

EriePMarket



A Great Lakes Commission Project

with funding from

USDA-NRCS

Conservation Innovation Grants Program

<http://www.glc.org/work/eriepmarket>



Great Lakes Commission (based in Ann Arbor, MI)

- Interstate compact agency
- Created by Congress and the Great Lakes States in 1955
- Ontario and Quebec joined as associate members in 1999

Erie P Market Project Overview

Motivation

- Created to see if water quality trading can be used to help address nutrient pollution in the Western Lake Erie Basin (WLEB), which has resulted in **harmful algal blooms** during the late summer months.



Objectives:

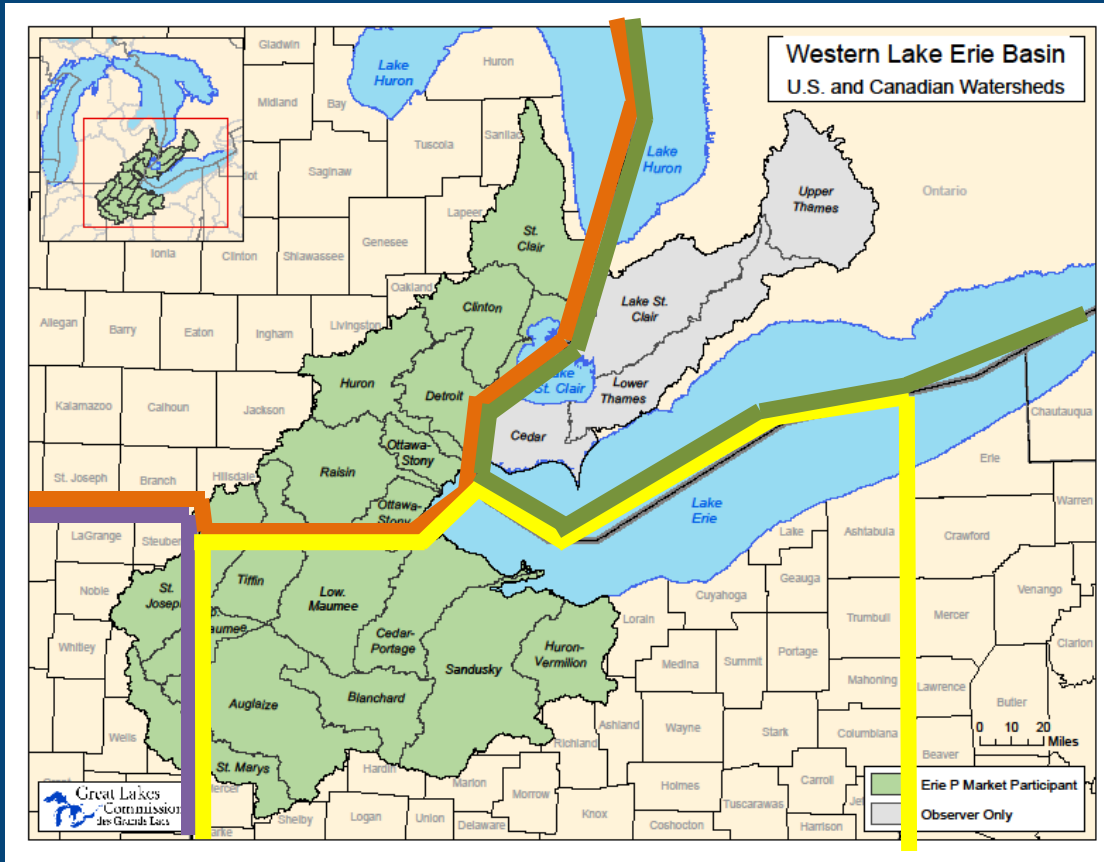
- Build consistent approach to Water Quality Trading in the WLEB (the Framework)
- Test the Framework to see how it works through pilot “trades”
- Consider how project results can inform other WLEB phosphorus reduction efforts



Trading and Stewardship Crediting

- **Use Market Structures to Pay for Performance**
- **Incentivizes Enrollment of High-Priority Ag Land**
 - Instead of a flat-rate incentive per practice installed, payments are based on modeled load reduction outcomes.
 - Farmers with land that has the highest phosphorus load reduction potential will achieve the greatest environmental benefits and generally receive larger financial incentives by enrolling.

A Watershed-Based Program Working Across Political Boundaries



- The WLEB is partially located within 3 US States
 - Michigan
 - Indiana
 - Ohio
- And 1 Canadian Province
 - Ontario

Designed to Maximize Participation

Originally envisioned for *Compliance Trades* only

- Cost-effective option for NPDES permittees operating under phosphorus limits to achieve regulatory compliance
- A demand analysis revealed a current lack of compliance drivers.

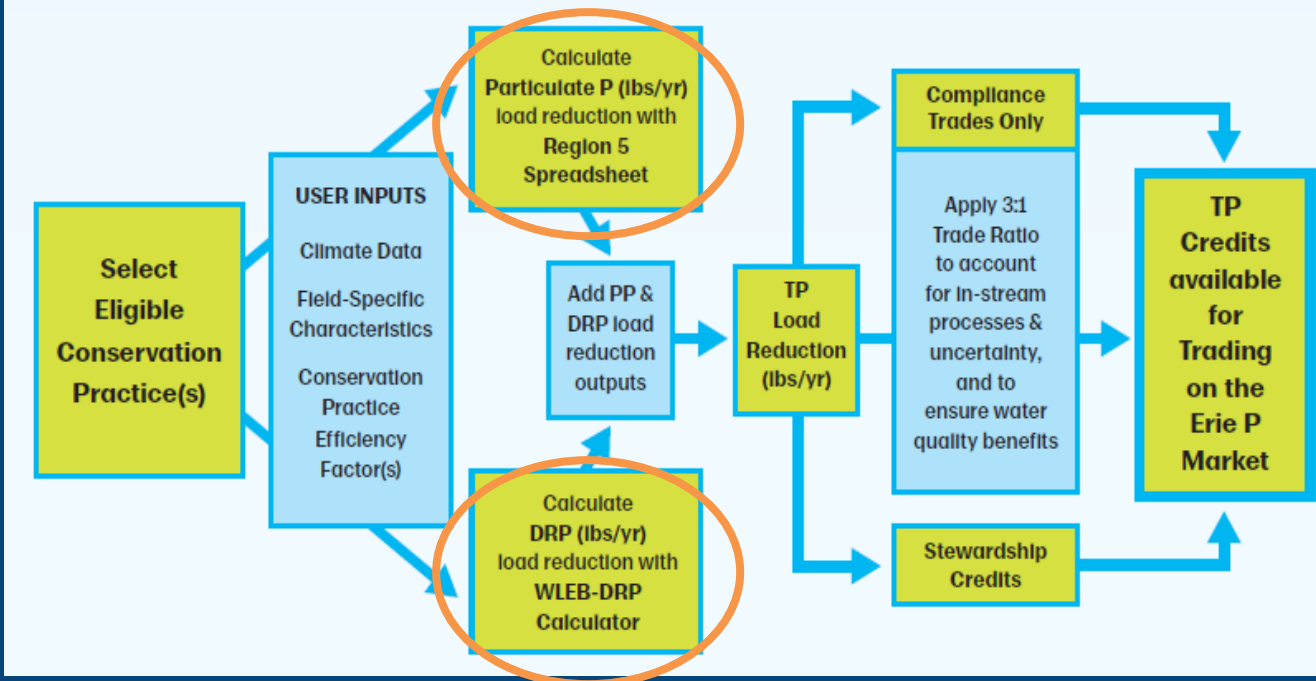
Expanded to also include *Stewardship Trades*

- Stewardship credits can be purchased by any individual or organization with an interest in improving WLEB water quality, opening up the market to a diverse array of potential buyers

Quantifying Phosphorus Load Reductions

- Most traditional conservation practices target Particulate Phosphorus (PP) but Dissolved Reactive Phosphorus (DRP) can also impact water quality.
- Erie P Market credits are calculated based on Total Phosphorus (TP) reductions where $TP = PP + DRP$

TP Credit Calculation Overview



Using a standardized method to calculate TP load reductions is key to enabling performance-based payments.

Erie P Market Deliverables

A Memorandum of Understanding

- Signed by water quality and agriculture agency directors from the three WLEB states in December 2017.
- The Province of Ontario did not sign the MOU, but participated in the creation of the Erie P Market as an observer.



The Erie P Market Framework

- Describes who is eligible
- Where and When trading can occur
- The process for verifying that conservation practices are working to improve water quality



Erie P Market Deliverables

Education and Outreach Materials

- Fact Sheets for Buyers & Sellers
- WLEB-wide supply and demand Report
- Cross-Cut Analysis of other WLEB WQT Programs

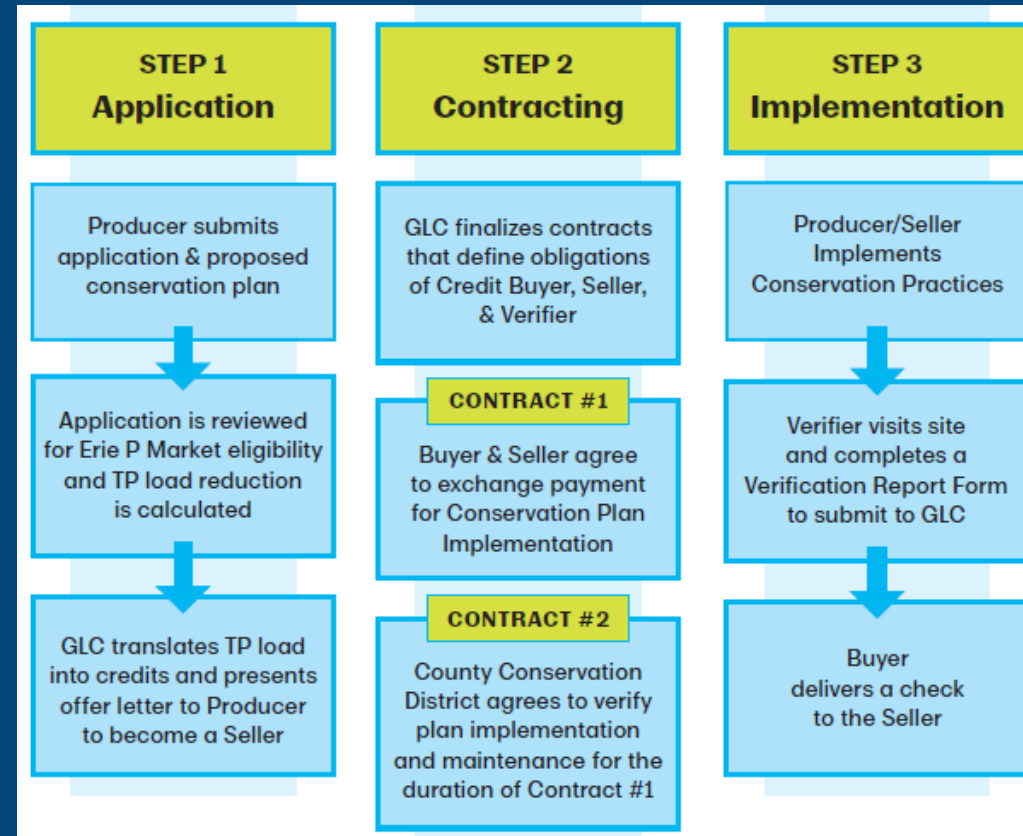
Templates for Applications and Contracts

- Support all phases of the transaction of buying and selling TP load reduction credits for *compliance* and *stewardship* trades.



Piloting the Framework

- Three contracts were signed to generate credits using the Erie P Market Framework in the Summer of 2018.
- Contracts were signed with farmers in the Ohio and Michigan to install conservation practices on both owned and leased land.
- Through a separate agreement GLC is compensating the County Conservation District for their credit verification services.



Piloting the Framework: Results

- Installed Conservation Practices
 - Grassed Waterways
 - Filter Strip
 - Cover Crops
 - No-Till
- **536 Acres** of Ag land in conservation
- **1,200 Pounds of Total Phosphorus** will be prevented from entering tributaries to the WLEB over a 5-year period



Aerial shot of newly installed grassed waterway in Ohio

Erie P Market Next Steps

- Short Term:
 - The Great Lakes Commission used remaining grant funds to act as the “interim buyer” of credits.
 - We are now seeking individuals or organizations who are interested in purchasing available credits
 - **\$30 per credit = 1 pound of Total Phosphorus** prevented from entering the WLEB
- Long Term Vision:
 - Expand the Erie P Market to create a WQT stewardship market that serves the entire Great Lakes Basin

Lessons Learned

- Keep process simple
 - Develop templates
 - Higher trade ratios over more complicated models
- Outreach to build confidence in
 - Calculation methods
 - Transaction process (broker, verifier)
- Beware of conflicts of interest between verifiers and credit sellers

Lessons Learned

- Weak compliance markets in Great Lakes region
 - Compliance markets require strong regulatory drivers
 - Regulators are wary of modeled outcomes
- Untapped opportunity for stewardship market
 - Drinking water utilities
 - Philanthropy
 - Others (land trusts, corporate sustainability programs)

Buy credits (or access other project materials):

www.eriepmarket.org

Thank you

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The Great Lakes Commission

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