

Source Protection Annual Progress Report 2024

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.

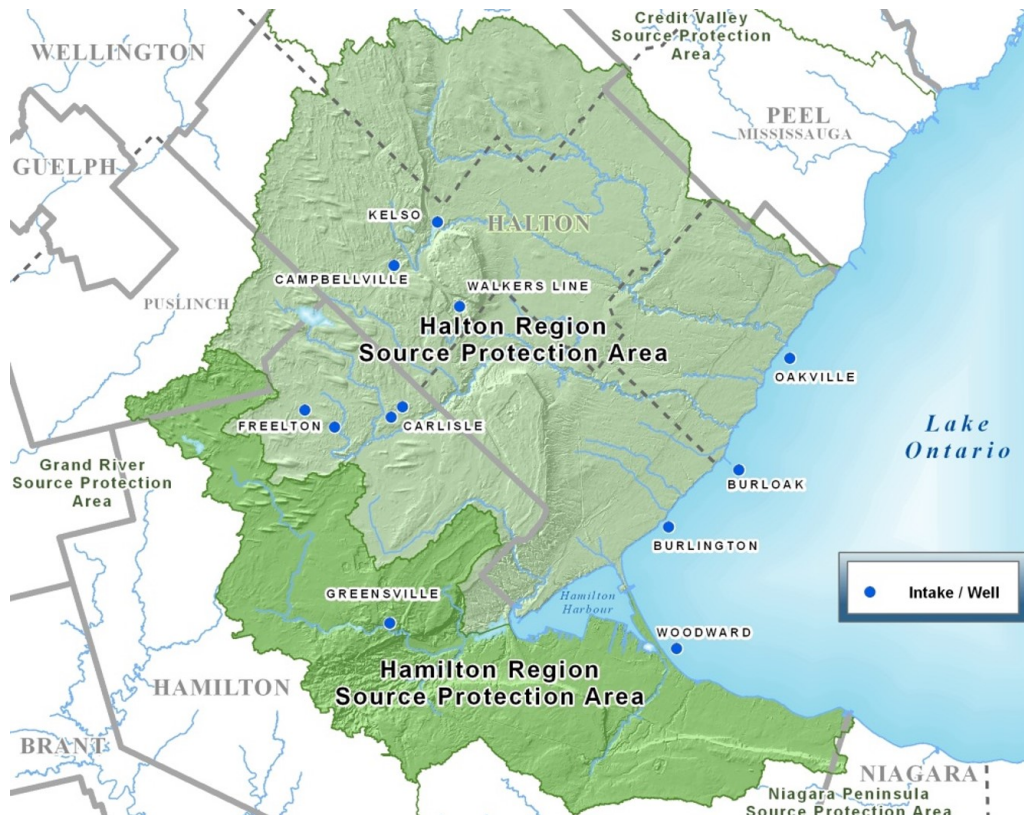


Figure 1: Halton-Hamilton Source Protection Region

II. A message from your local Source Protection Committee

Our progress score on achieving source protection plan objectives this reporting period:

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

This is the seventh Annual 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, 2023, and summarizing its progress in the year 2023.

A total of 840 potential significant threats to sources of municipal drinking water systems were identified during the comprehensive update to the Halton Hamilton Source Protection Plan. During the 2023 reporting year, municipalities worked to verify the potential threats. With the removal of threats through field verification, the total number of significant threats in the Halton Hamilton Source Protection Region is currently 659, a significant increase from 193 identified significant threats in 2022. Through inspection and field verification, Risk Management Officials and Inspectors have identified 181 threat activities that are not or no longer occurring and 174 threats that have been addressed through policy implementation. This represents a rate of 42% progress in addressing significant drinking water threats in the Halton Hamilton Source Protection Region. In 2022, 99% of the significant threats had been addressed. The difference in progress is directly related to the re-delineation of the vulnerable area for the Freelon drinking water system which substantially increased the number of properties with a vulnerability score of 10. This results in a substantial increase to the number of significant threats identified and needing to be addressed. Work to address the additional threats is ongoing.

As of December 31, 2023, 100% of the policies in the source protection plan are implemented, in progress or require no further action. Municipalities, provincial ministries, and other agencies and stakeholders are responsible for policy implementation.

The Halton-Hamilton Source Protection Committee continued with its communication and outreach program in 2023 with a presentation to the Oakville Rotary Club; participation at the Halton Environmental Networks Youth Conference on Climate Change and exhibits at the annual Halton Children's Water Festival and Conservation Halton's Hops and Harvest Festival.

Based on the review of the annual progress reporting by the implementing bodies, the Halton-Hamilton Source Protection Committee recognizes the large increase in significant drinking water threats. The Committee is pleased to see that these threats are being effectively addressed to achieve the objectives of the Clean Water Act. A ranking score of progressing well and on target is a fair assessment on its progress.

III. Our Watershed

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

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 Greenville) 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 with 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.

In November 2022, the Minister of the Environment, Conservation and Parks approved a comprehensive plan update under Section 36 of the Clean Water Act. The source protection plan contains policies that require or request actions from municipalities, provincial ministries, federal departments, conservation authorities, landowners, and stakeholders. This report summarizes actions taken in 2023 to implement the amended Halton-Hamilton Source Protection Plan.

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

1. Source Protection Plan Policies and Addressing Significant Risks

P: Progressing Well/On Target

The Halton-Hamilton Source Protection Committee included policies in the source protection plan to address prescribed drinking water threats through actions necessary to protect sources of drinking water, and the monitoring of policy implementation. 100% of the legally binding and non-legally binding policies in the Halton-Hamilton Source Protection Plan aimed to address significant drinking water threat activities have been implemented, or are in the process of being implemented.

Policies are in place to manage or prohibit activities that may occur in 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 42% of the existing significant threats have been managed and no longer pose a significant risk to municipal drinking water sources. Field verification of potential threats identified during the comprehensive Section 36 updates to the Halton-Hamilton Source Protection Plan is ongoing and any verified threats will be addressed and managed through the source protection plan policies.

Based on a continued advancement of source protection plan implementation in 2023, 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, 2023, 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. The planned Zoning Bylaw update was scheduled to commence in late 2022; however, with limited movement on the appeals related to the Official Plan and resulting legislative changes in Bill 23, the update has been delayed. Updates to the Official Plans for the Town of Oakville, Region of Halton, County of Wellington, and Town of Milton are currently underway. Planned completion timelines are likely to be delayed as a result of the legislative changes introduced in Bill 23. The Official Plan updates will reflect the most recent changes to the Source Protection Plan, approved on November 4, 2022. The Town of Halton Hills reported they expect their Official Plan and Zoning Bylaw review to begin in 2024. The Zoning Bylaw 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 on-site sewage system inspection program. The City of Hamilton and the Town of Milton established inspection programs in 2016. Prior to the Section 36 plan amendment the total number of properties within the Kelso and Campbellville areas (in Milton), and the Carlisle, Freelon and Greensville areas (in Hamilton) included in the sewage re-inspection program was 125, after field verification removed two. The first 5-year inspection cycle has been successfully completed, with all required inspections undertaken. The second 5-year cycle is underway. In 2023 there were 16 inspections required to be carried out by the Town of Milton. The Town of Milton reported 28 inspections completed in 2023.

Through the Section 36 plan amendment process the Freelon WHPA was re-delineated and resulted in a significant increase in identified potential on-site sewage threats. All newly identified potential threats will be included in the next re-inspection cycle, scheduled to commence in 2026.

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 2023 reporting year no new risk management plans were established. The cumulative total remains at 7 established risk management plans to date. In 2022 Halton Region reported 1 property with an existing drinking water threat activity that was not yet managed with an established or agreed to risk management plan. The threat has now been removed, resulting in no outstanding risk management plans.

During the 2023 reporting year, 7 site inspections were conducted, with no instances of non-compliance or contravention found.

Implementation of risk management plan policies is given a progress score of P: Progressing well.

5. Provincial Progress: Addressing Risks on the Ground

Ontario ministries review applications for new or amended and previously issued provincial approvals (e.g., Environmental Compliance Approvals issued 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 source water. The provincial approvals are either being issued, denied, amended, or revoked, where necessary, to conform with plan policies. At this time ministries have completed the review of 100% of previously issued provincial approvals in our source protection region.

In 2023, one Wastewater/Sewage Works ECA application was reviewed for source protection purposes, and one Wastewater/Sewage Works ECA was issued in the Halton Hamilton Source Protection Region.

The implementation of prescribed instruments policies by Ontario ministries is 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.

The City of Hamilton sponsors, participates in and develops activities, projects and programs that promote the preservation of water resources and highlights the importance of source water protection. Some of these activities include educational outreach at the Children's Water Festival, World Toilet Day, World Water Day, Future City Builders and school presentations. The City of Hamilton continues to ensure spill prevention/contingency and emergency response plans are up to date. In 2023 the city's emergency response exercise was focused on a water treatment plant incident.

Halton Region continues to integrate Source Protection awareness into existing materials related to significant drinking water threats and the distribution of regionally developed fact sheets through the planning application process.

Once again the Halton-Hamilton Source Protection Committee took part in Conservation Halton's 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. The Committee is committed to increasing community outreach and looks forward to taking part in additional events in the coming years.

Staff continue to find new ways to promote and share information about source water protection. With the development and release of a new Source Protection Story Map, members of the general public have been provided a new resource for learning about the program, understanding the vulnerable areas in their vicinity and are presented with Best Practices to better help protect sources of drinking water.



7. Source Protection Plan Policies: Summary of Delays

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.

In 2023, all Halton-Hamilton source protection plan policies that directly address significant drinking water threats are implemented or in progress.

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. The Region acknowledges 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 chloride contributing to the rising concentrations, 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. In 2022, Halton Region hired consultants to assess potential salt loading activities near the Campbellville wellfield. Sources considered where road salt is applied to roads, sidewalks and parking lots, salt water pools and septic systems as a result of impacts from water softeners. Results from the assessment suggest that no single source of sodium or chloride can be identified as contributing to the upward trends. One of the recommendations from the study was that Halton Region should begin sampling bromide as part of the sampling schedule to better understand the salt loading contributions of septic systems and road salt. Halton Region began sampling for bromide in 2023 and results will be reviewed once at least two years of sampling data has been attained.

9. Science-based Assessment Reports: Work Plans

A comprehensive review and update of the source protection plan and assessment reports per Section 36 of the Clean Water Act, 2006 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.

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

10. More from Watershed

To learn more about our source protection region/area, visit our website at: www.protectingwater.ca