Ontario Federation of Agriculture

Great Lakes and St. Lawrence Cities Initiative
iance des villes des Grands Lacs et du Saint-Laurent

Thames River

PHOSPHORUS REDUCTION COLLABORATIVE

PEGGY BREKVELD

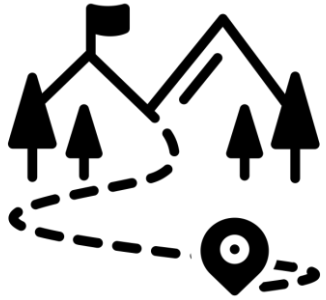
OFA VICE-PRESIDENT

Great Lakes and St Lawrence Cities Initiative
Member Meeting
June 5th 2019

PURPOSE OF TODAY'S PRESENTATION

Sharing awareness of innovative solutions that may be of interest to your communities

Looking for additional partners to join with us



Potential to use technologies at end of project

Hear your ideas and comments

Thames River
PHOSPHORUS REDUCTION COLLABORATIVE

A PARTNERSHIP APPROACH

Cities Initiative & Cities of Chatham-Kent & London

- Mayor Canniff

Farm organizations - OFA

- 38,000 farm families

Drainage sector

Environmental and conservation groups

First Nation

Conservation Authorities

Government officials

Thames River
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HARMFUL ALGAL BLOOMS

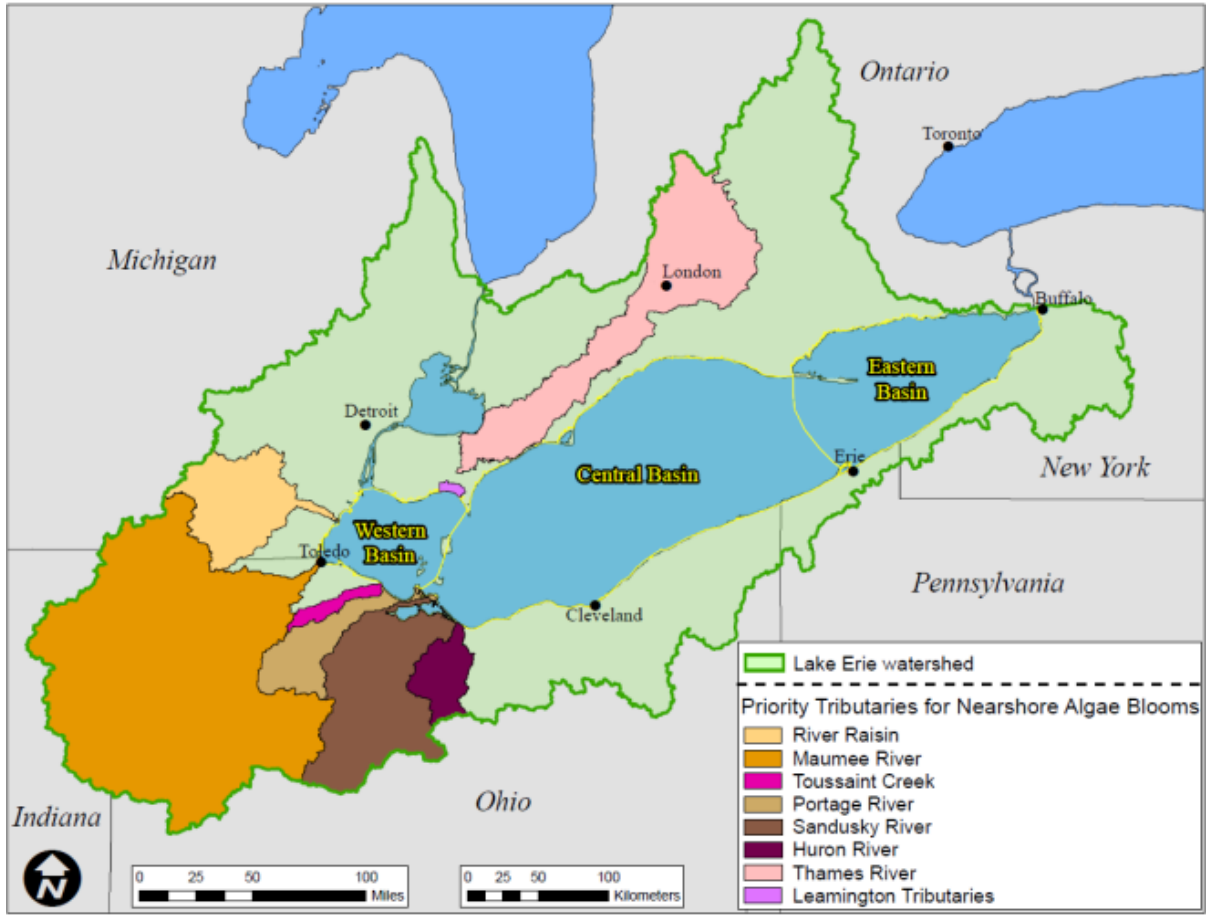
- **Harmful algal blooms are increasing**
- **Generally caused by phosphorus, growth in warmer water**

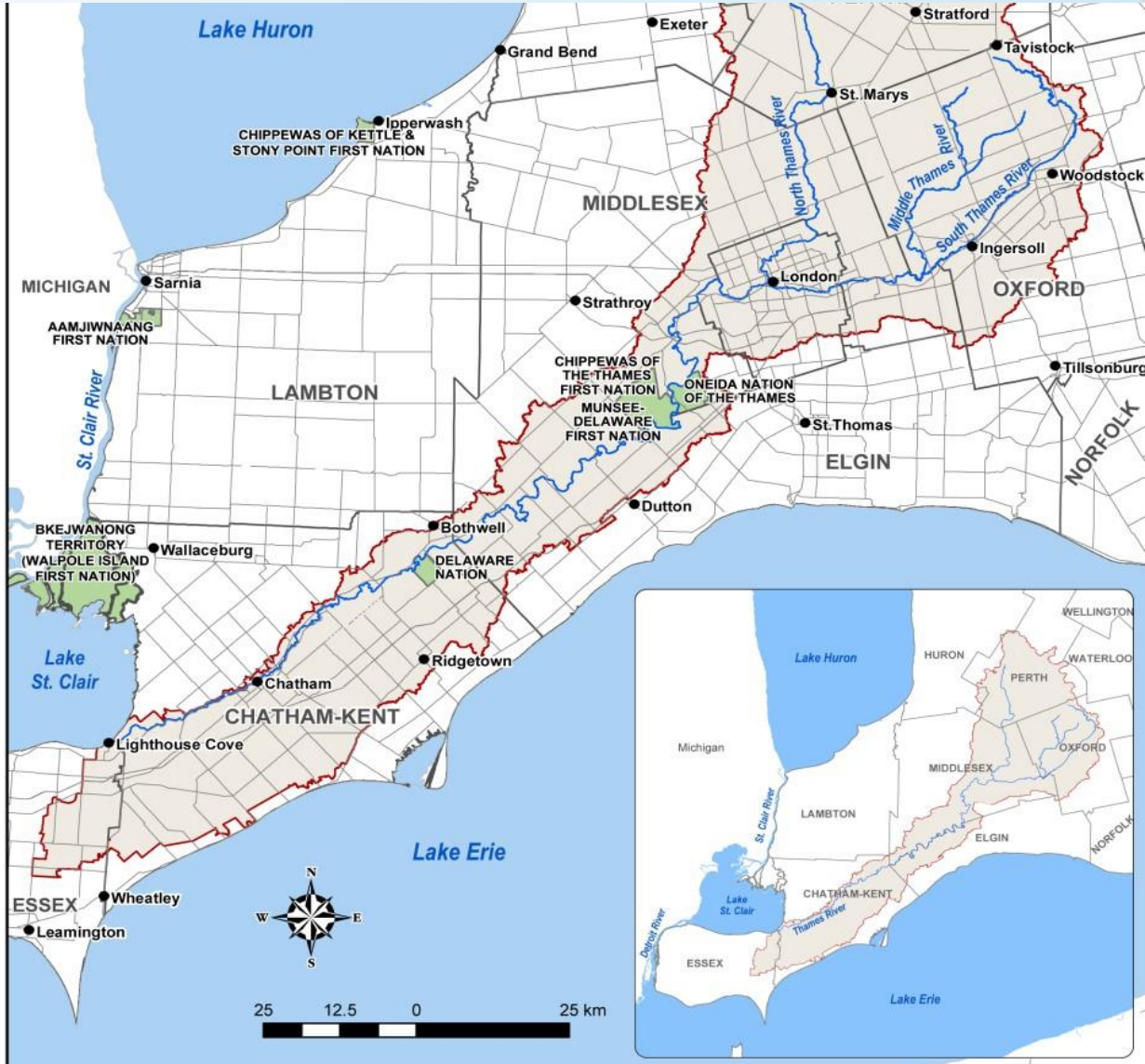
U.S., Canada, and Ontario Commitment to Lake Erie:

- **40% reduction** in total phosphorus in Western and Central Basin of Lake Erie
- **40% reduction** in spring total and soluble reactive phosphorus loads from watersheds where localized algae is a problem such as the Thames River. Maumee and others

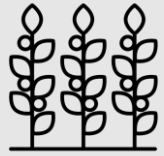
Thames River
PHOSPHORUS REDUCTION COLLABORATIVE

Thames River Drains Ag Lands and Cities





PHOSPHORUS LOSS AND PATHWAYS



Loss from agricultural lands as non point source

Greatest losses in non-growing season

- Snow melt
- Severe rain events

Lack of economic push…losing 0.50 kg/hectare of P worth $1.25

Pathways from Agriculture

- Surface to ditches and municipal drains
- Field tile systems to municipal drains

Thames River
PHOSPHORUS REDUCTION COLLABORATIVE

MAKING NON-POINT SOURCES INTO TREATABLE POINT SOURCES

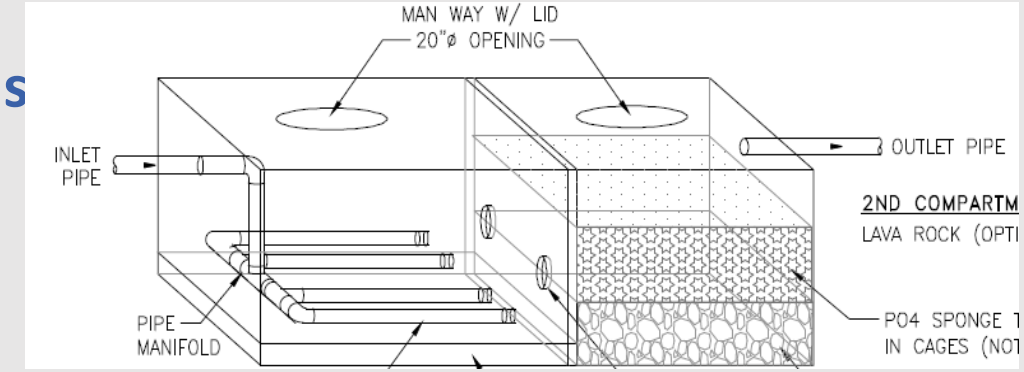
TECHNOLOGIES WITH OPPORTUNITIES

Pumping water into treatment systems

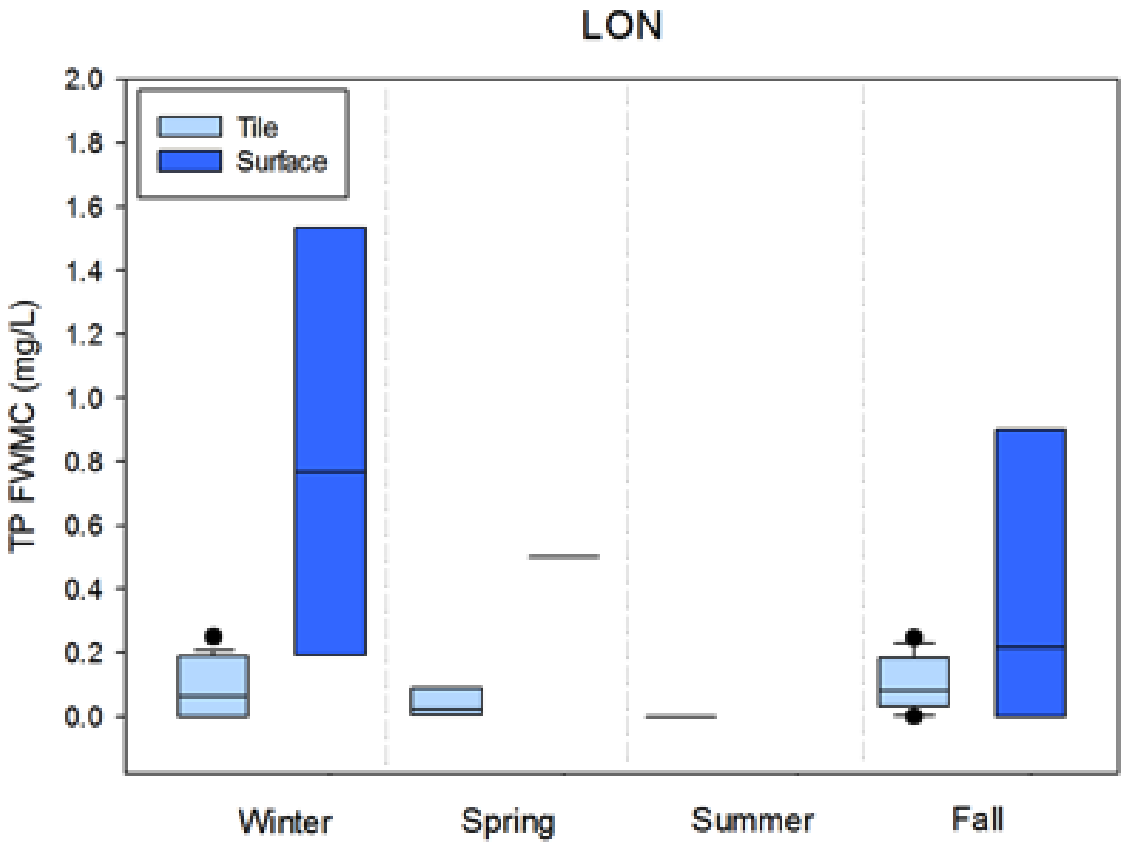
- Ontario and British Columbia companies

Intercept field tile waters with sorption materials

- Ontario, Ohio, Pennsylvania & Colorado companies



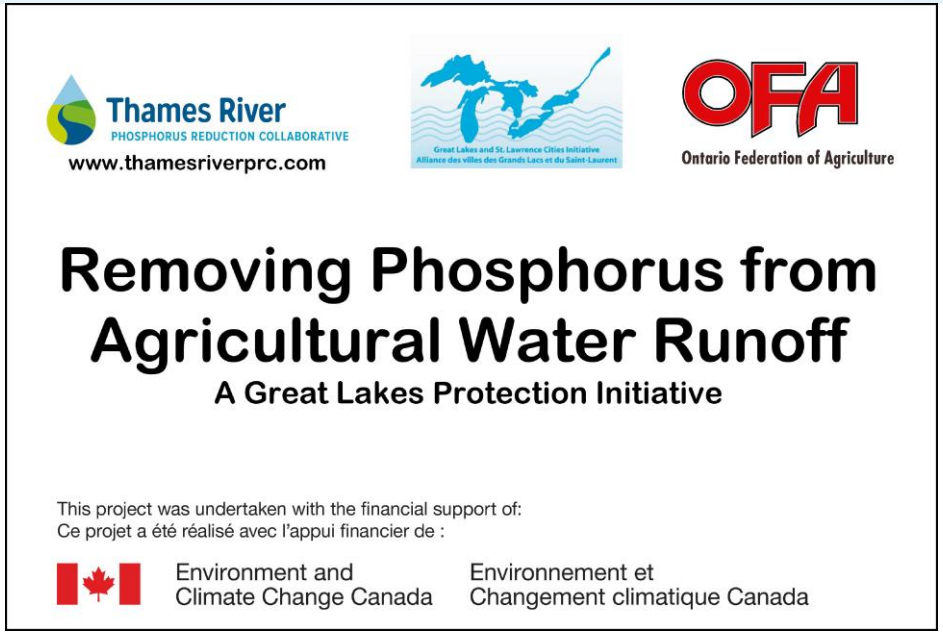
Monitoring and Results



Future Opportunities

- June 26-27th 2019 Thames River PRC Project Tour
  - Invitation to anyone
  - Sarah Rang has circulated agenda
- Future Canada – US Conference on a Circular Economy for Phosphorus Removal and Re-Use?
  - OFA would like to join forces with US & the Cities Initiative
  - Contact Sarah Rang for follow-up

Thank You



CANADIAN AGRICULTURAL PARTNERSHIP

AAC agricultural adaptation council

Ontario

Canada