

# CTC Source Protection Region 2022 Annual Progress Report

## I. Introduction

Source protection plans are created under the *Clean Water Act, 2006*. This annual report summarizes the progress made by December 31, 2022 in implementing the source protection plan for municipal drinking water systems in the Credit Valley, Toronto and Region, and Central Lake Ontario (CTC) Source Protection Region.

Protecting the sources of our drinking water is the first step in a multi-barrier approach to safeguard the quality and quantity of our water supplies. The source protection plan is the culmination of extensive science-based assessment, research, consultation, and collaboration with local stakeholders and the provincial government. When policies in the plan are implemented it ensures that activities carried out near municipal wells and lake-based intakes will not pose significant risk to drinking water supplies.

We acknowledge and recognize the efforts made by municipalities, stakeholders and the CTC Source Protection Committee in the development and implementation of the Source Protection Plan.



## II. A message from your local Source Protection Committee

### **P : Progressing Well/but Short of Target – The majority of the source protection plan policies have been implemented and/or are progressing.**

This is the sixth Annual Report on implementation of the CTC Source Protection Plan (Plan) since it took effect on December 31, 2015. All stakeholders responsible for Plan policy implementation reported on their progress in 2022.

Most of the legally binding policies (88%) that address significant drinking water threats are implemented in the CTC Region. All municipalities have established processes to ensure that land use planning decisions conform to the Plan.

At the time the Plan came into effect in 2015, over 10,000 significant drinking water threats were identified in the CTC Region. Since then, field verification has reduced that number to 6,159 significant threats. Only 301 significant drinking water threats remain to be addressed, all of these within the Credit River Watershed. Furthermore, approximately 97% of existing significant drinking water threats have been addressed through policy implementation or removed through threats verification.

The COVID-19 pandemic has constrained the ability of municipalities to engage property and business owners, conduct site visits and septic system inspections.

Fewer than half of the required risk management plans (RMPs) have been established to address significant threats and several municipalities will not achieve the 2023 deadline for completion of RMPs.

Further, the Committee noted its concern about increasing sodium and chloride concentrations in the raw water from most of the municipal wells with identified issues in the drinking water systems for Orangeville and Georgetown and expressed concern about rising levels across the CTC.

As a result, the Committee concluded that implementation of the Plan is progressing well, but short of target.

The Committee will continue to work with source protection authority and municipal staff, as well as the province to identify ways to advance RMP completion.

### III. Our Watershed

To learn more, please read our assessment report(s) and source protection plan(s).

The CTC Source Protection Region contains over 25 large and small watersheds and spans over 3,800 km<sup>2</sup> of land, from the Oak Ridges Moraine in the north to Lake Ontario in the south. The region contains portions of the Niagara Escarpment, Oak Ridges Moraine, Greenbelt, Lake Ontario, and the most densely populated area of Canada. The CTC Source Protection Region includes 25 local municipalities and eight single tier, regional or county municipalities, 67 municipal supply wells, and 16 municipal surface water intakes in Lake Ontario. The region is complex and diverse in terms of geology, physiography, population, and development pressures. There are many, often conflicting, water uses including, drinking water supply, recreation, irrigation, agriculture, commercial and industrial uses, and ecosystem needs.

The Credit Valley Source Protection Area is formed by one main watercourse, the Credit River, and a number of smaller Lake Ontario tributaries. Nearly 1500 km of streams and creeks empty into the Credit River including Black Creek, Silver Creek, West Credit River, Shaw's Creek, East Credit River, Fletchers Creek, Caledon Creek, and several others. There are thirteen municipal water systems operating in the source protection area, two are surface water based – accessing Lake Ontario as the source; the remainder are groundwater-based. There are no municipal drinking water sources taking from the Credit River. About 1 million people make the Credit watershed their home.

The Toronto and Region Source Protection Area comprises numerous watersheds, plus their collective Lake Ontario waterfront shorelines, to incorporate portions of six upper-tier and 15 lower-tier municipalities. The nine major watersheds are Carruthers, Duffins, Etobicoke, Highland, Mimico, and Petticoat Creeks, and also the Don, Humber and Rouge Rivers. More than 5 million people live within the source protection area with the population expected to grow significantly in the years to come. There are ten municipal water systems operating in the source protection area, five are surface water based – accessing Lake Ontario as the source; the remainder are groundwater-based.

The Central Lake Ontario Source Protection Area is fully contained within the Regional Municipality of Durham. There are numerous watersheds within its boundaries, with the five major watersheds originating at the Oak Ridges Moraine. These major watersheds are Lynde, Oshawa, Farewell, Bowmanville, and Soper Creeks. There are no municipal wells within the source protection area; all municipal drinking water comes from Lake Ontario. There are three municipal drinking water systems: Whitby, Oshawa, and Bowmanville.

## IV. At a Glance: Progress on Source Protection Plan Implementation

### 1. Source Protection Plan Policies

P : Progressing Well/On Target

There are 129 policies in the CTC Source Protection Plan. The policies address: 21 types of threats prescribed in regulation and 2 types of local drinking water threats; other actions considered necessary to protect drinking water sources; and implementation monitoring. Some policies are implemented by a single stakeholder, others by multiple stakeholders.

As of the end of 2022, 88% of legally binding policies and 82% of non-legally binding policies that address significant drinking water threats have been implemented, and the rest are in progress, or have been considered and did not require further action. 74% of policies addressing moderate and low threats have been implemented and the rest are in progress. Furthermore, approximately 97% of existing significant drinking water threats have been addressed (i.e., eliminated or managed).

### 2. Municipal Progress: Addressing Risks on the Ground

P : Progressing Well/On Target

It is a requirement that municipalities ensure their Official Plan (OP), and where appropriate Zoning by-law, conforms with the local source protection plan. As of December 2022, out of 33 municipalities in CTC Source Protection Region, 31 municipalities have completed or are in the process of completing their OP conformity exercise. With regards to Zoning by-laws, 12 municipalities have completed or are in the process of completing their conformity exercise.

### 3. Septic Inspections

S: Satisfactory (inspection progress varies across the CTC)

Within the CTC Region, 295 septic systems are expected to be inspected every 5 years to satisfy the requirements of the Ontario Building Code. In 2022, 37 inspections were completed, representing 13% of the total inspections required over the 5-year cycle.

Municipal septic inspection programs experienced delays in recent years because of the COVID-19 pandemic and resource limitations. One hundred and seventy-five inspections are now overdue in Town of Erin and across Regional Municipality of York. Both municipalities are prioritizing the outstanding inspections in 2023. Of the systems inspected in 2022, 95% did not require any maintenance work, while 5% required minor maintenance. None required major maintenance.

## 4. Risk Management Plans

S: Satisfactory (progress varies across CTC)

The CTC Source Protection Plan contains policies that require the development of Risk Management Plans (RMPs) to manage some drinking water threats. Screening processes are in place at municipalities to ensure applications for future development are reviewed appropriately for potential threat activities and source protection policy application.

Overall, 150 RMPs are in place within the CTC. Nineteen of these RMPs were established in 2022, with an additional 48 RMPs in the process of being completed as of the end of the year. In 2022 risk management efforts continued to be affected by pandemic related restrictions, lengthy negotiations, and other source protection related demands on limited staff time. There are 169 RMPs that remain to be negotiated to address significant threats, with 163 required to be in place by the end of 2023 in Halton Region, and the Towns of Orangeville and Erin. Despite good progress in the first quarter of 2023, it is not likely the 2023 deadline can be met, and therefore the affected municipalities will be requesting an extension for completion of remaining RMPs.

There were 118 inspections carried out in 2022 by Risk Management Inspectors for prohibited or regulated activities; the most inspections completed in any year to date. There was 100% compliance with RMPs and prohibited activities that were inspected.

## 5. Provincial Progress: Addressing Risks on the Ground

P : Progressing Well/On Target

Ontario ministries review applications for new or amended provincial approvals (i.e., Prescribed Instruments, such as Environmental Compliance Approvals under the *Environmental Protection Act*) where they have been identified as a tool in our plan to address activities that pose a significant risk to sources of drinking water. Where necessary, conditions are added to approvals to ensure that the activity does not pose a significant threat to sources of drinking water.

For CTC Source Protection Region, the ministries have reported 100% completion of review of previously issued provincial approvals in our source protection region. In 2022, MECP conducted detailed review of 9 new applications: 7 Fuel Handling/Storage and 2 Wastewater/Sewage Works. The 2 Wastewater/Sewage Works Environmental Compliance Approval applications were determined to be significant drinking water threats to be managed through Prescribed Instrument conditions. At the conclusion of 2022, these Prescribed Instruments had yet not been issued.

Provincial ministries also consider source protection vulnerability when prioritizing sites for planned or proactive inspections. Ministry staff continue to receive training on the source protection program, their annual reporting requirements, and recent amendments to the Director's Technical Rules.

## 6. Source Protection Awareness and Change in Behaviour

Municipalities, conservation authorities and other implementing bodies within the CTC Source Protection Region work with landowners and business owners to help safeguard our sources of drinking water. Municipalities across the CTC have established education and outreach programs, which contribute to enhancing awareness of source water protection. Examples of 2022 efforts to build awareness include:

- Phase 1 of the Lake Ontario Collaborative Group partners (Peel, Toronto, Durham) Lake Ontario Water Quality Forecasting System was completed, allowing forecasting of potential impacts from contaminant spills to their water treatment plant intakes.
- Wellington County municipalities collaborated on 3 Smart about Salt training events for municipal staff and 2 sessions for private contractors
- Peel Region endorsed a Source Water Protection Incentive Program to help reduce costs incurred by affected landowners and business owners who must comply with a Risk Management Plan
- Credit Valley Conservation is promoting source water protection best practices through education and outreach to owners of non-municipal drinking water sources

## 7. Source Protection Plan Policies: Summary of Delays

The development of a Joint Municipal Water Supply Management Model (policy DEM-6) for the municipalities of Mono, Amaranth, Orangeville, and East Garafraxa is nearing completion as all 4 municipal councils have passed resolutions to execute the agreement; final sign-off is expected in 2023.

Provincewide, all Source Protection Plans were required to include policies to address significant drinking water threats. The CTC Source Protection Committee chose to also include policies to address moderate and low drinking water threats. These moderate and low drinking water threat policies relate to the application of road salt, the handling and storage of certain chemicals and provision of education and outreach materials. Since the implementation of these moderate and low threat policies (SAL-12, SAL-13, DNAP-3) are non-legally binding, their implementation status varies across the source protection region.

A number of policies associated with implementation of Risk Management Plans to address existing threats, also remain in progress.

## 8. Source Water Quality: Monitoring and Actions

Thirteen drinking water issues have been identified at wells in three drinking water systems in our Source Protection Region. For these drinking water systems, the Source Protection Plan requires that the municipality establish more frequent raw water quality monitoring to help further characterize concentrations and trends. All municipalities have monitoring and treatment systems in place to ensure that municipal drinking water meets the requirements under the *Safe Drinking Water Act, 2002*.

In the Orangeville Drinking Water System, five wells have been identified with chloride issues and three wells with sodium issues. While chloride concentrations in three of the wells continue to rise, they appear to have stabilized in two wells. Sodium concentrations in the affected wells continue to increase.

In the Acton Drinking Water System, two wells have been identified with nitrate issues though concentrations appear to have stabilized.

In the Georgetown Drinking Water System, three wells have been identified with chloride issues and concentrations are increasing.

Over time, appropriate monitoring will help determine if implementation of plan policies and other actions are improving the raw water quality for these systems. Further assessment of water quality trends across the CTC Region will be implemented in the coming years.

## 9. Science-based Assessment Reports: Work Plans

No work plans were required to be implemented for our assessment report(s).

Review of the 2021 Technical rules is ongoing and the Source Protection Committee is guiding a multi-year comprehensive review and update of the CTC Source Protection Plan and Assessment Reports under s.36 of the *Clean Water Act, 2006*.

## 10. More from the Watershed

To learn more about our source protection region, visit our website at <https://ctcswp.ca/>