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
  - 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
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
Great Lakes Ballast Water Collaborative: Panel Discussion

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**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Limit</th>
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<tbody>
<tr>
<td>Organisms &gt; 50 micrometers</td>
<td>Less than 10 viable organisms per cubic meter</td>
</tr>
<tr>
<td>Organisms 10 to 50</td>
<td>Less than 10 viable organisms per milliliter</td>
</tr>
<tr>
<td>micrometers</td>
<td></td>
</tr>
<tr>
<td>Escherichia coli</td>
<td>Less than 250 colony forming units per 100 milliliters</td>
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<tr>
<td>Intestinal enterococci</td>
<td>Less than 100 colony forming units per 100 milliliters</td>
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Implementation Timeline

- MPCA issues permit
  - Vessels apply for coverage; submit ballast/sediment management plan
  - MPCA approves ballast/sediment plans and issues Notices of Coverage
- Vessels install technology approved by MPCA
- Comply with biological standards
- Existing vessels: Jan 2009 - Jan 2016
<table>
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<tr>
<th>Government Agency</th>
<th>BW Discharge Standard for New</th>
<th>BW Discharge Standard for Existing</th>
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<tr>
<td>Transport Canada</td>
<td>IMO D-1 and D-2</td>
<td>IMO D-1 and D-2</td>
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<td>USCG, USEPA</td>
<td>BWE/BMPs</td>
<td>BWE/BMPs</td>
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<tr>
<td>SLSMC, SLSDC</td>
<td>BWE (30 ppt salinity), SWF</td>
<td>BWE (30 ppt salinity) SWF</td>
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<td>Michigan</td>
<td>Technology</td>
<td>Technology</td>
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<tr>
<td>Illinois, Minnesota,</td>
<td>IMO in 2012</td>
<td>IMO by 2016</td>
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<tr>
<td>Pennsylvania*</td>
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<tr>
<td>Ohio</td>
<td>IMO in 2016</td>
<td>NA</td>
</tr>
<tr>
<td>New York</td>
<td>1000x IMO in 2013</td>
<td>100x IMO by 2012</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>100x IMO by 2012</td>
<td>100x IMO by 2014</td>
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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