

Wisconsin Ballast Water Program Update

Susan Eichelkraut — Lake Michigan Ballast Water Inspector



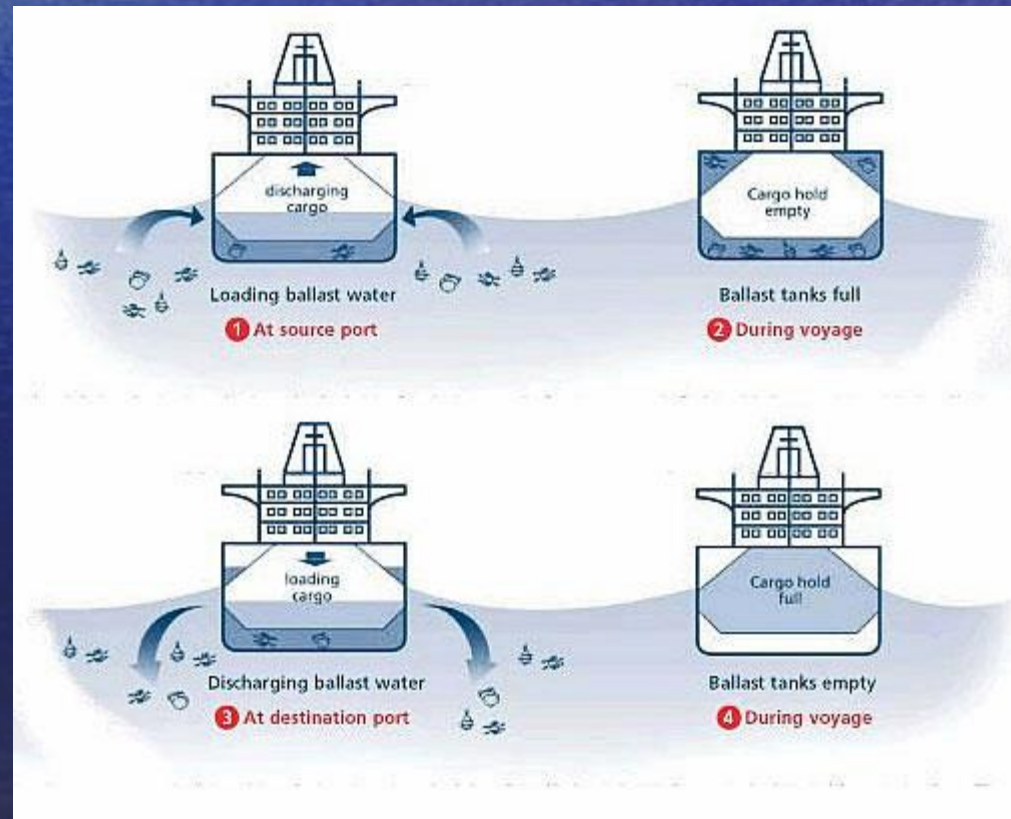
Ballast: *Any solid or liquid used to change the Draft or Trim, to regulate stability, or maintain stress loads.*

Unload Cargo – Load Ballast

Load Cargo – unload ballast

Ballast Water Capacity

- Lakers up to 16 million gallons
- Pumping at 20,000 gpm





BW Regulation: A Delicate Balance!

- USCG Rule
- EPA VGP
- States
- Environmental groups/Research
 - Rules/Permits not stringent enough
- Shipping companies
 - Installation dates too stringent
 - Cost of treatment systems & existing ships

WI Permit Applicability

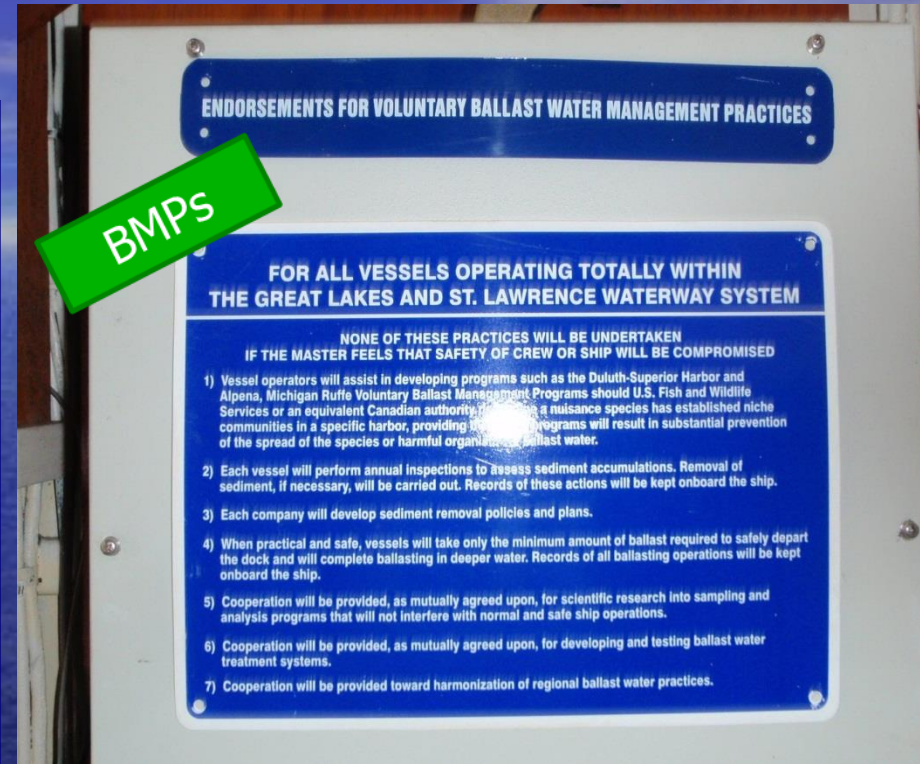
Re-issued Permit 4/1/15

- Salties (ocean going) and Lakers
- > 24.1 m AND > 8 m³ ballast capacity
- Operating in WI waters



WI Requirements (All Vessels)

- Ballast Water and Sediment Management Plan
 - Best Management Practices
 - Disposal requirements
 - Record keeping
- Ballast Log Book
 - Uptake
 - Discharge
 - Sediment Disposal
 - Treatment



Best Management Practices ?

- Ballast water exchange
- Rinse anchor and chains
- Minimize ballast update in high risk areas
- Install higher seachests
- Potable water
- Off shore treatment

WI Requirements all Vessels

New Salties: 12/2013*

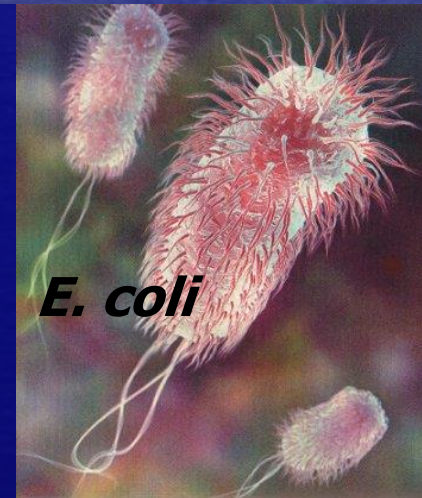
Existing Salties 1st dry dock after 1/2016*

Lakers first dry dock after 3/2018**

** if treatment systems available*

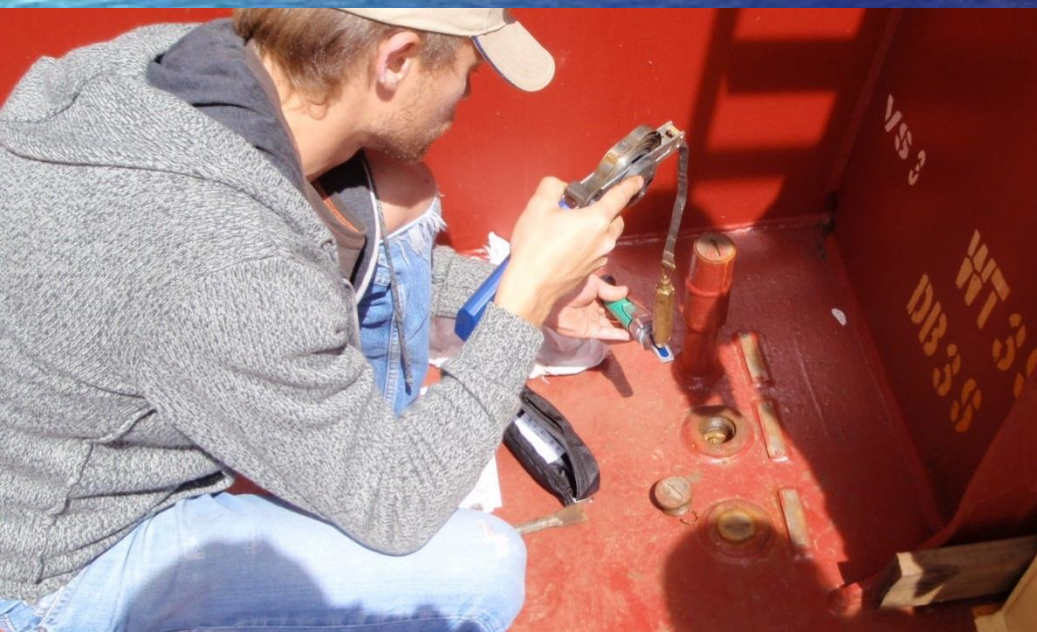
***pending contested case hearing*

- IMO standards for viable organisms
 - $< 10/\text{m}^3$ for organisms $> 50 \mu\text{m}$
 - $< 10/\text{ml}$ for organisms $10\text{-}50 \mu\text{m}$
 - *E. coli* $< 250 \text{ cfu}/100 \text{ ml}$
 - *(beach standard is 126 cfu/100 ml)*
 - Intestinal enterococci $< 100 \text{ cfu}/100 \text{ ml}$
 - *(beach standard is 33 cfu/100 ml)*
 - *Vibrio cholerae* $< 1 \text{ cfu}$ per 100 ml



WI Permit Requirements

- Open ocean Ballast Water Exchange/Flushing
 - Must be > 30 ppt salinity to enter St. Lawrence Seaway
 - **No new Great Lakes AIS have *been found* since 2006!**
- Treatment system approval
- Biocide discharge limits
- Salinity < 2.7 ppt



Current Federal Regulations

- 3/2012 – Coast Guard rule
 - International Maritime Organization (IMO) effluent limit standards (technology-based)
 - Sunsets Ballast Water Exchange
 - Treatment system implementation less stringent
 - Requires Coast Guard treatment system type approval
 - Currently over 50 Alternate Management Systems accepted by USCG (14 for fresh water)
- *Lakers are not required to meet IMO under USCG Rule*



Current Federal Regulations

- 3/2013 – EPA VGP2
 - IMO standards
 - Keeps Ballast Water Exchange
 - No treatment for Lakers**
 - **2nd Circuit Court Decision October 2015 requires the VGP to address Lakers in next permit
- Potential Federal Legislation Commercial Vessel Incidental Discharge Act (VIDA)



Could preempt the states and EPA authority

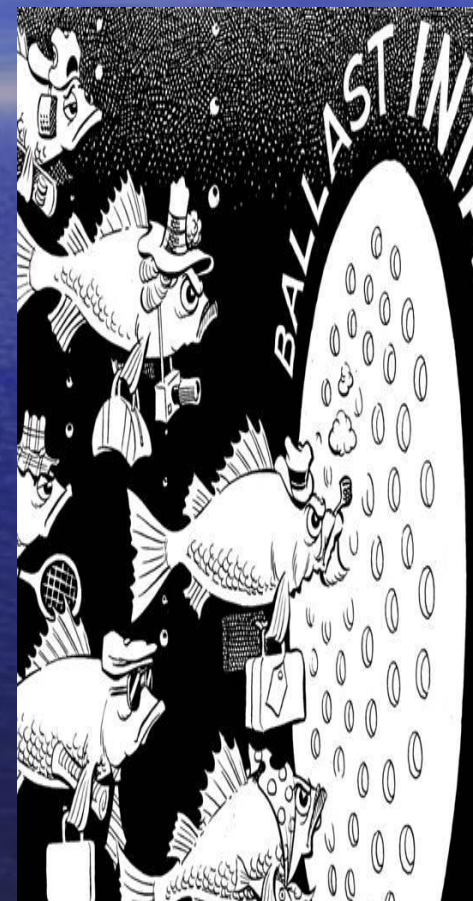
Species in North America, but not *found* in Lake Superior... *yet*

- Bloody Red Shrimp (*Hemimysis anomala*)
 - Mysis shrimp now found in all other Great Lakes. Food web impacts predicted.
- ‘Cell from Hell’ (*Pfiesteria piscicida*)
 - Dinoflagellate microbe found on the Atlantic coast that can cause fish kills.
- Starry Stonewort (*Nitellopsis obtusa*)
 - Exotic invasive algae in lower lakes



Current Research

- Researchers looking at IMO Standard
Is it stringent enough?
- Looking at microbes and potential for transporting potentially harmful bacteria over long distances in ballast water.
- **Great Ships Initiative – Superior**
 - Conducted onboard testing on at least one system this year for the USCG that are currently commercially available and have AMS acceptance.



Future Plans

- Continue inspections (to date have done over 300)
 - Expand knowledge of treatment systems
- Promote updating BMPs in ballast water management plans
- Oppose Commercial Vessel Incidental Discharge Act that would preempt the States' full authority to regulate discharges
- Continue to educate crew members on AIS and BMPs & public outreach
- Continue to assist/facilitate ballast sampling for research
- Continue to participate in Ballast Water Great Lake Groups and try to identify “high risk” ports for inbound vessels.



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