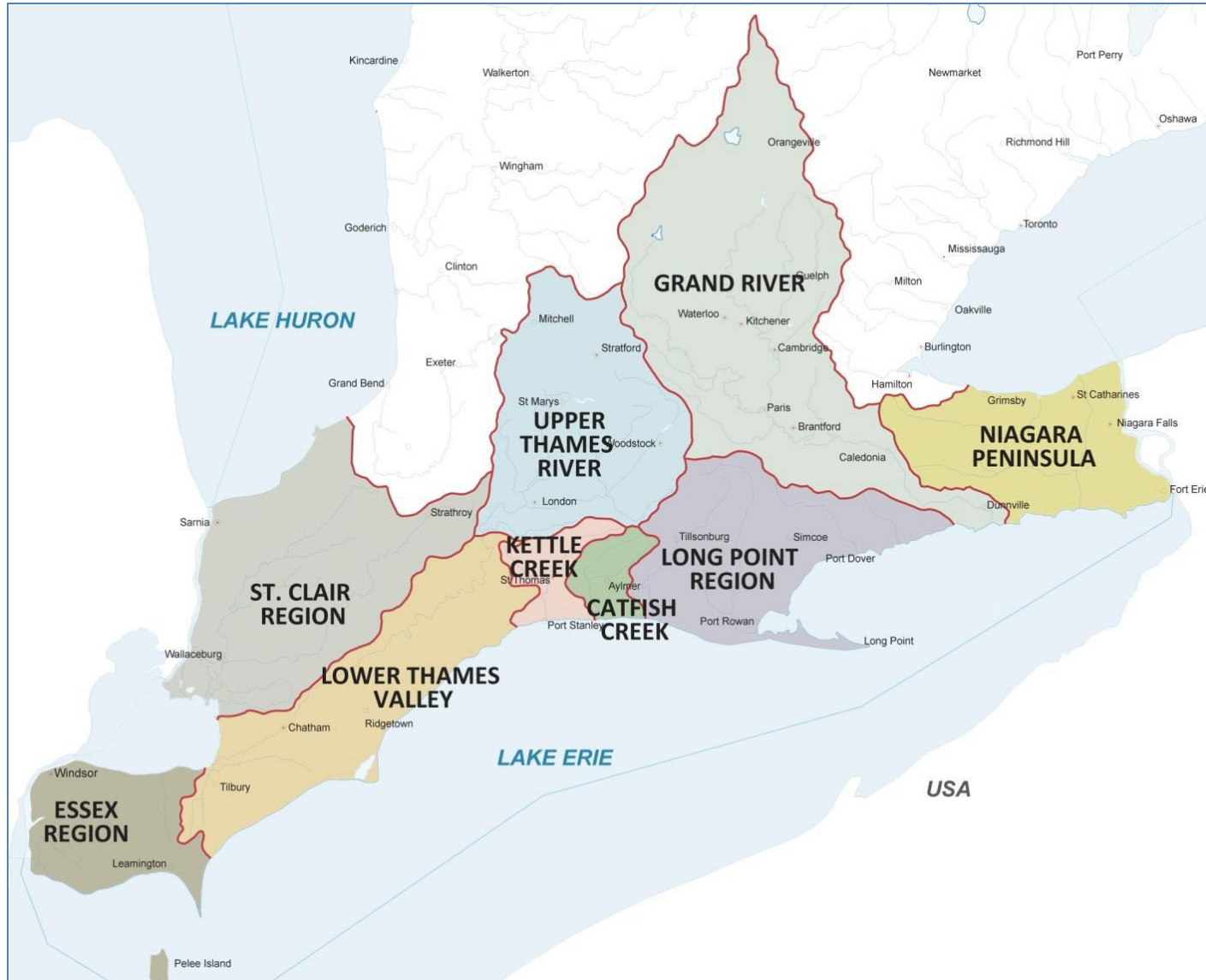


CONSERVATION AUTHORITIES: PARTNERS IN ACTION

February 14, 2017



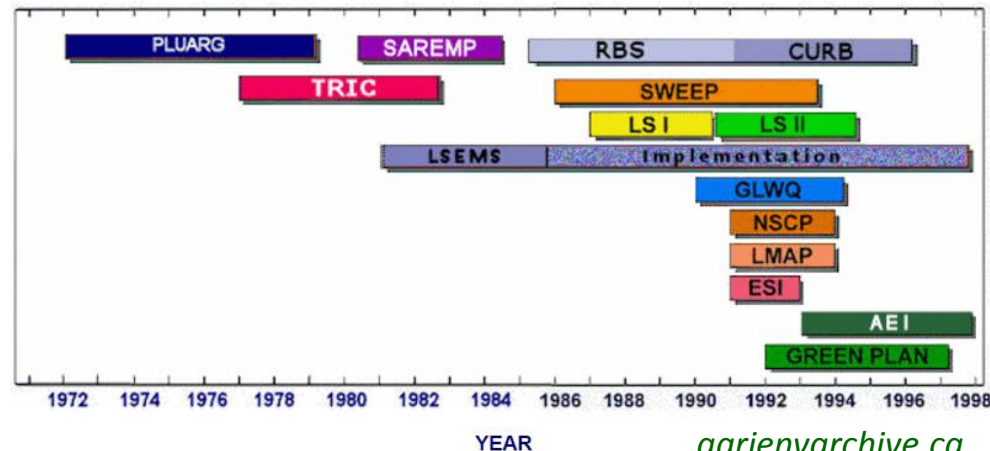
40 Year History

Conservation Authorities have been active in the delivery of phosphorus reduction programs continuously since the 1970s....

- *PLUARG*
- *TRIC / GRIC*
- *SAREMP*
- *OSCEPAP I and II*
- *LSI and II*
- *SWEEP*
- *Kintore Paired Subwatershed Studies*
- *Rural Beaches Strategy, CURB*
- *NSCP*
- *MOE Diffuse Source Program*
- *Clean Water Program*
- *Source Water Protection*

Program Timelines

Click on coloured bars below to ENTER PROGRAM



agrienvarchive.ca

Breadth of Programs....

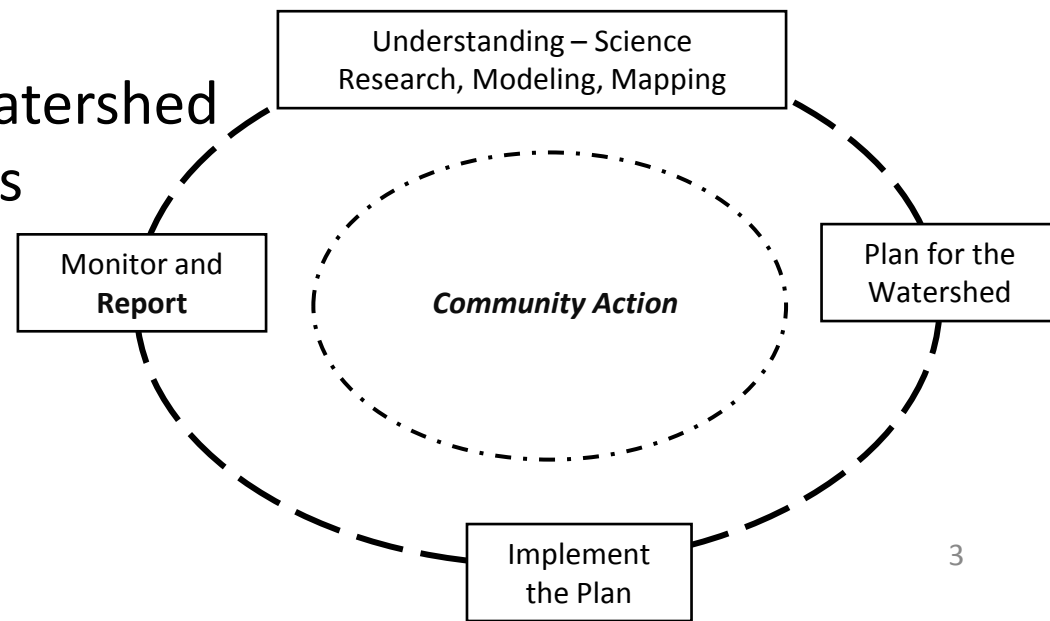
A broad range of programs delivered by Conservation Authorities address phosphorus reduction.

Such as:

Stewardship, Research, Education and Outreach, Monitoring, Watershed Reporting, Natural Heritage, Land Management, Watershed Planning...

Programs that are urban, rural and agricultural.

Watershed based with subwatershed approach to deliver programs at the local level.



Agricultural and Rural Stewardship

Table 1. Conservation Authority Landowner Stewardship Programs – Agricultural and Other Rural Cost-Shared BMP's Completed 2006 – 2012 in the Lake Erie Basin

Conservation Authority	Number of Projects Completed	Grant \$ Provided to Landowners
Catfish Creek Conservation Authority	160	\$733,982
Essex Region Conservation Authority	624	\$4,442,497
Grand River Conservation Authority	3669	\$9,874,329
Kettle Creek Conservation Authority	284	\$1,693,034
Long Point Region Conservation Authority	396	\$1,823,233
Lower Thames Valley Conservation Authority	290	\$437,759
St. Clair Region Conservation Authority	448	\$1,618,702
Upper Thames River Conservation Authority	2483	\$3,714,538
Totals	8354	\$24,338,074

Other Related Programs...

“More than agricultural stewardship”



- Watershed Management Planning
- Water quality monitoring
- Hydrometric network (quantity)
- Natural Heritage Studies
- Property acquisition, management and rehabilitation
- Land Use Planning and Regulation (i.e. sediment and erosion control, municipal drains, wetlands)
- Source Water Protection
- Environmental Data management systems (WISKI)
- Curriculum based education programs
- Low Impact Development program
- SAR Recovery initiatives related to water quality
- GIS Technical Studies (i.e. DEM, 2-D Modelling), spatial data maintenance.
- ... other

Expertise in place to deliver...



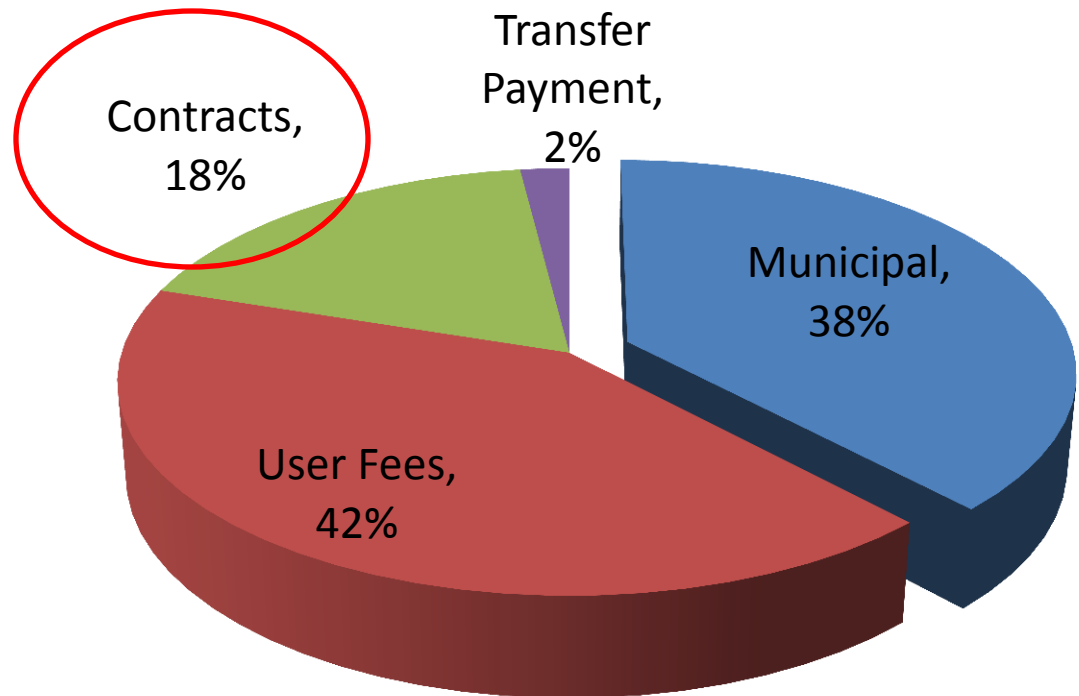
- Biologists
- Professional Engineers
- Professional Foresters
- Certified Teachers
- Hydrogeologists
- Registered Professional Planners
- Regulation Officers
- Agronomists
- Hydrologists
- GIS Specialists
- Water Quality Specialists
- Partnership Specialists
- Field Extension staff.
- etc.

~ 600 Staff in 9 Lake Erie CAs

Program Funding

- Governed and funded locally
- Stewardship effectiveness suffers due to short-term, single focus, limited contract funding.
- CAs have created umbrella programs to insulate landowners from program and funding variability.

Who Pays?



Key Messages

1. Phosphorus reduction has been a component of Conservation Authority work for **40+ years...**
2. Implement a **wide range of programs** and have long-term **established local relationships** to deliver work on the ground.
3. Significantly **more resources needed**.
4. Need to **expand** existing proven local programs.
5. **Ready to go...** and to ramp up!
 - Have been lobbying and preparing for Great Lakes program implementation for more than 20 years.
 - No program setup required
 - Extensive technical staff and programs in place (shovel ready)
 - Local knowledge and relationships
 - Non-profit, proven efficient delivery (Long Term Cheap)
 - Leverage funding
 - Implementation can start now with proven programs, policy discussions can continue simultaneously.

ERCA Initiatives



Connections with the Agricultural Community

- Agrologist and Certified Crop Advisor on staff
- Extensive partnerships with producers, industry, and stakeholders
- Demonstration Farm

Science and Monitoring

- Extensive water quality monitoring program in the Essex Region
- Load vs. Concentration

Clean Water~Green Spaces Program

- Well established BMP program with many successes each year
- Current program focuses on soil erosion, but has many P based benefits
- GLASI subwatershed study

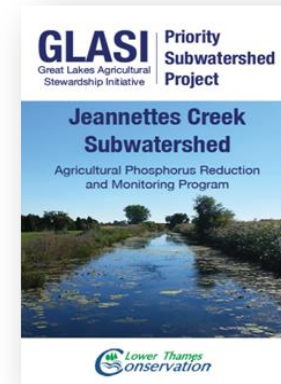


Phosphorus Initiatives LTVCA



Monitoring Initiatives

- **Rondeau Bay Wetland Monitoring (2016-2018)**
 - Verify the effectiveness of wetlands at reducing P-loads
- **Rondeau Bay Field Pump House Monitoring (2015 – 2018)**
 - Monitoring P-Loads from field pump drainage system
- **GLASI Jeannettes Creek PSP (2015-2018)**
 - Verification of Targeted Suite of BMPs at reducing P-loss
 - CBA - \$ Spent/Kg of P Reduced
 - Edge of Field NT – Cover Crop BMP effectiveness study

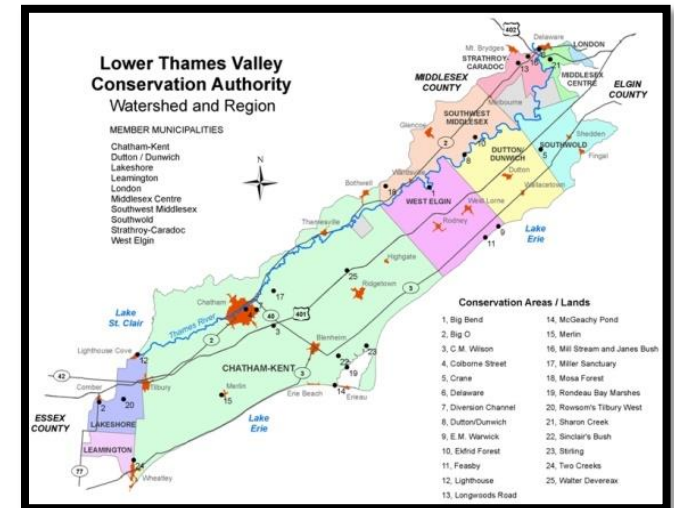


Stewardship & BMP Programs

- Staff provide technical assistance to plan stewardship and BMP projects with watershed landowners
- Project Cost-Share \$'s: Trees, Wetlands, TGP, Ag BMPs

Education and Outreach

- Host educational workshops for local producers
- Bus Tours & Field Days
- Stakeholder Presentations



Upper Thames River Conservation Authority

Phosphorus Initiatives

1. Thames River Water Management Plan (2017)

- Multi-Stakeholder action plan to reduce phosphorus loads, help to deliver on DAP for urban and rural sources

2. Rural Clean Water Program

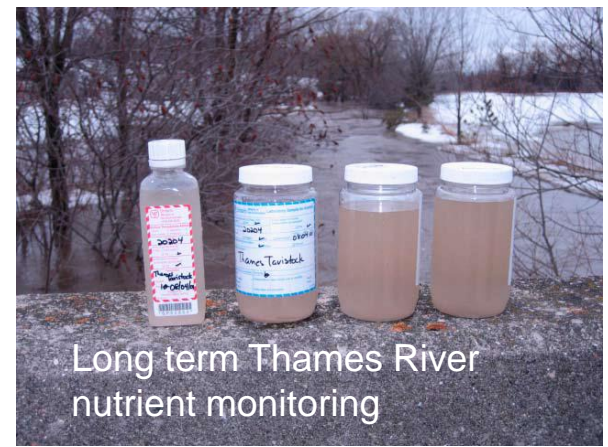
- Voluntary program to provide technical assistance and cost-share for landowners to implement BMPs for phosphorus and soil loss.
- Funded by voluntary municipal contributions (3350 projects since 2001)
Goal: expand program delivery of priority actions that target highest P load conditions (winter-spring runoff) across the entire Thames watershed

3. Demonstration and Outreach

- GLASI Priority Subwatershed Project
- Work with landowners, agency, and industry to develop new practices for nutrient management for on-going changes in agriculture

4. Watershed Monitoring

Long-term monitoring and reporting of river flows and nutrients.



Phosphorus Initiatives GRCA



Grand River Water Management Plan

- Voluntary action commitments from GRCA and watershed stakeholders
- Actions to address point and non point sources

Rural Water Quality Program

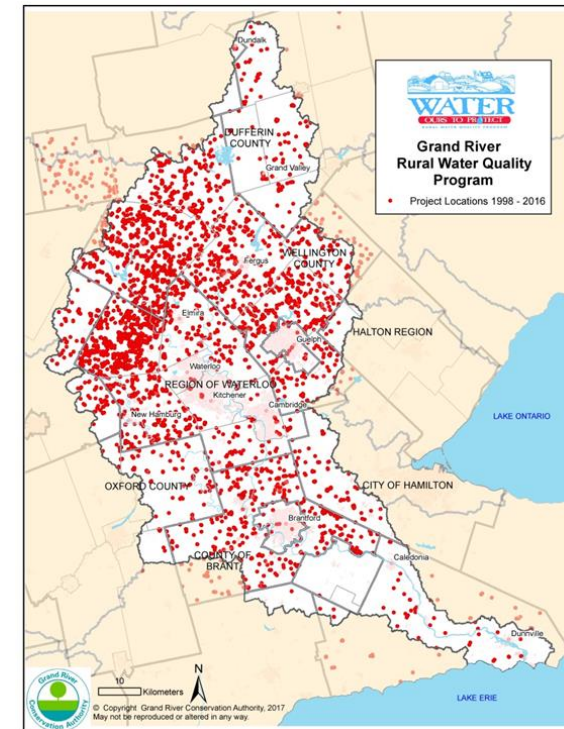
- Cost share and incentives
- Funded from voluntary municipal contributions

GLASI Outreach & Education

- Related to soil health & water quality

GIS Tool Development

- AGREN Soil Calculator
- Gully/Nutrient Source Area Potential Mapping



SCRCA Initiatives

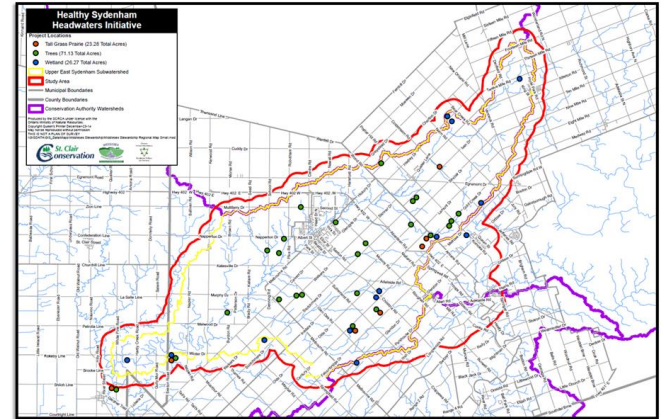


Strategic Plan – A Way Forward

- Focus on Programs to Reduce Phosphorous Loading into the Great Lakes
- Stewardship programs, while also addressing other watershed needs, should focus on reducing Phosphorous levels entering the Great Lakes

Healthy Watersheds Stewardship Programs

- Technical and financial assistance towards rural farm and non-farm best management practices
- Landowners voluntarily bringing forward project to be completed on their property to habitat, environment, farm operations or all the above
- 2013-2016 – Completed 160 projects – total cost \$1,433,500 – grants provided \$956,250



Landowner Outreach

- Workshops, speaker series, attending community and commodity group meetings to create dialogue and foster partnerships

Monitoring

- Water quantity and quality monitoring on a subwatershed basis – parameters of interest