



Halton Region

**Drinking Water
Source Protection
Implementation
Technical Paper**



June 2019

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Purpose

This Technical Paper is intended to provide background information and to inform the Natural Heritage System Discussion Paper as it relates to drinking water source protection in Halton Region. The information in this Technical Paper and the outcomes of the Natural Heritage System Discussion Paper will inform an amendment to the Regional Official Plan related to the natural heritage system, water resource system, and drinking water source protection. Halton Region is subject to three Provincially approved Source Protection Plans (SPPs):

Halton-Hamilton SPP, effective as of December 31, 2015

Grand River SPP, effective as of July 1, 2016

CTC SPP (Credit Valley, Toronto, Central Lake Ontario), effective as of July 1, 2016.

All plans are currently in effect and this Technical Paper is intended to inform Halton Region's obligations and implementation requirements as they relate to drinking water source protection in the Official Plan. Subsequently, the local municipal Official Plans and Zoning By-laws will also need to be amended.

Background

The Walkerton tragedy in May 2000 resulted in the Province of Ontario enhancing efforts to protect drinking water supplies. In 2002, Justice Dennis O'Connor released a report in response to the Walkerton inquiry containing recommendations for the protection of drinking water in Ontario. As a result, the *Clean Water Act, 2006 (CWA, 2006)* was established in December 2006 to provide a legal framework for providing long-term protection to drinking water sources in Ontario. The following sections reflect the chronological approach to the development and implementation of SPPs.

Clean Water Act, 2006

The *CWA, 2006* was created to help protect drinking water sources from contamination and overuse as the first step in a multi-barrier staged approach, which includes proper treatment processes, training of operators, appropriate testing, and oversight of distribution. The *CWA, 2006* outlines a specific science-based process for the continuous local development and refinement of SPP policies which are intended to protect drinking water. The *CWA, 2006* requires the development of assessment reports, which inform SPPs. The *CWA, 2006* provides four methods through which SPPs and assessment reports may be revised: minor and administrative amendments (Section 51 of O. Reg. 287/07); locally initiated amendments (Section 34); amendments made by Minister of Environment, Conservation and Parks, previously Ministry of Environment and Climate Change (the Ministry) order (Section 35); and amendments made through a mandated review (Section 36).

The *CWA, 2006* O. Reg. 287/07 identifies 22 (previously 21) prescribed drinking water threat activities that are to be assessed against municipal drinking water to determine if a significant drinking water threat currently exists or if there is a potential it may exist in the future. The 22 drinking water threat activities include:

1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act*.
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.
3. The application of agricultural source material to land.
4. The storage of agricultural source material.
5. The management of agricultural source material.
6. The application of non-agricultural source material to land.
7. The handling and storage of non-agricultural source material.
8. The application of commercial fertilizer to land.
9. The handling and storage of commercial fertilizer.
10. The application of pesticide to land.
11. The handling and storage of pesticide.
12. The application of road salt.
13. The handling and storage of road salt.
14. The storage of snow.
15. The handling and storage of fuel.
16. The handling and storage of a dense non-aqueous phase liquid.
17. The handling and storage of an organic solvent.
18. The management of runoff that contains chemicals used in the de-icing of aircraft.
19. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.
20. An activity that reduces the recharge of an aquifer.
21. The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard.
22. The establishment and operation of a liquid hydrocarbon pipeline. O. Reg. 385/08, s. 3; O. Reg. 206/18, s. 1.

Roles and Responsibilities

The *CWA, 2006* also identifies roles and responsibilities in developing and implementing SPPs including: Source Protection Authorities, Source Protection Committees, Risk Management Officials (RMO), Risk Management Inspectors (RMI); and identifies responsibilities for municipalities and land owners or persons engaged in or proposing to engage in the drinking water threat activities. This section provides an overview of the key roles and responsibilities that are identified in the *CWA, 2006* which are relevant to this Technical Paper.

Risk Management Official – The Risk Management Official is responsible for preparing, negotiating and establishing risk management plans and evaluating risk assessments under Part IV of the *CWA, 2006*. An individual cannot be appointed as a Risk Management Official unless they have the qualifications prescribed by the regulations, which state that the individual must complete a ministry approved training course.

Risk Management Inspector – The Risk Management Inspector is responsible for enforcing Part IV powers. An individual cannot be appointed as a Risk Management Inspector unless they have the qualifications prescribed by regulation, which state that the individual must complete a ministry approved training course.

Source Protection Authority – A conservation authority or other person or body that under the *CWA, 2006* is responsible for administering the source protection program. The Source Protection Authority is responsible for appointing members to the Source Protection Committee and engaging municipalities in the planning process. The Source Protection Authority plays a role in monitoring and reporting and is the primary driver of the process at the watershed level.

Source Protection Committee – The Source Protection Committee is responsible for the content of the SPPs. The committee is made up of local citizens who live or work in the watershed, representatives from the economic sector, and municipal representatives. Municipal representatives are nominated by their respective municipalities, with the exception of the chair who is appointed by the Minister. The Source Protection Committee is responsible for updating the Assessment Reports and the Source Protection Plans. They are also responsible for ensuring that stakeholders and the public are consulted throughout the process.

Assessment Report

The Ministry approved Assessment Reports provide the scientific and technical rationale for the policies that are included in the SPPs. The CTC Source Protection Region, Halton-Hamilton Source Protection Areas, and the Grand River Source Protection Area Assessment Reports were initially approved in 2015 by the Ministry on July 22 (amended March 25, 2019), August 5 (amended October 12, 2017), and November 25 (amended February 21, 2017), respectively. The development of these Assessment Reports was guided by technical rules and tables listing threats and circumstances. The Source Protection Committee, in consultation with municipalities, stakeholders, landowners, conservation authorities and the province, assessed the prescribed threat categories for municipal drinking water sources to determine current and potential future threats. Assessment reports are intended to be periodically reviewed, updated and amended as mandated through Section 36 of the *CWA, 2006* as new information becomes available. Updates can be initiated outside of a mandatory review by the Source Protection Authority or the Minister per Sections 34 and 35 of the *CWA, 2006*, respectively.

Assessment reports typically include the following:

- An overview of the local watershed
- A water budget

- The delineation of vulnerable areas and associated vulnerability scoring
- The types and number of significant threats to water quality and water quantity near wells and intakes; and
- Assessment of existing water quality and water quantity issues

There are three primary steps involved in drafting assessment reports.

1. First, vulnerable areas are identified and mapped. These include Wellhead Protection Areas (WHPAs), Intake Protection Zones (IPZs), Issue Contributing Areas (ICAs), Highly Vulnerable Aquifers (HVAs) and Significant Groundwater Recharge Areas (SGRAs).
 - Wellhead Protection Area (WHPA): an area that is related to a wellhead and within which it is desirable to regulate or monitor drinking water threats. WHPAs are delineated for threats to quality and quantity.
 - Wellhead Protection Areas for Quality (WHPA-A, -B, -C, -D): the areas near a municipal well which are sensitive to contamination and which are arranged according to either a set distance or delineated based on the time-of-travel (up to 25 years) that it would take for water entering the ground to enter the well. WHPAs are also delineated for municipal wells where nearby surface water flows can seep through soil and influence the well (WHPA-E). This situation is known as groundwater under the direct influence of surface water, or a GUDI well.
 - Wellhead Protection Areas for Quantity (WHPA-Q, -Q1, -Q2): the areas near a municipal well for which a municipal groundwater supply may be at risk of depletion due to other groundwater withdrawals from the same aquifer or from a reduction in groundwater recharge. WHPAs for Quantity are delineated through a Tier 3 Water Budget and Water Quantity Risk Assessment.

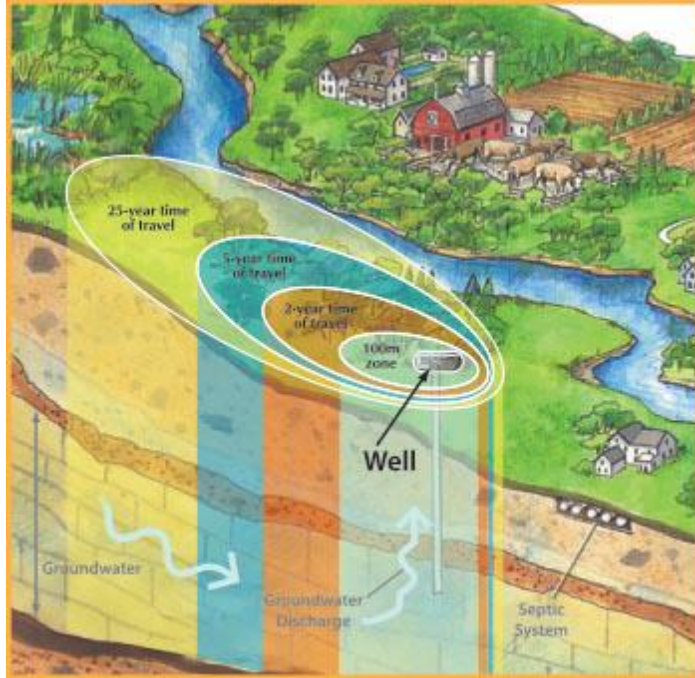


Figure 1: Wellhead Protection Areas¹

- Intake Protection Zone (IPZ): an area that is related to a surface water intake and within which it is desirable to regulate or monitor drinking water threats. These areas are either set distances, delineated based on the time it would take to respond to a spill, or based on the catchment area of the intake.

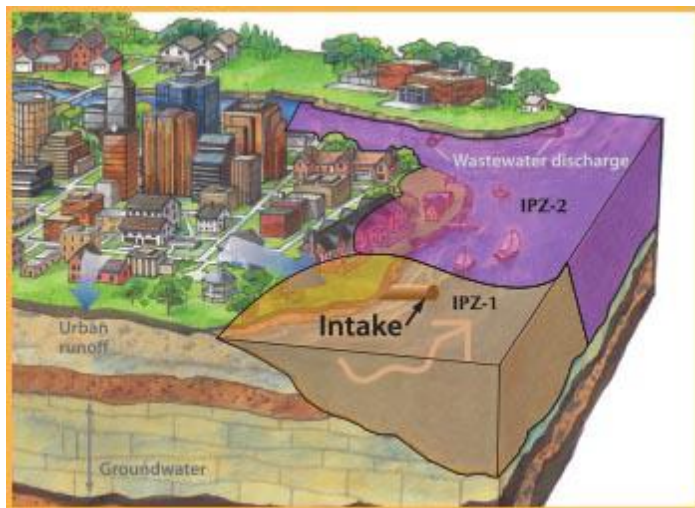


Figure 2: Intake Protection Zone²

¹ Ontario Ministry of the Environment and Climate Change. (2016). *Integrating Source Protection into Municipal Planning Documents*.

² Ontario Ministry of the Environment and Climate Change. (2016). *Integrating Source Protection into Municipal Planning Documents*.

- Significant Groundwater Recharge Area (SGRA): a recharge area which helps maintain the water level in an aquifer that supplies a community with drinking water. Recharge areas often have loose or permeable soil such as sand or gravel, which allows the water to seep easily into the ground. Areas with shallow fractured bedrock are also often recharge areas.
- Highly Vulnerable Aquifer (HVA): an aquifer on which external sources have or are likely to have a significant adverse effect, and includes the land above the aquifer. An aquifer can be considered highly vulnerable based on a number of factors, including how deep it is underground, what sort of soil or rock is covering it and the characteristics of the soil or rock surrounding it. The faster water is able to flow through the ground to an aquifer, the more vulnerable it is to contamination.

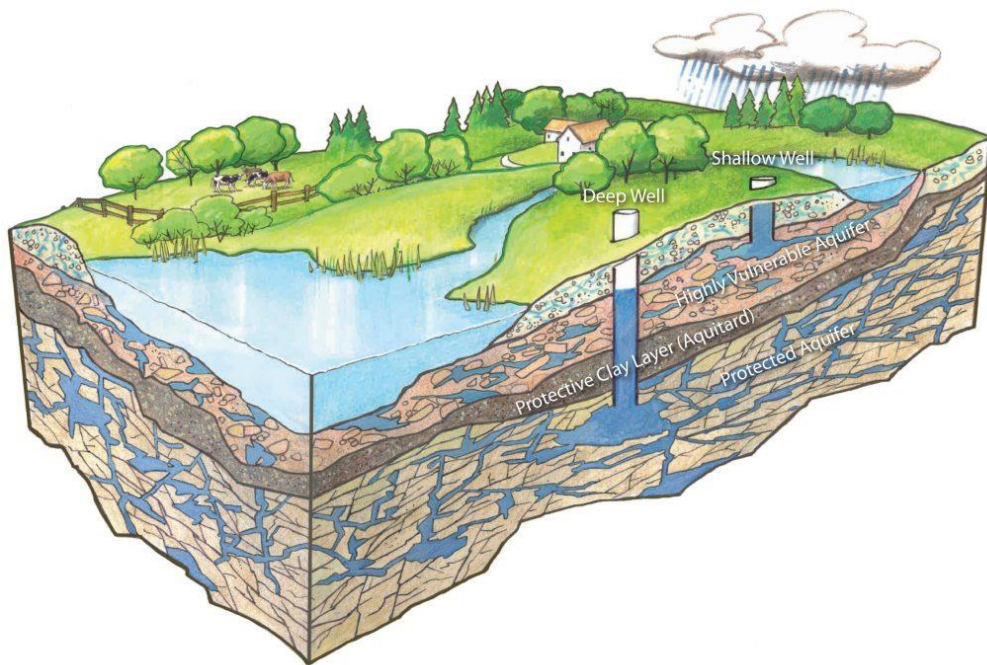


Figure 3: Highly Vulnerable Aquifers and Significant Groundwater Recharge Areas³

- Issue Contributing Area (ICA): an area within a vulnerable area where presently occurring human activities or conditions resulting from past human activities have or are likely to contribute to the elevated concentration of particular substances in the drinking water source. Issues refer to pathogens and chemically specific substances which commonly include chloride, sodium, and nitrate. If an Issue is identified for a well, then all prescribed drinking water threat activities related to that particular substance within the ICA are significant drinking water threats, regardless of vulnerability scoring.

³ South Georgian Bay Lake Simcoe Region. (2019). *Drinking Water Source Protection: Vulnerable Areas*.

2. Second, the local incidences of the 22 prescribed drinking water threat activities are identified.
3. Third, the hazard of a threat and the vulnerability of a water source are assigned scores on 10-point scales. The overall risk scores are calculated by multiplying these two figures. If a risk score is greater than 80, the risk is considered 'significant' as illustrated below.



Figure 4: Calculating Significant Risk Scores⁴

Source Protection Plans and Explanatory Documents

The SPP is a document that contains policies to protect municipal sources of drinking water against threats identified in the assessment report. The objectives of a SPP as established under the *CWA, 2006* are:

1. To protect existing and future drinking water sources in the Source Protection Area; and
2. To ensure that, for every area identified in an assessment report as an area where an activity is or would be a significant drinking water threat:
 - a. The activity never becomes a significant drinking water threat; or
 - b. If the activity is occurring when the SPP takes effect, the activity ceases to be a significant drinking water threat.

SPPs use a multi-stakeholder approach and include policies that safeguard the quality and quantity of municipal drinking water systems. Generally, SPPs set out:

- How the risks posed by drinking water threats will be reduced or eliminated;
- Policy, Threat and Issues monitoring programs;

⁴ CTC Source Protection Committee. (2016). *Assessing Our Water Sources: Protecting Our Drinking Water Sources*.

- Who is responsible for taking action;
- Timelines for implementing the policies and programs; and
- How progress will be measured.

SPPs contain policies that either recommend or require actions be taken to address activities identified as threats to drinking water sources. SPPs use a variety of approaches to ensure the protection of drinking water including:

- Prescribed instruments – a permit or other legal document issued by the provincial government allowing an activity to take place (e.g. permit under *Pesticide Act* or Licences under the *Aggregate Resources Act*).
- Risk management plans – a proactive or safety measure that can reduce the risk posed by a significant threat (e.g. installing stronger storage containers for fuel storage). Risk management plans are negotiated with the Risk Management Official and would apply to the use of the property by current and future owners provided the activity continues.
- Restricted land use – a type of land use (e.g. industrial) within a wellhead protection area or intake protection zone that has been designated under Part IV of the *CWA, 2006* and that is normally associated with one or more activities that are significant drinking water threats (e.g. the handling and storage of an organic solvent).
- Prohibition of activities – certain activities could be prohibited in vulnerable areas to prevent or remove the occurrence of significant threats. This tool should only be used when the other tools would not be adequate.
- Education and outreach – intended to inform the public and landowners about drinking water source protection and any significant threats on landowners' properties.
- Land use planning – using zoning by-laws and official plans to ensure that new development is appropriate and does not create new significant threats.

SPPs are applicable law in the *Planning Act, Condominium Act, 1998* and the *Building Code Act, 1992*, meaning that planning and building officials within municipalities play a role in implementation.

An explanatory document bridges the assessment report with the approved SPP by explaining how and why policy options were considered and chosen based on the specific threat that was assessed and determined to be significant.

Source Protection Plan Policies Affecting Halton Region

SPPs are based on watersheds and therefore can cross municipal boundaries. Halton Region is located in three different watersheds and as such is subject to the policies of three SPPs.

These SPPs protect the municipal drinking water sources in all municipalities located within the jurisdiction of the SPP. SPP policies to protect drinking water wells or surface water intakes located in other municipalities also apply in Halton Region where the vulnerable areas associated with these wells or surface intakes extend into Halton Region.

The following three approved SPPs are applicable within Halton Region and can be found on Figure 5:

[Halton-Hamilton Source Protection Plan](#)
[CTC Source Protection Plan](#)
[Grand River Source Protection Plan](#)

These SPPs can be accessed online. They each contain policies and mapping illustrating where policies apply in vulnerable areas.

Additionally, the Ministry hosts a [Source Water Protection Portal](#) which is intended to allow property owners to understand how SPP policies based on the 22 threat categories may affect the use of their properties. The Source Water Protection Portal summarizes the basic application of SPP policies and also directs visitors to the Province's [Source Protection Information Atlas](#). The Atlas is intended to allow property owners to see which specific SPP policies affect their properties.

Halton-Hamilton SPP

The Halton-Hamilton SPP applies to two Source Protection Areas: The Hamilton Region Source Protection Area and the Halton Region Source Protection Area. The Halton Region Source Protection Area which includes drinking water sources in Halton Region aligns closely with the delineation of watersheds managed by Halton Region Conservation Authority. The Halton Region Source Protection Area comprises lands within the Local municipalities of Halton Region as well as the City of Hamilton, Township of Puslinch (County of Wellington), and City of Mississauga (Regional Municipality of Peel).

The assessment reports informing this SPP primarily identify concern with stresses on drinking water quantity and describe threats to water quality due to past, ongoing, or potential future activities. The majority of the land use policies in this SPP to which Halton Region's Official Plan must conform, address significant threat activities which only occur in WHPAs for Quality, WHPAs for Quantity and ICAs. This SPP also contains significant threat policies for IPZs however they are not land use policies and therefore do not require planning authorities to consider them in making decisions under the *Planning Act* and *Condominium Act, 1998* and do not require Regional Official Plan conformity.

CTC SPP

The CTC SPP applies to three Source Protection Areas: Credit Valley Source Protection Area, Toronto and Region Source Protection Area, and Central Lake Ontario Source Protection Area. The Credit Valley Source Protection Area includes WHPAs found in the Georgetown and Acton areas of Halton Hills.

The Credit Valley Source Protection Assessment Report informing this SPP and affecting areas within Halton Region primarily identifies concern with stresses on drinking water quantity and describes threats to water quality due to past, ongoing, or potential future activities. The majority of the land use policies in this SPP to which Halton Region's Official Plan must conform address significant threat activities, which occur in WHPAs for Quality, WHPAs for Quantity and ICAs. This SPP also contains a land use policy related to the application of road salt (SAL-10) which does not require Regional Official Plan conformity but which planning authorities must have regard for in making decisions under the *Planning Act* and *Condominium Act, 1998* and therefore consider for official plan implementation. SAL-10 applies where the application of road salt would be a low or moderate threat in WHPAs for Quality as well as SGRAs, and HVAs.

Grand River SPP

The Grand River SPP applies only to the Grand River Source Protection Area, which is located in the Lake Erie Source Protection Region. Wells located in neighbouring County of Wellington and nearby City of Guelph have WHPAs affected by the Grand River Source Protection Plan which extend into the most western point of the Town of Milton in the Eden Mills area.

The Grand River Source Protection Assessment Report informing this Plan and affecting areas within Halton Region primarily identifies concern with threats to water quality due to past, ongoing, or potential future activities. The majority of the land use policies in this SPP to which Halton Region's Official Plan must conform address significant threat activities which only occur in WHPAs for Quality.

The local Conservation Authorities, City of Guelph, Guelph and Eramosa Townships are currently developing water quantity policies associated with municipal wells within their jurisdictions that would affect Halton Region and that would be included in a future update of the Grand River SPP.

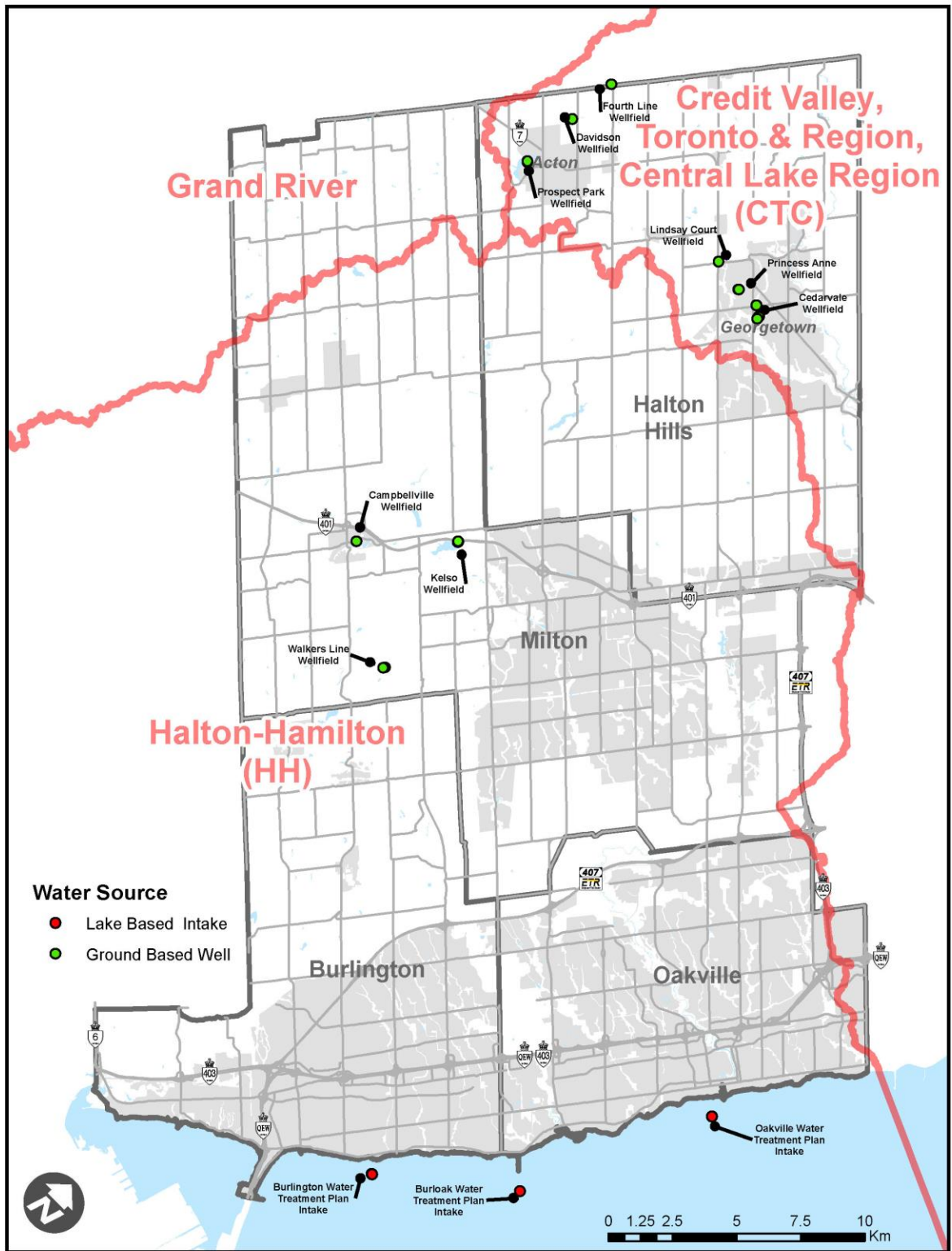


Figure 5: Source Protection Areas and Drinking Water Sources in Halton Region

Municipal Drinking Water Sources Within Halton Region

Halton Region’s municipal drinking water is sourced from groundwater and Lake Ontario-based sources through municipal wellfields and lake intakes, respectively.

Lake Ontario water is supplied to the Town of Oakville, City of Burlington and parts of the Town of Milton from Water Treatment Plants (Burlington, Burloak & Oakville Water Treatment Plants).

Groundwater is supplied to the Town of Halton Hills and parts of the Town of Milton from wellfields in the communities of Georgetown (Cedarvale, Princess Anne, and Lindsay Court wellfields), Acton (Prospect Park, Davidson, and Fourth Line wellfields) and Town of Milton (Kelso, Campbellville, and Walkers Line wellfields).

Table 1 below summarizes the Region’s drinking water sources and identifies the Source Protection Region where each source is located.

Table 1: Municipal Drinking Water Sources Within Halton Region

Water Taking Location	Source of Water	Source Protection Region
Oakville Water Treatment Plant	Lake Ontario	Halton-Hamilton
Burloak Water Treatment Plant	Lake Ontario	
Burlington Water Treatment Plant	Lake Ontario	
Kelso Wellfield	groundwater	
Campbellville Wellfield	groundwater	
Walkers Line Wellfield	groundwater	
Cedarvale Wellfield	groundwater	Credit Valley-Toronto and Region-Central Lake Ontario
Princess Anne Wellfield	groundwater	
Lindsay Court Wellfield	groundwater	
Prospect Park Wellfield	groundwater	
Davidson Wellfield	groundwater	
Fourth Line Wellfield	groundwater	

Existing Planning Policies

Provincial Policies

The Provincial Policy Statement, 2020, provides policy direction to planning authorities regarding the protection of water quality and quantity:

2.2.1 Planning authorities shall protect, improve or restore the quality and quantity of water by:

- f) implementing necessary restrictions on development and site alteration to:
 1. protect all municipal drinking water supplies and *designated vulnerable areas*;
 2. protect, improve or restore vulnerable surface and ground water, sensitive surface water features and sensitive ground water features, and their hydrologic functions.

Designated vulnerable area “means areas defined as vulnerable, in accordance with provincial standards, by virtue of their importance as a drinking water source”.

This policy will be met by the Region through the update to the ROP which will address drinking water source protection.

Regional Official Plan (ROP)

In the 1990s, Halton Region was recognized as a leader in groundwater management in Ontario due to its work in developing groundwater protection strategies. The Region had introduced water policies related to drinking water source protection during the Sustainable Halton process through directives contained in the Aquifer Management Plan, endorsed by Council in September, 2000, as outlined in Report [PW-05-17/LPS07-17](#). The ROP has evolved over time to adapt to legislative changes and to recognize strategic recommendations stemming from the Aquifer Management Plan.

The current 2009 Regional Official Plan contains policies and mapping to protect and enhance the quality and quantity of Halton Region’s ground water and surface water resources as directed through the Aquifer Management Plan. These policies related to drinking water source protection were included in the ROP prior to the Provincial approval of the relevant SPPs that are implemented by the CWA, 2006. The land use policy direction outlined in the applicable SPPs will replace the need for some of the existing ROP policies that resulted from the Aquifer Management Plan. The following chart identifies the relevant ROP policies and discusses their current applicability.

Table 2: Review of Existing ROP Policies

Section	Policy	Comment
101	It is the policy of the Region to:	Reference to Aquifer Management Plan should be removed. Policies that go beyond the role of protecting water for municipal drinking will be addressed in the water resource system component of the natural heritage system work.
101 (1.1)	Adopt and update from time to time, and incorporate by amendment to this Plan appropriate recommendations of an Aquifer Management Plan that will, among other things: <ol style="list-style-type: none"> a) determine whether the groundwater resources can support in the long term activities and land uses within the Agricultural Area and the Region’s Natural Heritage System and in those parts of the Urban Area that rely on well water supply; b) identify those areas which are susceptible to water quantity and quality problems; 	

	<p>c) identify those areas where good quality water is generally available to sustain additional rural settlement;</p> <p>d) examine the impact of private, individual wastewater disposal systems on the quality of groundwater; and</p> <p>e) propose procedures for the on-going monitoring and protection of the aquifers.</p>	
139.3	In addition to the land use designations that prescribe conditions for <i>development</i> , there are seven areas where <i>development</i> is subject to further conditions or constraints. They are:	Map 1D does not directly correspond to the mapping in the SPP and as a result it is not appropriate to continue applying policies to these areas. The update to the policies and mapping will likely update or replace Map 1D.
139.3 (4)	Municipal Wellhead Protection Zones, as shown on Map 1D,	
145	It is the policy of the Region to:	
145 (1)	Adopt and maintain an Aquifer Management Plan as described in Section 101(1.1), and Guidelines for Hydrological Studies and Best Management Practices for Groundwater Protection as described in Section 101(1.4).	The reference to an Aquifer Management Plan is no longer relevant and should be removed from this policy.
145 (2)	<p>Identify the following Municipal Wellhead Protection Zones as shown on Map 1D, based on the migratory pattern of groundwater upstream from each of the active municipal wells supplying water to <i>Halton</i>:</p> <p>a) Zone 1—100-day travel time, which is immediately adjacent to the municipal well and allows limited time for natural remediation of any contaminants in the groundwater.</p> <p>b) Zone 2—100-day to 2-year travel time, which is considered to be close to the wellhead, whereby groundwater contaminated with petroleum hydrocarbons or industrial solvents within this area would arrive at the well in a relatively short time frame.</p> <p>c) Zone 3—2-year to 10-year travel time, which is further from the wellhead, whereby any groundwater contamination within this area would have some time to be attenuated and diluted before reaching the municipal well; in addition, there may be sufficient time to secure a new water supply or undertake remedial action prior to the contamination of the wellhead.</p>	As noted above, these Wellhead Protection Zones do not correspond to the approved SPPs. In implementing the SPPs through the ROP, these policies will no longer be required.
145 (3)	Require Local Zoning By-laws to show the boundaries of Municipal Wellhead Protection Zones and prohibit or restrict within these areas land uses that have the potential to release or discharge contaminants to significantly affect the quality of groundwater in accordance with Tables 2.1 and 2.2. This <i>policy</i> will be applied	As noted above, these Wellhead Protection Zones do not correspond to the approved SPPs. In implementing the Source Protection Plans through the ROP, these policies will no longer be required.

	through the development permit system within the Niagara Escarpment Plan Area.	
Table 2.1	See Appendix I: Land Use Groups by Risk to Ground Water Quality	Table 2.1 (Appendix I) does not correspond to the policies in the approved SPPs. It is not appropriate to continue applying these policies.
Table 2.2	See Appendix II: Land Use Prohibitions and Restrictions within Municipal Wellhead Protection Zones	Table 2.2 (Appendix II) will no longer be necessary.
145 (3.1)	Amend this Plan to incorporate the appropriate recommendations of the approved Drinking Water Source Protection Plans affecting <i>Halton</i> , to comply with the provisions of the Clean Water Act.	This policy will no longer be necessary.
145 (4)	Extend the protection of Wellhead Protection Zones, based on Sections 145(2) and 145(3) of this Plan, for municipal wells serving neighbouring municipalities and request similar protection from neighbouring municipalities for municipal wells serving residents of <i>Halton</i> .	This policy will no longer be necessary.

Current Implementation Processes

Once SPPs came into effect, all municipal decisions under the *Planning Act*, *Condominium Act*, or the *Building Code Act* were required to conform to the significant drinking water threat policies of the SPPs. Regardless of any other Act, the SPPs take precedence in the event of conflict between a SPP policy for a significant threat and the official plan or zoning by-law. The following sections provide an overview of the existing implementation of Source Protection at Halton Region. A number of the implementation initiatives outlined go beyond the role of land use planning and will not necessarily be addressed through policy updates to the ROP.

Planning / NEC Development / Building Permits Application

Halton Region, in collaboration with the lower tier municipalities and the Niagara Escarpment Commission, has integrated the SPPs into existing development application procedures. This integration includes a shared understanding of: legislative requirements, roles and responsibilities, policy implications, and the application review process. To comply with the SPP policies, the municipalities require applicants located in identified Vulnerable Areas to provide information using the Region's Source Protection Checklist (Appendix III) and/or detailed Source Protection Self-Assessment Form (Appendix IV) for review prior to deeming their application to be complete. Based on review of this information, often supplemented by a site visit, the Risk Management Official will issue a Section 59 notice under the *CWA, 2006* indicating that Section 57 (prohibition) or Section 58 (Risk Management Plan) under the *CWA, 2006* do not apply to the application, or that a Risk Management Plan has been established (following the process described below).

Environmental Compliance Approvals

The Ministry requires applicants to assess potential SPP implications, along with any necessary risk management measures, when submitting Environmental Compliance Approval (ECA) application forms for approval. To assist Halton Region Engineering and Construction staff when submitting ECA applications for regional projects (e.g., storm and sanitary sewers), Source Protection staff review relevant information for any projects located in vulnerable areas and provide necessary Source Protection information to Engineering and Construction staff to complete the ECA application form prior to submission to the Ministry for approval.

Risk Management Plans

Part IV of the *CWA, 2006* mandates that new and existing tools be used by municipalities, and other implementing bodies, to protect the quantity and quality of municipal drinking water sources. The most relevant of these new tools is the Risk Management Plan (RMP). Policies in the SPP identify locations, activities, and circumstances where RMPs are to be used to manage activities that may be significant drinking water threats to municipal sources of drinking water.

Staff is currently in the process of establishing RMPs with landowners related to provincially prescribed activities associated with agricultural, commercial, institutional, residential (specifically in regard to large parking lots within the chloride ICA) and industrial land uses. The RMPs are legally-binding documents under the *CWA, 2006*, between the Risk Management Official and the landowner or persons engaged in the drinking water threat activities, and outline the management practices to address prescribed drinking water threat activities. To assist with facilitating RMP negotiations and provide a consistent approach to establishing RMPs, staff has developed a RMP Guidance Document. This document provides landowners with background information as to why an RMP is required, outlines the responsibilities of landowners to implement RMPs, and describes related inspections by Halton Region's Risk Management Inspector.

Education and Outreach

Staff undertakes a number of education and outreach activities to promote local knowledge of the SPP and to fulfill requirements for education and outreach outlined in the SPPs. These activities include:

- Completing a gap analysis of existing education and outreach materials being provided by lower tier municipalities and other agencies, to determine necessary materials to assist landowners in understanding the importance of protecting drinking water sources and the potential implications of SPP policies.
- Developing a suite of Source Protection factsheets to comply with Halton-Hamilton (HH), Credit Valley, Toronto Region, Central Lake Ontario (CTC), and Grand River SPP policies for the following sectors: Agricultural, Residential (Chemicals and Fuels), ICI (Chemicals and Fuels), and Salt / Snow for all sectors. In addition, Risk Management Plan, and Planning / Building Permit application factsheets were prepared to assist landowners with the implementation of SPP policies.

- Developing and distributing simple industrial-grade Emergency Spill Response Stickers for landowners with fuel tanks.
- Participating in public events to discuss Source Protection including: Ontario Water Works Association conference, Fall Fairs, Soil and Crop Improvement Association events and, International Association of Hydrogeologists Symposium.
- Developing and updating the Halton Region Source Protection web pages, which make the Source Protection factsheets digitally available.

Annual Reporting

Section 81 under the *CWA, 2006* requires all Implementing Bodies (including Halton Region) to submit annual progress reports to the Source Protection Authorities and subsequently the Source Protection Authorities are required to provide annual reports to the Ministry. The Minister is required to include a summary of the progress reports in the annual report prepared by the Minister under the *Safe Drinking Water Act, 2002*. The annual reporting tracks Halton Region’s efforts and progress for SPP implementation and the overall success of the program. The diagram below is a representation of the flow of annual reporting information from the implementing bodies (e.g., Halton Region) to the Source Protection Authorities and MECP that inform the Minister’s annual report.

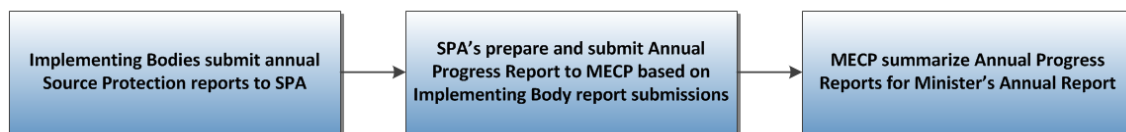


Figure 6: Annual Reporting Process

Implementation Challenges and Opportunities

Source Protection Policy Direction

SPPs within Halton Region state that official plans must be amended to conform with SPPs within 5 years from when the SPPs took effect, or at the time of the next official plan review in accordance with Section 26 of the *Planning Act*. Lower tier municipal zoning by-laws must also be amended to conform with SPPs within three years after the approval of the local official plan amendment. Each SPP has identified specific policies that must be addressed through land use planning. These policies along with some other relevant policies are included below with a brief analysis related to the direction and future considerations in policy development.

Map figures following each SPP policy table are provided for illustrative purposes only. Detailed mapping for the application of policies can be found within the SPP documents or through the Province’s [Source Protection Information Atlas](#).

Table 3: Relevant Halton-Hamilton Source Protection Policies

Halton-Hamilton Source Protection Area for Halton Region	
Policy Text	Analysis
General Policies	
<p>G-1</p> <p>If no time period is set out below or no time period is specified within a policy, the policy comes into full force and effect on the effective date set out in Section 2.4 and must be complied with from that date forward.</p> <p>a. For the purpose of section 58(3) of the Clean Water Act, 2006, risk management plans for existing significant threats must be established within five years of the date the Source Protection Plan comes into full force and effect.</p> <p>b. For the purpose of section 59(1) of the Clean Water Act, 2006, the date for the policies regarding restricted land uses to come into full force and effect is the same date that the Source Protection Plan comes into full force and effect.</p> <p>c. For the purpose of section 43(2) of the Clean Water Act, 2006, the deadline for amendments to prescribed instruments is three years from the date that the Source Protection Plan comes into full force and effect.</p> <p>d. For the purpose of section 40(2) of the Clean Water Act, 2006, the official plans for the Region of Halton, the City of Hamilton, and the County of Wellington must be amended to conform to the significant threat policies no later than the time of the next five year review required by section 26 of the Planning Act.</p> <p>e. For the purpose of section 40(2) of the Clean Water Act, 2006, the official plans for the Town of Milton, the Town of Halton Hills, the Town of Oakville, and the City of Burlington, must be amended to conform to the significant threat policies no later than the time of the next five year review required by section 26 of the Planning Act.</p> <p>f. For the purpose of section 42 of the Clean Water Act, 2006, zoning by-law conformity must be in accordance with the Planning Act.</p>	<p>d. is the most relevant policy for the ROPR as it requires Ops to be updated to conform to the SPP. The ROPR will satisfy this requirement so inclusion of this policy may not be required.</p>

Halton-Hamilton Source Protection Area for Halton Region	
Policy Text	Analysis
<p>G-2</p> <p>In accordance with section 59(1) of the Clean Water Act, 2006, unless identified specifically within a policy, all land uses except solely residential uses, set out within the official plans for the municipalities where this Source Protection Plan is in full force and effect are designated as land uses to which the restricted land uses provisions of the Clean Water Act apply in areas where significant threats may occur.</p>	<p>This policy is relevant as it relates to a Planning Act processes. This policy identifies all uses except for residential for restricted land use meaning that they would require approval from the RMO.</p>
Prescribed Threat Policies	
<p>T-3-C</p> <p>Where the future establishment of waste disposal sites within the meaning of Part V of the Environmental Protection Act would be a significant drinking water threat,</p> <p>a. the City of Hamilton shall prohibit through amendments to Planning Act tools the establishment of waste disposal sites with the following specific activities occurring - application of untreated septage to land; storage, treatment and discharge of tailings from mines; landfarming of petroleum refining waste; landfilling of hazardous waste; landfilling of municipal waste; landfilling of solid, nonhazardous, industrial or commercial waste; injection of liquid waste into a well; polychlorinated biphenyls (PCB) waste storage; and storage of hazardous waste.</p> <p>b. the City of Hamilton shall provide copies of their planning documents to the Source Protection Authority when they have been amended to conform with the policy to prohibit the establishment of waste disposal sites.</p> <p>c. the risk management official for the Region of Halton shall screen all building permit and Planning Act applications in accordance with policy G-2 for waste disposal site activities exempt from Environmental Compliance Approvals under Ontario Regulation 347 and prohibit these activities from occurring to ensure they never become significant threats.</p> <p>d. the risk management official for the Region of Halton shall document in his/her annual report, in accordance with Section 65 of Ontario Regulation 287/07, action taken regarding prohibition of waste disposal sites and</p>	<p>a. and b. are not applicable for Halton Region however c. and d. are identified as mandatory policies for land use planning. The policy is related to screening applications for waste disposal sites and reporting on them through the annual report. Wording considerations should be made. This would be triggered through the Section 59 requirement (above), so a policy may not necessarily be required.</p>

Halton-Hamilton Source Protection Area for Halton Region	
Policy Text	Analysis
submit this report to the Source Protection Authority by February 1 of each year.	
<p>T-9-C a</p> <p>In consideration of Planning Act applications where the future discharge of stormwater effluent from stormwater retention ponds would be a significant drinking water threat,</p> <p>a. where possible, the municipal planning authority shall require the applicant to locate stormwater retention ponds outside of the vulnerable area.</p>	<p>This policy is related to stormwater discharge and the location of stormwater retention ponds. This policy is mandatory for land use planning.</p>
<p>T-10-C a.</p> <p>In consideration of site plan approval for properties located partially within vulnerable areas where the future establishment of septic systems requiring approval under the Environmental Protection Act would be a significant drinking water threat,</p> <p>a. where possible, the municipal planning authority shall require the applicants to locate the septic systems outside of the vulnerable areas to ensure they will not be significant drinking water threats.</p>	<p>This policy is related to the location of septic systems. This policy is mandatory for land use planning.</p>
<p>T-10-C b.</p> <p>In consideration of site plan approval for properties located partially within vulnerable areas where the future establishment of septic systems requiring approval under the Environmental Protection Act would be a significant drinking water threat,</p> <p>b. the municipal planning authority shall document the number of site plan applications reviewed that were denied, those approved with the septic systems located outside of the vulnerable areas, and those approved with the septic systems located within the vulnerable areas and report this information, including the rationale for the decisions made, to the Source Protection Authority by February 1 of each year.</p>	<p>This policy is related to reporting on site plan applications as they relate to the location of septic systems. This is not a mandatory policy for implementation through land use planning, however municipalities are required to report on similar items. A broad reporting policy could be considered.</p>
<p>T-11-C a.</p> <p>Where future septic systems requiring approval under the Ontario Building Code would be significant drinking water threats,</p> <p>a. the Region of Halton, the Town of Milton and the City of Hamilton shall require through amendments to Planning</p>	<p>This policy is related to lot sizes being large enough to accommodate septic systems. Wording considerations or modifications could be</p>

Halton-Hamilton Source Protection Area for Halton Region	
Policy Text	Analysis
Act tools that future lot sizes be sufficient to accommodate the systems.	made to ROP policy 101(1.4)
<p>T-11-C b.</p> <p>Where future septic systems requiring approval under the Ontario Building Code would be significant drinking water threats,</p> <p>b. the municipal planning authority shall provide copies of their planning documents to the Source Protection Authority when they have been amended to conform with the policy to ensure that future lot sizes are sufficient to accommodate the required private servicing.</p>	<p>This policy is related to reporting on policy updates for septic systems and will be addressed above.</p>
<p>T-15-S</p> <p>Where septic systems and holding tanks are used within municipal service areas and where their use is a significant drinking water threat,</p> <p>a. landowners are requested to decommission existing septic systems and holding tanks and connect to municipal sewage works where municipal services are provided, connections are permitted, and where municipal servicing capacity is available.</p> <p>b. the City of Hamilton and the Region of Halton shall document the number and locations of new connections to municipal sewage works for properties formerly using septic systems and holding tanks that were significant drinking water threats and report this information to the Source Protection Authority by February 1 of each year.</p>	<p>This policy is to encourage decommissioning existing septic systems and connecting to municipal services where they are available and policy allows. It also requires reporting on the number of the connections made in response to this.</p>
<p>T-32-C a.</p> <p>Where the future handling and storage of road salt would be a significant drinking water threat</p> <p>a. within a wellhead protection area and issue contributing area, the Region of Halton, Town of Milton, Town of Halton Hills, and the City of Hamilton shall prohibit through Planning Act tools salt storage facilities with greater than 5,000 tonnes of capacity.</p>	<p>This is a mandatory land use planning requirement related to the handling and storage of salt. Further consideration should be made around the policy approach taken.</p>
<p>T-37-C a.</p> <p>Where the future storage of snow would be a significant drinking water threat</p>	<p>This is a mandatory land use planning requirement related to the storage of</p>

Halton-Hamilton Source Protection Area for Halton Region	
Policy Text	Analysis
<p>a. in a wellhead protection area and issue contributing area, the Region of Halton, the Towns of Milton and Halton Hills and the City of Hamilton shall prohibit through Planning Act tools snow storage facilities that are at or above grade at greater than one hectare in size or, below grade, at or greater than 0.01 hectare in size.</p>	<p>snow. Further consideration should be made around the policy approach taken.</p>
<p>T-37-C b.</p> <p>Where the future storage of snow would be a significant drinking water threat</p> <p>b. the Region of Halton, the Towns of Milton and Halton Hills and the City of Hamilton shall provide copies of their planning documents to the Source Protection Authority when they have been amended to conform with the policy to prohibit snow storage facilities of these sizes.</p>	<p>This is a mandatory monitoring policy for Halton Region, however its implementation under the <i>Planning Act</i> is not required and a policy is not necessary in the Regional Official Plan. This will be addressed through T-37-C a. and reporting requirements. A policy consideration may not be necessary in this instance.</p>
<p>T-39-C a.</p> <p>Where the future storage of snow would be a significant drinking water threat in an issue contributing area,</p> <p>a. the municipal planning authority shall require at site plan approval that best management practices for site design to protect drinking water sources be included to manage snow storage and the associated melt water at snow storage facilities at or above grade between 0.01 and 1 hectare in size.</p>	<p>This is a mandatory land use planning requirement related to the storage of snow. Further consideration should be made around the policy approach taken.</p>
<p>T-39-C b.</p> <p>Where the future storage of snow would be a significant drinking water threat in an issue contributing area,</p> <p>b. the municipal planning authority shall document the number of new site plan applications reviewed, and the conditions imposed for the management of snow storage and melt water runoff and report this information to the Source Protection Authority by February 1 of each year.</p>	<p>This is a mandatory monitoring policy for Halton Region, however its implementation under the <i>Planning Act</i> is not required and a policy is not necessary in the Regional Official Plan. This will be addressed through T-37-C a. and reporting requirements. A policy consideration may</p>

Halton-Hamilton Source Protection Area for Halton Region	
Policy Text	Analysis
	not be necessary in this instance.
<p>T-41-C a.</p> <p>Where the future handling and storage of fuel would be a significant drinking water threat,</p> <p>a. the Region of Halton, Town of Milton, and the City of Hamilton shall prohibit gas stations through Planning Act tools.</p>	<p>This is a mandatory policy that does not permit gas stations to be located where they would be a significant drinking water threat. Policy considerations should be provided to identify where this policy would occur.</p>
<p>T-41-C b.</p> <p>Where the future handling and storage of fuel would be a significant drinking water threat,</p> <p>b. the municipal planning authority shall provide copies of their planning documents to the Source Protection Authority when they have been amended to conform with the policy to prohibit gas stations.</p>	<p>This is a mandatory monitoring policy for Halton Region, however its implementation under the <i>Planning Act</i> is not required and a policy is not necessary in the Regional Official Plan. This will be addressed through T-37-C a. and reporting requirements. A policy consideration may not be necessary in this instance.</p>
<p>T-53-C</p> <p>To facilitate the effective implementation of policies for significant drinking water threats and assist in municipal decision-making,</p> <p>a. the municipal planning authorities are requested to require proponents to disclose whether any of the following activities are expected to occur on the property where they would be significant drinking water threats, as well as the substances utilized or stored and their volume:</p> <p>i. the establishment, operation or maintenance of a system that collects, stores, transmits, treats, or disposes of sewage</p> <p>ii. the application or storage of agricultural source material</p> <p>iii. the application, or handling and storage of commercial fertilizer</p>	<p>This is a mandatory policy that requests municipalities to ask a proponent for full disclosure related to a number of activities. The direction for this should be tied to a pre-consultation process. Policy options for this should be considered.</p>

Halton-Hamilton Source Protection Area for Halton Region	
Policy Text	Analysis
<ul style="list-style-type: none"> iv. the application, or handling and storage of pesticide v. the application, or handling and storage of road salt vi. the storage of snow vii. the handling and storage of fuel viii. the handling and storage of a dense non-aqueous phase liquid ix. the handling and storage of an organic solvent x. the use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard <p>b. the City of Hamilton, the Region of Halton, and the County of Wellington are requested to require a full disclosure report as part of a complete application under the Planning Act.</p> <p>c. the Ministry of Municipal Affairs and Housing is requested to enact the regulations under the Planning Act to enable the use of conditional zoning.</p> <p>d. the municipal planning authority shall report to the Source Protection Authority by February 1 of each year on actions taken to amend municipal documents/processes to require disclosure of threat activities and the number of disclosure reports that were received in the previous year.</p>	
<p>T-55-C b.</p> <p>Within a wellhead protection area Q1, where an increased or new water taking would be a significant drinking water threat,</p> <p>b. the municipal planning authority shall only provide final approval for new development that requires a Permit to Take Water once the Ministry of the Environment and Climate Change has determined that the proposed taking does not become a significant water quantity threat.</p>	<p>This is a mandatory policy related to approval for new development that requires a permit to take water and is directed to the municipal planning authority.</p>
<p>T-58-C a.</p> <p>Within a wellhead protection area Q2 where a future reduction in recharge would be a significant drinking water threat,</p>	<p>This is a mandatory policy that will tie to policy requirements for urban</p>

Halton-Hamilton Source Protection Area for Halton Region	
Policy Text	Analysis
<p>a. the municipal planning authority shall only approve settlement area and urban area expansions as part of a municipal comprehensive review where it has been demonstrated that a reduction in recharge will not create a significant drinking water threat.</p>	<p>boundary expansions as part of an MCR process.</p>
<p>T-59-C a.</p> <p>Within a wellhead protection area Q2 where a future reduction in recharge would be a significant drinking water threat,</p> <p>a. the municipal planning authority shall require that planning applications demonstrate that all attempts have been made to achieve a pre-development recharge condition using best management practices and including low impact development measures.</p>	<p>This is a mandatory policy that the municipal planning authorities require applications to demonstrate a pre-development recharge condition. Policy approaches should be considered here as this will likely be tied to study requirements.</p>
3.3.1 Transport Pathways	
<p>O-1-S</p> <p>To achieve the intent of the Clean Water Act, 2006, that drinking water threats identified in the vicinity of a transport pathway cease to be or do not become a significant threat, and that a pathway ceases to endanger the source water of a municipal water supply, the following policies apply:</p> <p>a. Municipalities are requested to use best management practices to protect the quantity and quality of groundwater sources during the installation of new municipal infrastructure in proximity to municipal wells.</p> <p>b. Municipalities are requested to incorporate conditions of approval for development applications to ensure private wells that are no longer in use are abandoned in accordance with Ontario Regulation 903.</p> <p>c. The Ministry of the Environment and Climate Change and the municipalities responsible for water services are requested to provide ongoing funding for incentive programs focused on the decommissioning of wells, and for education and outreach programs regarding the decommissioning of wells.</p> <p>d. If funding is provided by the Ministry of the Environment and Climate Change through the Ontario Drinking Water Stewardship Program, the Hamilton and Halton Watershed Stewardship Programs, under the direction of the Halton Region and Hamilton Conservation</p>	<p>This is not a mandatory planning policy. This policy addresses best management practices for municipal infrastructure, decommissioning private wells and not permitting septic systems where municipal infrastructure is available. Although not required, policy considerations could be given to approaches in addressing this policy.</p>

Halton-Hamilton Source Protection Area for Halton Region	
Policy Text	Analysis
<p>Authorities, shall implement the incentive program to decommission unused wells.</p> <p>e. The municipalities are requested to develop a program to facilitate, where possible and appropriate, the connection to municipal water services of current private well users within the urban area. The users should be required to decommission the unused wells.</p> <p>f. The municipalities are requested to prohibit the construction of new wells and septic systems within the urban area where municipal water and wastewater services are available.</p> <p>g. Repealed</p> <p>h. The Source Protection Authority and Source Protection Committee, upon receipt of a notice from a municipality regarding an application for development of a transport pathway within a wellhead protection area, shall refer the notice to the Source Protection Department of the Conservation Authorities for follow up and reporting back.</p>	

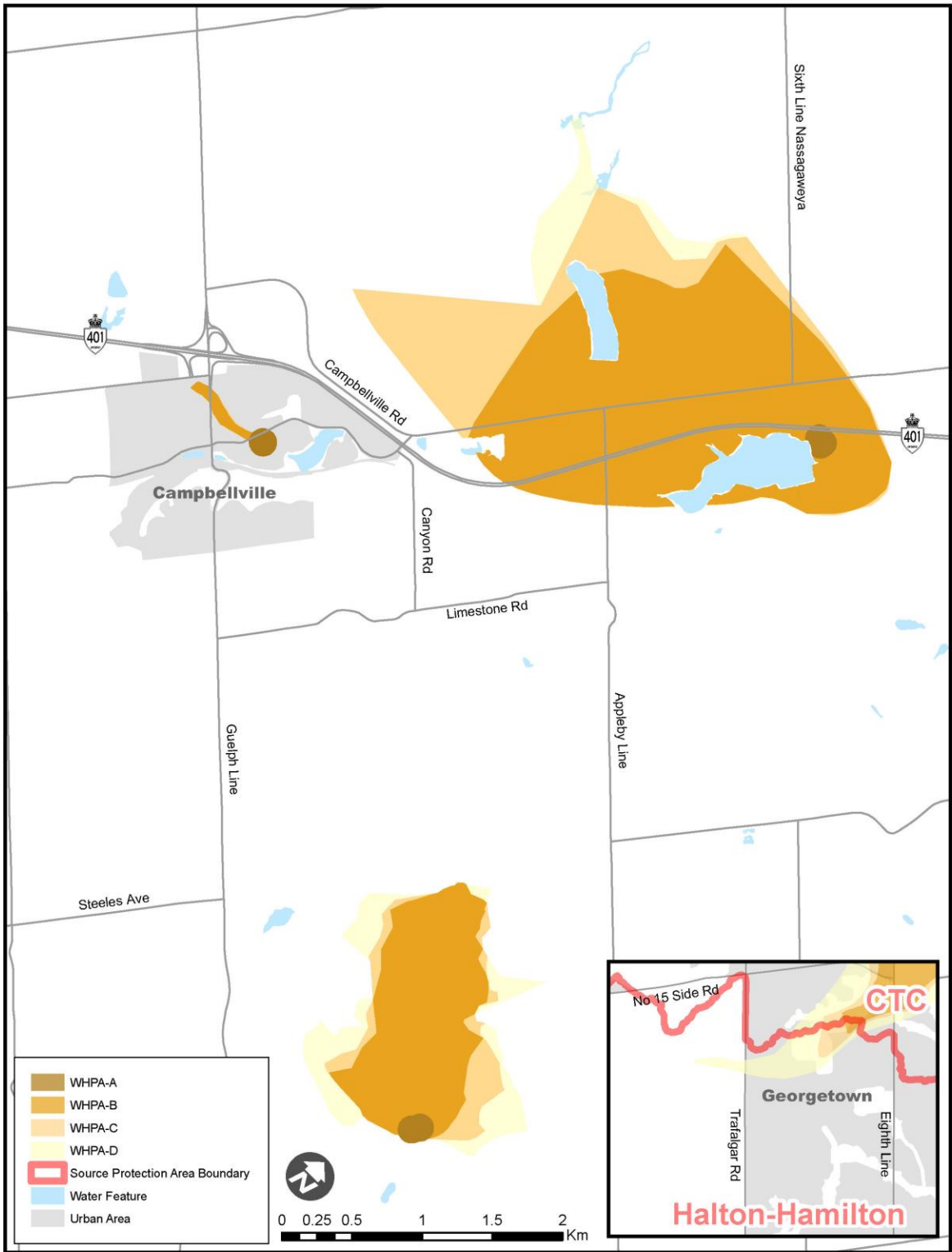


Figure 7: Halton-Hamilton SPP WHPAs for Quality within Halton Region

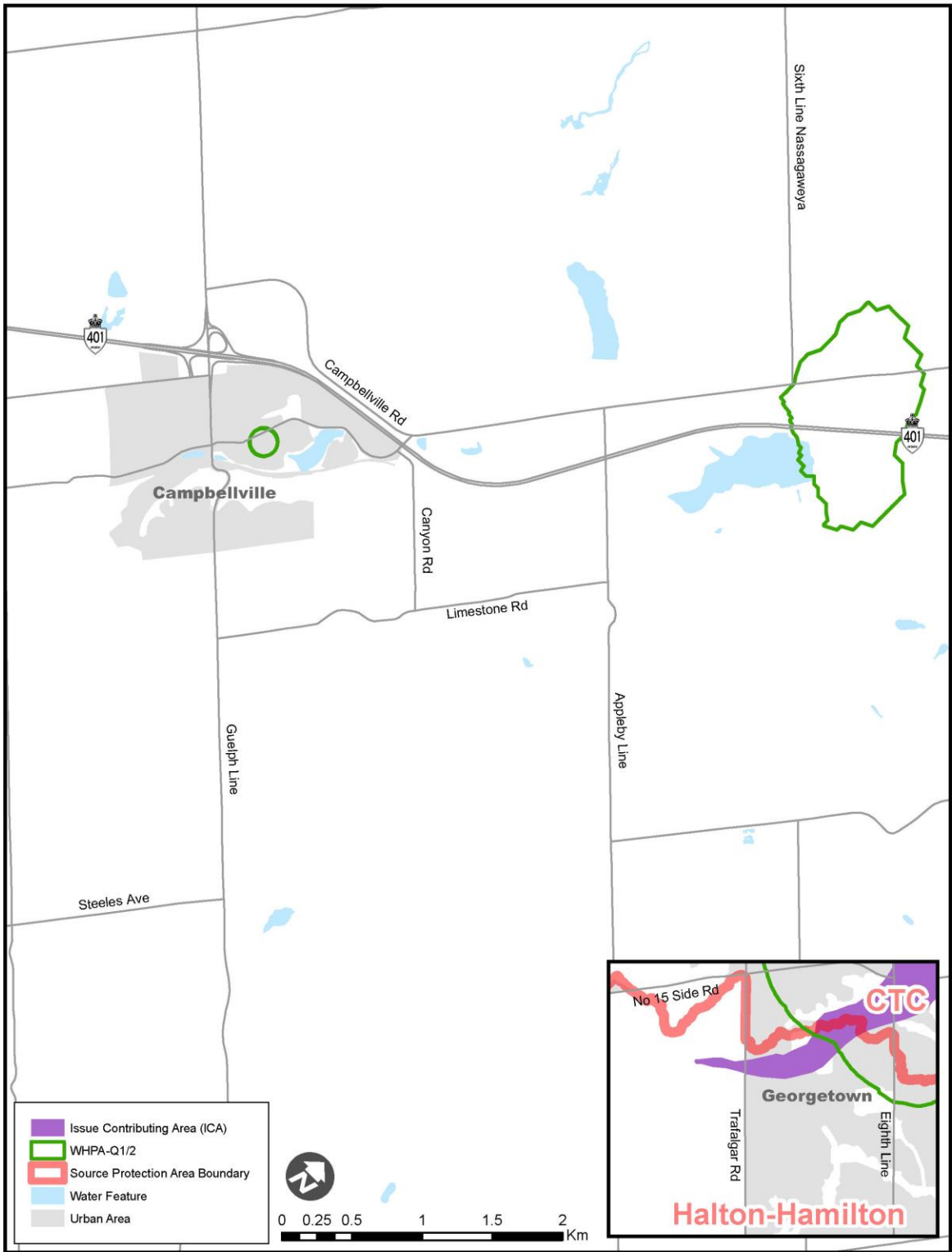


Figure 8: Halton-Hamilton SPP WHPA-Q and ICA within Halton Region

Table 4: Relevant CTC Source Protection Policies

CTC Source Protection Area for Halton Region	
Policy Text	Analysis
Timelines for Policy Implementation	
<p>T-8</p> <p>Official plans shall be amended for conformity with the Source Protection Plan at the time of the next review in accordance with s.26 of the Planning Act. Zoning by-laws shall be amended within 3 years after the approval of the official plan.</p>	<p>This is a mandatory land use policy which outlines the timelines for OP implementation.</p>
<p>T-9</p> <p>Decisions on planning matters shall conform with the policy immediately upon the date the Source Protection Plan takes effect.</p>	<p>This is a mandatory land use policy which outlines the timelines for OP implementation.</p>
Transition	
<p>Under the <i>Clean Water Act, 2006</i>, there is consideration for source protection plans (SPPs) to have a Transition Provision that outlines the circumstances under which a “future” drinking water threat activity, that would otherwise be prohibited, may be considered as “existing”, even if the activity has not yet commenced. The intent is to allow applications in transition to proceed while drinking water threats are managed under the “existing threat” policies. The CTC Source Protection Committee included a Transition Provision to recognize situations where an approval-in-principle to proceed with a development application had already been obtained, or where a complete application was made prior to the date the SPP came into effect, but requires further planning approvals to implement the application in progress. The CTC SPP was approved by the Minister of Environment and Climate Change on July 28, 2015 and became effective on December 31, 2015. Applications submitted after the effective date of the CTC SPP may only be transitioned if they are helping to implement an application in process prior to the date the CTC SPP took effect. “Existing Threat” policies apply to prescribed drinking water threat activities under the following circumstances:</p> <p>1) A drinking water threat activity that is part of a development proposal where a Complete Application (as determined by the municipality or Niagara Escarpment Commission) was made under the <i>Planning Act</i>, <i>Condominium Act</i> or <i>Niagara Escarpment Planning and Development Act</i> (NEPDA) prior to the day the Source Protection Plan comes into effect. The policy for “existing”</p>	<p>This is a mandatory policy however its implementation through ROP inclusion is not required. This policy informs the meaning of “existing” and “future” as they relate to threats within other mandatory policies in this SPP. Further consideration about how this could be incorporated into the ROP is required.</p>

CTC Source Protection Area for Halton Region	
Policy Text	Analysis
<p>drinking water threats also applies to any further applications required under the <i>Planning Act, Condominium Act</i>, Prescribed Instruments, or a development permit under the NEPDA, to implement the development proposal.</p> <p>2) A drinking water threat activity that is part of an application accepted for a Building Permit, which has been submitted in compliance with Division C 1.3.1.1 of the <i>Ontario Building Code</i> under the <i>Building Code Act, 1992</i> as amended prior to the day the Source Protection Plan comes into effect.</p> <p>3) A drinking water threat activity that is part of an application accepted for the issuance or amendment of a Prescribed Instrument prior to the day the Source Protection Plan comes into effect.</p>	
10.1.4 General and Other Policies	
<p>GEN-1</p> <p>s.59 Restricted Land Uses</p> <p>In accordance with Section 59 of the Clean Water Act, 2006, all land uses, except solely residential uses, where significant drinking water threat activities have been designated for the purposes of Sections 57 and 58 of the Clean Water Act, 2006, are hereby designated as Restricted Land Uses and a written notice from the Risk Management Official shall be required prior to approval of any Building Permit, Planning Act or Condominium Act application.</p> <p>Despite the above policy, a Risk Management Official may issue written direction specifying the situations under which a planning authority or Chief Building Official may be permitted to make the determination that a site specific land use designation is, or is not, designated for the purposes of Section 59. Where such direction has been issued, a site specific land use that is the subject of an application for approval under the Planning Act or for a permit under the Building Code Act is not designated for the purposes of Section 59, provided that the planning authority or Chief Building Official, as applicable, is satisfied that:</p> <p>a. The application complies with the written direction issued by the Risk Management Official; and,</p> <p>b. The applicant has demonstrated that a significant drinking water threat activity designated for the purposes of Section 57 or 58 will not be engaged in, or will not be affected by the application.</p>	<p>This is a mandatory policy. This policy identifies all land uses except for residential for restricted land use. This policy is similar to HR-CW-1.3 and G-2, although it does not provide the process flexibility that HR-CW-1.3 provides.</p>

CTC Source Protection Area for Halton Region	
Policy Text	Analysis
<p>Where the Risk Management Official has provided written direction designating a land use for the purpose of section 59, a written Notice from the Risk Management Official shall be required prior to approval of any Building Permit under the Building Code Act, 1992 as amended, in addition to Planning Act and Condominium Act applications in accordance with Section 59 of the Clean Water Act, 2006.</p>	
10.2 Waste	
<p>WST-5</p> <p>Land Use Planning</p> <p>The use of land for waste disposal (future) shall be prohibited where the storage or generation of waste would be a significant drinking water threat at the following types of waste disposal sites:</p> <ul style="list-style-type: none"> a) Storage, treatment, and discharge of tailings from mines; b) Landfarming of petroleum refining waste; c) Landfilling (hazardous waste); d) Landfilling (municipal waste); e) Landfilling (solid non-hazardous industrial or commercial waste); f) Liquid industrial waste injection into a well; g) Storage of hazardous or liquid industrial waste (at large facilities such as landfills and transfer stations); h) Storage of wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste (at large facilities such as landfills and transfer stations). 	<p>This is a mandatory land use policy and prohibits new waste disposal sites where it would be a significant drinking water threat. This may not require a policy as it would be triggered through the Section 59 review process.</p>
10.3 Sewage	
<p>SWG-3</p> <p>Land Use Planning</p> <p>Municipalities shall adopt Official Plan policies that require the enactment or amendment of Site Plan Control By-laws containing provisions for the siting and design of septic systems, including holding tanks, governed under the Building Code Act, 1992 as amended, as follows:</p> <ul style="list-style-type: none"> • Site Plan Control is required for existing vacant lots of record to ensure that the siting and design of on-site septic systems, including the siting of future reserve bed locations, is optimized in relation to significant drinking water threats in any of the following areas: WHPA-A (future); or • WHPA-B (VS = 10) (future); or 	<p>This is a mandatory land use policy. This policy requires site plan control for existing vacant lots of record. Wording considerations around simplifying this policy should be made.</p>

CTC Source Protection Area for Halton Region	
Policy Text	Analysis
<ul style="list-style-type: none"> • WHPA-E (VS = 10) (future); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (future). 	
<p>SWG-4</p> <p>Land Use Planning</p> <p>1) No new lots requiring septic systems, including holding tanks, governed under the Building Code Act shall be created where the activity would be a significant drinking water threat in the following area:</p> <ul style="list-style-type: none"> • WHPA-A (future). <p>2) New lots requiring septic systems, including holding tanks, governed under the Building Code Act in an area where the activity would be a significant drinking water threat shall only be permitted if the municipality is satisfied that the activity will not become a significant drinking water threat. The hydrogeological assessment to determine appropriate development density shall be conducted by a professional licensed to carry out that work in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-B (VS = 10) (future); or • WHPA-E (VS = 10) (future); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (future). 	<p>This is a mandatory land use policy. This policy is related to the creation of new lots that require septic systems and holding tanks where they would be a significant threat. Halton's ROP currently limits opportunities to create new lots outside of the urban areas where this would be most applicable. This policy should be reviewed in the context of existing policies. Given that the this policy is broken up and applies to two separate areas it may be appropriate to include two separate policies in the ROP.</p>
<p>SWG-9</p> <p>Land Use Planning</p> <p>1) New development dependent on septic systems with subsurface disposal of effluent, as regulated by the Ontario Water Resources Act, shall be prohibited where the activity would be a significant drinking water threat in the following area:</p> <ul style="list-style-type: none"> • WHPA-A (future). <p>2) New development dependent on septic systems with subsurface disposal of effluent, as regulated by the Ontario Water Resources Act, in an area where the activity would be a significant drinking water threat, shall only be permitted where it has been demonstrated by the proponent through an approved Environmental Assessment or similar planning process that the location for the septic system is the preferred alternative and the</p>	<p>This is a mandatory land use policy. This policy is similar to the policy above, with the exception that it is tied to new development rather than lot creation. This policy should be reviewed in the context of existing ROP policies. Given that the this policy is broken up and applies to two separate areas it may be appropriate to include two separate policies in the ROP.</p>

CTC Source Protection Area for Halton Region	
Policy Text	Analysis
<p>safety of the drinking water system has been assured in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-B (VS = 10) (future); or • WHPA-E (VS = 10) (future); or • the remainder of an Issue Contributing Area for Nitrates, Pathogens, Sodium or Chloride (future). 	
<p>SWG-12</p> <p>Land Use Planning</p> <p>1) The use of land for the establishment of a new stormwater management facility shall be prohibited where the discharge (including infiltration) of stormwater would be into a significant threat area in:</p> <ul style="list-style-type: none"> • WHPA-A (future). <p>2) The use of land for the discharge from a stormwater management facility into an area where the activity would be a significant drinking water threat shall only be permitted where it has been demonstrated by the proponent through an approved Environmental Assessment or similar planning process that the location of discharge from a stormwater retention pond is the preferred alternative and the safety of the drinking water system has been assured in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-B (VS = 10) (future); or • WHPA-E (VS ≥ 8) (future); or • the remainder of an Issue Contributing Area for Nitrates, Pathogens or Chloride (future). 	<p>This is a mandatory land use policy. This policy prohibits the location of stormwater management facilities where they would be a significant threat and only allows for the discharge of stormwater management facilities if it can be demonstrated that it is preferred alternative. Policy options for implementation should be considered here. Given that this policy is broken up and applies to two separate areas it may be appropriate to include two separate policies in the ROP.</p>
<p>SWG-14</p> <p>Land Use Planning</p> <p>New development dependent on sanitary sewers and related pipes, in an area where the activity would be a significant drinking water threat, shall only be permitted where it has been demonstrated by the proponent through an approved Environmental Assessment or similar planning process that the location for the sanitary sewer and related pipes is the preferred alternative and the safety of the drinking water system has been assured in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-A (future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS = 10) (future); or 	<p>This is a mandatory land use policy. This policy requires studies to determine the preferred alternative for new development dependent on sanitary sewers and related pipes where it would be a significant threat.</p>

CTC Source Protection Area for Halton Region	
Policy Text	Analysis
<ul style="list-style-type: none"> the remainder of an Issue Contributing Area for Nitrates or Pathogens (future). 	
<p>SWG-16</p> <p>Land Use Planning</p> <p>1) The use of land for the establishment of facilities for the storage of sewage shall be prohibited where the activity would be a significant drinking water threat in any of the following areas:</p> <ul style="list-style-type: none"> WHPA-A (future); or WHPA-E (VS \geq 9) (future); or WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (future). <p>2) The use of land for the establishment of facilities for the storage of sewage, in an area where the activity would be a significant drinking water threat, shall only be permitted where it has been demonstrated by the proponent through an approved Environmental Assessment or similar planning process that the location for the storage of sewage is the preferred alternative and the safety of the drinking water system has been assured in any of the following areas:</p> <ul style="list-style-type: none"> WHPA-B (VS \geq 8) (future); or WHPA-C (VS = 8) (future); or the remainder of an Issue Contributing Area for Nitrates or Pathogens (future). 	<p>This is a mandatory land use policy. The first part prohibits the storage of sewage where it would be a significant threat. The second part requires studies to determine the preferred alternative to locating facilities that store sewage. These two policies apply in different areas and as such, it may be worthwhile to create two ROP policies.</p>
<p>SWG-18</p> <p>Land Use Planning</p> <p>Development dependent on the establishment of sewage works shall be prohibited where sewage works would be a significant drinking water threat where the sewage works discharge is to surface water from:</p> <p>a) Combined sewer discharge from a stormwater outlet to surface water; and</p> <p>b) Sewage treatment plant bypass discharge to surface water, in any of the following areas:</p> <ul style="list-style-type: none"> WHPA-E (VS \geq 8) (future); or In any WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (future). 	<p>This is a mandatory land use policy. This policy prohibits development dependent on the establishment of sewage works where it would be a significant drinking water threat. Policy considerations should be made to clarify and ensure proper implementation of this policy.</p>

CTC Source Protection Area for Halton Region	
Policy Text	Analysis
<p>c) Industrial effluent discharges, in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-E (VS ≥ 8) (future); or • In any WHPA-E in an Issue Contributing Area for Nitrates, Pathogens or Chloride (future). <p>d) Sewage treatment plant effluent discharges (includes lagoons), in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-A (future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS ≥ 8) (future); or • In any WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (future). 	
10.7 Road Salt	
<p>SAL-3</p> <p>Land Use Planning</p> <p>Where the application of road salt to roads and parking lots would be a significant drinking water threat, the planning approval authority shall:</p> <ol style="list-style-type: none"> 1) Prohibit the establishment of new parking lots with greater than 2000 square metres in: <ul style="list-style-type: none"> • WHPA-A not in an Issue Contributing Area for Sodium or Chloride (future); 2) Prohibit the establishment of new parking lots with greater than 200 square metres in: <ul style="list-style-type: none"> • WHPA-A in an Issue Contributing Area for Sodium or Chloride (future); and 3) Require a salt management plan, which includes a reduction in the future use of salt, as part of a complete application for development which includes new roads and parking lots where the application of road salt is significant in any of the following areas: <ul style="list-style-type: none"> • WHPA-B (VS = 10) (future); or • WHPA-E (VS ≥ 9) (future); or • the remainder of an Issue Contributing Area for Sodium or Chloride (future). <p>Such plans should include but not be limited to mitigation measures regarding design of parking lots, roadways and sidewalks to minimize the need for repeat application of road salt such as reducing ponding in parking areas; and directing stormwater discharge outside of vulnerable areas where possible.</p>	<p>This is a mandatory land use policy related to the application of road salt where it would be a significant drinking water threat. This policy should be further broken down to clearly indicate where and under what circumstances a significant drinking water threat would occur.</p>

CTC Source Protection Area for Halton Region	
Policy Text	Analysis
<p>SAL-10</p> <p>Land Use Planning</p> <p>Where the application of road salt would be a moderate or low drinking water threat, the planning approval authority is encouraged to require a salt management plan, which includes a reduction in the future use of salt, as part of a complete application for development which includes new roads and parking lots in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-A (VS = 10) (existing, future); or • WHPA-B (VS ≤ 10) (future); or • WHPA-C (future); or • WHPA-D (future); or • WHPA-E (VS ≥ 4.5 and <9) (future); or • HVA (future); or • SGRA (VS ≥ 6) (future). <p>Such plans should include, but not be limited to, mitigation measures regarding design of parking lots, roadways and sidewalks to minimize the need for repeat application of road salt such as reducing ponding in parking areas, directing stormwater discharge outside of vulnerable areas where possible, and provisions to hire certified contractors.</p>	<p>This is a mandatory land use policy related to the application of road salt where it is a moderate or low drinking water threat and encourages the planning approval to require a salt management plan for development including new roads and parking lots. Consideration should be made for the ROP around when this policy would apply.</p>
10.13 Water Quality	
<p>DEM-2</p> <p>Land Use Planning (Planning Policies in WHPA-Q1 with Significant Water Quantity Threats)</p> <p>Within the Tier 3 Water Budget WHPA-Q1 where a water taking is or would be a significant water quantity threat, the relevant Planning Approval Authority shall ensure water taking does not become a significant drinking water threat by:</p> <ol style="list-style-type: none"> 1) Only permitting new development if the new development does not require a new or amended Permit to Take Water; 2) Only providing final approval for new development that requires a new or amended Permit to Take Water once the Ministry of the Environment and Climate Change has determined that the proposed taking will not become a significant water quantity threat; 3) Only approving settlement area expansions within WHPA-Q1 as part of a municipal comprehensive review 	<p>This is mandatory land use policy related to the Tier 3 Water Budget WHPA-Q1. This policy applies to new development and settlement area boundary expansions.</p>

CTC Source Protection Area for Halton Region	
Policy Text	Analysis
<p>where the applicable provincial planning criteria have been met and the following has been demonstrated:</p> <ul style="list-style-type: none"> a) the aquifer has sufficient capacity to sustainably provide municipal water services to the expanded settlement area; b) the expansion will not adversely impact the aquifers ability to meet the municipal water supply requirements for current and planned service capacity, for other permitted takings, or for wastewater receiving bodies; and c) the hydrological integrity of municipal wells will be maintained. 	
<p>REC-1</p> <p>Land Use Planning (Planning Policies for Protecting Groundwater Recharge)</p> <p>For applications under the Planning Act within the Tier 3 Water Budget WHPA-Q2 identified as having significant water quantity threats, the relevant Planning Approval Authority shall ensure recharge reduction does not become a significant drinking water threat by:</p> <ul style="list-style-type: none"> 1) Requiring new development and site alteration under the Planning Act to implement best management practices such as Low Impact Development (LID) with the goal to maintain predevelopment recharge. Implementation of best management practices is encouraged, but voluntary, for Agricultural Uses, Agriculture-related Uses, or On-farm Diversified Uses where the total impervious surface does not exceed 10 per cent of the lot. 2) Requiring that all site plan (excluding an application for one single family dwelling) and subdivision applications to facilitate major development (excluding development on lands down-gradient of municipal wells in the Toronto & Region Source Protection Area [Map 3.5]) for new residential, commercial, industrial and institutional uses provide a water balance assessment for the proposed development to the satisfaction of the Planning Approval Authority which addresses each of the following requirements: <ul style="list-style-type: none"> a) maintain pre-development recharge to the greatest extent feasible through best management practices such as LID, minimizing impervious surfaces, and lot level infiltration; 	<p>This is a mandatory land use policy related to water quantity within the Tier 3 Water Budget WHPA-Q2. It applies to a range of development. Consideration should be given around simplifying what is required of this policy and when it would apply.</p>

CTC Source Protection Area for Halton Region	
Policy Text	Analysis
<p>b) where pre-development recharge cannot be maintained on site, implement and maximize off-site recharge enhancement (within the same WHPA-Q2) to compensate for any predicted loss of recharge from the development; and</p> <p>c) for new development (excluding a minor variance) within the WHPA-Q2 and within an Issue Contributing Area (for sodium, chloride or nitrates), the water balance assessment shall consider water quality when recommending best management practices and address how recharge will be maintained and water quality will be protected.</p> <p>The Planning Approval Authority shall use its discretion to implement the requirements of this policy to the extent feasible and practicable given the specific circumstances of a site and off-site recharge opportunities.</p> <p>3) Only approving settlement area expansions as part of a municipal comprehensive review where it has been demonstrated that recharge functions will be maintained on lands designated Significant Groundwater Recharge Areas within WHPA-Q2.</p> <p>4) Amending municipal planning documents to reference most current Assessment Reports in regards to the Significant Groundwater Recharge Areas within WHPA-Q2.</p>	

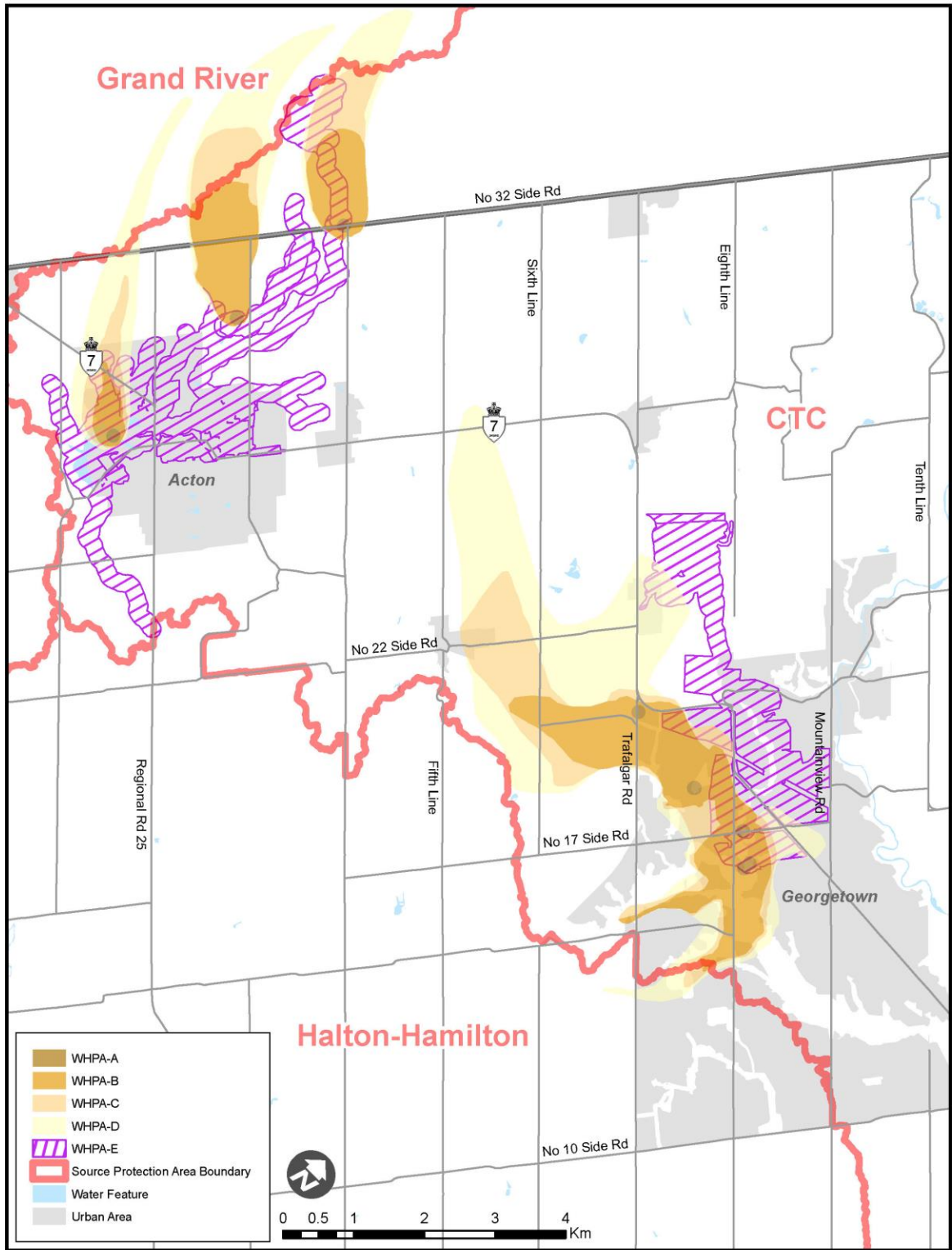


Figure 9: CTC SPP WHPAs for Quality within Halton Region

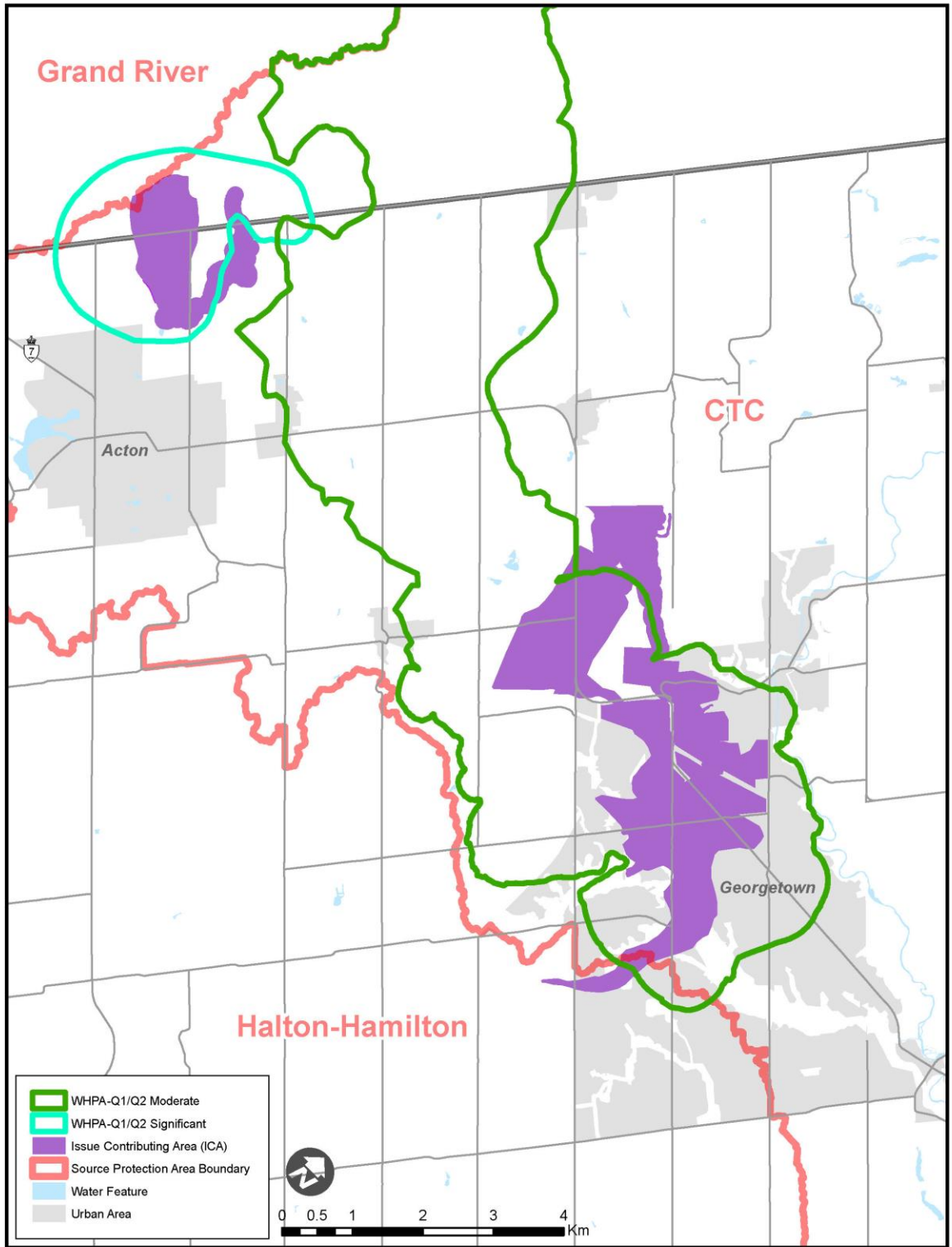


Figure 10: CTC SPP WHPA-Q and ICA within Halton Region

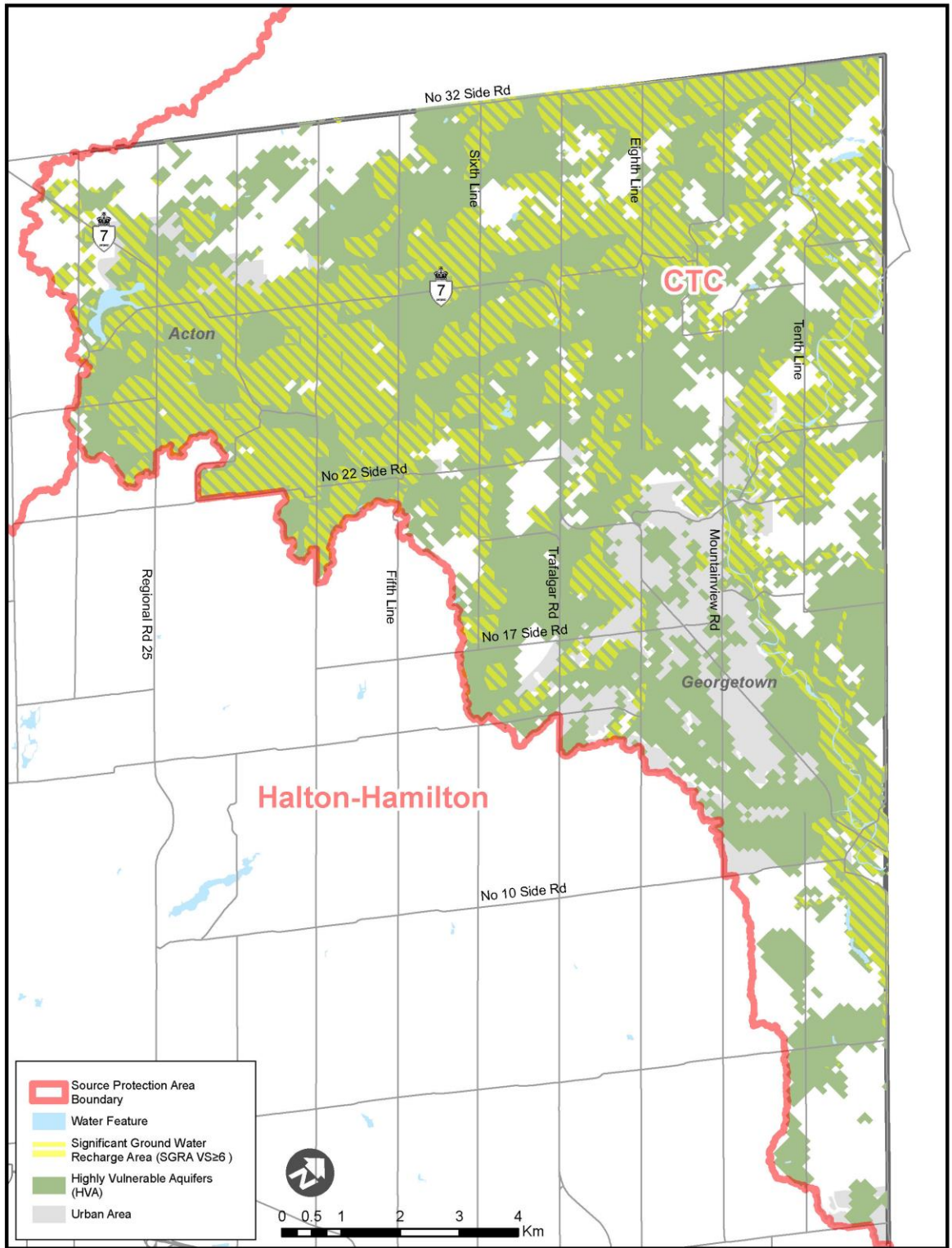


Figure 11: CTC SPP SGRA and HVA within Halton Region

Table 5: Relevant Grand River Source Protection Policies

Grand River Source Protection Area for Halton Region	
Policy Text	Analysis
Implementation Timing and Transition Policies	
<p>HR-CW-1.1</p> <p><i>Implementation, Timing</i></p> <p>Except as set out below, the policies contained in this Source Protection Plan shall take effect on the date set out by the Minister.</p> <p>a. For Section 57 of the <i>Clean Water Act</i>, 2006 if an activity was engaged in at a particular location before this Source Protection Plan took effect, policies regarding prohibited activities do not apply to a person who engages in the activity at that location until 180 days from the date the Source Protection Plan takes effect;</p> <p>b. For Section 58 of the <i>Clean Water Act</i>, 2006 if an activity was engaged in at a particular location before this Source Protection Plan took effect and the Risk Management Official gives notice to a person who is engaged in the activity at that location that, in the opinion of the Risk Management Official, policies regarding regulated activities should apply to the person who engages in the activity at that location on and after a date specified in the notice that is at least 120 days after the date of the notice;</p> <p>c. For Section 59 of the <i>Clean Water Act</i>, 2006 policies regarding restricted land uses shall take effect the same day the Source Protection Plan takes effect;</p> <p>d. Where the Source Protection Policies require Halton Region to develop and implement education and outreach and/or incentive programs as the primary tool for managing or eliminating a particular significant threat and where such programs are deemed necessary and/or appropriate by the Region of Halton and subject to available funding, such programs shall be developed and implemented within five (5) years from the date the Source Protection Plan takes effect;</p> <p>e. For Sections 43 of the <i>Clean Water Act</i>, 2006 if an activity was engaged in at a particular location before this Source Protection Plan took effect, amendments to Prescribed Instruments shall be completed within three</p>	<p>This section outlines timelines for implementation, which currently apply. The most relevant for the ROPR is f), which requires the update of Official Plans and Zoning By-laws to conform to the Source Protection Plan. The ROPR will be addressing this requirement. In terms of incorporating this policy in the ROP, it would be redundant from a Regional perspective, however consideration could be given around direction for local official plan and zoning conformity.</p>

Grand River Source Protection Area for Halton Region	
Policy Text	Analysis
<p>(3) years from the date the Source Protection Plan takes effect, and,</p> <p>f. For Section 40 and 42 of the <i>Clean Water Act</i>, 2006 the Official Plans must be amended to conform with the significant threat policies and adopted by municipal council by the next five (5) year Official Plan update as required under subsection 26(1) of the <i>Planning Act</i> or within five (5) years from the date the Source Protection Plan takes effect. Zoning and/or by-law conformity exercises may be completed within three (3) years of the completion of the Official Plan conformity exercise as per section 26(9) of the <i>Planning Act</i>.</p>	
<p>HR-CW-1.2</p> <p><i>Transition</i></p> <p>The following transition provisions apply to the Source Protection Plan policies. For the purposes of this Plan, where one or more of the following has been received regarding a future significant threat activity prior to the Source Protection Plan coming into effect and where a policy in this Plan prohibits a “future” threat activity, the policy for managing “existing” drinking water threat activities applies in the following cases even though those activities will commence after the Source Protection Plan comes into effect:</p> <p>a. A complete application for site plan approval under the <i>Planning Act</i>;</p> <p>b. An application for Environmental Compliance Approval; or</p> <p>c. A complete application for a Building Permit that significant threat activity shall be permitted subject to the policies pertaining to existing significant threat activity as well as any further applications required under the <i>Planning Act</i>, <i>Condominium Act</i>, and Building Permit or Prescribed Instruments required to implement the development proposal associated with this significant threat activity.</p> <p>Where the above noted applications have lapsed or been withdrawn, this policy shall no longer apply.</p>	<p>While this policy addresses some planning related matters, it may not be necessary to include in the ROP. Further consideration should be given related to the overall purpose of this policy.</p>

Grand River Source Protection Area for Halton Region	
Policy Text	Analysis
Uses and Areas Designated as Restricted Land Use Policies	
<p>HR-CW-1.3</p> <p><i>Part IV- RLU</i></p> <p>In accordance with Section 59 of the <i>Clean Water Act</i>, all land uses, with the exception of residential uses, where significant drinking water threat activities have been designated for the purpose of Section 57 and 58 of the <i>Clean Water Act</i>, are hereby designated as Restricted Land Uses. Within these areas, a written Notice from the Risk Management Official shall be required prior to approval of any Building Permit, <i>Planning Act</i> or <i>Condominium Act</i> application.</p> <p>Notwithstanding, a Risk Management Official may issue written direction specifying the conditions that would permit a planning authority or building official to make a determination whether to: 1) designate a site specific residential land use as a Restricted Land Use; or 2) exempt a site specific land use from the Restricted Land Use designation. In order to exempt a site specific land use, the planning authority or building official must be satisfied that:</p> <ol style="list-style-type: none"> a. The application complies with the written direction issued by the Risk Management Official; and b. The applicant has demonstrated that a significant drinking water threat activity designated for the purposes of section 57 or 58 will not be engaged in, or will not be affected by the application. 	<p>The first part of this policy is relevant as it relates to a Planning Act processes. Although this is not a required direction for land use planning, consideration could be given to potential policy options in addressing this.</p> <p>The second part of this policy speaks to options for delegation to simplify the planning process in certain circumstances. Further consideration should be given around policy approaches.</p>
Official Plan and Zoning By-law Amendment(s) Policies	
<p>HR-MC-1.4</p> <p><i>Land Use Planning</i></p> <p>Halton Region and the Town of Milton shall amend their Official Plan and/or Zoning By-Laws to:</p> <ol style="list-style-type: none"> a. Identify the vulnerable areas in which drinking water threats prescribed under the <i>Clean Water Act</i>, 2006 would be significant; b. Indicate that within the areas identified, any use or activity that is, or would be, a significant drinking water threat is required to conform with all applicable Source 	<p>This policy direction is mandatory for implementation through land use planning. The ROPR update will address the requirement of this policy and as such it is likely not necessary to include.</p>

Grand River Source Protection Area for Halton Region	
Policy Text	Analysis
<p>Protection Plan policies and, as such, may be prohibited, restricted or otherwise regulated by those policies;</p> <p>c. Incorporate any other amendments required to conform with the threat specific land use policies identified in this Source Protection Plan.</p>	
13. The Handling and Storage of Road Salt	
<p>HR-MC-8.1</p> <p><i>Future Land Use Planning WHPA-A-v.10 WHPA-B-v.10</i></p> <p>The Region of Halton and the Town of Milton shall amend their Official Plans to prohibit future salt storage and handling facilities with a capacity greater than 5,000 tonnes of road salt where this activity would be a significant drinking water threat, to ensure these activities never become significant drinking water threats.</p>	<p>This is a mandatory policy related to salt storage. Wording considerations should be explored to ensure appropriate and effective implementation.</p>
14. The Storage of Snow	
<p>HR-MC-9.1</p> <p><i>Future Land Use Planning WHPA-A-v.10 WHPA-B-v.10</i></p> <p>The Region of Halton and Town of Milton shall include policies in their Official Plan requiring all future development to be designed and maintained based on best management practices regarding snow storage including the provision of designated snow storage areas and the management of associated melt water to ensure this activity never becomes a significant drinking water threat.</p>	<p>This is a mandatory policy related to snow storage. Wording considerations should be explored to ensure appropriate and effective implementation.</p>
15. The Handling and Storage of Fuel	
<p>HR-MC-10.2</p> <p><i>Future Land Use Planning WHPA-A-v.10</i></p> <p>In consideration of any future <i>Planning Act</i> application for the handling and storage of fuel within vulnerable areas where this activity would be a significant drinking water threat, the future handling and storage of fuel in conjunction with a future or expanded retail gas station and future or</p>	<p>This is a mandatory policy related to handling and storage of fuel. Wording considerations should be explored to ensure appropriate and effective implementation.</p>

Grand River Source Protection Area for Halton Region	
Policy Text	Analysis
<p>expanded bulk fuel storage facility excluding bulk fuel storage associated with a municipal emergency generator facility is not permitted within a Wellhead Protection Area A (WHPA-A), to ensure this activity never becomes a significant drinking water threat.</p>	
16. The Handling and Storage of a Dense Non-Aqueous Phase Liquid (DNAPL)	
<p>HR-MC-11.3</p> <p><i>Future Land Use Planning WHPA-A-v. 10</i></p> <p>In consideration of any future Planning Act application where the land uses associated with the future handling and storage of dense non-aqueous phase liquid and/or organic solvents would be a significant drinking water threat under the Clean Water Act, 2006 is prohibited within a Wellhead Protection Area A (WHPA-A) to ensure these activities never become significant drinking water threats.</p>	<p>This is a mandatory policy related to handling and storage of dense non aqueous phase liquid and/or organic solvents. Wording considerations should be explored to ensure appropriate and effective implementation.</p>
17. The Handling and Storage of an Organic Solvent	
<p>HR-MC-11.3</p> <p><i>Future Land Use Planning WHPA-A-v. 10</i></p> <p>In consideration of any future Planning Act application where the land uses associated with the future handling and storage of dense non-aqueous phase liquid and/or organic solvents would be a significant drinking water threat under the Clean Water Act, 2006 is prohibited within a Wellhead Protection Area A (WHPA-A) to ensure these activities never become significant drinking water threats.</p>	<p>This is a mandatory policy related to handling and storage of dense non aqueous phase liquid and/or organic solvents. Wording considerations should be explored to ensure appropriate and effective implementation.</p>

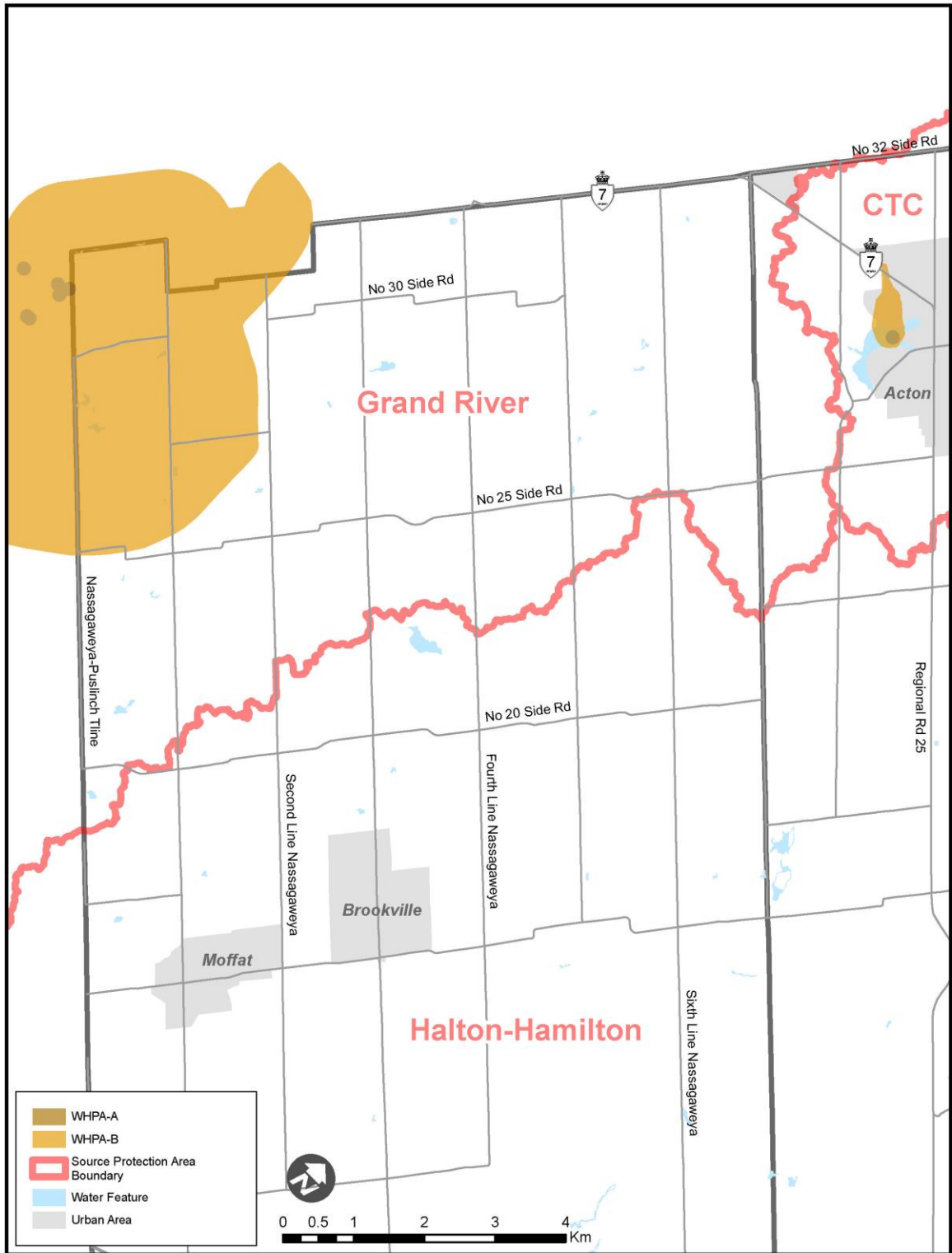


Figure 12: Grand River WHPAs for Quality within Halton Region

Policy Approaches/Best Practices

A small number of single- and upper-tier municipalities have implemented SPP policies into their official plans. The varying policy and mapping approaches these municipalities have used provide lessons for Halton Region. The County of Simcoe, Regional Municipality of Niagara, and City of Kingston, have all achieved Official Plan conformity for SPPs within their jurisdiction. Halton's neighbour, the Regional Municipality of Peel has produced a discussion paper to inform SPP implementation through its Municipal Comprehensive Review. The following sections outline key information that can help inform the approach taken by Halton Region.

County of Simcoe

Similar to Halton Region, Simcoe County is subject to three SPPs: The South Georgian Bay Lake Simcoe SPP, the CTC SPP, and the Saugeen Grey Sauble North Bruce Peninsula SPP. A by-law amending the Simcoe County OP was adopted on September 13, 2016 to include SPP policies.

Official Plan Amendment 1 (OPA-1) adds SPP policies as a subsection in the Growth Management Strategy section of Simcoe's OP. This update to the OP also saw the addition of 3 schedules which illustrate: Wellhead Protection Areas and Surface Water Intake Protection Zones; Highly Vulnerable Aquifers; and Significant Groundwater Recharge Areas.

Unlike Halton, Simcoe County's lower-tier municipalities are responsible for municipal drinking water sources. As a result, the County's policies provide high level, directional policies to guide local implementation. The Amendment to the OP identifies vulnerable areas and provides policies and provisions for prohibiting or restricting land uses that would pose a significant threat to municipal drinking water supplies. Nothing in the amendment prevents a local municipality from being more restrictive in its OP or zoning by-law, unless doing so would conflict with any of the policies and objectives of the SPPs. Local municipalities are encouraged to develop a screening process and tools for development applications in a vulnerable area to assess potential risks to municipal drinking water resources and to determine if circulation to the Risk Management Official is required in accordance with policy 3.15.5.

The amendment is organized by the following policy themes:

- Water Quality;
- Stormwater Management and Sewage Systems;
- Water Quantity;
- Water Taking;
- Settlement Area Boundary Expansion;
- Transitional Provisions; and
- Implementation

Within the jurisdiction of Simcoe County, there are no municipal wells or surface intake facilities located within the CTC SPP and the Saugeen Grey Sauble North Bruce Peninsula SPP Regions. Therefore, generally only implementation of the South Georgian

Bay Lake Simcoe SPP is required for protection of Simcoe County operated WHPAs and IPZs. Where a WHPA identified by the neighbouring CTC SPP intrudes into Simcoe County, the relevant policies are implemented independently. Due to this context, SPP policies are generally consolidated. Where a specific SPP contains unique policies for particular combinations of threats and vulnerable areas, this is noted within that policy subsection.

Like Halton Region, Simcoe County is subject to multiple Source Protection Regions. As the Region develops its policy approach to drinking water source protection Halton can explore the option of organizing the policies by policy theme. As demonstrated in the Simcoe OP, organizing by policy theme has allowed the County to incorporate a high level of detail and to group vulnerable area types together where a policy, for instance, may apply to both WHPAs and IPZs. This approach also results in little duplication of policies and where SPPs contradict or are more or less restrictive site specific or geographic specific policies can be used within the section to ensure conformity with the appropriate SPP.

Regional Municipality of Niagara

Niagara Region's boundary is located almost entirely within one Source Protection Region meaning it is primarily subject to the Niagara Peninsula SPP. A very small area near the Town of Grimsby is within the Halton Hamilton SPP's jurisdiction however there are no WHPAs or other mapped SPP policy areas in this area. Unlike Halton, there are no municipal wells at all within the Region and as a result, the SPP policies focus solely on the protection of municipal surface water intakes which supply municipal drinking water.

A by-law amending the Niagara Region Official Plan was adopted on April 30, 2015 to include SPP policies. Official Plan Amendment 5 adds a new "Source Water Protection" subsection into their "Natural Environment" section. This update to the OP also saw the addition of Schedule H to illustrate the IPZs within the Region. Additionally, through this amendment a number of definitions were added to the Regional Official Plan including Intake Protection Zone, Risk Management Official, and Risk Management Plan.

The amendment is organized by water treatment plants, each located in different lower tier municipalities and includes a section for implementation and monitoring policies. Niagara's policies are slightly repetitive; however, they provide a site-specific approach with tailored policies for each treatment plant based on its unique IPZ characteristics and level of vulnerability. The policies provide additional context beyond the SPP around when they would apply, taken from the explanatory document. For instance, the size of a storm sewer drainage area and at what point discharge from stormwater management facilities poses a significant threat differs from plant to plant.

Since Niagara Region's source protection policies only cover three water treatment plants the approach to organizing the policies by treatment plant is an appropriate mechanism. This approach may not work in Halton given the number of vulnerable areas where policies apply and the complexity of implementing three SPP's; however, Halton could consider structuring the policies based on the municipality where they apply. Halton could also

consider using some wording from the explanatory document where it helps to provide additional information or context, provided the end result still conforms to the relevant SPP.

City of Kingston

The City of Kingston's boundary is located within one Source Protection Region meaning it is only subject to the Cataraqui Source Protection Plan. Similar to Halton, the City of Kingston obtains its water from a combination of wells and surface sources. Through the City's municipal comprehensive review adopted March 7, 2017, source protection policies were incorporated into the City OP to bring it into conformity with the Cataraqui SPP.

The amendment is organized by vulnerable area type starting with a section on vulnerable areas followed by sections for IPZs, HVAs, SGRAs, and unstable bedrock. The drinking water source protection policies also contain sections for the development process, transport pathway notification, and new drinking water systems. Organizing the policies by vulnerable area type means there is little duplication in policies and where a site specific policy is necessary, the appropriate reference is made. It should be noted the policies provided are high level and often defer to the SPP or the Cataraqui Region Conservation Authority. Halton Region may also consider including higher level policies, while still distinguishing between policy inconsistencies across multiple SPPs.

While the City of Kingston is only subject to one Source Protection Region, as Halton Region develops its policy approach to drinking water source protection the Region can explore the option of organizing the policies by vulnerable area type, however this could cause some challenges in ensuring that applications are not triggered for review where it isn't necessary. If Halton considers this approach, it would be important to include a geographical reference.

Regional Municipality of Peel

Like Halton Region, Peel Region is subject to multiple SPPs and obtains its water from a combination of wells and surface sources, which would make its OP implementation of SPP policies instructive to Halton Region. Peel Region's boundary is located within three Source Protection Regions and is subject to the CTC SPP, the South Georgian Bay Lake Simcoe (SGBLS) SPP, and the Halton-Hamilton SPP. There are no municipal supply wells or surface water intakes within the Halton-Hamilton Source Protection Region. Therefore, only implementation of the CTC SPP and the SGBLS SPP is required for protection of Peel Region operated WHPAs and IPZs.

The Region of Peel Official Plan was adopted on July 11, 1996 with the most recent consolidated version dated December 2016. A Municipal Comprehensive Review is underway for conformity with revised Provincial plans and policies and Peel Region will take this opportunity to integrate SPP policies into their OP as well.

Like Halton, prior to the changes to the CWA, 2006 Peel Region's 1996 OP included policies for the protection of surface and ground water resources. This OP directs local municipalities to identify and regulate land uses, development and site alteration, within and near, sensitive groundwater recharge areas, sensitive surface water features,

groundwater dependent areas and municipal wellhead protection areas. Through further amendments to their 1996 plan, policies for watershed planning, wellhead protection, protection of vulnerable aquifers, water budgets and water conservation plans were added to conform to the Oak Ridges Moraine Conservation Plan. These policies however do not conform to the CTC and SGBLS SPPs.

As indicated in the Water Resources Discussion Paper for their Official Plan Review, Peel Region's approach will likely utilize their existing policy framework as a foundation from which they will incorporate new policies to conform to the SPPs. In the Source Protection Plan Discussion Paper, Peel Region has identified two main policy options to address conformity with multiple SPPs:

- Implement policies based on SPP area boundaries
- Implement Region-wide uniform SPP policies using a “most restrictive policies” approach

Peel Region has also laid out 5 possible ways to organize the SPP policies within their OP:

- By vulnerable area type (e.g. WHPA, ICA, SGRA, HVA)
- By level of vulnerability (e.g. by vulnerability score)
- By policy theme (e.g. water quality, water quantity)
- By threat type (e.g. waste disposal sites, sewage systems, septic systems, etc.)
- A combination of the above

Peel Region's source protection policies are not yet implemented as they are being evaluated through their municipal comprehensive review. However, Halton Region can look to the work Peel Region has completed to inform its own policy approach. Peel Region will likely utilize their existing policy framework as a foundation from which they will incorporate new policies to conform to the SPPs which is an approach Halton can explore. Additionally, Peel Region's policy options and organization alternatives, identified in their Source Protection Plan Discussion Paper to address conformity with multiple SPPs, are instructive in navigating a similar situation within Halton Region.

Other considerations

Properties Within Multiple SPPs.

Where a single property is affected by multiple SPPs, the SPP which would apply is dependent on the proposed location described in a specific application submitted pursuant to the *Planning Act*. SPPs cross property boundaries, and they apply where an existing or potential threat has been identified.

Dealing with Change

Halton Region is currently updating the Regional Official Plan and will include policies that address the applicable SPPs. At the same time, the Province has recently updated Ontario Regulations to the *CWA, 2006* to modify provisions such as the Tables of Drinking Water Threats and Technical Rules for Assessment Reports. The relevant Source Protection Authorities are currently working to update the SPPs to be consistent with these modifications. These changes may have implications for land use planning matters and would continue to apply after the effective date. As previously noted, the *CWA, 2006*

provides four methods through which SPPs and assessment reports may be revised: minor and administrative amendments (Section 51 of O. Reg. 287/07); locally initiated amendments (Section 34); amendments made by Minister of Environment and Climate Change order (Section 35); and amendments made through a mandated review (Section 36).

Integration with NHS and Water Resource System

The Growth Plan for the Greater Golden Horseshoe requires municipalities to identify a Water Resource System. The Water Resource System is defined in the Growth Plan and includes areas that may be affected by SPP policies. The Water Resource System provides a consistent framework for water protection through the GGH. The Water Resource System complements the SPPs' focus on protection of municipal drinking water sources. Because both the Water Resource System and the SPP policies serve to protect water, it is unlikely that there would be any conflicting policies. The work completed in the assessment reports for the SPPs in Halton could help to inform the mapping of the Water Resource System. Further review of the two components should be undertaken through the development of the NHS Report and Phase 3 of the ROPR.

Implementation Considerations/Ties to RMO/RMI Roles

A number of the SPP policies that are required to be implemented through land use planning refer to various types of activities. As per the *Planning Act*, planning authorities are not permitted to regulate activities. As such, where an application may be triggered by these types of policies, the planning process would trigger a review from the RMO. Where there are instances where activities could be occurring where they should not, the RMI would be responsible for addressing the situation.

Integration with Overlapping Policy Directions

SPP policies take precedence in the event of a policy conflict, unless the other policy in question is more restrictive. Section 105 of the *CWA, 2006* states that if there is a conflict between a provision of the *CWA, 2006* and a provision of another Act or a regulation or instrument made, issued or otherwise created by another Act, with respect to a matter that affects or has the potential to affect the quality or quantity of any water that is or may be used as a source of drinking water, the provision that provides the greatest protection to the quality and quantity of the water prevails.

Next Steps

Halton Region will be incorporating Source Protection policies into the Regional Official Plan as part of the broader Regional Official Plan Review. The information in this Technical Paper is intended to help inform the options and considerations for addressing source protection in the Regional Official Plan. The following provides a brief description of policy and mapping options to consider through the amendment process.

Policy Approaches

Evaluating potential policy approaches is complex given that there are three SPPs that must be addressed and that they apply to different geographies of Halton. The options for policy approaches include:

1. Including sections for objectives and for general policies, followed by policies outlined by the specific SPP. This approach along with mapping can clearly indicate what policies would apply and where. One challenge with this approach is the duplication of policies where two or more SPPs have similar threats and policy approaches.
2. A second approach would be to include sections for objectives and general policies followed by policies organized based on municipality. This would create an easy transition for implementation into local official plans, however if two or more source protection plans apply within a municipality, they may have similar policies that are still slightly different. Combining these policies could be a challenge and may result in a policy approach that is more restrictive than necessary.
3. A third approach could include sections for objectives and general policies, followed by policies related to specific topic areas (i.e. water quality and water quantity). This approach would work best if only one SPP applied. With multiple SPPs, there would be challenges combining policies that are similar while applying in different geographies. Similar to above, combining the policies may result in an approach that is more restrictive than required and would need to include specific geographic references.

These policy approaches should be considered in the context of the mapping approaches and vice versa.

Mapping Approaches

Similar to the policies, the mapping of source protection will be complicated given that policies only apply in certain geographies and there are multiple SPPs to take into consideration. There is also a concern with changes to mapping occurring during the life of the ROP. The options for mapping should reflect the policy approach taken and are provided as follows:

1. Create schedules that show areas with associated threats and identify which SPP applies in each geography.
2. Create schedules based on municipalities and which SPPs and policies would apply to each specific municipality.
3. Create schedules that identify where the significant threats are without recognizing the specific SPP (subject to policy approach).
4. Provide mapping similar to option 1, 2, or 3 without identifying the maps as schedules, but rather as appendices for information.

All of these mapping options should be considered in Phase 3 of the ROPR and reflect the approach taken in policy.

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Appendices

Appendix I: Land Use Groups by Risk to Groundwater Quality (ROP)⁵

TABLE 2.1 LAND USE GROUPS BY RISK TO GROUNDWATER QUALITY

<i>Group 1—High Risk Land Uses</i>			
<ul style="list-style-type: none"> • Landfills, waste transfer stations, & putrescible waste disposal • Lagoons for sewage treatment • Auto wrecking & salvage yards • Commercial or industrial dry cleaning of textiles & textile products • Foundries, non-ferrous metal smelting & refining, & casting operations • Metal finishing operations (electroplating, electrocoating, galvanizing, painting, application of baked enamel) • Vehicle stampings • Wood & wood product preservation & treatment 	<ul style="list-style-type: none"> • Airports • Bulk liquid trucking • Local inter-municipal passenger service terminals • Warehousing, bulk storage or retail sale of: <ul style="list-style-type: none"> - Oil, natural gas & petroleum products - Household or industrial cleaning products - Agricultural pesticides, herbicides, fungicides & chemicals • Manufacturing of: <ul style="list-style-type: none"> - Petroleum products or asphalt batching (including processing) - Motor vehicles, trucks, & bus bodies - Aircraft & aircraft parts - Trailers 	<ul style="list-style-type: none"> - Rail cars - Mobile homes - Ships & boats - Industrial chemicals - Printing inks - Adhesives - Small electrical appliances - Electric lamps - Wet batteries - Dry electrical industrial equipment - Vehicle engines - Cable & wire - Pharmaceuticals & medicines - Paints & varnishes - Major electric appliances - Plastics & synthetic resins - Lighting fixtures 	<ul style="list-style-type: none"> - Wet electrical equipment - Steering & suspension parts - Engine parts - Motor vehicle wiring - Jewellery & precious metals - Reinforced fibreglass plastic - Electronic components (semi-conductors, printed circuit boards, cathode ray tubes) - Unfinished fabricated metal products - Wheels & brakes - Leather products - Soaps & toilet preparations
<i>Group 2—Moderate Risk Land Uses</i>			
<ul style="list-style-type: none"> • Golf courses • Photo developing facilities • Printing of newspapers, packaging & books • Repair of industrial machinery 	<ul style="list-style-type: none"> • Repair of motor vehicles, aircraft, watercraft, rail vehicles & trucks • Manufacturing of: <ul style="list-style-type: none"> - Plastic parts for vehicles - Telephones 	<ul style="list-style-type: none"> - Business machines - Plastic products - Paper & newsprint - Stereo equipment - Fax machines - Dry batteries - Glass & glass products 	<ul style="list-style-type: none"> - Furniture, caskets, cabinets & other wood products - Radios & televisions - Computing equipment - Rubber products - Photographic equipment
<i>Group 3—Low Risk Land Uses</i>			
<ul style="list-style-type: none"> • Funeral homes & cemeteries • Medical, health & other laboratories • Storage, repair yards & facilities for contractors • Asphalt paving & roofing contractor yards • Lawn care contractors • Machinery equipment rental yards 	<ul style="list-style-type: none"> • Retail sale of agricultural pesticides & herbicides • Repair (including welding) of: <ul style="list-style-type: none"> - Photographic equipment - Watches - Electronic equipment - Appliances - Furniture 	<ul style="list-style-type: none"> - Jewellery - Electronic motors - Small motors - Vending machines - Computer equipment • Manufacturing of: <ul style="list-style-type: none"> - Textiles (including dyeing) - Vehicle fabric accessories 	<ul style="list-style-type: none"> - Dairy - Processed foods & meats - Soft drinks & alcohol - Baked goods - Canned goods - Frozen foods

⁵ Halton Region Official Plan, Part IV: Environmental Quality, s. 145, p. 98.

Appendix II: Land Use Prohibitions and Restrictions Within Municipal Wellhead Protection Zones (ROP)⁶

TABLE 2.2 LAND USE PROHIBITIONS AND RESTRICTIONS WITHIN MUNICIPAL WELLHEAD PROTECTION ZONES

	<i>Zone 1 100-day Travel Time</i>	<i>Zone 2 100-day to 2-year Travel Time</i>	<i>Zone 3 2-year to 10-year Travel Time</i>
<i>Group 1 – High Risk Land Uses</i>	<ul style="list-style-type: none"> Prohibited 	<ul style="list-style-type: none"> Prohibited 	<ul style="list-style-type: none"> Prohibited
<i>Group 2 – Moderate Risk Land Uses</i>	<ul style="list-style-type: none"> Prohibited 	<ul style="list-style-type: none"> Prohibited 	<ul style="list-style-type: none"> Permitted with Best Management Practices & a groundwater monitoring program*
<i>Group 3 – Low Risk Land Uses</i>	<ul style="list-style-type: none"> Prohibited 	<ul style="list-style-type: none"> Prohibited 	<ul style="list-style-type: none"> Permitted with Best Management Practices*
<i>Other Prohibitions</i>	<ul style="list-style-type: none"> Construction of new sanitary sewage systems Spreading or storage of biosolids, septage or manure Installation of new septic systems 	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> None
<i>Other Restrictions</i>	<ul style="list-style-type: none"> New residential development over 20 units will be required to undertake a monitoring program of groundwater quality for a period of at least five years after completion of the development 	<ul style="list-style-type: none"> New residential development over 20 units will be required to undertake a monitoring program of groundwater quality for a period of at least five years after completion of the development 	<ul style="list-style-type: none"> None

* As prescribed in Region's Guidelines for Hydrogeological Studies and Best Management Practices for Groundwater Protection.

⁶ Halton Region Official Plan, Part IV: Environmental Quality, s. 145, p. 99.

Appendix III: Source Water Protection Checklist



Source Water Protection Checklist

Prior to submitting Planning or NEC or Building Permit Applications, email completed checklist to sourcewater@halton.ca

Source Water Protection Information

Is the Subject Property within a vulnerable area? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> WHPA-A <input type="checkbox"/> WHPA-B <input type="checkbox"/> WHPA-C <input type="checkbox"/> WHPA-E <input type="checkbox"/> WHPA-Q1/Q2 <input type="checkbox"/> Issue Contributing Area	Internal Use Only Municipal Staff Name: _____
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Subject Property & Contact Information

Subject Property Address: _____
 Type of Application (Planning, Building Permit, NEC): _____
 Description of Application (attach supporting documentation): _____

	Applicant	Property Owner (if not Applicant)
Name:	_____	_____
Company Name:	_____	_____
Mailing Address (if different then above):	_____	_____
Email:	_____	_____
Day-time Telephone #:	_____	_____

Has property been subject to a previous Source Protection Review (yes or no): _____
 If yes, identify any changes to prescribed activities: _____

Source Protection Activities

Indicate if any of the following activities is or will be occurring on the subject property:

Applicable for All Land Uses SALT <input type="checkbox"/> Salt storage (containers, bins) <input type="checkbox"/> Parking Lot Area > 200 m ² (2,152 ft ²) <input type="checkbox"/> Snow Storage Area > 100 m ² (1,076 ft ²) RECHARGE REDUCTION <input type="checkbox"/> An activity that reduces recharge to an aquifer (i.e. additional paved areas or rooftops)	FUEL HANDLING & STORAGE > 250L (65 gal.) <input type="checkbox"/> Home heating, retail outlet, bulk plant, marina, farm, gas station <input type="checkbox"/> Liquid fuel or fuel oil
Applicable for All Land Uses Except Residential WASTE <input type="checkbox"/> Storage of hazardous waste or liquid industrial waste <input type="checkbox"/> Storage of PCB waste CHEMICAL HANDLING & STORAGE > 25L (6.5 gal.) <input type="checkbox"/> Degreasers, coolants, cleaners, paints, resins, adhesives, wood treatments, sealers, inks, rubber, solvents, vehicle fluids, dry cleaning products, and other detergents AGRICULTURAL (not subject to Nutrient Management Act) <input type="checkbox"/> Application or storage of fertilizers >25 kg (55 lbs.) <input type="checkbox"/> Application or storage of pesticides >2,500 kg (5511 lbs.) <input type="checkbox"/> Application or storage of agricultural source material (i.e. manure) <input type="checkbox"/> Application or storage of unprocessed plant based materials (i.e. fruit or vegetable peels) > 500kg <input type="checkbox"/> Outdoor confinement area or farm animal yard (i.e. barnyard)	
<input type="checkbox"/> NONE OF THE ABOVE ACTIVITIES ARE APPLICABLE	

Declaration: I _____ declare that the information contained in this checklist and all attached documentation is true to the best of my knowledge.

Date (mmm/dd/yyyy) _____ **Registered Owner or Authorized Agent for Owner (Signature)** _____

For more information, call 311 or call Halton Region at 905-825-6000 or email sourcewater@halton.ca

Appendix IV: Landowner/Operator Self-Assessment of Drinking Water Threat Activities

Landowner/Operator Self-Assessment of Drinking Water Threat Activities

Purpose:

This form has been prepared by Halton Region as a first step in the preparation of Risk Management Plans (RMPs) for activities that are identified as significant threats to drinking water under *the Clean Water Act, 2006, S.O. 2006, c.22 (The Clean Water Act, 2006)*.

This form is to be completed by the person engaged in an activity (Landowner/Operator) that is identified as a significant threat to drinking water or where a proposed activity is identified as having potential to be a significant threat to drinking water.

This form will be reviewed by the Halton Region Risk Management Official (RMO) in a Consultation Meeting that is a key step in the preparation of a Risk Management Plan. The information presented in this form will be used by the RMO to:

- 1) Confirm that activities associated with the property are a significant threat to drinking water under *The Clean Water Act, 2006*.
- 2) Evaluate the effectiveness of existing "Risk Management Measures" in reducing the potential for the activities to be a significant threat to drinking water.
- 3) Identify the risk management measures required to ensure that the identified activities cease to be or do not become significant threats to drinking water in Halton Region.

The RMO may also use information obtained through Consultation or through an on-site inspection by the RMO or an RMI to assist in making the above decisions.

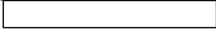
In the event that the landowner and the person(s) engaged in the activity are not the same, the RMO will negotiate the RMP with the landowner and the person engaged in the activity. The RMP will dictate responsibilities for implementing, and complying with, the agreed upon RMP. In some cases, the landowner may also be included in the development and negotiation of the RMP.

Instructions

- 1) Complete Form 1
- 2) Complete Form 2 and following corresponding Forms (2A to 2M) **for both existing and proposed activities**
- 3) If the answers to each item in Form 2 are "No", the RMO/RMI will review the land use, site activities, and may conduct an on-site inspection. Pending findings of the review, the RMO/RMI may identify activities that may require further evaluation.

Form 1 – Property Information				
1	Property Address:			
2	Tax Assessment Roll # :			
		Landowner (Primary Contact)	Operator / Tenant	Operator / Tenant
3	Name (Print Name): Relation to Property:			
4	Facility/Business Name (if applicable):			
5	Mailing Address (If different then above):			
6	Day-time Telephone #: Email:			
7	Describe current land use	Type	Describe Activities	
		Residential		
		Agricultural		
		Commercial		
		Industrial		
		Institutional		
		Other		
8	Describe previous activities that may have occurred on the property over the past 10 years			
9	List and provide copies of environmental studies (i.e. Phase I/II ESA) completed for the property?			

Part 1 – Property Information (Detailed Layout Map)



G-2

Form 2 - Initial Screening of Drinking Water Threats					
Do any of the following Activities take place on the property?		Yes	No	Unknown	If "Not Sure" or "Yes" Fill Out Corresponding Form #
1	Waste including hazardous wastes				2A
2	Sewage systems including septic systems				2B
3	The application, handling and storage of agricultural source material to land (i.e. manure)				2C
4	The application, handling, and storage of non-agricultural source material to land (i.e. biosolids, food waste)				2D
5	The application, handling, and storage of commercial fertilizer to land.				2E
6	The application, handling, and storage of pesticide to land.				2F
7	The application, handling, and storage of road salt.				2G
14	The storage of snow.				2G
15	The handling and storage of fuel (i.e.gasoline, home heating oil).				2H
16	The handling and storage of a dense non-aqueous phase liquid (i.e. paint strippers, metal and plastic cleaning solvents)				2I
17	The handling and storage of an organic solvent (i.e. paint thinners, glue solvents).				2J
18	Chemicals used in the de-icing of aircrafts.				See RMO/RMI
19	An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.				2K
20	An activity that reduces the recharge of an aquifer.				2K
21	Livestock grazing, pasturing, or an outdoor confinement area, or a farm-animal yard.				2L
22	Transport pathways				2M

Form 2A - Detailed Threat Evaluation – Waste					
1	Is the property registered through Ontario's Hazardous Waste Information Network (HWIN)? [Y/N] [If yes, please provide HWIN Reference Number]				
2	Is the property registered as a Waste Receiver through the Ontario Ministry of the Environment and Climate Change (MOECC)? [Y/N] [If yes, please provide Waste Receiver Number]				
3	Does the property have an Ontario MOECC Certificate of Approval (C of A) or Environmental Compliance Approval (ECA) for waste storage or waste disposal? [Y/N]				
4	If the property has a C of A or ECA for waste storage – please provide the RMO/RMI with an updated copy of the approval and a Statement of Conformity with the CWA provided by the Issuing Agency				
			Petroleum Refining Waste	Hazardous Waste or Liquid Industrial Waste	Municipal Waste
5	Identify the types of waste disposed (Check all that apply):				
6	Estimate area of waste storage:	< 1 Hectare			
		1 -10 Hectares			
		>10 Hectares			
7	Is waste stored above ground, below ground, or partially below ground?				
8	Is the property used to store or dispose of Polychlorinated Biphenyl (PCB) waste? [Y/N] [If yes, provide details to RMO/RMI]				
9	Are any other liquid wastes stored on the property? [Y/N] [If yes, provide details to RMO/RMI]				
10	Is there a leak detection monitoring system? [Y/N]				
11	Have liquid waste products or leachate effluents leaked or infiltrated into the subsurface? [Y/N] [If yes, provide documentation to RMO/RMI for review]				
12	Is there a monitoring network in place? [Y/N] [If yes, provide documentation to RMO/RMI for review]				
13	Is there knowledge of waste contaminants in groundwater outside the property boundary? [Y/N] [If yes, provide documentation to RMO/RMI for review]				
14	Have measures been taken to remove/contain waste contaminants from the subsurface? [Y/N] [If Yes, provide documentation to RMO/RMI for review]				
15	Is there an Emergency Response Plan in place? [Y/N] [If yes, provide to RMO/RMI for review]				

Form 2B - Detailed Threat Evaluation – Sewage		
Sanitary Sewage Systems		
1	Is the property serviced by municipal or communal sewage system? <i>[Y/N]</i>	
2	Does the property have a septic system, outhouse, earth-pit privy, privy vault, greywater system, cesspool, or leaching bed system (including systems that are no longer actively used)? <i>[Y/N]</i>	
3	Does the property have a holding tank that is used to store sewage to be hauled away? <i>[Y/N]</i> <i>[If yes, provide holding tank capacity (litres)]</i>	
4	Does the sewage system on the property service more than one residence/building/property? <i>[Y/N]</i>	
5	Is the capacity of the sewage system greater than 10,000 L/day? <i>[Y/N]</i>	
	a) If yes, is there a Certificate of Approval (C of A) or Environmental Compliance Approval (ECA) to operate? <i>[Y/N]</i>	
	b) If the property has a C of A or ECA, provide RMO/RMI with an updated copy of the approval and a Statement of Conformity with the CWA provided by the Issuing Agency.	
6	Are records available for sewage system installation? <i>[Y/N]</i> <i>[If yes, provide details of dates and construction details]</i>	
7	Has the sewage system been inspected by a licensed contractor? <i>[Y/N]</i> <i>[If yes, provide details of dates and inspection findings]</i>	
8	Have remedial actions been taken to improve sewage system performance? <i>[Y/N]</i> <i>[If yes, provide details of work performed and dates]</i>	
9	Has the holding tank been pumped out within the last five (5) years? <i>[Y/N]</i> <i>[If yes, provide details of work performed and dates]</i>	
Stormwater Management Facilities		
10	Is there a stormwater management facility on the property? <i>[Y/N]</i>	
	a) If yes, is there a Certificate of Approval (C of A) or Environmental Compliance Approval (ECA) to operate? <i>[Y/N]</i>	
	b) If the property has a C of A or ECA, provide RMO/RMI with an updated copy of the approval and a Statement of Conformity with the CWA provided by the Issuing Agency.	
11	Are there systems in place to promote infiltration of excess water from precipitation events, such as permeable pavements, infiltration galleries, oil-grit separators, etc.? <i>[Y/N]</i>	

Form 2C - Detailed Threat Evaluation – Agricultural Source Material (manure)		
1	Is ASM stored on the property? [Y/N]	
2	How much nitrogen is estimated within the stored ASM: [Select annual maximum]	< 0.5 Tonnes
		0.5 – 5 Tonnes
		> 5 Tonnes
		Not Known
3	How is the ASM stored:	Temporary field nutrient storage site at or above grade
		Temporary field nutrient storage site at or below grade
		Permanent nutrient storage facility below grade
		Permanent nutrient storage facility partially below grade
		Permanent nutrient storage facility at or above grade
		Other [Provide description to RMO/RMI]
4	Is ASM applied to the land on the property? [Y/N]	
5	What is the typical area to which ASM is applied:	< 1 Hectare
		1 – 10 Hectares
		> 10 Hectares
6	a)	Is ASM application regulated by a Nutrient Management Plan, or Environmental Farm Plan? [Y/N]
	b)	If yes, provide RMO/RMI with an updated copy of the Plan and a Statement of Conformity with the CWA provided by the Issuing Agency.
7	Are best management practices in place, such as:	Testing of nutrient demand of soil prior to application [Y/N]
		Cover crops [Y/N]
		Buffer strips [Y/N]
		Other [Provide Description to RMO/RMI]
8	Is the Application of ASM carried out by a trained Operator? [Y/N]	
9	Do ASM application contractors (including Operators) receive training on the importance of optimizing ASM application to maximize crop yield? [Y/N]	
10	Does equipment monitoring application rates of ASM when spreading? [Y/N]	
11	Is there a monitoring network in place? [Y/N] [If yes, provide documentation]	
12	Is there knowledge of ASM contaminants in groundwater outside the property boundary? [Y/N] [If yes, provide documentation to RMO/RMI for review]	
13	Have measures been taken to remove/contain ASM contaminants from the subsurface? [Y/N] [If yes, provide documentation to RMO/RMI for review]	
14	Is there an Emergency Response Plan in place? [Y/N] [If yes, provide to RMO/RMI for review]	

Form 2D - Detailed Threat Evaluation – Non-Agricultural Source Material		
Non-Agricultural Source Material (NASM) refers to biosolids other than generated from agricultural manure including from sewage treatment facilities, pulp and paper mills, and food processing operations.		
1	Is NASM stored on the property? [Y/N]	
2	How much nitrogen is estimated within the stored NASM: [Select annual maximum]	< 0.5 Tonnes
		0.5 – 5 Tonnes
		> 5 Tonnes
		Not Known
3	How is the NASM stored:	Temporary field nutrient storage site at or above grade
		Temporary field nutrient storage site at or below grade
		Permanent nutrient storage facility below grade
		Permanent nutrient storage facility partially above and below grade
		Permanent nutrient storage facility at or above grade
	Other [Provide description to RMO/RMI]	
3	Is NASM applied to the land on the property? [Y/N]	
4	What is the typical area to which NASM is applied:	< 1 Hectare
		1 – 10 Hectares
		> 10 Hectares
5	Is the Application of NASM carried out by a trained Operator (including owner or contractor)? [Y/N]	
6	Do NASM application contractors (including Operators) receive training on the importance of optimizing NASM application to maximize crop yield? [Y/N]	
7	Does NASM application equipment contain meters for regulating the rate of spreading? [Y/N]	
8	Is there a monitoring network in place? [Y/N] [If yes, provide documentation to RMO/RMI for review]	
9	Is there knowledge of NASM contaminants in groundwater outside the property boundary? [Y/N]	
10	Have measures been taken to remove/contain NASM contaminants from the subsurface? [Y/N]	
11	Is there an Emergency Response Plan in place? [Y/N] [If yes, provide to RMO/RMI for review]	

Form 2E - Detailed Threat Evaluation – Commercial Fertilizer			
1	Are Commercial Fertilizers handled or stored for:	Use on the property [Y/N];	
		For Wholesale Sale [Y/N];	
		For Retail [Y/N];	
		For Manufacture/Processing? [Y/N];	
2	How much Commercial Fertilizer may be handled or stored on the property: [Select annual maximum]	No fertilizer stored	
		< 10 kg	
		10 kg– 100 kg	
		100 kg – 2.5 Tonnes	
3	Is Commercial Fertilizer applied to the property? [Y/N];		
4	What is the typical area to which Commercial Fertilizer is applied:	< 0.5 Hectares	
		0.5 – 10 Hectares	
		> 10 Hectares	
5	What is the typical nitrogen content of the Commercial Fertilizer:	< 5%	
		5 – 25%	
		> 25%	
6	What is the typical phosphorus content of the Commercial Fertilizer:	< 5%	
		5 - 25%	
		>25%	
7	a)	Is Commercial Fertilizer regulated by a Nutrient Management Plan, or Environmental Farm Plan? [Y/N] [If yes, please provide documentation to RMO/RMI for review]	
	b)	If yes, please provide RMO/RMI with an updated copy of the Plan and a Statement of Conformity with the CWA provided by the Issuing Agency.	
8	Are best management practices in place, such as:	Testing of nutrient demand of soil prior to application [Y/N]	
		Cover crops [Y/N]	
		Buffer strips [Y/N]	
		Other [Provide Description to RMO/RMI]	
9	Are there measures in place to prevent Commercial Fertilizer from being released to soil or groundwater? [Y/N] [If yes, provide to details to RMO/RMI];		
10	Is the Application of Commercial Fertilizer carried out by a trained Operator (including owner or contractor)? [Y/N] [If yes, provide copies of certificates to RMO/RMI for review]		
11	Do Commercial Fertilizer application contractors (including Operators) receive training on the importance of optimizing fertilizer application to maximize crop yield? [Y/N]		
12	Does Commercial Fertilizer application equipment contain meters for regulating the rate of spreading? [Y/N]		
13	Is there an Emergency Response Plan in place? [Y/N] [If yes, provide to RMO/RMI for review]		

Form 2F - Detailed Threat Evaluation – Pesticide				
		Pesticide:	Stored	Applied
1	Are pesticides stored or applied on the property that contains the following ingredients? <i>[Y/N to all that apply in each column]:</i>	MCPA		
		Mecoprop		
		Atrazine		
		Dicamba		
		2,4-D		
		Dichloropropene-1,3		
		MCPB		
		Metalaxyl		
		Pendimethalin		
		Glyphosate		
		Metalochlor or s-Metalochlor		
2	Are pesticides stored for:	Use on the property <i>[Y/N]:</i>		
		For Wholesale Sale <i>[Y/N]:</i>		
		For Retail Sale <i>[Y/N]:</i>		
		For Manufacture/Processing <i>[Y/N]:</i>		
3	Are more than 2,500 kg of pesticides stored or handled for use on the property? <i>[Y/N]:</i>			
4	Are more than 250 kg of pesticide stored or handled for retail sale? <i>[Y/N]:</i>			
5	Pesticides are applied on the property to an area that is:	< 1 Hectares		
		1– 10 Hectares		
		10 – 100 Hectares		
		>100 Hectares		
6	a)	Are any approvals in place governing pesticide storage on the property? <i>[Y/N]</i>		
	b)	If yes, please provide RMO/RMI with an updated copy of the Approval and a Statement of Conformity with the CWA provided by the Issuing Agency.		
7	Are there measures in place to prevent stored pesticides from being released to soil or groundwater? <i>[Y/N]</i> <i>[If yes, provide details to RMO/RMI for review]</i>			
8	Are pesticides being applied by a licensed contractor? <i>[Y/N]</i>			
9	Is there an Emergency Response Plan in place? <i>[Y/N]</i> <i>[If yes, provide to RMO/RMI for review]</i>			

Form 2G - Detailed Threat Evaluation – Road Salt and Snow

Storage of Road Salt		
1	How much salt may be stored on the property for use in de-icing: <i>[Select annual maximum]</i>	No salt stored
		< 10 kg
		10 kg– 100 kg
		100 kg – 1 Tonne
		>1 Tonne
2	What is the type of salt stored:	Road Salt <i>[Y/N]</i>
		Treated Road Salt <i>[Y/N]</i>
		Sand and Salt Mix <i>[Y/N]</i>
		Other <i>[Please describe]</i>
3	Is there storage of winter de-icing agents that do not contain chloride? <i>[Y/N]</i> <i>(If yes, please describe)</i>	
4	Are measures in place to keep stored salt dry and minimize exposure to rain, snow or wind (i.e. roofs, plastic bags, etc.)? <i>[Y/N]</i>	
5	Are measures in place to keep soluble salt parameters from infiltrating into the underlying soil? <i>[Y/N]</i>	
Application of Road Salt		
6	Are winter de-icing agents applied on the property? <i>[Y/N]</i> <i>(If no, proceed to question 11)</i>	
7	What types of winter de-icing agents are applied on the property:	Road Salt <i>[Y/N]</i>
		Treated Road Salt <i>[Y/N]</i>
		Sand and Salt Mix <i>[Y/N]</i>
		Salt Alternatives <i>[Y/N]</i> <i>(Please describe)</i>
		Sand Only <i>[Y/N]</i>
		Other <i>[Please describe]</i>
8	What is the typical area to which salt is applied?	< 200 m ²
		200 – 2,000 m ²
		> 2,000 m ²
9	On what type of surface is the salt applied to?	Concrete Pavement <i>[Y/N]</i>
		Asphalt Pavement <i>[Y/N]</i>
		Permeable Pavement <i>[Y/N]</i>
		Gravel <i>[Y/N]</i>
		Soil <i>[Y/N]</i>
		Other <i>(Please describe)</i>

Form 2G - Detailed Threat Evaluation – Road Salt and Snow			
10	Is drainage run-off from the area where salt is applied directed to:	Storm sewer system [Y/N]	
		Ditch [Y/N]	
		Adjacent Lands [Y/N]	
		Other (Please describe)	
Snow Storage			
11	Is the property used to store snow that may contain salt from application on roads, on the property, or from other properties? [Y/N]		
12	Is the snow stored in an area:	0.01 to 0.5 Hectares	
		0.5 to 1 Hectares	
		1 to 5 Hectares	
		> 5 Hectares	
13	Is the snow stored:	On paved surfaces that drain to adjacent soil? [Y/N]	
		On paved surfaces that drain to storm water systems? [Y/N]	
		On native soil that can drain to surface water features? [Y/N]	
		On native soil where drainage will infiltrate locally? [Y/N]	
Risk Management Measures			
14	Are any of the following alternatives to salt application being used?	Urea Products? [Y/N]	
		Reduced-Chloride Products? [Y/N]	
		Chloride Free-Products? [Y/N]	
		Beet Juice? [Y/N]	
		Other [Please describe]	
15	Is the application of winter de-icing agents carried out by:	Owner [Y/N]	
		Staff/Employees [Y/N]	
		Contractor [If yes, please provide name, and contact details]	
16	Are the persons responsible for winter de-icing certified by the Smart About Salt Program? [Y/N]		
17	Do salt application contractors (including Operators) receive training on the importance of optimizing salt application to meet safety requirements? [Y/N]		
18	Is there guidance in place to optimize application of salt to meet safety requirements? [Y/N]		
19	Does salt application equipment contain meters for regulating the rate of spreading? [Y/N]		
20	Is there a system/program in place to maintain equipment and calibrate meters [Y/N]		
21	Is there a system in place to control drainage runoff from the area of salt application (i.e. Curbs to direct to a storm sewer system)? [Y/N]		

Form 2G - Detailed Threat Evaluation – Road Salt and Snow

22	Is there a monitoring network in place? [Y/N] [If yes, provide documentation to RMO/RMI for review]	
23	Have measures been taken to remove/contain salt contaminants (chloride) from the subsurface? [Y/N]	
24	Is there an Emergency Response Plan in place? [Y/N] [If yes, provide to RMO/RMI for review]	

Form 2H - Detailed Threat Evaluation – Fuel						
1	a)	Is the property registered for fuel storage with the Technical Safety and Standards Authority (TSSA)? [Y/N]				
	b)	If yes, please provide RMO/RMI with an updated copy of the registration and a Statement of Conformity with the CWA provided by the Issuing Agency.				
2	Is the property considered to be a Bulk Plant as per O. Reg. 217/01 (Liquid Fuels) [Y/N]					
3	Is the property considered to be a Facility as per O. Reg. 213/01 (Fuel Oil) [Y/N]					
		Gasoline	Diesel Fuel / Heating Oil	Aviation Fuel	Other (Identify fuels, oils, lubricants)	
4	Identify the types of fuel used or stored (Check all that apply).					
5	How much fuel may be on-site (annual maximum):	< 25 L (Jerry Can)				
		25 – 250 L (Drum)				
		250 – 2,500 L				
		> 2,500 L				
6	How many containers/tanks?					
7	Are the containers/tanks:	Portable?				
		Above-Ground?				
		Below-Ground?				
		Inside Buildings?				
8	Is secondary containment in place to contain leakage before it reaches the soil/groundwater? [Y/N]			Fully [Y/N]		
				Partially [Y/N]		
9	Is there a leak detection monitoring system? [Y/N] [If yes, provide documentation to RMO/RMI for review]					
10	Do you know if fuel has historically leaked into the subsurface? [Y/N] [If yes, provide documentation to RMO/RMI for review]					
11	Is there a monitoring network in place? [Y/N] [If yes, provide documentation to RMO/RMI for review]					
12	Is there knowledge of fuel contaminants in groundwater outside the property boundary? [Y/N] [If yes, provide documentation to RMO/RMI for review]					
13	Have measures been taken to remove/contain contaminants from the subsurface? [Y/N]					
14	Is there an Emergency Response Plan in place? [Y/N] [If yes, provide to RMO/RMI for review]					

Form 2I - Detailed Threat Evaluation – Dense Non-Aqueous Phase Liquid								
1	a)	Is the property registered for chemical storage with the TSSA? [Y/N]						
	b)	If yes, provide RMO/RMI with an updated copy of the registration and a Statement of Conformity with the CWA provided by the Issuing Agency.						
2	Are any of these chemicals or chemical classes (i.e. PAH) used or stored [Y/N to all that apply]: Note: Chemicals are typically listed on material data safety sheets (MSDS) * See List of Polycyclic Aromatic Hydrocarbon Compounds		Tetrachloroethylene/ Perchloroethylene (PCE)					
			Trichloroethylene (TCE)					
			Vinyl Chloride (VC)					
			Dioxane-1,4 (1,4-Dioxane or 1,4D)					
			Polycyclic Aromatic Hydrocarbons (PAH)*					
3	What size are individual containers [Y/N to all that apply]:		DNAPL Chemical or Chemical Class:	PCE	TCE	VC	1,4-D	PAH
			< 1 L Packages					
			1 – 25 L containers					
			> 25 L containers					
4	What is the total volume of these chemicals that may be stored on-site (Specify number of containers/tanks):		< 25 L					
			25 – 250 L					
			250 – 2,500 L					
			> 2,500 L					
5	Are the containers/tanks:		Portable?					
			Above-Ground?					
			Below-Ground?					
6	Are other liquids stored that may contain chlorinated solvent or polychlorinated chlorinated biphenyl chemicals? [Y/N] [If yes, provide details to RMO/RMI]							
7	Is Secondary Containment in place to contain leakage before it reaches the soil/groundwater? [Y/N]		Fully?					
			Partially?					
8	Is there a leak detection monitoring system? [Y/N] [If yes, provide documentation]							
9	Have DNAPL chemicals been spilled or historically leaked into the subsurface? [Y/N/Not Sure] [If yes, provide documentation to RMO/RMI]							
10	Have historical spills or leaks been large enough to report to the MOECC? [Y/N/Not Sure]							
11	Is there a monitoring network in place? [Y/N] [If yes, provide documentation]							
12	Is there knowledge of DNAPL contaminants in groundwater outside the property boundary? [Y/N/Not Sure] [If yes, provide documentation to RMO/RMI for review]							
13	Is there an Emergency Response Plan in place? [Y/N] [If yes, please provide for review]							

Form 2J - Detailed Threat Evaluation – Organic Solvents						
1	a)	Is the property registered for chemical storage with the TSSA? [Y/N]				
	b)	If yes, provide RMO/RMI with an updated copy of the registration and a Statement of Conformity with the CWA provided by the Issuing Agency.				
2	Are any of these organic solvent chemicals handled or stored [Y/N to all that apply]: Note: Chemicals are typically listed on material data safety sheets (MSDS)	Carbon Tetrachloride (CT) [Y/N]				
		Chloroform (CFM) [Y/N]				
		Methylene Chloride (MC) [Y/N]				
		Pentachlorophenol (PCPH) [Y/N]				
		Other (Describe)				
3	What size are individual containers [Y/N to all that apply]:	Organic Solvent:	CT	CFM	MC	PCPH
		< 1 L Packages				
		1 – 25 L containers				
		> 25 L containers				
4	What is the total volume of Organic Solvents that may be stored on-site (Specify number of containers/tanks):	< 25 L				
		25 – 250 L				
		250 – 2,500 L				
		> 2,500 L				
5	Are the containers/tanks:	Portable?				
		Above-Ground?				
		Below-Ground?				
6	Is Secondary Containment in place to contain leakage before it reaches the soil/groundwater? [Y/N]	Fully?				
		Partially?				
7	Is there a leak detection monitoring system? [Y/N] [If Y, Provide documentation]					
8	Have organic solvent chemicals historically leaked into the subsurface? [Y/N/Not Sure]					
9	Have historical spills or leaks been large enough to report to the MOECC? [Y/N/Not Sure]					
10	Is there a monitoring network in place? [Y/N] [If yes, provide documentation]					
11	Is there knowledge of organic solvent contaminants in groundwater outside the property boundary? [Y/N/Not Sure] [If yes, provide documentation to RMO/RMI for review]					
12	Have measures been taken to remove/contain organic solvent contaminants from the subsurface? [Y/N] [If yes, provide documentation to RMO/RMI for review]					
13	Is there an Emergency Response Plan in place? [Y/N] [If yes, provide to RMO/RMI for review]					

Form 2K - Detailed Threat Evaluation – Water Quantity		
Water Use		
1	Is there a water supply well on the property? [Y/N]	
2	Is the well actively used? [Y/N]	
3	Is the well used for residential purposes? [Y/N]	
4	If no, what purpose is the well used for?	
5	If no, Is there a Permit to Take Water issued by the MOECC – provide Reference Number and a copy of the Permit to Take Water	
	a)	Please estimate daily average water taking (L):
	b)	Please estimate maximum daily water taking (L):
6	Is the used water:	Consumed (removed from property in containers or product)? [Y/N]
		Returned to the environment on the property? [Y/N]
		Directed to a municipal sewer system? [Y/N]
7	Are measures in place to minimize water consumption? [Y/N] [If yes, provide details to RMO/RMI for review]	
Reduction of Recharge		
8	What portion of the property contains impervious surfaces? [%]	
9	Is precipitation run-off from impervious services:	Directed to return to the environment on the property by infiltration? [Y/N]
		Directed to a storm sewer system and infiltrated on the property? [Y/N]
		Directed to a storm sewer system and removed from the property? [Y/N]

Form 2L - Detailed Threat Evaluation – Livestock					
1	Please indicate the maximum number of each type of livestock and/or poultry on the property at any one time over the last 10 years (including grazing/pasture land acreage):	Livestock Type	# of Livestock	Grazing/Pasture Lands (Acres)	Comments
		Beef			
		Dairy			
		Horses			
		Chicken			
		Pigs			
		Goats			
		Sheep			
		Turkey			
		Other			
2	Do you have an outdoor confinement area? <i>[Y/N]</i>				
3	What is the total land area of the outdoor confinement area? [acres]				
4	Is run-off management controls implemented? (i.e. collection systems, vegetated infiltration areas,				
5	Are setbacks applied from surface water and wells (i.e. buffer strips, fencing)?				
6	Is clean water diverted away from outdoor confinement areas? <i>[Y/N]</i>				
7	Erosion controls applied? (i.e. rotational grazing, control structures)?				

Form 2M - Detailed Threat Evaluation – Transport Pathways

Transport Pathways may consist of excavations for building foundations, utilities, boreholes, or other subsurface structures that may potentially increase the vulnerability score that was assigned in the Vulnerability Assessment presented in the Assessment Report. In some cases, increased vulnerability scores may result in an identified activity becoming a significant threat to drinking water.

Wells			
1	Are any of the following types of wells present on the property (if more than one, please provide number):	Dug Water Supply Wells? [Y/N]	
		Drilled Water Supply Wells? [Y/N]	
		Irrigation Wells? [Y/N]	
		Dewatering Wells? [Y/N]	
		Geothermal Wells? [Y/N]	
		Monitoring Wells	
		Drywell or soakaway pit? [Y/N]	
		Other? [Y/N]	
2	Are the wells identified above currently in use? [Y/N]		
3	Are there any wells on the property that are not currently in use?		
4	Are there any records of former wells that have been abandoned in accordance with O. Reg. 903 (as Amended)? [Y/N/Not Sure] [If Y, provide available documentation or depths to the RMO/RMI to confirm].		
5	Are the wells sufficiently deep to intersect the municipal water supply aquifer? [Y/N/Not Sure] [If Y, provide available documentation or depths to the RMO/RMI to confirm].		
Excavations, Utilities, Foundations, Tunnels or other Subsurface Structures			
6	Are there any excavations or grading for utilities foundations, or other structures in place that extend to a depth up to 2 m below ground surface? [Y/N/Not Sure]		
7	Are there any excavations, grading for foundations, tunnels or other structures that extend to a depth more than 2 m below the low point of grade on the property? [Y/N/Not Sure] – [If Y or Not Sure, provide available documentation to RMO/RMI for review].		