



# *ABS Seminar: Ballast Water Management*

## *New York, NY*

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U.S. Department of Transportation



# Presentation Overview

- St. Lawrence Seaway–Great Lakes Overview.
- Current Seaway Ballast Water Regulations.
- Great Lakes Seaway Ballast Water Working Group.
- Great Lakes Ballast Water Collaborative.

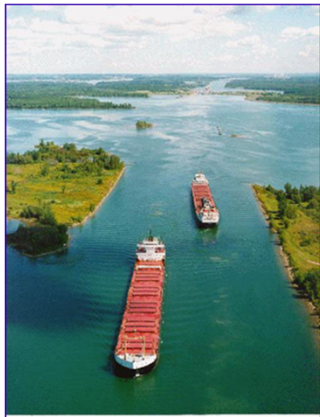


# The St. Lawrence Seaway

## 423 miles and 27 Border Crossings

### The U.S. Saint Lawrence Seaway Development Corporation

A U.S. Government Corporation within the U.S. DOT that directly partners with Canada to manage and operate the Seaway.



# The Great Lakes Seaway System has Unique Attributes

- The world's largest body of "extremely" fresh and cold water ( $\leq 0.5$  ppt, IMO std. = 2.5 ppt).
- A **binational waterway** with numerous national, state, and provincial agencies exercising abutting and overlapping authorities.
- Different fleets with distinct voyage patterns:

- International Fleet
- U.S.-Flag Fleet
- Canadian-Flag Fleet



# Public Awareness on the Great Lakes of Aquatic Nuisance Species

- Zebra Mussels.
- A history of strict Ballast Water Exchange requirements and comprehensive, but voluntary, Best Management Practices.
- A concentration of ballast water research and testing expertise:
  - The Great Lakes Environ. Research Laboratory, Ann Arbor, Mich.
  - The Great Lakes Institute for Environ. Research, U. of Windsor, Ont.
  - The Great Ships Initiative, Superior, Wis.
- Growing public concern over introduction of Aquatic Nuisance Species by international vessels -- (“Close The Seaway!”).
  - Most Great Lakes States (6 of 8) issued a 401 Certification permit or analogous state law in response to EPA’s VGP1 in 2008.





# The Seaway's Ballast Water Regulation and Enforcement Regime

- In 2006, Transport Canada issued a new regulation requiring all international vessels with “No Ballast on Board (NOBOB)” entering the Seaway from beyond the Exclusive Economic Zone to engage in Salt Water Flushing (SWF) of ballast tanks.
- The new requirement was a major advance in ballast water management .
- In March 2008, the U.S. SLSDC issued (in close coordination with the USCG), a matching regulation requiring SWF on inbound NOBOB vessels.



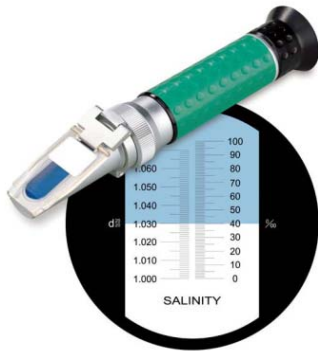
# Current Seaway Ballast Water Regulations

- A binational, multi-agency effort to protect the Great Lakes.
- 33 C.F.R. 401.30 – applies to all international, NOBOB vessels entering the Seaway from beyond the EEZ.
- Require saltwater flushing on ocean-going ships - every ballast tank containing residual amounts of ballast water and/or sediment.
- Require all ocean-going ships to exchange their ballast tanks at sea.
- Ballast tanks must maintain salinity level of 30 ppt.
- Authority to enforce these regulations through letters of retention, letters of warning, notices of violation or fines, up to \$36,625.
- **100 percent of all tanks on every ocean-going vessel are targeted for inspection.**



# Great Lakes Seaway Ballast Water Working Group (BWWG)

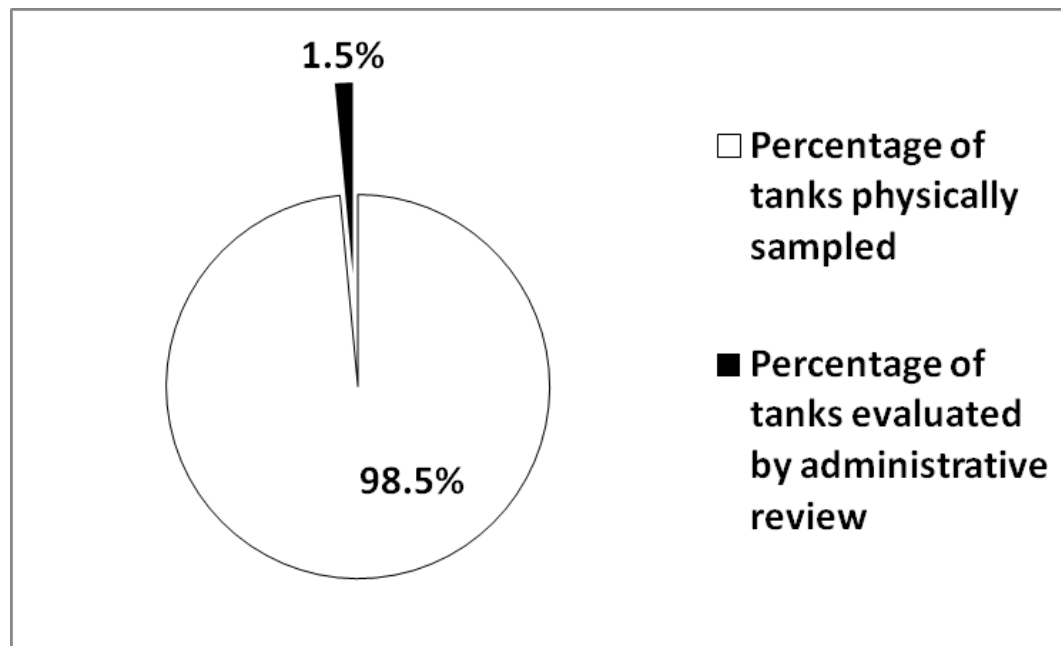
- Since 2008, the BWWG has been comprised of representatives from the **United States Coast Guard (USCG)**, the U.S. **Saint Lawrence Seaway Development Corporation (SLSDC)**, **Transport Canada - Marine Safety (TCMS)**, and the Canadian **St. Lawrence Seaway Management Corporation (SLSMC)**.





# ENFORCEMENT

## 2011 Navigation Season Ballast Water Tank Inspections



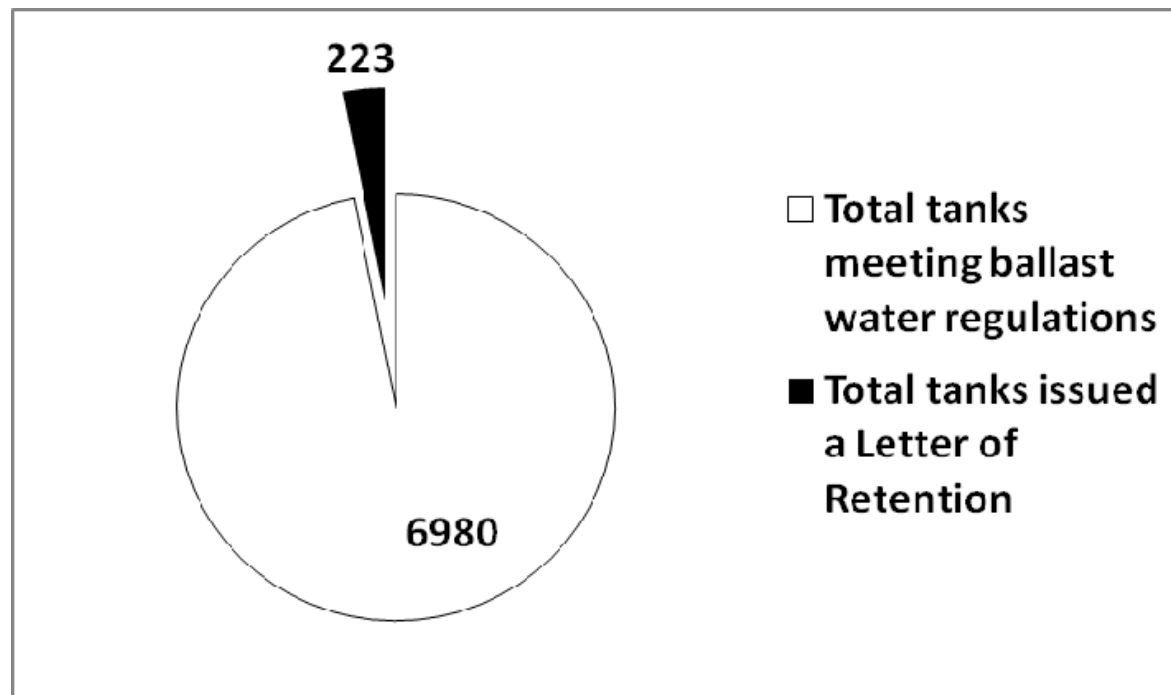
Total Tanks:  
7203



**Enforcement Goal: 100 Percent**  
("Every Tank on Every Ship")

# COMPLIANCE

## 2011 Navigation Season Compliance Results



**Compliance Rate: 97 Percent**

Note: All non-compliant tanks are sealed.

# Effect of the Seaway Regulations?

- The ***Great Lakes Aquatic Nonindigenous Species Information System (GLANSIS)*** indicates that no new species established since 2006 in the Great Lakes.

**GLANSIS Website:** <http://www.glerl.noaa.gov/>

- This 6-year period represents the longest period of “non-establishment” since before 1959.
- As a result, there is a growing understanding that the Seaway, as an ANS introduction vector, is being managed effectively.



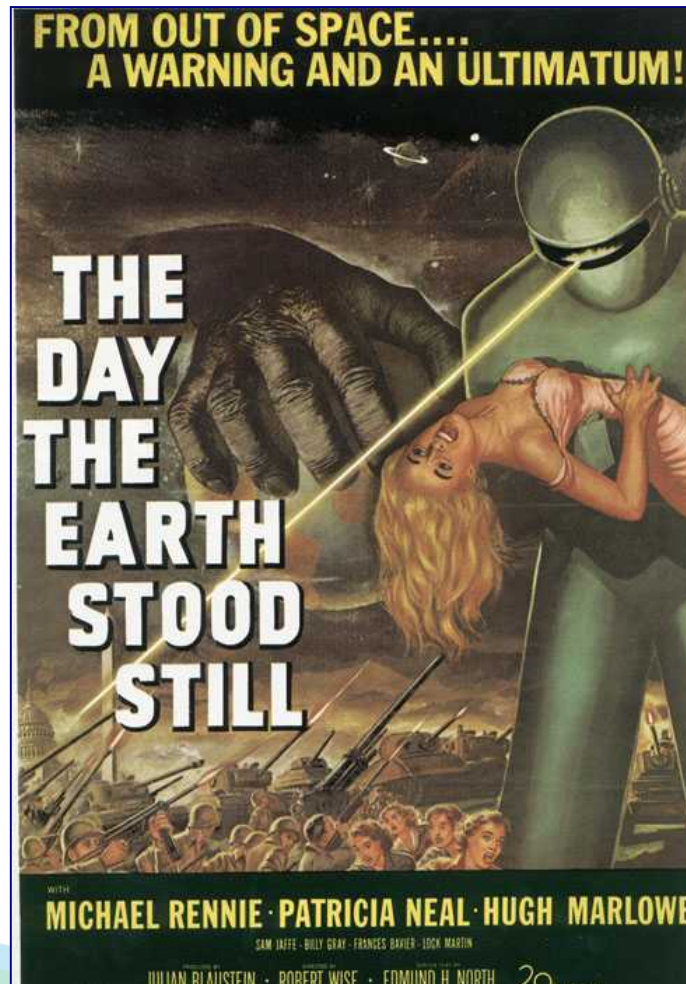
# Enforcement + Compliance = Effective BW Management

- Enforcement Goal (100 percent)
  - Every ballast tank of every inbound ocean-going vessel to be inspected.
  - Contents of every ballast tank must maintain 30 ppt salinity.
- Industry is complying (97 percent of all NOBOB tanks = 30ppt).
- The Great Lakes Seaway System has the most comprehensive ballast water management regime in N. America, if not the world.
- Since 2006, **no unmanaged ballast water from saltwater, international vessels entering the Great Lakes.**



September 18, 2006

## NW Environmental Advocates vs. EPA





# A New Regulatory Landscape

**NEW PLAYERS + NEW RULES + A KNOWLEDGE GAP =  
CONFUSION & UNCERTAINTY**

- More U.S. and Canadian policymakers than ever in need of knowledge to formulate regulations of immense complexity within a limited time frame...
- Yet, the science of ballast water is a relatively “new” discipline...
- And a U.S. national legislative solution is not forthcoming...
- Commerce dreads uncertainty above all else, especially in a “fragile” economy.



# How to respond on the Great Lakes?

**In a region of multiple jurisdictions where ballast water regulatory authority is now widely dispersed and information and knowledge are limited, it is essential to...**

- Build new relationships and partnerships.
- Create a forum for candid and unbiased discussion.
- Exchange relevant and substantive information and data among senior decision makers.
- Emphasize inclusive participation (*“round table”*).
- Strive for flexibility and informality.



## The Result...?

# ...Great Lakes Ballast Water Collaborative (BWC)

Comprised of:

- Government Regulators (State and Federal)
- Commercial Maritime Representatives
- Scientists and Researchers
- Non-Governmental Organizations

Seeking to:

- Share relevant information
- Foster better communication
- Partner to reduce ANS introduction and spread risks

**Primary Objective:** *Bring U.S. Great Lakes State Representatives together with the marine industry and respected Canadian and U.S. scientists and researchers.*



# High-Level Participation is Key

Over 100 individuals and organizations have been actively participating in the GL BWC, including:

## **FEDERAL AGENCIES**

U.S. EPA

U.S. Coast Guard

Transport Canada

Fisheries and Oceans Canada

International Joint Commission

U.S. Maritime Administration

National Oceanographic Atmospheric Administration

National Park Service

U.S. Geological Survey

U.S. Saint Lawrence Seaway Development Corporation

Canadian St. Lawrence Seaway Management Corporation



# High-Level Participation is Key

## **STATES AND PROVINCES**

Minnesota Pollution and Control Agency

Wisconsin Department of Natural Resources

New York Department of Environmental Conservation

California State Lands Commission

Ministère des Transports du Québec

Ontario Ministry of Natural Resources

## **SCIENTISTS & RESEARCHERS**

Chris Wiley

Allegra Cangelosi

Dr. Lisa Drake

Dr. Hugh MacIsaac

Dr. David Reid

Dr. Sarah Bailey

Dr. Mario Tamburri





# High-Level Participation is Key

## **COMMERCIAL NAVIGATION**

American Steamship Co.  
Canadian Shipowners Assoc.  
Seaway Marine Transport  
Canada Steamship Lines  
Shipping Federation of Canada  
American Great Lakes Ports Assoc.

Fednav, Ltd.  
Canfornav, Ltd.  
Interlake Steamship Co.  
Key Lakes, Inc.  
U.S. Lake Carriers Assoc.

## **OTHER ENTITIES**

Minnesota Sea Grant  
Northeast Midwest Institute  
Great Lakes Commission

ABS  
Minn. Env. Partnership  
Great Lakes United



# Relevancy is Critical

The BWC has sought to broaden the understanding of some of the most important questions surrounding ballast water regulation, including:

- Identifying “commercially available” treatment systems “rated” to meet or exceed a standard beyond the IMO (D-2) standard for fresh water environments.
- Evaluating factors affecting the installation of specific ballast water treatment systems on the applicable fleets and vessels transiting the Great Lakes.
- Assess current verification capabilities for treatment systems to comply with a discharge standard of 100x the IMO (D-2) standard.



# Gather Frequently at a “Round” Table

- The **non-hierarchical** and **informal** nature of the Collaborative is critical to its effectiveness as a forum for relationship building and information exchange.
- A willingness to meet frequently has allowed beneficial relationships and substantive proposals to develop:

Underlined entries indicate meetings of the full Collaborative (60+ people)

- September 2009 in Detroit, MI
- December 2009 in Ann Arbor, MI
- January 2010 in Toronto, ONT
- May 2010 in Montreal, QUE
- July 2010 in Duluth/Superior, MN/WI
- January 2011 in Toronto, ONT
- September 2011 in Baltimore, MD
- February 2012 in Cleveland, OH
- August 2012 in Duluth/Superior, MN/WI



# Pre-Ballast Water Collaborative:

Federal  
Regulators

Researchers  
&  
Scientists

GL State  
Regulators

Treatment  
System  
Vendors

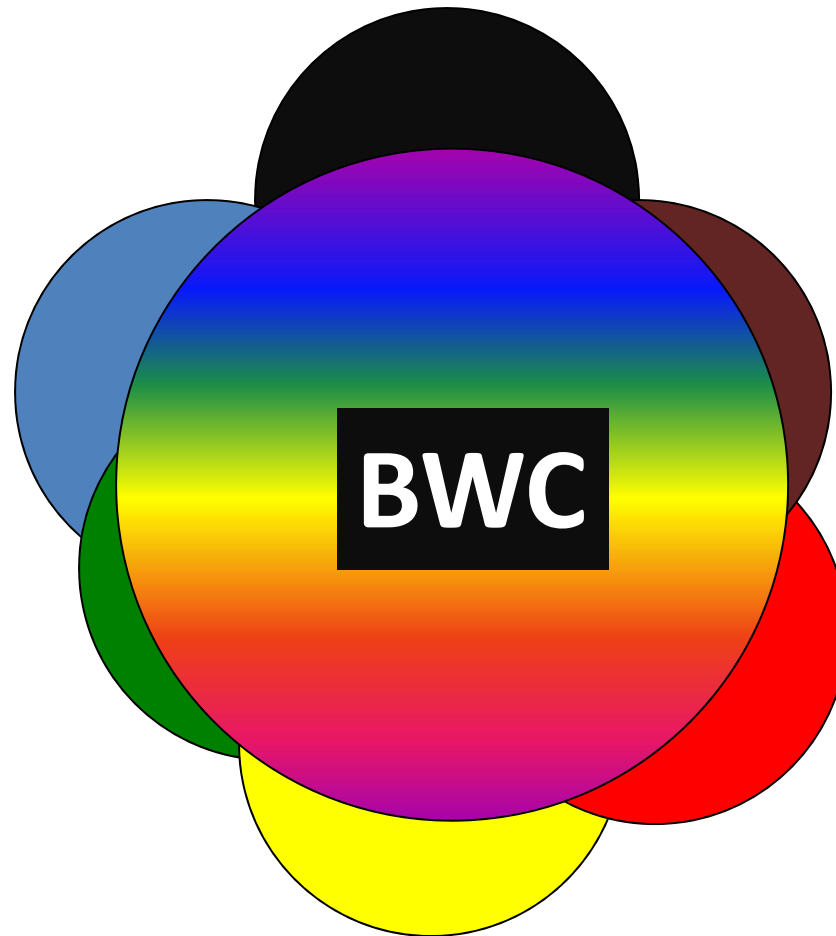
Maritime  
Industry

NGOs



# A Common Center of Understanding

After almost  
3 years of  
the Great Lakes  
Ballast Water  
Collaborative:



***“ONLY CONNECT...”*** – E.M. Foster, *Howards End*



# BWC Outcomes

- Connect and Educate key stakeholders on complexities of ballast water science, management, regulation, and enforcement.
- Allow for better understanding of contents of NAS study and SAB Report (6/11), EPA VGP2 proposal (11/11) and USCG final rule (3/12).
- Elicit practical and immediate risk-mitigation proposals from industry.
- Help align Federal and State regulatory regimes:
  - Wisconsin DNR ruling December 2010
  - New York DEC VGP2 proposal May 2012
- Draft and disseminate substantive, informative, and “accessible” reports to the public.
  - BWC Reports available at: [www.greatlakes-seaway.com](http://www.greatlakes-seaway.com)  
under the “Environment” tab.

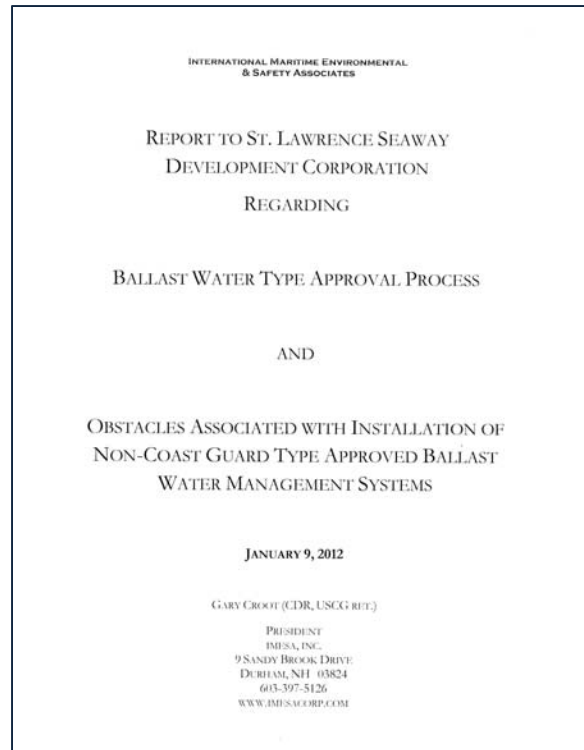


# Next Areas of Focus for the BWC

- Provide accurate information/education/real understanding.
- Understand how the new regulatory framework – USCG Final Rule, EPA VGP2, State 401 Permits – will all work together.
- Move from defining the ballast water regulatory framework to helping implement that framework effectively.
- Focus on Ballast Water Management Systems (BWMS):
  - Availability of technology for GLSLS?
  - Reliability of verification/enforcement?
  - Independent laboratories?



# Understanding the USCG Type Approval Process



- As we enter the regulatory “implementation” phase, understanding the requirements and timelines associated with the USCG’s Type Approval of BWMS is critical.
- The SLSDC commissioned a report in January 2012 to help it better understand the process and the challenges associated with the installation of BWMS.
- You can download copy of the 1/9/12 report at: [www.greatlakes-seaway.com](http://www.greatlakes-seaway.com) under the “Environment” tab.



# BWC Upcoming Activities

- Next BWC Meeting: Aug 2-3, 2012, Duluth, MN:
  - Focus on the USCG Ballast Water Discharge Final Rule including details of the Type Approval process and how the USCG will implement the Alternate Management System provision.
  - How to facilitate installation of BWMS on board vessels that transit the Great Lakes/St. Lawrence Seaway System? – An in-depth panel discussion moderated by Chris Wiley (TC, DFO, and Chair of the IMO Ballast Water Working Group).



# Remainder of 2012 will be busy

- October 2012 – States to submit final 401 Certifications.
- November 2012 – EPA to publish VGP2.

Despite Progress, Challenges Remain:

- Varying Federal and State requirements.
- Length of USCG Type Approval Process.
- Cost of new BWMS technologies.
- Dearth of fresh water BWMS technologies.





# Going Forward

- Regulatory authority over ballast water in the U.S. will remain a “shared enterprise.”
- Effective regulation will require greater partnership among regulatory agencies and maritime stakeholders than in the past.
- Collecting and widely sharing of relevant, substantive information is essential.
- The *Great Lakes Ballast Water Collaborative* is one model of how to address the complexities of this new regulatory landscape.



# Thank You !

Many of the reports and other data sources mentioned in this presentation can be found on the Seaway's website:

**[www.greatlakes-seaway.com](http://www.greatlakes-seaway.com)**



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