



Lake Carriers' Association

The Greatest Ships on the Great Lakes

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Via E-Mail: kate.frantz@state.mn.us

Ms. Kate Frantz

SP-5

Industrial Division

Minnesota Pollution Control Agency

520 Lafayette Road North

St. Paul, MN 55155-4194

Dear Ms. Frantz:

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

Lake Carriers' Association ("LCA") represents 17 American companies that operate 57 U.S.-flag vessels ("lakers") on the Great Lakes and carry the raw materials that drive the nation's economy. Those include iron ore and fluxstone for the steel industry, aggregate and cement for the construction industry, coal for power generation, as well as salt, sand and grain. Collectively, our members can transport more than 115 million tons of dry-bulk cargo per year. They employ more than 1,600 men and women, all of whom are U.S. citizens or legally admitted aliens, and provide annual wages and benefits of approximately \$125 million. In turn, the cargos our members carry generate and sustain more than 103,000 jobs in the United States and have an economic impact of more than \$20 billion.

Thank you for the opportunity to review and comment on Minnesota's Draft Section 401 Conditional Water Quality Certification of the EPA's next Vessel General Permit. We believe that working collaboratively we and Minnesota Pollution Control Agency ("MPCA") can produce a VGP that protects Minnesota's precious Lake Superior waters while allowing Great Lakes freighters to continue to move Minnesota iron ore to steel mills in the United States and Canada.

Importance of Great Lakes Shipping to Minnesota

Great Lakes shipping plays an important role in Minnesota's economic well-being. A recent study, *The Economic Impacts of the Great Lakes-St. Lawrence Seaway System*, determined that waterborne commerce generates almost 6,300 jobs in Minnesota. The vast majority of those jobs – 4,309 – are tied to cargos carried by LCA members.

Primary among these cargos is iron ore in the form of taconite pellets. Minnesota's Mesabi Range is the American steel industry's largest source for domestic iron ore. The pelletized taconite is shipped through four Lake Superior ports, three of which are in Minnesota: Duluth, Superior, Two Harbors and Silver Bay. The table on the following page records shipments from these ports in recent years:

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The Association Representing Operators of U.S.-Flag Vessels on the Great Lakes

AMERICAN STEAMSHIP COMPANY ♦ ANDRIE, INC. ♦ ARMSTRONG STEAMSHIP COMPANY ♦ BELL STEAMSHIP COMPANY
CENTRAL MARINE LOGISTICS, INC. ♦ GRAND RIVER NAVIGATION COMPANY, INC. ♦ GREAT LAKES FLEET/KEY LAKES, INC.
INLAND LAKES MANAGEMENT, INC. ♦ THE INTERLAKE STEAMSHIP COMPANY ♦ LAKES SHIPPING COMPANY
LAKE MICHIGAN CARFERRY SERVICE ♦ PERE MARQUETTE SHIPPING ♦ PORT CITY MARINE SERVICES ♦ PORT CITY STEAMSHIP SERVICES
SOO MARINE SUPPLY, INC. ♦ UPPER LAKES TOWING COMPANY, INC. ♦ VANENKEVORT TUG & BARGE INC.

Shipments of Minnesota Iron Ore on the Great Lakes
(net tons)

Port	2010	2011	Average 2006-2011
Duluth, MN	6,085,176	7,711,147	6,717,316
Superior, WI	7,745,539	8,949,320	8,970,633
Two Harbors, MN	14,119,821	16,271,740	12,536,347
Silver Bay, MN	6,788,916	6,017,263	5,316,839
Total	34,739,452	38,949,470	33,541,135

Source: Lake Carriers' Association survey of Great Lakes iron ore ports.

In each instance, the totals above represent more than 70 percent of U.S. iron ore moving on the Great Lakes.

Cargos delivered to Minnesota are also important. In 2007, the last year before the recession, LCA members delivered nearly 3 million tons of limestone, 1.5 million tons of coal, 190,000 tons of cement, and 117,000 tons of salt to Minnesota.

Summary of Key Points

1. As proposed by MPCA, it will be impossible for an existing laker to legally operate in Minnesota waters after January 1, 2016.
2. Minnesota is proposing the most expansive ballast water discharge requirements on the Great Lakes. Michigan has proposed a more stringent technology based effluent limit that would only apply to oceangoing vessels after 2026; however, oceangoing vessels have already stopped taking on export cargo in Michigan, which eliminates the need for them to discharge ballast water. This is a direct result of previous ballast water regulations adopted by Michigan. With the publication of the U.S. Coast Guard's Final Rule on March 23, 2012, and the draft EPA VGP2, the Federal government has established ballast water regulations that are 1) environmentally protective of the fragile Great Lakes ecosystem; 2) feasible and practicable, thus ensuring widespread compliance; and 3) economically achievable for all segments of the maritime industry. The state of Minnesota and MPCA have long stated their preference for Federal, environmentally protective standards over a patchwork of regional or state regulations. That Federal standard now exists and is enforced by both the Coast Guard and EPA. Therefore, Minnesota should either harmonize its 401 Certification and SDS Permit to reflect the national standards, or withdraw them.
3. There is presently no ballast water management system (BWMS) capable of being installed on our vessels (commonly referred to as lakers) and we do not foresee a BWMS that can accommodate lakers' volumes, flowrates, temperature range and other considerations during the term of the next VGP. This position is supported by numerous independent studies initiated by the U.S. Coast Guard and EPA. Both agencies acknowledged this fact and therefore required lakers to continue to employ Best Management Practices to limit the potential that their ballast might spread an exotic introduced by an oceangoing vessel. Additionally, the states of Ohio, Wisconsin, New York, Indiana, Pennsylvania and Michigan (Illinois has not yet published draft VGP2 regulations or made its intentions known) have also concluded that there are no systems capable of treating the high flow rates common to lakers given the physical constraints of our vessel layouts and operating profiles (short voyages, fresh water, wide temperature range...).
4. We strongly concur with MPCA's determination that a Water Quality Based Effluent Limitation (WQBEL) cannot be established at this time. This determination is supported by numerous studies, including the National Research Council of the National Academies of Science report on ballast water which was funded jointly by the EPA and Coast Guard. We support MPCA's

conclusion that additional research needs to be completed and significantly more data gathered before any scientifically supportable conclusions can be drawn. We urge MPCA to evaluate existing data gathered by ongoing studies by the EPA as outlined in the VGP2 Fact Sheet. Additionally, we recommend MPCA's proposed monitoring requirements be amended to encourage vessel operators and associations to continue conducting more focused scientific studies in lieu of the proposed annual requirement for each ship. Such a targeted data collection would likely yield better, more actionable data.

Minnesota Can Achieve Its Goal by Harmonizing Its 401 Certification and SDS Permit With the Coast Guard Discharge Standard and Schedule and the EPA VGP2.

At various public meetings, and in formal comments to administrative dockets, Minnesota has stated its preference for the adoption of a strong Federal standard which is environmentally protective for Minnesota's state waters. Lacking such Federal guidance, MPCA initiated the General State Disposal System for ballast water discharges in 2008. Since that time, the Coast Guard has published its Final Rule establishing a protective and achievable ballast water discharge standard, an implementation schedule which is reasonable, yet aggressive, and a process for Type Approving Ballast Water Management Systems to ensure they will operate effectively in all environments, including the Great Lakes. The EPA is also proposing Federal standards for ballast water discharge in its VGP2.

We applaud MPCA's decision to adopt most of the provisions of the U.S. Federal regulations and International Maritime Organization's Convention as it pertains to an achievable, and protective standard, as well as an implementation schedule which is feasible and practicable for oceangoing vessels. However, minor differences remain which can cause confusion to the maritime industry and which may result in unintended non-compliance by shipowners. One such example is the minor difference in organism size classes between the MPCA's draft certification and both the IMO and Coast Guard federal standards.

Another such example is the lack of a definitions section in the permit. There are several terms – such as “construction date”, “operate exclusively on the Great Lakes”, and “within the Exclusive Economic Zone or Canadian equivalent” which are open to significant interpretation, which could have major impacts on the implementation of the permit.

Therefore, we strongly urge MPCA to simply incorporate by reference the recently published Coast Guard Final Rule regulations – including the definitions, standards, applicability and implementation schedule – into its 401 Certification. This would ensure that Minnesota's permit requirements reflect the MPCA's and DNR's intention, as stated by Jeff Stollenwerk during the Coast Guard's public meeting in Chicago on October 2, 2009 and in the comments to the Coast Guard docket, “to support a Federal regulation that is protective of Minnesota waters.”

While we understand that the SDS Permit will not expire until late 2013, we urge Minnesota to consider discontinuing the issuance of SDS Permits for ballast water since they are now unnecessary due to existing Federal regulations promulgated by the Coast Guard and the Vessel General Permit. If immediate discontinuation is not an option due to legal reasons, it should be discontinued in 2013.

Another option would be for the next iteration of the SDS permit to adopt existing regulatory requirements, much as Ohio's 401 Certification has directly adopted either Coast Guard or IMO discharge standards.

No Ballast Water Management Systems Presently Available for Installation Onboard Lakers

At the Federal level, both agencies which have jurisdiction over ballast water discharges – the U.S.

EPA and the Coast Guard – have determined that there are presently no ballast water management systems available which can be installed and operate satisfactorily on lakers. The states of Wisconsin, Ohio, New York, Indiana, Pennsylvania and Michigan have all reached the same conclusion. In fact, except for Minnesota, none of the Great Lakes states has included in their VGP2 draft 401 Certifications, state permits or implementing regulations any requirement for the installation of ballast water management systems onboard lakers.

In addition to the obvious difference in risk associated with vessels which are confined to the Great Lakes versus vessels which can bring non-indigenous species into the Great Lakes, there are several factors which make lakers significantly different from oceangoing vessels. First, even our smallest lakers typically have flow rates which are several times higher than their oceangoing counterparts. In the case of our largest, most efficient and environmentally friendly “thousand footers,” they have flow rates approaching 80,000 gallons per minute. To put this in perspective, Western Lake Superior Sanitary District (“WLSSD”) includes the cities and towns of Duluth, Hermantown, Proctor, Cloquet and three smaller municipalities. On an average day, the WLSSD processes approximately 2.0 million gallons of water per hour at their facility. This is only 60 percent more than the flow rate of a thousand footer. Yet, the WLSSD facility encompasses approximately 15 acres, contains 12 treatment tanks and miles of piping. Imagine the difficulty – or impossibility – of attempting to squeeze such a system into the confines of a laker. There are simply no BWMS presently in production or being designed which have the capability to treat these extremely high flow rates on existing lakers. Vessel ballast rates must match the rate of cargo operations or structural failure is certain.

Equally important, we do not anticipate that systems that can accommodate lakers' requirements will exist during the term of VGP2.

Second, our ships' longest voyages are no more than five or six days and most are three days or less. Some voyages are only several hours. Compare these transit times to an oceangoing ship which may have a voyage of several weeks or even months. Many treatment systems which use biocides to kill organisms require hold times of several days to first kill the organisms, then several more days to degrade sufficiently so as not to be harmful to the environment upon discharge. The extremely short duration of our voyages, coupled with the extreme cold water experienced throughout much of the navigation system would render such treatment systems ineffective and potentially damaging to the environment.

Third, all of our vessels have uncoated ballast tanks. Due to the fresh water operating environment, many of our ships have been in safe operation for 75 years or more with very little internal corrosion. Introducing a biocide, particularly one of the many oxidants such as chlorine or ozone, would quickly cause the deterioration of these tanks. The existing condition of the tanks, welding techniques used and structural limitations make coating the tanks ineffective.

Many of the systems which might receive Coast Guard type approval are not practicable for use on Great Lakes vessels. For example, many electrolytic chlorination systems are being developed which might be able to treat at flow rates which approach those of our smallest vessels. However, those systems require salt water, hence they are suitable for oceangoing vessels. The use of a brine tank would be highly corrosive to the uncoated ballast tanks. Those electrolytic chlorination systems have very high power requirements which would exceed the power generation and distribution capability of our ships, particularly given the fact that they would need to be operated simultaneously with the self-unloading equipment.

Lake Carriers Association agrees with the conclusions drawn by the Science Advisory Board, the U.S. Coast Guard, the EPA and several Great Lakes states that there are no ballast water management systems presently or foreseeable during the term of the VGP2 available that can be

fitted on board our existing fleet of lakers. We urge MPCA to reconsider its position regarding applicability and adopt the position taken by these other regulatory agencies which also have responsibility for protecting the waters of the Great Lakes. The draft 401 requirements do not provide a viable option for lakers to legally operate in Minnesota after 2016.

Water Quality Based Effluent Limits (WQBEL)

We strongly support MPCA's conclusion that a Water-Quality Based Effluent Limit cannot be determined at this time. This conclusion echoes the determination made by the National Research Council of the National Academies of Science which stated "the existing data are not sufficient to characterize a biologically meaningful relationship, much less estimate the associated uncertainty, to be able to identify with confidence the invasion probabilities associated with particular discharge standards."

We agree with MPCA that additional data is required before a water quality based standard is developed in the future. We believe that a robust scientific effort must be undertaken before such a WQBEL standard can be developed. It is our understanding that based on the conclusions drawn by the NAS, that the EPA and the Coast Guard have initiated such a study. Other research organizations and institutions are undertaking similar studies, including Canada's Department of Fisheries and Oceans and the Great Lakes Ballast Water Collaborative, of which LCA and several of its members are active.

We don't believe that the annual monitoring program proposed by MPCA will yield the kind of data necessary to make a fully informed determination regarding the establishment of a WQBEL. We propose, as an alternative, that shipowners or associations such as LCA, Shipping Federation of Canada and Canadian Shipping Association, be given the option of continuing to work with the scientific community to develop targeted, scientific studies to collect information useful to not only MPCA, but other regulatory and academic bodies. Any such studies would be subject to the approval of the MPCA and could include collaborative efforts among government, academia, the maritime industry and environmental non-government organizations.

Coverage of Lakers Confined to Upstream of the Welland Canal

The "***recommended***" BMPs for inclusion in the ballast management plan and implemented prior to discharge of ballast in Minnesota were developed to be used during an active VHS incident as determined by the Coast Guard and the Great Lakes' Fishery Commission's Council of Lake Committees. Since the development of that protocol in 2006, portions of all five Great Lakes have been determined to contain the VHS virus. The Great Lakes fishery appears to have adapted to the presence of VHS virus and there has been no recent fish kill connected to the virus. It would be unwise and unsafe for a vessel operator to use the "***recommended***" BMPs on a routine basis; however, it is not unreasonable for them to be incorporated into a vessel's ballast management plan for use, should the Coast Guard and Council of Lake Committees declare an active VHS incident is occurring in an area where vessels are unable to avoid the uptake of ballast.

When Treatment Systems Are Available For Lakers

As we have stated repeatedly, there are no BWMS that can accommodate lakers' operational requirements. Nor do we expect any will be available during the term of VGP2. Both the Coast Guard and EPA have positively stated that when ballast water treatment systems become available for use on lakers, the Federal agencies will draft regulations to require their use.

Once an ANS has taken root, it can and will migrate independent of commercial navigation. Take for example the ruffe. Since 1993, it has been migrating along the southern shore of Lake Superior at a rate of about 25 miles per year. And once the ruffe reaches the St. Marys River, the rest of the Great Lakes lie before them.

Another critical factor to consider is that lakers' ballast is but one of many means of introducing and spreading ANS. The U.S. Geological Survey has identified 64 and ballast is but one. See Attachment A.

Recommended Changes and Edits to Specific VGP Certification Conditions

1.a. Table A Biological Performance Standards for Ballast Water Treatment Technology. The organism size classes differ slightly from the IMO Ballast Water Management Convention, Coast Guard Final Rule and EPA Draft VGP2. This is most likely due to an administrative error in the Coast Guard's Notice of Proposed Rulemaking which was subsequently changed in the Final Rule. To align with the aforementioned standards, the organism class sizes should be: Organisms $\geq 50 \mu\text{m}$ in minimum dimension; Organisms $<50\mu\text{m}$ and $\geq 10 \mu\text{m}$. Although this difference may seem trivial, from a legal standpoint and a type approval standpoint, consistency with Federal and international standards is critical to ensure consistent enforcement and compliance testing.

Additionally, it is likely that the IMO and U.S. Coast Guard will adopt an instantaneous maximum or time-weighted average as the limit type for discharges. This is due to a variety of factors, most notably that it is exceedingly difficult to conduct a ballast water discharge sample during the entire course of the ballast water discharge. Therefore, we recommend MPCA adopt the limit type and sample type which are finally adopted by the U.S. Coast Guard to ensure consistency in enforcement.

1.b. Vessels Constructed prior to January 1, 2012. For the reasons detailed previously, we do not believe there are or will be ballast water management systems (BWMS) which will be effective on lakers by the January 1, 2016 implementation date.

1.c. Vessels Constructed after January 1, 2012. According to a report completed by International Maritime Environmental and Safety Associates¹, the first U.S. Coast Guard type approved BWMS will not be available until 2 ½ to 3 ½ years from the date on which the Coast Guard finalizes its policy and programs for type approval meaning such systems will not be available until January 2015 at the earliest. Thus, requiring vessels constructed after January 1, 2012 to have BWMS on board prior to commencement of vessel operations in MN waters is an impossibility.

6. Coverage of lakers confined to upstream of the Welland Canal. It is unclear where the delineation line is regarding the term "upstream of the Welland Canal". We recommend the downstream end of the Welland Canal (i.e., the Lake Ontario end) be established as the delineation line. The natural flow of water in the Great Lakes system is from the west to the east, so this flush effect allows for moving the delineation without fear of facilitating introduction or spread of ANS. Also, due to its unique design, one of our member's vessels can only drydock at the facility at Port Weller, which is just upstream of the final (northernmost downstream) lock in the Welland Canal. Additionally, the term "confined" can be open to interpretation. While many of our vessels are capable of transiting through the Welland Canal to Lake Ontario, and are certificated by the U.S. Coast Guard to do so, they normally do not. Therefore, we recommend the term "confined" be changed to "lakers operating exclusively upstream of the northernmost lock in the Welland Canal" to avoid confusion. We note,

¹ Report to St. Lawrence Seaway Development Corporation Regarding Ballast Water Type Approval Process and Obstacles Associated with Installation of Non-Coast Guard Type Approved Ballast Water Management Systems; Jan 4, 2012; International Maritime Environmental and Safety Associates

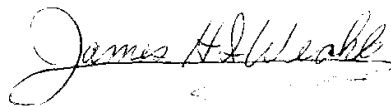
however, that some vessel operators and trade associations have made compelling arguments that Anticosti Island should be the delineation line.

General Comments. As mentioned above, the lack of a definitions section can lead to significant confusion and misinterpretation which could, in turn, lead to unintentional non-compliance by the shipping industry. As with the general body of the permit, we urge MPCA to directly adopt the definitions from 33 Code of Federal Regulations Part 151, Subparts C and D which contain the Coast Guard's new and existing ballast water regulations.

Conclusion

Lake Carriers' Association has taken several steps to address the problem of water ballast transport of ANS. In fact, our first effort dates back to 1993 and dealt with trying to contain the ruffe to western Lake Superior. But despite everyone's efforts, the problem persists, worldwide. We hope the ballast water treatment systems that will be installed on oceangoing vessels will permanently end new introductions of ANS to the Great Lakes. We will continue to do our best to minimize the potential that our members' ballast might spread an ANS. We cannot, however, comply with MPCA's requirement to meet the IMO Standard by January 1, 2016 now or during the term of VGP2. We will take the steps we can – our current Best Management Practices, and perhaps implement other measures, but we cannot meet the requirements MPCA has proposed. We hope come January 1, 2016 we will still be able to be a vital partner with Minnesota's iron mining industry and other enterprises. That is, unfortunately, uncertain at this time.

Very Respectfully,



James H. I. Weakley
President

Cc: LCA Board of Directors
Bruce Bowie, Canadian Shipowners Association

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Appendix A

Vectors for Introduction and Spread of Non-Indigenous Species Identified by U.S. Geological Survey

Accidental	Hitchhiker - Plants	Released – Packing Material
Canal	Hitchhiker - Platforms	Released - Pet
Dispersed	Hitchhiker - Scuba Gear	Shipping
Dispersed - Flood	Hitchhiker - Oysters	Shipping - Ballast Water
Dispersed - Ocean Current	Hitchhiker - Stocked Fish	Shipping - Hull Fouling
Dispersed - Waterfowl	Hitchhiker With Tunicates	Shipping - Solid Ballast
Escaped Captivity	Hybridized	Stocked
Escaped Captivity - Aquaculture	Ocean Currents	Stocked - Aquaculture
Escaped Captivity - Farm	Planted	Stocked - Aquarium
Escaped Captivity - Fur Farm	Planted - Erosion Control	Stocked - Escaped
Escaped Captivity - Pet	Planted - Food	Stocked - For Biocontrol
Escaped Captivity - Pond	Planted - Forage	Stocked - For Conservation
Escaped Captivity - Research	Planted - Ornamental	Stocked - For Exhibit
Escaped Captivity - Zoo	Planted - Restoration/Mitigation	Stocked - For Food
Gulf Stream Drift	Planted - Wildlife Habitat	Stocked - For Forage
Hitchhiker	Released	Stocked - For Research
Hitchhiker - Fishing, Boating	Released – Aquarium	Stocked - For Sport
Hitchhiker - Aquaculture	Released - Bait	Stocked - Illegally
Hitchhiker - Aquatic Plants	Released - Fish Food	Stocked - Misidentified
Hitchhiker - Imported Logs	Released - Biocontrol	Stream Capture
Hitchhiker - Imported Plants	Released - Food	Unknown
Hitchhiker - Packing Material	Released - Lab Animals	

Source: U. S. Geological Survey database Great Lakes Aquatic Non-Indigenous Species Information System