

## CTC Source Protection Region 2019 Annual Progress Report

### Introduction

This annual progress report outlines the progress made in implementing our source protection plan for the Credit Valley, Toronto and Region, and the Central Lake Ontario (CTC) Source Protection Areas, as required by the Clean Water Act and regulations for the 2019 calendar year. Together, these source protection areas comprise the CTC Source Protection Region, as highlighted in the image below.

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 with the community, and collaboration with local stakeholders and the Province. When policies in the plan are implemented it ensures that activities carried out in the vicinity of municipal wells and lake-based intakes will not pose significant risk to those drinking water supplies.



## **A Message from your local Source Protection Committee**

- P - Progressing Well/Short of Target – The majority of the source protection plan policies have been implemented and/or are progressing; some fall short of target.
- S - Satisfactory – Some of the source protection plan policies have been implemented and/or are progressing.
- L - Limited progress – A few of source protection plan policies have been implemented and/or are progressing.

This is the third Annual Report on implementation progress of the Drinking Water Source Protection Program in the CTC Source Protection Region since the CTC Source Protection Plan took effect on December 31, 2015.

Of the 10,583 significant drinking water threats enumerated in 2015, only 424 currently exist. Further, the majority of applicable plan policies that address significant drinking water threats are either implemented or in progress. Therefore, the CTC Source Protection Committee determined that implementation of the CTC Source Protection Plan (SPP) is progressing well.

There is one legislated deadline stipulated, however, in the CTC Source Protection Plan, that staff concluded that will not be met; that being the completion of all Risk Management Plans to address SDWTs by December 2020. There are 240 which remain to be negotiated. As a result, therefore, the committee chose to report the status of the SPP as “Progressing well, but short of target” in its report back for 2019 and recommended requesting an extension to the Province of this timeline by 2 or 3 years.

## **Our Watersheds**

The CTC Source Protection Region contains 25 large and small watersheds and spans over 6,400 km<sup>2</sup>, 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 8 single tier, regional or county municipalities, 66 municipal supply wells, and 16 municipal surface water intakes on 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 covers an area of 1,000 km<sup>2</sup>. The Credit River Watershed contains 22 subwatersheds, each representing a major drainage area of the Credit River. 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 water sources on the Credit River.

The Toronto and Region Source Protection Area comprises nine watersheds, plus their collective Lake Ontario waterfront shorelines, to incorporate portions of six upper-tier and 15 lower-tier municipalities. These nine watersheds include Carruthers, Duffins, Etobicoke, Highland, Mimico, and Petticoat Creeks, as well the Don, Humber and Rouge Rivers. More than 4.7 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 covers an area of 638.6 km<sup>2</sup> that is fully contained within the Regional Municipality of Durham. There are 15 watersheds within its boundaries, with the five major watersheds originating at the Oak Ridges Moraine. There are no municipal wells within source protection area; municipal drinking water comes from Lake Ontario. There are there are municipal drinking water systems: Whitby, Oshawa, and Bowmanville.

## **At a Glance: Progress on Source Protection Plan Implementation**

### **1. SOURCE PROTECTION PLAN POLICIES**

The CTC Source Protection Committee included 165 policies in the CTC Source Protection Plan to address 21 prescribed threats and two local threats, actions considered necessary to protect sources of drinking water, and policies for monitoring implementation. Some policies are required to be implemented by one stakeholder, while others are to be implemented by several.

At the end of the fourth year of implementation, 92% of legally binding policies addressing significant drinking water threats have been implemented, and 4% of these policies are in the process of being implemented.

**Progress: P - Progressing Well/On Target**

## 2. MUNICIPAL PROGRESS: ADDRESSING RISKS ON THE GROUND

All municipalities in the CTC Source Protection Region are subject to the policies in the CTC Source Protection Plan. However, only 21 municipalities have vulnerable areas where significant drinking water threat policies apply. All municipalities where a future significant drinking water threat to sources of drinking water is possible, have processes in place to ensure that their day-to-day planning decisions conform with the CTC Source Protection Plan. Since the CTC Source Protection Plan has one land use planning policy that applies to the application of road salt (SAL-10), all 33 municipalities will need to review and update their Official Plan to ensure that it conforms to the CTC Source Protection Plan.

Municipalities in the CTC Source Protection Region are amending their Official Plans as required to conform with the Growth Plan for the Greater Golden Horseshoe, 2017. The Growth Plan requires that all upper tier municipalities complete their review by summer 2022 and lower tier municipalities by summer 2023. As of December 2019, 28 of the 33 municipalities have completed or are in the process of completing their conformity exercise.

### 2019 Progress: P - Progressing Well/On Target

## 3. SEPTIC INSPECTIONS

There are 371 septic system inspections that are required to be complete every five years to satisfy the requirements of the Mandatory Septic System Inspection Protocol. The first round of septic systems was required to be complete in January 2017. Municipalities in the CTC Source Protection Region are now in the midst of the second round of inspections, which are to be completed by January 2022. In 2019, two septic system inspections were completed to conform with the Ontario Building Code. Inspections at these systems confirmed that both are functioning as designed or carrying out required pump-outs.

### 2019 Progress: P - Progressing Well/On Target

## 4. RISK MANAGEMENT PLANS

In 2019, 41 Risk Management Plans were established in the CTC Source Protection Plan. This number reflects the most risk management plans generated in any one calendar year. At the end of 2019, 103 Risk Management Plans are in place within the CTC Source Protection Region.

Municipalities have reported that 27 Risk Management Plans are in the process of being completed. There were 45 inspections carried out by a Risk Management Inspector for prohibited or regulated activities. In 2018, there was 100% compliance with Risk Management Plans and prohibited activities that were inspected.

Although municipalities across the CTC Source Protection Region have made significant progress in establishing risk management plans, it is unlikely that the estimated remaining 236

plans will be complete by the December 2020 deadline. On an annual basis, there is great variation across municipalities, in the number of risk management plans that can be developed based on the complexity of these documents, the number of threats being addressed through the Plan, and the willingness of the parties carrying out the activity(ies) to negotiate the parameters of the Plan. For those municipalities with a large number of risk management plans yet to negotiate, the Risk Management Officials will need to increase the rate at which the Plans are established.

### **2019 Progress: S - Satisfactory**

## **5. PROVINCIAL PROGRESS: ADDRESSING RISKS ON THE GROUND**

The Province has established Standard Operating Policies to ensure that all applications submitted for provincial approvals take into account the science generated through the Drinking Water Source Protection Program and policies in the relevant source protection plan. Where necessary, conditions are added to the approval to ensure that the activity does not pose a significant threat to sources of drinking water.

The province completed a review of all previously approvals (100%) issued in the CTC Source Protection Plan where the activity could have resulted in a significant threat, at the end of December 2018. Through 2019, provincial ministries continued to review applications for new or amended approvals for conformity with the CTC Source Protection Plan.

### **2019 Progress: P - Progressing Well/On Target**

## **6. SOURCE PROTECTION AWARENESS AND CHANGE IN BEHAVIOUR**

Municipalities and conservation authorities within the CTC Source Protection Region have been working with landowners and business owners to increase the awareness of source protection planning and the value of safeguarding our sources of drinking water. All municipalities in the CTC Source Protection Region have established education and outreach programs, which, in time, is expected to further enhance knowledge and awareness of source protection planning.

Education and outreach programs have used the following approaches to inform stakeholders:

- Development and distribution of educational materials;
- Workshops and site visits;
- Source protection content for websites and social media promotion;
- Water and Wastewater Treatment Plant tours;
- Signage; and
- Information kiosks at events and festivals.

In particular, three Drinking Water Source Protection signs have been posted on roadways in the CTC Source Protection Region.

## 7. SOURCE PROTECTION PLAN POLICIES: SUMMARY OF DELAYS

As with the CTC Source Protection Plan, all such documents prepared in the Province were required to have a policy or policies to address significant drinking water threats. The CTC Source Protection Committee chose to also include policies to address three moderate and low drinking water threats. These drinking water threats include the application of road salt and the handling and storage of certain chemicals. Since the implementation of these four moderate and low threat policies (SAL-10, SAL-12, DNAP-3, OS -1) is non-legally binding, their execution varies greatly across the source protection region with several municipalities indicating some progress, while others indicating no progress made.

The establishment of incentive programs to encourage and support property owners and businesses with best management practices is one policy tool used by the CTC Source Protection Committee to address significant drinking water threats. The majority of municipalities with significant threat policies have not been able to establish such programs, therefore, the implementation of Policy GEN-5 has made very limited progress across the source protection region. The Committee was aware that this policy would be difficult to implement, hence it was established as a non-legally binding commitment.

## 8. SOURCE WATER QUALITY: MONITORING AND ACTIONS

Fourteen drinking water issues have been identified at four 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 further characterize this data and determine the impact of policies established to manage potential threats contributing to these increased values. This information can be accessed by contacting the local municipality.

Since these monitoring initiatives have only recently been established, there is insufficient data to be able to discern the impact of source protection plan policies on activities which may contribute to these concentrations.

### **Orangeville Drinking Water System** (5 municipal wells)

- Sodium: Wells 6, 9A, 9B - An increasing trend/concentration has been observed.
- Chloride: Wells 6 and 10 - An increasing trend/concentration has been observed.
- Chloride: Wells 9A, 9B - A decreasing trend/concentration has been observed.
- Chloride: Well 10 - No change in trend/concentration.

### **Inglewood Drinking Water System** (1 municipal well)

- Pathogens: Well 2 - A decreasing trend/concentration has been observed.

**Acton Drinking Water System** (2 municipal wells)

- Nitrates: Davidson Wells 1 and 2 - No change in trend/concentration.

**Georgetown Drinking Water System** (3 municipal wells)

- Chloride: Cedarvale Wells 1, 4, and 4A - No change in trend/concentration.

## **9. SCIENCE-BASED ASSESSMENT REPORTS: WORK PLANS**

No work plans were required to be implemented for our assessment reports.

## **10. MORE FROM THE WATERSHED**

For more information about source protection implementation in the CTC Source Protection Region, please see our story map, which is available on our website: <https://ctcswp.ca/>