Annex 4 Update: Public Input, Future Plans

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Great Lake Advisory Board Meeting

October7, 2015

Outline

- GLWQA Nutrients Annex
  - Recommended Targets – a brief reminder
- Input from Consultation
- Next Steps
  - Consider Comments & Finalize Targets
  - Adaptive management
  - Domestic action plans

Nutrients Annex

In cooperation and consultation with stakeholders –

By 2016 and starting with Lake Erie

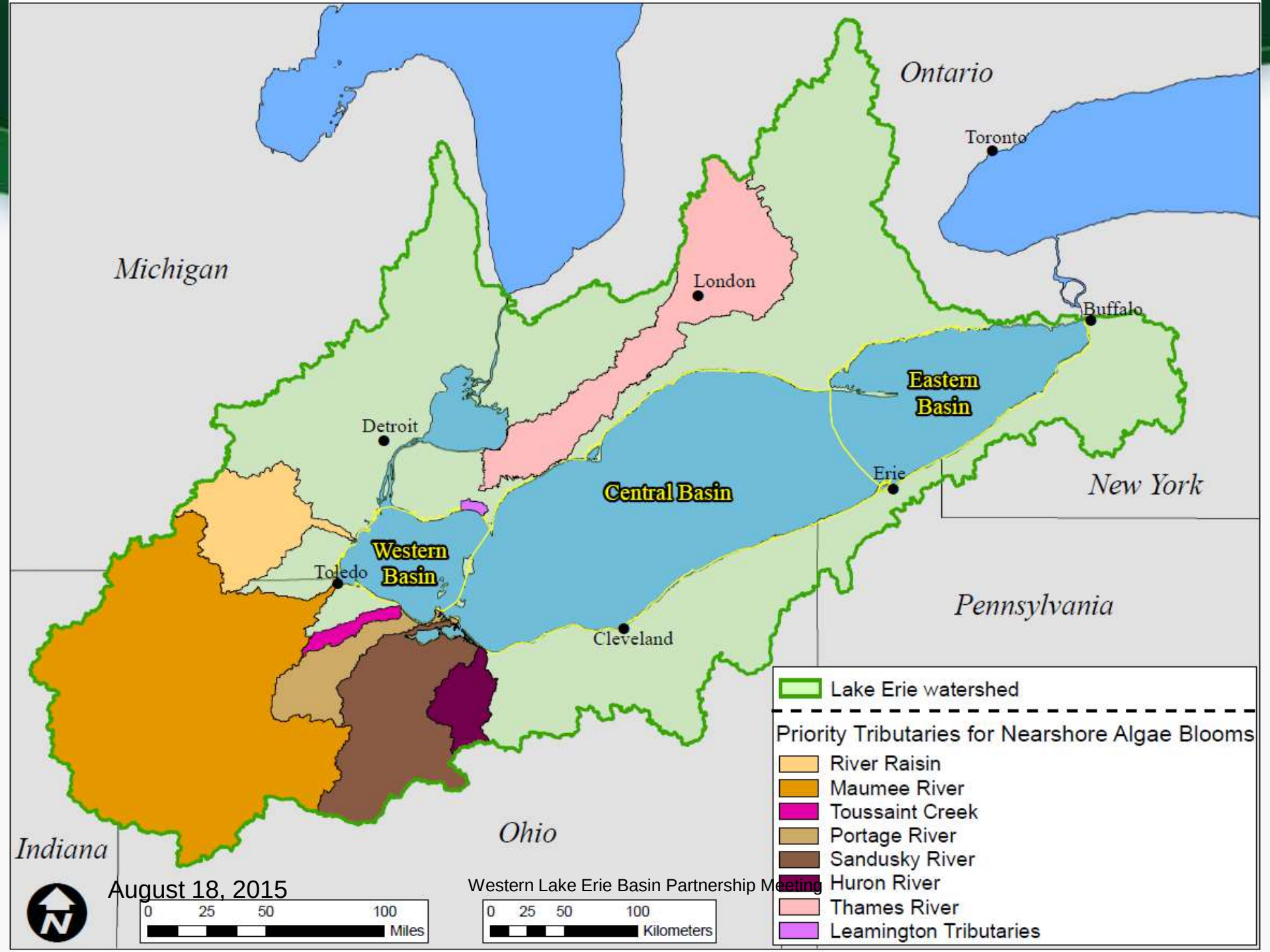
- Review, revise and/or develop concentration and loadings objectives for offshore and nearshore waters of Great Lakes
- Establish allocations by country
- Establish load reduction targets for priority watersheds that have significant or localized impact

By 2018

- Develop Domestic Action Plans
- Implement P reduction programs

Proposed Bi-National Phosphorus Load Reduction Targets

Lake Ecosystem Objectives Great Lakes Water Quality Agreement Annex 4, Section B	Western Basin of Lake Erie	Central Basin of Lake Erie
Minimize the extent of hypoxic zones in the Waters of the Great Lakes associated with excessive phosphorus loading, with particular emphasis on Lake Erie	40% reduction in total phosphorus entering the Western Basin and Central Basin of Lake Erie – from the United States and from Canada - to achieve 6000 MT Central Basin load	
Maintain algal species consistent with healthy aquatic ecosystems in the nearshore Waters of the Great Lakes	40% reduction in spring total and soluble reactive phosphorus loads from the following watersheds where localized algae is a problem:	
	Thames River - Canada Maumee River - US River Raisin - US Portage River - US Toussaint Creek - US Leamington Tributaries – Canada	Sandusky River - US Huron River, OH – US
Maintain cyanobacteria biomass at levels that do not produce concentrations of toxins that pose a threat to human or ecosystem health in the Waters of the Great Lakes	40 % reduction in spring total and soluble reactive phosphorus loads from the Maumee River (U.S.)	N/A


Ontario
Michigan
Toronto
London
Buffalo
Eastern Basin
Detroit
Central Basin
Erie
New York
Western Basin
Toledo
Pennsylvania
Cleveland
Indiana
Ohio
Lake Erie watershed
Priority Tributaries for Nearshore Algae Blooms
River Raisin
Maumee River
Toussaint Creek
Portage River
Sandusky River
Huron River
Thames River
Leamington Tributaries
0 25 50 100 Miles
0 25 50 100 Kilometers

Consultation Overview

- Direct consultation (in-person or webinar)
- Binational and Domestic engagement
- Feedback Received
  - Technical concerns
  - Ideas for action

Types of Feedback Received

- General support for the 40% reduction targets and our process
- Some concerns regarding:
  - Baseline & measuring progress
  - Applying 40% to all priority watersheds (some may need more/less)
  - Perceived lack of target for Detroit River
  - Lack of Eastern basin target for Cladophora
  - How to account for uncertainty & set realistic goals
  - Climate change

Ideas for Action

- Stakeholder collaboration in development of domestic action plans
- Focus on BMPs that reduce DRP
- Strategic monitoring & implementation
- Comprehensive assessment of sources
- Identify load allocations by state/province

Adaptive Management

- Implementation
- Enhanced Monitoring
- Research & Modelling
- Evaluate
- Adjust

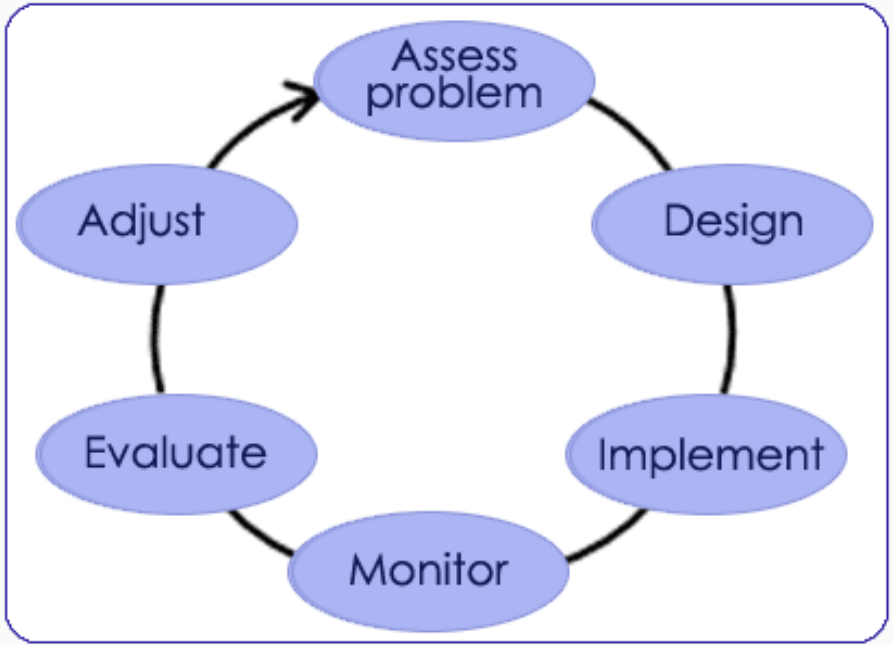
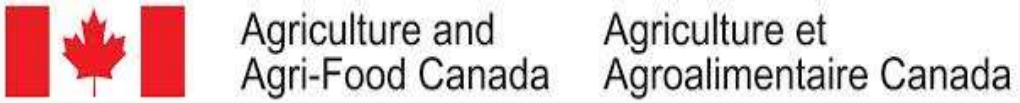


Diagram from U.S. Department of the Interior

Next Steps

- Consider input received during consultation
- Finalize targets by February 2016 to achieve the time bounded commitment
- Begin work on
  - Binational P Reduction Strategy
  - Domestic Action Plans
  - Lake Ontario

Nutrients Annex Subcommittee



Ministry of the
Environment
and Climate Change