas);
- National Wilderness Areas (see Part 12.1.4 for a list of such areas); and
- Any component designated under the National Wild and Scenic Rivers System (see Part 12.1.5 for a list of such areas).
- Any waterbody designated as an Outstanding National Resource Water (ONRW) by a State or Tribe (see Part 12.1.6 for a description of such areas)

12.1.1 Marine Sanctuaries under the National Marine Sanctuaries Act (16 U.S.C. 1431 et seq.) and National Marine Monuments Designated under the Antiquities Act of 1906

- Channel Islands (California)
- Cordell Bank (California)
- Fagatele Bay (American Samoa)(U.S.)
- Florida Keys (Florida)
- Flower Garden Banks (Texas)

- Grays Reef (Georgia)
- Gulf of the Farallones (California)
- Hawaiian Islands Humpback Whales (Hawaii)
- Monitor (North Carolina)
- Monterey Bay (California)
- Olympic Coast (Washington)
- Papahanaumokuakea Marine National Monument (Hawaii)
- Stellwagen Bank (Massachusetts)
- Thunder Bay (Michigan)

12.1.2 National Parks and Refuges: National Park Service, Department of the Interior

Alabama
Horseshoe Bend National Military Park
Little River Canyon National Preserve
Natchez Trace Parkway
Russell Cave National Monument
Selma To Montgomery National Historic Trail
Trail Of Tears National Historic Trail
Tuskegee Airmen National Historic Site
Tuskegee Institute National Historic Site
Alaska
Alagnak Wild River
Alaska Public Lands
Aleutian World War II National Historic Area
Aniakchak National Monument and Preserve
Bering Land Bridge National Preserve
Cape Krusenstern National Monument
Denali National Park and Preserve
Gates Of The Arctic National Park and Preserve
Glacier Bay National Park and Preserve
Inupiat Heritage Center
Katmai National Park and Preserve
Kenai Fjords National Park
Klondike Gold Rush National Historical Park
Kobuk Valley National Park
Lake Clark National Park and Preserve
Noatak National Preserve
Sitka National historical Park
Wrangell - St Elias National Park and Preserve
Yukon - Charley Rivers National Preserve
American Samoa
National Park of American Samoa
Arizona
Canyon De Chelly National Monument
Casa Grande Ruins National Monument
Chiricahua National Monument
Coronado National Memorial
Fort Bowie National Historic Site
Glen Canyon National Recreation Area
Grand Canyon National Park
Hohokam Pima National Monument
Hubbell Trading Post National Historic Site
Juan Bautista de Anza National Historic Trail
Lake Mead National Recreation Area
Montezuma Castle National Monument
Navajo National Monument
Old Spanish National Historical Trail
Organ Pipe Cactus National Monument
Parashant National Monument
Petrified Forest National Park
Pipe Spring National Monument
Saguaro National Park
Sunset Crater Volcano National Monument
Tonto National Monument
Tumacácori National Historical Park
Tuzigoot National Monument
Walnut Canyon National Monument
Wupatki National Monument
Yuma Crossing National Heritage Area
Arkansas
Arkansas Post National Memorial
Buffalo National River
Central High School National Historic Site
Fort Smith National Historic Site
Hot Springs National Park
Pea Ridge National Military Park
Trail Of Tears National Historic Trail
California
Alcatraz Island
Cabrillo National Monument
California National Historic Trail
Channel Islands National Park
Death Valley National Park
Devils Postpile National Monument
Eugene O'Neill National Historic Site

Fort Point National Historic Site
Golden Gate National Recreation Area
John Muir National Historic Site
Joshua Tree National Park
Juan Bautista de Anza National Historical Trail
Kings Canyon National Park
Lassen Volcanic National Park
Lava Beds National Monument
Manzanar National Historic Site
Mojave National Preserve
Muir Woods National Monument
Old Spanish National Historic Trail
Pinnacles National Monument
Point Reyes National Seashore
Pony Express National Historic Trail
Port Chicago Naval Magazine National Memorial
Presidio of San Francisco
Redwood National and State Parks
Rosie the Riveter WWII Home Front National Historical Park
San Francisco Maritime National Historical Park
Santa Monica Mountains National Recreation Area
Sequoia & Kings Canyon National Parks
Whiskeytown National Recreation Area
Yosemite National Park

Colorado

Bent's Old Fort National Historical Site
Black Canyon Of The Gunnison National Park
California National Historic Trail
Colorado National Monument
Curecanti National Recreation Area
Dinosaur National Park
Florissant Fossil Beds National Monument
Great Sand Dunes National Park and Preserve
Mesa Verde National Park
Old Spanish National Historic Trail
Pony Express National Historic Trail
Rocky Mountain National Park
Sand Creek Massacre National Historical Site
Santa Fe National Historic Trail
Yucca House National Monument

Connecticut

Appalachian National Scenic Trail
Quinebaug & Shetucket Rivers Valley National Heritage Corridor
Weir Farm National Historic Site

Delaware

Captain John Smith Chesapeake National Historic Trail

District of Columbia

Anacostia Park
Capitol Hill Parks
Captain John Smith Chesapeake National Historic Trail
Carter G. Woodson Home National Historic Site
Chesapeake & Ohio Canal National Historical Park
Chesapeake Bay Gateways Network
Constitution Gardens
Ford's Theatre National Historical Site
Fort Dupont Park
Franklin Delano Roosevelt Memorial
Frederick Douglass National Historic Site
George Mason Memorial
George Washington Memorial Parkway
John Ericsson National Memorial
Kenilworth Park & Aquatic Gardens
Korean War Veterans Memorial
Lincoln Memorial
Mary McLeod Bethune Council House National historic Site
Meridian Hill Park
National Capital Parks-East
National Mall
National Mall & Memorial Parks
National World War II
Old Post Office Tower
Peirce Mill
Pennsylvania Avenue National Historic Site
Potomac Heritage National Scenic Trail
President's Park (White House)
Rock Creek Park
Sewall-Belmont House National Historic Site
The Old Stone House
Thomas Jefferson Memorial
Vietnam Veterans Memorial
Washington Monument
World War II Memorial

Florida

Big Cypress National Preserve
Biscayne National Park
Canaveral National Seashore
Castillo De San Marcos National Monument
De Soto National Memorial
Dry Tortugas National Park
Everglades National Park
Fort Caroline National Memorial
Fort Matanzas National Monument
Gulf Islands National Seashore
Timucuan Ecological and Historical Preserve

Georgia

Andersonville National Historic Site
Appalachian National Scenic Trail
Augusta Canal national Heritage Area
Chattahoochee River National Recreation Area
Chickamauga & Chattanooga National Military Seashore
Cumberland Island National Seashore
Fort Frederica National Monument
Fort Pulaski National Monument

Jimmy Carter National Historic Site
Kennesaw Mountain National Battlefield Park
Martin Luther King Jr National Historic Site
Ocmulgee National Monument
Trail Of Tears National Historic Trail

Guam

War In The Pacific National Historical Park

Hawaii

Ala Kahakai National Historic Trail
Haleakala National Park
Hawaii Volcanoes National Park
Kalaupapa National Historical Park
Kaloko-Honokohau National Historical Park
Pu`uhonua O Honaunau National Historical Park
Puukohola Heiau National Historical Site
USS Arizona Memorial

Idaho

California National Historic Trail
City Of Rocks National Reserve
Craters Of The Moon National Monument and Preserve
Hagerman Fossil Beds National Monument
Lewis & Clark National Historic Trail
Minidoka Internment National Monument
Nez Perce National Historical Park
Oregon National Historic Trail
Yellowstone National Park

Illinois

Lewis & Clark National Historic Trail
Lincoln Home National Historic Site
Mormon Pioneer National Historic Trail
Trail Of Tears National Historic Trail

Indiana

George Rogers Clark National Historical Park
Indiana Dunes National Lakeshore
Lincoln Boyhood National Memorial

Iowa

Effigy Mounds National Monument
Herbert Hoover National Historic Site
Lewis & Clark National Historic Trail
Mormon Pioneer National Historic Trail

Kansas

Brown V Board Of Education National Historic Site
California National Historic Trail
Fort Larned National Historic Site
Fort Scott National Historic Site
Lewis & Clark National Historic Trail
Nicodemus National Historic Site
Oregon National Historic Trail
Pony Express National Historic Trail
Santa Fe National Historic Trail
Tallgrass Prairie National Preserve

Kentucky

Abraham Lincoln Birthplace National Historic Site
Big South Fork National River and Recreation Area
Cumberland Gap National Historical Park
Mammoth Cave National Park
Trail Of Tears National Historic Trail

Louisiana

Cane River National Heritage Area
Cane River Creole National Historical Park
El Camino Real de Los Tejas National Historic Trail
Jean Lafitte National Historical Park and Preserve
New Orleans Jazz National Historical Park
Poverty Point National Monument

Maine

Acadia National Park
Appalachian National Scenic Trail
Maine Acadian Culture
Roosevelt Campobello International Park
Saint Croix Island International Historic Site

Maryland

Antietam National Battlefield
Appalachian National Scenic Trail
Assateague Island National Seashore
Baltimore-Washington Parkway
Captain John Smith Chesapeake National Historic Trail
Catoctin Mountain Park
Chesapeake & Ohio Canal National Historical Park
Chesapeake Bay Gateways Network
Clara Barton National Historic Site
Fort Foote Park
Fort McHenry National Monument and Historic Shrine
Fort Washington Park
George Washington Memorial Parkway
Glen Echo Park
Greenbelt Park
Hampton National Historical Site
Harmony Hall
Monocacy National Battlefield
Oxon Cove Park & Oxon Hill Farm
Piscataway Park
Potomac Heritage National Scenic Trail
Suitland Parkway
Thomas Stone National Historic Site

Massachusetts

Adams National Historical Park
Appalachian National Scenic Trail
Blackstone River Valley National Heritage Corridor
Boston National Historical Park
Boston African American National Historic Site
Boston Harbor Islands National Recreation Area
Cape Cod National Seashore

Essex National Heritage Area
Frederick Law Olmsted National Historic Site
John F Kennedy National Historic Site
Longfellow National Historic Site
Lowell National Historical Park
Minute Man National Historic Site
New Bedford Whaling National Historical Park
Salem Maritime National Historic Site
Saugus Iron Works National Historic Site
Springfield Armory National Historic Site

Michigan

Isle Royale National Park
Keweenaw National Historical Park
Motor Cities National Heritage Area
North Country National Scenic Trail
Pictured Rocks National Lakeshore
Sleeping Bear Dunes National Lakeshore

Minnesota

Grand Portage National Monument
Mississippi National River and Recreation Area
North Country National Scenic Trail
Pipestone National Monument
Voyageurs National Park

Mississippi

Brices Cross Roads National Battlefield Site
Gulf Islands National Seashore
Natchez National Historical Park
Natchez Trace Parkway
Natchez Trace National Scenic Trail
Tupelo National Battlefield
Vicksburg National Military Park

Missouri

California National Historic Trail
George Washington Carver National Monument
Harry S Truman National Historic Site
Jefferson National Expansion Memorial
Lewis & Clark National Historic Trail
Oregon National Historic Trail
Ozark National Scenic Riverways
Pony Express National Historic Trail
Santa Fe National Historic Trail
Trail Of Tears National Historic Trail
Ulysses S Grant National Historic Site
Wilson's Creek National Battlefield

Montana

Big Hole National Battlefield
Bighorn Canyon National Recreation Area
Glacier National Park
Grant-Kohrs Ranch National Historic Site
Lewis & Clark National Historic Trail
Little Bighorn Battlefield National Monument
Nez Perce National Historical Park
Yellowstone National Park

Nebraska

Agate Fossil Beds National Monument
California National Historic Trail
Homestead National Monument of America
Lewis & Clark National Historic Trail
Mormon Pioneer National Historic Trail
Niobrara National Scenic River
Oregon National Historic Trail
Pony Express National Historic Trail
Scotts Bluff National Monument

Nevada

California National Historic Trail
Death Valley National Park
Great Basin National Park
Lake Mead National Recreation Area
Old Spanish National Historic Trail
Pony Express National Historic Trail

New Hampshire

Appalachian National Scenic Trail
Saint-Gaudens National Historic Site

New Jersey

Appalachian National Scenic River
Delaware National Scenic River
Delaware Water Gap National Recreation Area
Edison National Historic Site
Ellis Island National Monument
Gateway National Recreation Area
Great Egg Harbor River
Lower Delaware National Wild and Scenic River
Morristown National Historical Park
New Jersey Coastal Heritage Trail Route
New Jersey Pinelands National Reserve

New Mexico

Aztec Ruins National Monument
Bandelier National Monument
Capulin Volcano National Monument
Carlsbad Caverns National Park
Chaco Culture National Historical Park
El Camino Real de Los Tejas National Historic Trail
El Camino Real de Tierra Adentro National Historic Trail
El Malpais National Monument
El Morro National Monument
Fort Union National Monument
Gila Cliff Dwellings National Monument
Old Spanish National Historic Trail
Pecos National Historical Park
Petroglyph National Monument
Salinas Pueblo Missions National Monument
Santa Fe National Historic Trail
White Sands National Monument

New York

African Burial Ground Designation National Monument
Appalachian National Scenic Trail
Castle Clinton National Monument
Chesapeake Bay Gateways Network
Eleanor Roosevelt National Historic Site

Ellis Island National Monument
Erie Canalway National Heritage Corridor
Federal Hall National Memorial
Fire Island National Seashore
Fort Stanwix National Monument
Gateway National Recreation Area
General Grant National Memorial
Governors Island National Monument
Hamilton Grange National Memorial
Home Of Franklin D Roosevelt National Historic Site
Hudson River Valley National Heritage Area
Lower East Side Tenement Museum National Historic Site
Manhattan Sites
Martin Van Buren National Historic Site
National Parks of New York Harbor
North Country National Scenic Trail
Sagamore Hill National Historic Site
Saint Paul's Church National Historic Site
Saratoga National Historical Park
Statue Of Liberty National Monument
Theodore Roosevelt Birthplace National Historic Site
Theodore Roosevelt Inaugural National Historic Site
Upper Delaware Scenic and Recreational River
Vanderbilt Mansion National Historic Site
Women's Rights National Historical Park

North Carolina

Appalachian National Scenic Trail
Blue Ridge Parkway
Blue Ridge National Heritage Area
Cape Hatteras National Seashore
Cape Lookout National Seashore
Carl Sandburg Home National Historic Site
Fort Raleigh National Historic Site
Great Smoky Mountains National Park
Guilford Courthouse National Military Park
Moores Creek National Battlefield
Overmountain Victory National Historic Trail
Trail Of Tears National Historic Trail
Wright Brothers National Monument

North Dakota

Fort Union Trading Post National Historic Site
Knife River Indian Villages National Historic Site
Lewis & Clark National Historic Trail
North Country National Scenic Trail
Theodore Roosevelt National Park

Northern Mariana Islands

American Memorial Park

Ohio

Cuyahoga Valley National Park
David Berger National Memorial
Dayton Aviation Heritage National Historical Park
First Ladies National Historic Site
Hopewell Culture National Historical Park
James A Garfield National Historic Site
National Aviation Heritage Area
North Country National Scenic Trail
Perry's Victory & International Peace Memorial
William Howard Taft National Historic Site

Oklahoma

Chickasaw National Recreation Area
Fort Smith National Historic Site
Oklahoma City National Memorial
Santa Fe National Historic Trail
Trail Of Tears National Historic Trail
Washita Battlefield National Historic Site

Oregon

California National Historic Trail
Crater Lake National Park
Fort Vancouver National Historic Site
John Day Fossil Beds National Monument
Lewis & Clark National Historic Trail
Lewis and Clark National Historical Park
Nez Perce National Historical Park
Oregon National Historic Trail
Oregon Caves National Monument

Pennsylvania

Allegheny Portage Railroad National Historic Site
Appalachian National Scenic Trail
Chesapeake Bay Gateways Network
Delaware National Scenic River
Delaware & Lehigh National Heritage Corridor
Delaware Water Gap National Recreation Area
Deshler-Morris House
Edgar Allan Poe National Historic Site
Eisenhower National Historic Site
Flight 93 National Memorial
Fort Necessity National Battlefield
Friendship Hill National Historic Site
Gettysburg National Military Park
Gloria Dei Church National Historic Site
Hopewell Furnace National Historic Site
Independence National Historical Park
Johnstown Flood National Monument
Lackawanna Heritage Valley
Lower Delaware National Wild and Scenic River
North Country National Scenic Trail
Oil Region National Heritage Area
Path of Progress National Heritage Tour Route
Potomac Heritage National Scenic Trail
Rivers Of Steel National Heritage Area
Schuylkill River Valley National Heritage Area
Steamtown National Historic Site
Thaddeus Kosciuszko National Memorial
Upper Delaware Scenic and Recreational River

Valley Forge National Historical Park

Puerto Rico

San Juan National Historic Site

Rhode Island

Blackstone River Valley National Heritage Corridor
Roger Williams National Memorial
Touro Synagogue National Historic Site

South Carolina

Charles Pinckney National Historic Site
Congaree National Park
Cowpens National Battlefield
Fort Moultrie National Monument
Fort Sumter National Monument
Kings Mountain National Military Park
Ninety Six National Historic Site
Overmountain Victory National Historic trail
South Carolina National Heritage Corridor

South Dakota

Badlands National Park
Jewel Cave National Monument
Lewis & Clark National Historic Trail
Minuteman Missile National Historic Site
Missouri Recreational River
Mount Rushmore National Memorial
Wind Cave National Park

Tennessee

Andrew Johnson National Historic Site
Appalachian National Scenic Trail
Big South Fork National River and Recreation Area
Fort Donelson National Battlefield
Great Smoky Mountains National Park
Natchez Trace Parkway
Obed Wild and Scenic River
Overmountain Victory National Historic Trail
Shiloh National Military Park
Stones River National Battlefield
Tennessee Civil War National Heritage Area
Trail Of Tears National Historic Trail

Texas

Alibates Flint Quarries National Monument
Amistad National Recreation Area
Big Bend National Park
Big Thicket National Preserve
Chamizal National Memorial
El Camino Real de Los Tejas National Historic Trail
El Camino Real de Tierra Adentro National Historic Trail
Fort Davis National Historic Site
Guadalupe Mountains National Park
Lake Meredith National Recreation Area
Lyndon B Johnson National Historical Park
Padre Island National Seashore
Palo Alto Battlefield National Historic Site
Rio Grande Wild and Scenic River
San Antonio Missions National Historical Park

Utah

Arches National Park
Bryce Canyon National Park
California National Historic Trail
Canyonlands National Park
Capitol Reef National Park
Cedar Breaks National Monument
Dinosaur National Monument
Glen Canyon National Recreation Area
Golden Spike National Historic Site
Hovenweep National Monument
Mormon Pioneer National Historic Trail
Natural Bridges National Monument
Old Spanish National Historic Trail
Pony Express National Historic Trail
Rainbow Bridge National Monument
Timpanogos Cave National Monument
Zion National Park

Vermont

Appalachian National Scenic Trail
Marsh - Billings - Rockefeller National Historical Park

Virgin Islands

Buck Island Reef National Monument
Christiansted National Historic Site
Salt River Bay National Historic Park and Ecological Preserve
Virgin Islands National Park
Virgin Islands Coral Reef National Monument

Virginia

Appalachian National Scenic Trail
Appomattox Court House National Historical Park
Arlington House, The Robert E. Lee Memorial
Assateague Island National Seashore
Blue Ridge Parkway
Booker T Washington National Monument
Cape Henry Memorial
Captain John Smith Chesapeake National Historic Trail
Cedar Creek & Belle Grove National Historical Park
Chesapeake Bay Gateways Network
Claude Moore Colonial Farm
Colonial National Historical Park
Fredericksburg & Spotsylvania National Military Park
George Washington Memorial Parkway
George Washington Birthplace National Monument
Great Falls Park
Green Springs
Jamestown National Historic Site

Lyndon Baines Johnson Memorial Grove on the Potomac
Maggie L Walker National Historic Site
Manassas National Battlefield Park
Overmountain Victory National Historic Trail
Petersburg National Battlefield
Potomac Heritage National Scenic Trail
Prince William Forest Park
Richmond National Battlefield Park
Shenandoah Park
Theodore Roosevelt Island Park
Wolf Trap National Park for the Performing Arts
Yorktown National Cemetery

Washington

Ebey's Landing National Historical Reserve
Fort Vancouver National Historic Site
Klondike Gold Rush - Seattle Unit National Historical Park
Lake Chelan National Recreation Area
Lake Roosevelt National Recreation Area
Lewis & Clark National Historic Trail
Mount Rainier National Park
Nez Perce National Historical Park
North Cascades National Park
Olympic National Park
Ross Lake National Recreation Area
San Juan Island National Historical Park
Whitman Mission National Historic Site

West Virginia

Appalachian National Scenic Trail
Bluestone National Scenic River
Chesapeake & Ohio Canal National Historical Park
Chesapeake Bay Gateways Network
Gauley River National Recreation Area
Harpers Ferry National Historical Park
New River Gorge National River
Wheeling National Heritage Area

Wisconsin

Apostle Islands National Lakeshore
Ice Age National Scenic Trail
North Country National Scenic Trail
Saint Croix National Scenic River

Wyoming

Bighorn Canyon National Recreation Area
California National Historic Trail
Devils Tower National Monument
Fort Laramie National Historic Site
Fossil Butte National Monument
Grand Teton National Park
John D Rockefeller Jr Memorial Parkway
Mormon Pioneer National Historic Trail
Oregon National Historic Trail
Pony Express National Historic Trail
Yellowstone National Park

12.1.3 National Wildlife Refuges (including, but not limited to Wetlands Management Districts, Waterfowl Production Areas, National Game Preserves, Wildlife Management Areas, and National Fish and Wildlife Refuges)

As of 9/30/06, there were 547 national wildlife refuges in all 50 states. Neches River NWR in Texas, and the Rocky Mountain Front Conservation Area in Montana, were the 546th and 547th national wildlife refuges. There were 37 Wetland Management Districts in the Prairie Pothole region of the northern Great Plains.

The acreage for the NWRS as of 9/30/06 was 96,369,969.43 acres. The system encompasses 547 national wildlife refuges, 37 Wetland Management Districts (which include Waterfowl Production Areas in 204 counties), and 50 Coordination Areas which are managed by the states.

Refuges that have boundaries in multiple states are listed only in the state where the main visitor entrance is located. Maps of each area can be found by accessing the National Fish and Wildlife Services website at: http://www.fws.gov/refuges/refugeLocatorMaps/index.html.

Agassiz National Wildlife Refuge	MN	Alaska Maritime National Wildlife Refuge	AK
Alamosa National Wildlife Refuge	CO	Alaska Peninsula National Wildlife Refuge	AK

Alligator River National Wildlife Refuge	NC
Amagansett National Wildlife Refuge	NY
Anaho Island National Wildlife Refuge	NV
Anahuac National Wildlife Refuge	TX
Ankeny National Wildlife Refuge	OR
Antioch Dunes National Wildlife Refuge	CA
Aransas National Wildlife Refuge	TX
Arapaho National Wildlife Refuge	CO
Archie Carr National Wildlife Refuge	FL
Arctic National Wildlife Refuge	AK
Aroostook National Wildlife Refuge	ME
Arrowwood National Wildlife Refuge	ND
Arrowwood Wetland Management District	ND
Arthur R. Marshall Loxahatchee National Wildlife Refuge	FL
Ash Meadows National Wildlife Refuge	NV
Assabet River National Wildlife Refuge	MA
Atchafalaya National Wildlife Refuge	LA
Attwater Prairie Chicken National Wildlife Refuge	TX
Audubon National Wildlife Refuge	ND
Back Bay National Wildlife Refuge	VA
Baker Island National Wildlife Refuge	HI
Balcones Canyonlands National Wildlife Refuge	TX
Bald Knob National Wildlife Refuge	AR
Bamforth National Wildlife Refuge	WY
Bandon Marsh National Wildlife Refuge	OR
Banks Lake National Wildlife Refuge	GA
Baskett Slough National Wildlife Refuge	OR
Bayou Cocodrie National Wildlife Refuge	LA
Bayou Sauvage National Wildlife Refuge	LA
Bayou Teche National Wildlife Refuge	LA
Bear Lake National Wildlife Refuge	ID
Bear River Migratory Bird Refuge	UT
Bear Valley National Wildlife Refuge	OR
Becharof National Wildlife Refuge	AK
Benton Lake National Wildlife Refuge	MT
Benton Lake Wetland Management District	MT
Big Boggy National Wildlife Refuge	TX
Big Branch Marsh National Wildlife Refuge	LA
Big Lake National Wildlife Refuge	AR
Big Muddy National Fish & Wildlife Refuge	MO
Big Oaks National Wildlife Refuge	IN
Big Stone National Wildlife Refuge	MN
Big Stone Wetland Management District	MN
Bill Williams River National Wildlife Refuge	AZ
Bitter Creek National Wildlife Refuge	CA
Bitter Lake National Wildlife Refuge	NM
Black Bayou Lake National Wildlife Refuge	LA
Blackbeard Island National Wildlife Refuge	GA
Blackwater National Wildlife Refuge	MD
Block Island National Wildlife Refuge	RI
Blue Ridge National Wildlife Refuge	CA
Bogue Chitto National Wildlife Refuge	LA
Bombay Hook National Wildlife Refuge	DE
Bon Secour National Wildlife Refuge	AL
Bond Swamp National Wildlife Refuge	GA
Bosque del Apache National Wildlife Refuge	NM
Bowdoin National Wildlife Refuge	MT
Boyer Chute National Wildlife Refuge	NE
Brazoria National Wildlife Refuge	TX
Breton National Wildlife Refuge	LA
Browns Park National Wildlife Refuge	CO
Buck Island National Wildlife Refuge	VI
Buenos Aires National Wildlife Refuge	AZ
Buffalo Lake National Wildlife Refuge	TX
Butte Sink Wildlife Management Area	CA
Cabeza Prieta National Wildlife Refuge	AZ
Cabo Rojo National Wildlife Refuge	PR
Cache River National Wildlife Refuge	AR
Cahaba River National Wildlife Refuge	AL
Caloosahatchee National Wildlife Refuge	FL
Camas National Wildlife Refuge	ID
Cameron Prairie National Wildlife Refuge	LA
Canaan Valley National Wildlife Refuge	WV
Cape May National Wildlife Refuge	NJ
Cape Meares National Wildlife Refuge	OR
Cape Romain National Wildlife Refuge	SC
Carlton Pond Waterfowl Production Area	ME
Carolina Sandhills National Wildlife Refuge	SC
Castle Rock National Wildlife Refuge	CA
Cat Island National Wildlife Refuge	LA
Catahoula National Wildlife Refuge	LA
Cedar Island National Wildlife Refuge	NC
Cedar Keys National Wildlife Refuge	FL
Cedar Point National Wildlife Refuge	OH
Charles M. Russell National Wildlife Refuge	MT
Chase Lake National Wildlife Refuge	ND
Chassahowitzka National Wildlife Refuge	FL
Chautauqua National Wildlife Refuge	IL
Chickasaw National Wildlife Refuge	TN
Chincoteague National Wildlife Refuge	VA
Choctaw National Wildlife Refuge	AL
Cibola National Wildlife Refuge	AZ
Clarence Cannon National Wildlife Refuge	MO
Clarks River National Wildlife Refuge	KY
Clear Lake National Wildlife Refuge	CA
Coachella Valley National Wildlife Refuge	CA
Cokeville Meadows National Wildlife Refuge	WY
Cold Springs National Wildlife Refuge	OR
Coldwater River National Wildlife Refuge	MS
Columbia National Wildlife Refuge	WA
Colusa National Wildlife Refuge	CA
Conboy Lake National Wildlife Refuge	WA
Conscience Point National Wildlife Refuge	NY
Copalis National Wildlife Refuge	WA
Crab Orchard National Wildlife Refuge	IL
Crane Meadows National Wildlife Refuge	MN
Crescent Lake National Wildlife Refuge	NE
Crocodile Lake National Wildlife Refuge	FL
Cross Creeks National Wildlife Refuge	TN
Cross Island National Wildlife Refuge	ME

Crystal River National Wildlife Refuge	FL
Currituck National Wildlife Refuge	NC
Cypress Creek National Wildlife Refuge	IL
Dahomey National Wildlife Refuge	MS
D'Arbonne National Wildlife Refuge	LA
Deep Fork National Wildlife Refuge	OK
Deer Flat National Wildlife Refuge	ID
Delevan National Wildlife Refuge	CA
Delta National Wildlife Refuge	LA
Des Lacs National Wildlife Refuge	ND
Desecheo National Wildlife Refuge	PR
Desert National Wildlife Range	NV
DeSoto National Wildlife Refuge	IA
Detroit Lakes Wetland Management District	MN
Detroit River International Wildlife Refuge	MI
Devils Lake Wetland Management District	ND
Don Edwards San Francisco Bay National Wildlife Refuge	CA
Driftless Area National Wildlife Refuge	IA
Dungeness National Wildlife Refuge	WA
Eastern Neck National Wildlife Refuge	MD
Eastern Shore Of Virginia National Wildlife Refuge	VA
Edwin B. Forsythe National Wildlife Refuge	NJ
Egmont Key National Wildlife Refuge	FL
Elizabeth A. Morton National Wildlife Refuge	NY
Elizabeth Hartwell Mason Neck National Wildlife Refuge	VA
Ellicott Slough National Wildlife Refuge	CA
Emiquon National Wildlife Refuge	IL
Erie National Wildlife Refuge	PA
Ernest F. Hollings ACE Basin National Wildlife Refuge	SC
Eufaula National Wildlife Refuge	AL
Fallon National Wildlife Refuge	NV
Farallon National Wildlife Refuge	CA
Featherstone National Wildlife Refuge	VA
Felsenthal National Wildlife Refuge	AR
Fergus Falls Wetland Management District	MN
Fern Cave National Wildlife Refuge	AL
Fish Springs National Wildlife Refuge	UT
Fisherman Island National Wildlife Refuge	VA
Flattery Rocks National Wildlife Refuge	WA
Flint Hills National Wildlife Refuge	KS
Florence Lake National Wildlife Refuge	ND
Florida Panther National Wildlife Refuge	FL
Fort Niobrara National Wildlife Refuge	NE
Fox River National Wildlife Refuge	WI
Franklin Island National Wildlife Refuge	ME
Franz Lake National Wildlife Refuge	WA
Glacial Ridge National Wildlife Refuge	MN
Grand Bay National Wildlife Refuge	MS
Grand Cote National Wildlife Refuge	LA
Grasslands Wildlife Management Area	CA
Gravel Island National Wildlife Refuge	WI
Grays Harbor National Wildlife Refuge	WA
Grays Lake National Wildlife Refuge	ID
Great Bay National Wildlife Refuge	NH
Great Dismal Swamp National Wildlife Refuge	VA
Great Meadows National Wildlife Refuge	MA
Great River National Wildlife Refuge	MO
Great Swamp National Wildlife Refuge	NJ
Great White Heron National Wildlife Refuge	FL
Green Bay National Wildlife Refuge	WI
Green Cay National Wildlife Refuge	VI
Grulla National Wildlife Refuge	TX
Guadalupe-Nipomo Dunes National Wildlife Refuge	CA
Guam National Wildlife Refuge	GU
Hagerman National Wildlife Refuge	TX
Hakalau Forest National Wildlife Refuge	HI
Halfbreed Lake National Wildlife Refuge	MT
Hamden Slough National Wildlife Refuge	MN
Hanalei National Wildlife Refuge	HI
Handy Brake National Wildlife Refuge	LA
Harbor Island National Wildlife Refuge	MI
Harris Neck National Wildlife Refuge	GA
Hart Mountain National Antelope Range	OR
Hatchie National Wildlife Refuge	TN
Havasu National Wildlife Refuge	CA
Hawaiian Islands National Wildlife Refuge	HI
Hillside National Wildlife Refuge	MS
Hobe Sound National Wildlife Refuge	FL
Holla Bend National Wildlife Refuge	AR
Holt Collier National Wildlife Refuge	MS
Hopper Mountain National Wildlife Refuge	CA
Horicon National Wildlife Refuge	WI
Howland Island National Wildlife Refuge	HI
Huleia National Wildlife Refuge	HI
Humboldt Bay National Wildlife Refuge	CA
Huron National Wildlife Refuge	MI
Huron Wetland Management District	SD
Hutton Lake National Wildlife Refuge	WY
Imperial National Wildlife Refuge	AZ
Innoko National Wildlife Refuge	AK
Iowa Wetland Management District	IA
Iroquois National Wildlife Refuge	NY
Island Bay National Wildlife Refuge	FL
Izembek National Wildlife Refuge	AK
J. Clark Salyer National Wildlife Refuge	ND
J. Clark Salyer Wetland Management District	ND
J.N. Ding Darling National Wildlife Refuge	FL
James Campbell National Wildlife Refuge	HI
James River National Wildlife Refuge	VA
Jarvis Island National Wildlife Refuge	HI
John H. Chafee National Wildlife Refuge	RI
John Hay National Wildlife Refuge	NH
John Heinz at Tinicum National Wildlife Refuge	PA
John W. and Louise Seier National Wildlife Refuge	NE
Johnston Island National Wildlife Refuge	HI

Julia Butler Hansen Refuge for the Columbian White-Tailed Deer	WA
Kakahaia National Wildlife Refuge	HI
Kanuti National Wildlife Refuge	AK
Karl E. Mundt National Wildlife Refuge	SD
Kealia Pond National Wildlife Refuge	HI
Kellys Slough National Wildlife Refuge	ND
Kenai National Wildlife Refuge	AK
Kern National Wildlife Refuge	CA
Kesterton National Wildlife Refuge	CA
Key Cave National Wildlife Refuge	AL
Key West National Wildlife Refuge	FL
Kilauea Point National Wildlife Refuge	HI
Kingman Reef National Wildlife Refuge	HI
Kirtlands Warbler Wildlife Management Area	MI
Kirwin National Wildlife Refuge	KS
Klamath Marsh National Wildlife Refuge	OR
Kodiak National Wildlife Refuge	AK
Kofa National Wildlife Refuge	AZ
Kootenai National Wildlife Refuge	ID
Koyukuk National Wildlife Refuge	AK
Kulm Wetland Management District	ND
Lacassine National Wildlife Refuge	LA
Lacreek National Wildlife Refuge	SD
Laguna Atascosa National Wildlife Refuge	TX
Laguna Cartagena National Wildlife Refuge	PR
Lake Alice National Wildlife Refuge	ND
Lake Andes National Wildlife Refuge	SD
Lake Ilo National Wildlife Refuge	ND
Lake Isom National Wildlife Refuge	TN
Lake Mason National Wildlife Refuge	MT
Lake Ophelia National Wildlife Refuge	LA
Lake Umbagog National Wildlife Refuge	NH
Lake Wales Ridge National Wildlife Refuge	FL
Lake Woodruff National Wildlife Refuge	FL
Lake Zahl National Wildlife Refuge	ND
Las Vegas National Wildlife Refuge	NM
Lee Metcalf National Wildlife Refuge	MT
Leopold Wetland Management District	WI
Leslie Canyon National Wildlife Refuge	AZ
Lewis and Clark National Wildlife Refuge	WA
Litchfield Wetland Management District	MN
Little Pend Oreille National Wildlife Refuge	WA
Little River National Wildlife Refuge	OK
Logan Cave National Wildlife Refuge	AR
Long Lake National Wildlife Refuge	ND
Lost Trail National Wildlife Refuge	MT
Lostwood National Wildlife Refuge	ND
Louisiana Wetland Management District	LA
Lower Hatchie National Wildlife Refuge	TN
Lower Klamath National Wildlife Refuge	CA
Lower Rio Grande Valley National Wildlife Refuge	TX
Lower Suwannee National Wildlife Refuge	FL
Mackay Island National Wildlife Refuge	NC
Madison Wetland Management District	SD
Maine Coastal Islands National Wildlife Refuge	ME
Malheur National Wildlife Refuge	OR
Mandalay National Wildlife Refuge	LA
Marais des Cygnes National Wildlife Refuge	KS
Marin Islands National Wildlife Refuge	CA
Martin National Wildlife Refuge	MD
Mashpee National Wildlife Refuge	MA
Massasoit National Wildlife Refuge	MA
Mathews Brake National Wildlife Refuge	MS
Matlacha Pass National Wildlife Refuge	FL
Mattamuskeet National Wildlife Refuge	NC
Maxwell National Wildlife Refuge	NM
McFaddin National Wildlife Refuge	TX
McKay Creek National Wildlife Refuge	OR
McNary National Wildlife Refuge	WA
Medicine Lake National Wildlife Refuge	MT
Merced National Wildlife Refuge	CA
Meredosia National Wildlife Refuge	IL
Merritt Island National Wildlife Refuge	FL
Michigan Wetland Management District	MI
Michigan Islands National Wildlife Refuge	MI
Middle Mississippi River National Wildlife Refuge	IL
Midway Atoll National Wildlife Refuge	HI
Mille Lacs National Wildlife Refuge	MN
Mingo National Wildlife Refuge	MO
Minidoka National Wildlife Refuge	ID
Minnesota Valley National Wildlife Refuge	MN
Minnesota Valley Wetland Management District	MN
Missisquoi National Wildlife Refuge	VT
Mississippi Sandhill Crane National Wildlife Refuge	MS
Moapa Valley National Wildlife Refuge	NV
Modoc National Wildlife Refuge	CA
Monomoy National Wildlife Refuge	MA
Monte Vista National Wildlife Refuge	CO
Montezuma National Wildlife Refuge	NY
Moosehorn National Wildlife Refuge	ME
Morgan Brake National Wildlife Refuge	MS
Morris Wetland Management District	MN
Mortenson Lake National Wildlife Refuge	WY
Mountain Longleaf National Wildlife Refuge	AL
Muleshoe National Wildlife Refuge	TX
Muscatatuck National Wildlife Refuge	IN
Nansemond National Wildlife Refuge	VA
Nantucket National Wildlife Refuge	MA
National Bison Range	MT
National Elk Refuge	WY
National Key Deer Refuge	FL
Navassa Island National Wildlife Refuge	PR
Neal Smith National Wildlife Refuge	IA
Necedah National Wildlife Refuge	WI
Nestucca Bay National Wildlife Refuge	OR
Ninigret National Wildlife Refuge	RI
Nisqually National Wildlife Refuge	WA
Nomans Land Island National Wildlife Refuge	MA

North Central Valley Wildlife Management Area	CA
North Platte National Wildlife Refuge	NE
Northern Tallgrass Prairie National Wildlife Refuge	MN
Northwest Montana Wetland Management District	MT
Nowitna National Wildlife Refuge	AK
Noxubee National Wildlife Refuge	MS
Oahu Forest National Wildlife Refuge	HI
Occoquan Bay National Wildlife Refuge	VA
Ohio River Islands National Wildlife Refuge	WV
Okefenokee National Wildlife Refuge	GA
Optima National Wildlife Refuge	OK
Oregon Islands National Wildlife Refuge	OR
Ottawa National Wildlife Refuge	OH
Ouray National Wildlife Refuge	UT
Overflow National Wildlife Refuge	AR
Oxbow National Wildlife Refuge	MA
Oxford Slough Waterfowl Production Area	ID
Oyster Bay National Wildlife Refuge	NY
Ozark Cavefish National Wildlife Refuge	MO
Ozark Plateau National Wildlife Refuge	OK
Pahranagat National Wildlife Refuge	NV
Palmyra Atoll National Wildlife Refuge	HI
Panther Swamp National Wildlife Refuge	MS
Parker River National Wildlife Refuge	MA
Passage Key National Wildlife Refuge	FL
Pathfinder National Wildlife Refuge	WY
Patoka River National Wildlife Refuge and Wildlife Management Area	IN
Patuxent Research Refuge	MD
Pea Island National Wildlife Refuge	NC
Pearl Harbor National Wildlife Refuge	HI
Pee Dee National Wildlife Refuge	NC
Pelican Island National Wildlife Refuge	FL
Piedmont National Wildlife Refuge	GA
Pierce National Wildlife Refuge	WA
Pilot Knob National Wildlife Refuge	MO
Pinckney Island National Wildlife Refuge	GA
Pine Island National Wildlife Refuge	FL
Pinellas National Wildlife Refuge	FL
Pixley National Wildlife Refuge	CA
Plum Tree Island National Wildlife Refuge	VA
Pocosin Lakes National Wildlife Refuge	NC
Pond Creek National Wildlife Refuge	AR
Pond Island National Wildlife Refuge	ME
Port Louisa National Wildlife Refuge	IA
Presquile National Wildlife Refuge	VA
Prime Hook National Wildlife Refuge	DE
Protection Island National Wildlife Refuge	WA
Quillayute Needles National Wildlife Refuge	WA
Quivira National Wildlife Refuge	KS
Rachel Carson National Wildlife Refuge	ME
Rainwater Basin Wetland Management District	NE
Rappahannock River Valley National Wildlife Refuge	VA
Red River National Wildlife Refuge	LA
Red Rock Lakes National Wildlife Refuge	MT
Reelfoot National Wildlife Refuge	TN
Rice Lake National Wildlife Refuge	MN
Ridgefield National Wildlife Refuge	WA
Roanoke River National Wildlife Refuge	NC
Rocky Flats National Wildlife Refuge	CO
Rocky Mountain Arsenal National Wildlife Refuge	CO
Rose Atoll National Wildlife Refuge	HI
Ruby Lake National Wildlife Refuge	NV
Rydell National Wildlife Refuge	MN
Sabine National Wildlife Refuge	LA
Sachuest Point National Wildlife Refuge	RI
Sacramento National Wildlife Refuge	CA
Sacramento River National Wildlife Refuge	CA
Saddle Mountain National Wildlife Refuge	WA
Salinas River National Wildlife Refuge	CA
Salt Plains National Wildlife Refuge	OK
San Andres National Wildlife Refuge	NM
San Bernard National Wildlife Refuge	TX
San Bernardino National Wildlife Refuge	AZ
San Diego National Wildlife Refuge	CA
San Diego Bay National Wildlife Refuge	CA
San Joaquin River National Wildlife Refuge	CA
San Juan Islands National Wildlife Refuge	WA
San Luis National Wildlife Refuge	CA
San Pablo Bay National Wildlife Refuge	CA
Sand Lake National Wildlife Refuge	SD
Sandy Point National Wildlife Refuge	VI
Santa Ana National Wildlife Refuge	TX
Santee National Wildlife Refuge	SC
Sauta Cave National Wildlife Refuge	AL
Savannah National Wildlife Refuge	SC
Seal Beach National Wildlife Refuge	CA
Seal Island National Wildlife Refuge	ME
Seatuck National Wildlife Refuge	NY
Seedskadee National Wildlife Refuge	WY
Selawik National Wildlife Refuge	AK
Seney National Wildlife Refuge	MI
Sequoyah National Wildlife Refuge	OK
Sevilleta National Wildlife Refuge	NM
Shawangunk Grasslands National Wildlife Refuge	NY
Sheldon National Wildlife Refuge	NV
Shell Keys National Wildlife Refuge	LA
Sherburne National Wildlife Refuge	MN
Shiawassee National Wildlife Refuge	MI
Siletz Bay National Wildlife Refuge	OR
Silvio O. Conte National Fish & Wildlife Refuge	MA
Slade National Wildlife Refuge	ND
Sonny Bono Salton Sea National Wildlife Refuge	CA
Squaw Creek National Wildlife Refuge	MO
St. Catherine Creek National Wildlife Refuge	MS
St. Croix Wetland Management District	WI

St. Johns National Wildlife Refuge	FL
St. Marks National Wildlife Refuge	FL
St. Vincent National Wildlife Refuge	FL
Steigerwald Lake National Wildlife Refuge	WA
Stewart B. McKinney National Wildlife Refuge	CT
Stillwater National Wildlife Refuge	NV
Stone Lakes National Wildlife Refuge	CA
Sullys Hill National Game Preserve	ND
Sunkhaze Meadows National Wildlife Refuge	ME
Supawna Meadows National Wildlife Refuge	NJ
Susquehanna River National Wildlife Refuge	MD
Sutter National Wildlife Refuge	CA
Swan Lake National Wildlife Refuge	MO
Swanquarter National Wildlife Refuge	NC
Tallahatchie National Wildlife Refuge	MS
Tamarac National Wildlife Refuge	MN
Target Rock National Wildlife Refuge	NY
Ten Thousand Islands National Wildlife Refuge	FL
Tennessee National Wildlife Refuge	TN
Tensas River National Wildlife Refuge	LA
Tetlin National Wildlife Refuge	AK
Tewaukon National Wildlife Refuge	ND
Texas Point National Wildlife Refuge	TX
Thacher Island National Wildlife Refuge	MA
Theodore Roosevelt National Wildlife Refuge	MS
Three Arch Rocks National Wildlife Refuge	OR
Tijuana Slough National Wildlife Refuge	CA
Tishomingo National Wildlife Refuge	OK
Togiak National Wildlife Refuge	AK
Toppenish National Wildlife Refuge	WA
Trempealeau National Wildlife Refuge	WI
Trinity River National Wildlife Refuge	TX
Trustom Pond National Wildlife Refuge	RI
Tualatin River National Wildlife Refuge	OR
Tule Lake National Wildlife Refuge	CA
Turnbull National Wildlife Refuge	WA
Two Ponds National Wildlife Refuge	CO
Two Rivers National Wildlife Refuge	IL
Tybee National Wildlife Refuge	SC
UL Bend National Wildlife Refuge	MT
Umatilla National Wildlife Refuge	OR
Union Slough National Wildlife Refuge	IA
Upper Klamath National Wildlife Refuge	OR
Upper Mississippi River National Wildlife & Fish Refuge	MN
Upper Ouachita National Wildlife Refuge	LA
Upper Souris National Wildlife Refuge	ND
Valentine National Wildlife Refuge	NE
Valley City Wetland Management District	ND
Vieques National Wildlife Refuge	PR
Waccamaw National Wildlife Refuge	SC
Wallkill River National Wildlife Refuge	NJ
Wallops Island National Wildlife Refuge	VA
Wapack National Wildlife Refuge	NH
Wapanocca National Wildlife Refuge	AR
War Horse National Wildlife Refuge	MT
Washita National Wildlife Refuge	OK
Wassaw National Wildlife Refuge	GA
Watercress Darter National Wildlife Refuge	AL
Waubay National Wildlife Refuge	SD
Waubay Wetland Management District	SD
Wertheim National Wildlife Refuge	NY
West Sister Island National Wildlife Refuge	OH
Wheeler National Wildlife Refuge	AL
White River National Wildlife Refuge	AR
Whittlesey Creek National Wildlife Refuge	WI
Wichita Mountains Wildlife Refuge	OK
Willapa National Wildlife Refuge	WA
William L. Finley National Wildlife Refuge	OR
Willow Creek-Lurline Wildlife Management Area	CA
Windom Wetland Management District	MN
Wolf Island National Wildlife Refuge	GA
Yazoo National Wildlife Refuge	MS
Yukon Delta National Wildlife Refuge	AK
Yukon Flats National Wildlife Refuge	AK

12.1.4 National Wilderness Areas

Alabama

Cheaha Wilderness	Dugger Mountain Wilderness	Sipsey Wilderness

Alaska

Aleutian Islands Wilderness	Karta River Wilderness	Saint Lazaria Wilderness
Andreafsky Wilderness	Katmai Wilderness	Selawik Wilderness
Becharof Wilderness	Kenai Wilderness	Semidi Wilderness
Bering Sea Wilderness	Kobuk Valley Wilderness	Simeonof Wilderness
Bogoslof Wilderness	Kootznoowoo Wilderness	South Baranof Wilderness
Chamisso Wilderness	Koyukuk Wilderness	South Etolin Wilderness
Chuck River Wilderness	Kuiu Wilderness	South Prince of Wales Wilderness
Coronation Island Wilderness	Lake Clark Wilderness	Stikine-LeConte Wilderness
Denali Wilderness	Maurille Islands Wilderness	Tebenkof Bay Wilderness

Endicott River Wilderness
Forrester Island Wilderness
Gates of the Arctic Wilderness
Glacier Bay Wilderness
Hazy Islands Wilderness
Innoko Wilderness
Izembek Wilderness
Misty Fjords National Monument Wilderness
Mollie Beattie Wilderness
Noatak Wilderness
Nunivak Wilderness
Petersburg Creek-Duncan Salt Chuck Wilderness
Pleasant/Lemusurier/Inian Islands Wilderness
Russell Fjord Wilderness
Togiak Wilderness
Tracy Arm-Fords Terror Wilderness
Tuxedni Wilderness
Unimak Wilderness
Warren Island Wilderness
West Chichagof-Yakobi Wilderness
Wrangell-Saint Elias Wilderness

Arizona

Apache Creek Wilderness
Aravaipa Canyon Wilderness
Arrastra Mountain Wilderness
Aubrey Peak Wilderness
Baboquivari Peak Wilderness
Bear Wallow Wilderness
Beaver Dam Mountains Wilderness
Big Horn Mountains Wilderness
Cabeza Prieta Wilderness
Castle Creek Wilderness
Cedar Bench Wilderness
Chiricahua National Monument Wilderness
Chiricahua Wilderness
Cottonwood Point Wilderness
Coyote Mountains Wilderness
Dos Cabezas Mountains Wilderness
Eagletail Mountains Wilderness
East Cactus Plain Wilderness
Escudilla Wilderness
Fishhooks Wilderness
Fossil Springs Wilderness
Four Peaks Wilderness
Galiuro Wilderness
Gibraltar Mountain Wilderness
Grand Wash Cliffs Wilderness
Granite Mountain Wilderness
Harcuvar Mountains Wilderness
Harquahala Mountains Wilderness
Hassayampa River Canyon Wilderness
Havasu Wilderness
Hells Canyon Wilderness
Hellsgate Wilderness
Hummingbird Springs Wilderness
Imperial Refuge Wilderness
Juniper Mesa Wilderness
Kachina Peaks Wilderness
Kanab Creek Wilderness
Kendrick Mountain Wilderness
Kofa Wilderness
Mazatzal Wilderness
Miller Peak Wilderness
Mount Baldy Wilderness
Mount Logan Wilderness
Mount Nutt Wilderness
Mount Tipton Wilderness
Mount Trumbull Wilderness
Mount Wilson Wilderness
Mt. Wrightson Wilderness
Muggins Mountain Wilderness
Munds Mountain Wilderness
Needle's Eye Wilderness
New Water Mountains Wilderness
North Maricopa Mountains Wilderness
North Santa Teresa Wilderness
Organ Pipe Cactus Wilderness
Paiute Wilderness
Pajarita Wilderness
Paria Canyon-Vermilion Cliffs Wilderness
Peloncillo Mountains Wilderness
Petrified Forest National Wilderness Area
Pine Mountain Wilderness
Pusch Ridge Wilderness
Rawhide Mountains Wilderness
Red Rock-Secret Mountain Wilderness
Redfield Canyon Wilderness
Rincon Mountain Wilderness
Saddle Mountain Wilderness
Saguaro Wilderness
Salome Wilderness
Salt River Canyon Wilderness
Santa Teresa Wilderness
Sierra Ancha Wilderness
Sierra Estrella Wilderness
Signal Mountain Wilderness
South Maricopa Mountains Wilderness
Strawberry Crater Wilderness
Superstition Wilderness
Swansea Wilderness
Sycamore Canyon Wilderness
Table Top Wilderness
Tres Alamos Wilderness
Trigo Mountain Wilderness
Upper Burro Creek Wilderness
Wabayuma Peak Wilderness
Warm Springs Wilderness
West Clear Creek Wilderness
Wet Beaver Wilderness
White Canyon Wilderness
Woodchute Wilderness
Woolsey Peak Wilderness

Arkansas

Big Lake Wilderness
Black Fork Mountain Wilderness
Buffalo National River Wilderness
Caney Creek Wilderness
Dry Creek Wilderness
East Fork Wilderness
Flatside Wilderness
Hurricane Creek Wilderness
Leatherwood Wilderness
Poteau Mountain Wilderness
Richland Creek Wilderness
Upper Buffalo Wilderness

California

Agua Tibia Wilderness
Ansel Adams Wilderness
Argus Range Wilderness
Big Maria Mountains Wilderness
Bigelow Cholla Garden Wilderness
Bighorn Mountain Wilderness
Black Mountain Wilderness
Bright Star Wilderness
Bristol Mountains Wilderness
Bucks Lake Wilderness
Cache Creek Wilderness
Cadiz Dunes Wilderness
Caribou Wilderness
Carrizo Gorge Wilderness
Carson-Iceberg Wilderness
Castle Crags Wilderness
Cedar Roughs Wilderness
Chanchelulla Wilderness
Chemehuevi Mountains Wilderness
Chimney Peak Wilderness
Chuckwalla Mountains Wilderness
Chumash Wilderness
Cleghorn Lakes Wilderness
Clipper Mountain Wilderness
Coso Range Wilderness
Coyote Mountains Wilderness
Cucamonga Wilderness
Darwin Falls Wilderness
Dead Mountains Wilderness
Death Valley Wilderness
Desolation Wilderness
Dick Smith Wilderness
Dinkey Lakes Wilderness
Domeland Wilderness
El Paso Mountains Wilderness
Emigrant Wilderness
Farallon Wilderness
Fish Creek Mountains Wilderness
Funeral Mountains Wilderness
Garcia Wilderness
Golden Trout Wilderness
Golden Valley Wilderness
Granite Chief Wilderness
Grass Valley Wilderness
Hauser Wilderness
Havasu Wilderness
Hollow Hills Wilderness
Hoover Wilderness
Ibex Wilderness
Imperial Refuge Wilderness
Indian Pass Wilderness
Inyo Mountains Wilderness
Ishi Wilderness
Jacumba Wilderness
Jennie Lakes Wilderness
John Muir Wilderness
Joshua Tree Wilderness
Kaiser Wilderness
Kelso Dunes Wilderness
Kiavah Wilderness
King Range Wilderness
Kingston Range Wilderness
Lassen Volcanic Wilderness
Lava Beds Wilderness
Little Chuckwalla Mountains Wilderness
Little Picacho Wilderness
Machesna Mountain Wilderness
Malpais Mesa Wilderness
Manly Peak Wilderness
Marble Mountain Wilderness
Matilija Wilderness
Mecca Hills Wilderness
Mesquite Wilderness
Mojave Wilderness
Mokelumne Wilderness
Monarch Wilderness
Mount Lassic Wilderness
Mt. Shasta Wilderness
Newberry Mountains Wilderness
Nopah Range Wilderness
North Algodones Dunes Wilderness
North Fork Wilderness
North Mesquite Mountains Wilderness
Old Woman Mountains Wilderness
Orocopia Mountains Wilderness
Otay Mountain Wilderness
Owens Peak Wilderness
Pahrump Valley Wilderness
Palen/McCoy Wilderness
Palo Verde Mountains Wilderness
Phillip Burton Wilderness
Picacho Peak Wilderness
Pine Creek Wilderness
Pinnacles Wilderness
Piper Mountain Wilderness
Piute Mountains Wilderness
Red Buttes Wilderness
Resting Spring Range Wilderness
Rice Valley Wilderness
Riverside Mountains Wilderness
Rodman Mountains Wilderness
Russian Wilderness
Sacatar Trail Wilderness
Saddle Peak Hills Wilderness
San Gabriel Wilderness
San Gorgonio Wilderness
San Jacinto Wilderness
San Mateo Canyon Wilderness
San Rafael Wilderness
Sanhedrin Wilderness
Santa Lucia Wilderness
Santa Rosa Wilderness
Sawtooth Mountains Wilderness
Sequoia-Kings Canyon Wilderness
Sespe Wilderness
Sheep Mountain Wilderness
Sheephole Valley Wilderness
Silver Peak Wilderness
Siskiyou Wilderness
Snow Mountain Wilderness
South Fork Eel River Wilderness
South Nopah Range Wilderness
South Sierra Wilderness
South Warner Wilderness
Stateline Wilderness
Stepladder Mountains Wilderness
Surprise Canyon Wilderness
Sylvania Mountains Wilderness
Thousand Lakes Wilderness
Trilobite Wilderness
Trinity Alps Wilderness
Turtle Mountains Wilderness
Ventana Wilderness
Whipple Mountains Wilderness
Yolla Bolly-Middle Eel Wilderness
Yosemite Wilderness
Yuki Wilderness

Colorado

Black Canyon of the Gunnison Wilderness
Black Ridge Canyons Wilderness
Buffalo Peaks Wilderness
Byers Peak Wilderness
Cache La Poudre Wilderness
Collegiate Peaks Wilderness
Comanche Peak Wilderness
Eagles Nest Wilderness
Flat Tops Wilderness
Fossil Ridge Wilderness
Great Sand Dunes Wilderness
Greenhorn Mountain Wilderness
Gunnison Gorge Wilderness
Holy Cross Wilderness
Hunter-Fryingpan Wilderness
Indian Peaks Wilderness
James Peak Wilderness
La Garita Wilderness
Lizard Head Wilderness
Lost Creek Wilderness
Maroon Bells-Snowmass Wilderness
Mesa Verde Wilderness
Mount Evans Wilderness
Mount Massive Wilderness
Mount Sneffels Wilderness
Mount Zirkel Wilderness
Neota Wilderness
Never Summer Wilderness
Platte River Wilderness
Powderhorn Wilderness
Ptarmigan Peak Wilderness
Raggeds Wilderness
Rawah Wilderness
Sangre de Cristo Wilderness
Sarvis Creek Wilderness
South San Juan Wilderness
Spanish Peaks Wilderness
Uncompahgre Wilderness
Vasquez Peak Wilderness
Weminuche Wilderness
West Elk Wilderness

Florida

Alexander Springs Wilderness
Big Gum Swamp Wilderness
Billies Bay Wilderness
Bradwell Bay Wilderness
Cedar Keys Wilderness
Chassahowitzka Wilderness
Florida Keys Wilderness
Island Bay Wilderness
J.N. "Ding" Darling Wilderness
Juniper Prairie Wilderness
Lake Woodruff Wilderness
Little Lake George Wilderness
Marjory Stoneman Douglas Wilderness
Mud Swamp/New River Wilderness
Passage Key Wilderness
Pelican Island Wilderness
St. Marks Wilderness

Georgia

Big Frog Wilderness
Blackbeard Island Wilderness
Blood Mountain Wilderness
Brasstown Wilderness
Cohutta Wilderness
Cumberland Island Wilderness
Ellicott Rock Wilderness
Mark Trail Wilderness
Okefenokee Wilderness
Raven Cliffs Wilderness
Rich Mountain Wilderness
Southern Nantahala Wilderness
Tray Mountain Wilderness
Wolf Island Wilderness

Hawaii

Haleakala Wilderness
Hawaii Volcanoes Wilderness

Idaho

Craters of the Moon National Wilderness Area
Frank Church-River of No Return Wilderness
Gospel-Hump Wilderness
Hells Canyon Wilderness
Sawtooth Wilderness
Selway-Bitterroot Wilderness

Illinois

Bald Knob Wilderness
Bay Creek Wilderness
Burden Falls Wilderness
Clear Springs Wilderness
Crab Orchard Wilderness
Garden of the Gods Wilderness
Lusk Creek Wilderness
Panther Den Wilderness

Indiana

Charles C. Deam Wilderness

Kentucky

Beaver Creek Wilderness
Clifty Wilderness

Louisiana

Breton Wilderness
Kisatchie Hills Wilderness
Lacassine Wilderness

Maine

Caribou-Speckled Mountain Wilderness
Moosehorn (Baring Unit) Wilderness
Moosehorn Wilderness

Massachusetts

Monomoy Wilderness

Michigan

Big Island Lake Wilderness
Delirium Wilderness
Horseshoe Bay Wilderness
Huron Islands Wilderness
Isle Royale Wilderness
Mackinac Wilderness
McCormick Wilderness
Michigan Islands Wilderness
Nordhouse Dunes Wilderness
Rock River Canyon Wilderness
Round Island Wilderness
Seney Wilderness
Sturgeon River Gorge Wilderness
Sylvania Wilderness

Minnesota

Agassiz Wilderness
Boundary Waters Canoe Area Wilderness
Tamarac Wilderness

Mississippi

Black Creek Wilderness
Gulf Islands Wilderness
Leaf Wilderness

Missouri

Bell Mountain Wilderness
Devils Backbone Wilderness
Hercules-Glades Wilderness
Irish Wilderness
Mingo Wilderness
Paddy Creek Wilderness
Piney Creek Wilderness
Rockpile Mountain Wilderness

Montana

Absaroka-Beartooth Wilderness
Anaconda Pintler Wilderness
Bob Marshall Wilderness
Cabinet Mountains Wilderness
Gates of the Mountains Wilderness
Great Bear Wilderness
Lee Metcalf Wilderness
Medicine Lake Wilderness
Mission Mountains Wilderness
Rattlesnake Wilderness
Red Rock Lakes Wilderness
Scapegoat Wilderness
Selway-Bitterroot Wilderness
UL Bend Wilderness
Welcome Creek Wilderness

Nebraska

Fort Niobrara Wilderness
Soldier Creek Wilderness

Nevada

Alta Toquima Wilderness
Arc Dome Wilderness
Arrow Canyon Wilderness
Bald Mountain Wilderness
Becky Peak Wilderness
Big Rocks Wilderness
Black Canyon Wilderness
Black Rock Desert Wilderness
Boundary Peak Wilderness
Bridge Canyon Wilderness
Bristlecone Wilderness
Calico Mountains Wilderness
High Rock Canyon Wilderness
High Rock Lake Wilderness
High Schells Wilderness
Highland Ridge Wilderness
Ireteba Peaks Wilderness
Jarbidge Wilderness
Jimbilnan Wilderness
Jumbo Springs Wilderness
La Madre Mountain Wilderness
Lime Canyon Wilderness
Little High Rock Canyon Wilderness
North McCullough Wilderness
Pahute Peak Wilderness
Parsnip Peak Wilderness
Pinto Valley Wilderness
Quinn Canyon Wilderness
Rainbow Mountain Wilderness
Red Mountain Wilderness
Ruby Mountains Wilderness
Santa Rosa-Paradise Peak Wilderness
Shellback Wilderness
South Egan Range Wilderness

Clover Mountains Wilderness
Currant Mountain Wilderness
Death Valley Wilderness
Delamar Mountains Wilderness
East Fork High Rock Canyon Wilderness
East Humboldts Wilderness
Eldorado Wilderness
Far South Egans Wilderness
Fortification Range Wilderness
Goshute Canyon Wilderness
Government Peak Wilderness
Grant Range Wilderness
Meadow Valley Range Wilderness
Mormon Mountains Wilderness
Mount Grafton Wilderness
Mt. Charleston Wilderness
Mt. Irish Wilderness
Mt. Moriah Wilderness
Mt. Rose Wilderness
Muddy Mountains Wilderness
Nellis Wash Wilderness
North Black Rock Range Wilderness
North Jackson Mountains Wilderness
South Jackson Mountains Wilderness
South McCullough Wilderness
South Pahroc Range Wilderness
Spirit Mountain Wilderness
Table Mountain Wilderness
Tunnel Spring Wilderness
Wee Thump Joshua Tree Wilderness
Weepah Spring Wilderness
White Pine Range Wilderness
White Rock Range Wilderness
Worthington Mountains Wilderness

New Hampshire

Great Gulf Wilderness
Pemigewasset Wilderness
Presidential Range-Dry River Wilderness
Sandwich Range Wilderness
Wild River Wilderness

New Jersey

Brigantine Wilderness
Great Swamp National Wildlife Refuge Wilderness

New Mexico

Aldo Leopold Wilderness
Apache Kid Wilderness
Bandelier Wilderness
Bisti/De-Na-Zin Wilderness
Blue Range Wilderness
Bosque del Apache Wilderness
Capitan Mountains Wilderness
Carlsbad Caverns Wilderness
Cebolla Wilderness
Chama River Canyon Wilderness
Cruces Basin Wilderness
Dome Wilderness
Gila Wilderness
Latir Peak Wilderness
Manzano Mountain Wilderness
Ojito Wilderness
Pecos Wilderness
Salt Creek Wilderness
San Pedro Parks Wilderness
Sandia Mountain Wilderness
West Malpais Wilderness
Wheeler Peak Wilderness
White Mountain Wilderness
Withington Wilderness

New York

Otis Pike Fire Island High Dune Wilderness

North Carolina

Birkhead Mountains Wilderness
Catfish Lake South Wilderness
Ellicott Rock Wilderness
Joyce Kilmer-Slickrock Wilderness
Linville Gorge Wilderness
Middle Prong Wilderness
Pocosin Wilderness
Pond Pine Wilderness
Sheep Ridge Wilderness
Shining Rock Wilderness
Southern Nantahala Wilderness
Swanquarter Wilderness

North Dakota

Chase Lake Wilderness
Lostwood Wilderness
Theodore Roosevelt Wilderness

Ohio

West Sister Island Wilderness

Oklahoma

Black Fork Mountain Wilderness
Upper Kiamichi River Wilderness
Wichita Mountains Wilderness

Oregon

Badger Creek Wilderness
Black Canyon Wilderness
Boulder Creek Wilderness
Bridge Creek Wilderness
Bull of the Woods Wilderness
Cummins Creek Wilderness
Diamond Peak Wilderness
Drift Creek Wilderness
Eagle Cap Wilderness
Gearhart Mountain Wilderness
Grassy Knob Wilderness
Hells Canyon Wilderness
Kalmiopsis Wilderness
Mark O. Hatfield Wilderness
Menagerie Wilderness
Middle Santiam Wilderness
Mill Creek Wilderness
Monument Rock Wilderness
Mount Hood Wilderness
Mount Jefferson Wilderness
Mount Thielsen Wilderness
Mount Washington Wilderness
Mountain Lakes Wilderness
North Fork John Day Wilderness
North Fork Umatilla Wilderness
Opal Creek Wilderness
Oregon Islands Wilderness
Red Buttes Wilderness
Rock Creek Wilderness
Rogue-Umpqua Divide Wilderness
Salmon-Huckleberry Wilderness
Sky Lakes Wilderness
Steens Mountain Wilderness
Strawberry Mountain Wilderness
Table Rock Wilderness
Three Arch Rocks Wilderness
Three Sisters Wilderness
Waldo Lake Wilderness
Wenaha-Tucannon Wilderness
Wild Rogue Wilderness

Pennsylvania

Allegheny Islands Wilderness
Hickory Creek Wilderness

Puerto Rico

El Toro Wilderness

South Carolina

Cape Romain Wilderness
Congaree National Park Wilderness
Ellicott Rock Wilderness
Hell Hole Bay Wilderness
Little Wambaw Swamp Wilderness
Wambaw Creek Wilderness
Wambaw Swamp Wilderness

South Dakota

Badlands Wilderness
Black Elk Wilderness

Tennessee

Bald River Gorge Wilderness
Big Frog Wilderness
Big Laurel Branch Wilderness
Citico Creek Wilderness
Cohutta Wilderness
Gee Creek Wilderness
Joyce Kilmer-Slickrock Wilderness
Little Frog Mountain Wilderness
Pond Mountain Wilderness
Sampson Mountain Wilderness
Unaka Mountain Wilderness

Texas

Big Slough Wilderness
Guadalupe Mountains Wilderness
Indian Mounds Wilderness
Little Lake Creek Wilderness
Turkey Hill Wilderness
Upland Island Wilderness

Utah

Ashdown Gorge Wilderness
Beaver Dam Mountains Wilderness
Black Ridge Canyons Wilderness
Box-Death Hollow Wilderness
Cedar Mountain Wilderness Area
Dark Canyon Wilderness
Deseret Peak Wilderness
High Uintas Wilderness
Lone Peak Wilderness
Mount Naomi Wilderness
Mount Nebo Wilderness
Mount Olympus Wilderness
Mount Timpanogos Wilderness
Paria Canyon-Vermilion Cliffs Wilderness
Pine Valley Mountain Wilderness
Twin Peaks Wilderness
Wellsville Mountain Wilderness

Vermont

Big Branch Wilderness
Breadloaf Wilderness
Bristol Cliffs Wilderness
George D. Aiken Wilderness
Glastenbury Wilderness
Joseph Battell Wilderness
Lye Brook Wilderness
Peru Peak Wilderness

Virginia

Barbours Creek Wilderness
Beartown Wilderness
James River Face Wilderness
Kimberling Creek Wilderness
Lewis Fork Wilderness
Little Dry Run Wilderness
Little Wilson Creek Wilderness
Mountain Lake Wilderness
Peters Mountain Wilderness
Priest Wilderness
Ramseys Draft Wilderness
Rich Hole Wilderness
Rough Mountain Wilderness
Saint Mary's Wilderness
Shawvers Run Wilderness
Shenandoah Wilderness
Three Ridges Wilderness
Thunder Ridge Wilderness

Washington

Alpine Lakes Wilderness
Boulder River Wilderness
Buckhorn Wilderness
Clearwater Wilderness
Colonel Bob Wilderness
Glacier Peak Wilderness
Glacier View Wilderness
Goat Rocks Wilderness
Henry M. Jackson Wilderness
Indian Heaven Wilderness
Juniper Dunes Wilderness
Lake Chelan-Sawtooth Wilderness
Mount Adams Wilderness
Mount Baker Wilderness
Mount Rainier Wilderness
Mount Skokomish Wilderness
Noisy-Diobsud Wilderness
Norse Peak Wilderness
Olympic Wilderness
Pasayten Wilderness
Salmo-Priest Wilderness
San Juan Wilderness
Stephen Mather Wilderness
Tatoosh Wilderness
The Brothers Wilderness
Trapper Creek Wilderness
Washington Islands Wilderness
Wenaha-Tucannon Wilderness
William O. Douglas Wilderness
Wonder Mountain Wilderness

West Virginia

Cranberry Wilderness
Dolly Sods Wilderness
Laurel Fork North Wilderness
Laurel Fork South Wilderness
Mountain Lake Wilderness
Otter Creek Wilderness

Wisconsin

Blackjack Springs Wilderness
Gaylord A. Nelson Wilderness
Headwaters Wilderness
Porcupine Lake Wilderness
Rainbow Lake Wilderness
Whisker Lake Wilderness
Wisconsin Islands Wilderness

Wyoming

Absaroka-Beartooth Wilderness
Bridger Wilderness
Cloud Peak Wilderness
Encampment River Wilderness
Fitzpatrick Wilderness
Gros Ventre Wilderness
Huston Park Wilderness
Jedediah Smith Wilderness
North Absaroka Wilderness
Platte River Wilderness
Popo Agie Wilderness
Savage Run Wilderness
Teton Wilderness
Washakie Wilderness
Winegar Hole Wilderness

12.1.5 National Wild and Scenic Rivers

Alagnak, Alaska
Alatna, Alaska
Allagash Wilderness Waterway, Maine
Allegheny, Pennsylvania
American (Lower), California
Andreafsky, Alaska
Aniakchak, Alaska
Au Sable, Michigan
Bear Creek, Michigan
Beaver Creek, Alaska
Big and Little Darby Creeks, Ohio
Big Marsh Creek, Oregon
Big Piney Creek, Arkansas
Big Sur, California

Birch Creek, Alaska
Black Butte, California
Black Creek, Mississippi
Black, Michigan
Bluestone, West Virginia
Buffalo, Arkansas
Cache la Poudre, Colorado
Carp, Michigan
Charley, Alaska
Chattooga, Georgia, North and South Carolina
Chetco, Oregon
Chilikadrotna, Alaska
Clackamas, Oregon
Clarion, Pennsylvania
Clarks Fork Yellowstone, Wyoming
Cossatot, Arkansas
Crescent Creek, Oregon
Crooked, Oregon
Delaware (Lower), New Jersey & Pennsylvania
Delaware (Middle), New Jersey & Pennsylvania
Delaware (Upper), New York & Pennsylvania
Delta, Alaska
Deschutes, Oregon
Donner und Blitzen, Oregon
Eagle Creek, Oregon
East Branch Tahquamenon, Michigan
East Fork Jemez, New Mexico
Eel, California
Eleven Point, Missouri
Elk, Oregon
Elkhorn Creek, Oregon
Farmington (West Branch), Connecticut
Feather, California
Flathead, Montana
Fortymile, Alaska
Grande Ronde, Oregon
Great Egg Harbor, New Jersey
Gulkana, Alaska
Horsepasture, North Carolina
Hurricane Creek, Arkansas
Illinois, Oregon
Imnaha, Oregon
Indian, Michigan
Ivishak, Alaska
John Day, Oregon
John, Alaska
Joseph Creek, Oregon
Kern, California
Kings, California
Klamath, California
Klickitat, Washington
Kobuk, Alaska
Lamprey, New Hampshire
Little Beaver, Ohio
Little Deschutes, Oregon
Little Miami, Ohio
Little Missouri, Arkansas
Lostine, Oregon
Loxahatchee, Florida
Lumber, North Carolina
Malheur, Oregon
Manistee, Michigan
Maurice, New Jersey
McKenzie, Oregon
Merced, California
Metolius, Oregon
Middle Fork Clearwater, Idaho
Middle Fork Salmon, Idaho
Middle Fork Vermilion, Illinois
Minam, Oregon
Missouri, Montana
Mulberry, Arkansas
Mulchatna, Alaska
Musconetcong, New Jersey
New, North Carolina
Niobrara, Nebraska
Noatak, Alaska
North Fork American, California
North Fork Crooked, Oregon
North Fork John Day, Oregon
North Fork Koyukuk, Alaska
North Fork Malheur, Oregon
North Fork Middle Fork Willamette, Oregon
North Fork Owyhee, Oregon
North Fork Smith, Oregon
North Fork Sprague, Oregon

North Powder, Oregon
North Sylamore Creek, Arkansas
North Umpqua, Oregon
Nowitna, Alaska
Obed, Tennessee
Ontonagon, Michigan
Owyhee, Oregon
Paint, Michigan
Pecos, New Mexico
Pere Marquette, Michigan
Pine, Michigan
Powder, Oregon
Presque Isle, Michigan
Quartzville Creek, Oregon
Rapid, Idaho
Red, Kentucky
Richland Creek, Arkansas
Rio Chama, New Mexico
Rio de la Mina, Puerto Rico
Rio Grande, New Mexico
Rio Grande, Texas
Rio Icacos, Puerto Rico
Rio Mameyes, Puerto Rico
Roaring, Oregon
Rogue, Oregon
Saint Joe, Idaho
Saline Bayou, Louisiana
Salmon, Alaska
Salmon, Idaho
Salmon, Oregon
Sandy, Oregon
Selawik, Alaska
Sespe Creek, California
Sheenjek, Alaska
Sipsey Fork West Fork, Alabama
Sisquoc, California
Skagit, Washington
Smith, California
Snake, Idaho & Oregon
South Fork John Day, Oregon
Squaw Creek, Oregon
St. Croix (Lower) Minnesota & Wisconsin
St. Croix (Lower), Minnesota & Wisconsin
St. Croix, Minnesota & Wisconsin
Sturgeon, Michigan (Hiawatha National Forest)
Sturgeon, Michigan (Ottawa National Forest)
Sudbury, Assabet, Concord, Massachusetts
Sycan, Oregon
Tinayguk, Alaska
Tlikakila, Alaska
Trinity, California
Tuolumne, California
Unalakleet, Alaska
Upper Rogue, Oregon
Verde, Arizona
Wallowa, Oregon
Wekiva, Florida
Wenaha, Oregon
West Little Owyhee, Oregon
Westfield, Massachusetts
White Clay Creek, Delaware & Pennsylvania
White Salmon, Washington
White, Oregon
Whitefish, Michigan
Wildcat River, New Hampshire
Wildhorse and Kiger Creeks, Oregon
Wilson Creek, North Carolina
Wind, Alaska
Wolf, Wisconsin
Yellow Dog, Michigan

12.1.6 Outstanding National Resource Water (ONRW) designated by a State or Tribe

States have an obligation under the antidegradation policy of the Clean Water Act to ensure that water quality is maintained and protected where "high quality waters constitute an outstanding National resource, such as water of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance." 40 CFR 131.12(a)(3).

Water Resources Boards may designate certain waters, including wetlands, as outstanding under state and federal law. When waters are designated, their existing water quality shall, at a minimum, be protected and maintained. Because ONRWs are designated by each state, permittees should consult state water quality management agencies to determine if ONRWs exist in the area where they may operate their vessel.

13. Appendix H – One Time Report.

EPA United States Environmental Protection Agency
Washington, DC 20460 Form Approved
One Time Report for Discharges Incidental to the Normal Operation
Of a Vessel under the NPDES Vessel General Permit

OMB No. 2040-0004

Commercial Vessel General Permit – One Time Permit Report

Date: _____

Owner Name and Address: _____

Operator Name and Address: _____

Vessel Name: _____ Flag: _____

Vessel Gross Tonnage: _____ GROSS TONS

Vessel Length: _____ FEET / METERS (CIRCLE ONE)

Questions	YES	NO
1. Have all the *monitoring conditions* and *visual inspection requirements* in this General Permit (Part 4 and Part 5 if applicable) that apply to your vessel been met since the beginning of its coverage? *If you answered "NO," please check which requirements were not met in the space provided below:* ☐ Routine inspections ☐ Annual inspections ☐ Analytical monitoring (if applicable) ☐ Drydock inspection (if applicable) ☐ Other (please explain) _____	YES	NO

2. Have any *corrective actions* required by this General Permit (Part 3 of this Permit) that apply to your vessel been necessary since the beginning of its coverage?

☐ None
☐ 1-5 corrective actions
☐ 6-10 corrective actions
☐ 11-20 corrective actions
☐ 21-30 corrective actions
☐ More than 30 corrective actions

3. Have *modifications* requiring new parts or the installation of new equipment been made to your vessel since the beginning of its coverage under this General Permit for the purpose of meeting the conditions or limitations (Part 3) of this Permit? *If you answered "YES," then how many modifications have you made?* ☐ One ☐ Two ☐ Three or more	YES	NO
4. Have any *standard operating procedures* for your vessel been modified since the beginning of its coverage under this General Permit for the purpose of meeting the conditions or limitations? *If you answered "YES," then how many?* ☐ One ☐ Two ☐ Three or more	YES	NO
5. Have you conducted all the *environmental training* related to your vessel that is required under this General Permit since the beginning of its coverage?		
Required Training *For Crew*	YES	NO
Required Training *For Passengers* (if not applicable, leave blank)	YES	NO
6. Have you experienced any *undue delays in operation* of your vessel since the beginning of its coverage under this General Permit that are directly the result of compliance with the requirements of the Permit? *If you answered "YES," please provide a brief description of each instance in the space provided below.*	YES	NO

14. Appendix I– Discharge Monitoring Report.

15. Appendix J - Procedure for Whole Effluent Toxicity Testing of Ballast Water

This appendix applies to any vessels subject to Part 5.8.1.2 of this permit.

15.1 Required Toxicity Testing

A. For all ships which discharge salt water ballast into salt water or fresh water environments, or fresh water ballast into salt water environments, the testing for all ballast water biocides must include the chronic WET testing contained within this section. The permittee must conduct tests on at least 1 vertebrate, 1 invertebrate, and 1 plant of the species listed for each of the following groups:

Group A:

- 7-day survival and growth test with silverside minnows (*Menidia beryllina* in EPA/821-R-02-014),

  OR
- 7-day survival and growth test with topsmelt (Atherinops affinis in EPA/600-R-95-136).

Group B:

- 7-day survival and growth test with a mysid (*Americamysis bahia* in EPA/821-R-02-014),

  OR
- 7-day survival and growth test with a the Pacific mysid (*Holmesimysis costata* in EPA/600-R-95-136),

  OR
- 48-hour bivalve fertilization with the Mussel (*Mytilus sp.* in EPA/600-R-95-136) or Oyster (*Crassostrea gigas* in EPA/600-R-95-136),

  OR
- 1-hour fertilization with the Purple Urchin (*S. pupuratus* in EPA/600-R-95-136) or Sand dollar (*Dendraster excentricus* in EPA/600-R-95-136).

Group C:

- 72-hour growth inhibition test with a marine diatom (*Skeletonema costatum* according to ISO 10253),

  OR
- 48-hour germination and germ-tube length test with the Giant kelp (*Macrocystis pyrifera* in EPA/600-R-95-136).

B. If you have not completed testing under Part A above, ships which discharge fresh water ballast into fresh water environments (e.g. Lakers), the testing for all ballast water biocides must include the following chronic WET testing:

- 7-day survival and growth test with fathead minnows (*Pimephales promelas* in EPA/821-R-02-013)
- 7-day survival and reproduction test with a cladoceran (*Ceriodaphnia dubia* in EPA/821-R-02-013)
- 96-hour growth inhibition test with the n algal species (*Pseudokirchneriella subcapitata* (historically referred to as *Selenastrum capricornutum*) in EPA/821-R-02-013)

15.2 Testing and reporting instructions:

A. Definition of Whole Effluent Toxicity

Whole effluent toxicity measures the effect (e.g., mortality, reduced growth, reproduction) to test organisms exposed to an effluent compared to control organisms. The goal of the chronic test is to determine if an effluent contains toxic materials in chronically toxic concentrations. In addition to mortality, these tests test help identify sublethal effects on test organisms such as reduced reproduction and growth. Effect concentration (EC) is a point estimate of the toxicant concentration (expressed as a percent) that would cause an observable effect (e.g., death, reduced growth) in a given percent of test organisms, calculated from a continuous model (e.g. Probit Model). EC25 is a point estimate of the toxicant concentration that would cause an observable adverse effect in 25 percent of test organisms. Chronic test results shall be reported in TUc, where TUc = 100/EC25. For a discharge evaluated for chronic toxicity, toxicity is defined by an exceedance of this permit condition is defined by of a chronic toxicity discharge value of 1.0 TUc as a monthly median or 1.6 TUc as a daily maximum. If the toxicity of the treatment system results in a discharge which exceeds 1.0 TUc as a monthly median or 1.6 TUc as a daily maximum, EPA may require the owner/operator to cease discharging from the treatment system until they obtain coverage under an individual NPDES permit.

B. General Test Instructions

Unless modified for reasons identified below, the effluent must be sampled and whole effluent toxicity testing conducted according to methods at 40 CFR Part 136.3, Table 1A, or via EPA/821-R-02-13, EPA/821-R-02/014, or EPA/600-R-95-136.

1. Biocide solutions should be stored in the dark at 8 ± 1ºC with minimal headspace. The storage container should be made out of a substance to which the biocide would not adsorb or react.
2. If the biocide concentration can be analyzed reliably in the toxicity testing lab, then it should be done in one test chamber (or a surrogate) at each test concentration at the beginning and end of the test. If it can't be measured reliably,

then the concentrations should be assumed to be as prepared. If the concentration cannot be easily measured, do not attempt Option 16.2.C, below.

3. 7-day chronic tests should be started with freshly prepared biocide solution and renewed with biocide solution that is freshly prepared during the 7 days of the test.
4. All samples of ballast water taken for testing shall be composites of at least 4 grab samples, taken at approximately equal intervals during a ballast water discharge event, and shall include water discharged near the beginning and near the end of the discharge event.
5. Holding times from completion of sample collection until toxicity test initiation shall not exceed 36 hours.

C. Quality Assurance

- A series of five dilutions and a control shall be tested. A dilution series of 12.5%, 25%, 50%, 62.5, and 100% from the ballast water treatment system shall be provided. These will provide data that are comparable among the submissions.
- If organisms are not cultured in-house, concurrent testing with reference toxicants shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient.
- If either the reference toxicant tests or the effluent tests do not meet all test acceptability criteria as specified in the test methods manual, then the permittee must re-sample and re-test within approximately 14 days or during the first discharge event upon reentering waters subject to this permit, whichever is later.
- Reference toxicant tests shall be conducted using the same test conditions as effluent toxicity tests (i.e., same test duration, etc.).
- Control and dilution water should be laboratory water, as described in the test methods manual. If the dilution water used is different from the culture water, a second control using culture water shall also be tested.
- When effluent monitoring frequencies for whole effluent toxicity and priority pollutants are concurrent, then chemical analyses for priority pollutants shall be performed on a split of the sample collected for whole effluent toxicity testing.

D. Reporting

Test reports must meet the reporting requirements in the EPA toxicity testing manuals (EPA/821-R-02-13, EPA/821-R-02-014, or EPA/600-R-95-136), and describe test conditions such as test chamber size, solution volume, temperature, dilution water source, exact test start time, exact test end time, etc. Test reports must contain a readable copy of all hand-written bench sheets. The bench sheets must include both the toxicological and water chemistry data for the biocide tests. The bench sheets must contain actual counts (not percentages) in order to be acceptable. Start counts must be clearly recorded on the bench sheet. The test report must include computer printouts of test data and statistical analyses. Test organism source, age, and unusual conditions must be reported. Each test report must contain a section where all deviations from

test protocols must be accurately listed or the absence of such deviations noted. The results of range-finding tests must also be included if they were used to determine the most sensitive species prior to definitive testing.

15.3 Ballast Water Treatment System Options

The testing and report must support one of the two options below depending on the nature of the treatment system and biocide. Performing more than one of the testing options described below may make sense. A combined strategy, for example, could allow approval conditions for biocide neutralization if discharge must happen earlier than the approved minimum time needed for biocide degradation. Please anticipate all circumstances before choosing one or more of the testing options:

A. Biocide Toxicity Testing to Demonstrate Zero Toxicity at Ballast Water Discharge

A convenient type of ballast water treatment system is one which uses a biocide which begins as highly toxic and gradually becomes nontoxic due to volatilization, reaction, or degradation during a voyage. The ship operator will not need to measure the biocide concentration in the ballast water at discharge but will only need to document the biocide dose and the time elapsed from treatment to discharge. Toxicity testing will be used to determine the minimum time allowed between treatment and discharge. The steps in this determination are:

1) Determine a maximum biocide concentration which will be used.

2) Add the biocide to the water to be used as ballast up to that concentration and hold under conditions that are as close as possible to actual use in a ballast tank.

3) These storage conditions would include 8 ± 1ºC in the dark.

4) The surface area to volume ratio of the storage container should be as small as practical in order to resemble a ballast tank. The storage container should be made out of a substance to which the biocide would not adsorb or react.

5) Separate toxicity tests must be conducted on each sample drawn from the storage container every four hours over a 24-hour time period chosen so that the estimated time for the disappearance of toxicity is near the end of the 24 hours.

6) A pretest may be needed to estimate the time for disappearance of biocide toxicity. The pretest may also determine the most sensitive species so only that species needs tested with all of the samples. Concentration series are not required since a time series is the testing goal.

7) An alternate approach is to prepare separate volumes of biocide treated water at 4-hour intervals and subsequently initiate all of the toxicity tests at the same time on samples drawn from each volume.

8) An example of an efficient method for the alternative approach is to setup a schedule similar to the following:
   i) Prepare biocide-treated water at 4:00, 8:00, 12:00, 16:00, and 20:00 on one day.
   ii) At 16:00 on a subsequent day predicted to be the beginning of the last 24 hours of toxicity, use the treated water prepared at 4:00, 8:00, 12:00, and 16:00 to start tests.
   iii) Start tests at 12:00 on the next day using the treated water prepared at 12:00, 16:00, and 20:00, and then do the daily renewals, etc. as soon as possible for the tests begun on the first day.
   iv) Conduct daily renewals, etc. at 14:00 for the duration of the testing.

2) Exercise caution in setting an alternative testing schedule so that the minimum time needed before ballast water discharge is not overestimated and ship operators are not needlessly inconvenienced.

3) The earliest sample to produce no statistically significant toxicity relative to a concurrent control test will be the indicator of the minimum time needed before discharge.

B. Toxicity Testing to Verify Biocide Neutralization

Another type of ballast water treatment system that would be protective of the environment is one which uses a biocide that would stay toxic during the voyage and could be neutralized just prior to discharge. The neutralizing chemical might also have some toxicity but this toxicity would be less than the toxicity of the biocide that it neutralizes. Toxicity testing should focus on determining the margin between the concentration of the neutralizing chemical which effectively eliminates biocide toxicity and the toxic threshold of the neutralizing chemical itself. Any toxic reaction byproducts produced by the neutralization will be discovered during the toxicity testing.

The general process is:

1) The 25% effect level is used by EPA as an estimate of the toxic threshold. The IC25 should be used for continuous (e.g., growth, reproduction) and the EC25 for quantal endpoints (e.g., survival, larval development, fertilization).

4) Once the toxicity testing has been done, then a plan must be written and submitted describing how the neutralizing chemical will be used to be both effective in removing biocide toxicity and stay below its toxic threshold.
   i) If the toxic threshold is above the maximum concentration needed to neutralize the biocide, then monitoring of the chemical dosing relative to the ballast water discharge volume should be adequate to demonstrate maintenance of the safety margin.
   ii) If the toxic threshold is below the maximum concentration needed to neutralize the biocide, then a removal or reaction rate needs determined for relevant concentrations of both the neutralizing chemical and biocide. Careful monitoring of neutralizing chemical dosing relative to biocide dosing will be needed for maintaining environmental safety.

iii) If the concentration of the biocide and neutralizing chemical can be reliably measured onboard on a routine basis, chemical monitoring can be used for demonstrating safety when the threshold is below the maximum concentration. A small residual of neutralizing chemical can be an indication of effective biocide removal.

15.4 Approval and Exceptions

If the WET option set forth in Section 5.8.1.2 is chosen, the permittee must submit the results of the initial testing and an explanation of the appropriate methods of ballast water treatment to EPA at the address specified in Part 5.8.3 of this permit.