



Halton Region Source Protection Authority Board of Directors Meeting

Conservation Halton

Apr 21, 2022 1:00 PM - 4:00 PM EDT

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MEETING NO: Halton Region Source Protection Authority Board of Directors # 03 21

MINUTES

The Halton Region Source Protection Authority Board of Directors Meeting was held on Thursday, September 23, at 3:00 p.m. via Zoom Webinar.

Members Present:

Hamza Ansari
Rob Burton
Mike Cluett
Rick Di Lorenzo
Joanne Di Maio
Cathy Duddeck
Allan Elgar
David Gittings
Zobia Jawed
Moya Johnson
Gordon Krantz
Marianne Meed Ward
Rory Nisan
Gerry Smallegange
Jim Sweetlove
Jean Williams

Absent with regrets:

Steve Gilmour
Zeeshan Hamid
Bryan Lewis

Staff present

Kim Barrett, Associate Director, Science & Partnerships
Hassaan Basit, President & CEO/Secretary-Treasurer
Garner Beckett, Executive Director, Conservation Halton Foundation
Adriana Birza, Manager, Office of the President & CEO
Niamh Buckley, Administrative Assistant, Office of the President & CEO
Chitra Gowda, Snr. Manager, Watershed Planning and Source Protection
Craig Machan, Director, Parks and Operations
Kellie McCormack, Associate Director, Planning & Regulations
Marnie Piggot, Director, Finance
Plezzie Ramirez, Director, Human Resources
Jill Ramseyer, Director, Corporate Compliance
Pavan Seth, Procurement Manager
Barb Veale, Director, Planning & Watershed Management
Mark Vytvytskyy, Chief Operating Officer

Chair Gerry Smallegange called the meeting to order at 3.02 p.m.

- 1. Roll Call**
- 2. Disclosure of Pecuniary Interest for HRSPA Board of Directors**

There were **NONE**.

3. Acceptance of Agenda

HRSPA 03 01

Moved by: Jean Williams
Seconded by: Mike Cluett

THAT the Agenda be **accepted as distributed**.

Carried

4. Consent Items

4.1 Approval of the Halton Region Source Protection Authority Board of Directors Meeting Minutes dated April 22, 2021

4.2. Source Water Protection Consultation
(HRSPA 03 21 01)

The consent items **were adopted**.

5. IN CAMERA

HRSPA 03 02

Moved by: Jean Williams
Seconded by: Cathy Duddeck

THAT the Halton Region Source Protection Authority Board of Directors **move In Camera**.

Carried

5.1 Confidential Matter
(HRSPA 03 21 02)

HRSPA 03 03

Moved by: Jean Williams
Seconded by: Moya Johnson

THAT the Halton Region Source Protection Authority Board of Directors **reconvene in public forum and that staff proceed as directed In Camera**.

Carried

6. Other Business

There was **no** other business.

7. Adjournment

HRSPA 03 04

Moved by: Jean Williams

THAT the Halton Region Source Protection Authority Board of Directors meeting **be adjourned at 3:09 p.m.**

Carried

Signed by: Hassaan Basit, President & CEO/Secretary-Treasurer

Date: April 21, 2022

DRAFT

REPORT TO: Halton Region Source Protection Authority Board of Directors

REPORT NO: HRSPA 01 22 01

FROM: Chitra Gowda, Senior Manager, Watershed Planning and Source Protection

DATE: April 21, 2022

SUBJECT: Halton-Hamilton Assessment Reports and Source Protection Plan Updates

Recommendation

THAT the Halton Region Source Protection Authority Board of Directors **approves the updates, made under Section 36 of the Clean Water Act, to the Halton-Hamilton Assessment Reports and Source Protection Plan for submission to the Ministry of the Environment, Conservation and Parks.**

And

THAT the Halton Region Source Protection Authority Board of Directors **approves the Staff report entitled “Halton-Hamilton Assessment Reports and Source Protection Plan Update”.**

Executive Summary

From 2019 to early 2022, Halton-Hamilton Source Protection Region (HHSPR) staff from Conservation Halton and the Hamilton Conservation Authority completed comprehensive science and policy updates per Section 36 of the *Clean Water Act, 2006*. The Halton-Hamilton Source Protection Committee (HHSPC) and the Halton Region and Hamilton Region Source Protection Authority (SPA) Boards were engaged throughout the process. A multi-phase consultation was also carried out. The updates and consultation address a Minister’s order issued in 2019 to ensure continued protection of municipal drinking water sources. A final submission of the scientific assessment reports and the source protection plan containing policies will be made to the Ministry of the Environment, Conservation and Parks (MECP) by the end of May 2022.

Report

Background

The drinking water source protection program for the Halton-Hamilton Source Protection Region (HHSPR) is implemented by Conservation Halton and the Hamilton Conservation Authority who function as source protection authorities (SPAs) under Ontario’s *Clean Water Act, 2006*. They maintain the Source Protection Plan containing policies to protect municipal drinking water sources and the science-based Assessment Reports.

Upon approval of the first source protection plan for the Halton-Hamilton Source Protection Region (HHSPR) in late 2015, the Minister of the Ministry of the Environment, Conservation and Parks

(MECP) issued an order requiring the subsequent submission of a workplan by end of November 2018 to review the Source Protection Plan per Section 36 of the *Clean Water Act, 2006*. These workplans were required across Ontario, leading to the second round of source protection planning across the province.

The HHSPR workplan included tasks to review both science and policies, to support the continued protection of drinking water sources. It is available at: <https://bit.ly/3k6pyu0>. Upon MECP's review of the HHSPR workplan, the Minister issued an amended order in March 2019 pursuant to Section 36 of the *Clean Water Act, 2006*. It specifies tasks from the workplan that must be undertaken to update the Assessment Reports and Source Protection Plan.

Timelines

The Table 1 shows an overview of the comprehensive updates process timelines including consultation and final submission by HHSPR to MECP. Staff carried out comprehensive updates to the science, policies, and support documents. Regular meetings of the Source Protection Committee were held.

No.	Step	Timeline
1	Need for updates identified per Section 36 of the <i>Clean Water Act, 2006</i>	2018 onwards
2	Development of proposed updates	Apr. 2019 to Jun. 2021
3	Early engagement with MECP, HHSPC review	Jun. to Aug. 2021
4	Pre-consultation, consider comments, HHSPC review	Sep. to Nov. 2021
5	Public consultation, consider comments, HHSPC review	Dec. 2021 to Feb. 2022
6	HHSPC meeting	March 15, 2022
7	Source Protection Management Committee meeting	March 16, 2022
8	Develop full submission package	March 1 to May 30, 2022
9	Source Protection Authority Board meetings	April 2022
10	Submission to MECP	May 30, 2022

Table 1: Timelines for Comprehensive Updates for Source Water Protection

Consultation

The updates were subject to a phased engagement and consultation process with municipalities, businesses, the public, and other stakeholders.

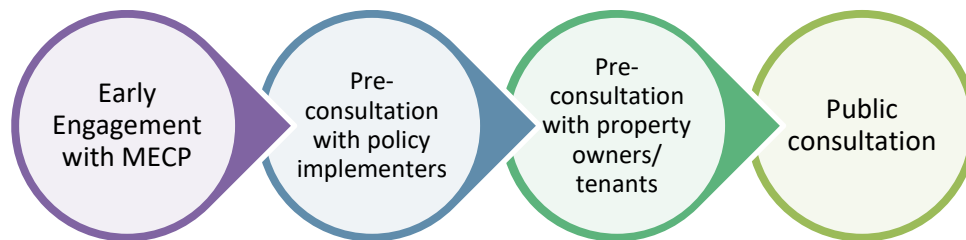


Figure 1: Phased Engagement and Consultation Process

The public comment period took place from December 15, 2021 to February 4, 2022. Consultation packages for policy implementing bodies were sent by email to around 80 recipients including municipal clerks, provincial ministries and businesses. The packages for property owners were mailed to around 280 properties in wellhead protection areas (WHPAs) of Freelon, Kelso, Walkers Line, Carlisle and Greensville municipal drinking water systems with groundwater sources.

Virtual information sessions were held on January 13 and January 20, 2022. Resources including the video recording are at: www.protectingwater.ca. Individual property inquiries were addressed separately and confidentially by the program manager.

Updates

A high level summary of the updates is provided below.

- Updated vulnerability scores for the Wellhead Protection Areas of Campbellville, Kelso, Walkers Line, Carlisle, and Greensville municipal drinking water systems
- Updated Wellhead Protection Areas delineation and vulnerability scores for the Freelon municipal drinking water system
- Updated contaminant transport pathways studies
- Updated mapping for managed lands, livestock density and impervious surfaces
- Updated threats risk assessments
- Updated Intake Protection Zones and vulnerability scores for the Burlington, Burloak and Oakville municipal drinking water systems
- Updated vulnerability scores for the Woodward municipal drinking water system
- Updates to align with the revised technical framework under the *Clean Water Act, 2006*.
- Updated policy format for the source protection plan.
- Updated and new policies of the source protection plan to address implementation challenges, reflect the updated list of prescribed drinking water threat activities under the *Clean Water Act, 2006*, and address early engagement, pre-consultation and public consultation comments received.

Appendix A provides further details. The comments received during consultation and responses by staff; the follow up from the March 15, 2022 Source Protection Committee meeting; and the resulting proposed updated Halton and Hamilton Regions Assessment Reports, Source Protection Plan and

Explanatory Document are available at the source protection region webpage and the updated documents available at: <http://www.protectingwater.ca/governance.cfm?itemid=4825&smocid=1466>.

Submission

Staff seek approval of the science and policy updates from the Source Protection Authority Boards in April 2022. Staff are carrying out remaining minor typographical edits (such as correcting spelling mistakes) and Accessibility for Ontarians with Disabilities Act (AODA) related edits (such as reformatting tables) and will submit the revised updated Halton and Hamilton Regions Assessment Reports and Source Protection Plan to the MECP by the end of May 2022.

Impact on Strategic Priorities

This report supports the Momentum priority of Natural Hazards and Water

Financial Impact

There is no financial impact to this report.

Signed & respectfully submitted:



Barb Veale
Senior Director, Watershed Strategies and

Approved for circulation:



Hassaan Basit
President & CEO/Secretary-Treasurer

FOR QUESTIONS ON CONTENT: Chitra Gowda, 905-336-1158 ext. 2237, cgowda@hrca.on.ca

Attachment 1 - Summary of Proposed Updates to the Halton-Hamilton Source Protection Plan

The Source Protection Plan includes policies for both the Hamilton Region and Halton Region Source Protection Areas (SPAs). The main changes to the Source Protection Plan are described below.

- Policy format: updated to enhance clarity.
- Definition of existing threat: From the first approved plan (Dec. 2015), most of the existing and future activities are managed, while prohibitions apply to a small number of future activities. Through discussion with municipalities in 2021, the definition of existing threat was updated to help prevent unintended prohibitions (for certain future activities), given the high growth and development area that HHSPR is characterized by. In the definition, the ten-year limit to an activity occurring is removed and proponent need to demonstrate intent of resuming an activity. Examples of “demonstrated intent” are included in the Explanatory Document.

Mandatory policies

- Policy G-1 (overarching timelines): updated to enhance clarity around plan updates and to add a policy effective date for risk management plans for existing threats. Addresses a comment from MECP received during consultation and reiterates that risk management officials have five years to establish new risk management plans.
- Policy G-2 (designation of land uses for risk management): continues to exclude residential land use. Updated based on discussions with municipalities, to allow municipalities to streamline the screening of applications and reduce workload involved in reviewing unrelated activities (e.g.: new/changing restaurant).
- Policy T-26-C (commercial fertilizer): updated to address existing significant risk activities of the application of commercial fertilizer, along with future significant risk activities. Addresses a requirement of the *Clean Water Act, 2006*.
- Policy T-47-C part b (livestock grazing): updated in discussion with municipalities such that a softer policy tool, education and outreach, can be applied on farm properties where livestock density is less than 5 nutrient units per farm (outside WHPA-A). Risk management plans will continue to apply to significant risks in WHPA-A (a 100 meter circle around the municipal wellhead).
- Policies T-2-C, T-13-C, T-27-C, T-31-C, T-43-C, T-54-C: updated based on municipal input, to clarify that existing education and outreach (E&O) programs can continue and to begin new E&O for newly identified significant drinking water threats.
- Policy T-52-C part b: updated to direct MECP to make all monitoring and reporting requirements in Environmental Compliance Approvals publicly available at Access Environment.
- Policies T-29 C/S, T-34-C/S, T-35-C/S, T-52-C/S, T-53 C/S: to enhance clarity, these policies were split into legally binding and non-binding policies without changing the intent of the policies. T-52-C was updated further, as described in the point above.
- Policy T-68-C (liquid hydrocarbon pipelines): updated based on discussions with pipeline

April 21, 2022

companies, federal and provincial regulatory agencies. Directed to Conservation Halton and Hamilton Conservation Authority to enhance awareness of drinking water source protection. The lead (Conservation Halton) undertakes policy implementation on behalf of both conservation authorities.

Strategic, non-binding policies (non-mandatory)

- Policy G-5 (stewardship program funding): new proposed policy directed to MECP to provide long term and adequate funding for education and outreach and landowner incentive programs. Addresses a comment from CA staff received during consultation.
- Policies T-62-S, T-63-S, T-64-S, T-65-S (liquid hydrocarbon pipelines): updated based on several discussions and emails with pipeline companies, federal and provincial regulatory agencies. Requests pipeline companies to include maps of intake protection zones in their emergency plans and consider watershed science while updating emergency zones. Requests regulatory agencies to ensure that regulatory requirements for pipeline design, installation, operation and maintenance of pipelines helps protect drinking water sources.
- Policy O-1-S (for contaminant transport shortcuts): updated to request municipalities to apply best practices during maintenance of (in addition to the specified installation of new) municipal infrastructure near municipal drinking water wells.
- Policy O-4-S (for import and disposal of excess soil): terminology “importation of fill”, is replaced with: “excess fill/excess soil including but not limited to contaminated soil” to harmonize terminology from O. Reg. 406/19 and the original intent of the committee.
- Policy O-5-S (spills planning and control in transportation corridors): updated to recommend that MTO, Transport Canada and the MECP Spills Action Centre work together to develop and implement an education and outreach program.
- Policy O-6-S (spills planning and control at the Hamilton Harbour and in shipping areas): updated to be directed to Transport Canada and MECP based on their roles and responsibilities, in addition to the Hamilton Oshawa Port Authority.

REPORT TO: Halton Region Source Protection Authority Board of Directors

REPORT NO: HRSPA 01 22 02

FROM: Chitra Gowda, Senior Manager, Watershed Planning and Source Protection

DATE: April 21, 2022

SUBJECT: Halton-Hamilton Source Protection Plan: Annual Progress Report 2021

Recommendation

THAT the Halton Region Source Protection Authority, together with the Hamilton Region Source Protection Authority, **approves the submission of the Annual Progress Report 2021 for the Halton-Hamilton Source Protection Plan to the Ministry of the Environment, Conservation and Parks by May 1, 2022, in the format set out by the Province;**

And

THAT the Halton Region Source Protection Authority **receives for information the staff report entitled “Halton-Hamilton Source Protection Plan: Annual Progress Report 2021”.**

Executive Summary

The Halton-Hamilton Source Protection Plan came into effect at the end of December 2015. Source Protection Authorities report on policy implementation progress annually as required under the *Clean Water Act, 2006*. Staff prepared the Annual Progress Report for 2021, demonstrating continued policy implementation by municipalities and others to protect municipal drinking water sources.

Activities that pose significant risks to municipal drinking water sources continue to be monitored, verified, removed, or addressed by implementation of policies. By the end of 2021, 99% of the existing significant threat activities were managed. All policies in the Halton-Hamilton Source Protection Plan are in process or have been implemented.

The following report provides an overview of the activities undertaken and successes achieved for the Halton-Hamilton Source Protection Plan implementation in 2021.

Report

Background

The *Clean Water Act, 2006* requires the preparation, maintenance and implementation of source protection plans to protect the quality and quantity of sources of municipal drinking water. The Halton-Hamilton Source Protection Plan was approved by the Ministry of the Environment, Conservation and Parks (MECP) on December 31, 2015. Since then, the implementation of policies is being carried out by municipalities, provincial ministries, and others, to address risks posed to municipal drinking water sources. The policy implementers have been working to satisfy the intent of each policy.

There are a variety of policy tools used in the plan, including “soft tools” such as education and outreach, best practices, and stewardship programs, and regulatory tools including land use planning (official plan and zoning by-laws), prescribed instruments (such as environmental compliance approvals), risk management plans (per Part IV of the Act), and other strategic measures. Together, they meet the objectives of the plan to protect existing and future municipal drinking water sources.

Annual Progress Reporting

As required by the *Clean Water Act, 2006*, the Halton-Hamilton Source Protection Region (HHSPR) must prepare an annual progress report to demonstrate progress made in implementing policies that protect Lake Ontario and groundwater municipal drinking water sources in the region. Figure 1 provides a simplified overview of a comprehensive process.

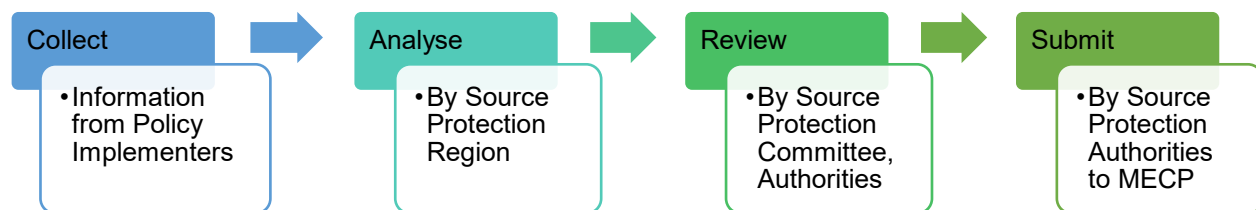


Figure 1: Source Protection Plan - Annual Progress Reporting At-a-Glance

Staff analyzed information from implementing bodies, using the online Electronic Annual Reporting (EAR) tool. Municipalities, provincial ministries, and others are commended for a large effort in collecting pertinent data and information over the course of the year, to inform the annual progress reporting process to multiple source protection authorities overlapping political boundaries.

Several “reportables” are provided to MECP at the source protection region level, based on HHSPR’s analysis of hundreds of contributing data and information from policy implementers provided by February 1 every year. In turn, the MECP collects the detailed synthesized “reportables” from Source Protection Authorities across Ontario by May 1 every year and aggregates it to the provincial scale in the annual Chief Drinking Water Inspector’s Report.

Highlights 2021

Attachment 1 is the 2021 Annual Progress Report. It is the fifth report of policy implementation progress of the Halton-Hamilton Source Protection Plan. There are 98 Halton-Hamilton Source Protection Plan policy parts to address the 193 actual significant drinking water threats that have been identified as of December 31, 2021. The overall progress made in 2021 to address significant threats is 99%, a notable increase from the 88% in 2020 and 80% in 2019. Policy implementers are commended for their efforts in 2021 that ensured the safety of watershed residents and staff while also protecting municipal drinking water sources through the COVID-19 global pandemic.

Septic systems identified as significant risks under the *Clean Water Act, 2006* were inspected under the septic re-inspection program mandated by the *Ontario Building Code Act*. Municipal staff achieved a completion of all required risk management plans within the MECP-extended timeline of the end of 2021.

Provincial ministries continued to screen permits and licenses for source water protection requirements. Prioritized inspections of farm properties were carried out by the provincial staff to ensure implementation of best management measures. Training for certified nutrient management planners includes source water protection. Contractors for MTO are trained and conform to an MTO Salt Management Plan which contains best available winter maintenance practices for environmental protection. Education and outreach were carried out by municipalities and others to enhance awareness of the importance of protecting drinking water sources.

The Halton-Hamilton Source Protection Committee (HHSPC) met on March 15, 2022 and reviewed the HHSPR Staff analysis. For 2021, the HHSPC assigned a letter score of “P”, the highest score possible, which denotes: “Progressing Well/On Target – The majority of the source protection plan policies have been implemented and/or are progressing”. In each of 2019 and 2020, the HHSPC also assigned a score of P.

Staff will make a final submission of the Annual Progress Report for 2021 to the MECP by the legislated deadline of May 1.

Submission

Staff seek approval of the Annual Progress Report 2021 from the Source Protection Authority Boards in April 2022. Staff are carrying out remaining minor typographical edits (such as correcting spelling mistakes) and Accessibility for Ontarians with Disabilities Act (AODA) related edits (such as reformatting tables) and will submit the Annual Progress Report 2021 to the MECP by May 1, 2022.

Impact on Strategic Priorities

This report supports the Momentum priority of Natural Hazards and Water

Financial Impact

There is no financial impact to this report.

Signed & respectfully submitted:



Barb Veale
Senior Director, Watershed Strategies

Approved for circulation:



Hassaan Basit
President & CEO/Secretary-Treasurer

FOR QUESTIONS ON CONTENT: Chitra Gowda, 905-336-1158 ext. 2237, cgowda@hrca.on.ca

Source Protection Annual Progress Report 2021

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 most of the significant threat activities have been managed.

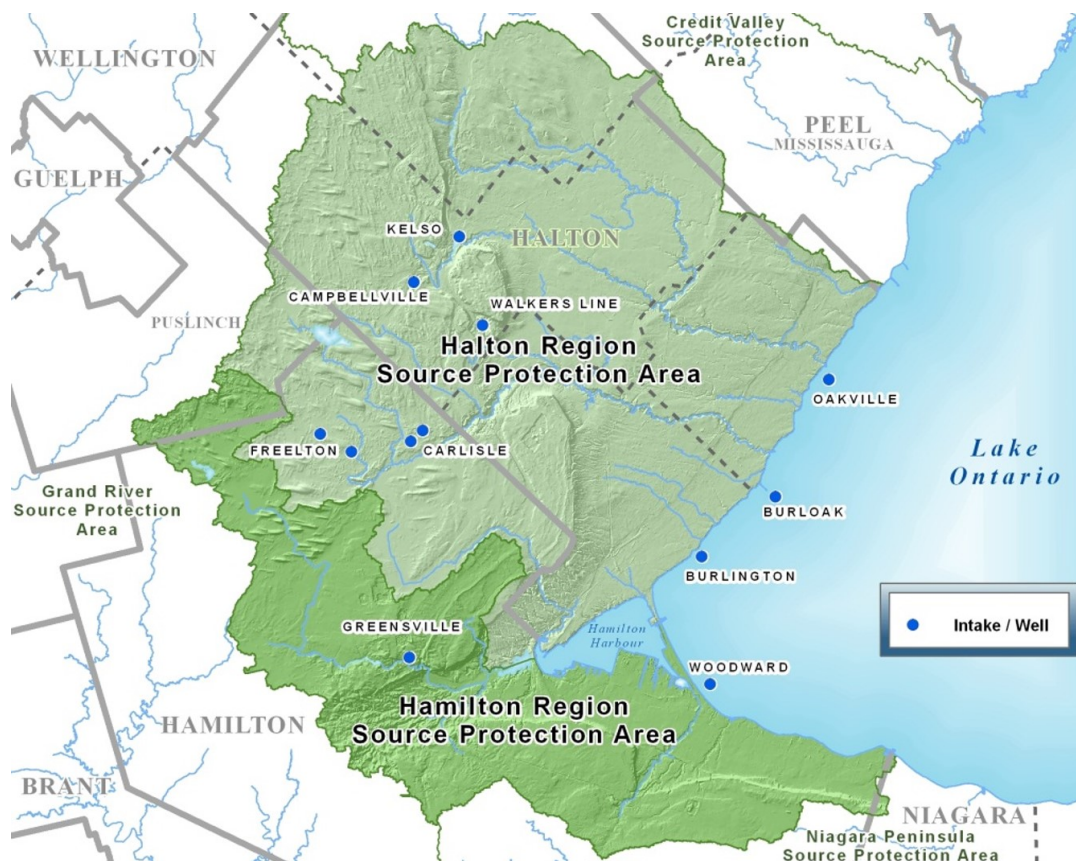


Figure 1: Halton-Hamilton Source Protection Region

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 fifth 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, 2021, and summarizes its progress in the year 2021.

A total of 193 significant threats to municipal drinking water systems were identified as of December 31, 2021. Approximately 99% of these significant drinking water threats have been addressed which has increased from 88% for 2020. As well, 100% of the policies are considered to be implemented, in progress or require no further action. 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 policy implementation.

As the COVID-19 pandemic continued throughout 2021, the municipalities and other policy implementers continued to adapt to the situation while making progress in policy implementation towards the protection of municipal drinking water sources. The committee was also able to undertake its communication outreach program with a virtual presentation to the commercial/industrial sector, a podcast to the general public and an exhibit at the annual Conservation Halton Hops and Harvest Festival.

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 99% of the significant drinking water threats have been effectively addressed in 2021 through the plan's policies in achieving the objectives of the Clean Water Act, 2006 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 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 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. Through 2021, comprehensive updates to the science and policies based on most recent data and feedback were carried out and will be submitted to the province of Ontario in 2022 for final approval.

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 2021 with tracking of implementation between December 31, 2015, when the plan took effect, and December 31, 2021.

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. Approximately 99% of the existing significant threats have been managed.

Based on a continued advancement of source protection plan implementation in 2021, 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 in the Halton-Hamilton Source Protection Region and policies are directed to eight municipalities. The policies include the requirement for municipalities to update their planning documents.

Official plan conformity exercises are completed by the City of Hamilton, County of Wellington, City of Burlington and Town of Halton Hills. Various parts of the Official plans for Burlington and Halton Hills are under appeal. The official plan conformity exercises for the Regional Municipality of Halton, and the Towns of Milton and Oakville are in progress. Zoning by law conformity is completed for City of Hamilton and Township of Puslinch.

Implementation of policies by the municipalities has progressed safely in 2021, in the face of the COVID-19 global pandemic. All policies targeting significant threat activities are in progress or implemented. Therefore municipal progress in implementing policies 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.

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 reinspection program is now 125, after field verification removed two. The first 5-year inspection cycle is successfully completed, with all required inspections undertaken. The second 5-year cycle has begun with 87 inspections already completed in 2021 by the City of Hamilton. All 87 septic systems required minor maintenance (tank pump out), while none needed major repairs. The inspection program includes outreach materials about the proper care and use of septic systems, and this also satisfies the requirements of an education and outreach policy. Therefore the municipal sewage re-inspection programs are given a progress score of P: Progressing well.

4. Risk Management Plans

Screening processes are in place at 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 that planning and permitting processes may proceed. A total of 21 such notices were issued in 2021 by the City of Hamilton (18) and Halton Region (3).

Risk management officials and inspectors continued to safely verify and inspect threat activities occurring in the region in 2021, following physical distancing and other safety measures put into place in Ontario due to the COVID-19 pandemic. Due to the efforts of municipal risk management officials, all six required risk management plans were established well within the extended deadline of December 31, 2021. As well, six inspections were undertaken in 2021 where risk management plans apply. Therefore the implementation of risk management plan policies is given a progress score of P: Progressing well.



Figure 2: Kelso Drinking Water System Pumping Station

5. Provincial Progress: Addressing Risks on the Ground

Ontario provincial ministries including the Ministry of the Environment, Conservation and Parks (MECP), Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF), 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. 012-2968) ensures that applications for water takings, sewage works, biosolids sites, etc. are screened. NDMNRF and MTO screen aggregate licence 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 a certified person. No significant threats were identified through screening by the provincial ministries in 2021.

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. Therefore 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

To raise awareness about protecting drinking water sources, road signs were installed in previous years near wellhead protection areas by the City of Hamilton (20) and MTO (2).

City of Hamilton reports that the Source Protection Plan continuously brings awareness about potential issues that can impact source water quantity and quality. Positive outcomes are the well decommissioning program (9 wells in 2021) and capital projects (e.g. Woodward and Dundas Wastewater Treatment Plants Upgrades). The city held online events that had a source water component (Children's Water Festival, etc.). Emergency response exercises were carried out for a spill scenario near the municipal intake. The city's new Salt Management Plan helps manage winter road salt use. The city approved a plan to reduce GHG emissions and is researching blue green algae and climate change impacts on the Lake Ontario intake.

Through 2021, Halton Region continued to sample 6 monitoring wells they established in 2019 in Campbellville to better understand chlorides sources in nearby municipal wells. Town of Milton developed a plan to implement source protection policies into their Official Plan. Best practices and Regional policy directions are being researched. There is awareness of the policy areas and policies among Town staff, and local residents. Town of Halton Hills staff are working with Regional staff on salt management plans for Town properties.

County of Wellington and Township of Puslinch report that newspaper ads were published on water conservation, salt and fertilizer use. Educational material was provided to the proponents. Social media posts were made through 2021. The source water protection website has fact sheets and other resources. A virtual Children's Groundwater Festival was successfully held, co-chaired by staff. Development reviews and inspections continued. A Drinking Water Threat Disclosure Report is required where significant threats may be present near municipal wells. This built on existing Official Plan policies since 2008 and Halton-Hamilton policies. See www.wellington.ca



Figure 3: Drinking Water Protection Zone Road Sign

7. Source Protection Plan Policies: Summary of Delays

In 2021, all of 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 2021, municipal staff achieved establishment of 100% of the required risk management plans by the extended deadline of December 31, 2021. Another milestone achieved was the completion of the first round of 5-year septic system inspections. Approximately 99% of the significant risk threats are addressed.

The general, strategic policies in the source protection plan are also 100% implemented, in progress or considered and further actions are not required. Through the Section 36 comprehensive updates to the source protection plan in 2021, discussions with policy implementers were held to streamline non legally binding strategic policies, and options discussed by the Halton-Hamilton source Protection Committee.

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 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.

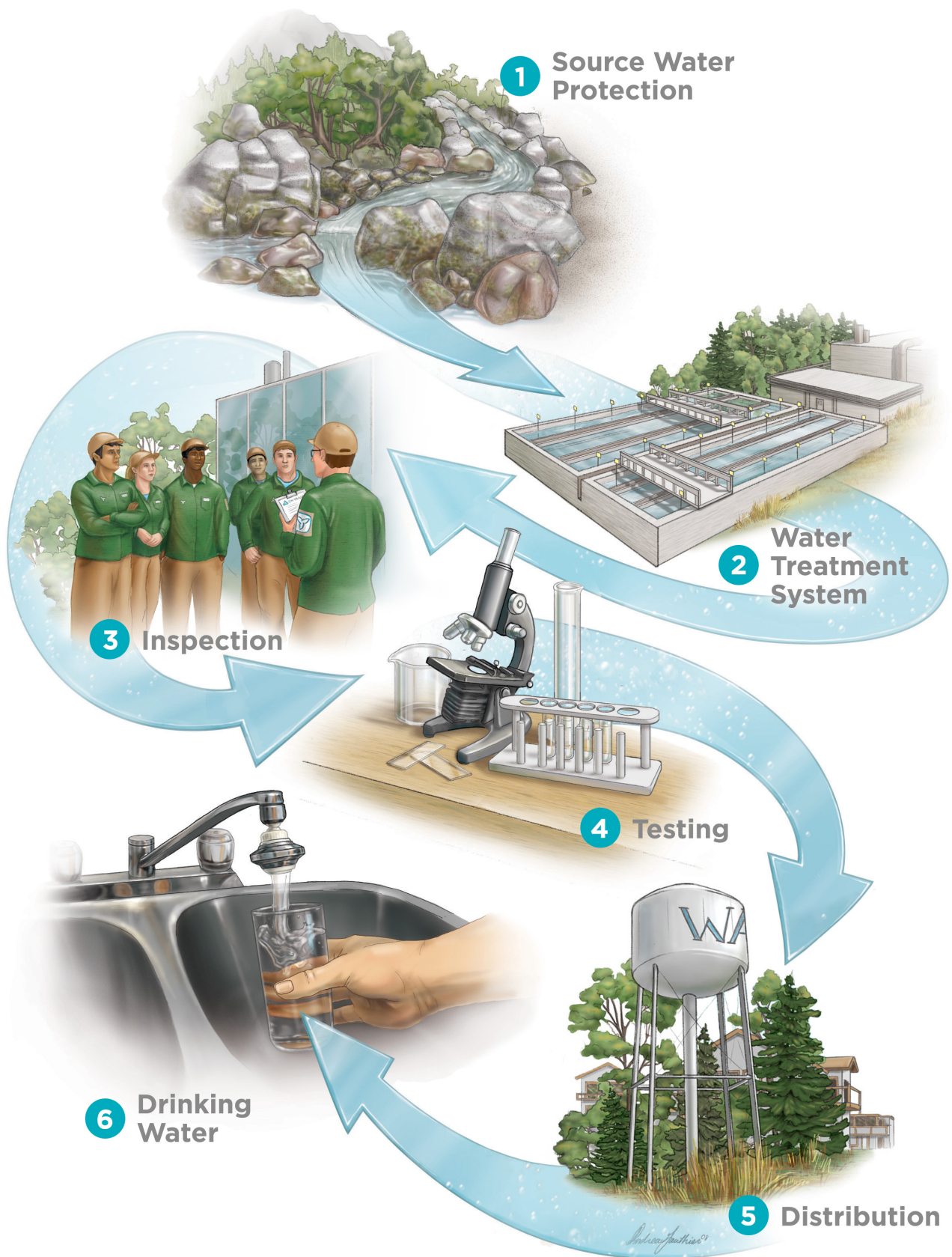


Figure 4: Multi-Barrier Approach in Ontario

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 was developed in 2018. A copy of the work plan is available at www.protectingwater.ca

The Minister, MECP approved the workplan in 2019 paving the way for comprehensive updates to the source protection plan and assessment reports per Section 36 of the Clean Water Act, 2006. The Halton-Hamilton Source Protection Region (HHSPR) staff (from Conservation Halton and Hamilton Conservation Authority) carried out omnibus, comprehensive updates throughout 2021 towards a Section 36 update to the assessment reports, source protection plan and explanatory document.

The City of Hamilton provided a detailed technical study on the Freelon groundwater wellhead protection area update. HHSPR staff prepared detailed technical studies to assess contaminant transport pathways and to delineate and reassess Lake Ontario intake protection zones. Staff also proposed updates to a third of the policies to address policy implementation challenges, some of which were identified through the annual progress reporting process.

Regular meetings were held with the Source Protection Committee, and a large consultation process was undertaken involving early engagement with MECP, pre-consultation and public consultation phases. Monthly meetings with municipal staff and ad hoc meetings with other policy implementers were held by HHSPR in order to collaboratively seek input and engage on the updates and on annual progress reporting changes and requirements.

The updates carried out under Section 36 will be submitted to the MECP in spring 2022.

10. More from the Watershed

The Halton-Hamilton Source Protection Plan includes both mandatory and strategic policies. The response to both types of policies are mutually complementary in the protection of drinking water sources.

The strategic policies request municipalities, provincial ministries and others to: carry out education and outreach programs that include source protection messaging; address contaminant “shortcut” transport pathways (like improperly abandoned wells); collect climate data; educate the public about importation of excess soil; consider offering incentives to protect water sources; update spill response and salt management plans; reduce water consumption to sustain supplies; and educate those that transport dangerous goods near wells and intakes.

Municipalities and conservation authorities have long recognized the importance of the protection of water sources through integration with other initiatives. Capital projects, planning, stewardship and outreach programs complement policy implementation, and inform the community and businesses of the need to protect water and how to do it.

The MECP’s updated spill response procedures consider source protection vulnerable areas. In 2021, the ministry began its transition to a new incident management system. The MTO requires their contractors to conform to the Salt Management Plan which includes practices to protect drinking water sources.

The Climate Change Vulnerability Assessment Tool (developed in 2020 through a multi-stakeholder initiative co-chaired by Conservation Ontario and MECP) helps apply a climate change lens to municipal drinking water source quality risk assessments. Training sessions were provided by a small working group including Conservation Ontario, MECP, Conservation Halton and others in early 2021.

Through 2021, the Halton-Hamilton Source Protection Region staff, Committee and policy implementers continued online events, and developed resources and tools to continue drinking water source protection. Social media posts were developed around road salt use, fuel storage and other themes to raise awareness on source water protection. The Source Protection Committee carried out sector outreach throughout the year. Landowner and prospective applicants continue to reach out to municipal and source protection authority staff about the program and policies.

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

