

**More Stringent Regulation of Ballast Water Discharges Is On the Horizon**  
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I. Introduction

Ballast water discharges from vessels are implicated in the introduction of a wide variety of aquatic invasive species. Aquatic invasive species are plants, animals and microscopic organisms that cause serious problems outside of their native range. It has been estimated that more than 10,000 marine species each day hitch rides around the globe in the ballast water tanks of ships.<sup>2</sup> The zebra mussel, billions of which have spread throughout United States waters, is perhaps the best-known example to Americans, but there are also the European ruffe, the round goby, the mitten crab, the green crab, the brown mussel, various fish and shellfish pathogens, and many aquatic nuisance vegetation species, such as Eurasian watermilfoil, hydrilla, water hyacinth and water chestnut.<sup>3</sup> The annual cost for damages from and control of all invasive species (including aquatic) in the United States has been estimated at \$137 billion.<sup>4</sup>

While there is some regulation of ballast water discharges, generally through best management practices such as salt water flushing and the maintenance of ballast water management reports, a technology that ultimately eliminates invasive species living in ballast water prior to discharge of such water is not yet commercially available. Many advocates for stringent ballast water standards believe that once a performance standard is adopted, whether through an international convention or U.S. legislation, companies will develop the technology to meet such performance standard for sale in the commercial market. In converse, the lack of a performance standard perhaps impedes innovation to solve this significant environmental problem. Nonetheless, what level of control should be adopted, whether the standard to be adopted is achievable, and by what date should vessels comply with such control standard is not yet decided.

Today there are numerous proposals to create standards to address aquatic invasive species in ballast water. This article will describe those efforts, including efforts by the International Maritime Organization (“IMO”), U.S. Congress, U.S. Coast Guard, U. S. Environmental Protection Agency (“EPA”), and the individual states.

II. IMO Standards

The international community recognizes the substantial danger to the marine environment posed by aquatic invasive species. In 2004, the IMO adopted the

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<sup>1</sup> The views expressed in this article are of the authors and not their employers or clients.

<sup>2</sup> EPA, Office of Water, *Aquatic Nuisance Species in Ballast Water Discharges: Issues and Options, Draft Report for Public Comment*, 2001.

<sup>3</sup> 16 U.S.C. §4701(a).

<sup>4</sup> New York State Department of Environmental Conservation, Comments Submitted in United States Environmental Protection Agency Proposed Rulemaking Concerning Regulation of Pollutant Discharges Incidental to the Operation of Vessels, Including Ballast Water, August 6, 2007, p. 8.

International Ballast Water Management Convention (hereinafter referred to as the “Convention”).<sup>5</sup> This instrument attempts to provide a universal and comprehensive framework for preventing the introduction and spread of aquatic invasive species through ballast water. It is important to realize that other vectors for vessel source invasions, such as hull fouling or seawater piping, are not addressed by the Convention. There are presently 12 contracting parties to the Convention, representing 3.46% of the world's gross tonnage. This is far short of the 30 countries and 35% required for entry into force to occur.

The Convention is novel in many regards, including an aggressive technology forcing timeline for a transition from ballast water exchange to ballast water treatment, with new vessels having to meet performance standards as early as 2009. That timeline has proven to be difficult to meet from a practical perspective. Most recently, the IMO Assembly, at its 25th Session, adopted a consensus resolution to effectively delay enforcement of the first operative compliance date for the Convention.<sup>6</sup> Specifically, IMO was struggling to provide some certainty for how contracting parties would treat certain ships that were unable to install approved equipment because it was not available as a practical matter.

From an international law perspective, this presented several interesting and complex problems. The Convention had not entered into force, so its amendment procedures were not available to address the problem. Even if the amendment procedure had been available, the lack of timeliness and political difficulties of re-opening the Convention for substantive revision made this unacceptable to many governments for policy reasons as well as legal reasons. Some commentators, led by a suggestion from the IMO Secretariat, believed that the operative dates in the Convention would automatically shift to the date of entry into force because they considered it to be an issue of retroactivity and contrary to the Vienna Convention on the Law of Treaties. After rejecting other options, the member-States of the IMO determined that a resolution adopted on a consensus basis would provide the most certainty, without offending the terms of the Convention itself. After the IMO Marine Environment Protection Committee (MEPC) failed to reach sufficient consensus at its 56th Session, the IMO Assembly successfully resolved the issue at the express request of the Secretary-General. Although the resulting non-binding Assembly Resolution does not resolve all the problems presented by the mis-match between the requirement for, and actual availability of, ballast water treatment technology, it does appear to have solved the most immediate of the problems.

Among other novel characteristics of the Convention, is the approach of leaving many contentious technical issues to be resolved through subsequent development of Guidelines. This is an obvious imperfect solution because the limitations of recommendatory Guidelines cannot provide the kind of certainty that actual convention text can provide. This has proven to be the case, with at least one set of Guidelines (G-2,

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<sup>5</sup> The International Convention for the Control and Management of Ships' Ballast Water and Sediments, Feb. 2004, IMO 1620M.

<sup>6</sup>See International Maritime Organization, Resolution A. 1005(25).

Sampling), still remaining to be completed and adopted. The MEPC is expected to consider those Guidelines, which are still the source of a great deal of technical and policy controversy, at its 57th Session.<sup>7</sup> The legal question of just how much effect Guidelines that are expressly referenced in a Convention are to have remains rather untested.

One more example of novel characteristics of the Convention is provided by its “more stringent measures” provision, which expressly authorizes contracting parties to impose more stringent measures in certain waters under their jurisdiction. Just precisely how this provision interacts with the Convention’s “additional measures” provision will pose interesting legal questions as unilateral and regional regimes become more common in the absence of a coherent and effective global regime. The negotiators of the Convention struck an express and delicate compromise, with regard to “additional measures,” so as to allow the possibility for either Articles 196 or 211(6) of the United Nations Convention on the Law of the Sea, 1982, to potentially describe a coastal State’s competency to impose those measures. This intentional “decision not to decide,” necessarily introduces certain ambiguities and room for substantial future controversy as the Convention is implemented.

The United States, at this point, has not ratified the Convention. This is largely because the Administration has been awaiting the final negotiation of the Guidelines, prior to making a determination of whether to transmit the Convention to the Senate for advice and consent.

### III. U.S. Legislation

As discussed below, several bills are pending before Congress to address the regulation of ballast water discharges and, more generally, the prevention of introduction and spread of aquatic invasive species. In total, ten different bills directly addressing aquatic nuisance species have been introduced to date in the 110th Congress. Of those ten bills, descriptions of the most politically viable are provided.

Senate bill 1578 was introduced by Senator Daniel Inouye (Hawaii) on June 7, 2007. This bill, to amend the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990, was approved by the Senate’s Commerce, Science and Transportation Committee on or around September 28, 2007, with Senator Barbara Boxer (California) as the lone dissenter. The bill would require salt water exchange of all ballast water tanks as an interim measure. As a long term measure, the bill would require vessels to install new technology that meet performance standards 100 times more stringent than the IMO standards under a phased implementation schedule of 2011 to 2015.<sup>8</sup> The bill, nonetheless, would provide the U.S. Coast Guard authority to extend that time frame out

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<sup>7</sup> See International Maritime Organization session paper MEPC 57/1, recalling the established dates for the meeting as 31 March 2008 to 4 April 2008 at London, United Kingdom.

<sup>8</sup> Specifically, the bill provides that all vessels must have installed control technology that removes organisms larger than 50 micrometers such that less than one living organism per 10 cubic meters is discharged in ballast water, with similar thresholds for smaller organisms.

two years, and perhaps even farther out, if the Coast Guard finds complying with the new performance standards is not feasible. The bill also retains jurisdiction to enforce compliance of ballast water management plans with one agency, the Coast Guard, and not with multiple agencies such as the EPA and state permitting authorities under the Clean Water Act (although the bill permits states to have their own ballast water programs as long as they do not conflict with the federal program).

Generally, many organizations have supported this bill, but several national environmental groups have opposed the bill because it would not permit EPA and state regulation of ballast water discharges under the Clean Water Act. A coalition of 16 environmental organizations, including Earthjustice, Oceana, Friends of the Earth, Sierra Club, and Natural Resources Defense Council, filed a comment letter on August 1, 2007 requesting that the Clean Water Act exemption be removed from the bill as well as any other provision that preempts the right of states to have more stringent performance standards. Similarly, the legal officers (e.g., Attorney Generals) for six of the Great Lakes states (Illinois, Michigan, Minnesota, New York, Wisconsin, and Pennsylvania) sent a comment letter on September 24, 2007 stating that the bill should not preempt ballast water discharges from regulation under the Clean Water Act or states' authority to regulate such discharges. The states also requested that the bill remove the language that grants the Coast Guard the authority to extend the timeframes for the installation of ballast water technology if necessary.

House of Representatives bill 2830 was introduced by Representative James Oberstar (Minnesota) on June 22, 2007. Title V of this bill regarding the Coast Guard authorization of appropriations for 2008, entitled Ballast Water Treatment, would require vessels to achieve the same performance standards as the Senate bill, but the phase-in schedule is slightly faster, from 2008 through 2013. Additionally, the bill contains a unique "reverse pre-emption clause" that would suspend any Federal enforcement if an individual state acted in accordance with the Federal law and imposed its own regime.

Senator Ted Stevens (AK) recently introduced Senate bill 2645 on February 14, 2008, entitled the Vessel Discharge Evaluation and Review Act. This bill would continue the EPA exemption that discharges incidental to the normal operation of a vessel do not need a discharge permit and would direct the Coast Guard, in consultation with the Under Secretary of Commerce for Oceans and Atmosphere, to promulgate a final rule to establish uniform national discharge standards, similar to the program for vessels of the armed forces. The bill would also limit the authority of a state to adopt its own program for such discharges unless the state shows some waters within its jurisdiction need greater environmental protection and the Under Secretary of Commerce for Oceans and Atmosphere determines such prohibition does not create an undue burden on commerce.

#### IV. Coast Guard Programs

Pursuant to the Aquatic Nuisance Prevention and Control Act, 16 U.S.C. § 4701 *et seq.*,<sup>9</sup> the Coast Guard has adopted regulations for U.S. waters generally,<sup>10</sup> and specifically for the Great Lakes and the Hudson River north of New York City.<sup>11</sup> Both sets of regulations have reporting requirements,<sup>12</sup> and both contain substantive requirements, stricter for the Great Lakes and the Hudson River than elsewhere. Vessels entering the Great Lakes or the Hudson River with ballast water must either exchange it on the high seas, retain it on board, or “[u]se an alternative environmentally sound method . . . that has been submitted to, and approved by, the Commandant [of the Coast Guard] prior to the vessel’s voyage.”<sup>13</sup> As no such alternative has yet received Coast Guard approval, the only choices for the Great Lakes and the Hudson River, unless a specific Coast Guard waiver is obtained for safety reasons,<sup>14</sup> is high seas exchange or retention on board. For other U.S. waters, vessels have the same three choices (effectively two in the absence of approved alternatives) as those operating in the Great Lakes or the Hudson River, but they are permitted to discharge ballast water if they cannot employ approved management practices for safety reasons, so long as the discharge is kept to a minimum.<sup>15</sup>

It should be noted that these Coast Guard regulations do not apply to so-called NOBOB or no-ballast-on-board vessels, which enter United States waters fully loaded with cargo and thus do not need to carry ballast water.<sup>16</sup> Such vessels can harbor invasive species in the residual water contained in their otherwise empty tanks, which can be released when new ballast is taken on and then discharged during the processes of loading cargo at U.S. ports. The Coast Guard has published best practice guidance for NOBOB’s, but they are not enforceable standards. To address this issue more definitely in the Great Lakes, the Saint Lawrence Seaway Development Corporation recently adopted regulations to require vessels to conduct salt water flushing of each ballast water tank that contains residual amounts of water or sediment so that the remaining residual water in each tank has a salinity level of at least 30 parts per thousand. This regulation essentially would adopt the existing Canadian standards for NOBOBs transiting the Saint Lawrence seaway (which align with the Coast Guard best practices guidance) as a matter of U.S. law.<sup>17</sup>

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<sup>9</sup> In 1990, Congress passed the Non-Indigenous Aquatic Nuisance Prevention and Control Act, Pub. L. No. 101-646, 104 Stat. 4761, which was amended by the National Invasive Species Act of 1996, Pub. L. No. 104-332, 110 Stat. 4073, which are codified at 16 U.S.C. §§ 4701-4751.

<sup>10</sup> 33 CFR §151, Subpart D.

<sup>11</sup> 33 CFR §151, Subpart C.

<sup>12</sup> 33 CFR §§151.1516, 151.2041, 151.2043, 151.2045. The reports must indicate a vessel’s ballast water capacity and the total volume of ballast water on board, the method of ballast water exchange, and a log indicating each location where ballast water is exchanged.

<sup>13</sup> 33 CFR §151.1510.

<sup>14</sup> 33 CFR §151.1514.

<sup>15</sup> 33 CFR §§151.2030, 151.2035, 151.2036, 151.2037.

<sup>16</sup> 71 Fed. Reg. 19,742 (April 17, 2006). Reporting remains mandatory, even though observance of the ballast water best management practices outlined by the Coast Guard is voluntary for NOBOB vessels.

<sup>17</sup> 72 Fed. Reg. 74247, Proposed Rule (December 31, 2007); 73 Fed. Reg. 9950, Final Rule (Feb. 25, 2008).

Violators of the Coast Guard ballast water regulations are liable for civil penalties of up to \$27,500 per violation, with each day that a violation continues constituting a separate offense. Anyone who knowingly violates the regulations is guilty of a class C felony.<sup>18</sup>

## V. Environmental Protection Agency Programs

The Clean Water Act (“CWA”) prohibits any one from discharging any pollutant through a point source into the navigable waters of the United States without a National Pollutant Discharge Elimination System (“NPDES”) permit.<sup>19</sup> A point source includes any marine vessel. EPA is required to promulgate regulations to implement and enforce the CWA. The CWA authorizes states to administer the NPDES permit program once that program is approved by the EPA. In order to receive EPA approval, states must adopt legislation and regulations that demonstrate that they have the authority to issue NPDES permits and enforce such permits that are at least as stringent as the regulations adopted by the EPA. Once EPA approves the state permit program, the EPA must suspend its issuance of NPDES permits.<sup>20</sup> However, EPA and citizens retain the right to enforce violations of the state permit program in federal court. Most states have an approved program, thus the issuance of NPDES permits is generally done by the states, not EPA.<sup>21</sup>

The discharge of ballast water, however, has historically been exempted from the requirement to have a NPDES permit. A 1973 EPA regulation exempted any “discharge incidental to the normal operation of a vessel” from EPA’s NPDES permitting requirement.<sup>22</sup> But that exclusion is in question. In a suit brought by a coalition of environmental groups, *Northwest Environmental Advocates v. EPA*, the United States District Court for the Northern District of California held in March, 2005, that the exemption was beyond EPA’s authority and ordered EPA to repeal it.<sup>23</sup> In the remedy phase of this case, six major states (Illinois, Michigan, Minnesota, New York, Pennsylvania and Wisconsin) intervened on behalf of the environmental plaintiffs, asking the court to order EPA to adopt final regulations on ballast water discharges within a year. The District Court announced in September, 2006 that it would vacate EPA’s 1973 exemption on September 30, 2008, thus giving EPA two years to issue a replacement rule.<sup>24</sup> The United States, on behalf of EPA, has appealed the District Court’s rulings to the United States Court of Appeals for the Ninth Circuit. Oral argument was heard in August 2007, but to date, no decision has been issued.

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<sup>18</sup> 33 CFR §§151.1518, 151.2007. A Class C felony is punishable by imprisonment for a term of ten or more years, but less than 25 years. 18 U.S.C. §3559(a)(3).

<sup>19</sup> 33 U.S.C. §1342 *et seq.*

<sup>20</sup> 33 U.S.C. § 1342(b) and (c).

<sup>21</sup> For a list of states with delegated programs, see <http://cfpub.epa.gov/npdes/statestats.cfm>.

<sup>22</sup> 40 CFR §122.3(a). The statute itself only exempts from the definition of a pollutant “discharges incidental to the normal operation of a vessel of the Armed Forces.” 33 U.S.C. § 1362(6).

<sup>23</sup> N.D. Cal., No. C 03-5760, 61 ERC 1245 (March 31, 2005).

<sup>24</sup> N.D. Cal., No. C 03-5760, 63 ERC 1915 (September 18, 2006).

Even if the District Court decision in *Northwest Environmental Advocates* is reversed, upholding the exclusion of ballast water under EPA's NPDES permitting program, regulation of ballast water under the CWA may still move forward. States are permitted to adopt programs with stricter requirements, including covering source categories exempted by EPA.<sup>25</sup> Many of the state intervenors in the *Northwest Environmental Advocates* case have committed to adopt a ballast water discharge program if EPA fails to do so.<sup>26</sup>

While it is appealing the rulings by the District Court in *Northwest Environmental Advocates*, EPA is nevertheless beginning an administrative process to develop a permitting program for ballast water and other routine ship discharges under the CWA. EPA issued a notice on June 21, 2007 seeking comments on how to structure a NPDES permit program for discharges incidental to the normal operation of vessels, and nearly 1,000 comments were submitted.<sup>27</sup> It is expected that EPA will issue a draft regulation this spring.

Shipping companies, insurers, environmental groups and governmental agencies alike are eager to see what EPA actually proposes because the task before EPA is enormous. While it might seem that two years to develop a rule is not unreasonable, the reality is that, with the number of different types of vessels with varying potential discharges that travel from port to port in varying water bodies, it is not clear EPA can actually develop a comprehensive regulation required by the federal district court order. In particular, the federal district court did not limit its order to just ballast water but to all discharges incidental to the normal operation of a vessel, so that all marine vessels, including recreational boats would be subject to the rule. In a Declaration by James A. Hanlon, Director of EPA's Office of Wastewater Management, dated May 23, 2007, submitted with EPA's petition for review by the Ninth Circuit, Mr. Hanlon explained that, in 2005, there were approximately 8,400 vessels equipped with ballast water tanks making over 86,000 port calls in the U.S., approximately 81,000 commercial fishing vessels operating in the U.S., approximately 13 million state-registered recreational vessels in the U.S., and an additional estimated 5 million unregistered recreational vessels, bringing the total number of vessels that the Court has ordered regulated to 18 million.<sup>28</sup> The entire universe of point sources covered currently under the NPDES program is about 550,000.<sup>29</sup>

EPA could issue a general permit that requires salt water flushing of all vessels' ballast tanks; however, this permitting scheme would not address vessels without ballast tanks, vessels with ballast tanks that transport in one water body, vessels that operate in freshwater, or any of the other potential discharges from vessels (i.e., greywater, bilge water, etc.). Nonetheless, the only commercially available mechanism that has been

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<sup>25</sup> 40 CFR §123.1(i).

<sup>26</sup> See discussion on state programs *infra*.

<sup>27</sup> "Development of Clean Water Act National Pollutant Discharge Elimination System Permits for Discharges Incidental to the Normal Operation of Vessels," 72 Fed. Reg. 34241 (June 21, 2007).

<sup>28</sup> James A. Hanlon Declaration ("Hanlon Decl.") is available on the EPA website at [http://www.epa.gov/owow/invasive\\_species/ballast\\_water.html](http://www.epa.gov/owow/invasive_species/ballast_water.html). See Hanlon Decl. ¶ 4.

<sup>29</sup> Hanlon Decl. ¶ 5.

approximately 90 percent effective in removing aquatic invasive species is salt water flushing of both NOBOBs and ships declaring ballast water on board.<sup>30</sup>

In sum, EPA is in a difficult position in that it needs to adopt a discharge program for mobile sources of varying types, sizes and uses over a very short time period. On the other hand, EPA's failure to develop a comprehensive regulation leaves ship owners vulnerable to citizen suits under the CWA.

## VI. State Activities

Due to a lack of standards at the federal level, many states have begun to develop new laws and regulations to address the discharge of ballast water. These programs range from voluntary best management practices to specific control technologies that must be on board a vessel prior to discharging ballast water. States that have not developed a program are finding themselves at increasing risk of citizen suits. However, as discussed below, it does not appear that any state has developed a commercially viable and workable performance standard that solves the problem in the time period envisioned under several of these state programs. The following is a brief summary of recent state developments.

### *California*

On October 15, 2007, the California State Lands Commission approved regulations implementing performance standards for the discharge of ballast water in California waters.<sup>31</sup> The regulation requires ballast water treatment so that the ballast water discharged contains "no detectable living organisms that are greater than 50 micrometers in dimension" and specific standards for smaller organisms over a phased implementation schedule. The new standards will apply to vessels constructed after January 1, 2009 with a ballast water capacity of less than or equal to 5,000 metric tons; to vessels constructed after January 1, 2012 with a ballast water capacity greater than 5,000 metric tons, and beginning January 1, 2014 for vessels constructed before 2009 with a ballast water capacity between 1,500 and 5,000 metric tons and by 2016 for vessels with ballast water capacity less than 1,500 or greater than 5,000 metric tons. While vessels will thus be subject to performance standards as early as 2009, a December 2007 study by the California State Lands Commission to the California State Legislature that examined 28 ballast water treatment systems concluded that not one technology could meet the California performance standards.<sup>32</sup>

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<sup>30</sup> Gregory M. Ruiz and David F. Reid, *Current State of Understanding about the Effectiveness of Ballast Water Exchange (BWE) in Reducing Aquatic Nonindigenous Species (ANS) Introductions to the Great Lakes Basin and Chesapeake Bay, USA: Synthesis and Analysis of Existing Information*, NOAA Technical Memorandum GLERL-142, Sept. 2007.

<sup>31</sup> The regulation was adopted pursuant to the California Marine Invasive Species Act, Chapter 491 Statutes of 2003, as amended by the Coastal Ecosystems Protection Act of 2006. The regulation is promulgated at Cal. Code Regs, Tit. 2, Division 3, Ch. 1, Article 4.7 (Oct. 15, 2007).

<sup>32</sup> Dobroski et al., California State Lands Commission, Marine Facilities Division, *Assessment of the Efficacy, Availability and Environmental Impacts of Ballast Water Treatment Systems For Use In California Waters*, Dec. 2007.

### *Michigan*

In response to Michigan Act 451, Public Acts of 1994, as amended, Parts 31 and 41, and Michigan Executive Orders 1991-31, 1995-4 and 1995-18, Michigan has developed a general permit for the discharge of ballast water. The general permit took effect January 1, 2007. Michigan requires all vessels engaging in any port operations to have a general permit, including a certificate of coverage (“COC”), regardless of whether the vessel discharges ballast water in Michigan waters. For a vessel that discharges ballast water in Michigan waters, the general permit requires the vessel to have one of four optional on-board treatments: (1) hypochlorite treatment; (2) chlorine dioxide treatment; (3) ultra violet light radiation treatment preceded by suspended solids removal; and (4) deoxygenation treatment. Vessel owners can also apply for an individual NPDES permit and propose an alternative treatment.

No treatment is required for vessels not discharging ballast water in Michigan waters. For vessels that do not discharge ballast water in Michigan waters, the general permit requires that the vessel master or other duly authorized representative who plans to engage in port operations notify the Department of Environmental Quality with: vessel name and IMO number, COC number, port destination, arrival date and time period in port, last port and name of country, next port and name of country, vessel contact, reason for port operation, date and type of last ballast water management practice, total volume or weight of ballast water on board and certification that ballast water will not be discharged into waters of Michigan. This notice must be faxed or emailed at least 24 hours prior to port operations.<sup>33</sup>

A coalition of shipping interests challenged Michigan’s law in a suit filed March 15, 2007, charging violations of the United States and Michigan Constitutions and pre-emption by federal law, but their suit was dismissed last summer. The Court urged the concerned shipping interests to approach Congress, not the judiciary: “Plaintiffs further argue that regulation of ballast water discharge should be the province of federal and not state law . . . . The problem with this argument is not in any internal illogic, but instead that it is made to the wrong branch of government.”<sup>34</sup>

### *Minnesota*

Last August, the Minnesota Center for Environmental Advocacy (“MCEA”) filed a lawsuit against the Minnesota Pollution Control Agency alleging that the state agency is failing to take action to protect Lake Superior from the viral hemorrhagic septicemia virus (“VHS”) that kills fish by severe hemorrhaging. MCEA seeks a state court order that would require Minnesota to regulate the discharge of ballast water in Lake Superior and other Minnesota waterways by the spring 2008 shipping season. Both parties have made motions for summary judgment and oral argument was held on February 28, 2008.

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<sup>33</sup> The general permit is available on the Michigan Department of Environmental Quality’s website at <https://www.michigan.gov/deq> under the subheading “General NPDES Permits”.

<sup>34</sup> *Fednav, Ltd. v. Chester*, 505 F.Supp. 381 (E.D. Mich. 2007).

The state agency informed the judge that it is working on the development of a NPDES program for ballast water per the federal district court decision in *Northwest Environmental Advocates*, but it needs about six months to comply with its state administrative procedures, including providing all interested parties an opportunity for public comment. Based on the state's papers, it appears that Minnesota prefers to rely on EPA's establishment of a NPDES program, but if EPA fails to do so, then the state intends to adopt its own ballast water program.<sup>35</sup>

### *Ohio*

Ohio has a bill pending that would require the Department of Natural Resources to establish a program to issue permits to oceangoing vessels that enter Ohio's portion of Lake Erie. The permit would require that either the vessel not discharge ballast water or have an environmentally sound technology (to be defined by rules) to prevent the discharge of aquatic invasive species. The bill directs the Department of Natural Resources to use the Michigan program as guidance.<sup>36</sup>

### *Virginia*

Virginia has in place regulations establishing voluntary ballast water management practices that include cleaning ballast tanks regularly to remove sediments, discharging only the minimal amount of ballast water essential for safe operations, rinsing anchors, and for vessels outside the EEZ, conducting salt water exchange. The regulations' mandatory requirements require vessel operators or agents to file a ballast water control report with the Marine Resources Commission.<sup>37</sup>

### *Washington*

The Revised Code of Washington, Chapter 77.120, the Ballast Water Management Statute, became law effective on July 22, 2007. The law charges the Washington Department of Fish & Wildlife to develop regulations to implement a ballast water management program. Generally, vessels of 300 gross tons or more must either not discharge ballast water in Washington state waters, conduct a salt water exchange 50 nautical miles offshore (unless vessel is outside EEZ, then salt water exchange must occur 200 nautical miles offshore), or treat the ballast water to remove 95% of the zooplankton organisms and 99% of the phytoplankton and bacteria organisms.<sup>38</sup> Vessels must file a Ballast Water Reporting Form at least 24 hours prior to entering Washington waters, although the regulations also provide several exemptions (i.e., a safety exemption).

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<sup>35</sup> Court File No. 62-CV-07-2224, State of Minnesota District Court, Second Judicial District, County of Ramsey.

<sup>36</sup> 127<sup>th</sup> General Assembly of Ohio, H.B. 298, introduced by Representative Skindell on October 23, 2007.

<sup>37</sup> 4 Virginia Administrative Code 20-398-10.

<sup>38</sup> Washington Administrative Code 220-77-0900C and 09500A.

## VII. Conclusion

2008 could be seen as a pivotal year for the regulation of ballast water. Court decisions, bills, and regulations are pending at all levels of government. Shipping companies need to be cognizant of the ongoing development of federal and state laws and regulations and should consider participating in the public review and comment processes provided by the federal and state agencies. The environmental organizations have been very active on commenting on pending bills and regulations. The shipping companies likewise need to participate in these public forums, addressing such issues as identifying the types of discharges from vessels, what performance standards can be met in the future, the time period needed to retrofit vessels, spacing and safety issues related to proposed technologies, etc. In sum, shipping companies have a responsibility to participate in solving a significant environmental problem because they have the knowledge and expertise on ship management that can help guide legislators and regulators to the appropriate solution.