

Lake Simcoe WQT Feasibility and Offset Program Development

Human activities within the 2,900 square kilometer Lake Simcoe watershed, located 50 km north of Toronto, are affecting the health and quality of the lake and its tributaries. Lake Simcoe is the largest lake in southern Ontario, outside of the Great Lakes.

More than half of Ontario’s population is just over an hour’s drive from the lake. Water quality problems in Lake Simcoe have been documented since the 1970s and remain a cause for concern. The primary water quality concern is nutrient enrichment, particularly excessive amounts of phosphorus. The Province of Ontario was charged with establishing a protection plan for the Lake and

developing a phosphorus reduction strategy. Prior to implementing a reduction strategy, the Ontario Ministry of Environment commissioned a feasibility study on water quality trading (WQT) to determine if a market-based program could be used as another tool for funding nutrient reductions in the Lake Simcoe watershed.

Kieser & Associates, LLC (K&A) working with the Canadian consultant, XCG completed a comprehensive WQT feasibility study commissioned by the Ontario Ministry of Environment for Lake Simcoe in 2009. The study involved a review of pollutant trading programs in leading jurisdictions, identification of options for the structure and delivery of water quality trading programs, examination of environmental, economic, and social implications for implementing a fully functioning program and broad

watershed outreach to lay and technical audiences. The successful demonstration of feasibility led to K&A (and XCG) developing a recommended framework with the regional conservation authority serving as a clearinghouse for phosphorus offsets under the new “Lake Simcoe Phosphorus Offset Program”.

This program requires all new development to have a net zero phosphorus discharge. If unable to maintain stormwater on-site, phosphorus offsets must be obtained through urban stormwater retrofits at a 2.5:1 trade ratio. The economic assessment of these offset requirements was deemed acceptable to the development community, and overall net load reductions of phosphorus despite growth are projected. Now operational, the program is expected to help reduce phosphorus levels in Lake Simcoe and its tributaries.

Absent this trading program, new growth was expected to significantly increase TP loads to the lake. With the program, overall net reductions in loading are now expected with new growth. This \$1.2M program development effort was undertaken through the Lake Simcoe Conservation Authority under Ontario Ministry of the Environment grant awards. It is the largest program of its kind in Canada.

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Project Costs:
 \$675,000 (K&A)
 \$1,400,000 (Total)

Project Duration:
 2008-2009, 2012-2014

