

# Permit Fact Sheet

## General Information

Permit Number:	WI-0063835-01-0 General Permit
Activity:	Ballast Water Discharge
Permittee:	U.S. and international commercial vessels
Discharge Location:	Ports of call or in transit on commercial shipping routes.
Receiving Water:	Lake Michigan, Lake Superior, and other locations with commercial shipping traffic.

## General Description of Activities Covered Under This GP

General permits (GP) are designed to cover discharges from a category of activities that are similar in character. When a GP is issued, many dischargers meeting its requirements may be covered under the same GP. The Department has several categories of GPs covering hundreds of facilities. For activities eligible for coverage under a general permit, the Department sends a cover letter and a copy of the permit to the facility. The cover letter includes the Department's determination that a discharge is covered under the GP. A facility may need to be covered under more than one GP, depending on the different types of waste streams that a facility discharges. However, a facility that requires an individual permit for any part of its discharge may have all of its discharges covered under one individual permit.

Growing concerns and damage to the environment caused by aquatic invasive species (AIS) has raised the awareness on the need to regulate ballast water from vessels, which are the major vector for AIS introduction into the Great Lakes. However, the discharges incidental to the normal operation of a vessel, including ballast water, have been exempt from regulation under the Clean Water Act since 1973. In 2005 the U.S. District Court for the Northern District of California determined the exemption by EPA exceeded its authority. In accordance with the court ordered time frame EPA prepared a NPDES general permit to regulate ballast water and 25 other discharges from commercial vessels, which became effective December 19, 2008. The vacatur of the exemption became effective February 6, 2009. For more information on the history regulating ballast water and other discharges incidental to the normal operation of a vessel, refer to the EPA Vessel General Permit (VGP) and accompanying fact sheet available at the EPA web site: [http://www.epa.gov/owow/invasive\\_species/ballast\\_water.html](http://www.epa.gov/owow/invasive_species/ballast_water.html)

The discharge of ballast water is a new category of dischargers that EPA will now regulate under a National Pollutant Discharge Elimination System (NPDES) general permit. Effluent limit guidelines, a document with an in depth evaluation of how to regulate a category of dischargers, could not be prepared for vessels in the time allowed by the court. Consequently, the EPA general permit primarily relies on established best management practices, and doesn't include treatment requirements or numerical water quality based effluent limits. EPA's VGP requires oceangoing vessels to perform salt water exchange or flushing of the ballast water tanks as is currently required under U.S. Coast Guard regulations. These existing practices haven't stopped the introduction of AIS. The Department is proposing this general permit because the requirements in the EPA VGP aren't stringent enough to protect Wisconsin's water quality.

## Rational for Permit Requirements

### 1 Applicability

Those vessels issued the EPA VGP that have a ballast tank capacity of at least 2114 gallons (8 cubic meters) and are at least 164 feet in length (50 meters), must receive coverage under this permit to discharge ballast water in the waters of Wisconsin. The two criteria are consistent with the IMO and Minnesota criteria for their State Disposal System permit. This permit will supplement the EPA VGP by requiring ballast water treatment to reduce the risk of introducing AIS. A vessel between 79 feet and 164 feet would need only the EPA VGP and not the Wisconsin permit.

The permit recognizes five criteria that would qualify a vessel for an exemption for coverage. A permit does not need to be obtained if: (a) a vessel does not discharge ballast into waters of the state, (b) the vessel's movement is restrained to only one Captain of the Port Zone as defined by the U.S Coast Guard, (c) the vessel's ballast water is removed and treated by others, (d) vessels with flow-through ballast that is constantly being exchanged, and (e) vessels of the U.S. Armed Forces that are subject to their own regulation.

## **2 Permit Coverage**

Applicable vessels receive automatic coverage under this permit until September 19, 2009, which is the same as allowed under the EPA VGP. EPA allowed vessels up to 9 months after the December 19, 2008 effective date of the permit to submit a Notice of Intent (NOI) requesting coverage. In order to avoid any unnecessary duplication, a copy of the same NOI sent to EPA requesting coverage will be used to request the Wisconsin Ballast Water Discharge General Permit. The Department will grant coverage under the permit after the NOI is reviewed.

Coverage under this permit is terminated coincidentally with the VGP upon the submittal of a Notice of Termination by a vessel. As with the NOI process, the Department will make use of the EPA termination of coverage process to avoid unnecessary duplication.

## **3 Prohibited Discharges**

Permitted vessels are prohibited from discharging certain types of substances. Any solid material that is strained out of the water intake system or seachest, other than fine material that is entrained in the water and backwash, must be collected and properly disposed of. Any accumulated solids, sediment, or biological material in the ballast tanks, or generated by a treatment system, may not be discharged back into waters of the state; but, must be properly disposed of and documented. Seawater in other than residual amounts may not be discharged unless the effluent complies with the chloride effluent limit.

Of particular concern as both a source of AIS and as an illegal discharge under §30.12, Wis. Stats. (deposition of material on the bed of navigable waters), is the discharge of sediment from ballast tanks. The re-suspension of sediment when washing ballast tanks and then discharging the sediment laden wash water into surface water while in transit, is a common practice. The permits will prohibit this, with a compliance schedule to discontinue the discharge of sediment by 2012. The permit also requires the documentation of when ballast tanks are cleaned and where solids are disposed of.

## **4 Ballast Water Requirements**

### **4.1 Ballast Water Treatment Requirements**

A table in the permit identifies requirements for discharge standards and biocides, and indicates the vessels it's applicable to and the effective date of the requirement. By 2012, existing oceangoing vessels must comply with enhanced IMO discharge standards for how many viable AIS may be contained in ballast water discharges. New ocean going vessels constructed on or after January 1, 2013, must comply with even more restrictive extra enhanced IMO standards. The reason for holding new vessels to the highest standard is that newly constructed vessels should implement the best available technology, and can do so more easily than retrofitting existing vessels.

To address potential problems because of the lack of technology or engineering constraints on existing oceangoing vessels, a change in the discharge standard is possible. If the permittee provides justification as described in Subsection 4.1.1, a change from the enhanced IMO standard to the IMO would be granted by the Department. Similarly, for new oceangoing vessels, a time extension to the effective date is allowed if the permittee provides justification as describe in Subsection 4.1.2; but there is no provision to relax the extra enhanced IMO standards. The Department will notify permittees on whether the discharge standard is changed to IMO or a time extension is granted.

### **4.2 Monitoring Requirements and Effluent Limits**

#### **4.2.1 Discharge Standards**

For oceangoing vessels, enhanced or more restrictive discharge standards are included in the permit to be more protective than the proposed IMO standards. This is consistent with the proposal by the U.S. representatives at the IMO convention

made on January 5, 2004, and the proposed standards in U.S. Congressional legislation H.R. 2830 Coast Guard Authorization Bill of 2008. Because of a lack of scientific information on ballast water treatment, a conservative approach is appropriate, and a challenging standard is necessary to encourage development of treatment technologies.

The argument for more restrictive standards is that the current IMO proposal really doesn't result in a significant reduction in the risk for introducing AIS as discussed below.

For macro-zooplankton and nekton (organisms  $>50\ \mu\text{m}$ ) the proposed IMO standard is  $<10$  viable organisms per cubic meter, which is only 10 times less than the 100 per cubic meter background concentration of organisms typically observed in ballast water. The management practice of ballast water exchange or flushing is capable of achieving this same reduction. The proposed permit limit of  $<1$  per 10 cubic meters represents a 1000 times reduction over background.

For protists and phytoplankton (organisms  $10\text{-}50\ \mu\text{m}$ ) the proposed IMO standard is  $<10$  per ml, which is equivalent to background concentration of organisms typically observed in ballast water, so the standard represents no improvement. The proposed permit limit of  $<1$  per 10 ml represents a 100 times reduction over background.

For microbial organisms *E. Coli* and Enterococci the proposed IMO standards are less protective than those to protect human health. The proposed permit limits reflect standards for water used for bathing. One of indicator microbes for the discharge standards that is included in the proposed IMO standards, *Vibrio cholera*, has been excluded from the monitoring requirements in Table A and Table B because the analytical technique has not been validated by EPA.

Lakers are not subject to ballast water discharge standards in this permit. The Department may impose discharge standards on lakers in the next reissuance of the general permit. What the standards will be are still under consideration. Oceangoing vessels are responsible for introducing AIS into the Great Lakes. Laker vessels, with their large ballast water capacities, have the potential to spread AIS from port to port in the Great Lakes. The immediate concern addressed by this permit is preventing the introduction of any new AIS by oceangoing vessels.

#### **4.2.2 Biocide effluent limits**

This section of the permit is applicable to both oceangoing vessels and laker vessels that choose to use biocide treatments on some or all their ballast water to test or implement treatment now, prior to the effective date of the discharge standards. Existing water quality based effluent limits for chlorine would apply to a vessel discharge, as it would to other discharges of this common disinfectant. An acute limit  $38\ \mu\text{g/L}$ , calculated in accordance with ch. NR 106, Wis. Adm. Code, applies when chlorine or another halogen is used as a biocide. A chronic limit is unnecessary for the short term and intermittent discharges of ballast water. The limit is more stringent than the  $100\ \mu\text{g/L}$  limit contained in the EPA VGP. If other biocides or water treatment additives are used to treat AIS, the Department will determine the use restriction (serves as a surrogate effluent limit) according to Subsection 4.2.2.2.

#### **4.3 Ballast Water and Sediment Management Plan**

Vessels should have an existing Ballast Water and Sediment Management plan, to comply with U.S. Coast Guard requirements and the EPA VGP. The plan must be updated to reflect any changes in response to the requirements in this permit. The Department doesn't intend to review these plans, but reserves the right to inspect them, if necessary.

#### **4.4 Monitoring Plan**

Because of unknowns and to allow flexibility, the ballast water discharge monitoring must be established by each vessel for what monitoring would be useful for the operation of the treatment system, and for determining compliance with discharge standards. The permit does contain some minimum monitoring requirements. The permittee must prepare a monitoring plan within 12 months after permit coverage. The plan must be revised as necessary when ever appropriate. The Department doesn't intend to review these plans, but reserves the right to inspect them, if necessary.

#### **4.5 Ballast Water Treatment System Approval**

Plans and specifications for ballast water treatment system are not required to be submitted to the Department for review. This would duplicate technical reviews and approval of treatment systems performed by the IMO, EPA, the Great Ships Initiative or other similar authorities who have the technical expertise. There is no need for individual approval of treatment systems by the

Department. Wisconsin has a requirement for plan approval of wastewater treatment system (ch. NR 108, Wis. Adm. Code), and a ballast water treatment system would be a reviewable project. To address plan approval, a provision is included in the permit that allows for the automatic approval of a ballast water treatment system if certain criteria are met. A brief engineering report summary must be submitted to inform the Department about the vessel's ballast water treatment system.

## **4.6 Safety Exemption**

In recognition that vessels may be subject to adverse conditions on the water, an exemption is provided to automatically allow the curtailment of permit requirements. The exemption provision is consistent with the EPA VGP.

## **4.7 Record Keeping and Reporting**

Record keeping consist of two components: (1) an on board log book to document activities associated with discharging ballast water that must be kept and made available to the Department upon request, and (2) an annual discharge monitoring report (DMR). Information on the disposal of sediment cleaned from the vessel is also to be reported with the annual DMR in accordance with Subsection 3.2.

## **5 Compliance Schedules**

The permit contains six tables with dates for compliance with permit requirements.

### **5.1 Permit Coverage**

To obtain coverage under WPDES general permit WI-0063835-01, permittees are directed to submit a copy of the Notice of Intent (NOI) form for the EPA Vessel General Permit. The dates for required actions are consistent with the EPA VGP.

### **5.2 Monitoring Requirements and Effluent Limitations**

The effective dates for the applicable discharge standards in Subsection 4.2 are set to prevent the introduction of AIS into the Great Lakes in an expeditious time frame. For existing oceangoing vessels, the January 1, 2012 effective date is significantly more aggressive than the IMO schedule of 2016.

The biocide effluent limits in Subsection 4.2.2 are effective immediately. The Department has the authority in ch. NR 106, Wis. Adm. Code for calculating water quality based effluent limits or use restrictions for biocides. If a vessel uses a biocide at any time they are subject to limitations the same as any other surface water discharger. This limit is independent of the effective dates for the discharge standards in Subsection 4.2.1.

### **5.3 Treatment Requirement Exceptions**

The provision for changing the applicable discharge standard from the enhanced to the IMO standard in Subsection 4.1.1 will address the legitimate issue of whether emerging ballast water treatment technologies are commercially available for existing vessels. If the justification described in Subsection 4.1.1 is provided, the Department will evaluate granting a change in the discharge standard. To request a change, justification must be submitted no later than 9 months before the effective date, which is shown in the compliance schedule table.

The provision for time extension in Subsection 4.1.2 will address the legitimate issue of whether emerging ballast water treatment technologies are commercially available in the time allowed for new vessels. If the justification described in Subsection 4.1.2 is provided, the Department will evaluate granting a time extension. To request a time extension justification must be submitted no later than 18 months before the effective date, which is shown in the compliance schedule table.

### **5.4 Treatment System Plan Approval**

The permit allows for an automatic approval of plans and specifications for ballast water treatment systems. However, there is a required engineering report summary that the permittee must submit for the vessel to document the ballast water treatment system with the Department. The report should be submitted prior to installation. The Department is relying upon other authorities who are conducting evaluations and validations of ballast water treatment system, such as the IMO, U.S. Coast Guard, EPA, and the Great Ships Initiative.

## **5.5 Monitoring Plan**

The permittee must submit a monitoring plan within 12 months after permit coverage. Each vessel is responsible for determining its own monitoring needs. Any significant changes made to the monitoring plan should be submitted to the Department. An approval by the Department is not required, but comments on the plan may be provided.

## **5.6 Prohibited Discharges**

Because the washing of ballast tanks to clean out accumulated sediment is a common maintenance practice that may potentially require modifications to the vessel to eliminate, a delay of the prohibition until 2012 is included. This compliance date should allow vessels the time necessary to find alternative practices or make vessel modifications to comply with the prohibition on discharging sediment.

## **Other Comments:**

An antidegradation review for the issuance of this new general permit has not been performed because it's not applicable in this situation for existing dischargers that have not previously been permitted. The Department is in agreement with the EPA fact sheet for the VGP that says vessels covered should not be considered a new or increased point source discharge, which is what typically triggers an antidegradation review. And because vessels are a mobile source of pollutants it's not feasible to evaluate them since the antidegradation evaluation is site specific.

## **Attachments:**

NR 150 Environmental Assessment

## **Proposed Expiration Date:**

March 31, 2014

## **Prepared by:**

Wisconsin Department of Natural Resources  
Bureau of Watershed Management

**Date:** February 19, 2009

Filename: GP\_ballast\_FS.doc  
Directory: T:\org\water\wm\WW\DRAFTS  
Template: C:\Documents and Settings\helmul\Application  
Data\Microsoft\Templates\Normal.dot  
Title: Microsoft Word - 65259.doc  
Subject:  
Author: Lisa Helmuth  
Keywords:  
Comments:  
Creation Date: 02/19/2009 5:24:00 PM  
Change Number: 2  
Last Saved On: 02/20/2009 10:32:00 AM  
Last Saved By: Lisa Helmuth  
Total Editing Time: 1 Minute  
Last Printed On: 02/20/2009 10:32:00 AM  
As of Last Complete Printing  
Number of Pages: 5  
Number of Words: 2,769 (approx.)  
Number of Characters: 15,787 (approx.)