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United States Coast Guard
Docket Management Facility (M-30)
U.S. Department of Transportation
West Building, Ground Floor, Room W12-140
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590-0001

Docket Number USGC-2001-10486, Notice of Proposed Rulemaking

Dear United States Coast Guard:

Alliance for the Great Lakes, Great Lakes United, Healing Our Waters-Great Lakes Coalition, Natural Resources Defense Council, and the National Wildlife Federation, in consultation with the Conservation Law Center, Inc., respectfully submit these comments in response to the Notice of Proposed Rulemaking and Draft Environmental Impact Statement on Standards for Living Organisms in Ships' Ballast Water Discharged in U.S. Waters, Docket No. USCG-2001-10486.

Our organizations represent millions of individual members that have a deep concern for the well being of the Great Lakes and St. Lawrence River. The undersigned also consist of coalitions, which represent hundreds of environmental, conservation, hunting, fishing, labor, First Nation/tribal and academic organizations. Our organizational missions all focus on the protection and restoration of the Great Lakes and St. Lawrence River. A shared priority of our six groups is to ensure that invasive species in the Great Lakes and St. Lawrence River do not have a deleterious impact on their ecosystems, dependent communities, and economies. Our goal is to prevent the introduction and spread of invasive species in the Great Lakes-St. Lawrence River region.

Introduction

Aquatic invasive species are one of the biggest threats facing the Great Lakes and their tributaries today. The Great Lakes Regional Collaboration said in its report that due to an

inundation of invasive species the world's greatest freshwater lakes are "succumbing to an irreversible 'invasional meltdown' that may be more severe than chemical pollution."¹ This crisis is indicative of the tremendous stress that freshwater ecosystems are experiencing across the globe caused by aquatic invasive species. In North America, freshwater systems like the Great Lakes are experiencing extinction rates five times higher than terrestrial and marine ecosystems.² At least 123 freshwater animal species, including fish, mussels, crayfish and amphibians, have gone extinct across North America since 1900. This disproportionate and disturbing trend is expected to increase due to anthropogenic factors, including the accelerated movement of species by trade, and compounded by the impact of climate change.³ Leading international scientists are saying that we are on the verge of a major freshwater biodiversity crisis.⁴

The environmental and economic impacts of invasive species are well known. Research suggests that the annual cost to the Great Lakes region from invasive species introduced by shipping may be upwards of \$200 million annually.⁵ Invasions limit the ability of the natural ecosystem to support fisheries, raw water uses, and wildlife watching. The Coast Guard itself recognizes the environmental damage caused by invasive species saying in the Draft Environmental Impact Statement:

Nonindigenous species have the potential to disrupt aquatic ecosystems at all food web levels. NIS can adversely impact native biodiversity by causing changes in the relative abundance of native species and individuals that are of ecological and economic importance. Thus, they could have direct and indirect impacts to threatened and endangered marine flora and fauna. Introduced NIS are one of the main sources of risk to threatened and endangered species, second only to habitat loss (Wilcove and Chen 1998). NIS can change the structure of communities, causing a breakdown in structure and rapid reorganization (Sanders et al. 2003). The FWS considers NIS to be significant contributing factors in determining the "threatened" or "endangered" status of many native species (OTA 1993; Ruiz et al. 1997).⁶

These effects have been seen in the Great Lakes. The extirpation or major declines in important native species (such as lake trout and deepwater ciscoes) due to effects from aquatic invasive species (such as sea lamprey predation on lake trout, and competition with deepwater ciscoes by

¹ Great Lakes Regional Collaboration. 2005. "Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes." P. 17

² Ricciardi, A and Rasmussen, B. 1999. "Extinction Rates of North American Freshwater Fauna" Conservation Biology. Vol 15. No 5; pp 1220-1222.

³ United Nations press release, November 11, 2009

<http://www.un.org/apps/news/story.asp?NewsID=32916&Cr=climate+change&Cr1=>

⁴ [Klement Tockner](#), Director of the Leibniz-Institute of Freshwater Ecology and Inland Fisheries, public statement at the Diversita Conference, October 2009.

⁵ Lodge, D. and Finnof, D. 2008. Fact sheet: "Annual Losses to Great Lakes Region by Ship-borne Invasive Species at least \$200 Million: Preliminary Results."

⁶ USCG Ballast Water Discharge Standards Draft Programmatic Environmental Impact Statement at 3-3 (April 2008).

introduced alewives and rainbow smelt) have been highlighted in reports.⁷ The impacts of zebra and quagga mussels are dramatic and well documented.⁸

But an invasion to the Great Lakes does not stop at the lakeshore. Freshwater invasions to the Great Lakes spread across North America. Twenty years after the initial zebra and quagga mussel invasion to Lake St. Clair, the invasive mussels spread to all five Great Lakes, into the St. Lawrence, Mississippi, Tennessee, Hudson, and Ohio River Basins, and have recently established west of the continental divide in California and Nevada, despite an extensive binational effort to prevent a westward expansion.⁹ The rapid spread of freshwater invaders from the Great Lakes illustrates that protecting the Great Lakes from ballast-mediated invasions protects freshwater ecosystems across North America.

A strong federal program that effectively eliminates the risk of new introduction and spread of invasive species in the Great Lakes and other fresh water systems is urgently needed, especially in light of the documented high rate of extinction plaguing these systems.¹⁰ The National Invasive Species Act, 16 U.S.C. §§ 4701 *et seq.* (“NISA”), requires just such a program by establishing a zero discharge standard for the introduction and spread of nonindigenous species. See 16 U.S.C. § 4711(c)(1) (the Coast Guard “shall . . . prevent the introduction and spread of nonindigenous species in waters of the United States by ballast water operations and other operations of vessels equipped with ballast water tanks”); 16 U.S.C. § 4711(c)(2) (the Coast Guard “shall . . . ensure to the maximum extent practicable that aquatic nuisance species are *not* discharged into waters of the United States from vessels”) (emphasis added).¹¹

The new rule being proposed by the U.S. Coast Guard helps our nation advance towards meeting the zero discharge standard.

In general, we support the approach the Coast Guard is proposing to meet the goals of NISA and to establish numerical standards for allowable concentrations of living organisms in ballast water. We strongly support the proposal to establish final (“Phase Two”) standards 1000 times more stringent than the International Maritime Organization’s (IMO) standards. The Phase Two standards represent a high level of environmental protection, they are as stringent as the strongest state standards currently in place, they establish a consistent national program, and they build upon the framework of the IMO’s Ballast Water Convention.

We also support the proposed provisions that allow making the Phase Two standard more stringent when information reveals that a more effective treatment is practicable.

⁷ Bails, et.al. 2005. “Prescription for Great Lakes Ecosystem Protection and Restoration (Avoiding the Tipping Point of Irreversible Changes).”

⁸ See U.S. Geologic Survey fact sheet at <http://www.glsc.usgs.gov/files/factsheets/2000-6%20Zebra%20Mussels.pdf>

⁹ Great Lakes United, “Zebra Mussels: Facts and Figures” March 18 2008

¹⁰ Extinction Rates of North American Freshwater Fauna, Anthony Ricciardi and Joseph B. Rasmussen, *Conservation Biology*, Vol. 13, No. 5 (Oct., 1999), pp. 1220-1222

¹¹ NISA required the Coast Guard to create voluntary national guidelines for ballast water management. 16 U.S.C. § 4711(c). Subsections (e) and (f) of Section 4711 require the Coast Guard to periodically review and revise the guidelines, including by making them into mandatory regulations, if the Coast Guard finds that such revisions are necessary to achieve the zero discharge standard in 16 U.S.C. § 4711(c)(1).

We are pleased with the explicit recognition that vessels subject to this rulemaking are also subject to the Environmental Protection Agency's Vessel General Permit. We stress the need for active coordination with the EPA as it fulfills its responsibilities under the Clean Water Act (CWA) to regulate ballast water discharges to protect water quality. The Coast Guard and EPA need to work together closely to create a coherent federal program for regulating ballast water that utilizes both the Coast Guard's expertise in vessels and EPA's expertise in protecting water quality, in particular in the context of developing control technology. Any federal program to control ballast water discharges from ships must engage both agencies and fully comply both with NISA and the CWA.

Lastly, we are particularly concerned that strong and effective regulations are applied binationally to the Great Lakes and St. Lawrence River. Canada and the United States share jurisdiction over all but one of the Great Lakes. With a border running through the largest deposit of accessible freshwater on earth, it is imperative that Canada and the U.S. closely coordinate on the development and implementation of ballast regulations for vessel operations on the Great Lakes, as currently is required under the Great Lakes Water Quality Agreement. Coordinating regulations with Canada is needed to avoid a "race to the bottom" where inconsistencies in new laws and regulations aimed at preventing biological pollution in the Great Lakes would result in ships avoiding more stringent regulations in one country by choosing to discharge ballast water in the other country's jurisdiction. Additional coordination with Canada is needed because the two countries already have established compatible enforcement, inspection and monitoring programs which should be built upon as opposed to eroded, as new regulations emerge in the United States.

To this end, as the Coast Guard finalizes this rule and establishes standards 1000 times more stringent than the IMO standard, we also urge the United States to ratify the IMO's Ballast Water Convention. The IMO Ballast Water Convention clearly states that countries can both ratify and legally enact stronger standards than the IMO standard when it says, "Nothing in this Convention shall be interpreted as preventing a Party from taking, individually or jointly with other Parties, more stringent measures with respect to the prevention, reduction or elimination of the transfer of Harmful Aquatic Organisms and Pathogens through the control and management of ships' Ballast Water and Sediments, consistent with international law."¹²

Canada has stated its intention to ratify the Ballast Water Convention, but has no plans to require a national ballast water discharge standards more stringent than the IMO ballast water discharge standard for vessels transiting to Canadian waters. We encourage the United States to ratify the Ballast Water Convention and approach the IMO jointly with Canada, to petition for higher ballast water discharge standards, equivalent to the Phase Two standards proposed in this rulemaking, for vessels operating in all U.S. waters and in Canadian waters of the Great Lakes and St. Lawrence River. Ratification of the Ballast Water Convention by the United States and Canada will also catapult this important agreement towards adoption, leading to greater protection from aquatic invasive species globally.

¹²International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 BWM/CONF/36 Article 2 # 3

We respectfully request the following changes be made to make this rule more environmentally protective, expedite its implementation, ensure accountability, and consistent with NISA mandates.

1. Implementation Schedule and Standards

Since 1990, with the passage of the Nonindigenous Aquatic Nuisance Prevention and Control Act (NANPCA), 16 U.S.C. 4711 et seq., Congress has demonstrated its concern about ballast water management. In 1996, with passage of NISA, Congress reemphasized the role of ballast water in the spread of invasive species. The proposed regulation allows final implementation of Congress's mandate to occur in 2025--or beyond--35 years after the initial passage of NANPCA. While the final standard proposed is commendable, the national implementation schedule proposed is unnecessarily protracted, especially in the light of how long the Coast Guard has been tasked with "prevent[ing] the introduction and spread of nonindigenous species in waters of the United States by ballast water operations and other operations of vessels equipped with ballast water tanks."

We make the following recommendations to amend the implementation schedule and standards specifically for vessels entering the St. Lawrence Seaway or operating in the Great Lakes, but our recommendations also apply to vessels operating in any freshwater ecosystem in the United States. We also support similar improvements to the broader national program.

a. *Modifications of Phase One Standard for the Great Lakes.* We urge the Coast Guard to revise the Phase One standards to at least ten times the IMO standards or to the highest standard currently practicable, and to revise the implementation schedule to require all vessels to meet the standards by January 1, 2012. We make these recommendations based upon the following factors:

- 1) Current availability of treatment systems that meet the IMO standard. The IMO has determined that at least 3,000 units should be available for installation by 2010.¹³
- 2) A method already exists to improve performance of IMO approved treatments by 10 to 100 times even if treatments to meet standards greater than IMO are not immediately available.¹⁴ This method is the application of ballast water exchange before the use of IMO approved technology.
- 3) The California State Lands Commission determined that treatments are likely available that will meet a standard three orders of magnitude stricter than the IMO standards.¹⁵

These factors show that compliance with standards at least ten times IMO is practicable, and therefore necessary pursuant to NISA's mandate to ensure that aquatic nuisance species are not discharged to the maximum extent practicable.

¹³ Report of the Ballast Water Working Group, International Maritime Organization. July 15, 2009. MEPC 59/WP.6

¹⁴ Chris Wiley, Department of Fisheries and Oceans/ Transport Canada, and Chair IMO Ballast Water Working Group. October 15, 2009 public presentation

¹⁵ Ballast Water Treatment Technologies for use in California Waters, N. Dobroski, C. Scianni, L. Takata and M. Falkner. California Lands Commission, Marine Invasive Species Program. October 15, 2009.

b. *Modification of Phase Two Implementation Schedule for the Great Lakes.* We advocate that the Coast Guard require all ships to comply with the Phase Two standards by January 1, 2016. No delay beyond that date is warranted. In January 2009, California reported that two ballast water treatment systems had already demonstrated the potential to comply with the state's standards, which are equivalent to the Phase Two standards.¹⁶ The state also predicted that several systems should be ready to meet the standards before 2010.¹⁷ That prediction appears well on the way to coming true. As California reported less than two months ago:

The field of ballast water treatment technology appears to be evolving rapidly. Within ten months of the release of our most recent report . . . [in January], the number of systems which have presented data demonstrating the potential to meet California's performance standards has more than tripled - from two to seven. We expect to see a great increase in the available data on system performance in the near future, particularly as systems are installed on operational vessels beginning January 1, 2010 for the initial implementation of California's performance standards for vessels with a ballast water capacity of less than 5000 MT.¹⁸

Clearly, the development of treatment technology is advancing rapidly, making a deadline later than 2016 for compliance with the Phase Two standards unjustified.

c. *Reliance on Drydocking Schedules.* We oppose reliance on drydocking schedules to set the compliance dates for Phase One and Phase Two standards. The proposed rule's allowance for vessels to comply with both the Phase One and Phase Two standards only after their first drydocking after a given compliance deadline is a significant and unjustified delay. As the Coast Guard notes in its fact sheet summarizing the proposed rule, a vessel's "scheduled drydocking . . ., depending on vessel type and service, could be either a 2.5, 5 or (in very rare cases) 10 year interval."¹⁹ The preamble to the proposed rule states that the Phase One and Phase Two compliance timelines were crafted in part to "avoid[] long delays at shipyards where these installations take place."²⁰ In other words, the allowance of this additional 2.5 to 10 year period before a vessel would have to comply with the Phase One or Phase Two standards appears to have been based on the assumption that any ballast water management system would have to be installed during the vessel's scheduled drydocking.

Nothing in the administrative record supports this assumption, however. On the contrary, the Coast Guard's own Preliminary Regulatory Analysis and Initial Regulatory Flexibility Analysis states that "[n]one of the proposed systems" for ballast water treatment analyzed by the Coast

¹⁶ See N. Dobroski, C. Scianni, D. Gehringer and M. Falkner, California State Lands Commission, *2009 Assessment Of The Efficacy, Availability And Environmental Impacts Of Ballast Water Treatment Systems For Use In California Waters*, at p. 58 (Jan. 2009) ("2009 Assessment"), available at

http://www.slc.ca.gov/Spec_Pub/MFD/Ballast_Water/Documents/2009CSLCTechReportFinal.pdf.

¹⁷ *Id.*

¹⁸ Ballast Water Treatment Technologies for use in California Waters, p. 13, N. Dobroski, C. Scianni, L. Takata and M. Falkner. California Lands Commission, Marine Invasive Species Program. October 15, 2009.

¹⁹ U.S. Coast Guard Office of Operating and Environmental Standards, *Proposed Ballast Water Discharge Standard Rulemaking* (Sept. 15, 2009), Doc. No. USCG-2001-10486-0155.1, at 2 n.1.

²⁰ 74 Fed. Reg. 44, 639.

Guard “requires the vessel to be drydocked.”²¹ The same document states that “[o]nce the regulatory regime is articulated and actual production and installation have begun, we [*i.e.*, the Coast Guard] consider it relatively easy to install a treatment system.”²²

Additionally, some ballast water treatment technology suppliers have stated that their systems may be installed without drydocking or vessel downtime, can be installed while the vessel is in commercial operation, and require minimal modification.^{23 24} Other systems could be developed with these qualities in mind.

Because there is no basis in the administrative record for allowing vessels to wait until their next scheduled drydocking before installing a ballast water treatment system that complies with the Phase One or Phase Two standards, this delay should be removed from the proposed timelines at 33 C.F.R. §§ 151.1512, 151.2035 (proposed). The Coast Guard should replace this delay with hard deadlines for Phase One and Phase Two compliance, as we recommend above.

d. *Practicability of Phase Two Shall Terminate Phase One Implementation.* Regardless of the ultimate compliance date, no vessel should be allowed to install and implement treatment to the Phase One standards after compliance with the Phase Two standards is practicable. In other words, as soon as compliance with the Phase Two standards is practicable, even if that occurs before our recommended January 1, 2016, compliance date, such compliance must be required of every vessel that has not yet met Phase One requirements.

2. Practicability Review

NISA mandates that that the Coast Guard “shall . . . ensure to the maximum extent practicable that aquatic nuisance species are not discharged into waters of the United States from vessels.” 16 U.S.C. 4711(c)(2)(A). We urge the Coast Guard to make several modifications to the proposed rule as it relates to the practicability review to ensure that the practicability review is as efficient and effective as possible and that it conforms to NISA’s mandate.

a. *Immediate and Continuous Review.* We urge the Coast Guard to modify the practicability review process so that it begins immediately and functions as a continuous review process until the successful implementation of the Phase Two standards on all vessels. NISA mandates that *not less frequently than* every three years, the Coast Guard shall review and revise its ballast water regulations and promulgate additional regulations on the basis of the best scientific information available. 16 U.S.C. § 4711(e)(1). Thus, the statute does not require a gap between reviews, but instead assures that reviews will not be spaced too far apart.

In the proposed rule, the Coast Guard sets its initial practicability review as occurring at least three years prior to the first compliance dates set forth in Tables 151.1512(c) and 151.2035(c).

²¹ U.S. Coast Guard Office of Standards Evaluation and Development, *Preliminary Regulatory Analysis and Initial Regulatory Flexibility Analysis* (June 2008), Doc. No. USCG-2001-10486-0140.1, at 49.

²² *Id.* at 59.

²³ Hyde GUARDIAN Ballast Water Treatment System, at 2, *available at* http://www.hydemarine.com/ballast_water/e-book_tech/Hyde_GUARDIAN_Tech_Brochure.pdf.

²⁴ Marengo Technology Group, *Why Choose Marengo*, *available at* <http://www.marencogroup.com/about.html>.

Discrete triennial reviews will cause unnecessary delays in revising the regulations to account for rapidly emerging technologies, especially in the event that a practicable technology becomes available in the interim between reviews. Also, it could result in an initial practicability review occurring so early in the implementation schedule that newly developed, but relevant treatment prospects are not considered.

To address these issues, we urge the Coast Guard to revise the process for the practicability review so that the practicability review process begins immediately at the time the ballast water management regulations take effect. Further, rather than a discrete event that occurs every three years, the practicability review should be a continuous process, one which enables the Coast Guard to incorporate findings from ballast water treatment evaluations as they are submitted to the Coast Guard or identified by the Coast Guard itself. The incorporation of findings that indicate that a treatment system is practicable and surpasses the capacity of prior treatment systems should trigger a new formal practicability assessment. This will allow prompt revisions of the regulations in the event that a technology becomes practicable. This process will better serve NISA's goal of ensuring that regulations are revised "as necessary, on the basis of the best scientific information available" than the triennial review schedule currently proposed.

b. Open and Transparent Process. We also urge the Coast Guard to modify its proposal to ensure that practicability review is an open and transparent process, one that gives all parties, including the public, the opportunity to review and comment. In particular, the regulations should specify that an electronic docket will be established for all information related to the practicability review. Such information should include all data and test results submitted to the Coast Guard in support of an approval of a treatment system, as well as any additional information the Coast Guard gathers or identifies. The rules should specify that all parties may review and comment on the information submitted to the docket.

c. Ability to Comment on Practicability Determinations. We urge the Coast Guard to make clear in the rule that the Coast Guard will first issue any determination regarding practicability as an initial determination and then accept and review public comments before issuing a final determination. This will help ensure that the Coast Guard has received and considered all relevant information in making a practicability determination.

d. Remove the Presumption of an Extension of Phase Two Compliance Date. As the Coast Guard recognizes both in the preamble and the proposed rule themselves, 74 Fed. Reg. 44,635; 33 C.F.R. §§ 151.1511(c)(2), 151.2030(c)(2) (proposed), any alteration of the Phase Two standards, or the deadline for compliance with those standards, would be subject to notice-and-comment rulemaking procedures under the Administrative Procedure Act ("APA"), 5 U.S.C. § 553. At the same time, however, the Coast Guard also proposes to include in both Subpart C and Subpart D of the proposed regulations provisions requiring that "the Coast Guard shall . . . extend the initial compliance date" for the Phase Two standards if it "cannot make a determination" that the Phase Two standards will be achievable by the compliance deadline. 33 C.F.R. §§ 151.1511(c)(2), 151.2030(c)(2) (proposed). These provisions would embed within the practicability review a presumption in favor of extending the Phase Two compliance deadlines.

Unless the rules more clearly define the practicability review process and establish a hard deadline for Phase Two compliance, they will not create a sufficiently strong incentive to drive development and implementation of the technology necessary to meet the Phase Two standards. The proposed rule should establish that the Coast Guard will not extend the Phase Two compliance deadline unless it is able to establish through a future APA notice-and-comment rulemaking that such an extension is necessary to allow for practicable implementation of the Phase Two standards.

Pursuant to this comment, we urge the Coast Guard to delete the proposed subsections 33 C.F.R. §§ 151.1511(c)(2) and 151.2030(c)(2). Deleting those two subsections would remove the presumption in favor of extending the Phase II deadlines without otherwise constraining the Coast Guard's discretion to conduct future rulemakings in connection with any practicability review.

e. Make the Scope of the Practicability Review Consistent with the Mandate of NISA. We urge the Coast Guard to revise the regulations to make clear that the practicability review will be consistent with the mandate of NISA. NISA requires that the regulations “ensure to the maximum extent practicable that aquatic nuisance species are not discharged into waters of the United States from vessels.” 16 U.S.C. 4711(c)(2)(A). Courts have held that “the phrase ‘to the maximum extent practicable’ [. . .] ‘imposes a clear duty on the agency to fulfill the statutory command to the extent that it is feasible or possible.’” *Biodiversity Legal Found. v. Babbitt*, 146 F.3d 1249, 1254 (10th Cir. 1998) (quoting *Fund for Animals v. Babbitt*, 903 F. Supp. 96, 107 (D.D.C. 1995)); *see also Wyoming v. United States*, 279 F.3d 1214, 1237 (10th Cir. 2002) (“[T]o the ‘extent’ or ‘maximum extent practicable’ . . . undoubtedly places limits on the agency’s discretion.”).

Accordingly, the practicability review must be limited to the factors identified by NISA. The Coast Guard's consideration of what technology or practices will reduce vessels' discharges of invasive species “to the maximum extent practicable” must be in furtherance of NISA's zero discharge standard for invasive species, 16 U.S.C. § 4711(c)(1) and (2)(A), and consistent with NISA's express requirement that the Coast Guard's regulations “be based on the best scientific information available.” 16 U.S.C. § 4711(c)(2)(I). NISA also requires the Coast Guard to “take into consideration” other specified factors, including “(i) vessel types; (ii) variations in the characteristics of point of origin and receiving water bodies; (iii) variations in the ecological conditions of waters and coastal areas of the United States; and (iv) different operating conditions.” 16 U.S.C § 4711(c)(2)(H). The Coast Guard should focus only on the factors that are expressly authorized by NISA in making a determination of practicability. We urge the Coast Guard to adopt a definition of “to the maximum extent practicable” that will limit the practicability review to these statutorily defined factors.

Extending the practicability review to areas beyond technological feasibility, such as the implementation of testing protocols or the capability of vendors to make or install systems is inconsistent with, and is not supported by, NISA. We therefore urge the Coast Guard to delete the subparagraphs of the proposed regulations that apply the practicability review to testing

protocols (33 CFR § 151.1511(c)(2)(ii)²⁵ and 151.2015(c)(1)(ii)), and revise the preamble so that the practicability review will be consistent with the mandate of NISA.

f. *Coordinate and Consolidate Review with that of EPA.* Given that the CWA also applies to ballast water discharges,²⁶ it does not make sense for the Coast Guard to create a separate review process for ballast water discharge standards that is any less protective of the Great Lakes and other waters of the United States than the level of protection required by the CWA, or that unnecessarily creates complications and differences between the Coast Guard's and EPA's programs. Rather, the Coast Guard should make clear in any final rule that the agency will conduct its NISA practicability review in direct coordination with EPA. Further, the Coast Guard should make clear that it will assist EPA in enforcement of any limitations on ballast water discharge required by the CWA, including any limitations on discharge of ballast water that are more stringent than those that would be required under the Coast Guard's NISA practicability review.

The CWA requires EPA to ensure that ballast water discharges meet both technology-based effluent limitations based on the best available technology, 33 U.S.C. § 1311(b)(1)(A); 40 C.F.R. § 122.44(a)(1), and water quality based effluent limitations that are sufficient to protect existing and designated uses and otherwise not cause or contribute to violations of water quality standards, 33 U.S.C. § 1311(b)(1)(A); 40 C.F.R. § 122.44(d).²⁷ The water quality-based effluent limitations must be sufficient to protect water quality, without regard to technological feasibility or cost. 33 U.S.C. §§ 1341(a)(1), 1341(d); *see also Defenders of Wildlife v. Browner*, 191 F.3d 1159, 1163 (9th Cir. 1999) (noting that, under CWA, permitting authority “is under specific obligation to require that level of effluent control which is needed to implement existing water quality standards *without regard to the limits of practicability*”) (emphasis added) (internal citations omitted); *In re City of Moscow, Idaho*, 10 E.A.D. 135, NPDES Appeal 00-10, 2001 WL 988721, at *24 (E.A.B. July 27, 2001) (“[S]ection 301(b)(1)(C) of the CWA requires unequivocal compliance with applicable water quality standards, and does not recognize an exception for cost or technological infeasibility.”).

The only way that EPA can satisfy the CWA's requirement that the Great Lakes and other waters of the United States be fully protected, without regard to technological feasibility or cost, is to require all vessels to comply with the Phase Two standards in the Coast Guard's proposed rule according to a hard deadline for compliance, such as the January 1, 2016, deadline that we propose above.

3. Regulating Lakers

²⁵ We note our recommendation to delete proposed subsection 33 CFR § 151.1511(c)(2) in its entirety in section d.

²⁶ *Northwest Environmental Advocates v. U.S. EPA*, 537 F.3d 1006, 1025 (9th Cir. 2008) (finding “congressional intent to address the serious national problem of ballast water discharges of invasive species, and to do so on multiple, non-exclusive fronts,” including the CWA).

²⁷ The current VGP does not live up to the CWA's requirements. Because of EPA's failure to require either kind of limitation in the VGP, the Natural Resources Defense Council and the National Wildlife Federation, along with other environmental groups, are currently challenging the VGP in the U.S. Court of Appeals for the District of Columbia Circuit. The cases have been consolidated under the name *Lake Carriers Ass'n v. EPA*, Case No. 09-1001 (D.C. Cir.).

Given NISA’s “zero discharge” standard, vessels that operate exclusively within the Great Lakes and St. Lawrence River (“lakers”) should be regulated to the same extent as ocean-going vessels. We strongly support the applicability of the proposed rule to lakers, as being required by NISA.

²⁸ Although lakers may not be the primary sources of aquatic invasive species, they nonetheless contribute significantly to the spread of such species within the Great Lakes.²⁹

a. *Reporting and Recordkeeping Requirements for Vessels Operating Exclusively in One Captain of the Port Zone.* We support Subpart D’s regulation of “lakers,” including vessels operating exclusively within one Captain of the Port Zone. However, we oppose any exemption of vessels operating exclusively within a Captain of the Port Zone from reporting and recordkeeping requirements, regardless of their lack of use of on-board technology.

b. *Support for Regulation of Lakers.* Ballast water transfers are the dominant transport vector for invasive species, and lakers transfer a much greater volume of ballast water annually than ocean-going vessels.³⁰ Roughly 90% of the commercial shipping operations in the Great Lakes area are domestic, and lakers account for over 95% of the volume of ballast water transferred.³¹ Thus, although lakers may pose no danger of primary infestation – that is, direct infestation by nonindigenous species, they disperse invasive species wider and faster than those species could have spread on their own.³² Regulation of lakers is therefore required to contain the spread of the invasive species already present.³³

Lakers are especially suited to transport invasive species for two reasons. First, they move the water over relatively short distances and thus do not keep it in their ballast tanks for a long time, leading to a high survival rate for the organisms inside.³⁴ Secondly, empirical evidence shows that 30% of the ballast water for lakers is loaded in Detroit, Nanticoke (Ontario), Indiana Harbor and Cleveland, while most of it (56%) is discharged in Superior, Duluth, Two Harbors, Stoneport and Calcite ports.³⁵ This leads to a conclusion that a lot of ballast water transfer goes upstream, transporting invasive species at a rate far greater than they could achieve on their own.³⁶

A report by the Canadian government shows that lakers could serve as a vector for primary introduction of non-indigenous species to ports on the Great Lakes by moving ballast water sourced from ports on the St. Lawrence River, if taxa native to ports on the St. Lawrence River are non-indigenous to the Great Lakes, or if ports on the St. Lawrence River serve as sites for the

²⁸ See 16 U.S.C. § 4711(c)(1), (2)(A).

²⁹ See Michigan Department of Environmental Quality (MDEQ), Comments Received on the Draft Section 401 Water Quality Certification (Dec. 8, 2008), available at http://www.michigan.gov/documents/deq/wb-swias-401cert-response_258951_7.pdf (Response to Comment 2); Rup et al., *Domestic Ballast Operations on the Great Lakes: Potential Importance of Lakers as a Vector for Introduction and Spread of Nonindigenous Species*, Can. J. of Fisheries and Aquatic Sciences (accepted for publication on 16 Oct. 2009) at 9.

³⁰ See Rup, *supra* note 14, at 2.

³¹ *Id.* at 7.

³² *Id.* at 8.

³³ See generally Brief of Appellant NWF, *NWF v. Chester*, No. 08-1652-AA (Mich. 30th Cir. Ct., filed 2009), available at http://online.nwf.org/site/DocServer/Brief_of_Appellant_NWF_05-08-2009.pdf?docID=9461.

³⁴ See Rup, *supra*, note 14, at 8 (With many intra-regional transits taking less than 24 hours, and typical inter-regional sailing times of 3–4 days, plankton survival in ballast tanks of lakers is expected to be very high).

³⁵ *Id.* at 8 and attached tables.

³⁶ *Id.*

primary introduction and establishment of taxa that are non-indigenous to both regions.³⁷ Just as importantly, while only 1% of lakers transport water from St. Lawrence River ports to Great Lakes, the absolute volume is equivalent to the contribution by coastal and transoceanic vessels combined.³⁸

Two case studies help illustrate the point. Zebra mussels were introduced into the Great Lakes area in 1988, when it colonized parts of Lake St. Clair; in under 10 years it spread to all five Great Lakes and into the basins of Ohio, Hudson, Tennessee and Mississippi rivers.³⁹ Zebra mussels have no capacity to move upstream, so their spread across the Great Lakes was facilitated by the commercial and recreational boating within the area.⁴⁰ Ecological damage aside, the economic damage from this species of mussels is projected to be in billions of dollars.⁴¹

The second case concerns the spread of Viral Hemorrhagic Septicemia (“VHS”), an infectious fish disease that was diagnosed for the first time in 2003 in the Lake St. Clair area. It spread from there to all the lakes but Lake Superior and it is expected to arrive there shortly as well.⁴² Unlike mussels, fish that carry the VHS can move upstream, but ballast water discharge is one of the key vectors of viral transmission.⁴³ With no “laker” regulation, the virus will probably spread through Lake Superior within the next few years and possibly move into other waterways of the country.⁴⁴

Issuing new regulations for ocean-going vessels and restricting the influx of new non-indigenous species is therefore only part of the solution. The regulations also need to address the invasive species already in the Great Lakes area and that necessitates the regulation of lakers. The methods for treating ballast water may (or may not) be different for “lakers” than for ocean-going vessels, but treatment is required to fully effectuate the goal of protecting the Great Lakes and to ensure that the spread of invasive species is halted.

4. Coast Guard BWMS Approval Process and Independent Testing Facilities

Under the proposed rule, the Coast Guard would evaluate and approve individual ballast water management systems (BWMS) before they could be installed on vessels. We urge the Coast Guard to minimize delays in technology approval by streamlining the review process to the

³⁷ S.A. Bailey, Fisheries and Oceans Canada, *Report on Domestic Ballast Water Study – Phase 2* (Fiscal Year 2008-2009) at 7, available at <http://www.piersystem.com/posted/443/Appendix3FisheriesandOceansCanadaRoleofDomesticBallastWaterStudyPhase2.355926.pdf>.

³⁸ *Id.*

³⁹ Great Lakes Science Center, Invasive Invertebrates, http://www.glsc.usgs.gov/main.php?content=research_invasive_zebramussel&title=Invasive+Invertebrates0&menu=research_invasive_invertebrates.

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² Gary E. Whelan, Fish Production Manager, Michigan Department of Natural Resources, *Viral Hemorrhagic Septicemia (VHS) Briefing Paper* (February 6, 2009) at 5-8, available at http://www.michigan.gov/documents/dnr/Viral-Hemorrhagic-Septicemia-Fact-Sheet-11-9-2006_178081_7.pdf.

⁴³ *Id.* at 4.

⁴⁴ See generally *id.*

extent possible while at the same time maintaining the integrity of the program. More specifically, we recommend the following:

a. *Greater Investment in and Reliance upon Independent Labs.* As proposed, independent laboratories (“ILs”) will play a central and critical role in the testing and certification of specific technologies as meeting the ballast water discharge standards (“BWDS”). We encourage the Coast Guard to define methods of testing that are clear, practicable and effective at assessing ballast treatment performance in advance of a type approval and establish and enforce rigorous audits of the ILs to ensure the integrity of the process. However, as a corollary, the Coast Guard should rely on the certification results provided by the ILs as presumptively acceptable without substantial additional review by the Coast Guard itself.

b. *Make IL Data Publicly Available.* Consistent with the approach described above, the Coast Guard should make the IL test data and final “Test Report” generated in the assessment process electronically available to the public immediately after they have been submitted to the agency.

c. *Streamline Process for System-Specific Environmental Impact Analyses.* The proposed rule indicates that, upon receipt of an “application” for approval of a ballast water management system, the Coast Guard would then commence an independent evaluation, including environmental impact analyses under the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA) for each individual system (see proposed rule § 162.060-10(e)). We are concerned that the Coast Guard may inordinately delay regulatory determinations if it fails to conduct these critical reviews in a timely fashion. To assist an efficient review process, we urge the Coast Guard to incorporate into its rule:

- 1) A requirement that the Coast Guard commence the NEPA and ESA review process as early as possible, for example, upon the submittal of the “letter of intent” called for in § 162.060-10(a).
- 2) Provision for a publicly available electronic data base of NEPA review information that can be accessed and utilized by the Coast Guard and other applicants in subsequent reviews as appropriate to avoid duplicating prior efforts and speed the review process.

d. *Funding and Infrastructure Needs.* One bottleneck that may impede the rapid implementation of the rule relates to the review capacity and level of resources available to the federal agencies and to the independent land-based and ship-board testing facilities. The rule should incorporate adequate testing and application fees to support these activities within the federal agencies and at the independent laboratories.

e. *Improved Independent Laboratory Testing Protocols.* We also recommend the following revisions to the proposed testing program, to improve its efficiency and reliability in predicting effectiveness:

- 1) Land-based testing is far more readily controlled for experimental purposes than shipboard testing. At the same time, each test site (at freshwater, brackish, and ocean

salinities) will confront treatment systems with a distinct set of organisms and water chemistry. To assure that weaknesses of the treatment system associated with salinity and associated natural assemblages are revealed during the type approval process, we recommend that land-based testing should occur at three separate test sites and each type of salinity. Successful outcomes from the three land-based testing sites will remove much uncertainty associated with ultimate treatment performance on ships, and facilitate the Coast Guard's final decision-making process once the treatment system portfolio is complete. Meanwhile, shipboard testing should focus on operational parameters more than biological endpoints, and shortened to a 6 month period, so that the additional land-based tests do not add time to the approval process.

- 2) We strongly recommend that the Coast Guard revise its rule to assure land based testing will be predictive of actual performance.
 - a. Any treatment system approved for use in fresh water be tested at the land-based scale in a truly fresh water system, that is to say, water of 1 Practical Salinity Unit (PSU) or less. The current proposed test would potentially allow treatment systems tested in brackish water (3 PSU) to qualify for type approval for use in fresh water systems like the Great Lakes. This revision is important because the assemblages of organisms for brackish and truly fresh water are substantially different, as is the water chemistry that may be associated with interactions with active substances.
 - b. Land-based tests should employ primarily natural assemblages of organisms, with cultured organisms only providing a benchmark for intercalibration between test facilities. Accordingly, sequential fills of treatment and control tanks should not be allowed; only simultaneous filling should take place to assure comparability between the two test streams.
 - c. Finally, test facilities should have at least 100 times the BWDS organism concentrations in challenge water and 10 times the BWDS organism concentrations in control discharge water to assure adequate statistical power of the tests.
- 3) In addition, EPA and the Coast Guard should work together to assure that the environmental soundness evaluations under this rule supports necessary determinations by both agencies so that treatment developers need not undertake duplicative evaluations.
- 4) Protocols for testing biological and operational effectiveness and environmental soundness should be reviewed and revised annually, until a point is reached in which few revisions are being made. These reviews and revisions should be based upon IL testing experiences and a database, maintained by the USCG and EPA, that correlates treatment system performance in type approval testing with treatment system performance in actual ship board use based on regulatory spot checking outcomes.

5. Whole-Ship Approach

NISA requires that the Coast Guard address introduction of invasive species from not only ballast water, but also from “ship operations *other than ballast water discharge . . .*”⁴⁵ The proposed regulations are not specific enough with regard to non-ballast water management requirements. For example, the provision for removing organisms from hulls, piping, etc. states that the organisms must be removed “on a regular basis.”⁴⁶ The only other “whole-ship” provision requires “rinsing” anchors and anchor chains.⁴⁷

We request that the regulations require the Coast Guard to study the impacts of invasive species introduced in ways other than ballast water, such as anchors, anchor chains, and hulls, as well as effective methods to reduce or eliminate the introduction of invasive species through these vectors. We request the regulations provide that, after the study is completed, the Coast Guard amend the regulations accordingly to achieve full protection from invasive species from the whole-ship vector.

6. Enforcement

To ensure that the requirements of both NISA and the CWA are fully and effectively implemented, the Coast Guard should establish a clear and transparent process for sharing monitoring and enforcement information with both EPA and the public. NISA encourages the Coast Guard to use the expertise, facilities, members or personnel of agencies that have routine contact with vessels.⁴⁸ Public information on discharges will “democratize” enforcement, allowing EPA, States, and private entities and citizens to participate and reducing the Coast Guard’s own enforcement burden. An example of a transparent and timely communication of monitoring information is seen in the binational publication “Great Lakes Ballast Water Management Report.” The report was compiled by the Great Lakes Seaway Ballast Water Working Group, comprised of representatives of the United States Coast Guard, the U.S. Saint Lawrence Seaway Development Corporation, Transport Canada - Marine Safety, and the Canadian St. Lawrence Seaway Management Corporation. The report is released annually and provides a detailed snapshot of enforcement and monitoring activities for vessels entering the St. Lawrence Seaway. For example, the 2008 report details a notable increase in the number of ballast tank inspections of oceangoing commercial ships entering the Great Lakes St. Lawrence Seaway System from outside U.S. or Canadian waters, as well as an improvement over the prior year’s inspection program statistics. The report also describes the alternate management actions that the few ships with non-compliant ballast tanks were required to undertake.⁴⁹

We also urge that a rigorous enforcement, inspection and monitoring program be developed to determine compliance with these new regulations. Such a program would include regular inspection and publication of monitoring reports, similar to that currently being performed for all vessels entering the St. Lawrence Seaway by the binational Great Lakes Seaway Ballast Water Working Group. A program should also include regular, unscheduled inspection of actual

⁴⁵ 16 U.S.C. § 4711(c)(2)(E)(i)(emphasis added).

⁴⁶ 33 C.F.R. §§ 151.2050(f)(proposed).

⁴⁷ 33 C.F.R. §§ 151.2050(e)(proposed).

⁴⁸ 16 U.S.C. § 4711(h)

⁴⁹ 2008 Summary of Great Lakes Seaway Ballast Water Working Group March 2009 http://www.greatlakes-seaway.com/en/pdf/2008_BW_Rpt_EN.pdf

performance of technology, including analyzing substantial water samples, to ensure complete compliance. Such a monitoring and inspection program could be incorporated into the Port State Control Program currently implemented by the U.S. Coast Guard.

Finally, it is apparent that implementation of ballast water treatment and technologies will require inspection to ensure water quality of the receiving water body is not impacted by the treated ballast water biocide residuals, treatment byproducts, or other possibly toxic discharges. We request information on how the Coast Guard and the EPA plan to enforce water quality discharge requirements that ensure treated ballast water does not adversely impact the receiving water body.

Summary

Aquatic invasive species are the biggest threat facing Great Lakes – St. Lawrence River biodiversity and an invasion to the Great Lakes impacts freshwaters across North America. A strong federal program is urgently needed. The new rule being proposed by the U.S. Coast Guard helps begin putting one in place. However, we believe improvements must be made to the proposed approach. We urge the Coast Guard to accept our recommendations, which are offered in the spirit of establishing the strongest possible protections for the Great Lakes and St. Lawrence River. Please do not hesitate to contact any of the undersigned organizational representatives if you have questions or need clarification on our position.

Sincerely,

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In addition to the joint submission, we have attached the following technical comments and recommendations, where **bold** is suggested new language and ~~striketrough~~ is suggested deleted language:

1. 151.2005 Definition of Empty/refill exchange:

“Masters or operators ~~should~~ **must** pump out as close to 100 percent of the ballast water as is safe to do so.”

2. 151.2020 Vessels in innocent passage:

“A foreign vessel . . . or not navigating ~~the internal waters of the U.S.~~ **in the EEZ**) does not fall within the applicability of this subpart.” “Internal waters” is not a defined term.

3. 151.2040(a) Discharge of ballast water in extraordinary circumstances:

“The master . . . of a vessel that cannot practicably meet the requirements of section 151.2025(a)(3) of this subpart--either because its voyage does not take it into waters 200 nautical miles or greater from any shore for a sufficient length of time and the vessel retains **all of its** ballast on board”

4. 151.2040 Discharge of ballast water in extraordinary circumstances:

“A vessel that cannot practicably meet the requirements of section 151.2025(a)(1) of this subpart because its approved BWMS is inoperable **must** employ one of the other ballast water management practices” The rule should state that failure to use the approved BWMS, if required to do so under the implementation schedule, is a violation of the rule, even though the “other” practice is used.

5. 151.2045 Safety exception:

“vessel design limitations” should not be considered an “extraordinary condition.”

6. 151.2050(c) Additional requirements:

“Sediments ~~should~~ **must** be disposed of in accordance with local, State, and Federal regulations.”

8. Appendix to Subpart D of Part 151—Ballast Water Reporting Form and Instructions for Ballast Water Reporting Form:

Introductory Paragraph: “Amendments ~~should~~ **must** be submitted if there are any differences”