

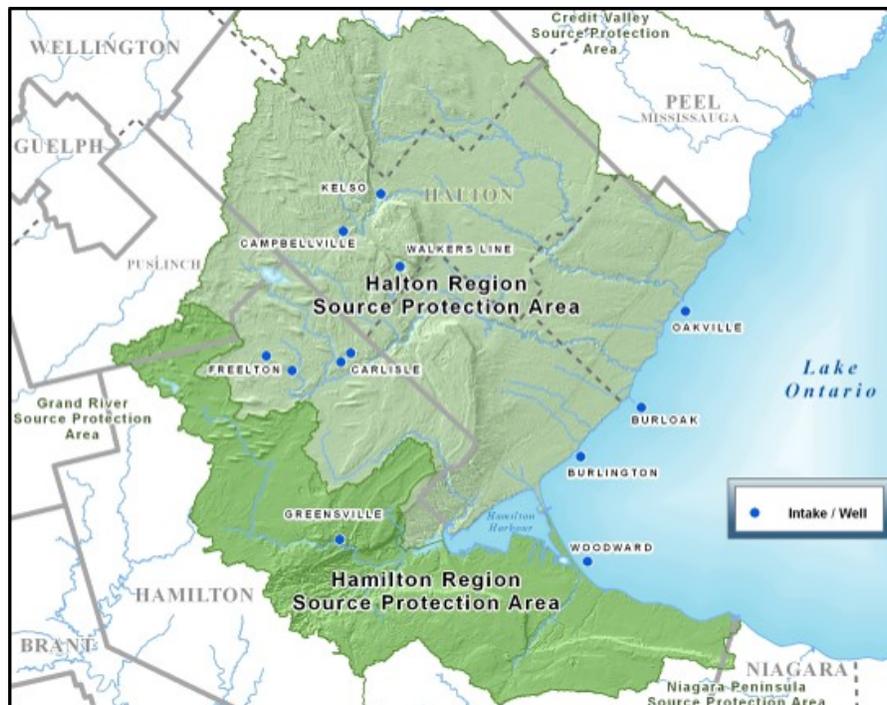
# Source Protection Annual Progress Report

## I. Introduction

This annual progress report briefly 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 many significant threat activities have been managed.



For more information about the drinking water source protection program in the Halton-Hamilton Source Protection Region, please visit our website at [www.protectingwater.ca](http://www.protectingwater.ca)

## 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.**
- 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 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, 2019 and summarizes its progress in 2019.

With changes to the counting of the Halton-Hamilton Source Protection Plan policies there are 98 policies to address the 207 actual significant drinking water threats that have been identified as of December 31, 2019. Multiple bodies consisting of the municipalities within the source protection region as well as various provincial ministries and other agencies and stakeholders are responsible for their implementation. Approximately 80% of the significant drinking water threats have been addressed which is down from 84% for 2018 but reflects newly identified threat activities in 2019. However, 100% of the policies are considered to be implemented, in progress or require no further action.

The Committee continued with its outreach program during 2019. Presentations were made to the Niagara Escarpment Commission, members of Hamilton Council and a number of the elected members of the Provincial Parliament as well as students at McMaster University. Continued outreach will be undertaken in 2020.

Based on the review of the annual progress reporting by the bodies implementing the plan, the Halton-Hamilton Source Protection Committee is pleased to see that 100% of the policies associated with the plan are effectively addressing significant drinking water threats and achieving the objectives of the Clean Water Act and that 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 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 substantially 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.

Studies completed over the past few years have assessed the vulnerabilities and risks to the quality and quantity of the waters that supply the municipal wells and intakes from activities occurring on lands and in waters in their vicinity. Protection areas have been mapped and a plan developed to manage or prohibit certain activities within these areas. Follow-up assessments were completed for the Kelso, Campbellville and Greensville municipal well supplies when new data and more advanced modelling tools became available. All municipal wells have protection areas for threats to water quality, while only those where it was determined that the sustainability of the water source may be in question have protection areas for threats to water quantity. The municipal intakes in Lake Ontario also have protection zones for threats to water quality.

The source protection plan contains policies that require or request action from provincial ministries, federal departments, municipalities, conservation authorities, landowners, and stakeholders. This report summarizes actions taken in 2019 with tracking of implementation between December 31, 2015, when the plan took effect, and December 31, 2019.

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

### 1. Source Protection Plan Policies

The Halton-Hamilton Source Protection Committee included policies in their source protection plan to address prescribed threats, a local threat, 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. Some of each policy type (binding, non-binding, strategic) are yet to be fully implemented but 80% of the existing significant threats have been managed.

Based on a continued advancement of source protection plan implementation in 2019, the progress score given for overall plan implementation status is P: Progressing well.

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

There are 12 municipalities within the Halton-Hamilton Source Protection Region but policies are directed at eight to address significant, moderate and low threat activities outlined in the source protection plan. These policies primarily require municipalities to update planning documents, update education and outreach programs or initiate new ones to include source protection messaging, consider the offering of incentives to have work required to protect water sources completed in a timely manner, to update spill response and salt management plans, to reduce water consumption to sustain supplies and to ultimately ensure all municipal decisions and actions protect drinking water sources.

Implementation of the source protection plan policies by the municipalities has progressed in 2019. All policies targeting significant threat activities are in progress or implemented. Risk management plans are required to be established by December 31, 2020 and Halton Region, the City of Hamilton and the Township of Puslinch are working on these. Official plan conformity exercises have been completed by the City of Hamilton, County of Wellington and the Township of Puslinch. Halton Region, the Towns of Milton and Oakville, and the City of Burlington have begun their conformity exercises while Halton Hills as not yet started. Burlington's adopted Official Plan (April 2018) contains draft policies that recognize the Source Protection Plan and the requirement for a disclosure report. The plan is currently with Halton Region for review and approval. The Town of Milton began their conformity exercise (We Make Milton) in the summer of 2019 and predict that it will be 2 to 3 years before the process is complete. Oakville anticipates completion of their amendment by late 2021 and the Town of Halton Hills in 2021/2022.

The source protection plan also includes general strategic policies that all 12 municipalities are requested to implement to protect the quality and/or quantity of source water. Actions are requested to limit the flow of contaminants through transport pathways, to collect climate data to better inform studies and assess changes, to educate the public about the potential issues with the importation of fill, to update spill prevention and emergency response plans, and reach out to those that transport dangerous goods near wells and intakes. Although voluntary, most municipalities are working on or have implemented these policies.

The municipalities have made great progress in 2019 toward implementing all their policies and are given a progress score of P: Progressing well.

### 3. Septic Inspections

The Ontario Building Code requires that small sewage systems be re-inspected every five years through a mandatory minimal program or a discretionary more advanced program. The City of Hamilton and the Town of Milton established inspection programs in 2016 and owners of properties within the wellhead protection areas where sewage systems could be a significant threat received letters to have third party contractors complete the inspection and to submit the required certificate to the municipality following completion of any required works.

Although not yet in operation, the Greensville well system was expanded in 2019 and the protection area was redelineated. The revised delineated area includes 13 sewage systems already inspected and 17 new ones. These new ones will be included in the next round of inspections in a few years.

The total number of properties within the Kelso, Campbellville, Carlisle, Freelon and Greensville areas that are now included in the program is 127. Of these, 110 (87%) have been inspected. Only two major repairs were required and have been completed. The inspection program included outreach materials about proper care and use of septic systems that also satisfied the requirements of an education and outreach policy.

A progress score of P: Progressing well is given to the two municipal sewage re-inspection programs.

## 4. Risk Management Plans

Screening processes are in place within the planning and building departments of the municipalities to ensure applications for future development are reviewed appropriately for potential threat activities and source protection policy application. Applicants with properties where significant threats are possible must receive a notification from the risk management official that no plan policies apply and the planning and permitting processes may proceed. A total of 13 notices were issued in 2019 by the City of Hamilton and zero by Halton Region and the Township of Puslinch.

Risk management officials and inspectors continued to verify threat activities occurring in the region in 2019. Two significant threat activities were added in commercial fertilizer application and use of land by livestock. The establishment of risk management plans is underway with the City of Hamilton completing three on three properties to address significant threats posed by the application of commercial fertilizer. Halton Region and the Township of Puslinch are in negotiations to establish risk management plans to address significant threat activities in their areas. Policies require that all risk management plans must be in place by December 31, 2020.

Based on the progress made in 2019, the progress score given for the development of risk management plans is P: Progressing well.

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

Provincial ministries, including MECP, MNRF, MMAH, MTO and OMAFRA, are responsible for the implementation of source protection policies included in the Halton-Hamilton Source Protection Plan to reduce the risk of significant threat activities or to inform decision makers, collect and share data and lessons learned with others, or provide incentives to advance policy implementation.

The Ministry of the Environment, Conservation and Parks - wastewater/sewage works was the only ministry to receive applications to undertake activities that could pose significant risk to the drinking water sources in Halton-Hamilton. Of the three applications that underwent detailed review for source protection, one significant drinking water threat was identified and managed through conditions in the permit.

Relevant provincial 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 Provincial Government has made the responsibilities of the source protection authorities under the Clean Water Act mandatory services and this has raised awareness and ensured that source protection planning is incorporated into government business.

Through a collaborative effort of many stakeholders, a tool for local use to assess potential risk to source water quality from climate change was developed in 2019 and will be released in 2020. This tool will be useful to advance local discussion about possible impacts and mitigation needs.

Provincial ministries are given a progress score of P: Progressing well.

## 6. Source Protection Awareness and Change in Behaviour

Local municipal source protection staff continued to train municipal staff of other departments and to reach out to their communities to raise awareness about the protection of drinking water sources in 2019. Children's water festivals, well decommissioning, and staff training continue to bring positive results in increased awareness about the sources of our drinking water and the need to keep it clean and plentiful.

In 2019, Halton Region participated in an Environmental Farm Plan workshop and fall fairs and utilized Conservation Ontario's communications products, such as the source protection YouTube video, to relay their messaging. They continued their Residential Well Decommissioning Grant Program and refined their Spill Response Procedure to align with the objectives defined in the Halton-Hamilton Source Protection Plan. Also, to better understand the sources of chlorides in the Campbellville municipal wells, Halton Region installed six groundwater monitoring wells nearby.

Hamilton source protection staff educated residents on septic tanks and holding tanks at a community meeting, and informed de-icing contractors and their supervisors about the adverse effects on drinking water of the overuse of road salt and the need to optimize its use.

Municipal staff report that the source protection plans are continuously bringing awareness about potential issues that can impact water quantity and quality in the context of capital projects and development applications. Positive outcomes are resulting from implementation of municipal capital projects, such as upgrades to wastewater treatment plants, the Randle Reef Sediment Remediation Project, Hamilton's Real-Time Control System, cross-connection control projects, Burlington's oil/grit separators, and Peel Region's Inflow and Infiltration Remediation Strategy. The City of Hamilton is also forward thinking about source water quality in its involvement in a research project about cyanobacteria that focuses on seasonality and climate change aspects, and its impact on the municipal intakes.

Township of Puslinch source protection staff reached out to residents all across the County of Wellington, including within the portion of the Township in the Halton-Hamilton Source Protection Region. They continue to raise awareness through training, newspaper ads, the production of education and outreach materials and their distribution during landowner visits, inspections, and direct mailings.

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

In 2019 Halton-Hamilton region achieved the milestone of 100% of the source protection plan policies that directly address significant drinking water threats as either implemented, in progress or considered and further actions are not required. In 2020 we expect to move closer to full implementation with the deadline for negotiated risk management plans approaching.

The general, strategic policies in the source protection plan are also 100% implemented, in progress or considered and further actions are not required. A few municipalities have not started implementation of a few policies, however, others have implementation underway and the policies were recorded as in progress. In future years, the source protection authority will seek a coordinated approach to implementation of these policies based on the knowledge and actions of those who have succeeded with their implementation efforts.

## 8. Source Water Quality: Monitoring and Actions

The Cedarvale well field is located in Georgetown, part of Halton Hills, and its protection areas for quality and quantity extend slightly into the Halton Region Source Protection Area. Well numbers 1A, 4 and 4A in this well field have rising trends in chloride concentrations and an issue contributing area has been delineated. The CTC Source Protection Committee identified the need for chloride management measures and 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 will be integrated into Halton Region's existing groundwater monitoring program and further assessment of water quality issues will be completed once data are collected and analyzed.

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

No work plans to satisfy these technical rules were required to be implemented for our assessment reports. However, a work plan to undertake a comprehensive review and update of the source protection plan and assessment reports directed technical work in 2019. A copy of the work plan is available at [www.protectingwater.ca](http://www.protectingwater.ca).

## 10. More from the Watershed

The Halton-Hamilton Source Protection Plan includes policies that are strategic in nature and implementers are requested, rather than required, to implement them. The response to these policies has been good and the drinking water sources of the source protection region are better protected because of their implementation.

Local municipalities report that relationship building with private companies is ongoing, as is training of staff and discussions on incorporating source protection principals into winter maintenance plans, spill response plans, and official plan updates.

Furthermore, local municipalities have recognized the importance of the protection of the quality and quantity of water sources through integration with other initiatives. Well decommissioning programs are offered to reduce pathways for contaminants to reach the aquifers from which drinking water is taken. Children's water/groundwater festivals help inform families of the need to protect water and how they can do their part. Municipal capital projects such as the Woodward Avenue Wastewater Treatment Plant upgrade in Hamilton, the remedial action plan activities in Hamilton Harbour, cross-connection and downspout disconnection programs in many municipalities, manhole and sewer lining to prevent sewage leakage in Peel Region, and the installation of oil/grit separator chambers in existing storm sewer systems to improve the quality of the water discharging to Lake Ontario from Burlington, will all produce positive outcomes for the protection of drinking water sources.