Unit 8 – Ballast Water

States’ Rights vs. International Commerce
The Ballast Water Problem

Cross section of ship showing ballast tanks and ballast water cycle

Graphic Credit IMO
Ballast Water Exchange

- Replace lower-salinity coastal water with higher-salinity open-ocean water between ports of call.

- Reduces the number of potentially invasive species in the ballast tanks
Ballast Water Treatment

- **Mechanical** – Filtration and separation
- **Physical** - Sterilization by ultraviolet light, ozone, heat, electric current, or ultrasound
- **Chemical** – Biocides
- **Drawbacks:**
  - Costly
  - Retrofits Required
  - Additional Training
International Convention for the Control and Management of Ships’ Ballast Water and Sediments

- Adopted on February 13, 2004 under the auspices of the IMO.

- Will enter into force 12 months after ratification by 30 nations, representing 35% of the world merchant shipping tonnage.
  - As of March 31, 2007, 8 signatories representing 3.21% of tonnage.
Federal Regulation

- Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 passed in response to zebra mussel invasion. (Reauthorized by NISA)
  - Authorized issuance of regulations “to prevent the introduction and spread of aquatic nuisance species into the Great Lakes through the ballast vessels.”
  - Authority delegated to Coast Guard

- Clean Water Act (EPA)
Coast Guard BWM Program

Vessels carrying ballast water and operating in the Great Lakes or on the Hudson River must employ one of the following:

- Open-ocean ballast water exchange;
- Retain ballast water on board; or
- Use an alternative environmentally sound method of BWM approved by the Coast Guard.
NOBOBs – Loophole?

- Ballast water reporting forms
- Voluntary best management practices
  - Mid-ocean exchange
  - Saltwater flushing of empty tanks
Clean Water Act

- Illegal to discharge pollutants from a point source into the navigable waters of the U.S. without a National Pollutant Discharge Elimination System (NPDES) permit.
  - Discharges “incidental to the normal operation of a vessel” exempt from NPDES program.

- In 2005, California district court ordered EPA to repeal exemption and regulate BW.
Michigan BWM Program

- **Senate Bill 332**
  - All ocean-going vessels engaging in port operations in Michigan after January 1, 2007 must obtain a permit from the MDEQ.

- **Ballast Water Control General Permit**
  - Four treatment methods identified: (1) hypochlorite; (2) chlorine dioxide; (3) ultraviolet (UV) light radiation; and (4) deoxygenation.
Shipping Company Challenge

- In March 2007, several international shipping companies filed suit challenging Michigan’s program.
  - Argue that the law is preempted by federal regulation and violates the Commerce Clause.

- Congressional Action?