

# **MARITIME TRANSPORTATION ON THE GREAT LAKES**

## **ISSUES AND CHALLENGES**

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[WWW.GREATLAKESPORTS.ORG](http://WWW.GREATLAKESPORTS.ORG)

**OVERVIEW  
OF THE  
GREAT LAKES  
SHIPPING SYSTEM**

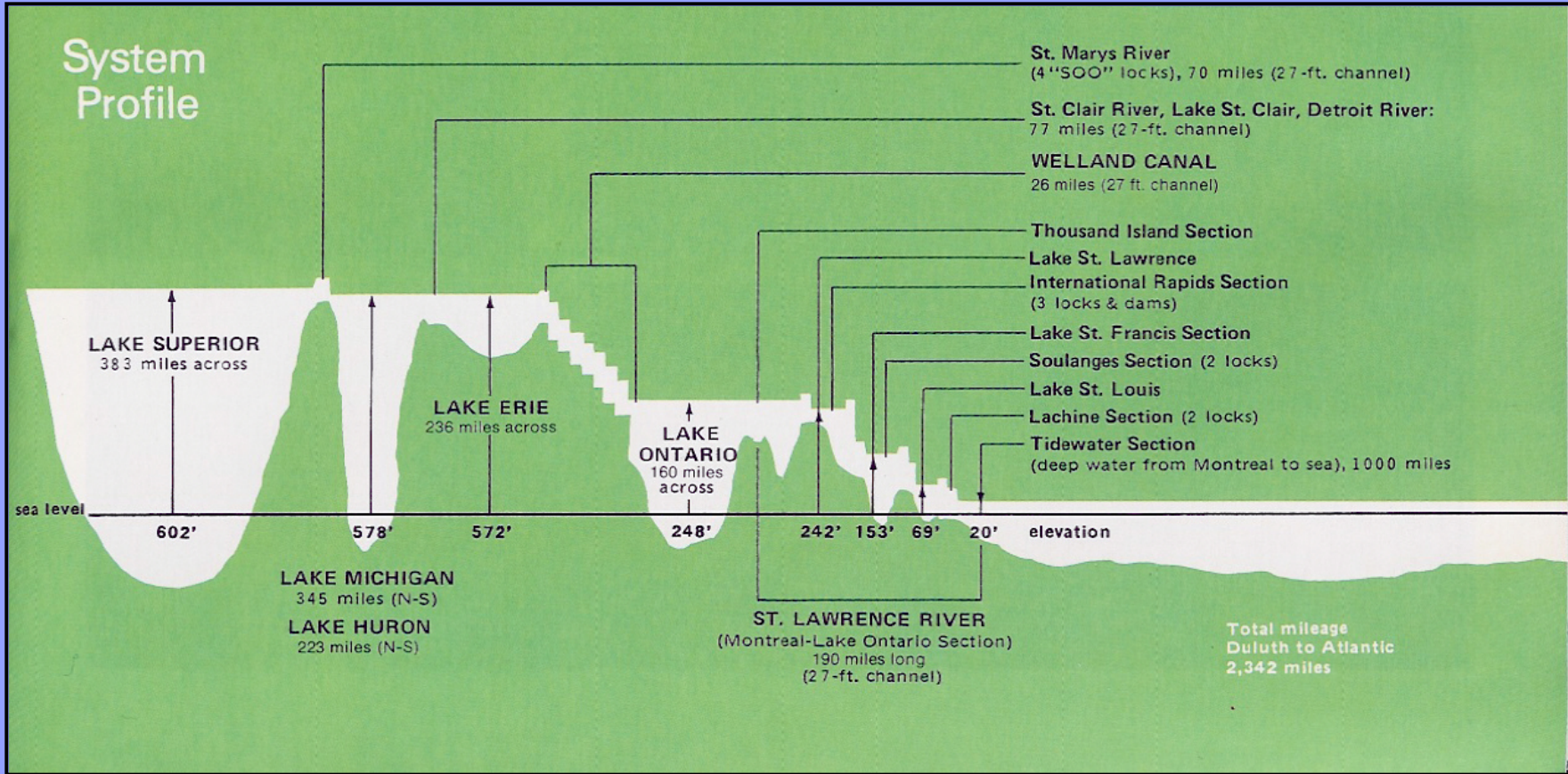
# GREAT LAKES / ST. LAWRENCE SEAWAY SYSTEM



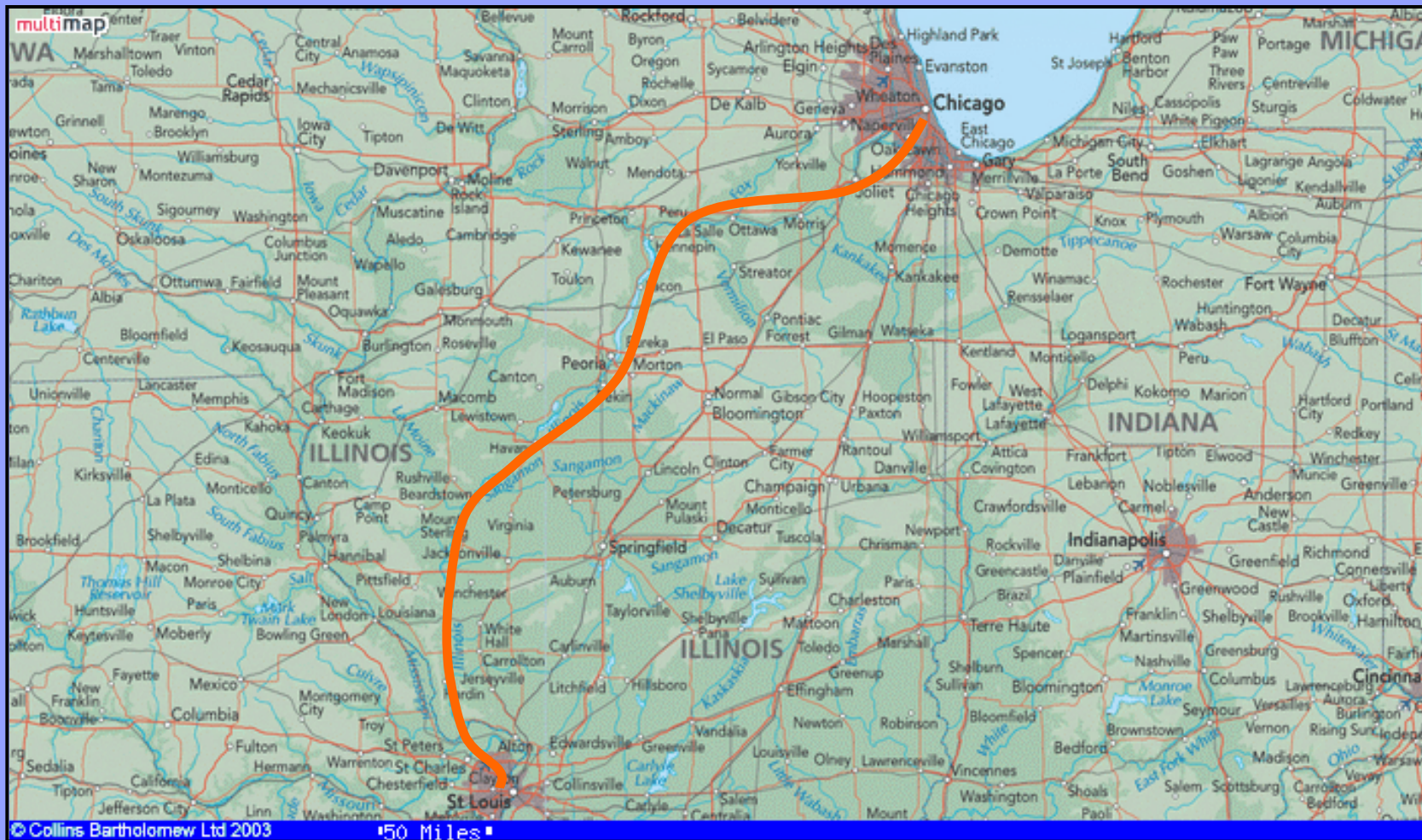
# GREAT LAKES / ST. LAWRENCE SEAWAY LOCK INFRASTRUCTURE



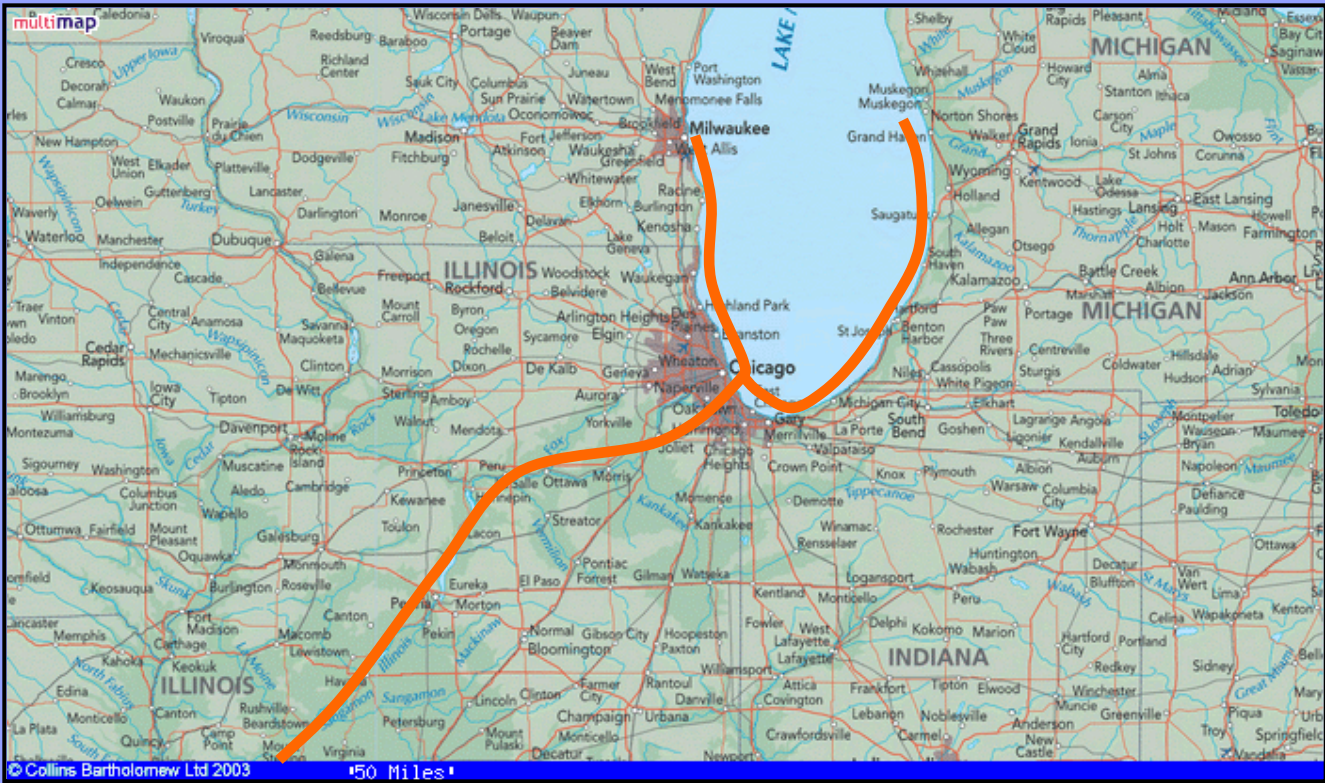
# TOPOGRAPHICAL VIEW



# INLAND RIVER - GREAT LAKES CONNECTION



# INLAND RIVER - GREAT LAKES CONNECTION



# Great Lakes Navigation System

Three Primary Industry Segments:

- U.S.-Flag domestic shipping
- Canadian-Flag domestic shipping
- Foreign-Flag Ocean shipping



# U.S.-FLAG DOMESTIC SHIPPING (Bulk Only)



# INDIANA HARBOR (1000' x 105' x 28' draft)

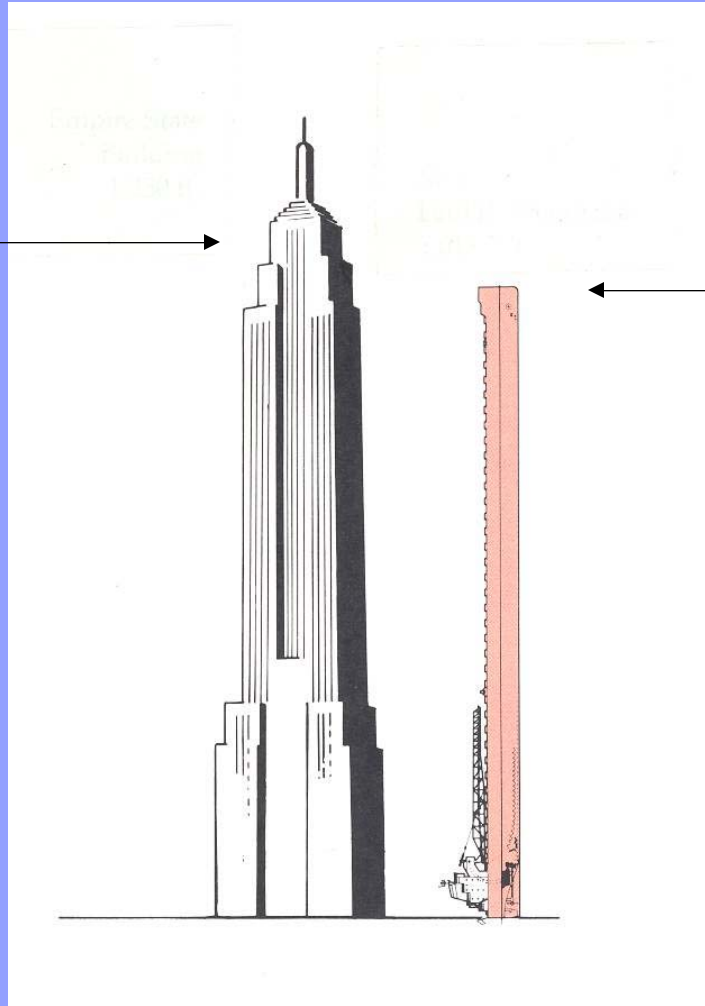


INDIANA HARBOR, St. Clair River, 8 / 25 / 2001  
Don Coles, Great Lakes Aerial Photos

**Empire  
State  
Building**

**1,224  
Feet**

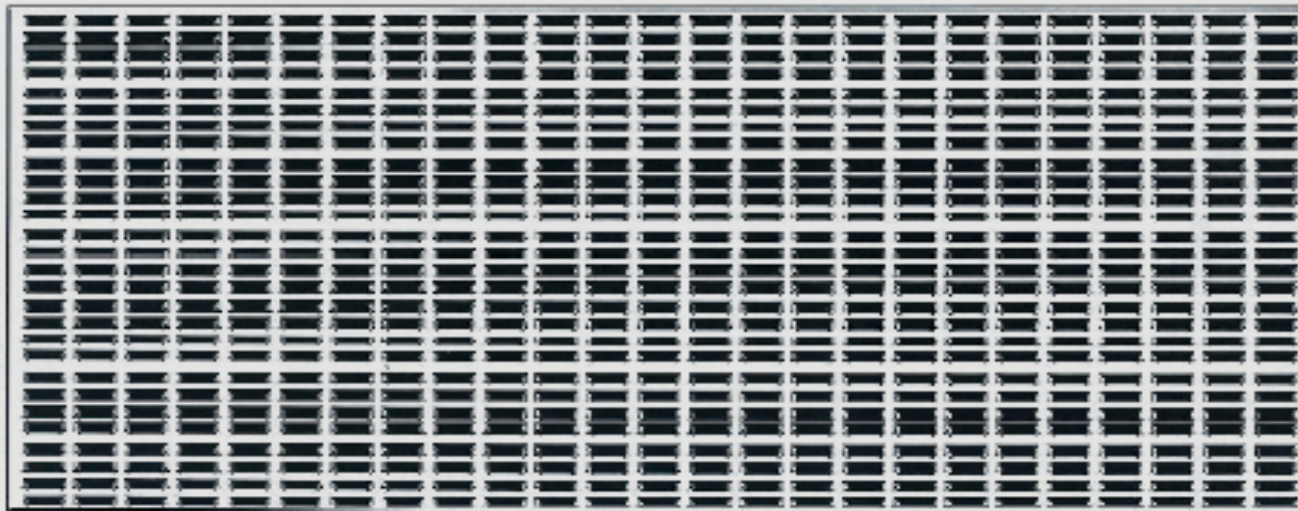
**102<sup>nd</sup>  
Floor**



**Indiana  
Harbor**

**1,000  
Feet**

**1 Laker = 7 100-Car Unit Trains**



**100 - 100 TONS PER RAILROAD CAR**



*Photo: Rod Burdick*

**1 Laker = 2,800 Trucks**



# CANADIAN-FLAG DOMESTIC SHIPPING (Bulk Only)



# ALGOCAPE (730' x 75' x 28' draft)



ALGOCAPE, Lake St. Clair 7 / 22 / 2001  
Don Coles, Great Lakes Aerial Photos

# FOREIGN-FLAG OCEAN SHIPPING (Bulk and Breakbulk)



# FEDERAL SAGUENAY (656' x 77' x 26' draft)





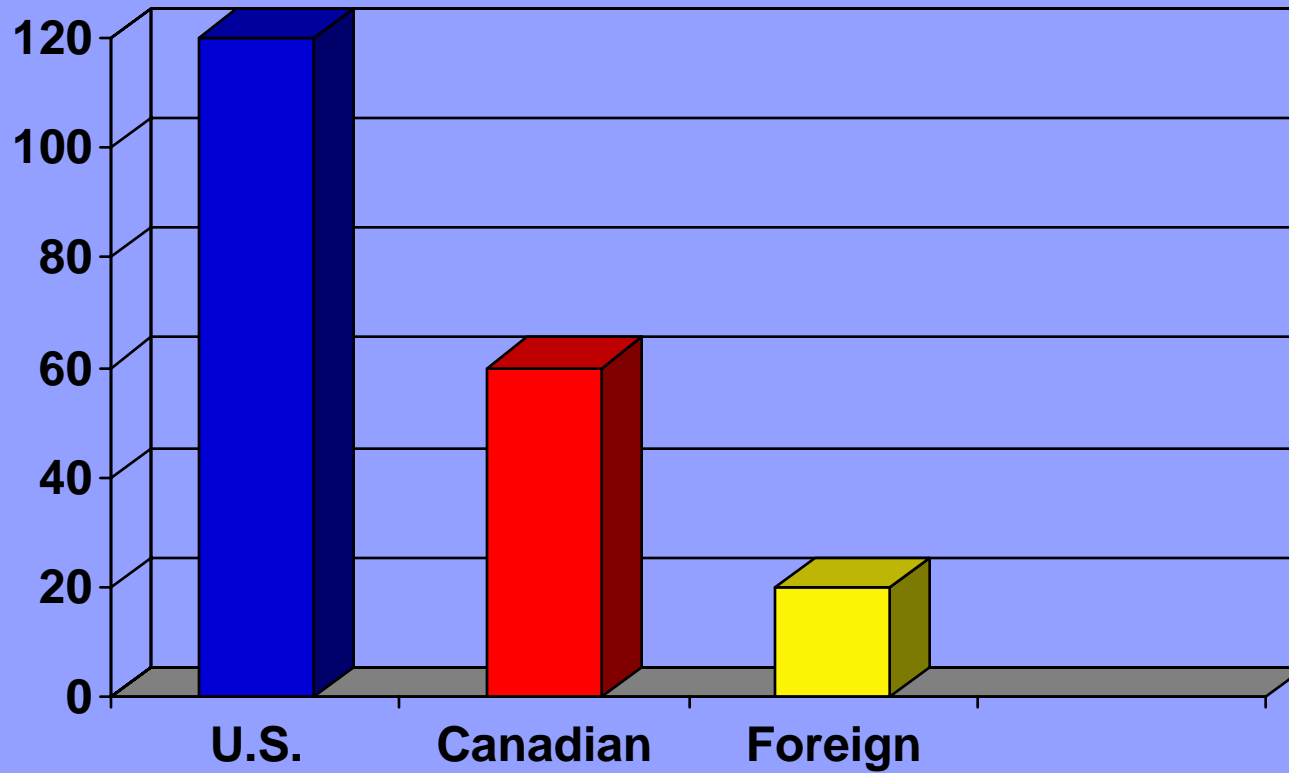


# CARGO TYPES

- Bulk
- Breakbulk
- Project cargo
- Few containers

# CARGO VOLUME

(millions of tons)



# INDUSTRIES SERVED



- **STEEL**
  - Imported semi-finished steel
  - Raw materials for domestic production



- **AGRICULTURE**
  - Fertilizers
  - Export grains

- **FOREST PRODUCTS**



- **CONSTRUCTION**
  - Cement
- **UTILITIES**
  - Coal

# COMPETITION









- East Coast ports
- Gulf ports
- Rail
- Trucking
- Inland River System

# **ISSUES & CHALLENGES**

# **GREAT LAKES DREDGING CRISIS**

- More than \$200 million Great Lakes maintenance dredging backlog
- \$3 billion+ excess balance in the Harbor Maintenance Trust Fund
- Critical locations: Saginaw, MI; Green Bay, WI; Cleveland, OH; Toledo, OH

# IMPACT OF DREDGING CRISIS

<b>Major Great Lakes Vessel Classes</b>	<b>Vessel Length (feet)</b>	<b>Per-Trip Carrying Capacity</b>	<b>Capacity Per Inch Of Draft*</b>
	<b>1,000</b>	<b>69,664</b>	<b>267</b>
	<b>806</b>	<b>34,720</b>	<b>146</b>
	<b>767</b>	<b>28,336</b>	<b>127</b>
	<b>730</b>	<b>27,558</b>	<b>115</b>
	<b>635</b>	<b>22,064</b>	<b>107</b>
	<b>501</b>	<b>13,776</b>	<b>71</b>

\*Capacity per inch of draft reflects the incremental tonnage carried at normal loaded draft.

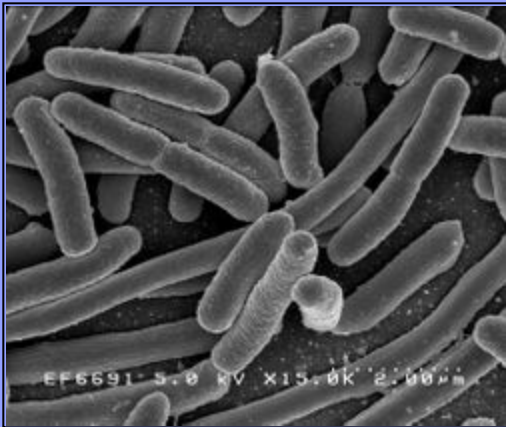
# Rep. Oberstar On Dredging

***“It is incomprehensible to me that the ships that depart our Minnesota harbors cannot carry full loads of iron ore and low-sulfur coal because the U.S. Army Corps of Engineers does not get enough money to maintain the system. This waterway is too important a part of the national transportation infrastructure to be treated like a poor relation. In the next Congress, I will do everything in my power to bring our fair share of Federal dredging dollars back to the Great Lakes.”***

Congressman James L. Oberstar  
September 29, 2006



# AQUATIC NUISANCE SPECIES



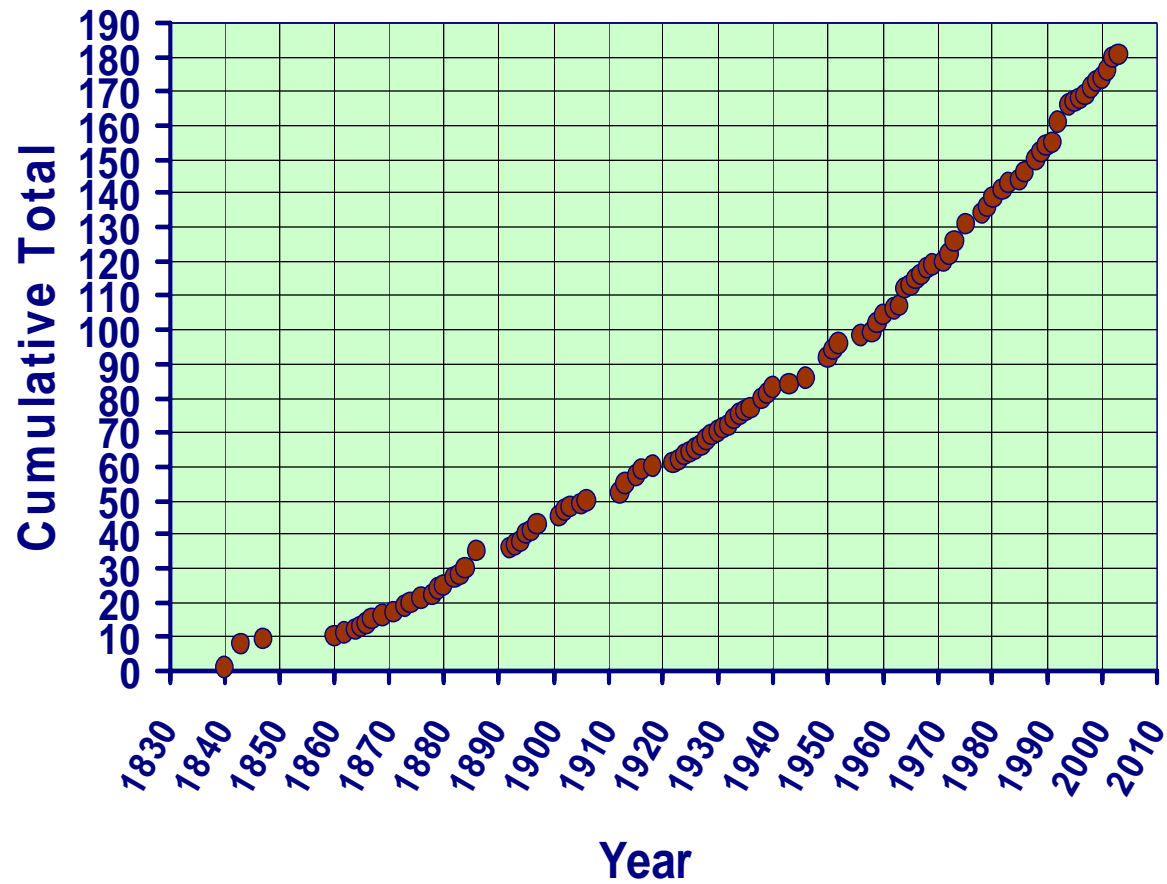
# GREAT LAKES ANS TIMELINE

- Zebra Mussel discovered in G.L. in 1986
- Congress enacts Nonindigenous Prevention and Control Act of 1990
- Ballast Water exchange mandatory for G.L. ocean vessels in 1993
- Congress enacts NISA in 1996
- Michigan considers legislation in 2000 to effectively ban ocean ships from state waters
- 2003 U.S. Chair of the IJC calls for closure of the St. Lawrence Seaway to ocean shipping
- 2005 National Academy of Sciences begins study of Seaway closure
- Michigan enacts legislation in 2006 forbidding the discharge of ballast water from ocean ships at Michigan ports, or the installation of state-approved treatment ballast treatment systems.

# GROWING PUBLIC INTEREST AS PROBLEM PERSISTS

- Organized and vocal environmental organizations
- Media has become "anti-shipping"
- Marine industry has been redefined as a "polluter"
- Governors call for solutions
- Mayors call for solutions
- Legislation introduced in most G.L. states
- Regulatory measure enacted in Michigan

Record of ANS Discovery in the Great Lakes



**2006: at least 181 ANS (161 free-living)**

*Source: Ricciardi 2006*

# "GREAT SHIPS INITIATIVE"

- Industry-led effort to accelerate the development of shipboard ballast water treatment systems
- R&D center currently under construction in the Port of Duluth/Superior
- Provide engineering assistance
- Arrange access to ships
- Lobby for state and federal assistance

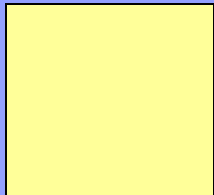
# OBJECTIVE

To end ship mediated introductions of aquatic invasive species into the Great Lakes

# PROJECT ELEMENTS



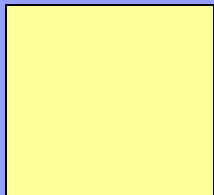
technology incubation



harbor monitoring



installation assistance / financing



post installation monitoring / assistance

# FUNDING

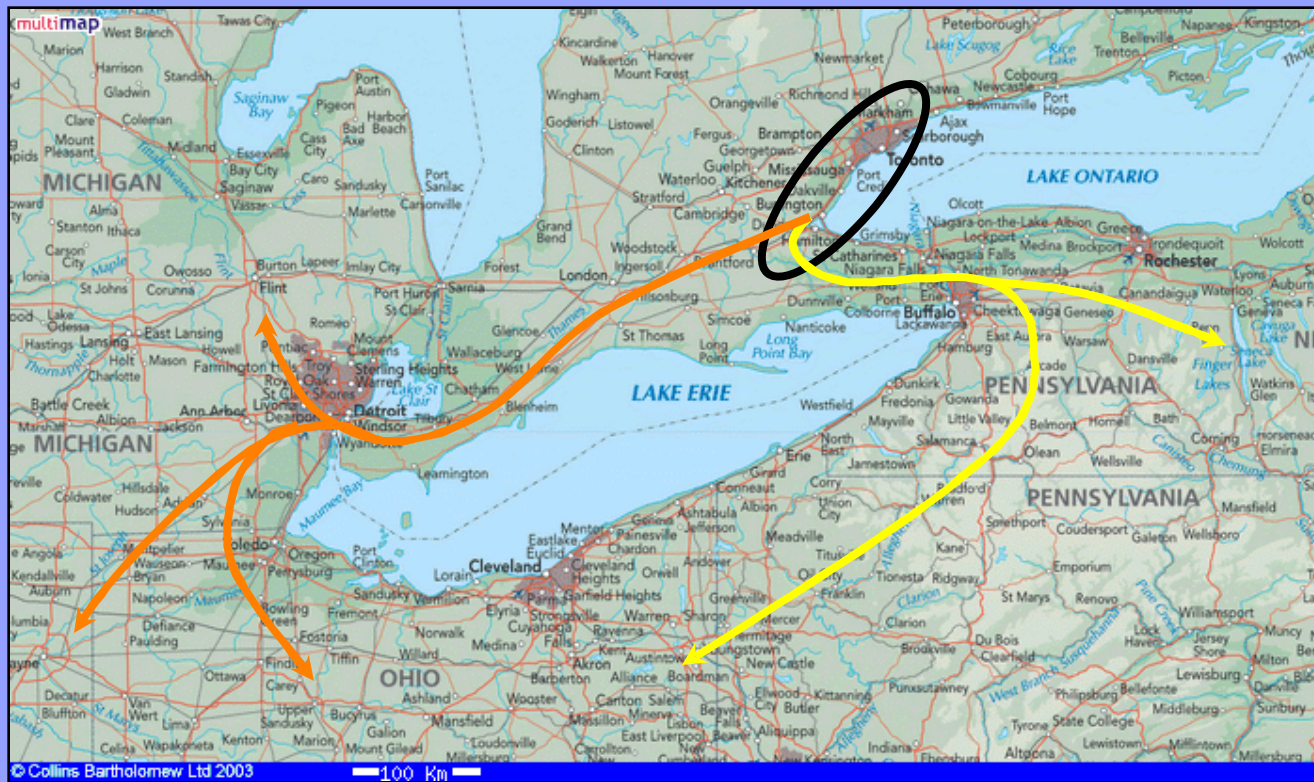
(as of November, 2006)

Great Lakes Ports	100,000.00
U.S. Department of Transportation	900,000.00
Maritime Administration	700,000.00
SLSDC	50,000.00
SLSMC	50,000.00
NOAA	1,250,000.00
GLMRI	50,000.00
Total	3,300,000.00

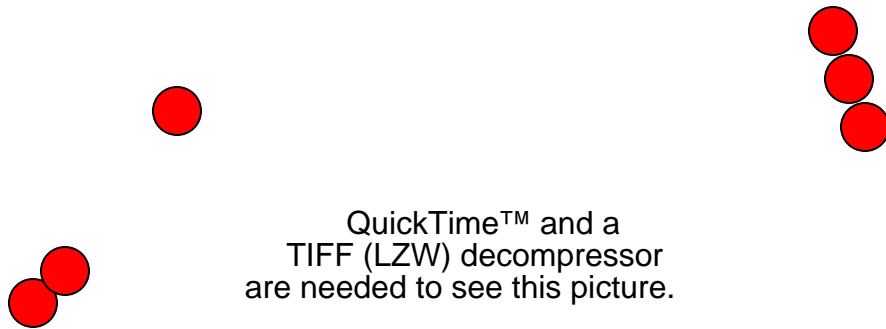


# SHORT SEA SHIPPING

## CURRENT LAND TRANSPORT ROUTES IN THE EASTERN GREAT LAKES



# EXISTING BORDER CROSSINGS





Detroit-Windsor  
Truck Ferry (existing)



Cleveland-Port Stanley  
Truck Ferry



Erie-Nanticoke  
Truck Ferry



Hamilton-Oswego  
Truck Ferry

109TH CONGRESS  
2D SESSION **H. R. 5889**

To amend the Internal Revenue Code of 1986 to exempt from the harbor maintenance tax certain commercial cargo loaded or unloaded at United States ports in the Great Lakes Saint Lawrence Seaway System.

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IN THE HOUSE OF REPRESENTATIVES

JULY 26, 2006

Mrs. JONES of Ohio (for herself and Mr. ENGLISH of Pennsylvania) introduced the following bill; which was referred to the Committee on Ways and Means

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**A BILL**

To amend the Internal Revenue Code of 1986 to exempt from the harbor maintenance tax certain commercial cargo loaded or unloaded at United States ports in the Great Lakes Saint Lawrence Seaway System.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the "Great Lakes Short  
5 Sea Shipping Enhancement Act of 2006".

# "GREAT LAKES SHORT SEA SHIPPING ENHANCEMENT ACT"

# FREIGHT TRANSPORTATION DATABASE

- Great Lakes Maritime Research Institute - University of Toledo
- Central database integrating highway, rail, and marine transportation data
- Assist regional, state and provincial planners in identifying marine solutions to gridlock
- Justify short sea shipping alternatives
- Justify marine infrastructure investments



# GREAT LAKES NAVIGATION STUDY

- 5-year U.S.-Canadian study of system infrastructure
- Focus on maintenance/replacement of existing navigation structures
- No support in the region for expansion or enlargement

# THANKS!

