Great Lakes Ballast Water Collaborative: Panel Discussion

Meeting Series: Sept. 2009 through July 2010

Introduction to a “Wicked Problem”

Dale Bergeron, Maritime Transportation Specialist, MN Sea Grant

A “virtual” organization

Beginnings…

- Origin of the “Great Lakes Ballast Water Collaborative”
  - The notion of addressing a “Wicked Problem”
  - Assembling a multidisciplinary-interagency-public/private initiative
  - Functioning through a “virtual” organization (avoiding additional layers)
  - Time-specific needs drive participant agenda
  - First Meeting, Detroit: “*Great Lakes Regulatory Forum on Ballast Water Action” (sponsored by Seaway & IJC)*

Addressing multiple standards, implementation schedules and jurisdictions

Many Participants & Perspectives

Essential Stakeholders

- Understanding participant "Value Propositions"
  - Key players (identifying points of action…52 participants)
    - International
    - Federal U.S. & Canadian (Agencies & Organizations)
    - States (DEQ, DNR, PCA)
    - Maritime Industry (U.S., Canadian, International)
    - Environmental NGOs
    - Scientists/Academics (World-wide)
  - Communicating information within a neutral forum

    (There are no Villains in this story…Scott Smith, USGS)
  - Unique perspectives and requirements
  - Confirmation of information by multiple experts & peers

    (first-hand information; everybody in the room at the same time)

Building a common or shared understanding…
(does not necessarily mean acceptance or agreement)

Like 3-D Chess: every move impacts all levels of activity…

"So, McCoy, why the hell did you do that?"

History of the GL Ballast Water Collaborative

- Activities over 10-months
  - Great Lakes Regulatory Forum on Ballast Water Action, Detroit, MI, Sept. 23-24, 2009
  - ANS Panel Meeting, Ann Arbor, Dec. 10-11, 2009
  - Marine Club, Toronto, ON, Jan. 12-14, 2010
  - Submission of grant; EPA/GLRI Request for Proposals
  - Great Lakes Ballast Water Collaborative, Montreal, May 18, 2010
  - Great Lakes Ballast Water Collaborative, Duluth, July 20-21, 2010

Great Lakes Ballast Water Collaborative: Panel Discussion

St. Paul, Minnesota - November 9, 2010

Craig H. Middlebrook
Deputy Administrator
Saint Lawrence Seaway Development Corp.

A Quick Quiz

Ballast Water Regulation in the United States is…

a) An issue of immense complexity and importance.
b) Shared among multiple (federal and state) jurisdictions.
c) Causing great uncertainty for commercial maritime and NGO stakeholders.
d) A complete mess.
e) All of the above.

Why is the Seaway involved in this?

In the "wake" of Northwest Environmental Advocates v. EPA …

…the landscape of ballast water regulation in the U.S. was radically altered. What was once only a federally regulated activity is now regulated by state and federal authorities:

- The EPA joins the U.S. Coast Guard in regulating discharges from vessels;
- States, under section 401 of the CWA, can now establish their own ballast water requirements, including water purity standards;
- Policymakers, many new to commercial navigation, suddenly need answers to complicated questions.

New Players + New Rules + A Lack of Knowledge = Confusion & Uncertainty

- More policymakers than ever seeking hard data to formulate regulations.
- Yet, the science of ballast water is a relatively “new” discipline.
- And a national legislative solution is not forthcoming.
- Commerce dreads uncertainty above all else.

What to Do?

The Great Lakes Ballast Water Collaborative:

- Establish new relationships.
- Create a forum for candid and unbiased discussion.
- Provide relevant and substantive information and data.
- Emphasize inclusive participation.
- Remain flexible and informal.

This is not “rocket science,” but …

… the BWC has served a real need and filled in real gaps that no other entity was able to at the moment:

- 100+ participants.
- 5 meetings in 12 months.
- 2 substantive reports.
- A solid base for mutual understanding and respect.

“Leadership Matters”

- MN Pollution Control Agency
- WI Department of Natural Resources
- MN Sea Grant
- International Joint Commission
- Saint Lawrence Seaway Development Corporation – U.S. DOT

A Year from Now…

… the landscape on this issue will be considerably different and a way forward will be clearer:

- Major reports will be completed.
- State deadlines will be upon us.
- USCG ballast water rulemaking.
- Closer to a new EPA VGP.

Will it be a way forward on ballast water management and treatment that is commercially workable? Environmentally effective? Widely supported?

Great Lakes Ballast Water Collaborative: Panel Discussion

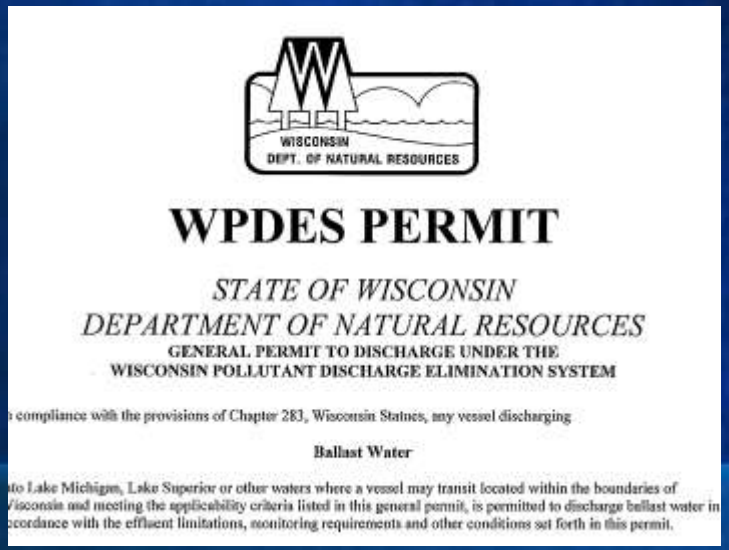
Susan Sylvester
Wisconsin Dept. Natural Resources

Status of Wisconsin's Ballast Water Permit

- 401 Certification to EPA VGP contested
- 401 Certification withdrawn
- WPDES General Permit effective date 02-01-10
- Discharge standard effective 100 x IMO
  - 01-01-2012 new ocean going vessels
  - 01-01-2014 existing ocean going vessels

Permit Requirements

- BMPs for all vessels
  - Lakers
  - Ocean Going
- Reporting
- Feasibility Determination due 12-31-10



WISCONSIN
DEPT. OF NATURAL RESOURCES

WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
GENERAL PERMIT TO DISCHARGE UNDER THE
WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM

compliance with the provisions of Chapter 283, Wisconsin Statues, any vessel discharging

Ballast Water

to Lake Michigan, Lake Superior or other waters where a vessel may transit located within the boundaries of Wisconsin and meeting the applicability criteria listed in this general permit, is permitted to discharge ballast water in accordance with the effluent limitations, monitoring requirements and other conditions set forth in this permit.

Size of Vessels Covered

- **Have at least ballast tank capacity of 2,114 gallons (8 cubic meters) and…**
- **Are at least 164 feet in length**

- Vessels that do not discharge ballast waters into Wisconsin waters are not subject to this permit
- Maximum daily limit for :

  chloride 1,514 mg/L

Prohibitions

- Solids that accumulate on ballast water intakes shall be removed and disposed to prevent material from entering waters of state
- Any accumulated solids, sediments, or biological material removed from tanks or treatment systems shall not be discharged into waters of the state

Asked BWC to help answer key questions:

- Identify available BWTS rated to meet or exceed 100 x IMO
- Evaluate fleet factors to installation and operation of BWTS—lakers & salties
- Once installed, how to verify a BWTS is working

Federal Updates

- USCG Ballast Water Discharge Standard proposed rule 08-28-2009
  - final adoption date unknown

- USEPA Vessel GP expires 2013
  - Science Advisory Board-Treatment
  - National Academy of Sciences-Standard

Feasibility Determination

- Report will be finalized in two weeks
- General Permit will be modified
- Notification will be made to all permittees

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St. Paul, Minnesota - November 9, 2010

Jeff Stollenwerk, Manager
Land & Water Quality Permits
Minnesota Pollution Control Agency

Minnesota Goal: Protect the state's water resources

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

Minnesota Ballast Water Activities

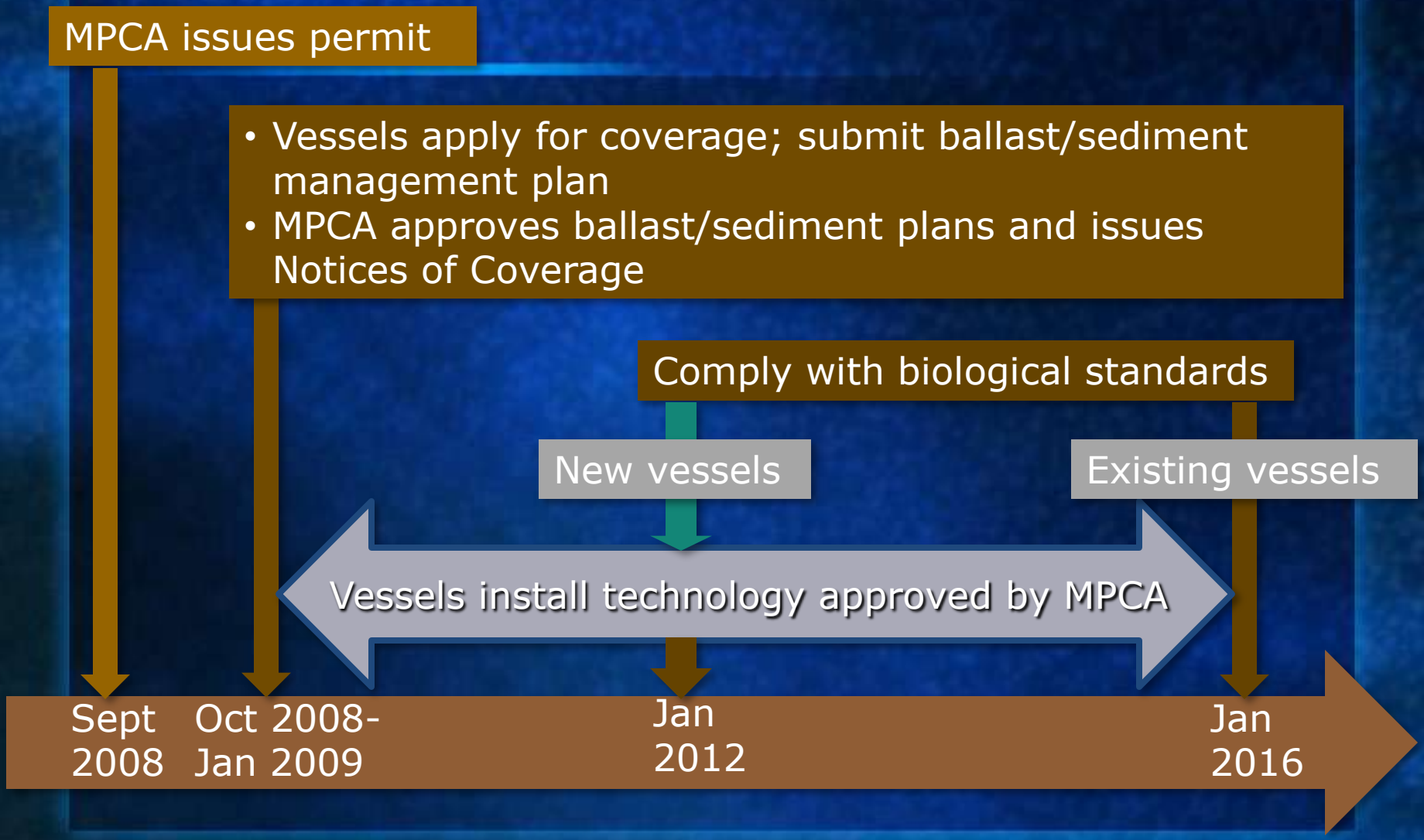
- Support national discharge standard
  - US Coast Guard
  - US Environmental Protection Agency
- Develop state ballast water regulatory program

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



St. Lawrence Seaway/Great Lakes Biological Discharge Standards

Government Agency	BW Discharge Standard for New	BW Discharge Standard for Existing
Transport Canada	IMO D-1 and D-2	IMO D-1 and D-2
USCG, USEPA	BWE/BMPs	BWE/BMPs
SLSMC, SLSDC	BWE (30 ppt salinity), SWF	BWE (30 ppt salinity) SWF
Michigan	Technology	Technology
Illinois, Minnesota, Pennsylvania*	IMO in 2012	IMO by 2016
Ohio	IMO in 2016	NA
New York	1000x IMO in 2013	100x IMO by 2012
Wisconsin	100x IMO by 2012	100x IMO by 2014

BWE=ballast water exchange; SWF=saltwater flush; BMP=best management practices. *PA rescinding discharge standard

Progress – Are we there yet?

Minnesota Current / Future Activities

- Continue support for national discharge standard
- Administering state ballast water permit
- Pursuing technical solutions
  - Sample port design
  - Testing technologies in freshwater
  - Filling information gaps
- Working within existing regulations

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