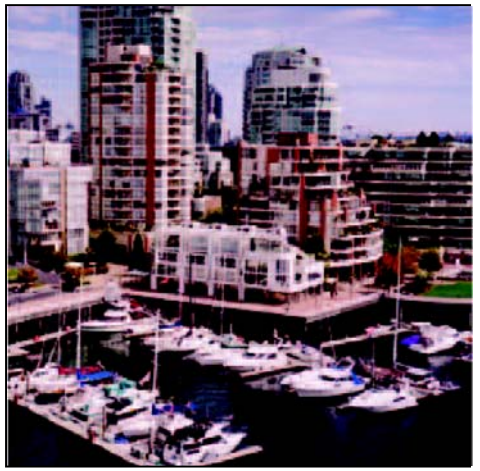


Canada's Ballast Water Control and Management Regulations

September 2007 ICAIS – Nijmegen, The Netherlands

Transport Canada Transports Canada

Canada

Who we are:

- Marine Safety, Transport Canada
- We administer national and international laws designed to ensure the safe operation, navigation, design and maintenance of ships, protection of life, property and prevention of ship source pollution

- Possible sources of unintentional introductions of invasive species from ships:
  - Cargo
  - Dunnage
  - Ballast water
  - Hull fouling

- In Canada, harmful aquatic organisms and pathogens in ballast are different from other substances which are regulated as pollutants

The *Canada Shipping Act 2001* states:

190. (1) The Governor in Council may, on the recommendation of the Minister, make regulations respecting the protection of the marine environment, including regulations

…

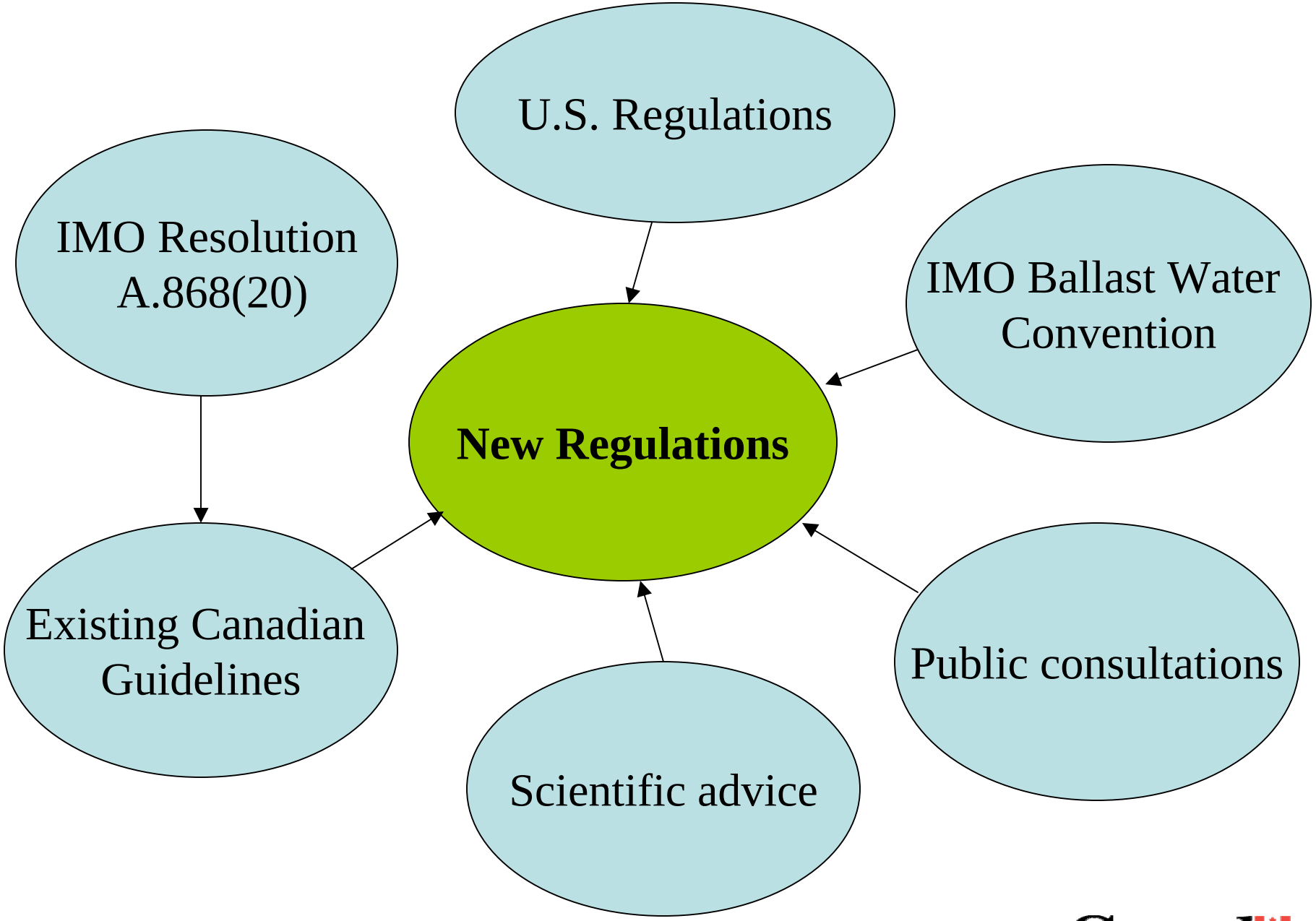
(f) respecting the control and management of ballast water;

(g) for preventing or reducing the release by vessels into waters of aquatic organisms or pathogens that, if released into those waters, could create hazards to human health, harm organisms, damage amenities, impair biological diversity or interfere with legitimate uses of the waters;

…

Actions to date on ballast water:

- 1989: Transport Canada introduced Voluntary Guidelines for Ballast Water Exchange for ships headed to the Great Lakes
- 1991: International Maritime Organization introduced Guidelines
- 1993: US Coast Guard introduced ballast water regulations
- 1998/99: Canadian Marine Advisory Council national and regional working groups formed
- 2000: National Ballast Water Management Guidelines introduced
- 2004: International Convention for the Control and Management of Ships' Ballast Water and Sediments finalized by the IMO
- 2006: Regulations published in Part II of the Canada Gazette


U.S. Regulations
IMO Resolution A.868(20)
IMO Ballast Water Convention
New Regulations
Existing Canadian Guidelines
Public consultations
Scientific advice

Ballast Water Control and Management Regulations

- Application
- BW Management
- Exchange – Transoceanic
- Exchange – Non Transoceanic
- Exchange Standard
- Treatment Standard
- Sediment Disposal
- Management Plans
- Exceptional Circumstances
- Reporting

Application

All ships in waters under Canadian jurisdiction designed to carry ballast unless :

- Operated exclusively within waters under Canadian jurisdiction, the US water of GL Basin or French waters of Saint Pierre and Miquelon
- Used in search and rescue or government service
- Pleasure craft (50 m max length and bw capacity of max 8 m^3)
- Permanent ballast water

Ballast Water Management

Management methods

- Exchange
- Treatment
- Discharge to a reception facility
- Retention onboard

Purpose of Management

- Minimize uptake and discharge
- Remove/render harmless

Management Not Necessary When . . .

- BW is taken on board in waters under Canadian jurisdiction, US waters of GL Basin or French water of Saint Pierre and Miquelon, unless it is mixed with BW taken on outside water under Canadian jurisdiction that was not subjected to exchange or treatment
- Emergency situations

Exchange - Transoceanic

- Ships that navigate beyond 200 nm from shore and depths >2000 m must exchange in those waters

- If going to the GL basin, St. Lawrence River or Gulf of St. Lawrence and can't exchange for safety reasons (ship/crew) –
  - Notify Minister of Transport ASAP
  - From Dec 1 to May 1 may use the Laurentian Channel East of 63 degrees west longitude and in water greater than 300 m deep

Exchange – Non Transoceanic

- Applies to ships that exchange ballast water and do not navigate beyond 200 nm from shore in 2000 m depth

- Can not discharge BW unless exchanged 50 nm from shore and in waters >500 m depth

- If unable because of safety or impracticality, then exchange in an alternate exchange zone

Exchange Standard

- 95% volumetric exchange
- Salinity of at least 30 ppt

Treatment Standard

- Treatment to the IMO standard is accepted as an option to exchange.
- Treatment that does not meet the IMO standard might also be accepted, but would have to be approved on a case-by-case basis as equivalent to exchange

Treatment Standard

- **9.** A ship that treats ballast water shall attain, after the treatment, ballast water having a viable organism and indicator microbe content less than the following concentrations:
- (*a*) 10 viable organisms per cubic metre greater than or equal to 50 µ in minimum dimension;
- (*b*) 10 viable organisms per millilitre less than 50 µ and greater than or equal to 10 µ in minimum dimension;
- (*c*) one colony-forming unit (cfu) of toxicogenic *Vibrio cholerae* (O1 and O139) per 100 mL or one cfu per 1 g (wet weight) zooplankton samples;
- (*d*) 250 cfu of *Escherichia coli* per 100 mL; and
- (*e*) 100 cfu of intestinal enterococci per 100 mL.

Sediment Disposal

- Sediment from routine cleaning of BW tanks that originates outside waters under Canadian jurisdiction is not to be discharged into the water

BW Management Plans

- Required 6 months after the regulations come into force
- Explains at least . . .
    - Description management processes & procedures for BW and Sediment
    - Safety procedures with respect to BW management
    - Coordination procedures with Canadian authorities
    - Design specifications
    - Specifics for flow through/sequential exchange
    - Responsible officer
    - BW reporting form and methods of delivery
- Not required to be approved

Exceptional Circumstances

- Applies to ships that can not comply due to equipment failure or for safety reasons
- Inform Minister of Transport at least 96 hours (or asap) before entry into territorial sea – provide updates
- Regulation describes what criteria the Minister will consider
- Minister in consultation with Master will determine measure to be taken

Reporting

- Ballast Water Reporting Forms must be submitted by ships destined for Canadian ports as soon as possible after ballast is managed
- If a vessel is unable to manage its ballast water as required under the Regulations, they must notify the Minister of Transport at least 96 hours before entry into the territorial sea of Canada

Guide to the Ballast Water Management Regulations

- TP 13617 is now a Guide to the Ballast Water Management Regulations
- The Guide elaborates on the following:
  - Preparation of Ballast Water Management Plans
  - Procedures and considerations when conducting exchanges
  - The use of ballast water treatment systems
  - Provisions for reporting
  - Procedures for small pleasure craft and rescue vessels
  - NOBOB vessels

NOBOB Ships

- Oceangoing NOBOB ships shall:

.1 comply with the Shipping Federation of Canada's "Code of Best Practices for Ballast Water Management",

.2 conduct a flushing of residual ballast at sea, or

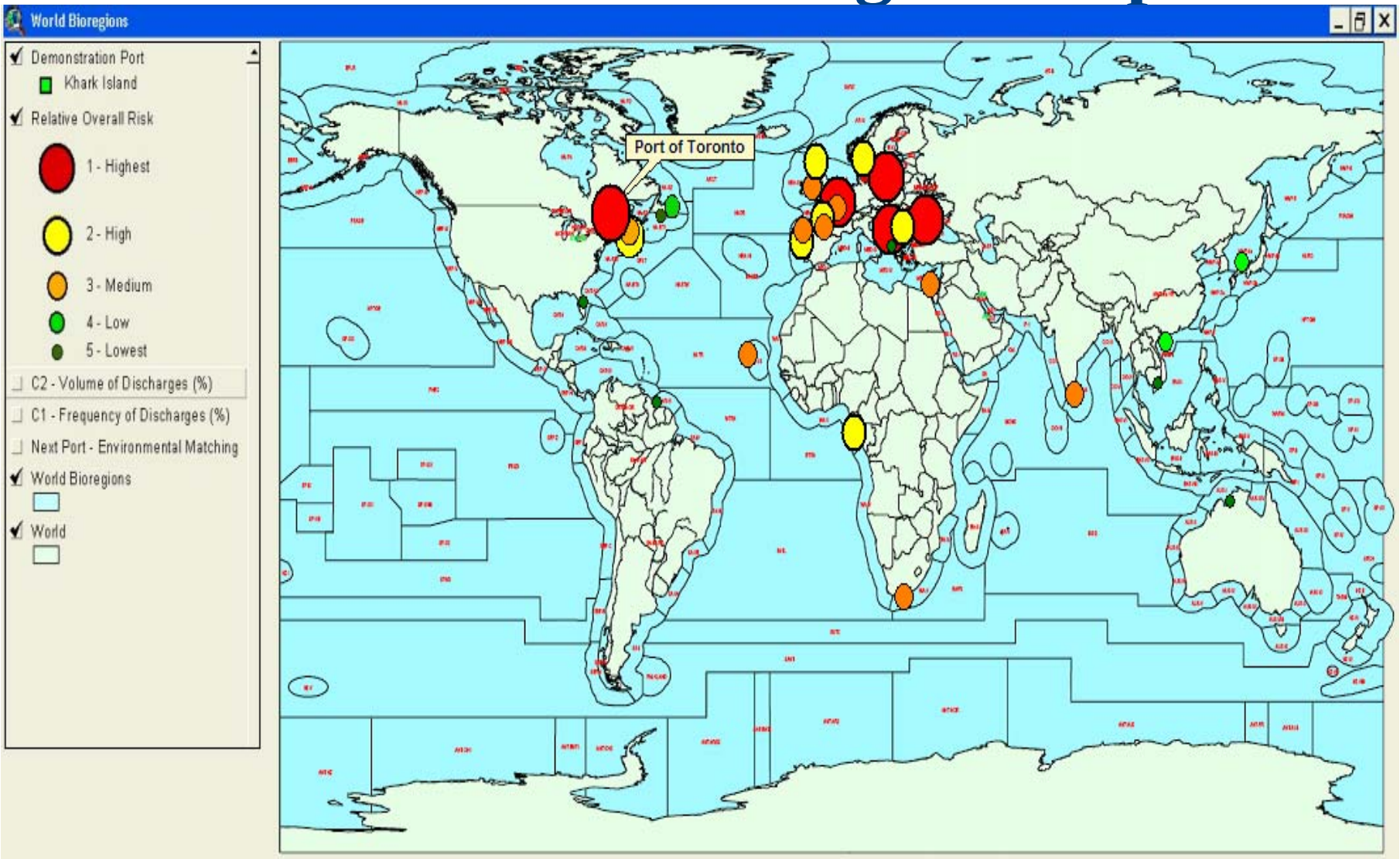
.3 carry residual water in all ballast tanks that might be subsequently discharged into the St Lawrence River or the Great Lakes that results from ballast that has properly exchanged or treated

- Lakers should comply with the "Voluntary Management Practices to Reduce the Transfer of Aquatic Nuisance Species Within the Great Lakes by U.S. and Canadian Domestic Shipping"

Next Steps

- Address domestic traffic
- Develop alternative treatment technologies
- Develop options for non-compliant ships (e.g. rock salt)
- Consider incorporation of all the provisions of the IMO International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004
- Finalize risk assessments
- Continue the ongoing implementation of Canada's National Ballast Water Database and development of risk assessment software

Risk assessments being developed



Example Levels of Risk

Low Risk Vessel

Vessel Type: **Chemical/Products Tanker**
Arrival Port: **Quebec City**
Last Port: **Algeciras - Spain**
Next Port: **Hamilton**
Ballast On Board: **1000 m^3**
Volume Discharged: **250m^3**
Ballast Water Source: **Algeciras -Spain**
Ballast Water Exchange: **No**
Non – Compliance: **Non-Compliance**
Reason for Non-Compliance: **Poor Weather**

Risk Factors

- Ballast water source dissimilar to destination port
- Low ballast water volume

High Risk Vessel

Vessel Type: **Tanker**
Arrival Port: **Quebec City**
Last Port: **New York - USA**
Next Port: **Hamilton**
Ballast On Board: **2000m^3**
Volume Discharged: **2000m^3**
Ballast Water Source: **New York - USA**
Ballast Water Exchange Location: **None**
Non – Compliance: **Non-Compliance**
Reason for Non-Compliance: **No Ballast Water Procedures On Board**

Risk Factors

- Source port temperature/salinity similar to destination port
- No ballast exchange
- High ballast water volume

Conclusion

- Our Regulations are not the final solution to the issue
- The Guidelines and Regulations do provide sound first steps towards addressing the issue

Further Information

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