Issue: Moratorium on Ocean-origin Great Lakes Shipping

Conservation Topics: Great Lakes Health, Aquatic Invasive Species & Diseases

Background:

It is estimated that more than 162 non-native aquatic invasive species have been either accidentally or intentionally introduced into the Great Lakes Basin (Ricciardi 2001). These new species and diseases fundamentally alter the structure and functioning of the Great Lakes ecosystem, leading to major ecological and economic impacts (Pimentel et. al. 2000). Once introduced, these species are at best controlled, but not removed. Natural resource stakeholders are left to incur both the costs of irreversible ecosystem changes, and the perpetual costs of managing the abundance of the invasive species. A recent review of scientific literature on the economic costs of invasive species on the Great Lakes, estimates a minimal range between US$200 – 500 million per year, and found estimates that ranged up to $5 billion per year (Taylor and Roach 2005). With the recent introduction of Viral Hemorrhagic Septicemia (VHS) into the Great Lakes, the potential risks of aquatic invasives are highlighted. This newly introduced disease has the potential to impact all Great Lakes fisheries, including inland waters. The value of these fisheries is tremendous (e.g., fisheries in all waters of Michigan are valued at $4.5 billion annually) and are fundamental to the quality of life of all citizens in this region. Once in the Great Lakes, these species can spread to other areas (e.g., the Mississippi River Drainage), and the estimated costs of invasives species in all of the U.S. is $123 billion per year (Pimentel et. al. 1999).

Ballast water from ocean-origin Great Lakes shipping vessels is widely accepted as the dominant vector for the introduction of new aquatic invasive species into the Great Lakes Basin (an estimated 72% of new invasive species are attributable to ballast water practices (Mills et. al. 1993)) (IAGLR 2002). Ocean-origin Great Lakes shipping transports only approximately 7% of the total tonnage transported in the Great Lakes – St. Lawrence Seaway system (12.3 million of 180 million metric tons in 2002) (Taylor and Roach 2005). If this form of shipping was ceased, and alternative transportation in the forms of lake-only Great Lakes shipping, train, barge, and truck were alternatively used, the cost to the industry is estimated at ~$55 million per year (Taylor and Roach 2005).

Development of adequate policies, regulations, technologies, and enforcement for the treatment of ballast waters has not occurred. Despite almost universal agreement by natural resource agencies, that current ballast management practices are insufficient to provide adequate protection to the Great Lakes, federal and international policy to correct this issue appears distant. Many conservation groups have recently begun calling for a moratorium on ocean vessel access to the Great Lakes, in recognition that without further prioritization placed on this issue, new protections will not be developed, and our Great Lakes will continue to be invaded by new invasive species.

Position Statement:

Given: that our Great Lakes ecosystems are continually perturbed through the introduction of aquatic invasive species, with significant irreversible ecological, social and economic impacts, *and;*

Given: that ocean-origin Great Lakes shipping, with associated ballast water practices, is widely accepted as the major vector for the continual introduction of new aquatic invasive species into the Great Lakes Basin, *and;*

Given: the impacts of these invasive species introductions to Great Lakes resources, and the costs to continually manage these invasive species fall on public citizens to bare, and could currently be prevented at a small fraction of the cost by the private industry which benefits economically;

We: Michigan Council of Trout Unlimited, a coalition of 23 Trout Unlimited chapters in the State of Michigan, representing more than, 7,000 members, dedicated to conserving, protecting and restoring coldwater fisheries and their watersheds;

Support: a moratorium be placed on ocean vessel access into the Great Lakes until such time when sufficient ballast water management technology, regulation, and enforcement are in place to ensure the prevention of future invasive species introductions into the Great Lakes via this vector, *and;*

Request: the United States Congress, the Canadian Parliament, and the State of Michigan Legislature take immediate action into this matter.

References:

International Association for Great Lakes Research (IAGLR). 2002. Research and management priorities for aquatic invasive species in the Great Lakes. Accessible at: (www.iaglr.org/scipolicy/ais).

Mills, E.L., J.H. Leach, J.T. Carlton, and C.L. Secor. 1993. Exotic species in the Great Lakes: a history biotic crises and anthropogenic introductions. J. Gt. Lakes Res. 19: 1-54.

Pimentel, D. L. Lach, R. Zuniga, and D. Morrison. 2000. Environmental and economic costs of nonindigenous species in the United States. BioScience 50: 53-65.

Ricciardi, A. 2001 Facilitative interactions among aquatic invaders: is an "invasional meltdown" occurring in the Great Lakes? Can. J. Fish Aquat. Sci. 58:1-13.

Taylor, J.C. and J.L. Roach. 2005. Ocean Shipping in the Great Lakes: Transportation cost increases that would result from a cessation of ocean vessel shipping. A peer-reviewed, but independently published research paper, funded by the Joyce Foundation, through Grand Valley State University. Accessible at: www.gvsu.edu/business.

Resources:

Great Lakes Fishery Commission Website - www.glfc.org/fishmgmt/exotics
International Association for Great Lakes Research (IAGLR) website – www.iaglr.org/scipolicy/ais
U.S. Environmental Protection Agency website – www.epa.gov/owow/invasive_species
Council of Great Lakes Fishery Agencies' Reference on Ballast Water Management – www.glfc.org/boardcomm/cglfa/refballast.htm
Great Lakes United conservation coalition website- www.glu.org/english/invasive_species/saltfreelakes/index.htm