

Multi-jurisdictional Framework for WQT in the Western Lake Erie Basin

Kieser & Associates, LLC (K&A) worked with the Great Lakes Commission under a 2-year USDA Conservation Innovation Grant to develop a multi-jurisdictional water quality trading framework for the Western Lake Erie Basin (WLEB). This basin is suffering from enrichment of phosphorus that has been deemed responsible for seasonal harmful algal blooms, which in 2014 caused the temporary shutdown of Toledo’s water source from Lake Erie. Phosphorus loading targets for Lake Erie are being defined which will be apportioned by country and will identify priority watersheds for load reductions. Trading has the potential to complement regulatory and other nonregulatory approaches to reduce nutrient and sediment pollution from non-point sources in Western Lake Erie.

WQT offers a cost-effective, flexible option for meeting permitted nutrient load limits while encouraging the installation of conservation practices in agricultural and other rural areas. This project built upon lessons learned from other programs, with a particular focus on the Ohio River Basin multi-state trading program. The project shared methods and protocols from four state and provincial jurisdictions containing the watersheds that drain into WLEB: Indiana, Michigan, Ohio, and Ontario. These elements included (a) quantification of nutrient load reductions and associated credit generation; (b) certification

through registration and tracking to document activities; and (c) verification of credit generating practices once they are installed.

For the project, K&A as the lead technical consultant prepared background information including a cross-cut analysis of several relevant WQT programs across North America, completed a supply and demand analysis, refined quantification methods and protocols (including a new application for quantifying dissolved phosphorus load reductions), and drafted the WQT framework. The framework was ultimately adopted by Ohio, Indiana and Michigan while Ontario is using it as a basis to assess within-province trading.

The framework allows for interstate trading amongst the three adopting jurisdictions such that farmers may trade with municipal WWTP buyers from another state within HUC-8 bi-state watersheds. A K&A analysis of phosphorus delivery helped establish virtually unlimited spatial trading opportunities in the basin.

The final framework is referred to as the “Erie P Market”. While it was constructed with broad stakeholder input to support trading as a compliance option for point source permittees, it is also a valuable tool for the stewardship community interested in trading to support agriculture’s efforts to improve Lake Erie.

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