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Canadian Domestic Shipping

Perspective and Efforts

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N. (Nick) Leak

Manager - CSA Ballast Water Research & Technical Evaluation Project and Fund



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Approach

Ballast Water Research and Technical Evaluation Project

- Further work on risks
- Assess available options
 - Systematically examine operational and environmental factors
- Technologies focused assessments



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Determine Risks



Transfer Potential Study

- Determine actual risks relevant to ballast water operations

First step

- Update CSA's Transfer Risk Model

Next steps

- Contribute to Minnesota/GSI AIS Study
- Partnership with The Nature Conservancy
- Develop tailored solutions - based on research then evaluation

Technical Options - Operations

Fleet

- 90 vessels
- Purpose-built classed to operate in domestic inland and near coastal waters
 - » 36 Self-Unloading Bulkers
 - » 24 Bulkers
 - » 22 Tankers
 - » 8 General Cargo & other

Trading

- Technically diverse and Specialty trades and Bi-national operations
 - » 70% lakes exclusive
 - » Rest are coastal, Arctic or go back and forth

Compliance

- Suite of Canadian, IMO and U.S. ballast water regulations
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Technical Options - Assessment

Evaluation Tool

Objectively assess the suitability of available BWTS for conditions

First step

- Multi-criteria based analysis
 - ~ 35 criteria to evaluate (~19) IMO & USCG AMS fresh water systems

Next steps

- Expand to all available BWTSs and new regulations



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Identify and Evaluate Potential Options

Identify potential hybrid solutions tailored for vessels and conditions

- Mobile Treatment System Testing
 - Partnered with US National Park Service
 - Included consultations with Transport Canada and Environment Canada



- Future
 - Mobile BWTS follow on testing for larger vessel
 - Continue to look for affordable, effective solutions
 - Seek opportunities and partnerships
 - Identify components or approaches for hybrid or alternate solution