Canada-Ontario Lake Erie Action Plan

National Nutrient Reuse and Recovery Forum
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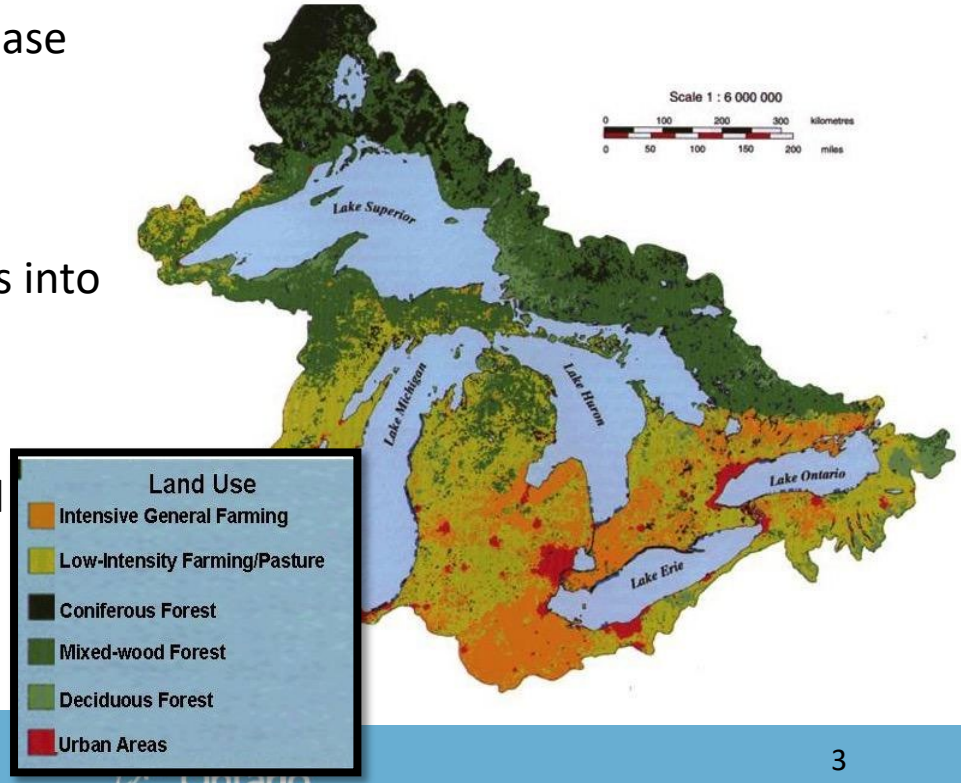
Presentation Outline …

- Context - focus on Lake Erie and the challenges
- Government response to challenges
- The Lake Erie Action Plan
- Phosphorus reuse and recovery, and the Action Plan

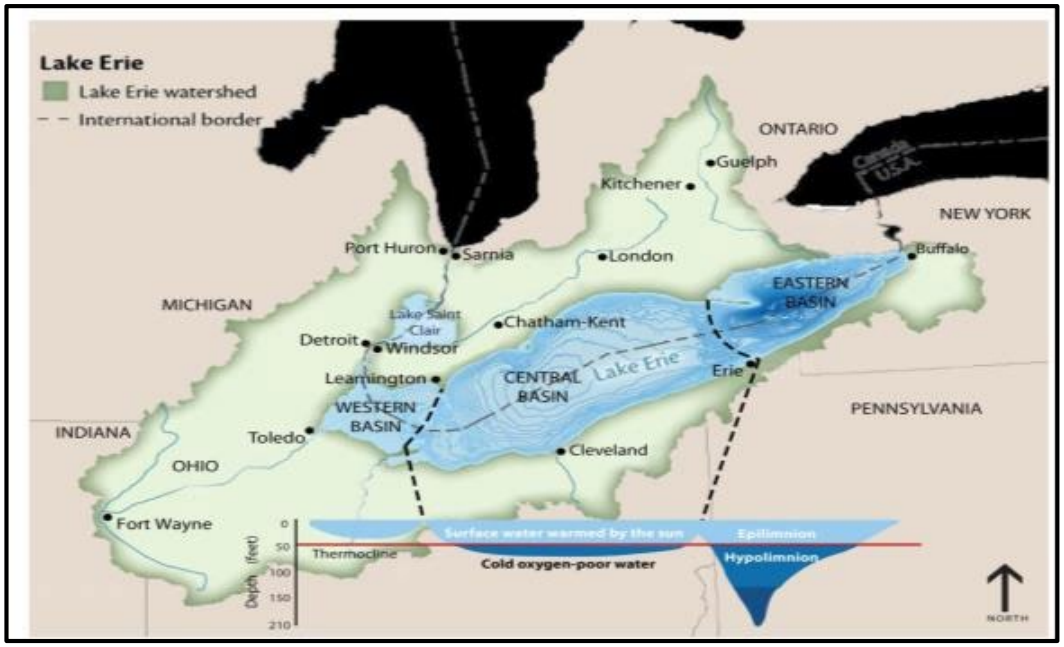
Context – Lake Erie

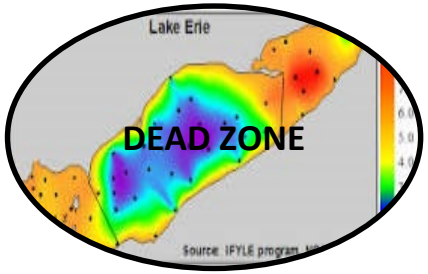
- Shallowest, warmest and most biologically productive of the five Great Lakes – making it highly sensitive to changes in nutrient levels and susceptible to algal blooms
- Provides drinking water for over 11 million people in Canada and the U.S.
- Approximately 75% of surrounding land base dedicated to agricultural production
- Estimated 11 billion litres of treated wastewater discharged each day from Canadian municipal and industrial sources into Lake Erie and its waterways
- Many areas of ecological significance
- One of the largest freshwater commercial fisheries in the world



Eutrophication – Not a New Problem for Lake Erie

The Challenges – Lake Erie's Response to Excessive Phosphorus Differs Depending on Where You Are…





WEST → EAST

Impact of Algal Blooms

Environmental Impacts

- Fish and wildlife habitat
- Animal health risks including fish kills
- Ecosystem function

Economic Impacts

- $4-5.5 billion over the next 30 years
- Commercial fishing, tourism and recreation, property values
- Additional water treatment
- Beach closures

Human Health Impacts

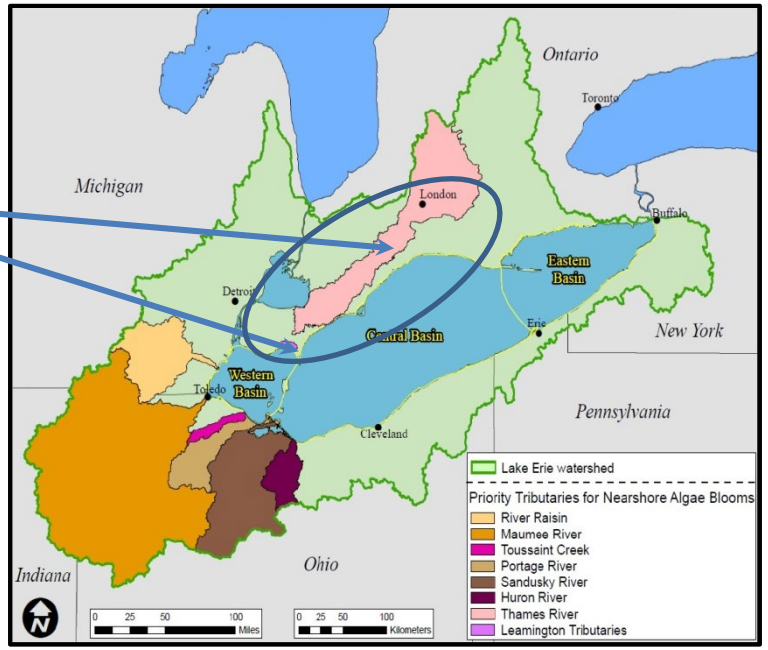
- Algal toxins may affect drinking water quality and recreational uses such as swimming

Governments' Response to Challenges – Targets for Lake Erie (February 2016)

- Canada and the U.S. established a 40 per cent phosphorus reduction target in 2016 for the western and central basins of Lake Erie

- Priority Nearshore Tributaries on the Canadian side - Thames River and Leamington tributaries 40% reduction in spring total and soluble reactive phosphorus

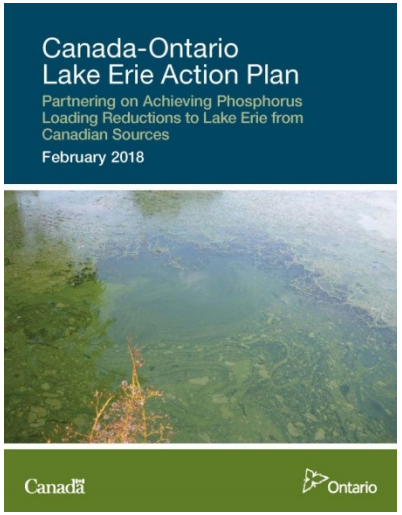
<u>Note</u>: No eastern Basin Target yet – insufficient science



Canada-U.S. Priority Tributaries

Canada-Ontario Lake Erie Action Plan (February 2018)

- Over 120 actions by Canada, Ontario and partners (e.g., municipalities, agriculture sector, CAs, NGOs) – addressing all three Lake Erie basins and Lake St. Clair



- Actions spread across five categories:
  - Category A – reduce phosphorus loadings
  - Category B – ensure effective policies, programs and legislation
  - Category C – improve the knowledge base
  - Category D – educate and build awareness
  - Category E – strengthen leadership and co-ordination
- Metrics will be established to support a suite of performance measures to track impacts over time – actions will be adjusted based on an adaptive management approach framework
- Detailed work plan to be in place by February 2019 – timelines, expected phosphorus reductions, lead agencies and investments required
- Governance: Implementation Team and Lake Erie Nutrients Working Group
- Progress report every five years – first one in 2023

Phosphorus Reuse and Recovery Commitment in the Action Plan

✓ Action C4.11 :

"Canada and Ontario will work with partners to explore opportunities to adopt innovative technologies that encourage phosphorus recovery and reuse"

Today's forum will help us meet this commitment !


Thank you !