



This project has received funding support from the

Ontario Ministry of the Environment.

Such support does not indicate endorsement by the Ministry of the contents of this material.

Collaborative Study

To Protect Lake Ontario Drinking Water



“...to ensure the long-term, proactive and strategic **protection** of Lake Ontario-based **drinking water** supplies.”

For more information:

- www.owwrc.com
- Larry Moore, Ph.D., CRSP
lmoore@ocwa.com
- Andy Valickis, P. Eng.
avalickis@ocwa.com

THE CHALLENGE

- Lake Ontario provides water to approximately 6 million people in Ontario
- High quality source, but threats include:
 - rivers and streams with agricultural and storm water contamination
 - sewage treatment – bypassing & combined sewage overflows
 - direct storm water discharges
 - changes to lake ecosystem
 - industrial discharges including power plants
- Complex physics – upwelling/downwelling, spring thermal bar, seasonal fluctuations, river plumes
- Extensive data exists, but:
 - data quality is variable
 - data exists in many forms/formats
 - data is held by many different stakeholders
 - lack of data for winter/extreme conditions

THE OPPORTUNITY

The *Clean Water Act* received Royal Assent on October 19, 2006

“It ensures communities are able to protect their municipal drinking water supplies through developing collaborative, locally driven, science-based source protection plans.”

The Ontario Ministry of the Environment (MOE) made funding available to identify potential risks to local water sources through the Source Protection Technical Studies Grant Program.

THE “COLLABORATIVE”

Utilities on Lake Ontario had established the Ontario Water Works Research Consortium (OWWRC) in 1999/2000 to study the biology, chemistry and physics of Lake Ontario.

The MOE’s Source Protection Program allowed an expansion of both the OWWRC partnership and the study program. In 2006, the **“Collaborative Study to Protect Lake Ontario Drinking Water”** was initiated.

THE STUDY PROGRAM 2007/2008

- Delineation of Intake Protection Zones (IPZs) for 20 water treatment plants from Niagara Region to Prince Edward County
- Identification of threats and assessment of risks:
 - along the shoreline
 - up the priority watersheds
 - with intensive work within the IPZs
- Special focus on pathogens and threats that can be found at the drinking water intakes



THE PARTNERS

➤ Municipalities/Utilities

- Peel Region (Lead Municipality)
- Prince Edward County
- Cobourg
- Port Hope
- Durham Region
- Toronto
- Halton Region
- Hamilton
- Niagara Region



➤ Conservation Authorities

- Source Water Protection Regions:
 - Quinte
 - Trent Conservation Coalition
 - CTC
 - Halton-Hamilton
 - Niagara

➤ Environment Canada

➤ Ontario Ministry of the Environment

➤ Ontario Clean Water Agency

- Coordinator
- Project Manager