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GREAT LAKES AND MISSISSIPPI RIVER INTERBASIN STUDY

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First Name(required): Robert Last Name(required): Stegmier

Organization/Tribe (Official Representatives only): _____

Street Address: _____

City: _____ State: _____ Zip Code (required): 49341

Public Scoping Meeting Location: _____

Date of Comment: _____

Comment Number: PR 1



US Army Corps
of Engineers®

January 27, 2011

Good afternoon ladies and gentleman.

My name is Robert Stegmier; I live in Rockford Mi about 140 miles south of here and 30 miles from the Lake Michigan shore, the city of Muskegon, Muskegon Lake and the famous Muskegon River..... I am a member of a chapter there of the Izaak Walton League of America a sportspersons conservation group established in 1922 with the mission to protect.... the Soil, Air, Woods, Waters and Wildlife.... **I am a member of the Ike's Great Lakes Committee.**

A little early history.....The League was very instrumental of getting the Boundary Waters Canoe Area established as well as the National Elk Refuge in Wyoming.

I am aware that you have heard much information regarding the Asian carp threat from some of my fellow committee members such as..... **George Guyant in Milwaukee..... Jill Crafton and David Zentner in Duluth** and had some good personal discussions with them too..... Thanks for listening to what they had to say.

I'll add one point for you to consider improving to your arsenal of river deterrent of the Asian Carp. That is to add chlorine through a diffuser pipe. This could be placed in rivers in conjunction with electrical barriers or in locations not suitable for electrical barriers. Fish swim away from chlorine.

Their points of concern are my mutual concerns too.... I believe those same concerns are shared by everyone in this audience..... **But today my major reason for speaking** is to point out that my personal fishing experiences are very much in jeopardy as they are for most folks here too..... Also such fishing experiences for my grand children and great grand children may be ended over ...before they even begin.

I believe and I think you do too..... that my fishing experiences with trips to the Muskegon R, Pere Marquette R, Manistee Rivers and the Big Two Hearted R in the UP as well as my big lake fishing for salmon, Lake Trout, Steelhead, Brown Trout, walleye, perch, white fish northern pike and muskellunge are in serious jeopardy of being destroyed along with the Lake Sturgeon .

I also know that you know the overall jeopardy is the devastation of a \$7 Billion plus each year of fisheries throughout the Great Lakes and to the citizens of the US and Canada..... Folks from all over US, Canada and other countries come to fish these waters.

I believe you also understand that the electrical barriers now in place along with others proposed are and will not be infallible..... **They will fail from time to time** and I believe will fail in the ultimate goal of keeping the present great threat of the Big head and Silver carp from getting into the Great Lakes.

I believe you knew before you left your offices to conduct these hearings that the potential damage is over \$7 Billion dollars each year. So while you are getting some more nitty gritty and fish stories you really are learning nothing more about solving the problems associated with the task of completing the needed task to accomplish a hydrological separation of the Great Lakes from the Mississippi River system.

So in my bewilderment.....I seriously wonder why you aren't down in **Chicago and Northern Indiana collecting the information you need and taking the first positive action** towards making the complete and positive hydrological separation that is needed.

I believe your target date of 2015 for your report to do something, whatever that something is, simply unacceptable. You need to double your effort and accomplish the task in half that time.

My charge to you is go back to Chicago and get rolling 24/7 to determine how and where to start the complete hydrological separation needed. .

Thank you very much for this opportunity to speak.

I can be reached at 616-866-4769 and rstegmier@ameritech.net

Robert Stegmier

616-866-4769

rstegmier@ameritech.net

www.iwla.org



January 18, 2006

**Izaak Walton League of America
Position Paper on Ballast Water Management in the Great Lakes**

The Izaak Walton League of America (IWLA) recognizes that commercial navigation on the Great Lakes is an important form of commerce for the Great Lakes states, the U.S., Canada and many foreign countries. Unfortunately, ballast water discharged from oceangoing vessels passing through the Great Lakes contain invasive species and sometimes human pathogens that create significant changes to the Great Lakes ecosystem and are a potential health threat to residents. It is well documented in the Great Lakes and other places that once a nonindigenous species is introduced into an aquatic system, they are difficult to control and likely impossible to eliminate.

The IWLA has established policy on invasive species and the treatment of ballast water.¹ The IWLA has determined that further reforms are necessary to require the shipping industry to comply with best available technology and management practices for the removal or destruction of non-native organisms in ballast water. Without swift and full compliance, additional non-native invasive species will continue to be introduced and the danger to the ecosystem will outweigh the benefits to the Great Lakes' states economies. Economists from Grand Valley State University estimate the cost of existing invasive species ranges from \$200 million to \$5 billion per year, and that the economic benefit of oceangoing commerce in the Great Lakes is approximately \$55 million annually.²

From 1994-2003 an average of 535 oceangoing foreign ships entered the Great Lakes per year.³ It is estimated that about six million metric tones (1.584 billion gallons) of foreign ballast water mixed with lake water is discharged in the Great Lakes each year.⁴

Ballast water is thought to be the source for zebra mussels, Eurasian ruffe, the round and tubenose gobies, spiny water fleas, and quagga mussels. Some 160 other species of fish and invertebrates have invaded the Great Lakes, most since the St. Lawrence Seaway opened in 1959. It is estimated by assistant Professor Anthony Ricciardi of McGill University in Montreal that a new invader is identified in the Great Lakes about every 7 months.⁵ This is unacceptable. These nonindigenous species disrupt the natural Great Lakes ecosystems, impact the natural reproduction of native fish and invertebrates, exacerbate botulinus toxin outbreaks which kill birds and animals, and have other adverse impacts on native flora and fauna. Further, many of

these species quickly spread to inland waters throughout the U.S. The economic impact to the sport and commercial fisheries of the Great Lakes is estimated by the U.S. Fish and Wildlife Service to be \$4 billion annually.

The Viral Hemorrhagic Septicemia (VHS) virus, a fish-killing pathogen that originated in Europe, has now caused large-scale fish-kills in Lakes Ontario, Erie and St. Clair from 2005-07. VHS virus is virulent and contagious through water and infected fish exposure, causing internal and external bleeding followed by death. It has been confirmed in the killing of thousands of Great Lakes fish.⁶ Without immediate action this disease will spread to other Great Lakes by shipment of VHS-containing water used for ballast in vessels and will cause serious damage to many Great Lakes fish populations. All Great Lakes ballast water must be disinfected and made free of pathogens, and any residual disinfectant toxicity must be neutralized before ballast water is released into receiving water.

At present, treatment of ballast water before discharge from the ships is the most effective way to address the introduction of non-native invasive species to the Great Lakes ecosystem. To ensure this protection, the IWLA recommends the immediate use of chlorine for the treatment of all ballast water in ships entering the Great Lakes through the St. Lawrence Seaway (“salties,” or sea-going) and in intra-lake vessels (“lakers”) that carry goods among the different Great Lakes basins. The purpose of the chlorine treatment is 1) to kill as many invasive plants, animals, invertebrates, and human pathogens as possible from “salties” entering the Great Lakes and 2) to control the movement of invasive species and pathogens between different Great Lakes by treating ballast water in “lakers” or “salties” moving between basins.

Chlorine and/or other ballast water treatment have been used in treating ballast water in other countries, including Chile, Argentina, and New Zealand.⁷ Studies show that using chlorine can remove more than 90% of aquatic invasive species when treated to a residual of 10 ppm (parts per million) of sodium hypochlorite.⁸

Professional engineer and IWLA member Frederick Eyer, who has spent his career in management of water treatment facilities, estimates the cost to treat ballast at 10 ppm of sodium hypochlorite and dechlorination of the residual with sodium bisulfite to be \$1.57 per/thousand gallons, or \$157 per million gallons. He further suggests the costs of two metered pumps for application of the sodium hypochlorite and sodium bisulfite to be less than \$1000 each.

The IWLA is aware of the toxic nature of chlorine and therefore believes that any sources used in its manufacture should be free of mercury emissions. Further, ballast water needs to be thoroughly dechlorinated before discharge. Also, tests for residual chlorine levels and neutralizing additives should be required to eliminate negative impacts on the Great Lakes.

Chlorine treatment is only part of the solution. Environmentally protective ballast water standards must be set with an aggressive timeline for implementation. The IWLA encourages the shipping industry to invest in research and development of technologies that may be more effective than chlorine treatment of ballast water. In addition to on-board solutions such as chlorine treatment, shore treatment facilities should be developed by the industry or the Army Corps of Engineers at several locations along the Seaway. These facilities should be capable of

treating ballast water on ships for invasive species and removing bottom sediments. The cost of operation of these facilities should be borne by the shipping industry on a “user pay” basis.

The IWLA further encourages the shipping industry to implement sediment removal on a routine basis as a Best Management Practice. Doing so increases the effectiveness of any ballast water treatment and, in the case of biocides, significantly reduces the amounts of chemicals needed as well as the cost per treatment.

Finally, the IWLA suggests that “empty” ballast water tanks be treated with chlorine or another acceptable biocide. The average residual sediment and water remaining in a ship *after* it has off-loaded its ballast water is 42,000 gallons.⁸ This secondary treatment would further reduce hard-to-treat aquatic invasive species or those that burrow into the sediment on the bottom. The amount of chemical remaining when the ship took on new ballast would be a part of that treatment although it is quite probable little would remain after 24 hours if the ship was under movement.

To assure that rapid progress is made on the best management practices described above, the IWLA supports the enactment of compatible laws by the Great Lakes states requiring Clean Water Act discharge permits for the discharge of ballast water. States could suspend these laws upon demonstration of adequately protective federal regulations.

Since the League was formed in Chicago in 1922, the Great Lakes ecosystem has been considered by our members to be a valuable natural resource. The Great Lakes are a significant economic resource to the Great Lakes states and Canadian provinces. The IWLA urges decision-makers and the shipping industry to seriously address the problem of invasive non-native species and take the necessary steps to protect this national treasure.

¹ Conservation Policies 2005. Izaak Walton League of America. 04 Jan. 2006. www.iwla.org/policies/conservationpolicies.pdf. See pages 57-58.

² Taylor, John C., and James L. Roach. “Ocean Shipping In the Great Lakes: Transportation Cost Increases That Would Result From A Cessation of Ocean Vessel Shipping.” December 2005.

³ From the affidavit of Raymond Vaughan in support of the petition of the states of New York, Wisconsin, Minnesota, Ohio, Illinois, the Commonwealth of Pennsylvania, the Michigan Department of Environmental Quality, and Great Lakes United to the United States Coast Guard. Contact committee members for more information. See also http://www.oag.state.ny.us/press/2004/jul/jul15b_04.html.

⁴ Reeves, Eric. Analysis of Laws and Policies Concerning Exotic Invasions of the Great Lakes: A Report Commissioned by the Office of the Great Lakes, Michigan Department of Environmental Quality. 15 March 1999. <http://www.deq.state.mi.us/documents/deq-water-great-lakes-aquatics-exotic2.pdf>. *Note: 1 metric tonne is approximately 264 gallons, therefore six million metric tonnes equals 1.584 billion gallons of foreign ballast.*

⁵ Meersman, Tom. "Invaded Waters." Star Tribune, 13 June 2004.

⁶ USDA-APHIS Emerging Disease Notice, July 2006:

http://www.aphis.usda.gov/vs/ceah/cei/taf/emergingdiseasenotice_files/vhsgreatlakes.htm; and
http://www.michigan.gov/documents/dnr/Viral-Hemorrhagic-Septicemia-Fact-Sheet-11-9-2006_178081_7.pdf

⁷ Aquatic Nuisance Species in Ballast Water Discharges: Issues and Options. U.S. Environmental Protection Agency. 10 Sept. 2001. http://www.epa.gov/npdes/pubs/ballast_report_attch5.pdf.

⁸ Reeves, Eric. Analysis of Laws and Policies Concerning Exotic Invasions of the Great Lakes: A Report Commissioned by the Office of the Great Lakes, Michigan Department of Environmental Quality. 15 March 1999. <http://www.deq.state.mi.us/documents/deq-water-great-lakes-aquatics-exotic2.pdf>.

IZAAK WALTON LEAGUE of America

November 30, 2009

Recommendations to the United States Coast Guard for Ballast Water Treatment.

United States Coast Guard Docket Number USGC-2001-10486; Notice of Proposed Rulemaking
Docket Management Facility (M-30)
U.S. Department of Transportation
West Building, Ground Floor, Room W12-140
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590-0001

To Whom It May Concern:

The Izaak Walton League's **Great Lakes Committee** respectfully submits these comments in response to the Notice of Proposed Rulemaking and Draft Environmental Impact Statement on Standards for Living Organisms in Ships' Ballast Water Discharged in U.S. Waters: Docket Number USCG-2001-10486.

The Izaak Walton League supports strong federal protections against the introduction of invasive aquatic species into our **Great Lakes** from ballast water dischargers. The continuing onslaught of these invasive species is biological pollution and one of the greatest threats to the health of the Great Lakes ecosystem, the most magnificent freshwater resource in the world.

The Izaak Walton League of America [was] founded in 1922. In addition to national staff, the League has 300 local chapters and state divisions that attract conservationists who roll up their sleeves to clean up litter, plant trees, monitor water quality and get involved with environmental education and wildlife habitat enhancement.

Aquatic invasive species introduced by ballast water discharges, like the *zebra mussel* and *round goby*, have already caused permanent ecosystem damage, have cost taxpayers hundreds of millions of dollars in control and suppression expenses, and have undermined our valuable sport fishery. New invasive species are entering our Great Lakes at an alarming rate: on average one every 28 weeks. Several invasive species introduced in the Great Lakes have also continued to spread through waterways across the nation.

In the proposed rule, the Coast Guard requested comments on whether or not the Great Lakes should be treated differently from the rest of the country in ballast regulations.

Since the League was formed in Chicago in 1922, the Great Lakes ecosystem has been considered by our members to be a valuable natural resource. We believe the Great Lakes should receive special treatment and requires the strictest protections from invasive species. The Great Lakes are especially susceptible to damage from invasive species and from other pollutants because the water in the larger lakes is flushed only once every 500 or more years.

Therefore, any pollutants, once in the lakes, are likely to stay rather than flush out, as they would in ocean environments. An invasion into the Great Lakes, unlike a coastal invasion, can quickly and easily spread across the freshwater rivers and lakes of North America. In the United States, congressional researchers estimated that zebra mussels cost the power industry alone \$3.1 billion in the 1993-1999 period, with their impact on industries, businesses, and communities over \$5 billion.

In addition, the Great Lakes are the direct source of drinking water for more than 30 million people in the United States and Canada. The greatest threat to our drinking water security is contamination from microbes, bacteria and viruses that can threaten human health if ingested. Modern drinking water treatment systems are effective at killing microscopic organisms before the water is sent to our taps. These systems rarely fail, but when they do the consequences can be serious. In 1993, a parasite known as *cryptosporidium* was in the waters of Lake Michigan off the shores of Milwaukee, Wisconsin. It got into drinking water supply and an outbreak affected more than 403,000 people, causing numerous deaths. It is the largest waterborne disease outbreak ever recorded in the United States.

We know that ballast tanks can transport dangerous types of microbes and pathogens, like *Cholera* and *Giardia*. **NOAA** determined that 49% of ballast tanks tested positive for one or more human pathogens. It is essential that high levels of protections are in place to ensure that human pathogens are not carried into the Great Lakes from ballast, and compromises the drinking water for tens of millions.

We appreciate the Coast Guard's proposed rule and believe it is an important step forward. Unfortunately, it falls short in effectively controlling invasive species. For example, even the proposed Phase I standard of less than ten organisms larger than 50 microns (i.e., fish) per cubic meter of ballast water would equal up to 378,790 live fish per thousand-foot boat load of 10 million gallons, which is the typical ballast water volume in a Great Lakes vessel.

This number of live contaminated fish is totally unprotective and unacceptable. Even the proposed Phase II standard for fish (less than 1 organism larger than 50 microns per 100 cubic meter of ballast water would allow 378 live fish per thousand-foot boat load of untreated ballast water. This number would not prevent the spread of VHS in infected carrier fish or prevent the establishment of invasive fish populations such as the *Eurasian ruffe*.

The number of fish discharged **needs to be zero** to truly protect the Great Lakes. Zero discharge is not inconsistent with current law. **In fact, the National Invasive Species Act (NISA) requires the Coast Guard to establish a zero discharge standard** for the introduction and spread of nonindigenous species.

Therefore, we ask you to significantly strengthen the proposed ballast rule to ensure that ships are not able to introduce or spread these harmful invasive species in U.S. waters.

We strongly recommend the following amendments to the draft rule:

1. Replace the proposed Phase I standards with the stricter standards proposed for Phase II. The proposed Phase I standards, which are those recommended by the **International Maritime Organization (IMO)**, are too weak. The final rule should require ballast water treatment that mirrors the California and New York state standards by no later than 2012.

2. Replace the proposed Phase II standards with stricter standards to bring us as close to zero discharge of live organisms as possible by 2014.

3. Close the practicability review loophole that could delay the implementation of these new standards. The scope of the practicable review should be consistent with the mandate of the **NISA**, which requires that the regulations “ensure to the maximum extent practicable that aquatic nuisance species are not discharged into waters of the U.S. from vessels.” In addition, it is critical that the review process be an open and transparent one that invites comments from all interested parties.

4. Continue to protect the authority of the U.S. **EPA** and the states to help solve this enormous problem. For better clarity, the Coast Guard should modify the rule to stipulate that the agency will conduct its NISA Practicable Review in direct cooperation with the U.S. EPA.

5. Retain the states’ rights to impose even stricter standards than the national standards.

6. Lakers operating exclusively within the Great Lakes and the St. Lawrence River should be regulated to the same extent as ocean-going vessels as they are significant parties to the spread of aquatic invasive species within the Great Lakes.

7. The new regulations must require the Coast Guard to address the impacts of invasive species introduced in ways other than ballast water, such as anchors, anchor chains, and hulls, as well as effective methods to reduce or eliminate the introduction of invasive species through these vectors.

8. The final rule should include strict provisions for enforcement of the new regulations, including outlining the penalties that will be invoked for violations and the amount of financial resources that will be dedicated to enforcement. The history of efforts to deal with invasive species discharged into the Great Lakes from ballast water over the last 20 years has been characterized by delay, loopholes in protection, and poor enforcement that have only exacerbated the problem. We cannot afford another 20 years – or even five years – of the same. It is important to put in place an effective, decisive solution now.

We greatly appreciate your consideration, and urge you to adopt our recommendations in the final rule.

Sincerely,

Great Lakes Committee
Izaak Walton League of America, Inc.

Jill Crafton, Chair IWLA Great Lakes Committee, Minnesota, IWLA
Leah Miller, Clean Water Program Director, IWLA

IWLA Great Lakes Committee Members:

Wendy Reid, Illinois; Emil Garcia, Indiana; Charlotte Read, Indiana; Timothy Russell, Indiana
Jim Sweeney, Indiana; Robert Stegmier, Michigan; John Trimberger, Michigan; Dave Dempsey, Minnesota; Gary Glass, Minnesota; Dave Zentner, Minnesota; Les Monostory, New York; Rick Graham, Ohio; Jeanne Agneessens, Wisconsin; Jerry Ernst, Wisconsin; George Guyant, Wisconsin.

Contact information; Dwight Lydell Chapter IWLA, Bob Stegmier conservation Chair, 616 866-4769, rstegmier@ameritech.net
www.iwla.org www.michiganikes.org