



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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Docket Management Facility M-30
US Dept. of Transportation; West Building Ground Floor; Room W-12-140
1200 New Jersey Avenue, SE
Washington, DC 20590-0001

Subject: Docket Number: USCG-2001-10486

Dear US Coast Guard:

Thank you for the opportunity to comment on the “Standards for Living Organisms in Ships’ Ballast Water Discharged in U.S. Waters; Draft Programmatic Environmental Impact Statement; Proposed Rule and Notice”. Susan Sylvester, of my staff, presented oral comments on October 2, 2009, at the Chicago public meeting on this rule. The Wisconsin Department of Natural Resources (DNR) is now submitting formal written comments in addition to those already presented. The State of Wisconsin’s interest in this matter relates primarily to our concerns about the integrity of the Great Lakes and our belief that controlling ballast water discharges is key to preventing the spread of aquatic invasive species (AIS) into this delicate ecosystem.

Overall, we believe the proposed rule is an excellent start and we fully support it. We are pleased that the rule proposes a concentration-based numerical discharge standard. A national standard will resolve many issues due to the patchwork of discharge standards existing currently among the Great Lakes states. Our preference has always been for international standards to address this worldwide problem and failing that, a strong national standard must be adopted now. A concentration-based standard is clearly needed as a replacement for ballast water exchange and flushing because the results of exchange and flushing are so highly variable. We cannot afford to wait any longer for more research to take place. New species like viral hemorrhagic septicemia (VHS) are appearing. Quagga mussels are making the impacts of zebra mussels seem tame and we must react quickly to try to stop the spread of these and any future aquatic menaces.

Wisconsin’s DNR strongly supports the need to control all ballast water discharges into the Great Lakes now. We believe that it is possible to prevent ship-mediated spread of AIS into Wisconsin’s waters in a manner that supports a viable shipping industry. Aquatic habitat and native species managed by the State of Wisconsin in the Great Lakes are continually threatened and impacted by invasive species and non-native diseases transported by ships’ ballast water. It is widely known that all waters of the Great Lakes watershed are threatened by rapid dispersal of non-natives through ballast water transfers. These invasive species take a steep toll on our Great Lakes, inland waterways and \$13 billion dollar tourism industry.

More than 180 non-native fish, plants, insects, and organisms have entered the Great Lakes since the early 1800’s, disrupting the food chain, fouling beaches, clogging infrastructure and costing citizens, industry, and businesses

more than \$200 million a year. Research has shown the primary way aquatic invasive species enter the Great Lakes is when ocean-going vessels discharge the ballast water they've carried on the ship to provide balance.

Wisconsin's Governor Doyle has been a leader in fighting aquatic invasive species in Wisconsin and under his administration funding has increased to our agency to help stop AIS spread on inland waters.

Everyday there is the potential for new introductions of AIS, or their spread from one Great Lake port to another. Once the invasive establishes itself, the state and federal governments must address this problem. In the last 10 years, over \$3 billion dollars have been spent in the Great Lakes to mitigate the damage by one invasive species, the zebra mussel. The burden of treating ballast water prior to discharge does not compare to the billions of dollars that are spent by taxpayers to control invasives that have been introduced to the Great Lakes by ballast waters.

Because of this, we strongly support the need to regulate all commercial vessels that discharge ballast waters into state and US waters and are very interested in working with the US Coast Guard and US EPA to advance solutions to this serious problem. Therefore, we encourage the US Coast Guard to adopt these ballast water discharge standards as soon as possible so that states are not forced to issue individual discharge standards or permits due to delays at the federal level.

On November 18, 2009, our agency issued a state ballast water discharge General Permit with the effective date of February 1, 2010. In short, the permit requires several actions. Ocean-going ships would have to meet strict standards for the number of living organisms allowed in the ballast water they discharge in Wisconsin ports. The permit requires that:

- Beginning in 2014, assuming commercially viable technology is available, existing ocean-going ships would have to meet a standard for living organisms in the ballast water they discharge that is 100 times more stringent than the standard proposed by the International Maritime Organization (IMO). New York State uses the same standard.
- Beginning in 2012, assuming commercially viable technology is available, new ocean-going ships would be required to meet a standard that is 100 times more stringent than the proposed international standards.
- Commercial vessels that move only among the Great Lakes ports, known as "Lakers", would not have to meet a ballast discharge standard in this general permit, which would be effective through January 2015, but we may require a discharge standard to be met in the next reissuance of the permit. They would be required to immediately take steps to prevent spreading AIS around the Great Lakes with best management practices.

The Department remains convinced that the IMO standard, alone, is simply not protective enough to achieve the needed safeguards against this significant vector for additional AIS. Our permit's strong performance standards, supports the national efforts put forth in the US Coast Guard rule. Wisconsin staffs have been and will continue to be working with Minnesota staff to share information to understand the shipping industry and ballast water issues and serve our common Port of Duluth/Superior.

The proposed USCG rule seeks comment on whether a more stringent standard between the proposed phase-one and the phase-two Ballast Water Discharge Standard (BWDS) is achievable. We would support the interim standard of 100 x IMO to be in place between the two phases so that the industry and the public understand that this is a progressive compliance schedule and that a stronger BWDS is needed to prevent further introductions of AIS, as the states of Wisconsin, New York, and California have demonstrated. The proposed rule notes that a number of states have already adopted BWDS using more stringent standards and we strongly encourage the US Coast Guard to adopt standards stronger than those by IMO.

The rule also seeks comment on whether one year or three years is the more appropriate time limit for further practicability review. Progress is continually being made on technology and treatment systems and we

continually get closer to developing the systems necessary to meet standards more restrictive than proposed IMO standards. We support a one year review timeframe to allow new systems to become available to the shipping industry as soon as possible to meet more restrictive standards. We are very concerned that the “grandfather” clause could potentially prevent any additional treatment upgrades to vessels beyond the initial phase-one IMO discharge standard. The final rule needs to provide greater clarity on this issue. We would support “grandfathering” a vessel that installs IMO treatment in phase-one, but they would be given a compliance date to upgrade to phase-two treatment levels.

The rule states that the phase-two implementation date for all existing vessels which have not installed a BWMS for phase-one is January 1, 2016. This has a compliance date of the first drydocking after January 1, 2016. We recognize several states have set this date for their 401 certification to the USEPA Vessel General Permit. Wisconsin strongly supports a more aggressive date as we believe the technology will be available prior to 2016 (or potentially as late as 2019 for the first drydocking date).

It is encouraging to see that the Coast Guard is interested in looking at the Great Lakes as a more sensitive ecosystem and may want to justify more stringent standards or compliance dates. The Great Lakes are unique and we believe a strong national standard is still the best way to implement this effectively. You also requested comment on whether vessels should be required to discharge into an on-shore treatment system prior to entering the Great Lakes. Wisconsin has looked at the feasibility of an off-ship treatment system at the Port of Milwaukee. It would be significantly more cost effective to install this type of off-ship treatment system at the entrance of the Great Lakes. We understand the issue with ship delays and potential back-ups due to this type of requirement. However, if the logistics could be worked out, this opportunity to remove ballast water from any vessel entering the Great Lakes system is the most cost effective way to prevent all the AIS from entering the system. This could be especially true for vessels that do not have an appropriate properly operating treatment system on-board. Requiring off-ship treatment of ballast water as ships enter the St. Lawrence Seaway is perhaps the most effective and efficient way to control ballast water discharges.

We have always felt strongly that federal regulations must be strong and numerical, such as 100 times IMO. The federal regulations should be the minimum and should not preempt even stronger state regulations. The final US Coast Guard rule should not prevent states from being more protective of their waters with stronger numerical discharge standards. Rigorous enforcement of the standards and an effective US EPA vessel general permit is the key to making this program successful to protect the integrity of the Great Lakes ecosystem. Wisconsin would like to see routine testing of the contents of the ships’ ballast tanks and testing of discharges, including those discharge outlets below the water line. Monitoring for chloride/salinity for oceangoing vessels discharging into freshwater is appropriate because of acute toxicity concerns. Test parameters for living organisms are also important. A NPDES Vessel General Permit from USEPA should require the US Coast Guard discharge standards to be implemented and should give state and federal personnel the right to enter ships for inspection and compliance purposes. Random checks must be done, as well as responses to complaints and inquiries.

The final regulation should recognize the need to control ballast water discharges from all vessels, including those that operate entirely within the St. Lawrence Seaway and Great Lakes System. The final discharge standard must apply to all commercial vessels including Lakers.

We urge the Coast Guard to release an updated Environmental Technology Verification Protocol, one of the key remaining elements of the Coast Guard’s ballast management program, for public comment such that an approved final protocol can be established for the verification of ballast water treatment technology.

It is also important to work closely with our Canadian neighbors to ensure that there is one common ballast water discharge standard for the Great Lakes so that the shipping industry has an even playing field regardless of country or port. Canada has not ratified the IMO standards to date and our federal government must work closely with them to ensure both countries are requiring the same standard in the Great Lakes.

While the proposed US Coast Guard regulation is a significant step forward, we are concerned that there could be delay before its final issuance. We urge final adoption of the regulations as quickly as possible. We remain committed to our position that continued discharges of AIS from ballast waters are unacceptable.

Thank you for the opportunity for the DNR to comment on the proposed ballast water discharge standards rule and on the general issue of ballast water as a vector for AIS into the most significant fresh water resource on the planet—our Great Lakes. We look forward to working with the US Coast Guard and the US EPA to advance the best possible regulatory actions to protect the waters of the state and the US. Duplicative efforts are a concern in a time when our staff and natural resources are so precious. We want to protect the Great Lakes from invasion of new AIS and are encouraged that the US Coast Guard has taken this first step to establish an effective discharge standard from all vessels.

Further comments on specific questions that were raised in the rule are attached to this letter for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matthew Frank', written in a cursive style.

Matthew Frank
Secretary

Attachment

ATTACHMENT

U.S Coast Guard (USCG) Proposed Rules for Ballast Water Discharge Standards 33 CFR Part 151 Subpart C and Subpart D

WDNR Comments on USCG questions:

Specific comment was requested on six questions. They asked to provide details on treatment system costs and installation. Wisconsin does have limited information on technology costs; however, we offer the following comments on these questions:

4. What are the technology alternatives and costs for smaller coastwise vessel types?
 - o Off ship treatment could be a practical solution for smaller coastwise vessels. We have looked into the feasibility of having a hopper barge with treatment system installed to be used to contain the ballast water off-loaded from vessels.
 - o This seems to be a viable alternative to installing treatment systems on every ship.

Estimated Capital Costs for Barge Off-Ship Ballast Water Treatment

**Port of Milwaukee Off-Ship Ballast Water Treatment Phase 3:
Estimated Costs for Planning and Design
Original with All Costs**

Item	Estimated Cost	Revised Estimated Cost 10/09
Search Great Lakes for barge to lease or purchase	\$5,000	Lease \$300-400/day April-Dec or purchase \$200K to \$2M depending on age & condition of barge
Procure Barge	\$25,000	\$7,000 delivery from Chicago to Milwaukee
Design Barge Retrofit for collection and treatment	\$100,000	\$100,000
Plan and perform waste characterization study and biological survey	\$125,000	\$125,000
Design Sampling Plan	\$25,000	\$25,000
Perform Batch testing to define treatment dosage and frequency	\$60,000	\$60,000
Design Treatment System	\$100,000	\$100,000
Characterize residuals and develop procedures for residuals management	\$80,000	\$80,000
Develop Treatment system operations and management plan	\$30,000	\$30,000
Tug operational cost		\$400/hour for shifting barge to ship
TOTAL	\$550,000	\$760,000 to \$2,560,000

For the ship, the conceptual modification would consist of adding a tee fitting into the existing ballast piping inboard of the sea valve on the shell of the vessel, closing the sea valve, and then sending the ballast water up through new piping (called the off-ship connection branch) to the deck of the ship. Depending on the size of the ship, the capital cost for the ship modification work would range from about \$60,000 to \$204,000.

5. What are the additional avoided environmental and social damages and economic benefits of ballast water discharge standards at more stringent standards?
 - o If we are able to prevent just one new AIS from establishing itself in the Great Lakes, then we have been successful with the new discharge standards. Wisconsin is especially concerned with the introduction of new bacteria or viruses, such as VHS, which has recently been found in waters of our state. The public has demanded that we prevent the introduction of new AIS into our waters. Lake Michigan beaches fouled with zebra mussel shells prevent the public from walking on the sand. Nuisance algal blooms with filamentous *Cladophora* being swept on shore, has caused beach closures because of the noxious odors from decomposition. The crash of the yellow perch population in Lake Michigan and Green Bay has changed the popular Wisconsin tradition of the Friday night fish fry forever.
 - o AIS events have cost the taxpayers of the state, millions of dollars in clean-up and prevention costs. For example, the Department first discovered viral hemorrhagic septicemia (VHS) in 2007. We responded immediately to try to understand how this virus was transferred between water bodies and between fish species. We reassigned production at our hatcheries and the Department of Agriculture, Trade, and Consumer Protection (DATCP) quarantined three hatcheries where fish were lost and as a direct result not stocked. For FY'2008 alone, costs that we can quantify for our central response totaled \$675,855, at the Kettle Moraine hatchery \$204,560, at Wild Rose Hatchery \$477,928, and at Lake Mills Hatchery \$119,580. We also incurred costs to develop a Biosecurity template for hatchery operations. Total costs incurred are approximately \$1.5 million. These are actual costs the department has incurred in one year trying to respond to just one new invasive species and do not include significantly greater costs to our tourism and fishing industry.

6. In light of the potentially severe nature of such damages, does the proposed rule ensure to the maximum extent practicable that aquatic nuisance species are not discharged into waters of the United States from vessels, as required by NISA? Would an approach that bypassed phase-one and went directly to the phase-two standards be practicable and provide greater protection of the aquatic environment?
 - o The Wisconsin Dept. of Natural Resources would like to see the most stringent standards required in phase-one, rather than having a phased in requirement. Owners/Operators will install treatment systems onto their vessels making a huge initial capital investment. They will not be interested in adding to this treatment system or installing a totally new system to meet a higher standard a few years later. You may hear from the shipping industry that they should be "grandfathered" once they install the initial treatment technology to meet the IMO phase-one discharge standard. The capitol expense required to upgrade these installed system will be significant. We should require the most restrictive discharge standard initially and allow for a compliance schedule if the industry is not able to meet the original target dates. If the rule established a 100 x IMO discharge standard initially, then it would not need to require a phase-two. The 1000 x IMO discharge standard could be required only for new vessels.

Other general comments:

- We agree that there are unknowns with emerging technology. We firmly believe that this rule will help move technology forward to achieve the discharge standards required. The initial imposition of the IMO standards and schedule will move the US to the international standard that will serve as the base starting point. But, Wisconsin strongly believes that is not the final acceptable discharge standard. It is important to keep the technology moving forward to 100 times more stringent or greater than IMO standards; with a regular review on the technology until phase two can be fully implemented.
- A non-existent reference is given in §151.2045(b) (1) where it states that a vessel on a voyage to the Great Lakes or Hudson River must comply with the requirements in §151.1514 of subpart C. There is no such section in subpart C. This needs to be clarified.
- In §151.2050, which identifies best management practices any vessel with ballast tanks must implement, (c) states - "*Clean the ballast tank regularly to remove sediment. Tanks should be cleaned 200 nautical miles from any shore or under controlled arrangements in port or at dry dock. Sediment should be disposed of in accordance with local, State, and Federal regulations.*" There may not be a location anywhere in the entire Great Lakes where there are 200 nautical miles from shore. Does this mean that there would be no acceptable location for this discharge of sediment? The distance criteria from shore would appear to exclude discharging sediment into the Great Lakes. This exemption must be clearly stated so it specifically states ballast tank sediment from vessels may not be discharged into the Great Lakes, including both oceangoing vessels and those that only traverse the Great Lakes (Lakers). This needs some clarification and strengthening. Use the word "shall" in two places instead of "should" so it's clear this is a requirement.

Prohibiting the discharge of sediment into the Great Lakes when ballast tanks are cleaned is critical because the sediment is potentially a concentrated source for nonindigenous species. Multiple life stages of organisms could accumulate that may not be destroyed or removed by ballast water management systems (as discussed in 4.2.1 of the DPEIS). We understand the current practice for cleaning ballast tanks is to wash down the tanks to generate sediment slurry, which is then discharged in the open water when the vessel is underway. This practice is in violation of two Wisconsin laws, §30.12(1), Wis. Stats., that prohibits the placement of material on the bed of a navigable water, and §29.601(3), Wis. Stats., that prohibits the discharge of deleterious substances.

In the preamble on page 44634, stated in the discussion about the phase one ballast water discharge standard, that the standards would not apply to vessels that operate exclusively in one Captain of the Port zone (COTP). The justification being that a vessel operating in only one zone would be unlikely to introduce aquatic nuisance species from outside the zone. This exemption provision needs clarification in the rule. This is not mentioned in Subpart C for the Great Lakes and Hudson River, and in Subpart D there appears to be contradictions. The exemptions in §151.2015 identifies what vessels are exempt from the requirements of this subpart, which implies all of Subpart D. Why then does (c), that applies to vessels in one COTP, specifically list just the exemption for the reporting and record keeping requirements in §151.2060 and §151.2070?

- We agree with the provision for the COTP exemption, but it should only be for the ballast water management system and the discharge standards.
- The requirements in §162.060 for the ballast water management system approval process is extremely thorough and well done.

- The proposed ballast water discharge standards only regulate living organisms. Another standard may be appropriate to address potential concerns with chloride toxicity from the discharge of seawater into freshwater environments. High chloride concentrations are present in an oceangoing vessel's ballast water after a saltwater exchange or flushing. At a salinity of 35 parts per thousand the chloride concentration is 55% or 19.2 parts per thousand (19,200 mg/L). Wisconsin has restrictions on the discharge of chloride, with an acute daily maximum limit 1514 mg/L (the chloride limit expressed as salinity is 2.7 parts per thousand).

We are unaware of how many oceangoing vessels may enter the Great Lakes ballasted with significant volumes of seawater, so the full implication of imposing a chloride limit is unknown. It's suspected there would be few ballast tanks with seawater as oceangoing vessels usually arrive loaded with cargo instead of ballast. The NOBOB vessels would take on ballast, diluting any residual seawater. A dilution ratio of 11:1 of freshwater to seawater would comply with the chloride limit.

If a restriction on chloride is included in the rule, a chloride exemption will need to be added for the prohibition on dilution in §162.060-20(f) that contains the design and construction requirements for ballast water management systems. It's certainly correct to prohibit dilution of ballast water to meet the ballast water discharge standards or living organisms. But, after treatment to remove or destroy the organisms, dilution could be used to meet the chloride limit.

If undiluted seawater above the limit is discharged into the Great Lakes it will create acute toxicity at the point of discharge. Ballast water management systems are not designed to remove salinity, and some may even rely on salinity for it to operate. Dilution of seawater ballast water with freshwater until it is below the chloride limit can be performed to prevent acute toxicity. This is an acceptable practice to comply with a water quality based effluent limit for a substance that is not a bioaccumulating chemical of concern. The final regulations need to be clear on this point.

Alternatively, if the US Coast Guard has evaluated the impacts of chloride from seawater in ballast tanks discharged into freshwater, and can justify the granting of a water quality standards variance with EPA, the limit could be altered or other mitigating actions could be required. Because the US Coast Guard April 2008 DPEIS was focused on the impacts of changes in the concentration of nonindigenous species in ballast water discharges, the impact from the discharge of seawater wasn't included.

- The Great Lakes are a drinking water source, and an irreplaceable freshwater natural resource. They warrant implementation of strong environmental regulations to protect such waters from the introduction of new biological pollutants, such as invasive species, and from the establishment of new populations of existing invasive species within these including the most vulnerable. We recognize the technical challenges that freshwater environments pose to treatment technology and the difference in construction between ocean going and laker vessels, these should be viewed as challenges to be met rather than excuses for inaction.