

Protecting Minnesota's Waters: Controlling Ballast Water Discharges

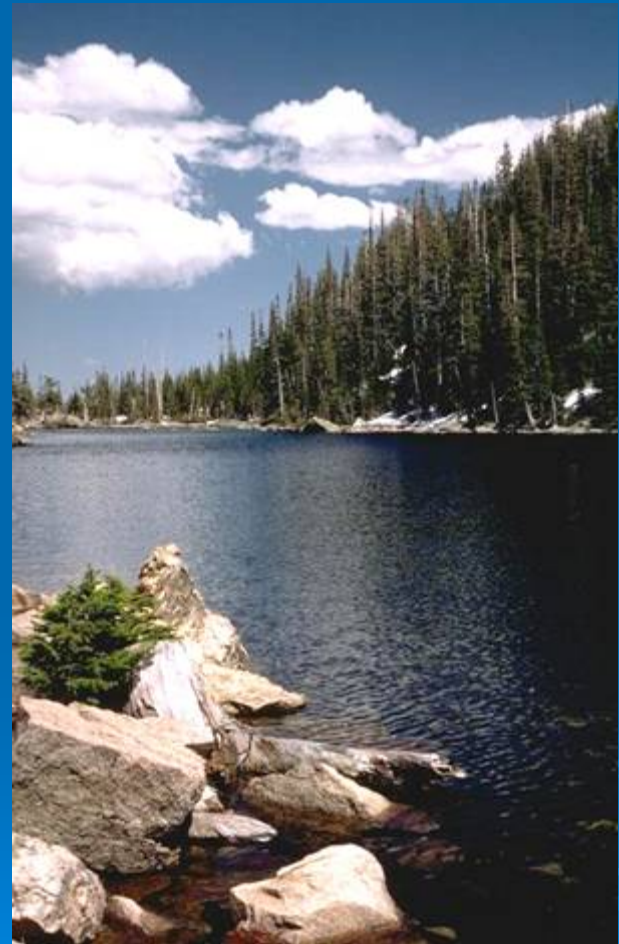
Great Lakes Panel on Aquatic Nuisance Species
June 25, 2009

Jeff Stollenwerk
Minnesota Pollution Control Agency

Photos courtesy of US Army Corps of Engineers, by Bielickii

Goal: Protect Minnesota waters

- Prevent ship-mediated spread of aquatic invasive species
- Support a viable shipping industry



Lake Superior is least invaded of the Great Lakes

>125 AIS in all Great Lakes, about 1/3 found in Lake Superior



Bloody Red Shrimp
Hemimysis anomala

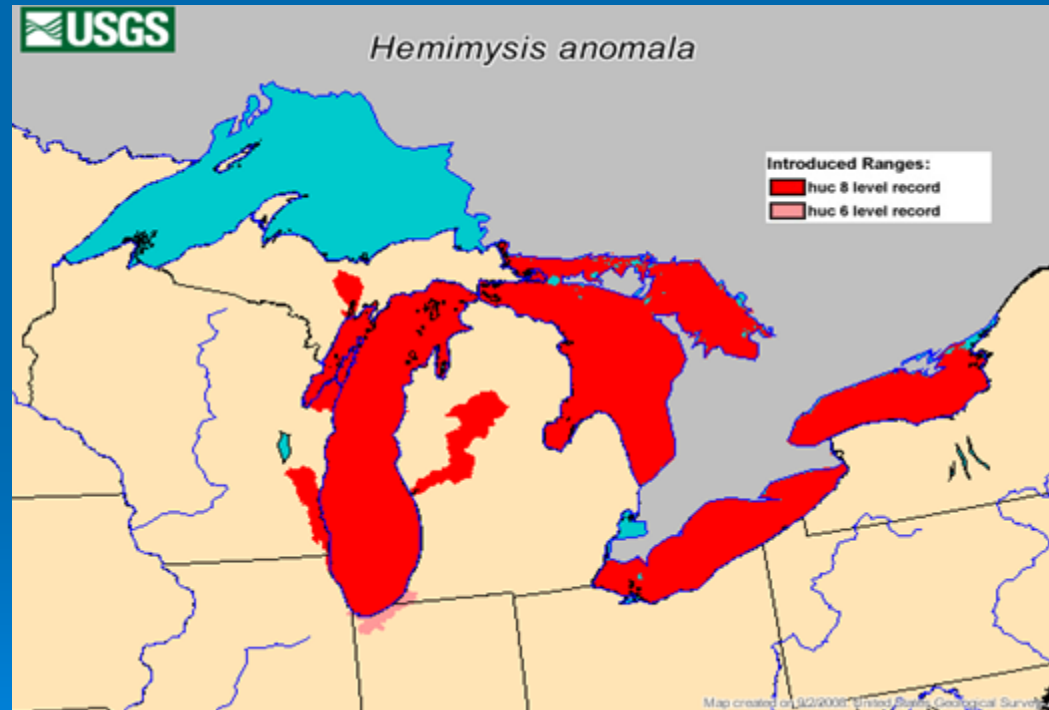
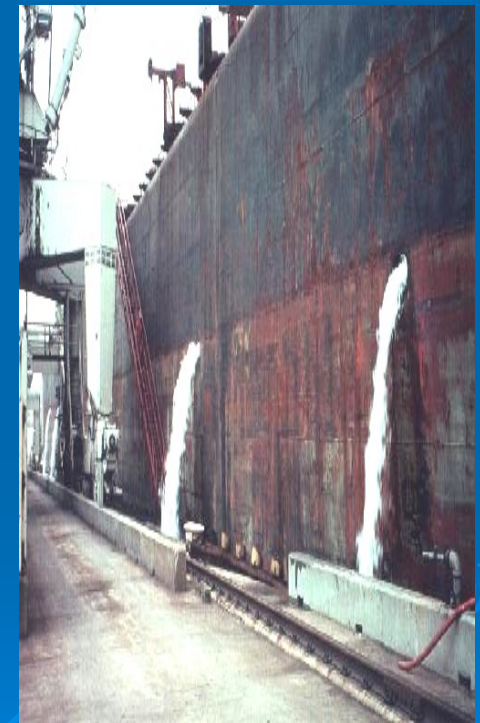
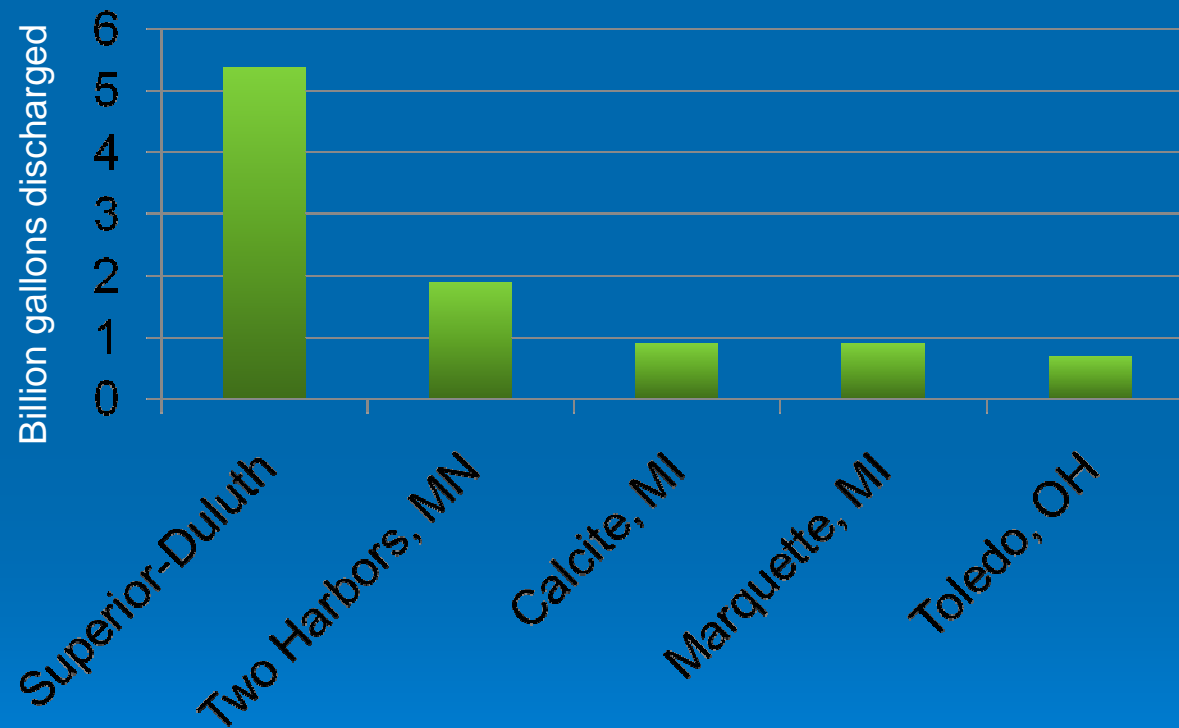


Photo and map courtesy of Great Lakes Aquatic Nonindigenous Species Information System

Top Ballast Receivers in 2005

Lakers discharge over 95% of ballast water;
Oceangoing vessels less than 5% in Superior-Duluth



Source: Preliminary Fisheries and Oceans Canada study data from 6-18-08 presentation by Chris Wiley, Transport Canada

Biological Performance Standards

International Maritime Organization (IMO) D-2 Standards

Parameter	Limit
Organisms > 50 micrometers	Less than 10 viable organisms per cubic meter
Organisms 10 to 50 micrometers	Less than 10 viable organisms per milliliter
Escherichia coli	Less than 250 colony forming units per 100 milliliters
Intestinal enterococci	Less than 100 colony forming units per 100 milliliters

Implementation Timeline

MPCA issues permit

- Vessels apply for coverage; submit ballast/sediment management plan
- MPCA approves ballast/sediment plans and issues Notices of Coverage

Comply with biological standards

New vessels

Existing vessels

Vessels install technology approved by MPCA

Sept
2008

Oct 2008-
Jan 2009

Jan
2012

Jan
2016

QUESTIONS?



Jeff Stollenwerk
Minnesota Pollution Control Agency
218-302-6612
<http://www.pca.state.mn.us/programs/ballastwater.html>