

Case Study 13: Thames River Watershed, Southern Ontario (Ilderton, Londesborough and St. Mary's sites)

Team Leader and key team members: Merrin Macrae (University of Waterloo), Kevin McKague, Gabrielle Ferguson, Richard Brunke (Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs), Ivan O'Halloran (University of Guelph), Derek Robinson (University of Waterloo).

Focus: Seasonality and year round losses of phosphorus in tile drainage and surface runoff; effects of multiple BMPs (tillage, fertilizer application methods) on P loads.

Typical farming practices: corn-soybean wheat rotation, cover crops after wheat; reduced-till (vertical till, 1 year in 3), in tile-drained landscapes (with some disk tillage on selected test plots); fertilizer applied by injection in bands.

Agricultural BMPs: reduced-till (vertical till, 1 year in 3), paired with the application of fertilizers in bands (subsurface); cover crops applied 1 in every 3 years; soil nutrient management

Watershed Scale Approaches: NA.

State and Federal Programs: Ontario Ministry of Agriculture and Food Best Management Practices Verification Program; Ontario Ministry of Agriculture and Food New Directions

Grants to Support Case Study: We are in Year 4 of a 4 year OMAFRA (BMPVD) grant and Year 1 of a 2 year OMAFRA (New Directions) grant.

Outreach Education: Ongoing outreach to regional managers and conservation authorities (OMAFRA, AAFC, GRCA, LTCA, UTCA), local/regional farmers and/or farming organizations (IFAO, LICO) through field tours and workshops, and in-person seminars at both academic institution, provincial and federal agencies, as well as presentations at national/international meetings.

Socio-Economic Factors: NA