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# Binational Action to Restore the Great Lakes

**John Lawrence**

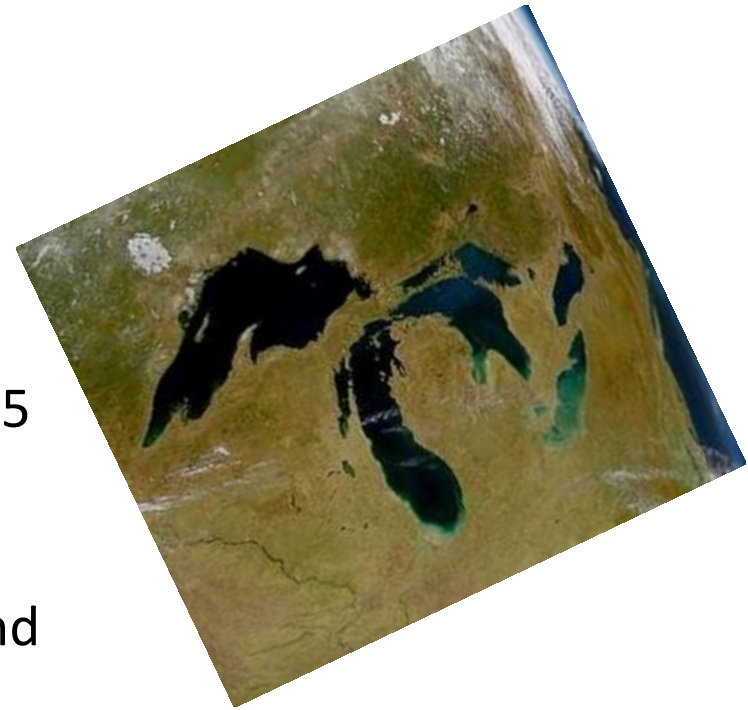
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**Cameron Davis**

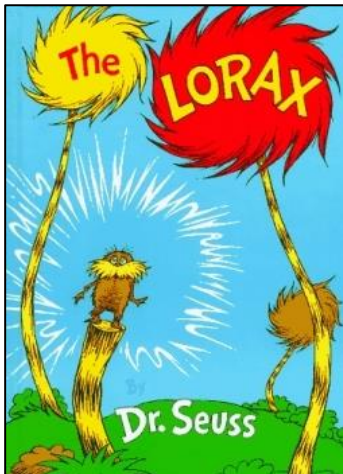
**Senior Advisor to the Administrator  
(Great Lakes),  
U.S. Environmental Protection Agency**

# The Great Lakes – *internationally significant*

- Largest fresh surface water system
- Home to more than 1/3 of Canadian population and 1/10 of US population
- Provide drinking water to more than 8.5 million Canadians
- Home to more than 350 fish species and 3,500 plant and animal species
- Dominant role in national competitiveness and economic activity



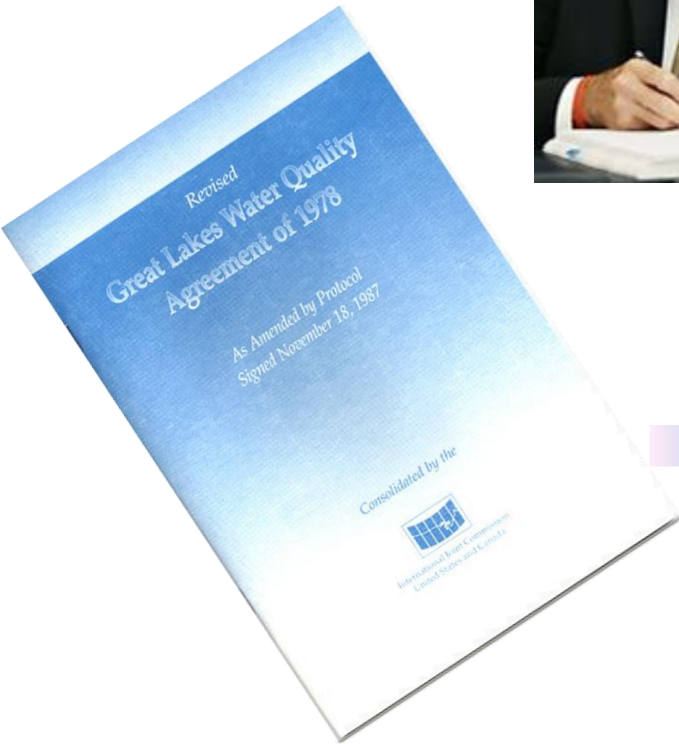
# The Great Lakes Water Quality Agreement – *centerpiece of action*



You're glumping the pond where the Humming-Fish hummed!  
No more can they hum, for their gills are all gummed.  
So I'm sending them off. Oh, their future is dreary.  
They'll walk on their fins and get woefully weary  
in search of some water that isn't so smeary.  
**I hear things are just as bad up in Lake Erie!**

— *The Lorax*, by Dr. Seuss

# The amended Agreement – *signed* *September 7<sup>th</sup>, 2012*



**PROTOCOL AMENDING THE AGREEMENT  
BETWEEN CANADA AND THE UNITED STATES OF AMERICA  
ON GREAT LAKES WATER QUALITY, 1978, AS AMENDED  
ON OCTOBER 16, 1983 AND ON NOVEMBER 18, 1987**

**AGREEMENT BETWEEN CANADA AND THE UNITED STATES  
OF AMERICA ON GREAT LAKES WATER QUALITY, 2012**



# Purpose and vision...

To restore and maintain the chemical, physical and biological integrity of the Waters of the Great Lakes.



Through the 2012 Agreement, Canada and the United States have established a shared vision and common objectives and commitments to science, governance and action that will help to restore and protect Great Lakes water quality and ecosystem health.

# The 2012 Agreement is...

**Comprehensive:** NEW annexes addressing priority challenges

- Aquatic Invasive Species, Habitat and Species, Climate Change Impacts

**Action-oriented:** establishing clear commitments

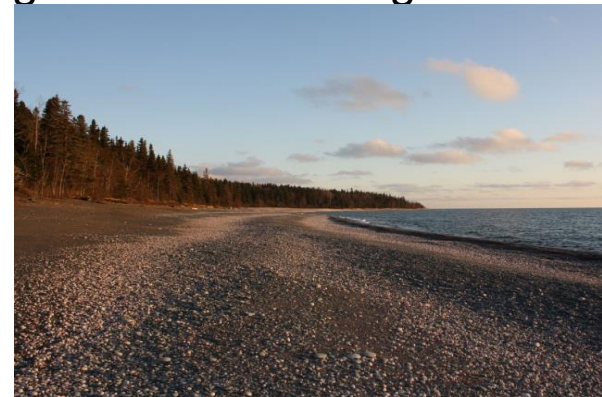
- Focusing on prevention and precaution
- Managing the nearshore

**Effective:** enhanced transparency and accountability

- Establishing a Great Lakes Public Forum
- Creating the Canada-United States Great Lakes Executive Committee

**Modernized and forward thinking:** reflecting current knowledge and preventing new problems

- Written in plain language



# Principles and Approaches

- Accountability
- Adaptive Management
- Adequate Treatment
- Anti-degradation
- Coordination
- Ecosystem Approach
- Innovation
- “Polluter pays”
- Precaution
- Prevention
- Public engagement
- Science-based management
- Sustainability
- Tributary management
- Virtual elimination
- Zero discharge

# General Objectives

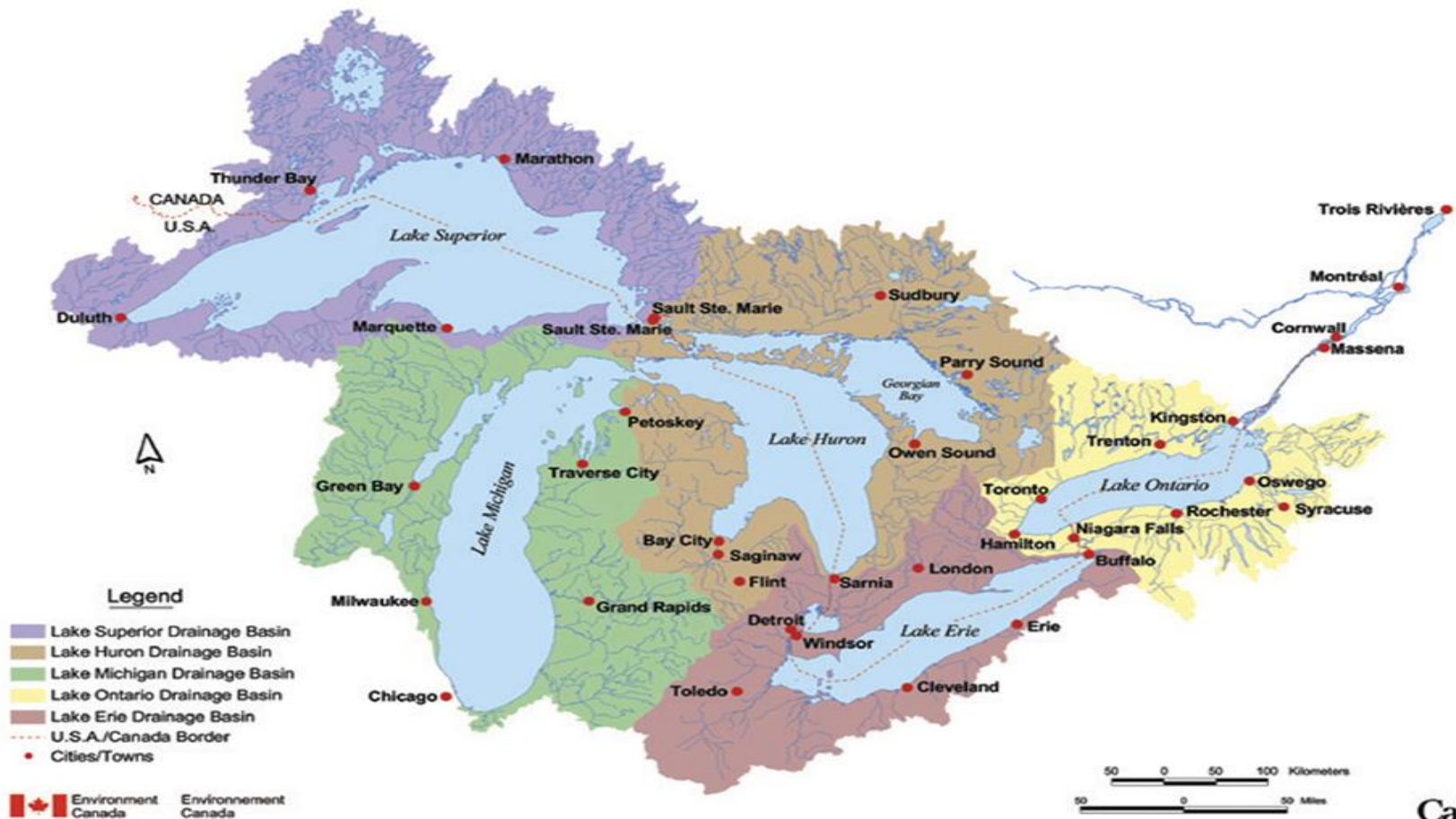
- Safe, high-quality drinking water
- Allow for swimming and other recreational use
- Allow for consumption of fish and wildlife
- Free from pollutants that could be harmful to human health, wildlife, or aquatic organisms
- Healthy and productive wetlands and other habitats
- Free from nutrients in amounts interfere with aquatic ecosystem health or human use
- Free from invasives that adversely impact water quality
- Free from harmful impact of contaminated groundwater
- Free from substances, materials or conditions that may negatively impact chemical, physical or biological integrity





# Specific Objectives

- Lake Ecosystem Objectives
- Substance Objectives





# Annexes of the Agreement

- 1 : Areas of Concern**
- 2 : Lakewide Action and Management Plans**
- 3 : Chemicals of Mutual Concern**
- 4 : Nutrients**
- 5 : Discharges from Vessels**
- 6 : Aquatic Invasive Species**
- 7 : Habitat and Species**
- 8 : Groundwater**
- 9 : Climate Change Impacts**
- 10 : Science**

# Annex 1: Areas of Concern

Restore beneficial uses in Areas of Concern through development and implementation of Remedial Action Plans



# Annex 2: Lakewide Management



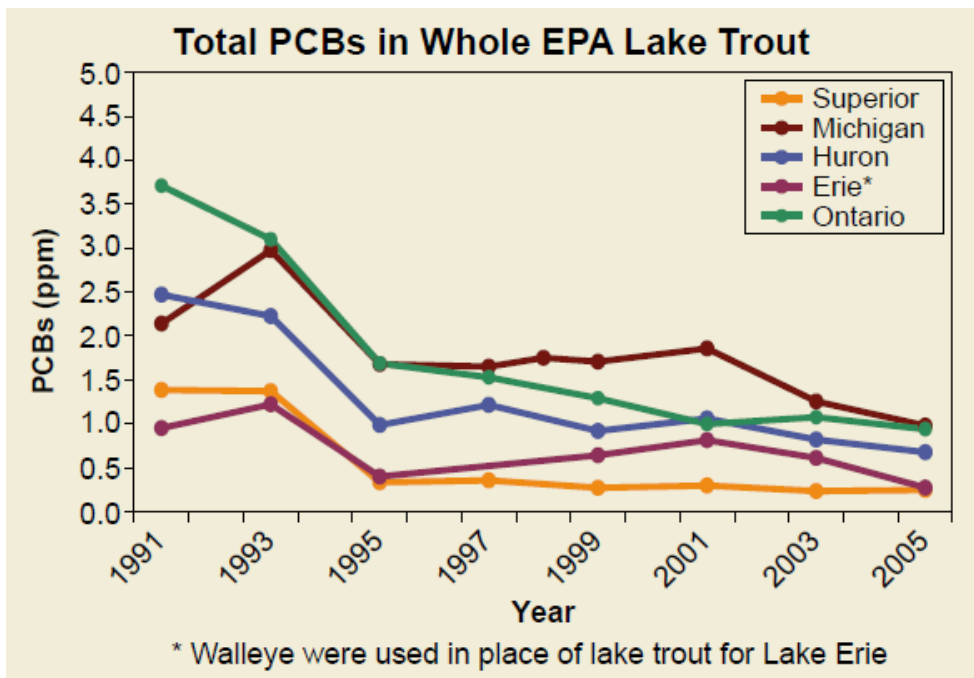
- Assess status of each Lake
- Actions to address threats to water quality
- Assess the nearshore waters and implement protection and restoration strategies



# Annex 3: Chemicals of Mutual Concern



- Identify Chemicals of Mutual Concern and reduce risks
- Reduce use and release of Chemicals of Mutual Concern
- Monitor effectiveness of pollution prevention and control measures



# Annex 4: Nutrients

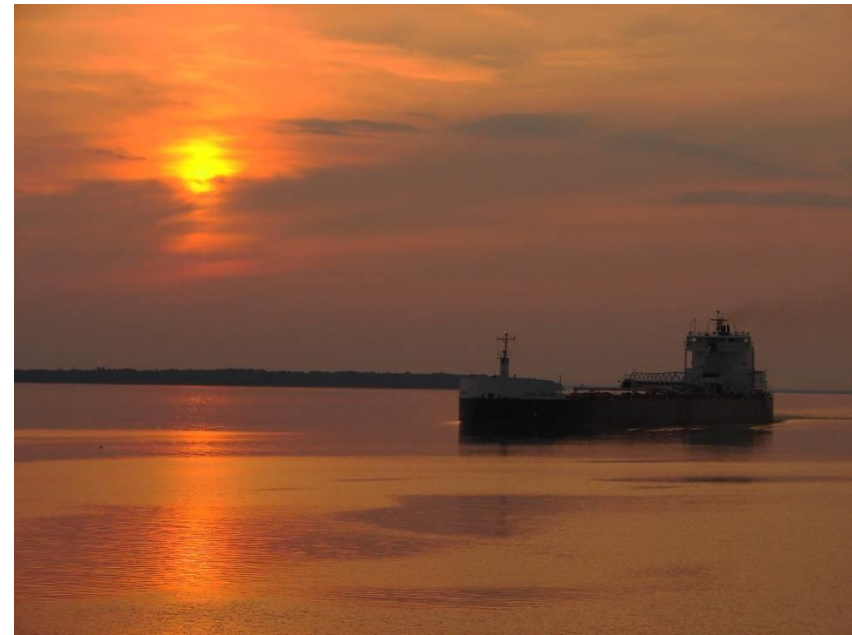
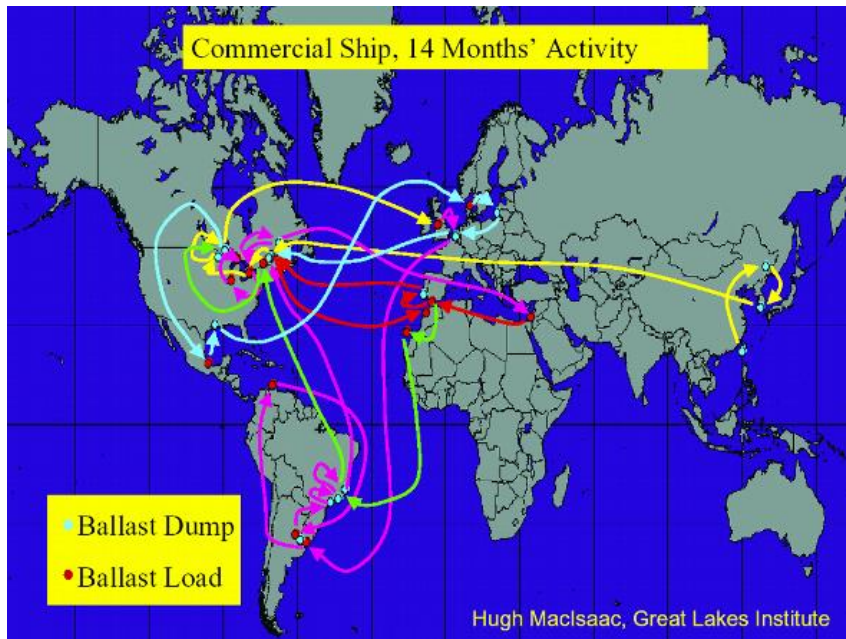
*Phosphorus – addressing toxic and nuisance algae*

Coordinate binational actions to manage phosphorus concentrations and loadings, and other nutrients if warranted, in the Waters of the Great Lakes



# Annex 5: Discharge from Vessels

Prevent and control vessel discharges harmful to the quality of the Waters of the Great Lakes





# Annex 6: Aquatic Invasive Species

Prevent the introduction of AIS, control or reduce the spread of existing AIS, and eradicate existing AIS where feasible





# Annex 7: Habitat and Species

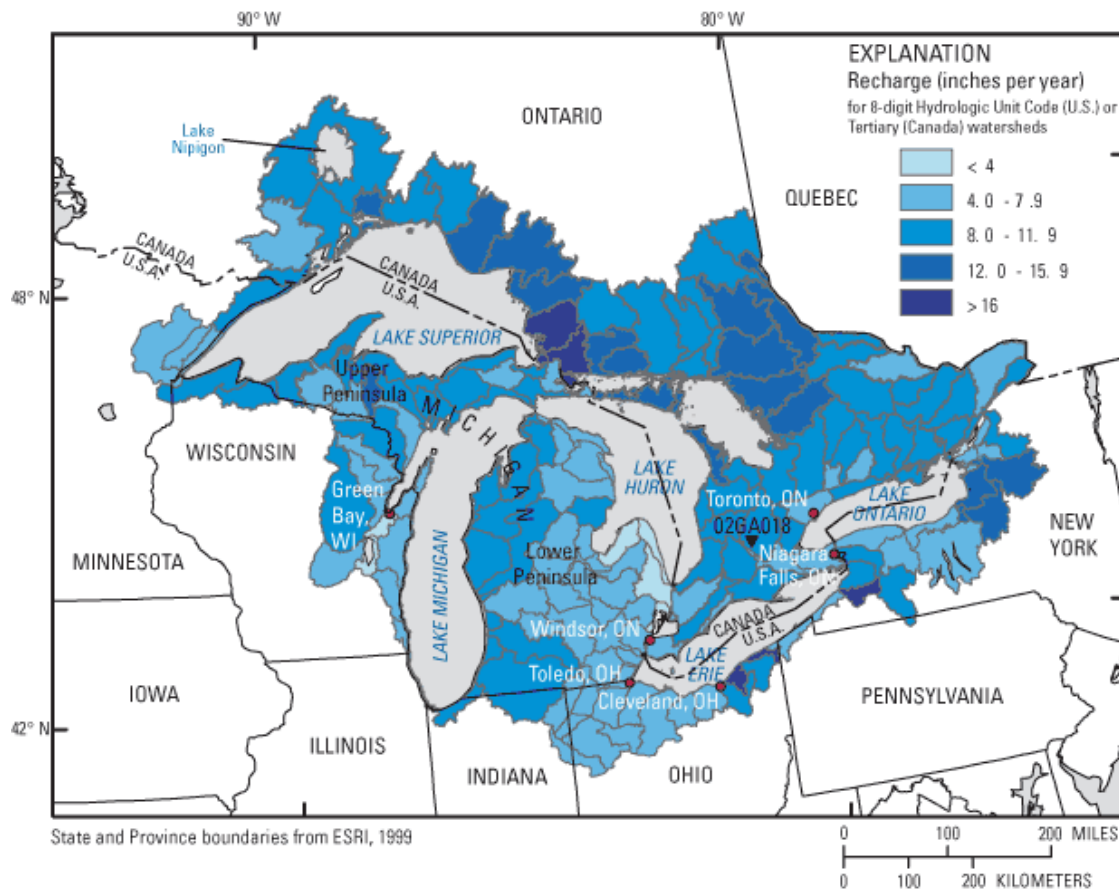


Conserve, protect, maintain, restore and enhance the resilience of native species and their habitat



# Annex 8: Groundwater

Coordinate groundwater science and management actions



# Annex 9: Climate Change Impacts



- Coordinate efforts to identify, quantify, understand and predict climate change impacts
- Share information with Great Lakes resource managers



# Annex 10: Science

Enhance coordination, integration, synthesis,  
and assessment of science activities





# Domestic efforts - Canada

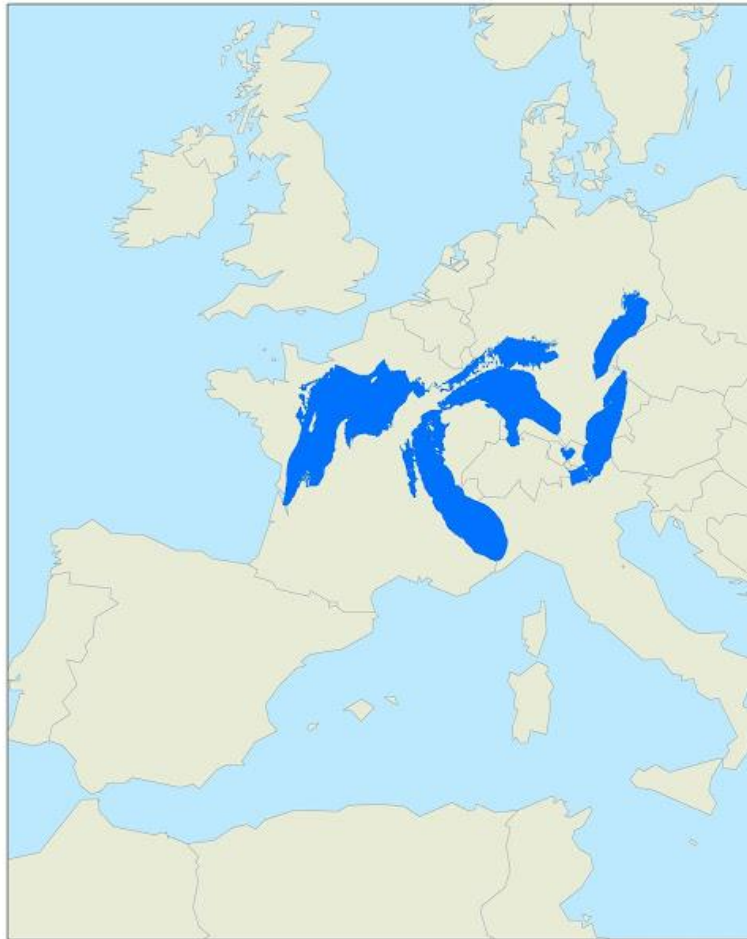
**Canada-Ontario Agreement on Great Lakes and Ecosystem Health** outlines how the two governments will cooperate and coordinate efforts.

Focused attention on:

- Randle Reef within Hamilton Harbour AOC
- Toxic and nuisance algae in Lake Erie
- Nearshore Framework



# Domestic efforts - US



- We have seen the removal of 25 BUIs at 13 AOCs as a result of GLRI-funded remediation work
- Presque Isle Bay was delisted in February, 2013
- Led by White House Council on Environmental Quality, federal, state, provincial and municipal partners have helped keep Asian carp from becoming established in the Great Lakes
- GLRI partners have restored, protected or enhanced more than 100,000 acres of wetland, coastal, upland and island habitat.