

**Alliance for the Great Lakes \***  
**Clean Water Action – Minnesota \***  
**Great Lakes Committee of the Izaak Walton League of America \***  
**Minnesota Center for Environmental Advocacy \***  
**Minnesota Conservation Federation \***  
**Minnesota Division – Izaak Walton League of America \***  
**Minnesota Trout Unlimited \***  
**National Wildlife Federation \***  
**Natural Resources Defense Council**

May 26, 2012

VIA EMAIL

Ms. Kate Frantz  
SP-5  
Industrial Division  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194  
Email: [kate.frantz@state.mn.us](mailto:kate.frantz@state.mn.us)

Subject: Draft Section 401 Conditional Water Quality Certification of the U.S. Environmental Protection Agency's Proposed 2013 National Pollutant Discharge Elimination System General Permit for Commercial and Large Recreational Vessels

Dear Ms. Frantz,

The undersigned are writing to comment on the Minnesota Pollution Control Agency's ("MPCA's") draft Section 401 Water Quality Certification of the U.S. Environmental Protection Agency's ("EPA's") proposed 2013 National Pollutant Discharge Elimination System General Permit for Commercial and Large Recreational Vessels ("VGP2"). Neither VGP2 nor MPCA's draft certification are sufficient to assure that vessel ballast water discharges will comply with Minnesota water quality standards, because they will not prevent the introduction or spread of new aquatic non-indigenous species or the establishment or spread of new aquatic invasive species ("AIS"). Accordingly, MPCA must revise the draft certification.

**Statements of Interest**

The Alliance for the Great Lakes is the oldest citizens' Great Lakes organization in North America, with tens of thousands of members and supporters throughout the Great Lakes basin. Its mission is to conserve and restore the world's largest freshwater resources using policy, education and local efforts, ensuring a healthy Great Lakes and clean water for generations of people and wildlife. Since 1970, the Alliance has advocated for effective measures to prevent

the introduction and spread of AIS in the Great Lakes basin. We are concerned that the draft certification will result in the introduction or spread of new AIS, which will impact the use and enjoyment of the Great Lakes and Minnesota's waters.

Clean Water Action is a one million member organization of diverse people and groups joined together to protect our environment, health, economic well-being and community quality of life. Our goals include clean, safe and affordable water; prevention of health threatening pollution; creation of environmentally safe jobs and businesses; and empowerment of people to make democracy work. Clean Water Action organizes strong grassroots groups and coalitions and campaigns to elect environmental candidates and solve environmental and community problems. Invasive species are crowding out our Great Lakes fish and wildlife. Clean Water Action is working to protect the Great Lakes we love and clean them up for future generations to enjoy.

The Great Lakes Committee of the Izaak Walton League of America ("IWLA") represents IWLA members in states across the Great Lakes Basin. We have been strongly advocating for the need for Ballast Water Standards and permitting to eliminate the threat of AIS in the Great Lakes as well as Emergency Treatment System development for ballast water treatment that fails to comply with existing and future standards or other emergencies that occur.

The Minnesota Center for Environmental Advocacy ("MCEA") is a Minnesota-based non-profit environmental organization whose mission is to use law, science, and research to protect and enhance Minnesota's natural resources, wildlife and the health of its people. One of MCEA's five program areas is wildlife and natural resources. As part of that program, MCEA has a deep interest in issues related to ballast water and preventing the significant threats posed by introducing and spreading AIS to the Minnesota waters of Lake Superior.

The Minnesota Conservation Federation ("MCF") is a nonprofit corporation organized and existing under the laws of the State of Minnesota. MCF has approximately forty organizational members and five hundred individual members. MCF's purpose is to further the conservation of natural and recreational resources in Minnesota. MCF has worked and advocated for the protection of water quality from the introduction and spread of AIS in discharges of ballast water by ships. MCF's members use and derive aesthetic enjoyment from wildlife and natural resources in Minnesota, including wetlands, streams, rivers, and lakes. MCF members therefore have a substantial interest in maintaining and protecting the quality of Minnesota's waters. MCF members are concerned that the draft certification will result in the introduction or spread of new aquatic non-indigenous species or the establishment or spread of new AIS, which will interfere with or eliminate their use and enjoyment of Minnesota's waters.

The Minnesota Division – Izaak Walton League of America is a collection of seventeen chapters across the state which have strongly advocated for enforcement of our laws to protect our Minnesota waters and for ballast water standards that will eliminate AIS introductions in ballast water. We are seeing the degradation to inland lakes from zebra mussels as well as the economic impacts for residents, businesses and recreational boaters.

Minnesota Trout Unlimited is a conservation organization working to protect, restore, and sustain Minnesota's coldwater fisheries and their watersheds, including Lake Superior. Our

members fish Lake Superior and its numerous tributaries, as well as Minnesota waters statewide, and have a strong interest in protecting them from AIS. We have long been at the forefront of efforts to protect and restore Lake Superior fisheries and North Shore watersheds, including by advocating for adequate regulation of ballast water discharges from all Great Lakes vessels to prevent the introduction and spread of new AIS into Minnesota waters.

The National Wildlife Federation (“NWF”) is a national, non-profit organization with approximately one million members nationwide and tens of thousands of members in Minnesota. NWF’s mission is to maintain and enhance the quality of the nation’s waters. NWF has strongly advocated for effective measures to prevent the introduction and spread of new aquatic non-indigenous species and the establishment and spread of new AIS in the Great Lakes basin. NWF members use Minnesota waters and the Great Lakes for recreational uses and aesthetic enjoyment, including, but not limited to, fishing, boating, and swimming. NWF members therefore have a substantial interest in maintaining and protecting the quality of Minnesota’s waters. NWF members are concerned that the draft certification will result in the introduction or spread of new aquatic non-indigenous species or the establishment or spread of new AIS, which will interfere with or eliminate their use and enjoyment of Minnesota’s waters.

The Natural Resources Defense Council (“NRDC”) is a national not-for-profit membership corporation, incorporated in the State of New York, which has over 350,000 members nationwide. NRDC’s mission is to safeguard the Earth: its people, its plants and animals, and the natural systems on which all life depends. NRDC’s board and staff of lawyers, scientists, and other environmental specialists have strongly advocated for effective measures to prevent the introduction and establishment of aquatic non-indigenous species in the Great Lakes basin. Members of NRDC use Minnesota waters and the Great Lakes for recreational uses and aesthetic enjoyment, including, but not limited to, fishing, boating, and swimming. Members of NRDC have a substantial interest in maintaining and protecting the quality of Minnesota’s waters. Members of NRDC are concerned that the draft certification will result in the invasion or spread of aquatic non-indigenous species, which will interfere with or eliminate their use and enjoyment of Minnesota waters.

### **Statement of Action MPCA Should Take**

MPCA should revise the draft certification as follows:

- Certify VGP2 only if MPCA can certify that the discharges it authorizes will comply with Minnesota water quality standards and that MPCA’s certification conditions assure that dischargers will comply with Minnesota water quality standards. MPCA’s draft certification that its conditions provide “reasonable assurance” of compliance with Minnesota water quality standards is insufficient to satisfy the requirements of § 401 of the Clean Water Act (“CWA”).<sup>1</sup>

---

<sup>1</sup> See Draft Letter from David Richfield, MPCA, to Tinka G. Hyde, U.S. EPA (May 7, 2012) (“Draft Certification”), at p. 2, ¶ 1 (Ex. 1).

- Revise Condition #2 by adding a numeric water quality-based effluent limitation (“WQBEL”) for AIS that will prevent the introduction or spread of new aquatic non-indigenous species and the establishment or spread of new AIS.
- Revise Conditions ##2 and 6 by adding a requirement that all vessels meet the WQBEL, including oceangoing vessels, vessels operating exclusively within the Great Lakes (“lakers”), vessels travelling short distances, vessels that can carry no more than 8 cubic meters of ballast water, and unmanned barges.
- Revise Conditions ##2 and 6 by adding a requirement that all vessels meet the WQBEL on or before the following deadlines:
  - New small<sup>2</sup> vessels (built on or after November 30, 2012): January 1, 2014
  - New large vessels (built on or after November 30, 2012): January 1, 2015
  - Existing vessels (built before November 30, 2012): January 1, 2016
- Revise Condition #7 by imposing monitoring and reporting requirements that will make compliance with the WQBEL practically enforceable.

### **Reasons for Revising the Draft Certification**

As we will explain in Parts III and IV of these comments, below, neither VGP2 nor MPCA’s draft certification will assure compliance with Minnesota water quality standards. Therefore, unless MPCA revises the draft certification as detailed above, VGP2 will permit the continued discharge of aquatic organisms to Minnesota waters, making the introduction or spread of new aquatic non-indigenous species and the establishment or spread of new AIS infestations inevitable.

### **I. AQUATIC INVASIVE SPECIES IMPAIR OR THREATEN TO IMPAIR MINNESOTA WATER QUALITY STANDARDS**

AIS are a persistent and unique problem in coastal and inland waters, costing the United States billions of dollars annually.<sup>3</sup> It is estimated that ship-borne AIS cost the Great Lakes Region alone at least \$200 million dollars every year.<sup>4</sup> Ballast water released from ocean vessels is the recognized vector for 65% of all invasions recorded in the Great Lakes since the opening of the St. Lawrence Seaway in 1959.<sup>5</sup>

Although lakers may not be responsible for *introducing* invasive species to the Great Lakes region, their potential for facilitating the *spread* of invasive species cannot be ignored.

---

<sup>2</sup> “Small” vessels are those with a ballast water capacity less than or equal to 5,000 metric tons. “Large” vessels are those with a ballast water capacity greater than 5,000 metric tons.

<sup>3</sup> Nat’l Aquatic Nuisance Species Task Force, *Aquatic Nuisance Species Impacts*, ANS TASK FORCE.GOV, [http://www.anstaskforce.gov/more\\_impacts.php](http://www.anstaskforce.gov/more_impacts.php) (last visited Jan. 31, 2012) (Ex. 2).

<sup>4</sup> U.S. Dep’t of Agric., *Annual Losses to Great Lakes Region by Ship-borne Invasive Species at least \$200 Million*, NATIONAL INVASIVE SPECIES INFORMATION CENTER (July 2008), [http://www.glu.org/sites/default/files/lodge\\_factsheet.pdf](http://www.glu.org/sites/default/files/lodge_factsheet.pdf) (Ex. 3).

<sup>5</sup> Anthony Ricciardi, *Patterns of invasion in the Laurentian Great Lakes in relation to changes in vector activity*, 12 DIVERSITY AND DISTRIB. 425 (2006) (Ex. 4).

Domestic ballast water transfers, such as those performed by lakers, “may contribute to non-indigenous species introduction and are likely the most important ballast-mediated pathway of secondary spread within the Great Lakes.”<sup>6</sup> As MPCA and the Minnesota Department of Natural Resources pointed out in comments on VGP2, “There are numerous examples of aquatic invasive species (AIS) that are present in Lake Michigan, Huron and Erie that are not yet established in Lake Superior. For these species, the most likely dispersal mechanism is ballast water.”<sup>7</sup>

AIS pose several dangers to aquatic ecosystems, including: outcompeting native species, threatening endangered species, damaging habitat, changing food webs, and altering the chemical and physical aquatic environment. Invasive species are thought to have been involved in 70% of this century’s extinctions of native aquatic species, and 42% of current endangered species are impacted significantly by invasive species.<sup>8</sup>

The Minnesota Department of Natural Resources has designated a long list of water bodies as infested by AIS.<sup>9</sup> The designated water bodies include Lake Superior and the St. Louis River, among many others, and the species causing the designations include the Zebra mussel, Eurasian ruffe, New Zealand mudsnail, round goby, spiny water flea, and white perch, among others.<sup>10</sup>

#### **A. Aquatic invasive species have harmed existing and designated uses and violate water quality criteria**

AIS have severely impaired designated and existing uses of Minnesota waters and violated water quality criteria. Designated uses include the propagation of fish and wildlife, recreation, aesthetic enjoyment, navigation, and the supply of water to the public, agriculture, and industry.<sup>11</sup> Existing uses are those that were in existence before January 1, 1988.<sup>12</sup>

##### **1. Zebra Mussel**

The Zebra mussel is found in several water bodies within Minnesota borders: in parts of Lake Superior, in nineteen other lakes, and in parts of the St. Croix River, Pelican Brook, and the Zumbro River.<sup>13</sup> The invasive species was probably introduced into the Great Lakes through the

---

<sup>6</sup> Michael P. Rup et al., *Domestic ballast operations on the Great Lakes: potential importance of Lakers as a vector for introduction and spread of nonindigenous species*, 67 CAN. J. FISH. AQUATIC SCI. 256, 258 (2010) [hereinafter *Potential Importance of Lakers as a Vector*] (Ex. 6).

<sup>7</sup> Letter from Rebecca J. Flood, Assistant Commissioner, MPCA, & Mary P. McConnell, Assistant Commissioner, Minnesota Department of Natural Resources, to Ryan Albert, Environmental Scientist, Water Permits Division, U.S. EPA 1 (Feb. 21, 2012).

<sup>8</sup> U.S. Env’tl. Prot. Agency, *Invasive Non-Native Species*, <http://www.epa.gov/owow/watershed/wacademy/acad2000/invasive.html> (last visited Apr. 2, 2012) (Ex. 7).

<sup>9</sup> MDNR, *Designation of Infested Waters* (Apr. 30, 2012), available at [http://files.dnr.state.mn.us/eco/invasives/infested\\_waters.pdf](http://files.dnr.state.mn.us/eco/invasives/infested_waters.pdf) (last visited May 17, 2012) (Ex. 8).

<sup>10</sup> *Id.*

<sup>11</sup> Minn. R. 7050.0140.

<sup>12</sup> Minn. R. 7050.0185, Subp. 2.D.

<sup>13</sup> Susan Balgie et al., *Invasive Species Program*, MN Dep’t of Natural Resources, *Invasive Species of Aquatic Plants and Wild Animals in Minnesota: Annual Report 2010 1* (2011), available at

discharge of ballast water.<sup>14</sup> These mussels “can create numerous problems, such as clogging intake pipes for industry or killing native mussels.”<sup>15</sup> Large populations of the mussels may also “interfere in the aquatic food chain” by consuming too much algae and other tiny particles, thereby making these nutrient sources unavailable for other organisms.<sup>16</sup> Invasive mussels have also been reported on boats and residential water intake systems.<sup>17</sup> In addition, the shells “can cause cuts and scrapes if they grow large enough on rocks, swim rafts and ladders,” and “[a]nglers may lose tackle as the shells can cut fishing line.”<sup>18</sup>

These effects violate narrative criteria associated with several applicable Minnesota water quality classifications. Narrative criteria for Class 2 waters, which include Lake Superior, state that there shall be no significant changes in the species composition and that “the propagation ... of the fish and other biota normally present shall not be prevented or hindered by the discharge of ... wastes to the waters.”<sup>19</sup> Zebra mussels impair “species diversity and composition,” “feeding characteristics,” and “species abundance and condition” of aquatic invertebrates.<sup>20</sup> Native mussels, for example, may be killed directly by zebra mussels or indirectly through competition. In the Superior-Duluth Harbor, “[t]he bottom was completely covered with zebra mussels” and many of the native mussels were being killed due to zebra mussel infestations.<sup>21</sup>

Lake Superior is also designated a Class 5 water body, and accordingly the water quality “shall be such as ... to avoid any interference with navigation or damaging effects on property.”<sup>22</sup> These criteria are violated by the fouling of boating equipment and water intake systems by clumps of zebra mussels and the severing of fishing lines. Likewise, injuries from sharp mussel shells violate the applicable Class 2A requirement that water quality be adequate for aquatic recreation.<sup>23</sup>

## 2. Eurasian Ruffe

Ruffe is an invasive species of fish that was introduced to Lake Superior from ballast water discharged into the Duluth harbor around 1985, and has since spread to other areas in Lake

---

[http://files.dnr.state.mn.us/aboutdnr/reports/legislative/invasive\\_species\\_legislative\\_report\\_2010.pdf](http://files.dnr.state.mn.us/aboutdnr/reports/legislative/invasive_species_legislative_report_2010.pdf) [hereinafter 2010 Report] (Ex. 9).

<sup>14</sup> *Zebra Mussels Threaten Inland Waters: An Overview*, Minnesota Sea Grant, [http://www.seagrant.umn.edu/ais/zebramussels\\_threaten](http://www.seagrant.umn.edu/ais/zebramussels_threaten) (last visited Jan. 31, 2012) (Ex. 10).

<sup>15</sup> 2010 Report 110.

<sup>16</sup> Susan Balgie, et al., *Invasive Species Program*, MN Dep’t of Natural Resources, *Invasive Species of Aquatic Plants and Wild Animals in Minnesota: Annual Report 2009* 113 (2010), available at [http://files.dnr.state.mn.us/eco/invasives/annual\\_report\\_2009.pdf](http://files.dnr.state.mn.us/eco/invasives/annual_report_2009.pdf) [hereinafter 2009 Report] (Ex. 11).

<sup>17</sup> 2010 Report 113.

<sup>18</sup> *Zebra Mussel (Dreissena polymorpha)*, MN Dep’t of Natural Resources, <http://www.dnr.state.mn.us/invasives/aquaticanimals/zebramussel/index.html> (last visited Jan. 26, 2012) (Ex. 12).

<sup>19</sup> Minn. R. 7050.0150 subp. 3.

<sup>20</sup> See Minn. R. 7050.0150 subp. 6(A)-(C).

<sup>21</sup> Marie Zhuikov, *Major Zebra Mussel Infestation in Harbor Impacts Native Mussels, Boaters*, Seiche, Jan. 2001, [http://www.seagrant.umn.edu/newsletter/2001/01/major\\_zebra\\_mussel\\_infestation\\_in\\_harbor\\_impacts\\_native\\_mussels\\_boaters.html](http://www.seagrant.umn.edu/newsletter/2001/01/major_zebra_mussel_infestation_in_harbor_impacts_native_mussels_boaters.html) (Ex. 13).

<sup>22</sup> Minn. R. 7050.0224 subp. 3.

<sup>23</sup> Minn. R. 7050.0222 subp. 2.

Superior and to other Great Lakes.<sup>24</sup> The species is aggressive and can harm ecosystems and native commercial and sport fish populations by competing for food and habitat.<sup>25</sup> “Populations of yellow perch, emerald shiners, and other forage fish caught in survey trawls *have declined significantly* as numbers of ruffe have increased in the St. Louis River.”<sup>26</sup> Trawl samples show that “[b]y 1992, ruffe had become the most numerous fish in [the St. Louis River].”<sup>27</sup>

Therefore, in at least the St. Louis River (categorized as Classes 2B, 3B, 3C, 4A, 4B, 5, and 6), the ruffe is responsible for significant changes in the species composition and harm to the food web that supports commercial and sport fisheries.<sup>28</sup> These effects are prohibited by general Class 2 narrative standards.<sup>29</sup> They are also prohibited by narrative criteria specific to Class 2B.<sup>30</sup>

### 3. New Zealand Mudsnaill

This invasive species was brought to the Great Lakes in ballast water, and is currently found in and around Duluth Harbor and in the St. Louis River estuary.<sup>31</sup> New Zealand mudsnails “outcompete species that are important forage for native trout and other fishes and provide little nutrition to fish that eat them.”<sup>32</sup> They “have adapted so well in Western rivers that they have pushed out almost all of the native insects, snails, and other invertebrates that are important food for fish.”<sup>33</sup> The mudsnails can take over so quickly because they “breed asexually—essentially cloning themselves. Small populations can quickly explode.”<sup>34</sup>

Class 2A narrative standards state that the quality of the waters “shall be such to permit the propagation and maintenance of a healthy community of cold water sport or commercial fish

---

<sup>24</sup> *Eurasian Ruffe (Gymnocephalus cernuus)*, MN Sea Grant, <http://www.seagrant.umn.edu/ais/ruffe> (last visited Jan. 26, 2012) (Ex. 14).

<sup>25</sup> *Id.*

<sup>26</sup> *Ruffe (Gymnocephalus cernuus)*, MN Dep’t of Natural Resources, <http://www.dnr.state.mn.us/invasives/aquaticanimals/ruffe/index.html> (last visited Feb. 2, 2011) (emphasis added) (Ex. 15).

<sup>27</sup> *Superior Pursuit: Facts about the Greatest Great Lake*, MN Sea Grant, <http://www.seagrant.umn.edu/superior/facts> (last visited Jan. 26, 2012) (Ex. 16).

<sup>28</sup> Minn. R. 7050.0140, 7050.0470.

<sup>29</sup> Minn. R. 7050.0150 subp. 3 (“the normal fishery and lower aquatic biota upon which it is dependent and the use thereof shall not be seriously impaired or endangered [and] the species composition shall not be altered materially”).

<sup>30</sup> Minn. R. 7050.0222 subp. 4 (“The quality of Class 2B surface waters shall be such as to permit the propagation and maintenance of a healthy community of cool or warm water sport or commercial fish and associated aquatic life, and their habitats.”).

<sup>31</sup> *New Zealand Mudsnaill (Potamopyrgus antipodarum)*, MN Dep’t of Natural Resources, [http://www.dnr.state.mn.us/invasives/aquaticanimals/nz\\_mudsnaill/index.html](http://www.dnr.state.mn.us/invasives/aquaticanimals/nz_mudsnaill/index.html) (last visited Jan. 26, 2012) (Ex. 17); MN Collection Information for the New Zealand Mudsnaill, U.S. Geological Survey, <http://nas.er.usgs.gov/queries/CollectionInfo.aspx?SpeciesID=1008&State=MN> (last visited Jan. 26, 2012) (Ex. 18).

<sup>32</sup> *New Zealand Mudsnaill (Potamopyrgus antipodarum)*, MN Dep’t of Natural Resources, [http://www.dnr.state.mn.us/invasives/aquaticanimals/nz\\_mudsnaill/index.html](http://www.dnr.state.mn.us/invasives/aquaticanimals/nz_mudsnaill/index.html) (last visited Jan. 26, 2012) (Ex. 19).

<sup>33</sup> *New Zealand Mudsnaills Found in Duluth-Superior Harbor*, The Seiche, Jun. 2006, [http://www.seagrant.umn.edu/ais/newzealand\\_mudsnaill](http://www.seagrant.umn.edu/ais/newzealand_mudsnaill) (last visited May 25, 2012) (Ex. 20).

<sup>34</sup> Tiny Snail, Big Trouble, US EPA, [http://www.epa.gov/ord/gems/scinews\\_nzmudsnaill.htm](http://www.epa.gov/ord/gems/scinews_nzmudsnaill.htm) (last updated Feb. 10, 2011) (Ex. 21).

and associated aquatic life, and their habitats.”<sup>35</sup> The mudsnail violates this standard because it disrupts the food chain for trout and other fish.

#### 4. Round Goby

The round goby, which entered the Great Lakes through the discharge of ballast water, is another disruptive invasive species found in Minnesota waters.<sup>36</sup> This “aggressive [and] pugnacious” species “can displace native fish, eat their eggs and young, take over optimal habitat, spawn multiple times a season, and survive in poor quality water.”<sup>37</sup> Since it was discovered in 1995, the round goby’s “population has steadily increased and spread within the [Duluth-Superior] Harbor.”<sup>38</sup> “The round goby has documented negative impacts on mottled sculpin reproduction... and suspected impacts on other native bottom dwelling fish, such as darters and sturgeon.”<sup>39</sup> This violates the narrative criteria applicable to Lake Superior, whose “species composition shall not be altered materially,” and whose “normal fishery ... shall not be seriously impaired or endangered.”<sup>40</sup>

#### 5. Spiny Waterflea

The spiny waterflea was also introduced to the Great Lakes through ballast water. The invasive species is now found across the Great Lakes, as well as in some inland water bodies in Minnesota.<sup>41</sup> The spiny waterflea disrupts aquatic ecosystems by consuming large quantities of zooplankton and can greatly reduce the amount of zooplankton available for native fish to eat, to the point of eliminating types of native zooplankton from water bodies.<sup>42</sup>

The spiny waterflea can also interfere with fishing. Spiny waterfleas “collect in masses on fishing lines and downrigger cables .... These masses can clog the first eyelet of rods, damage a reel’s drag system, and prevent fish from being landed.”<sup>43</sup> Such incidents violate both Class 2A criteria, which requires Lake Superior to be “suitable for aquatic recreation of all kinds, including bathing, for which the waters may be usable,” and Class 5 criteria, which require that the quality of Lake Superior is “such as to... avoid any... damaging effects on property.”<sup>44</sup>

---

<sup>35</sup> Minn. R. 7050.0222 subp. 2.

<sup>36</sup> *Round goby (Neogobius melanostomus)*, MN Dep’t of Natural Resources, <http://www.dnr.state.mn.us/invasives/aquaticanimals/roundgoby/index.html> (last visited Jan. 26, 2012) (Ex. 22).

<sup>37</sup> *Round Gobies Invade North America*, Minnesota Sea Grant, [http://www.seagrant.umn.edu/ais/gobies\\_invade](http://www.seagrant.umn.edu/ais/gobies_invade) (last visited Jan. 27, 2012); *Round Goby (Apollonia Melanostomus)*, Minnesota Sea Grant, <http://www.seagrant.umn.edu/ais/roundgoby> (last visited Jan. 27, 2012) (Ex. 24).

<sup>38</sup> Susan Balgie, et al., *Invasive Species Program*, MN Dep’t of Natural Resources, *Invasive Species of Aquatic Plants and Wild Animals in Minnesota: Annual Report 2005 121 (2006)*, available at <http://fwcb.cfans.umn.edu/courses/nresexotics3002/Handouts/InvasiveSpeciesProgannualreport06.pdf> (last visited May 25, 2012) (Ex. 25).

<sup>39</sup> *Id.*

<sup>40</sup> Minn. R. 7050.0150 subp. 3.

<sup>41</sup> 2010 Report 118; *Spiny water flea (Bythotrephes longimanus)*, MN Dep’t of Natural Resources, <http://www.dnr.state.mn.us/invasives/aquaticanimals/spinywaterflea/index.html> (last visited Jan. 28, 2012) (Ex. 26).

<sup>42</sup> 2010 Report 118; *Spiny water flea (Bythotrephes longimanus)*, MN Dep’t of Natural Resources.

<sup>43</sup> *Spiny and Fishhook Waterflea*, Minnesota Sea Grant, <http://www.seagrant.umn.edu/ais/waterflea> (last visited Jan. 29, 2012) (Ex. 27).

<sup>44</sup> Minn. R. 7050.0222 Subp. 2; Minn. R. 7050.0225 Subp. 2.

## 6. White Perch

White perch may have been introduced to Duluth Harbor through the discharge of ballast water.<sup>45</sup> “White perch are competitors of native fish species and have the potential to cause declines of fish populations because they eat the eggs of walleye and other fish species.”<sup>46</sup> This indicates that narrative criteria applicable to Lake Superior (maintenance of species composition and native fisheries) have been violated.

### B. New invasive species could also harm existing and designated uses and violate water quality criteria

EPA estimates that approximately 58 non-indigenous species currently “pose high or medium risk for becoming established in the Great Lakes and for causing ecological harm.”<sup>47</sup> One species likely to invade the Great Lakes through ballast water discharges is the golden mussel. The golden mussel shares some of the physical characteristics of the zebra mussel, but could potentially invade a broader range of habitats and therefore cause even more damage to Minnesota’s ecosystem.<sup>48</sup> Like the zebra mussel, the golden mussel clogs the intakes, pipes and filters of water treatment facilities, industrial plants, and power stations;<sup>49</sup> it also starves native bivalves.<sup>50</sup> Similarly, the monkey goby, a member of the goby fish family, has the potential to be introduced into the region through ballast water discharges and, like the round goby, could out-compete native fish species for food and habitat.<sup>51</sup> Another potential invader is the ‘killer shrimp,’ which preys on native shrimp and young fish.<sup>52</sup> It has already invaded and spread throughout Western Europe, causing significant ecological disruption.<sup>53</sup>

## II. BOTH STATE AND FEDERAL LAW REQUIRE A STATE CERTIFICATION THAT ASSURES COMPLIANCE WITH STATE WATER QUALITY STANDARDS

### A. Federal Law

In § 401, “the CWA gives states an express role in approving or barring discharges into their navigable waters, and in setting out the conditions under which such discharges may occur.”<sup>54</sup> Pursuant to § 401(a)(1), applicants for a federal permit for an activity that may result

---

<sup>45</sup> *Morone Americana*, USGS, <http://nas.er.usgs.gov/queries/factsheet.aspx?SpeciesID=777> (last updated Nov. 22, 2011) (Ex. 28).

<sup>46</sup> *White Perch (Morone americana)*, MN Dep’t of Natural Resources, <http://www.dnr.state.mn.us/invasives/aquaticanimals/whiteperch/index.html> (last visited Feb. 2, 2012) (Ex. 29).

<sup>47</sup> U.S. E envtl. Prot. Agency, Office of Research and Development, Natl. Center for E envtl. Assessment, EPA-600-R-08-066F, *Predicting Future Introductions of Nonindigenous Species to the Great Lakes*, at 1 (Nov. 2008), available at <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=190305> (last visited May 25, 2012) (Ex. 30).

<sup>48</sup> See NWF Golden Mussel Fact Sheet (Ex. 31).

<sup>49</sup> *Id.*

<sup>50</sup> *Id.*

<sup>51</sup> See NWF Monkey Goby Fact Sheet (Ex. 32).

<sup>52</sup> See NWF Killer Shrimp Fact Sheet (Ex. 33).

<sup>53</sup> *Id.*

<sup>54</sup> *Lake Carriers’ Ass’n v. EPA*, 652 F.3d 1, 3 (D.C. Cir. 2011); accord *Keating v. FERC*, 927 F.2d 616, 622 (D.C. Cir. 1991) (“Through this [§ 401 certification] requirement, Congress intended that the states would retain the power to block, for environmental reasons, local water projects that might otherwise win federal approval.”); *U.S. v. Marathon Dev. Corp.*, 867 F.2d 96, 99-100 (1st Cir. 1989).

in a discharge into state waters must provide the federal permitting agency with a certification from the state that the discharge “will comply” with applicable effluent limitations, state water quality standards, and standards of performance.<sup>55</sup> Section 401(d) also requires the certification to set forth limitations and monitoring requirements necessary to “assure” that dischargers “will comply” with state water quality standards.<sup>56</sup> In *PUD No. 1 of Jefferson County v. Washington Dept. of Ecology* (“*PUD No. 1*”), the Supreme Court held “Although § 303 [, which concerns water quality standards,] is not specifically listed in § 401(d), the statute allows States to impose limitations to ensure compliance with § 301 of the Act,” and “Section § 301 in turn incorporates § 303 by reference.”<sup>57</sup>

To “assure” that dischargers “will comply” with a water quality standard, a certification must include conditions sufficient to assure compliance with all three components of the standard: designated uses, water quality criteria (numeric or narrative), and the antidegradation (in Minnesota, the “nondegradation”) policy.<sup>58</sup> In *PUD No. 1*, the Court upheld a condition in the State of Washington’s certification establishing minimum flow requirements to assure that designated uses would be protected and that any discharges would comply with the state’s antidegradation policy.<sup>59</sup>

To protect a designated use, effluent limitations must assure that the use will be maintained. This follows from the CWA’s mandate that WQS “shall . . . serve the purposes of this Act,”<sup>60</sup> which are “to restore and *maintain* the chemical, physical, and biological integrity of the Nation’s waters.”<sup>61</sup> An impairment of a designated use would run contrary to the mandate of maintaining the integrity of the water. Consequently, a violation of a WQS occurs where a designated use continues to a diminished extent. The purposes of the Act would not be served by deeming a designated use protected, even as its usefulness degrades, by turning a blind eye to the degradation of a designated use until it is completely eliminated.

---

<sup>55</sup> 33 U.S.C. § 1341(a)(1), which provides in pertinent part as follows:

Any applicant for a Federal license or permit to conduct any activity . . . which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate . . . that any such discharge will comply with the applicable provisions of sections 1311, 1312, 1313, 1316, and 1317 of this title.

<sup>56</sup> 33 U.S.C. § 1341(d), which provides in pertinent part as follows:

Any certification provided under this section shall set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any applicant for a Federal license or permit will comply with any applicable effluent limitations and other limitations, under section 1311 or 1312 of this title, standard of performance under section 1316 of this title, or prohibition, effluent standard, or pretreatment standard under section 1317 of this title, and with any other appropriate requirement of State law set forth in such certification, and shall become a condition on any Federal license or permit subject to the provisions of this section.

<sup>57</sup> *PUD No. 1 of Jefferson County v. Washington Dept. of Ecology*, 511 U.S. 700, 712-13 (1994).

<sup>58</sup> *Id.* at 714-15, 719. See also 40 C.F.R. § 131.6 (identifies the elements that states must include in water quality standards, including designated uses, water quality criteria, and an antidegradation policy); U.S. ENVTL. PROT. AGENCY, EPA-823-B-94-005, WATER QUALITY STANDARDS HANDBOOK § 1.2 (Jul. 3, 2007), <http://water.epa.gov/scitech/swguidance/standards/handbook/chapter01.cfm#section2> (last visited May 25, 2012) (Ex. 34). [Hereinafter EPA WQS HANDBOOK.]

<sup>59</sup> *PUD No. 1 of Jefferson County v. Washington Dept. of Ecology*, 511 U.S. at 715, 719.

<sup>60</sup> 33 U.S.C. § 1313(c)(2)(A).

<sup>61</sup> 33 U.S.C. § 1251(a) (emphasis added).

The antidegradation policy requires the maintenance and protection of existing uses and the water quality necessary to protect existing uses.<sup>62</sup> In Minnesota, “‘Existing’ means in existence before January 1, 1988.”<sup>63</sup> “No activity is allowable under the anti-degradation policy which would partially or completely eliminate any existing use.”<sup>64</sup>

Also, to “assure” compliance, limitations and monitoring requirements must be enforceable as a practical matter. This follows from the meaning given to similar language in CWA § 402, which requires NPDES permits to “assure compliance” with water quality standards.<sup>65</sup> EPA has recognized that this means “[e]ach permit must be written clearly and unambiguously so that compliance can be tracked effectively and the permit can be enforced if violations occur.”<sup>66</sup> In the same vein, EPA instructed that “[m]onitoring is performed to determine compliance with effluent limitations established in NPDES permits [and] establish a basis for enforcement actions . . . .”<sup>67</sup> EPA’s guidance echoes Congress’s intent that the CWA establish clear requirements that provide precise benchmarks for performance and a basis for enforcement under the citizen suit provision.<sup>68</sup> That provision empowers citizens to sue for violations both of NPDES permits and certifications.<sup>69</sup>

Thus, the Act, its legislative history, and EPA regulations and guidance all create a “practical enforceability” requirement for effluent limitations and monitoring requirements imposed pursuant to § 401 just as they do for such limitations and requirements imposed pursuant to § 402. The critical role of enforcement in effectuating the purposes of the Clean Water Act is reflected in Congress’s enactment and successive amendments of the law.<sup>70</sup> Beginning with the 1972 amendments, Congress strengthened the enforcement authority of the

---

<sup>62</sup> See 40 C.F.R. § 131.12(a)(1); Wis. Admin. Code § NR 102.05(1) (“[N]o new or increased effluent [shall] interfere[] with or become[] injurious to any assigned uses made of or presently possible in . . . [state] waters.”).

<sup>63</sup> Minn. R. 7050.0185, Subp. 2.D. *But see* 40 C.F.R. § 131.3(e).

<sup>64</sup> See EPA WQS HANDBOOK § 4.4, <http://water.epa.gov/scitech/swguidance/standards/handbook/chapter04.cfm-section4>. Thus, a state must protect existing uses (including existing uses which are also designated uses) against degradation, not just elimination. See *PUD No. 1*, 511 U.S. at 718-19.

<sup>65</sup> 33 U.S.C. § 1342(a)(2) (“The Administrator shall prescribe conditions for such permits to assure compliance with the requirements of paragraph (1) of this subsection,” which include CWA § 301). Section 301 in turn incorporates by reference § 303, which concerns water quality standards. *PUD No. 1*, 511 U.S. at 712-13. EPA’s regulations reinforce the necessity that NPDES permits assure compliance with water quality standards. For instance, one regulation requires permitting authorities to “ensure” that water quality-based effluent limitations (“WQBELs”) are developed to achieve a level of water quality that “complies with all applicable water quality standards.” 40 C.F.R. § 122.44(d)(1)(vii)(A). Another prohibits the issuance of an NPDES permit “when imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected states.” 40 C.F.R. § 122.4(d) (emphasis added). “Affected states” necessarily include the water quality standards of the state issuing the permit.

<sup>66</sup> U.S. Environmental Protection Agency, *NPDES Permit Writers’ Manual*, § 11.5 at 11-21 (EPA-833-K-10-001, 2010) [hereinafter “NPDES PERMIT WRITERS’ MANUAL”].

<sup>67</sup> *Id.* § 8.1.1 at 8-2.

<sup>68</sup> S. Rep. No. 92-414, at 81 (1971) (“The citizen suit provision [Section 505] is consistent with principles underlying . . . the Act, [which are] the development of clear and identifiable requirements. Such requirements should provide manageable and precise benchmarks for performance.”).

<sup>69</sup> 33 U.S.C. § 1365(a)(1)(A) (authorizing citizen suits for violations of “an effluent standard or limitation”) & (f) (defining the term “effluent standard or limitation” to mean a “certification under section 1341”); *Stillwater of Crown Point Homeowner’s Ass’n, Inc. v. Kovich*, No. 2:09-CV-157-PRC, 2011 WL 4818511, at \*12 (N.D. In., Oct. 11, 2011).

<sup>70</sup> See *Black Warrior Riverkeeper, Inc. v. Cherokee Mining, LLC*, 548 F.3d 986, 987-88 (11th Cir. 2008).

federal government and enabled private citizens to bring an action in federal court against anyone violating effluent limitations.<sup>71</sup>

## B. State Law

As we will now explain, MPCA has an obligation under state law to respond to a request for certification and base its decision on whether VGP2 will prevent AIS. The state legislature has granted MPCA the power and duty to establish standards to prevent water pollution, including effluent limitations stringent enough to meet water quality standards.<sup>72</sup> MPCA may only issue a certification upon a determination that a discharge and discharger “will comply” with all applicable federal and state statutes and rules.<sup>73</sup> MPCA has explained this standard as follows:

A Section 401 water quality certification may be granted if the applicant demonstrates that an activity, such as discharge of dredged or fill materials, *will not violate* Minnesota’s water quality standards or result in adverse long-term or short-term impacts on water quality. Such impacts can be direct or cumulative with other indirect impacts.<sup>74</sup>

Under Minnesota rules, then, and consistent with *PUD No. 1*, “compliance” includes compliance with the water quality standards Minnesota adopted pursuant to § 303 of the Clean Water Act.<sup>75</sup>

MPCA must include in any § 401 certification those conditions necessary to assure compliance with water quality standards. Certifications must contain the same conditions required under the rules applicable to NPDES permits.<sup>76</sup> Under those rules, “a national pollutant discharge elimination system permit issued by the agency must contain conditions necessary for the permittee to *achieve compliance* with all Minnesota or federal statutes or rules.”<sup>77</sup> Therefore, MPCA was obligated to include conditions in its certification necessary to achieve compliance with state water quality standards.

### 1. Minnesota’s “reasonable assurance” standard does not comport with the federal “will comply” standard for certification

Minnesota’s rules are contrary both to § 401 and its own rule at § 7001.1450, Subp. 1(A). To wit, the rules authorize MPCA to issue a certification based upon “[a] statement that there is

---

<sup>71</sup> *Id.* at 988.

<sup>72</sup> Minn. Stat. 115.03, Subd. 1(e)(8).

<sup>73</sup> Minn. R. 7001.1450, Subp. 1(A) (requiring a certification determination to be made in accordance with Minn. R. 7001.0140, Subp. 1).

<sup>74</sup> *Clean Water Act Section 401 Water Quality Certifications*, MPCA, <http://www.pca.state.mn.us/index.php/water/water-permits-and-rules/water-permits-and-forms/clean-water-act-section-401-water-quality-certifications.html> (last visited Feb. 20, 2012) (emphasis added) (Ex. 35).

<sup>75</sup> See *PUD No. 1*, 511 U.S. at 713.

<sup>76</sup> “A section 401 certification shall contain the special conditions described in part 7001.1080, subparts 2 to 9, which conditions shall be established in the same manner as special conditions are established under part 7001.1080 for national pollutant discharge elimination system permits.” Minn. R. 7001.1470, Subp. 2.

<sup>77</sup> Minn. R. 7001.1080, Subp. 1 (emphasis added).

*reasonable* assurance that the activity will be conducted in a manner that will not violate applicable water quality standards.”<sup>78</sup>

This standard may have been modeled on a vestigial EPA regulation, now codified at 40 C.F.R. § 121.2(a)(3), which sets out the same “reasonable assurance” standard.<sup>79</sup> EPA’s regulation is a holdover from the 1970 version of the Federal Water Pollution Control Act, specifically § 21(b), the predecessor of § 401. Section 21(b) only required “reasonable assurance.”<sup>80</sup> EPA never conformed its regulation to the amended language included in § 401.<sup>81</sup>

Thus, EPA’s regulation – and MPCA’s rule – is not an interpretation of § 401(a)(1) or (d). This explains the clear inconsistency between the rule and the plain language of § 401, which deprives the rule of any force or effect. The standard for certification is unqualified compliance with water quality standards, just as § 401(a)(1) and (d) say it is; the standard is not “reasonable assurance” of compliance.

EPA’s outdated regulation does not override Congress’s decision to change the legal standard to the stricter “will comply” requirement. The law is well-settled that a regulation that is inconsistent with the underlying statute is null and void.<sup>82</sup> Therefore, it was inappropriate for MPCA to base its certification on the “reasonable assurance” standard. It could only certify the VGP if it was *certain* that discharges will comply with water quality standards.

## **2. Every discharge has the potential to result in the introduction or spread of a new AIS, triggering the nondegradation component of Minnesota’s water quality standards**

Each ballast water discharge to a water body in Minnesota could potentially result in the introduction or spread of a new AIS. The establishment of new AIS would violate the state’s nondegradation policy for outstanding resource value waters, such as Lake Superior.<sup>83</sup> That policy prohibits any “new or expanded discharge of any sewage, industrial waste, or other waste ... unless there is not a prudent and feasible alternative to the discharge.”<sup>84</sup>

“Expanded discharge” means... a discharge that changes in volume, *quality*, location, or any other manner after the effective date the outstanding resource

---

<sup>78</sup> Minn. R. 7001.1470, Subp. 1(C).

<sup>79</sup> See 40 C.F.R. § 121.2(a)(3) (“A certification made by a certifying agency shall include . . . [a] statement that there is reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards.”).

<sup>80</sup> 84 Stat. 91, 108 (1970).

<sup>81</sup> 40 C.F.R. § 121.2(a)(3) was originally 40 C.F.R. § 115.2(a)(3), and the text of the regulation did not undergo any change when it was re-designated. Compare 40 C.F.R. § 121.2(a)(3) with 36 Fed. Reg. 22,369, 22,488 (1971) (setting forth 40 C.F.R. § 115.2(a)(3)). Nor did EPA purport any of the incarnations of the regulation to be an interpretation of § 401. See 44 Fed. Reg. 32,854, 32,856 (1979) ; 37 Fed. Reg. 21,441 (1972). To the contrary, upon re-designating the regulation for the final time, EPA expressly noted, “The existing State certification regulations predate the Federal Water Pollution Control Act Amendments of 1972 and have never been updated.” 44 Fed. Reg. at 32,856).

<sup>82</sup> *U.S. v. Larionoff*, 431 U.S. 864, 873 (1977); *Dixon v. United States*, 381 U.S. 68, 74 (1965); *Manhattan Gen. Equip. Co. v. Comm’r of Internal Revenue*, 297 U.S. 129, 134 (1936).

<sup>83</sup> Minn. R. 7050.0180, Subp. 2(A).

<sup>84</sup> *Id.* at 7050.0180, Subp. 6.

value water was designated ... *such that an increased loading of one or more pollutants results*. In determining whether an increased loading of one or more pollutants would result from the proposed change in the discharge, the agency shall compare the loading that would result from the proposed discharge with the loading allowed by the agency as of the effective date of outstanding resource value water designation.<sup>85</sup>

The burden of showing that there is *not* a prudent and feasible alternative is on the permit applicant.<sup>86</sup> Even if no “prudent or feasible” alternative exists, the discharge must be “restrict[ed] ... to the extent necessary to preserve the existing high quality, or to preserve the wilderness, scientific, recreational, or other special characteristics that make the water an outstanding resource value water.”<sup>87</sup>

The presence of a new AIS would constitute a change in quality.<sup>88</sup> However, because MPCA allowed the unlimited discharge of organisms when Lake Superior was designated as an outstanding resource value water, the Minnesota Court of Appeals has determined that the discharge of a new AIS would not cause the increased loading of a pollutant.<sup>89</sup> In making this finding, the court was mistaken.

New non-indigenous species cannot be lumped together with non-indigenous species that were discharged in years past to form a monolith labeled “AIS,” any more than mercury, lead, and copper can be lumped together as “metals.” By definition, each species is unique. Thus, each time a vessel discharges a new individual non-indigenous species, it discharges a new effluent, just as a factory that once discharged mercury discharges a new effluent when it discharges lead or copper.

Moreover, new AIS are likely to have different impacts on existing uses, just as current individual AIS have different impacts. For instance, the zebra mussel depletes the food supply for other aquatic life; reduces the effectiveness of predatory fish; fosters plant growth that interferes with boaters, anglers, and swimmers; promote the growth of blue-green algae, and clogs water intake and distribution pipes. The round goby, on the other hand, outcompetes native fish species.

For these reasons, MPCA should have conducted a nondegradation review. Even MPCA has recognized that a nondegradation review is required for ballast water discharges by new ships operating in Lake Superior.<sup>90</sup> Nonetheless, MPCA appears not to have conducted any nondegradation review on the ground that certification conditions will reduce the likelihood of

---

<sup>85</sup> Minn. R. 7050.0180 Subp. 2(C) (emphases added).

<sup>86</sup> See *Minnesota Ctr. for Env'tl. Advocacy v. Comm'r of Minnesota Pollution Control Agency*, 696 N.W.2d 95, 102 (Minn. Ct. App. 2005) (“The burden of demonstrating that there is no prudent and feasible alternative is on the permit applicant.”).

<sup>87</sup> Minn. R. 7050.0180, Subp. 6. See also *Minnesota Ctr. for Env'tl. Advocacy v. Comm'r of Minnesota Pollution Control Agency*, 696 N.W.2d 95, 107 (Minn. Ct. App. 2005) (The MPCA’s “own policies require an exercise of that authority to maintain the high water quality of a valuable water resource.”).

<sup>88</sup> See *In re Request for Issuance of SDS Gen. Permit MNG300000*, 769 N.W.2d 312, 319 (Minn. Ct. App. 2009).

<sup>89</sup> *Id.* at 320.

<sup>90</sup> *In re Request for Issuance of SDS Gen. Permit MNG300000*, 769 N.W.2d at 320.

introducing or spreading new AIS.<sup>91</sup> As explained below, however, simply reducing the likelihood is not sufficient to protect Minnesota water quality standards. Consequently, MPCA may not certify VGP2 unless it first conducts the nondegradation review required by the rules.

### **III. THE EPA PERMIT DOES NOT ASSURE THAT BALLAST WATER DISCHARGES WILL COMPLY WITH MINNESOTA WATER QUALITY STANDARDS<sup>92</sup>**

The CWA requires NPDES permits to “assure compliance” with water quality standards.<sup>93</sup> EPA’s regulations reinforce the necessity that NPDES permits assure compliance with water quality standards. One regulation in particular requires permitting authorities to “ensure” that water quality-based effluent limitations (“WQBELs”) are developed to achieve a level of water quality that “complies with all applicable water quality standards.”<sup>94</sup>

#### **A. The permit’s technology-based effluent limitations do not assure compliance, because they will not prevent invasions of aquatic invasive species**

Based on a flawed assessment of the best available technology economically achievable, which is required by CWA § 301(b)(2)(A),<sup>95</sup> EPA established the International Maritime Organization’s (“IMO”) proposed D-2 standards as VGP2’s technology-based effluent limitations (“TBELs”) for oceangoing vessels.<sup>96</sup> These TBELs set concentrations of organisms allowed in ballast water discharges, but they will only reduce, not eliminate, the threat of new introductions and new AIS.

Invasive species are not like conventional pollutants. Even a small number of organisms may establish a population that grows exponentially and seriously harms the ecosystem.<sup>97</sup> There is no known safe concentration greater than zero at which introduced species will pose no threat to water quality standards.<sup>98</sup> In addition, many complex factors besides concentration affect

---

<sup>91</sup> See Draft Certification at pp. 7, 9.

<sup>92</sup> The full comments of NWF and NRDC on the draft VGP2 are in Exhibit 36 and incorporated here by this reference.

<sup>93</sup> 33 U.S.C. § 1342(a)(2) (EPA “shall prescribe conditions for . . . [NPDES] permits to *assure compliance* with the requirements of” CWA § 402(a)(1).) (emphasis added). One of the requirements of § 402(a)(1) is that permitted discharges must comply with CWA § 301. Section 301, in turn, requires WQBELs.

<sup>94</sup> 40 C.F.R. § 122.44(d)(1)(vii)(A). Another regulation prohibits the issuance of an NPDES permit “when imposition of conditions cannot *ensure compliance* with the applicable water quality requirements of all affected states.” 40 C.F.R. § 122.4(d) (emphasis added). “Affected states” necessarily include the water quality standards of the state issuing the permit.

<sup>95</sup> 33 U.S.C. § 1311(b)(2)(A).

<sup>96</sup> Draft VGP § 2.2.3.5.

<sup>97</sup> See Natl. Academy of Sciences, Committee on Assessing Numeric Limits for Living Organisms in Ballast Water, *Assessing the Relationship between Propagule Pressure and Invasion Risk in Ballast Water* 57 (2011) (Ex. 37) [hereinafter NAS REPORT]:

The importance of [initial habitat compatibility and propagule retention] underscore the relative role of inoculum density: very low inocula that match these two scenarios . . . could lead to highly successful invasions. Thus, one female crab with stored sperm introduced into a lagoon with highly restricted tidal exchange could produce an initial and even dense first-generation population of crabs that could then interbreed, and eventually exit the site that had acted as an inoculator.

<sup>98</sup> *Id.* at 1:

whether an introduced species can establish itself.<sup>99</sup> “Thus, any method that attempts to predict invasion outcomes based upon only one factor in the multi-dimensional world of the invasion process is likely to suffer from a high level of uncertainty.”<sup>100</sup>

The IMO standards, therefore, will not protect water quality standards. Nor will requiring oceangoing vessels to perform ballast water exchange or saltwater flushing in addition to meeting the IMO standards.<sup>101</sup> EPA pointed to no evidence that this will effectively eliminate the risk of further harmful species invasions and thus ensure that state water quality standards are fully and meaningfully protected. Rather, the best that EPA could claim for this approach is that it would “add another measure of protection against invasive species.”<sup>102</sup> While that finding provides a strong rationale for this requirement being adopted as a TBEL, the mere fact that such a requirement represents another step in the right direction does not mean that this provision is sufficient to assure compliance with water quality standards.

With respect to lakers, VGP2 requires such vessels to assess sediment accumulations and remove sediment if necessary (without specifying when removal is necessary); minimize ballast water taken dockside; and once a year assure that sea chest screens are fully intact.<sup>103</sup> EPA made no claim that these management practices would prevent AIS. Rather, EPA merely said that maintaining sea chest screens will “reduce the threat” of dispersing AIS within the Great Lakes.<sup>104</sup>

Both oceangoing vessels and lakers must comply with another set of management practices.<sup>105</sup> These practices are designed not to prevent AIS, but only to reduce the number of

---

With regard to [evaluating the risk of successful establishment of new aquatic nonindigenous species associated with a variety of ballast water discharge limits that have been used or suggested by the international community and/or domestic regulatory agencies] ... the available methods for determining a numeric discharge standard for ballast water are limited by a profound lack of data and information to develop and validate models of the risk–release relationship. Therefore, it was not possible with any certainty to determine the risk of nonindigenous species establishment under existing discharge limits.

See Cal. State Lands Comm’n, *Report on Performance Standards for Ballast Water Discharges in California Waters* at 19 (2006), available at

[http://www.slc.ca.gov/spec\\_pub/mfd/ballast\\_water/Documents/CSLCPPerformanceStdRpt\\_2006.pdf](http://www.slc.ca.gov/spec_pub/mfd/ballast_water/Documents/CSLCPPerformanceStdRpt_2006.pdf) (“The [uncertain] dose-response curve does include a single known point: zero exposure to [AIS] would present no invasion risk. Based on this logic, the only potential standard that is unarguably ‘biologically protective’ would be zero viable organism discharge.”) (Ex. 38).

<sup>99</sup> NAS REPORT at 4 (“while inoculum density is a key component, it is but one of scores of variables that can and do influence invasion outcome”); 47 (“These factors include the identity (taxonomic composition), sources, and history of the propagules, and their abundance (total number of organisms), quality, and frequency of delivery. Further influencing the outcome of propagule release is a host of factors that include both species traits and the recipient region’s environmental traits.”).

<sup>100</sup> *Id.* at 4.

<sup>101</sup> Draft VGP § 2.2.3.7 (Ex. 39).

<sup>102</sup> Draft Fact Sheet at 126 (Ex. 40).

<sup>103</sup> Draft VGP § 2.2.3.4.

<sup>104</sup> Draft Fact Sheet at 75.

<sup>105</sup> Draft VGP § 2.2.3.3.

living organisms taken up in, and later discharged in, ballast water or to ensure that such discharges do not occur in known sensitive areas.”<sup>106</sup>

**B. The permit’s water quality-based effluent limitation does not assure compliance, because it is not really a water quality-based effluent limitation and it is not practically enforceable**

Even EPA admitted that ballast water discharges meeting VGP2 TBELs have a “reasonable potential to cause or contribute to an exceedance of water quality standards.”<sup>107</sup> Therefore, pursuant to CWA § 301(b)(1)(C), 33 U.S.C. § 1311(b)(1)(C), and EPA’s regulation at 40 C.F.R. § 122.44(d)(1), which require effluent limitations sufficiently stringent to meet water quality standards, EPA included in VGP2 a limitation applicable to *all* vessels, which the agency described as a water quality-based effluent limitation. Because a reproducing population of non-indigenous organisms can be established by the introduction of a few individuals, any WQBEL must achieve complete prevention.<sup>108</sup> Further, EPA is not allowed to consider economic or technological feasibility when deciding which WQBELs are necessary to protect water quality standards under the CWA.<sup>109</sup>

VGP2’s purported WQBEL, however, is merely a general requirement that “discharge[s] must be controlled as necessary to meet applicable water quality standards in the receiving waterbody or another waterbody impacted by . . . discharges.”<sup>110</sup> Significantly, EPA did not find that the WQBEL will assure compliance with water quality standards, as it is required to do.<sup>111</sup> Instead, claiming without justification that a numeric WQBEL is “infeasible,”<sup>112</sup> EPA merely stated that it “expects” the WQBEL to “be as stringent as necessary to achieve water quality standards.”<sup>113</sup> EPA offered no reasoned analysis whatsoever in support of its expectation that the “WQBEL” will protect designated or existing uses.

In fact, the WQBEL is nothing more than a restatement of the CWA’s requirement that water quality standards must be met, which the operator of a vessel could not possibly determine when the discharge occurs and which neither EPA nor anyone else could possibly enforce, either when the discharge occurs or afterwards.

---

<sup>106</sup> Draft Fact Sheet at 73.

<sup>107</sup> *Id.* at 120.

<sup>108</sup> See Anthony Ricciardi & Hugh J. MacIsaac, *Evaluating the Effectiveness of Ballast Water Exchange Policy in the Great Lakes*, 18 *ECOLOGICAL APPLICATIONS* 1321, 1322 (2008) (Ex. 41).

<sup>109</sup> See 33 U.S.C. § 1311(b)(1)(C); 40 C.F.R. § 122.44(d)(1); 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 Moscow*, 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.”).

<sup>110</sup> Draft VGP § 2.3.1.

<sup>111</sup> 33 U.S.C. § 1342(a)(2) (EPA “shall prescribe conditions . . . to assure compliance with” water quality standards).

<sup>112</sup> Draft VGP Fact Sheet at 120.

<sup>113</sup> Draft VGP Fact Sheet at 149.

When a vessel discharges ballast water, neither the operator nor anyone else could possibly know whether the discharge contains any new non-indigenous species. Even if the operator had the capability to thoroughly examine the vessel's ballast water to determine whether it contains any new non-indigenous species, the operator could not possibly predict at the time of discharge whether any such species will establish a reproducing population that would violate water quality standards. The identification of "invasive" species might take years, as it did, for example, in the case of the zebra mussel.<sup>114</sup>

Years later, neither EPA nor anyone else could trace the invasive species to a particular vessel, let alone to a particular discharge. The WQBEL is thus contrary to EPA's own guidance for writing NPDES permits, which states as follows: "Each permit must be written clearly and unambiguously so that compliance can be tracked effectively and the permit can be enforced if violations occur."<sup>115</sup>

### **C. The permit improperly exempts certain vessels**

Without any legal justification, VGP2 exempts vessels travelling short distances. For example, the permit exempts vessels that "[o]perate exclusively in one Coast Guard Captain of the Port (COTP) Zone" or that "do not travel more than 10 nm and cross no physical barriers or obstructions."<sup>116</sup> This exemption is overly broad. The Sault Ste. Marie COTP Zone, for example, includes all of Lake Superior and part of northern Lakes Michigan and Huron.<sup>117</sup> Vessels traveling within a COTP may spread invasive species to previously uninfested areas.

In addition, VGP2 does not apply to "vessels with a capacity of less than 8 cubic meters of ballast water."<sup>118</sup> A vessel may introduce or spread invasive organisms regardless of whether it can carry more or less than eight cubic meters of ballast water. Similarly, a categorical exemption for unmanned barges<sup>119</sup> is inappropriate.

### **D. The permit's monitoring and reporting requirements are insufficient because they are not practically enforceable**

The monitoring and reporting requirements included in VGP2 are insufficient because they will not assure compliance with water quality standards under the CWA.<sup>120</sup> Even MPCA

---

<sup>114</sup> Jeffrey A. Crooks, *Lag times and exotic species: the ecology and management of biological invasions in slow-motion*, 12 *ECOSCIENCE* 316, 317 (Table I) (2005) (Ex. 42).

<sup>115</sup> U.S. Environmental Protection Agency, *NPDES Permit Writers' Manual*, 11-21 (EPA-833-K-10-001, 2010) [hereinafter "*NPDES Permit Writers' Manual*"].

<sup>116</sup> U.S. EPA, *Proposed 2013 Vessel General Permit* 36 (2011).

<sup>117</sup> 33 C.F.R. § 3.45-45(a).

<sup>118</sup> U.S. EPA, *Draft Fact Sheet* 120 (2011).

<sup>119</sup> *Id.* at 110.

<sup>120</sup> *See, e.g.*, NPDES PERMIT WRITERS' MANUAL at § 8.1.1 ("Monitoring is performed to determine compliance with effluent limitations established in NPDES permits . . . [and] establish a basis for enforcement actions.").

and the Minnesota Department of Natural Resources expressed concern that VGP2's monitoring requirements are insufficient to assure compliance with water quality standards.<sup>121</sup>

First, VGP2 only requires vessels to monitor ballast water functionality and compliance with the numeric limitations on two biological "indicator" organisms, rather than compliance with the numeric limitations on organisms in ballast water discharge.<sup>122</sup> EPA claims that the monitoring requirements are inapplicable to numeric limitations, due to the practical constraints on monitoring living organisms in ballast water discharge.<sup>123</sup> EPA bases its determination on 40 C.F.R. § 122.44(i)(1)(i), which states that, to "assure compliance with permit limitations," each NPDES permit's "shall include . . . when applicable . . . requirements to monitor . . . [t]he mass (or other measurement stated in the permit) for each pollutant limited in the permit." EPA's interpretation of "when applicable" to mean that monitoring is not required when there are practical constraints to monitoring is both unreasonable and inconsistent with the purpose of monitoring, which is to require that NPDES permits "assure compliance" with effluent limitations.<sup>124</sup> In particular, this interpretation renders any numeric limitations on organisms meaningless, because they will not be enforced under VGP2.

Similarly, EPA's failure to require operators to report the results of monitoring more than once a year is insufficient to assure compliance.<sup>125</sup> This lax standard is especially unreasonable in light of the fact that operators are already required to monitor system functionality at least once per month,<sup>126</sup> and "[m]any ballast water treatment system manufacturers require that the BWTS monitoring and recordkeeping are operated continuously to assure the system is functioning as designed."<sup>127</sup> Requiring operators to report the results of monitoring at least once per month therefore does not impose an unreasonable burden in light of the consequences of noncompliance. Further, such a requirement would allow regulatory bodies or citizens to take timely action against operators who fail to comply with permit requirements.

#### **IV. MPCA'S CERTIFICATION DOES NOT ASSURE COMPLIANCE WITH WATER QUALITY STANDARDS.**

MPCA's certification violates federal and state law, both because MPCA's standard for certification is inconsistent with the federal standard in § 401, and because the certification will not assure that discharges authorized by VGP2 will comply with Minnesota water quality standards. To assure ballast water discharges will comply with state water quality standards, MPCA should have developed and included WQBELs in its certification of VGP2.

---

<sup>121</sup> Letter from Rebecca J. Flood, Assistant Commissioner, MPCA, & Mary P. McConnell, Assistant Commissioner, Minnesota Department of Natural Resources, to Ryan Albert, Environmental Scientist, Water Permits Division, U.S. EPA 2 (Feb. 21, 2012).

<sup>122</sup> See Draft VGP §§ 2.2.3.5.1.1.2, 2.2.3.5.1.1.4.

<sup>123</sup> Draft VGP Fact Sheet at 83 n.18 ("[L]iving organism monitoring of vessel ballast water discharges, by mass or any other measure, is not required in this permit due to practical constraints on the ability to collect and analyze the volumes of ballast water necessary to directly detect and quantify such organisms at the levels of concern. Such requirements, therefore, are not "applicable" to this situation and are not included in today's permit.").

<sup>124</sup> See 33 U.S.C. § 1342(a)(2).

<sup>125</sup> See Draft VGP § 4.4.1.

<sup>126</sup> Draft VGP § 2.2.3.5.1.1.2.

<sup>127</sup> Draft VGP Fact Sheet at 85.

**A. The certification only requires vessels to meet the unprotective IMO D-2 standards in EPA’s permit**

Condition #1 of the certification imposes “biological performance standards,” which are identical to the VGP’s IMO D-2 standards.<sup>128</sup> As discussed previously, these standards are insufficient to prevent AIS.

**B. The certification’s failure to require vessels to meet a WQBEL violates federal and state law**

In Condition #2 of the certification, MPCA states that it will not require compliance with a WQBEL because the agency “is unable to conclusively determine a numeric standard which would definitively protect water quality and an unaltered species composition of the ecosystem.”<sup>129</sup> Nothing in the Clean Water Act or Minnesota’s water pollution control laws or rules relieve MPCA of the obligation to require compliance with a WQBEL for that reason.

As explained above, MPCA is obligated to include conditions in its certification necessary to achieve compliance with state water quality standards, conditions imposing WQBELs most especially.<sup>130</sup> If, indeed, MPCA is unable to establish a WQBEL that will assure compliance with Minnesota water quality standards, the agency may not certify VGP2.

**C. The certification’s requirements that oceangoing vessels perform ballast water exchange or saltwater flushing will not prevent AIS**

Conditions ##3 and 4 require oceangoing vessels to perform open-ocean ballast water exchange or saltwater flushing before discharging ballast water.<sup>131</sup> Although this may improve the performance of ballast water treatment systems in Minnesota waters, no evidence establishes that combining ballast water treatment with ballast water exchange or saltwater flushing will effectively eliminate the risk of further harmful species invasions and thus ensure that state water quality standards are fully and meaningfully protected. All EPA could claim for this approach in VGP2 is that it would “add another measure of protection against invasive species.”<sup>132</sup> Thus, contrary to MPCA’s assertion, these conditions are not an “interim WQBEL.”<sup>133</sup>

**D. The certification’s “emergency” provisions for high-risk ballast water discharges will not prevent AIS**

Condition #5 allows MPCA to “prohibit discharge, require a discharge to occur in a particular area, or require emergency treatment of any ‘high risk’ ballast water proposed to be discharged in Minnesota waters.”<sup>134</sup> Although MPCA’s goal to manage high-risk discharges is

---

<sup>128</sup> Compare Draft Certification pp. 2-3 with Draft VGP § 2.2.3.5. Actually, the certification is less protective than the VGP, because it does not set a biological treatment performance standard for Toxicogenic *Vibrio cholera*.

<sup>129</sup> Draft Certification p.3.

<sup>130</sup> See also Minn. R. 7053.0205, Subp. 8 (requiring MPCA to establish WQBELs where necessary to maintain water quality standards).

<sup>131</sup> Draft Certification at pp. 3-9.

<sup>132</sup> Draft Fact Sheet at 126.

<sup>133</sup> Draft Certification at pp. 7, 9.

<sup>134</sup> *Id.* at pp. 9 (Condition #5(a)).

commendable, nothing in this condition establishes how the agency would become aware of proposals to carry out such discharges.

In addition, Condition #5 does not even purport to assure compliance with Minnesota water quality standards, except to the extent that the agency exercises discretion, without any apparent provision for public review, to prohibit the discharge altogether. It allows MPCA to “authorize the use of BWTS identified as promising technology” by EPA, the U.S. Coast Guard, neighboring states, or a U.S. ballast water testing facility.<sup>135</sup> But it does not describe what level of protection such BWTS will provide to water quality standards. As a result, Condition #5 does not assure compliance with Minnesota water quality standards.

**E. The certification’s best management practices for lakers will not prevent AIS**

Condition #6, which requires lakers to follow certain best management practices and recommends that they follow others, is salutary to the extent it reduces the number of organisms discharged with ballast water. However, as explained above, simply reducing the number is no guarantee that aquatic non-indigenous and invasive species new to the area of discharge will not establish themselves there as AIS.

**F. The certification failed to require the necessary monitoring**

The certification does not require monitoring of compliance with the conditions in the Minnesota SDS permit for ballast water discharges, incorporated by reference in Condition #1.<sup>136</sup> In particular, the SDS permit prohibits discharges of ballast water that violate water quality standards.<sup>137</sup> This prohibition is no more practically enforceable than VGP2’s purported WQBEL. Moreover, MPCA did not establish any requirement to monitor compliance with the prohibition. In the absence of such a monitoring requirement, neither MPCA nor citizens can track compliance with the prohibition or enforce violations of the prohibition pursuant to CWA § 505. Because Condition #1 is not practically enforceable, it is defective.

In addition, the certification’s Condition #7 does not cure the deficiencies in VGP2’s monitoring requirements, described above. Even if Condition #7’s monitoring requirements were adequate to assure compliance with the IMO D-2 standards, those standards are insufficient to prevent AIS. Further, the monitoring required of vessels not required to meet the IMO D-2 standards is only to identify the potential spread of AIS already in the Great Lakes,<sup>138</sup> not to stop their spread.

MPCA must require vessel operators to monitor *all* classes of organisms in ballast water discharge – not just those organisms the EPA identified as feasible given practical constraints – in order to assure compliance with the IMO D-2 standards and any numeric WQBELs added by MPCA. In addition, Minnesota should require operators to report the results of their monitoring more than once a year. Requiring operators to report the results of monitoring at least once per

---

<sup>135</sup> *Id.* at pp. 10 (Condition #5(e)).

<sup>136</sup> *Id.* at p. 2.

<sup>137</sup> MPCA, State Disposal System Permit MNG300000, Ballast Water Discharge General Permit (Sep. 24, 2008) p. 2 (Part 1.2.b.).

<sup>138</sup> Draft Certification at pp. 12-13.

month does not impose an unreasonable burden in light of the consequences of noncompliance. Minnesota should also require operators to report any discharge or uptake incident contrary to the terms of the VGP2 within twenty-four hours of the incident. This will allow the state to take immediate actions when water quality is threatened by discharges that violate the terms of the VGP2.

### **Conclusion**

As we have shown, neither VGP2 nor MPCA's draft certification assures compliance with the designated and existing uses of Minnesota waters. Since compliance with Minnesota water quality standards cannot be assured, MPCA should revise the draft certification as we have urged.

Thank you for the opportunity to submit these comments.

Sincerely,

Gary Botzek  
Executive Director  
Minnesota Conservation Federation

Joel Brammeier  
President & CEO  
Alliance for the Great Lakes

Thomas Cmar  
Midwest Program Attorney  
Natural Resources Defense Council

Jill Crafton  
Chair  
Great Lakes Committee of Izaak Walton League of America

Larry Dolphin  
President  
Minnesota Division – Izaak Walton League of America

Neil Kagan  
Senior Counsel  
National Wildlife Federation

John P. Lenczewski  
Executive Director  
Minnesota Trout Unlimited

Scott Strand  
Executive Director  
Minnesota Center for Environmental Advocacy

Deanna White  
State Director  
Clean Water Action – Minnesota