

Source Protection Annual Progress Report 2022

I. Introduction

This annual progress report summarizes the progress made in implementing the source protection plans for the Halton Region and Hamilton Region Source Protection Areas, as required by the Clean Water Act, 2006 and its regulations. It highlights actions taken to protect the quality of the sources of our drinking water and to sustain them into the future.

The source protection plan is the culmination of extensive science-based assessments, consultation with the community, and collaboration with local stakeholders and the province. The implementation of the policies it contains ensures that activities carried out in the vicinity of municipal wells and lake-based water intakes will not pose significant risk to the water sources.

Thanks to the efforts of those responsible for implementing the policies, most of the policies have been implemented and most of the significant threat activities have been managed.

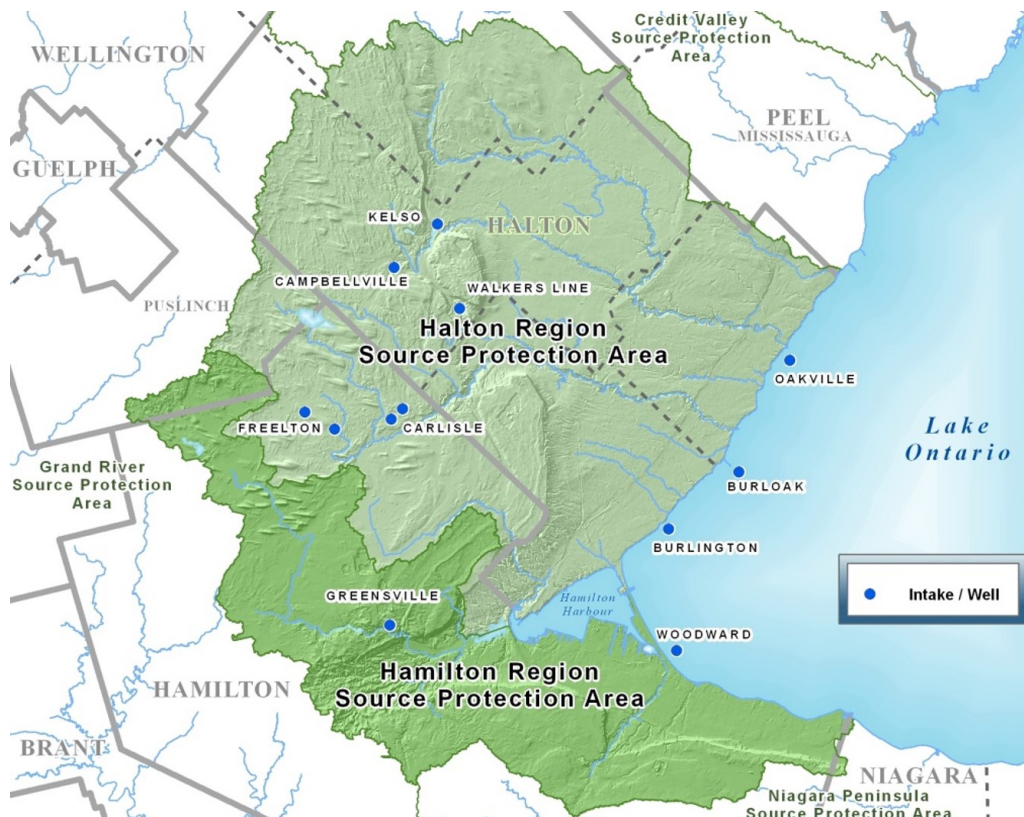


Figure 1: Halton-Hamilton Source Protection Region

II. A message from your local Source Protection Committee

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

This is the sixth Annual Progress Report prepared on implementation of the Source Protection Plan for the Halton-Hamilton Source Protection Region covering the period from December 31, 2015 to December 31, 2022, and summarizes its progress in the year 2022.

A total of 193 significant threats to municipal drinking water systems were identified as of December 31, 2022. Approximately 99% of these significant drinking water threats have been addressed. As well, 100% of the policies are considered implemented, in progress or require no further action. Municipalities within the source protection region as well as various provincial ministries and other agencies and stakeholders are responsible for policy implementation.

The Halton-Hamilton source protection program reached a milestone in 2022 with the submission and Minister's approval of proposed updates to the assessment reports and source protection plan as required under section 36 of the Clean Water Act 2006. The committee also continued with its communication outreach program with participation at Conservation Halton's Blooms and Bubbles and Hops and Harvest festivals and the Halton Region Children's Water Festival.

The Halton-Hamilton Source Protection Committee is pleased to see that 99% of the significant drinking water threats have been effectively addressed in 2022 through the plan's policies in achieving the objectives of the Clean Water Act and that the required Section 36 amendments to the plan have been completed. A ranking score, by the committee, of progressing well and on target is a fair assessment of its progress.



III. Our Watershed

To learn more, please read our assessment reports and source protection plan.

The Halton-Hamilton Source Protection Region is located at the western end of Lake Ontario and includes portions of the municipalities of the Cities of Hamilton, Burlington and Mississauga, the Regions of Halton, Peel and Niagara, the Towns of Milton, Halton Hills, Oakville and Grimsby, the County of Wellington and the Township of Puslinch. The region covers an area of 1,417 sq km of land and 720 sq km of Great Lakes waters.

Approximately 970,000 people make the source protection region their home and the region is expected to grow over the next decades. The landscape is changing due to this growth and the source protection plan is in place to help guide this growth in a way that protects our vulnerable drinking water sources.

The Regional Municipality of Halton and the City of Hamilton own and operate municipal water systems within the source protection region. These systems include six intakes in Lake Ontario (Woodward (2), Burlington (2), Burloak and Oakville), three municipal well systems in Hamilton (Carlisle, Freelon and Greensville) and three municipal well systems in Halton Region (Kelso, Campbellville and Walkers Line). In addition, some homes and businesses within the source protection region are supplied water from municipal drinking water systems located in neighbouring areas. In total, these municipal water systems supply about 95 percent of the population within the source protection region with reliable, clean drinking water. About 92 percent of the population receive water from Lake Ontario and 3 percent receive groundwater. Outside the urban area, private wells and cisterns are relied on by the remaining 5 percent of the population. Private well systems and the natural environment use the same sources of water that, under the current program, the government seeks to protect for municipal supplies. In this way, maintaining a sustainable supply of clean water within the aquifers of Halton-Hamilton Source Protection Region and in Lake Ontario will benefit all residents and business operators.

Through 2022, comprehensive updates to the science and policies based on most recent data and feedback were carried out, consulted on, and submitted to the Province of Ontario. In November 2022, the Minister of the Environment, Conservation and Parks approved the comprehensive plan update under Section 36 of the Clean Water Act.

The source protection plan contains policies that require or request action from municipalities, provincial ministries, federal departments, conservation authorities, landowners, and stakeholders. This report summarizes actions taken in 2022 with tracking of implementation between December 31, 2015, when the plan took effect, and December 31, 2022.

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

1. Source Protection Plan Policies

P: Progressing Well/On Target

The Halton-Hamilton Source Protection Committee included policies in their source protection plan to address prescribed threats through actions thought to be necessary to protect sources of drinking water, and the monitoring of policy implementation. All monitoring policies are being followed and are no longer tracked for policy implementation. 100% of the 60 legally binding policies, the 20 policies that are non-legally binding but address significant threat activities, and the 18 general strategic policies are implemented, are in process, or have been considered and did not require further action. Policies are in place to manage or prohibit activities that may be proposed to occur within vulnerable areas that could pose a risk to the quality or quantity of sources of drinking water, and for activities that are currently ongoing. Approximately 99% of the existing significant threats have been managed. Based on a continued advancement of source protection plan implementation in 2022, the progress score given for overall plan implementation status is P: Progressing well.

2. Municipal Progress: Addressing Risks on the Ground

P: Progressing Well/On Target

In the Halton-Hamilton Source Protection Region policies are directed at 8 municipalities that cover the activities of all 12 municipalities within the Source Protection Region. It is a requirement that municipalities ensure their Official Plan conforms with the local source protection plan.

As of December 31, 2022, the City of Hamilton has completed their Official Plan and Zoning by law conformity exercise. The City of Burlington has completed their exercise, but the Official Plan is currently under appeal. Updates to the Official Plans for the; Town of Oakville, Region of Halton, County of Wellington and Town of Milton are currently underway. These updates will reflect the most recent changes to the Source Protection Plan, approved on November 4, 2022. In 2021, the Town of Halton Hills reported their Official Plan was completed and under appeal. This was a reporting error and has been corrected. Halton Hills has not yet started their conformity exercise, but updates will commence in 2023. The Zoning by Law conformity exercise is underway at the Town of Oakville and the Township of Puslinch. Municipal progress in implementing policies is given a progress score of P: Progressing well.

3. Septic Inspections

P: Progressing Well/On Target

The Ontario Building Code requires that small sewage systems be inspected every five years through a mandatory minimal program or a discretionary more advanced septic inspection program. The City of Hamilton and the Town of Milton established inspection programs in 2016. The total number of properties within the Kelso and Campbellville areas (in Milton), and the Carlisle, Freelton and Greensville areas (in Hamilton) included in the sewage re-inspection program is now 125, after field verification removed two. In 2020 36 inspections were completed, the remaining 89 were completed in 2021. The first 5-year inspection cycle has been successfully completed, with all required inspections undertaken. The second 5-year cycle is in progress. There were 0 inspections required to be carried out in the 2022 reporting year. Inspections of the sewage systems will continue in accordance with the 5-year cycle. The municipal sewage re-inspection programs are given a progress score of P: Progressing well.

4. Risk Management Plans

P: Progressing Well/On Target

In the previous calendar year, 1 risk management plan was established for a cumulative total of 7 established to date. Currently there is 1 known property within Halton Region, with an existing drinking water threat activity that is not yet managed with an established or agreed to risk management plan. During the 2022 reporting year, 5 site inspections were conducted. While COVID restrictions have eased, the Risk Management officials and inspectors continued to safely conduct inspections (drive by threat verification). Implementation of risk management plan policies is given a progress score of P: Progressing well.



Figure 2: Kelso Drinking Water System Pump Station

5. Provincial Progress: Addressing Risks on the Ground

P: Progressing Well/On Target

Ontario provincial ministries including Ministry of the Environment, Conservation and Parks (MECP), Ministry of Natural Resources and Forestry (MNRF), Ministry of Transportation Ontario (MTO) and Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) implement source protection policies that use prescribed instruments to manage significant threat activities.

The MECP's updated Standard Operating Policy, 2017 (Environmental Registry No. 2968) ensures that applications for water takings, sewage works, biosolids sites, etc. are screened. MNRF and MTO screen aggregate license and permit applications. OMAFRA screened applications for which it issues/approves instruments under the Nutrient Management Act. For instruments not approved by OMAFRA, a letter of policy conformity is delegated to and may be issued by a certified person. No significant threats were identified through screening by the provincial ministries in 2022.

Source protection vulnerability is considered when prioritizing sites for planned inspections (pesticides program), and for proactive inspections (hauled sewage sites, processed organic waste sites, agricultural operations with existing prescribed instruments).

Ministry staff continue to be trained or have their training refreshed on the source protection program, recent amendments to the Technical Rules, and annual reporting requirements. The implementation of prescribed instruments policies by Ontario ministries are given a progress score of P: Progressing well.



6. Source Protection Awareness and Change in Behaviour

The awareness and protection of drinking water sources continues to be a priority of the Halton-Hamilton Source Protection Region.

City of Hamilton reports that the Source Protection Plan continues to bring awareness about potential issues that can impact source water quantity and quality. Positive outcomes have come from the Randle Reef Sediment Remediation Project and the Real-Time Control System and Cross-Connection Control Project. These projects have been made a priority because of public awareness about the quality of source water and sustainable water services. The municipality is also involved in the cyanobacteria study that looks at factors such as seasonality and climate change impact on the municipal intake. Studies on road salt application and the effect it has on the chloride and sodium levels in drinking water continue.

The Halton-Hamilton Source Protection Committee took part in the Conservation Halton Blooms and Bubbles, Hops and Harvest and the Children's Water festivals. The committee had a booth at each event, spotlighting the importance of protecting our drinking water sources.

County of Wellington and Township of Puslinch continue to require a Drinking Water Threat Disclosure Report where significant threats may be present near municipal wells. This built on existing Official Plan policies since 2008 and Halton-Hamilton policies. See the website wellington.ca



Figure 3: Hops and Harvest Festival Logo

7. Source Protection Plan Policies: Summary of Delays

In 2022, all the Halton-Hamilton source protection plan policies that directly address significant drinking water threats are implemented, in progress or considered and further actions are not required.

In November of 2022, a comprehensive update of the Source Protection Plan under Section 36 of the Clean Water Act was approved by the Minister of the Environment, Conservation and Parks. Implementation status of policy changes as a result of this update will be reported on in the 2023 annual reporting period.

8. Source Water Quality: Monitoring and Actions

The Cedarvale well field is located in Georgetown, part of the Town of Halton Hills, and outside of the Halton-Hamilton Source Protection Region. Its protection areas for quality and quantity extend slightly into the Halton Region Source Protection Area. Some of the wells in this well field have rising trends in chloride concentrations and an issue contributing area has been delineated. The neighbouring Credit Valley, Toronto and Region and Central Lake Ontario (CTC) Source Protection Committee identified the need for chloride management measures. The Halton-Hamilton Source Protection Committee included policies in their plan to manage or prohibit the storage and application of road salt and the storage of snow.

Halton Region reported that the chloride concentration trends at the wells have not changed since reporting began in 2016. However, it is acknowledged that it will take time for the benefits of the implementation of associated policies to be realized.

Halton Region also identified elevated or rising chloride concentrations in the source water of the Campbellville well field. To better understand the sources of the chlorides, Halton Region constructed six groundwater monitoring wells in the Campbellville area in 2019. These wells are integrated into Halton Region's existing groundwater monitoring program and further assessment of water quality issues will be completed upon longer term data being collected and analyzed.

9. Science-based Assessment Reports: Work Plans

A work plan to undertake a comprehensive review and update of the source protection plan and assessment reports per Section 36 of the Clean Water Act, 2006 was developed in 2018 and approved in 2019 by the Minister of the Environment, Conservation and Parks. Halton-Hamilton Source Protection Region staff, in collaboration with municipalities, carried out comprehensive science and policy updates through to 2022. Following consultation with ministries, municipalities, stakeholders and the general public, an updated Source Protection Plan was compiled and submitted to the Ministry in May 2022. The update was officially approved on November 4, 2022.

Review of the 2021 Technical rules is ongoing and any technical work and policy updates associated with the new technical rules will be submitted in a future Section 34 update.

10. More from the Watershed

To learn more about the Halton-Hamilton Source Protection Region, visit our website at www.protectingwater.ca