Source Protection Plan

This document contains two Source Protection Plans for the following Source Protection Areas:

- Halton Region
- Hamilton Region

Policies included apply to both Source Protection Areas

- Initially Approved by the Minister of the Environment and Climate Change on August 5, 2015
- In effect since December 31, 2015
- Amendment approved January 30, 2019

Prepared on behalf of the Halton-Hamilton Source Protection Committee

October, 2017
Source Protection Plans
for the
Halton Region Source Protection Area
and the
Hamilton Region Source Protection Area
Version 3.3
October 12, 2017

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- updated inset on Figure 10 and new Figure 11, updated reference to Greensville well supply studies

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Please contact us if you require this document in another format.

For more information about the Clean Water Act, 2006 and how you can play a role in protecting drinking water sources in the Halton-Hamilton Source Protection Region, please visit our website: www.protectingwater.ca
Executive Summary

Ontario is a land rich in water resources, a natural wealth that the province is committed to protecting. From grassroots community projects to provincial government strategies and legislation, people across Ontario are working together to ensure safe and sustainable drinking water for generations to come.

The Source Protection Plan

The first step in ensuring the future of Ontario’s drinking water sources came in 2006 with the introduction of the Clean Water Act. This key piece of legislation, together with Ontario Regulation 287/07, provides the legal framework for source protection planning and the first step in a multi-barrier approach to safeguard the quality and quantity of the province’s water supplies. The Act empowers communities to be involved in drinking water source protection through all stages of source protection planning, from the assessment of watersheds through to the implementation of source protection policies.

The Source Protection Plan, as mandated by the Clean Water Act, is the culmination of extensive science-based assessments, consultation, collaboration, and research. The Plan contains essential policies to ensure that activities that pose significant threats to municipal drinking water sources in the Halton Region Source Protection Area and the Hamilton Region Source Protection Area cease to exist or never become significant. This document combines the Plans for the two Source Protection Areas and is referred to as the Plan.

The Explanatory Document for this Plan, available on our website, details the rationale for each policy. The Source Protection Plan, a living document, will be reviewed and updated as necessary.

Drinking water threats

The Clean Water Act, 2006 identifies 21 activities that pose threats to the quality and quantity of drinking water sources (see Ontario Regulation 287/07). The application of pesticides, the storage of snow, or the handling and storage of fuel, for example, may impact source water quality. A threat to drinking water quantity, meanwhile, may occur if water is taken from, but not returned to, a drinking water source.

The Assessment Reports for the Halton Region and the Hamilton Region Source Protection Areas, provided as an appendix to this Plan, contain detailed descriptions and thorough evaluations of the Areas’ watersheds and the associated activities that pose significant threats to the quality and the quantity of the Areas’ sources of drinking water.

**Bold text** indicates that a definition or additional detail is included in the Glossary of Terms – Appendix D.
Policy tools

The Clean Water Act defines the tools available for policy development and implementation. These include:

- **Prescribed instruments**, such as permits
- Land use planning
- Education and outreach
- Incentive programs
- Prohibition
- Risk management plans
- Restricted land uses

The policies in this Plan have been developed in accordance with the tools above and clearly identify the parties responsible for their implementation. To assist in reading the Plan, two user-friendly reference tables provide easy access to specific policies, identifying individual policies by tool and by drinking water threat.

Policies

This Source Protection Plan includes general policies that set out timelines and designate land uses and activities in relation to drinking water threat policies, threat policies based on prescribed and local threats, and other policies set out to achieve the Plan’s objectives. In addition, monitoring policies, necessary to evaluate the implementation of significant threat policies, are included.

Most importantly, the policies contained in this Source Protection Plan provide the municipalities and residents of Halton Region and Hamilton Region Source Protection Areas with the necessary foundation, information, and agenda to support and carry out the province’s ongoing commitment to protecting our precious drinking water sources.
TABLE OF CONTENTS to be confirmed

Executive Summary ................................................................. i

1. INTRODUCTION................................................................................................................. 1

2. SOURCE PROTECTION PLAN AUTHORITY AND IMPLEMENTATION ......................... 4
   2.1 General Authority ........................................................................................................ 4
   2.2 Objectives of the Source Protection Plan ................................................................. 4
   2.3 Priorities of the Source Protection Plan .................................................................. 5
   2.4 Effective Date and Plan Amendments ................................................................... 5
   2.5 Threats to Drinking Water Sources ......................................................................... 6
   2.6 Where Policies Apply .............................................................................................. 6
   2.7 Tools Used in Policy Development ......................................................................... 26
   2.8 Reading the Plan ..................................................................................................... 27

3. SOURCE PROTECTION PLAN POLICIES ..................................................................... 33
   3.1 General Policies ....................................................................................................... 33
   3.2 Drinking Water Threat Policies ............................................................................ 35
       3.2.1 Prescribed Threat Policies .............................................................................
       3.2.2 Local Threat Policies ..................................................................................
   3.3 Other Policies ........................................................................................................ 60
       3.3.1 Transport Pathways ....................................................................................... 60
       3.3.2 Climate Data .................................................................................................. 61
       3.3.4 Disposal of Imported Fill ............................................................................. 61
       3.3.5 Spill Prevention Plans, Spill Contingency Plans, and Emergency Response Plans Along Highways, Railway Lines, or Shipping Lanes ................................................................. 62
       3.3.6 Lake Ontario Outreach ............................................................................... 62

4. REFERENCES ................................................................................................................... 64

LIST OF TABLES
1. Water quality and quantity threat policy reference table .................................................. 28
2. Other policy reference table ........................................................................................... 32

LIST OF FIGURES
1. Halton-Hamilton Source Protection Region ..................................................................... 2
2. Kelso existing and would be significant groundwater threat areas .................................. 9
3. Walkers Line existing and would be significant groundwater threat areas .................... 10
4. Campbellville existing and would be significant groundwater threat areas ................. 11
5. Freelton existing and would be significant groundwater threat areas .......................... 12
6. Carlisle existing and would be significant groundwater threat areas ............................ 13
7. Carlisle existing and would be significant surface water threat areas .......................... 14
8. Existing and would be significant Lake Ontario threat areas .................................... 15
9. Cedarvale wellhead protection area existing and would be significant groundwater threat areas ................................................................. 16
10. Cedarvale issue contributing area existing and would be significant groundwater threat areas ................................................................. 17
11. Greensville existing and would be significant groundwater threat areas .................... 18
12. Current road salt application policy area - Halton Area WHPA and ICA .................. 19
13. Current road salt application policy area - Halton Area WHPA and ICA .................. 20
14. Current road salt application policy area - Halton Area WHPA and ICA .................. 21
15. Current road salt application policy area - Halton Area WHPA and ICA .................. 22
16. Kelso WHPA-Q1 and Q2 ......................................................................................... 23
17. Campbellville WHPA-Q1 and Q2 ................................................................. 24
18. Cedarvale WHPA-Q1 and Q2 ................................................................. 25

LIST OF APPENDICES

A. Assessment Reports for Halton Region Source Protection Area and Hamilton Region Source Protection Area And the Explanatory Document in support of the Source Protection Plan .......... 65
B. Collaboration and Consultation ........................................................................... 67
   B.1. Collaboration ............................................................................................... 68
   B.2. Consultation ............................................................................................... 70
C. Clean Water Act, 2006 Part III Policy Lists ......................................................... 73
D. Glossary of Terms ............................................................................................... 79
1. Introduction

Clean, safe drinking water is essential to protect the health of Ontario’s residents. The May 2000 tragedy caused by the contamination of municipal drinking water in the Town of Walkerton resulted in the Province of Ontario enhancing its efforts to safeguard drinking water supplies. The purpose of the Clean Water Act, introduced in 2006, is to protect drinking water by starting at the source. It is part of a multi-barrier approach to reduce both quality and quantity risks to drinking water supplies. The Clean Water Act requires communities to develop collaborative, locally-driven, science-based protection plans for their existing and future sources of drinking water.

This document (referred to as the Plan) contains two Source Protection Plans that apply to the Source Protection Areas, Halton Region and Hamilton Region, that comprise the Halton-Hamilton Source Protection Region (see Figure 1). The Halton Region and the Hamilton Region Source Protection Areas are generally equivalent to the watersheds managed by the Halton Region Conservation Authority (Conservation Halton), and the Hamilton Conservation Authority, which are called Source Protection Authorities under the Act. However, minor adjustments to watershed boundaries were made to reflect the drainage within the watershed. (Note: within this report, the Source Protection Region or Region refers to the Halton-Hamilton Source Protection Region, and Halton Area or Hamilton Area refers to the two Source Protection Areas unless otherwise identified.)

The Halton Region Source Protection Area comprises lands within the municipalities of Halton Region — City of Burlington and towns of Milton, Oakville, and Halton Hills; the City of Hamilton; the County of Wellington — Township of Puslinch; and Peel Region — City of Mississauga. Approximately 94 percent of the population receive their drinking water from municipal water treatment plants located within the watersheds that are owned and operated by Halton Region and the City of Hamilton. The municipal water takings are from two sources – 88 percent from Lake Ontario and 6 percent from groundwater aquifers. Private systems, including wells and cisterns, provide water to the remaining 6 percent of the population.

The Hamilton Region Source Protection Area stretches from the Township of Puslinch in the northwest to the Town of Grimsby in the east and is primarily within the City of Hamilton. Approximately 97 percent of the population receive their drinking water from municipal water treatment plants located within the watersheds that are owned and operated by the City of Hamilton and from a municipal plant in the Town of Grimsby owned and operated by Niagara Region. The municipal water takings are from two sources – almost 97 percent from Lake Ontario and less than 1 percent from groundwater aquifers. Private systems, including wells and cisterns, provide water to the remaining 3 percent of the population.

A thorough assessment of the characteristics of the Region’s watersheds was completed in accordance with the requirements of the Clean Water Act, 2006 and is documented in the Assessment Reports for the Halton Region and the
To find more information about the watersheds within the Halton-Hamilton Source Protection Region, the Clean Water Act and source protection planning in your community, please visit our website at www.protectingwater.ca.

Hamilton Region Source Protection Areas included in this Plan as Appendix A. The Assessment Reports were the foundation for the development of the policies for this Source Protection Region. They identify stresses on drinking water quantity and describe threats to water quality due to past, ongoing, or potential future activities in the Areas.

The policies within this Plan are the result of extensive consultation, collaboration, and research. They will help ensure activities carried out near municipal wells and surface water intakes do not threaten the quality and quantity of the sources of drinking water. The rationale for each policy has been documented in a corresponding report called the Explanatory Document, which can be found on our website.

A summary of the consultation and collaboration processes implemented to engage the communities through the production of the Assessment Reports and the development of the policies in this Plan can be found in Appendix B.

Together with the Explanatory Document, this Source Protection Plan serves as a blueprint for drinking water source protection in the Halton Region and the Hamilton Region Source Protection Areas.
2. Source Protection Plan Authority and Implementation

2.1 General Authority

The legal framework for drinking water source protection primarily consists of the Clean Water Act, 2006, and Ontario Regulation 287/07, the General Regulation. The legal provisions for each of the Plan’s policies are summarized in Appendix C.

The Clean Water Act, 2006 and Ontario Regulation 287/07, the General Regulation, establish the legal framework for drinking water source protection.

The Act requires that Source Protection Committees, comprising stakeholders that live or conduct business within the Source Protection Region, prepare Source Protection Plans for each Source Protection Area. The Act also establishes the requirement for compliance.

Ontario Regulation 287/07, the General Regulation, requires that the Source Protection Plan explicitly identify the applicable legal provisions of the policies. Without the appropriate statements, the policies in this Plan would not have the necessary legal effect under Part III of the Clean Water Act, 2006 to obligate agencies to comply. To satisfy this requirement, the appropriate statements have been set out within Appendix C. Municipalities or agencies with obligations to ensure their decisions conform with policies in this Plan or who are required to satisfy obligations in this Plan should refer to the lists in Appendix C.

The Act also requires that certain provisions regarding timing requirements for implementation of Plan policies, land use designations for the use of restricted land uses, and activity designations for the use of risk management plans be set out in the Plan. General policies have been included in the Plan to satisfy these requirements.

This Source Protection Plan prevails when there is conflict between a significant threat policy and a municipal official plan or zoning by-law, unless the municipality has written policies that are more restrictive and would protect sources of drinking water better. All planning decisions must conform to the significant threat policies of the Source Protection Plan on the day the Plan takes effect. Section 39 of the Clean Water Act must be referenced for detailed provisions regarding the effect of the Plan.

In the case of conflict with the Provincial Policy Statement, the Greenbelt Plan, the Niagara Escarpment Plan, or the Growth Plan for the Greater Golden Horseshoe, the provision that provides the greatest protection to the quality and quantity of any water that is or may be used as a source of drinking water is that which prevails.

2.2 Objectives of the Source Protection Plan

The policies in this Plan are focused on the protection of sources of municipal drinking water and general best management practices that will protect source water across the Region. The policies are designed to implement the objectives defined by the General Regulation (section 22(1)):
1. To protect existing and future **drinking water sources** in the Source Protection Area.

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,
   i) the activity never becomes a significant drinking water threat,
   ii) if the activity is occurring when the Source Protection Plan takes effect, the activity ceases to be a significant drinking water threat.

An activity that poses a significant risk to drinking water sources may be managed or eliminated to reduce the risk and satisfy these objectives. The Source Protection Committee has included in the Plan policies that it believes will sufficiently manage or eliminate the significant risk.

### 2.3 Priorities of the Source Protection Plan

The policies contained within this Plan are focused primarily on ensuring that activities that pose a significant risk to municipal **drinking water sources** cease to be significant or never become significant. Identified threats that pose moderate or low risks to the drinking water sources, and not included in this Plan, may be considered and addressed by the Source Protection Committee in the future.

The *Clean Water Act, 2006* provides the authority to the Minister, as defined in the Act, to establish targets for Source Protection Areas that contribute water to the Great Lakes, relating to the use of the lakes as a source of drinking water. The Source Protection Committee then has the authority to include policies in the Plan that address these targets. Great Lakes targets have not been established for this first round of source protection planning and, as a result, no policies are included. Targets may be established in the future and the Plan will be revised as required.

The Act and Regulation identify specific topics that may be addressed in policy in a Source Protection Plan, if the Source Protection Committee is of the opinion that they are a potential concern in the Halton-Hamilton Source Protection Region. The optional policies that apply in this Region are related to emergency response/spills prevention plans, climate data collection, disposal of imported fill, Lake Ontario outreach, and **transport pathways**.

### 2.4 Effective Date and Plan Amendments

Section 31 of the *Clean Water Act* provides that the effective date of a Source Protection Plan is either the date upon which a notice of approval of the Plan is published on the Environmental Registry established under the Environmental Bill of Rights, or is the date set out in the Plan. The Minister of the Environment and Climate Change has set the effective date of this Plan as December 31, 2015.

This Plan may be amended from time to time in accordance with the circumstances prescribed by the Act and Regulation:

1. The Source Protection Authority, after consulting with the Source Protection Committee, may propose amendments to this Source Protection Plan.
2. The Minister of the Environment and Climate Change may order an amendment of the Source Protection Plan.
3. As part of the approval of the Source Protection Plan by the Minister of the Environment and Climate Change, an order was issued setting out the date of the periodic review and updating of the Assessment Reports and this Source Protection Plan with a work plan to be submitted by the province by November 30, 2018.

### 2.5 Threats to Drinking Water Sources

The threats to drinking water sources include 21 activities prescribed in regulation and local threats added through approval of the Director under the Clean Water Act. Two of the threats were prescribed to safeguard the quantity of water available for municipal well supplies across Ontario. These threats are possible only in areas identified as stressed through the tiered water budget and water quantity stress assessment process (see the Assessment Reports in Appendix A).

The 19 prescribed threat activities that could impact the quality of sources of municipal drinking water are summarized in the Assessment Reports and 18 are discussed in detail in the Explanatory Document. One of the threats, the management of agricultural source material, can never pose a significant risk in the Halton-Hamilton Source Protection Region.

One local threat has been added in the Halton–Hamilton Source Protection Region, as follows:

- The conveyance of oil by way of a pipeline that crosses a body of open water and would be designated as transmitting or distributing "liquid hydrocarbons," including "crude oil," "condensate," or "liquid petroleum products," and not including "natural gas liquids" or "liquefied petroleum gas," within the meaning of the Ontario Regulation 210/01 under the Technical Standards and Safety Act, or is subject to the National Energy Board Act.

The threat is discussed in the Explanatory Document and the Director’s letter of approval of the inclusion of this local threat can be reviewed in the Assessment Reports (see Appendix A).

### 2.6 Where Policies Apply

The mapping of areas where threat activities could affect source water quality at low, moderate and significant levels are possible is based on the vulnerable area together with the hazardous nature of the threat activity, the associated contaminants, and the vulnerability of the source water to contamination. The vulnerability mapping and the associated scoring is discussed in Section 6 of the Assessment Reports.

The majority of the water quality policies in this Plan address significant threat activities, which only occur in wellhead protection areas and issue contributing areas, and where event-based modelling was completed to assess intake protection zone threats and has identified a significant risk. Figures 2 through 7 show the areas where threat activities could pose a significant risk to the municipal wells located within the Halton Region Source Protection Area. Figures 9 and 10 show the areas within the Halton Region Source Protection Area where significant threats to the Cedarvale wells are possible. The Cedarvale wells are located in the neighbouring Credit Valley Source Protection Area, however,
their protection zones extend into the Halton Area. Figure 11 shows the areas where significant threats to the municipal source water are possible in the Hamilton Area. Policies written to address significant threats indicate that the policy applies within a vulnerable area where a significant threat could occur. These areas correspond to the mapped areas for each threat depicted on the figures.

Figures 12 through 15 illustrate the areas where the application of road salt could be a low, moderate or significant threat in the Halton Region and Hamilton Region Source Protection Areas. Relevant policies apply within these areas.

Many threats can occur in the same areas. To provide clear delineation on the wellhead protection area maps to show where significant threats would occur, the threats have been grouped. Policies developed to address a threat would apply in the area shown on the map for the appropriate group. The groupings and their mapped areas are as follows:

Group 1. Most threats to groundwater could be significant in wellhead protection areas where the vulnerability score is 10. In the Halton-Hamilton Source Protection Region, a score of 10 is only possible in wellhead protection areas A and B.

Group 2. A few threat activities for waste and sewage could be significant in wellhead protection areas A, B, and C where the vulnerability score for groundwater is 10 or 8.

Group 3. One threat, the handling and storage of dense non-aqueous phase liquids (DNAPLs), poses a greater risk to groundwater sources due to the physical and toxic characteristics of the chemicals in the group. These chemicals are denser than water and do not dissolve easily in water. Therefore, they are more difficult to detect underground and more difficult to clean up. For these reasons, the handling and storage of dense non-aqueous phase liquids are a significant threat at any vulnerability score within wellhead protection areas A through C.

Group 4. Where surface water quickly infiltrates into the ground and could impact groundwater quality - a wellhead protection area E - threats to surface water could be significant where the vulnerability score is 9.

Group 5. A smaller number of significant threats to surface water are possible in a wellhead protection area E where the vulnerability scoring is either 9 or 8.1.

Group 6. Prescribed threat activities that release chloride within the Cedarvale issue contributing area are elevated to be significant threats. Septic systems are not classed as significant threats in an issue contributing area for chloride.

Each threat activity listed in the groups is presented on the maps with the associated contaminant as either chemical or pathogen. The associated risk may vary depending on the contaminant type and the same threat may be listed in two groups.

Figure 8 shows the known areas where modelling has determined that under specific circumstances significant threats to the lake-based municipal source water in the Halton and Hamilton Areas exist. Future threats are possible within the mapped event-based areas for wastewater treatment plants that discharge to
surface water through a means other than a designed bypass. Additional mapping indicates locations where the release of fuel during either conveyance in a pipeline, or from handling or storage of fuel in tanks or ships would be a significant threat. Policies within this Plan apply to these areas.

Policies to address significant threat activities that pose a risk to the quantity of source water available for municipal use apply in the wellhead protection areas shown on Figures 16 through 18. The Kelso and Campbellville municipal wells are located within the Halton Region Source Protection Area. Only a portion of the Cedarvale protection area extends into the Halton Region Area from the Credit Valley Area. Policies that address threats to municipal drinking water sources apply only to the area where the threat exists or could exist if the threat activity was to begin in the future.

The Act and Regulation identify specific topics in addition to the prescribed threats that may be addressed in policy in a Source Protection Plan, if the Source Protection Committee is of the opinion that they are a potential concern in the Halton-Hamilton Source Protection Region. Policies that address these concerns are applicable across the Region unless otherwise restricted in the policy.
The application of commercial fertilizer can be a significant drinking water threat only if carried out in a vulnerable area that exceeds threshold values of percent managed land and livestock density (refer to Assessment Report maps).

Reference: Prescribed threat circumstances as listed in the Ministry of the Environment Table of Drinking Water Threats (2009)

Source: Conservation Halton

Date: April 2015

Projection: UTM NAD 83 Zone 17
Figure 3

Walkers Line
Existing and would be significant groundwater threat areas

Legend

WHPA Boundary
A
B
C
GW - Significant Threats - Group 1
GW - Significant Threats - Group 2
GW - Significant Threats - Group 3
Roads
Highway
Regional
Local
Municipal Well

Group 1: (WHPA-A-10, WHPA-B-10)
- Waste Disposal Site - Application of Untreated Seepage to Land (Chemical and Pathogen)
- Waste Disposal Site - Mine Tailing (Chemical)
- Waste Disposal Site - Landfilling of Petroleum Refining Waste (Chemical)
- Waste Disposal Site - Landfilling of Hazardous Waste (Chemical)
- Waste Disposal Site - PCB Waste Storage (Chemical)
- Waste Disposal Site - Storage of Hazardous Waste at Disposal Site (Chemical)
- Waste Disposal Site - Storage of Waste Caused by backwards Causing of Landfill Gas (Chemical)
- Sewage - Discharge from Stormwater Retention Pond (Chemical and Pathogen)
- Sewage - Sanitary Sewers and Related Pipes (Chemical and Pathogen)
- Sewage - Septic Systems (Chemical and Pathogen)
- Sewage - Septic System Holding Tanks (Chemical and Pathogen)
- Sewage - Sewage Treatment Plant Effluent Discharges (Chemical and Pathogen)
- Sewage - Storage of Sewage (Pathogen)
- ASM - Application (Chemical and Pathogen)
- ASM - Handling and Storage (Chemical and Pathogen)
- NASM - Application (Chemical and Pathogen)
- NASM - Handling and Storage (Chemical and Pathogen)
- Commercial Fertilizer - Application (Chemical)
- Pesticides - Application (Chemical)
- Organic Solvent - Handling and Storage (Chemical)
- Runoff Management - Aircraft De-icing Chemicals (Chemical)
- Runoff Management - Livestock Grazing and Pasturing (Chemical and Pathogen)
- Runoff Management - Livestock Grazing and Pasturing (Chemical and Pathogen)

Group 2: (WHPA-A-10, WHPA-B-10, WHPA-B-8, WHPA-C-8)
- Waste Disposal Site - Landfilling - Municipal Waste (Chemical)
- Waste Disposal Site - Landfilling - Solid Non-Hazardous Industrial or Commercial Waste (Chemical)
- Waste Disposal Site - Liquid Industrial Waste Injection Into Wells (Chemical)
- Sewage - Storage of Sewage (Chemical)

Group 3: (WHPA-A, WHPA-B, WHPA-C)
- DNAPL - Handling and Storage

GW: Groundwater
WHPA-A-10: Wellhead Protection Area A - Vulnerability Score of 10

Reference: Prescribed threat circumstances as listed in the Ministry of the Environment Table of Drinking Water Threats (2009)

Source: Conservation Halton
Date: February 2014
Projection: UTM NAD 83 Zone 17
The application of commercial fertilizer can be a significant drinking water threat only if carried out in a vulnerable area that exceeds threshold values of percent managed land and livestock density (refer to Assessment Report maps).

**Legend**

- **WHPA Boundary**
  - A
  - B
  - C
- **GW - Significant Threats - Group 1**
- **GW - Significant Threats - Group 2**
- **GW - Significant Threats - Group 3**
- **Roads**
  - Highway
  - Regional
  - Local

**Group 1: (WHPA-A, WHPA-B)**
- Waste Disposal Site - Application of Untreated Septage to Land (Chemical and Pathogen)
- Waste Disposal Site - Lime Spreading (Chemical)
- Waste Disposal Site - Landfilling of Petroleum Refining Waste (Chemical)
- Waste Disposal Site - Landfilling of Hazardous Waste (Chemical)
- Waste Disposal Site - PCB Waste Storage (Chemical)
- Waste Disposal Site - Storage of Hazardous Waste at Disposal Site (Chemical)
- Waste Disposal Site - Storage of Waste Cures (a,b,c,d,e,f,g,h,i,j,k,l) (Chemical)
- Sewage - Discharge from stormwater retention pond (Chemical and Pathogen)
- Sewage - Sanitary Sewers and Related Pipelines (Chemical and Pathogen)
- Sewage - Septic System (Chemical and Pathogen)
- Sewage - Septic System Holding Tanks (Chemical and Pathogen)
- Sewage - Storage of Sewage (Pathogen)

**Group 2: (WHPA-A, WHPA-B, WHPA-C)**
- Waste Disposal Site - Landfilling - Municipal Waste (Chemical)
- Waste Disposal Site - Landfilling - Solid Non Hazardous Industrial or Commercial (Chemical)
- Waste Disposal Site - Liquid Industrial Waste Injection Into Wells (Chemical)
- Sewage - Storage of Sewage (Chemical)

**Group 3: (WHPA-A, WHPA-B, WHPA-C)**
- DNAPL - Handling and Storage

**Groundwater**

**WHPA Boundary Area A** - Vulnerability Score of 10

**Reference:** Prescribed threat circumstances as listed in the Ministry of the Environment Table of Drinking Water Threats (2009)

**Source:** Conservation Halton

**Date:** April 2015

**Projection:** UTM NAD 83 Zone 17
The application of commercial fertilizer can be a significant drinking water threat only if carried out in a vulnerable area that exceeds threshold values of percent managed land and livestock density (refer to Assessment Report maps).
The application of commercial fertilizer can be a significant drinking water threat only if carried out in a vulnerable area that exceeds threshold values of percent managed land and livestock density (refer to Assessment Report maps).
The application of commercial fertilizer can be a significant drinking water threat only if carried out in a vulnerable area that exceeds threshold values of percent managed land and livestock density (refer to Assessment Report maps).

Source: Conservation Halton
Date: August 2015
Projection: UTM NAD 83 Zone 17

Legend

SW: Surface Water
WHPA: Wellhead Protection Area

Group 4: (WHPA-E-9)
- Waste Disposal Site - Application of Untreated Septage to Land (Chemical)
- Waste Disposal Site - Mine Tailings (Chemical)
- Waste Disposal Site - Landfilling of Petroleum Refining Waste (Chemical)
- Waste Disposal Site - Landfilling of Hazardous Waste (Chemical)
- Waste Disposal Site - Landfilling of solid non hazardous industrial or commercial waste (Chemical)
- Waste Disposal Site - Storage of Hazardous Waste at Disposal Site (Chemical)
- Sewage - Storage (Pathogen)
- ASM - Application (Chemical)
- ASM - Handling and Storage (Chemical)
- NASM - Application (Chemical)
- NASM - Handling and Storage (Chemical)
- Commercial Fertilizer - Application (Chemical)
- Pesticides - Handling and Storage (Chemical)
- Road Salt - Application (Chemical)
- Road Salt - Handling and Storage (Chemical)
- Snow - Storage (Chemical)
- Runoff Management - Aircraft De-icing Chemicals (Chemical)
- Use of land for livestock - Grazing and Pasturing (Chemical)
- Use of land for livestock - Confinement Yard (Chemical)

Group 5: (WHPA-E-9.1, WHPA-E-9)
- Waste Disposal Site - Application of Untreated Septage to Land (Pathogen)
- Sewage - Combined sewage discharge to surface water (Chemical and Pathogen)
- Sewage - Discharge from stormwater retention pond (Chemical)
- Sewage - Sewage treatment plant bypass discharge to surface water (Chemical and Pathogen)
- Sewage - Sewage treatment plant effluent discharges (Chemical and Pathogen)
- ASM - Application (Pathogen)
- ASM - Handling and Storage (Pathogen)
- NASM - Application (Pathogen)
- NASM - Handling and Storage (Pathogen)
- Use of land for livestock - (Pathogen)

This mapping is produced by Conservation Halton and should be used for information purposes only. The data displayed are derived from sources with varying accuracies and all boundaries should therefore be considered approximate. Data on this map is used under license with Conservation Halton, Ontario Ministry of Natural Resources, Halton Region, City of Hamilton, Ministry of Environment, Ontario Geological Survey, Natural Resources Canada, Teranet Enterprises Inc. and other agencies. Copyright 2015.
The application of commercial fertilizer can be a significant drinking water threat only if carried out in a vulnerable area that exceeds threshold values of percent managed land and livestock density (refer to Assessment Report maps).
Cedarvale Issue Contributing Area for Chloride
Existing and would be significant groundwater threat areas

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Figure 10
Cedarvale Issue Contributing Area for Chloride
Existing and would be significant groundwater threat areas

Legend

Source Protection Area
ICA - Significant Threat - Group 6
Cedarvale WHPA
Municipal Well

Group 6:
- Sewage - Discharge from stormwater retention pond
- Road Salt - Application
- Road Salt - Handling and Storage
- Snow - Storage

WHPA: Wellhead Protection Area
ICA: Issue Contributing Area

Reference: Prescribed threat circumstances as listed in the Ministry of the Environment Table of Drinking Water Threats (2009)

Source: Conservation Halton
Date: December 2017
Projection: UTM NAD 83 Zone 17

1:10,000
The application of commercial fertilizer can be a significant drinking water threat only if carried out in a vulnerable area that exceeds threshold values of percent managed land and livestock density (refer to Assessment Report maps).
Figure 12: Current Road Salt Application Policy Area
Halton Area WHPA and ICA

Legend
- Source Protection Area
- Upper Tier Municipality
- Lower Tier Municipality
- Niagara Escarpment
- Roads
  - Highway
  - Regional
  - Road Salt Application Policy - Current

For policies that apply in areas that have low, moderate, or significant risk

Current: Based on existing imperviousness densities

Projection: UTM NAD 83 Zone 17
Date: October 2014
Figure 13
Current
Road Salt Application Policy Area
Halton Area Intake Protection Zone

Legend
- Upper Tier Municipality
- Lower Tier Municipality
- Niagara Escarpment

Roads
- Highway
- Regional
- Waterbody
- Road Salt Application Policy - Current

For policies that apply in areas that have low or moderate risk

Current: Based on existing imperviousness densities

Projection: UTM NAD 83 Zone 17
Date: November 2014

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Figure 14
Current Road Salt Application Policy Area
Hamilton Area Wellhead Protection Area

Legend

- Source Protection Area
- Upper Tier Municipality
- Lower Tier Municipality
- Niagara Escarpment

Rocks
- Highway
- Regional
- Local

Road Salt Application Policy - Current

For policies that apply in areas that have low, moderate, or significant risk

Current: Based on existing imperviousness densities

Projection: UTM NAD 83 Zone 17
Date: October 2014
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Figure 15
Current Road Salt Application Policy Area
Hamilton Area Intake Protection Zone

Legend
- Upper Tier Municipality
- Lower Tier Municipality
- Niagara Escarpment
- Roads
  - Highway
  - Regional
- Waterbody
- Road Salt Application Policy - Current

For policies that apply in areas that have low or moderate risk

Current: Based on existing imperviousness densities

Projection: UTM NAD 83 Zone 17
Date: November 2014

©1:40,000
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Projection: UTM NAD 83 Zone 17
Date: July 2015

Legend

Roads
- Highway
- Regional
- Hydrography
- Waterbody
- Municipal Well
- Campbellville WHPA-Q1 and Q2

Figure 17
Campbellville WHPA-Q1 and Q2
This mapping is produced by Conservation Halton and should be used for information purposes only. The data displayed are derived from sources with varying accuracies and all boundaries should therefore be considered approximate. Data on this map is used under license with Conservation Halton, Ontario Ministry of Natural Resources, Halton Region, City of Hamilton, Ministry of Environment, Ontario Geological Survey, Natural Resources Canada, Teranet Enterprises Inc. and other agencies. Copyright 2013.
2.7 Tools Used in Policy Development

The Clean Water Act, 2006 defines the tools available for use in policies to achieve the objectives of the Plan. Some of the tools rely on voluntary participation, while others regulate the activity.

The Act provides the following tools for use to address drinking water threats:

- **Prescribed instruments** – existing legislative tools with the authority to regulate an activity that could be a drinking water threat. Nutrient management plans and environmental compliance approvals\(^1\) are two examples of instruments used by the Province of Ontario to regulate activities. These instruments could potentially be amended to protect drinking water sources better.

- **Land use planning** – public policy that seeks to order and regulate land use in an efficient and ethical way.

- **Education and outreach** - informing the public and stakeholders about drinking water threat activities and the importance of protecting drinking water sources. These programs will help raise awareness about why and how drinking water sources should be protected.

- **Incentive programs** – a formal plan used to promote or encourage participation in a program to reduce risks to sources of drinking water. Available expertise and partial or full funding to help landowners complete beneficial projects may increase participation and benefit sources of drinking water.

In addition, Part IV of the Act has introduced three new tools for significant threat policies:

- **Risk management plans** – developed through discussion between the landowner and the municipal risk management official and intended to manage the risk from an existing or future threat.

- **Restricted land uses** – allows the risk management official to screen applications for new development within the vulnerable areas where significant threats are possible for specified prescribed threats.

- **Prohibition** – could be used to stop a future threat from occurring, or as a last-resort when it is the opinion of the Source Protection Committee that an existing threat cannot be managed by any other tool.

The General Regulation also specifies tools that can be used for optional policies, which include:

- **Education and outreach** – on any topic, threat or otherwise

- **Incentive programs** – on any topic, threat or otherwise

- **Specified actions** – identify the actions to be taken to implement the Source Protection Plan or to achieve the Plan’s objectives. To be used in policies regarding the collection of climate data and the updating of emergency response/spills prevention plans.

\(^1\) Due to the modernization of the approval process for prescribed instruments, future environmental compliance approvals for sewage works are administered through the Environmental Protection Act whereas previously issued certificates of approval were under the Ontario Water Resources Act. In this document, the terms “certificates of approval” and “environmental compliance approvals” are used interchangeably and refer to the regulatory approvals.
Also included in optional policies are those that ensure that drinking water threats in the vicinity of a transport pathway cease to be or do not become a significant drinking water threat and that transport pathways cease to endanger the raw water supply of a drinking water system. The tools that are identified for use are stewardship programs, best management practices, pilot programs, research, and specified actions.

2.8 Reading the Plan

The policies in this Plan are organized by type, i.e., general policies, prescribed threat policies, local threat policies, and other policies.

To assist the reader of the Plan, an identifier has been used for each policy. The identifier specifies the type of policy, its number, and its legal effect.

The policy type is specified first and is one of the following:
- **G** – a general requirement of the Clean Water Act, 2006 or its regulations
- **T** – a threat policy based on the 21 prescribed drinking water threats
- **L** – a threat policy based on an added local threat
- **O** – an optional policy included to enhance drinking water source protection in the Source Protection Region

Each policy is numbered sequentially within the policy type.

The effect of the policy is designated as follows:
- **C** – requires compulsory compliance
- **S** – strategic policy, a discretionary obligation recommended to achieve the objectives of the Plan, which is non-legally binding

Threat policies address existing drinking water threats, potential future threats, or both, and the language of the policy indicates its application. The policy text also identifies the party responsible for its implementation.

Definitions are included in the glossary, Appendix D, and should be referenced when implementing the policies.

Activities that are or would be significant drinking water threats must be monitored and the implementation of significant threat policies evaluated. This monitoring and evaluation requires the introduction of additional policies. Monitoring policies follow their associated significant threat policies in Section 3.

Tables 1 and 2 below summarize each policy identifier in relation to the policy tool used to address the threat or identified concern. These tables are easy references to the associated policies.
### Table 1 Water quality and quantity threat policy reference table

<table>
<thead>
<tr>
<th>Threat</th>
<th>Education and Outreach</th>
<th>Incentives</th>
<th>Prescribed Instruments</th>
<th>Land Use Planning</th>
<th>Part IV Tools under the Clean Water Act, 2006</th>
<th>Restricted Land Uses</th>
<th>Regulated Activities (Risk Management Plans)</th>
<th>Other Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act</td>
<td>T-2-C a.</td>
<td>T-1-C a.</td>
<td>T-3-C a.</td>
<td>T-3-C c.</td>
<td>T-3-C c.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- combined sewer discharge</td>
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<td></td>
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<td></td>
<td>T-53-C a.</td>
<td></td>
<td></td>
<td>T-51-C</td>
</tr>
<tr>
<td>- sanitary sewers and pipes</td>
<td></td>
<td>T-6-C a.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>T-53-C a.</td>
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</tr>
<tr>
<td>Threat</td>
<td>Education and Outreach</td>
<td>Incentives</td>
<td>Prescribed Instruments</td>
<td>Land Use Planning</td>
<td>Part IV Tools under the Clean Water Act, 2006</td>
<td>Other Tools</td>
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<tr>
<td>5 The management of agricultural source material</td>
<td></td>
<td>Not a significant threat in the Halton-Hamilton Source Protection Region</td>
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</tr>
<tr>
<td>6 and 7 The application or handling and storage of non-agricultural source material</td>
<td></td>
<td>T-54-C a.</td>
<td>T-24-C a.</td>
<td></td>
<td></td>
<td>T-22-S a.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Threat</td>
<td>Education and Outreach</td>
<td>Incentives</td>
<td>Prescribed Instruments</td>
<td>Land Use Planning</td>
<td>Part IV Tools under the Clean Water Act, 2006</td>
<td>Other Tools</td>
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<td>T-35-C a.</td>
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<td>T-36-S a.</td>
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<td>T-49-S a.</td>
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<td>T-45-S c.</td>
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<tr>
<td>Threat</td>
<td>Education and Outreach</td>
<td>Incentives</td>
<td>Prescribed Instruments</td>
<td>Land Use Planning</td>
<td>Part IV Tools under the Clean Water Act, 2006</td>
<td>Other Tools</td>
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<tr>
<td>18  The management of runoff that contains chemicals used in the de-icing of aircraft</td>
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<td></td>
<td></td>
<td></td>
<td>T-46-S a.</td>
<td></td>
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<tr>
<td>19  An activity that takes water without returning it to the same source</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>T-56-C a. T-57-C a. T-57-C b.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Table 2  Other policy reference table

<table>
<thead>
<tr>
<th>Topic</th>
<th>Education and Outreach / Incentive</th>
<th>Specified Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposal of Imported Fill</td>
<td>O-4-S</td>
<td></td>
</tr>
<tr>
<td>Lake Ontario Outreach</td>
<td></td>
<td>O-7-S O-8-S</td>
</tr>
</tbody>
</table>
3. **Source Protection Plan Policies**

3.1 **General Policies**

**G-1** 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.

- 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.

- 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.

- 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.

- 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*.

- 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*.

- 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*.

**G-2** 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.
This policy designates activities in accordance with section 58(1) of the *Clean Water Act*. The following activities are designated for the purpose of section 58(1) – Regulated Activities, of the *Clean Water Act* and require the negotiation of a risk management plan as specified in the policy and where there could be a significant drinking water threat:

i. The application of agricultural source material on farms not phased-in under the *Nutrient Management Act*.

ii. The storage of agricultural source material on farms not phased-in under the *Nutrient Management Act*.

iii. The application of commercial fertilizer on farms not phased-in under the *Nutrient Management Act*.

iv. The handling and storage of commercial fertilizer.

v. The handling and storage of pesticides.

vi. The handling and storage of road salt.

vii. The handling and storage of fuel under Ontario Regulation 213/01 and under Ontario Regulation 217/01, except home fuel oil tanks.

viii. The handling and storage of dense non-aqueous phase liquid.

ix. The handling and storage of an organic solvent.

x. The use of land as a confinement area or a farm-animal yard on farms not phased-in under the *Nutrient Management Act* and the use of land as livestock grazing or pasturing land.

This policy designates activities in accordance with section 57(1) of the *Clean Water Act*. Exempt activities include the storage of:

- PCB waste
- hazardous waste or liquid industrial waste
- certain wastes exempted from the hazardous waste and liquid industrial waste definitions in Ontario Regulation 347

The establishment, operation and maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act that is exempt from Environmental Compliance Approvals under the *Environmental Protection Act* is designated for the purpose of Section 57(1) – Prohibited Activities of the *Clean Water Act* where waste disposal would be a significant drinking water threat.
3.2 Drinking Water Threat Policies

The following policies, although grouped as addressing prescribed threats and local threats, are not listed in any particular order. The reader is directed to Table 1 for a complete listing of policies that apply to each of the 18 prescribed significant threat activities and the 1 additional local threat that could be a significant risk to the source water of municipal drinking water systems in the Halton-Hamilton Source Protection Region.

3.2.1 Prescribed Threat Policies

T-1-C Where the future establishment of waste disposal sites, as defined within the meaning of Part V of the Environmental Protection Act, would be a significant drinking water threat,

a. the Ministry of the Environment and Climate Change shall prohibit this activity.

b. the Ministry of the Environment and Climate Change shall document their actions taken to implement this policy and report this information to the Source Protection Authority by February 1 of each year.

T-2-C To raise awareness about appropriate disposal of hazardous materials at waste disposal sites where they would be significant drinking water threats,

a. the City of Hamilton and the Region of Halton shall continue their established education and outreach programs on hazardous waste disposal and reduction of waste. In addition, within two years of the date the Source Protection Plan comes into effect, they shall include messaging consistent with source water protection and the diligent use and disposal of substances identified in the Ministry of the Environment and Climate Change’s most recent Tables of Drinking Water Threats, such as organic solvents, pesticides, and dense non-aqueous phase liquids.

b. the City of Hamilton and the Region of Halton shall document the efforts undertaken through education and outreach programs regarding hazardous waste disposal and reduction of waste and report this information to the Source Protection Authority by February 1 of each year.

Policies in Section 3.2 address identified threats to groundwater and surface water municipal drinking water sources.
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,

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, non-hazardous, industrial or commercial waste; injection of liquid waste into a well; polychlorinated biphenyls (PCB) waste storage; and storage of hazardous waste.

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.

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.

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 submit this report to the Source Protection Authority by February 1 of each year.

For future systems that would discharge stormwater from stormwater retention ponds where this activity would be a significant drinking water threat,

a. the Ministry of the Environment and Climate Change shall ensure that the environmental compliance approvals that govern the systems include appropriate terms and conditions to ensure that the systems do not become significant drinking water threats. As part of its program to review environmental compliance approvals that are affected by source protection plans the following conditions shall be considered for inclusion - the requirement for regular maintenance, periodic removal of accumulated sediment, lining of the pond where warranted, the use of an oil/water separator, and other requirements to address site conditions.

b. the Ministry of the Environment and Climate Change shall document the number and locations of applications received for environmental compliance approvals for these systems and the actions taken and report this information to the Source Protection Authority by February 1 of each year with copies of any issued approvals.
Where the future discharge of industrial effluent to the environment would be a significant drinking water threat,

a. the Ministry of the Environment and Climate Change shall ensure that the environmental compliance approvals that govern *industrial effluent discharges* include appropriate terms and conditions, to ensure that these discharges do not become significant drinking water threats. As part of its program to review environmental compliance approvals that are affected by source protection plans the following conditions shall be considered for inclusion - strict criteria for effluent quality and monitoring.

b. the Ministry of the Environment and Climate Change shall document the number and locations of applications received for environmental compliance approvals for industrial effluent discharge and the action taken on the applications and report this information to the Source Protection Authority by February 1 of each year with copies of any issued approvals.

Where the future installation of sanitary sewers and pipes would be a significant drinking water threat,

a. the Ministry of the Environment and Climate Change shall ensure that the environmental compliance approvals that govern these systems include appropriate terms and conditions to ensure that the sewers and pipes do not become significant drinking water threats. As part of its program to review environmental compliance approvals that are affected by source protection plans the following conditions shall be considered for inclusion - requirement for regular maintenance and inspection.

b. the Ministry of the Environment and Climate Change shall document the number and locations of applications received for environmental compliance approvals for industrial effluent discharge and the action taken on the applications and report this information to the Source Protection Authority by February 1 of each year with copies of any issued approvals.

Where existing and potential future *septic systems* and *holding tanks* regulated under the *Ontario Water Resources Act* or the *Environmental Protection Act* are or would be significant drinking water threats,

a. the Ministry of the Environment and Climate Change shall ensure that environmental compliance approvals that govern these systems include appropriate terms and conditions to ensure that these systems and tanks cease to be or do not become significant drinking water threats. As part of its program to review environmental compliance approvals that are affected by source protection plans the following conditions shall be considered for inclusion - mandatory monitoring of groundwater impacts, contingencies in the

The discharge of industrial effluent is only a significant threat in a wellhead protection area E. Thus, this policy only applies within the designated area of the Carlisle wellhead protection area (see Figure 7).

The Halton-Hamilton Source Protection Committee has relied on existing legislative tools, where possible, to manage significant threats. Environmental compliance approvals are already required for many of the prescribed threats.

Sewage works, including septic systems, with a design capacity of greater than 10,000 litres per day are regulated under section 53 of the *Ontario Water Resources Act, 1990* and the *Environmental Protection Act*. 
event that the quality of sources of drinking water is adversely affected, regular and ongoing compliance monitoring, mandatory system and tank inspections at least every five years, upgrading of these septic systems and holding tanks to current standards, if necessary, and annual reporting to the Source Protection Authority of any monitoring and inspection programs required and their results.

b. the Ministry of the Environment and Climate Change shall document the number and locations of environmental compliance approvals that were issued or amended for these septic systems and holding tanks and the actions taken, and report this information to the Source Protection Authority by February 1 of each year with copies of any issued approvals.

**T-8-C** Where existing or future sewage treatment plants are or would be significant drinking water threats from discharges, bypasses, or the storage of sewage,

a. the Ministry of the Environment and Climate Change shall ensure that the approvals that govern sewage treatment plants include appropriate terms and conditions to ensure that they cease to be or do not become significant drinking water threats. As part of its program to review environmental compliance approvals that are affected by source protection plans the following conditions shall be considered for inclusion - strict criteria for effluent quality, appropriate sizing to reduce bypasses, in addition to inspections and proactive maintenance of the **works** to prevent leaks.

b. the Ministry of the Environment and Climate Change shall document the number and locations of environmental compliance approvals that were reviewed or issued for sewage treatment plants and the actions taken and report this information to the Source Protection Authority by February 1 of each year with copies of any issued approvals.

**T-9-C** In consideration of *Planning Act* applications where the future discharge of **stormwater** effluent from stormwater retention ponds would be a significant drinking water threat,

a. where possible, the municipal planning authority shall require the applicant to locate stormwater retention ponds outside of the vulnerable area.

b. the municipal planning authority shall document the number of applications reviewed for stormwater retention ponds, whether the application was approved, and whether the pond was located within or outside of the area where a significant drinking water threat would occur and report this information, including the rationale for decisions made, to the Source Protection Authority by February 1 of each year.
T-10-C 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,

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.

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.

T-11-C Where future septic systems requiring approval under the Ontario Building Code would be significant drinking water threats,

a. the Region of Halton, the Town of Milton and the City of Hamilton shall require through amendments to Planning Act tools that future lot sizes be sufficient to accommodate the systems.

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.

T-12-S For consistency of planning documents across the Halton-Hamilton Source Protection Region where future septic systems requiring approval under the Ontario Building Code would be significant drinking water threats,

a. the Niagara Escarpment Commission is requested to ensure that future lot sizes in the Niagara Escarpment Plan Area are sufficient to accommodate the required private systems.

b. the Niagara Escarpment Commission is requested to provide to the Source Protection Authority a report of the actions taken to ensure that future lot sizes in the Niagara Escarpment Plan Area are sufficient to accommodate the required private septic systems.

To have consistent policies across the Source Protection Region, the Niagara Escarpment Commission is requested to amend the Niagara Escarpment Plan.
**T-13-C** To increase awareness about best practices to protect drinking water sources for existing and future users of septic tanks and holding tanks located within vulnerable areas where their use is or would be a significant drinking water threat,

a. within two years of the date the Source Protection Plan comes into effect, the City of Hamilton and the Region of Halton, in collaboration with the Source Protection Department of the Conservation Authorities, the Hamilton and Halton Watershed Stewardship Programs, and the Town of Milton are requested to continue and broaden education and outreach programs. The programs should inform landowners about the proper disposal of toxic chemicals, the operation and maintenance of septic systems, water softener discharges, and the benefits of installing effluent filters, performing tank inspections, and having tanks pumped out regularly.

b. the City of Hamilton and the Region of Halton shall document the nature of any new or continuing education and outreach programs established regarding septic systems, the number of persons contacted, and the location of the participants and report this information to the Source Protection Authority by February 1 of each year.

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**T-14-C** In support of the sewage system inspection requirements of the Ontario Building Code specific to vulnerable areas where existing sewage systems are significant drinking water threats,

a. the Town of Milton and the City of Hamilton shall implement an on-site sewage system maintenance inspection program, as required.

b. the Town of Milton and the City of Hamilton shall document the number of sewage system maintenance inspections completed, as well as the actions required, if any, and report this information to the Source Protection Authority by February 1 of each year.

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**T-15-S** Where septic systems and holding tanks are used within municipal service areas and where their use is a significant drinking water threat,

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.

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.
**T-16-S** To assist landowners in reducing the risks to drinking water sources where existing **septic systems** and **holding tanks** are significant threats,

a. the Ministry of the Environment and Climate Change is requested to provide ongoing funding through the Ontario Drinking Water Stewardship Program or a similar program for septic system upgrades and replacements, holding tank replacements with septic systems, decommissioning of unused systems, and for connection to municipal **sewage works**.

b. if funding is provided by the Ministry of the Environment and Climate Change, the Hamilton and Halton Watershed Stewardship Programs, under the direction of the Halton Region and Hamilton Conservation Authorities, shall implement the incentive program to reduce the risk of septic system and holding tank drinking water threats.

c. by February 1 of each year, the Hamilton and Halton Watershed Stewardship Programs, under the direction of the Halton Region and Hamilton Conservation Authorities, shall advise the Source Protection Authority of the amount of funding received from provincially funded programs for septic system and holding tank work and connection to municipal sewage works, as well as the number of projects completed in the previous year.

**T-17-C** To assist landowners with improvements required under the on-site **sewage systems** maintenance inspection program implemented where sewage systems are significant threats and in accordance with the Ontario Building Code,

a. the City of Hamilton, the Region of Halton, and the Town of Milton shall consider the creation of a financial assistance program. It is recommended that this program be designed in a manner that allows the work to be completed as required, and the landowner to repay the cost over time.

b. the City of Hamilton, the Region of Halton, and the Town of Milton shall document their efforts and the results regarding the creation of a municipal financing program to assist landowners and report this information and the number of participants to the Source Protection Authority by February 1 of each year.
T-18-C Where existing and future septic systems requiring approval under the Ontario Water Resources Act or the Environmental Protection Act are or would be significant drinking water threats,

   a. the municipality responsible for wastewater services may consider connections to municipal wastewater services for rural properties where the septic systems have failed and where all other mitigation measures have been explored (including the replacement of the systems and/or installation of advanced private treatment facilities) to the satisfaction of the municipality and found unsuitable, or where the municipality considers connection to municipal wastewater services for future development to be most appropriate, and where the connections are permitted by provincial and municipal planning policy.

   b. by February 1 of each year, the municipality responsible for wastewater services shall report to the Source Protection Authority the number of any connections made to the municipal wastewater system in the previous year due to the failure of a septic system.

T-19-C Where potential future sewage treatment plant bypasses would be significant drinking water threats,

   a. the municipalities responsible for stormwater systems are requested to implement programs which address connections of stormwater sources to sanitary sewers in order to reduce surges in volumes to sewage treatment plants during wet weather.

   b. by February 1 of each year, the municipalities responsible for stormwater systems shall report to the Source Protection Authority whether a program to address connections of stormwater sources to sanitary sewers has been implemented, their actions taken, and the results of those actions.

   c. by February 1 of each year, the municipalities responsible for wastewater services shall report to the Source Protection Authority the number of bypasses of the wastewater treatment plant that occurred in the previous year due to plant capacity limitations.

T-20-C Where the existing and potential future application and storage of agricultural source material (ASM) on farms not phased-in under the Nutrient Management Act are or would be significant drinking water threats,

   a. a risk management official shall screen all building permit and Planning Act applications in accordance with policy G-2 for properties zoned for agricultural use within vulnerable areas.
b. a risk management official shall establish risk management plans with persons undertaking or proposing to undertake the activities of the application or storage of agricultural source material. The implementation of these risk management plans shall be overseen by a risk management inspector. Their content shall be based upon the regulatory requirements of a nutrient management plan and strategy under the *Nutrient Management Act* and be scoped to address these specific threats.

c. the risk management official shall document action taken regarding risk management plans for the application and storage of agricultural source material in their annual report in accordance with Section 65 of Ontario Regulation 287/07, and the official shall submit this report to the Source Protection Authority by February 1 of each year.

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**T-21-C** Where the existing and potential future application or storage of agricultural source material are or would be significant drinking water threats and are managed by nutrient management plans and strategies,

a. the Ministry of Agriculture, Food and Rural Affairs shall ensure that the nutrient management plans and strategies are inclusive of measures to protect drinking water sources that, when implemented, will ensure that the application and storage of agricultural source material never become or cease to be significant drinking water threats. Contingency plans required for nutrient management plans and strategies must contain the requirement for notification of the Spills Action Centre if a leak is discovered from an agricultural source material storage facility or if there is a spill.

b. the Ministry of Agriculture, Food and Rural Affairs shall document the number and locations of nutrient management plans and strategies that were reviewed or approved and the actions taken to attain compliance with this policy and report this information to the Source Protection Authority by February 1 of each year.

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**T-22-S** To monitor compliance with nutrient management plans and strategies, non-agricultural source material plans, and Ontario Regulation 267/03 requirements for properties located within vulnerable areas where there are now or potentially would be significant drinking water threats due to the application and storage of agricultural source materials, non-agricultural source materials, commercial fertilizer, and land used for outdoor confinement areas and farm-animal yards,

a. the Ministry of the Environment and Climate Change is requested to conduct regular compliance inspections of agricultural operations where significant drinking water threats occur, and shall guide farmers to improve compliance performance, when needed.
b. the Ministry of the Environment and Climate Change shall document the number and location of inspections that were compliant and non-compliant with nutrient management plans and strategies, and non-agricultural source material plans and the actions taken, and report this information to the Source Protection Authority by February 1 of each year.

**T-23-S**  
As an incentive to reduce the existing significant risks from the application and storage of agricultural source materials, and from land used for livestock grazing, pasturing land, outdoor confinement areas, and farm-animal yards,

a. the Ministry of the Environment and Climate Change is requested to continue to provide ongoing funding for stewardship projects on properties where these activities are a significant threat.

b. if funding is provided by the Ministry of the Environment and Climate Change, the Hamilton and Halton Watershed Stewardship Programs, under the direction of the Halton Region and Hamilton Conservation Authorities, shall implement the incentive program.

c. by February 1 of each year, the Hamilton and Halton Watershed Stewardship Programs, under the direction of the Halton Region and Hamilton Conservation Authorities, shall advise the Source Protection Authority of the amount of funding received from provincially funded programs for agricultural stewardship projects.

**T-24-C**  
Where the future application, or handling and storage of categories 2 and 3 non-agricultural source material would be significant drinking water threats,

a. the Ministry of Agriculture, Food and Rural Affairs shall ensure that non-agricultural source material plans (NASM plans) required under the *Nutrient Management Act* include measures that, when implemented, will ensure that these activities never become significant drinking water threats.

b. the Ministry of Agriculture, Food and Rural Affairs shall document the number and locations where non-agricultural source material plans were approved, and the measures included and report this information to the Source Protection Authority by February 1 of each year.

### Non-agricultural source material

Non-agricultural source material is defined in Ontario Regulation 267/03 – General under the *Nutrient Management Act, 2002.*
**T-25-C**  Where the existing and future application of commercial fertilizer on farms not phased-in under the *Nutrient Management Act*, and where the handling and storage of commercial fertilizer on properties would be significant drinking water threats,

a. a risk management official shall screen all building permit and *Planning Act* applications in accordance with policy G-2 for properties where there would be a significant drinking water threat.

b. a risk management official shall establish risk management plans with persons proposing to undertake the activities of the application or storage of commercial fertilizer. The implementation of these risk management plans shall be overseen by a risk management inspector and their content based upon the regulatory requirements of a nutrient management plan under the *Nutrient Management Act* and best management practices, and scoped to address these specific threats.

c. the risk management official shall document action taken regarding risk management plans for the application, handling and storage of commercial fertilizer in their annual report in accordance with Section 65 of Ontario Regulation 287/07, and the official shall submit this report to the Source Protection Authority by February 1 of each year.

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**T-26-C**  Where the future application of commercial fertilizer would be a significant drinking water threat,

a. the Ministry of Agriculture, Food and Rural Affairs shall ensure that nutrient management plans required under the *Nutrient Management Act* include measures that, when implemented, will ensure that this activity never becomes a significant drinking water threat.

b. the Ministry of Agriculture, Food and Rural Affairs shall document the number and locations of properties where nutrient management plans were reviewed, and the measures included that will ensure that this activity never becomes a significant drinking water threat and report this information to the Source Protection Authority by February 1 of each year.
**T-27-C** Where the existing and future application, or handling and storage of commercial fertilizer would be significant drinking water threats,

a. within two years of the date that the Source Protection Plan comes into effect, the City of Hamilton and the Region of Halton, in collaboration with the Source Protection Department of the Conservation Authorities and the Hamilton and Halton Watershed Stewardship Programs, are requested to develop and implement education and outreach programs to promote best management practices regarding these activities for the protection of source water. The target audience will be golf courses, fertilizer application technicians, home and business owners, and retail establishments that apply or store commercial fertilizer.

b. the City of Hamilton and the Region of Halton shall document any new and existing education and outreach programs established regarding the application, handling or storage of commercial fertilizer, the nature of the programs, the number of persons contacted, and the location of the participants and report this information to the Source Protection Authority by February 1 of each year.

**T-28-C** For golf course properties located where the existing and future application, or storage and handling of commercial fertilizers would be significant drinking water threats,

a. the municipal planning authority shall encourage all operators to obtain and retain Audubon Co-operative Sanctuary Certification.

b. the municipal planning authority shall document the number of golf course operators approached and the number of golf courses with an Audubon Co-operative Sanctuary Certificate and report this information to the Source Protection Authority by February 1 of each year.

**T-29-C/S** Where the future handling and storage of pesticide would be a significant drinking water threat,

a. a risk management official shall screen all building permit and Planning Act applications in accordance with policy G-2 for properties where there would be a significant drinking water threat.

b. a risk management official shall establish risk management plans with persons proposing to undertake the activities of the handling and storage of pesticide. The implementation of these risk management plans shall be overseen by a risk management inspector.
c. the risk management official shall document in their annual report, in accordance with section 65 of Ontario Regulation 287/07, action taken regarding risk management plans for the handling and storage of pesticide and submit this report to the Source Protection Authority by February 1 of each year.

d. the Agrichemical Warehousing Standards Association is requested to review their standards to ensure they include appropriate buffer areas to protect municipal drinking water sources and send a response to the Source Protection Authority within six months.

T-30-S  Repealed

T-31-C  Where the existing and future application, or handling and storage of pesticide are significant drinking water threats,

a. within two years of the date that the Source Protection Plan comes into effect, the City of Hamilton and the Region of Halton, in collaboration with the Source Protection Department of the Conservation Authorities and the Hamilton and Halton Watershed Stewardship Programs, are requested to undertake an education and outreach program on pesticide use and storage methods and their potential impacts on drinking water sources. It is recommended that the outreach program include wellhead protection area mapping and target pesticide applicators and exterminators, golf course operators, and farmers.

b. the City of Hamilton and the Region of Halton shall document the nature of any new and existing education and outreach program established regarding the application, and the handling and storage of pesticide, the number of persons contacted, and the location of the participants and report this information to the Source Protection Authority by February 1 of each year.

T-32-C  Where the future handling and storage of road salt would be a significant drinking water threat

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.

b. within an issue contributing area a risk management official shall establish risk management plans with persons proposing to construct salt storage facilities of 5,000 tonnes or less. The implementation of these risk management plans shall be overseen by a risk management inspector.
c. the risk management official shall document in their annual report, in accordance with section 65 of Ontario Regulation 287/07, action taken regarding risk management plans for the handling and storage of road salt and submit this report to the Source Protection Authority by February 1 of each year.

d. 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 policies to prohibit the salt storage and handling facilities.

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**T-33-S** For consistency of planning documents across the Halton-Hamilton Source Protection Region where the future handling and storage of road salt would be a significant drinking water threat,

a. the Niagara Escarpment Commission is requested to prohibit salt storage and handling facilities with capacity greater than 5,000 tonnes in the Niagara Escarpment Plan Area where the handling and storage of salt would be a significant drinking water threat.

b. the Niagara Escarpment Commission is requested to provide to the Source Protection Authority a report of the actions taken to prohibit salt storage and handling facilities with capacity greater than 5,000 tonnes in the Niagara Escarpment Plan Area where the handling and storage of salt would be a significant drinking water threat.

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**T-34-C/S** Where the existing and future application, or handling and storage of road salt would be a significant, moderate or low drinking water threat in a wellhead protection area, intake protection zone or issue contributing area,

a. within two years of the date that the Source Protection Plan comes into effect, the City of Hamilton and the Region of Halton, in collaboration with the City of Burlington and Towns of Milton, Halton Hills and Oakville in Halton Region, are requested to develop and implement education and outreach programs for the private and public sector, as well as the general public, about the impacts of road salt on drinking water sources and the use of best management practices. It is recommended that the key messages be the efficient use of road salts and the use of alternatives.

b. the City of Hamilton and the Region of Halton shall document the nature of any new or existing education and outreach program established regarding the application, and handling and storage of road salt, the number of persons contacted, and the location of the participants and report this information to the Source Protection Authority by February 1 of each year.

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Education and outreach programs will inform public and private sectors about the ways in which road salt or alternatives must be used to protect our drinking water sources, bearing in mind that safety is paramount.
**T-35-C/S** Where the existing and future application, or handling and storage of road salt would be significant, moderate or low drinking water threats,

a. within two years of the date that the Source Protection Plan comes into effect, the municipalities shall amend their salt management plans to identify the location of wellhead protection areas, issue contributing areas, and intake protection zones and to enhance best management practices in these areas.

b. the municipalities shall advise the Source Protection Authority of the revision to the salt management plans when completed and provide a status update by February 1 of each year until completed.

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**T-36-S** To seek collaboration on the use of best practices for the application of road salt on Provincial roads where this activity could be a significant, moderate or low drinking water threat,

a. the Ministry of Transportation and their supporting de-icing contractors are requested to continue the proactive implementation of their salt management plans and to continue the use of best management practices within wellhead protection areas and intake protection zones.

b. the Ministry of Transportation is requested to update their salt management plan, as required, to ensure consistency with the most current versions of Environment Canada’s Code of Practice for the Environmental Management of Road Salts and the Transportation Association of Canada’s Syntheses of Best Practices.

c. the Ministry of Transportation should continue their ongoing investigation and implementation of innovative practices and new mitigative technologies regarding road salt application and the management of infiltration and runoff.

d. the Ministry of Transportation is requested to actively consider the creation of a pilot project utilizing new practices and mitigative technologies for road salt application or the management of runoff that could benefit drinking water sources within the Halton-Hamilton Source Protection Region.

e. the Source Protection Department of the Conservation Authorities shall consult with the Ministry of Transportation to:

i. determine the status of the Ministry’s salt management plan and, if revised, request a copy; and

ii. determine the status of pilot projects underway and proposed future pilot projects designed to protect drinking water sources in the Halton-Hamilton Source Protection Region and report on this information to the Source Protection Authority by February 1 of each year.

The investigation and implementation of innovative practices and new mitigative technologies regarding road salt application and the management of infiltration and runoff are key to protecting drinking water sources.
T-37-C Where the future storage of snow would be a significant drinking water threat

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.

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.

T-38-S For consistency of planning documents across the Halton-Hamilton Source Protection Region where the future storage of snow would be a significant drinking water threat,

a. the Niagara Escarpment Commission is requested to prohibit future snow storage facilities in the Niagara Escarpment Plan Area.

b. the Niagara Escarpment Commission is requested to provide to the Source Protection Authority a report on the actions taken to prohibit future snow storage facilities in the Niagara Escarpment Plan Area.

T-39-C Where the future storage of snow would be a significant drinking water threat in an issue contributing area,

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.

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.

T-40-C Where existing and potential future handling and storage of fuel are or would be significant drinking water threats,

a. the risk management official shall screen all building permit and Planning Act applications in accordance with policy G-2 within these vulnerable areas.
b. the risk management official shall establish risk management plans with persons undertaking or proposing to undertake the handling and storage of fuel under Ontario Regulation 213/01 and under Ontario Regulation 217/01, except home fuel oil tanks. The implementation of these risk management plans shall be overseen by a risk management inspector and they shall include the requirements for all storage tanks to comply with the requirements of the Technical Standards and Safety Act and its regulations, for all owners/operators to have an emergency response plan with emergency contact information of the municipality responsible for water services and the Spills Action Centre.

c. the risk management official shall document in their annual report, in accordance with Section 65 of Ontario Regulation 287/07, action taken regarding risk management plans for the handling and storage of fuel and submit this report to the Source Protection Authority by February 1 of each year.

**T-41-C** Where the future handling and storage of fuel would be a significant drinking water threat,

a. the Region of Halton, Town of Milton, and the City of Hamilton shall prohibit gas stations through Planning Act tools.

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.

**T-42-S** For consistency of planning documents across the Halton-Hamilton Source Protection Region where the future handling and storage of fuel would be a significant drinking water threat,

a. the Niagara Escarpment Commission is requested to prohibit gas stations in the Niagara Escarpment Plan Area.

b. the Niagara Escarpment Commission is requested to provide to the Source Protection Authority a report of the actions taken to prohibit gas stations in the Niagara Escarpment Plan Area.
T-43-C Where the existing and future handling and storage of fuel is or would be a significant drinking water threat,

a. within two years of the date that the Source Protection Plan comes into effect, the City of Hamilton and the Region of Halton, in collaboration with the Source Protection Department of the Conservation Authorities and the Hamilton and Halton Watershed Stewardship Programs, shall develop and implement an education and outreach program for homeowners with home fuel oil tanks, regarding spill response and the method and timing for contacting the Spills Action Centre. As part of this program, stickers with emergency phone numbers shall be provided to be placed on or near the fuel tanks and fill pipes to ensure immediacy of response if there is a spill or leak detected.

b. the City of Hamilton and the Region of Halton shall document the nature of any new education and outreach program established regarding home fuel oil tanks, the number of persons contacted, and the location of the participants and report this information to the Source Protection Authority by February 1 of each year.

T-44-C Where the existing or potential future handling and storage of dense non-aqueous phase liquids is or would be significant drinking water threats,

a. the risk management official shall screen all building permit and Planning Act applications in accordance with policy G-2 within these vulnerable areas.

b. the risk management official shall establish risk management plans with the persons undertaking or proposing to undertake the handling and storage of a dense non-aqueous phase liquid. The implementation of these risk management plans shall be overseen by a risk management inspector.

c. the risk management official shall document in their annual report, in accordance with Section 65 of Ontario Regulation 287/07, action taken regarding risk management plans for the handling and storage of a dense non-aqueous phase liquid and submit this report to the Source Protection Authority by February 1 of each year.

T-45-C Where the existing and future handling and storage of an organic solvent would be a significant drinking water threat,

a. the risk management official shall screen all building permit and Planning Act applications in accordance with policy G-2 within these vulnerable areas.
b. the risk management official shall establish risk management plans with the persons undertaking or proposing to undertake the handling and storage of an organic solvent. The implementation of these risk management plans shall be overseen by a risk management inspector.

c. the risk management official shall document in their annual report, in accordance with Section 65 of Ontario Regulation 287/07 action taken regarding risk management plans for the handling and storage of an organic solvent and submit this report to the Source Protection Authority by February 1 of each year.

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**T-46-S** In support of the existing planning process for airport facilities and to protect drinking water sources from runoff containing de-icing chemicals, the following policies apply where the management of runoff that contains chemicals used in the de-icing of aircraft would be a significant threat:

a. relevant airport authorities and operators, in their consideration of future airport facilities, are requested to include appropriate design standards and management practices to prevent the runoff from airport de-icing facilities from becoming a significant drinking water threat.

b. the Source Protection Department of the Halton Region and Hamilton Conservation Authorities shall periodically review the federal regulatory regime and policy to ensure appropriate design standards and management practices are included to prevent the runoff of chemicals at de-icing facilities where this activity is a significant threat. If improvements are warranted, Transport Canada is to be contacted.

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**T-47-C** To reduce the risks to drinking water sources where there are existing or potential future significant drinking water threats from the use of land as an outdoor confinement area or a farm-animal yard on farms not phased-in under the *Nutrient Management Act*, or from the use of land for livestock grazing or pasturing on all farms,

a. the risk management official shall screen all building permit and Planning Act applications in accordance with policy G-2 for properties zoned for agricultural use within these vulnerable areas.

b. the risk management official shall establish risk management plans with the persons using or proposing to use, if the screening process identifies a significant threat, farm lands for livestock outdoors. The implementation of these risk management plans shall be overseen by a risk management inspector and their content shall be based upon the regulatory requirements of a nutrient management strategy under the *Nutrient Management Act* and incorporate the best management practices for livestock grazing and pasturing land as set out in Streamside Grazing (2007 and as amended) including risk management plans will be established using the related standards from the *Nutrient Management Act* for the specific threat and best management practices from recognized documents.
extensive grazing within a wellhead protection area A, and scoped to address these specific threats.

c. the risk management official shall document in their annual report, in accordance with Section 65 of Ontario Regulation 287/07, action taken regarding risk management plans for the use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard and submit this report to the Source Protection Authority by February 1 of each year.

T-48-C Where the existing and potential future use of land as an outdoor confinement area or farm-animal yard is or would be a significant drinking water threat and is managed by nutrient management strategies prepared under the Nutrient Management Act,

a. the Ministry of Agriculture, Food and Rural Affairs shall ensure that all existing and future nutrient management strategies incorporate measures to protect drinking water sources that, when implemented, will ensure that the activities never become or cease to be significant drinking water threats.

b. the Ministry of Agriculture, Food and Rural Affairs shall document the number and locations of nutrient management strategies that were reviewed, amended, or approved, and the actions taken to attain compliance with this policy and report this information to the Source Protection Authority by February 1 of each year.

T-49-S To raise awareness of mapped drinking water sources and seek collaboration on the use of best practices for the application of road salt where this activity would be a future significant, moderate or low threat on private properties,

a. de-icing contractors are requested to develop and/or amend their salt management plans for private properties to identify the location of wellhead protection areas and intake protection zones, and to use best management practices to protect drinking water sources within these areas.

b. the Source Protection Department of the Halton Region and Hamilton Conservation Authorities shall consult with private de-icing contractors to determine if their salt management plans identify the location of vulnerable areas for drinking water source protection and report on this information to the Source Protection Authority by February 1 of each year.

T-50-S Repealed
T-51-C Where the future discharge of combined sewer effluent from a stormwater outlet to surface water would be a significant drinking water threat,

a. the City of Hamilton shall comply with the requirements of the province.

b. the City of Hamilton shall report on actions taken to implement the policy to the Source Protection Authority by February 1 of each year.

T-52-C/S Where discharges from sewage treatment plants, the handling and storage of fuel, and the conveyance of oil in a pipeline that crosses an open body of water are existing significant drinking water threats to Lake Ontario municipal intakes,

a. the Ministry of the Environment and Climate Change shall provide mapping of intake protection zones three and the locations of known significant threats to the Spills Action Centre, and if necessary modify procedures to ensure that the operators of all water treatment plants that could be affected by a spill are notified.

b. the Ministry of the Environment and Climate Change shall ensure that the environmental compliance approvals that govern the sewage works include appropriate terms and conditions to ensure that the systems do not become significant drinking water threats. As part of its program to review environmental compliance approvals that are affected by source protection plans and in consultation with the municipalities responsible for water services the following conditions shall be considered for inclusion - adjustment of the reporting thresholds for pathogens and chemicals of concern in effluent.

c. the owners of facilities where these significant drinking water threats have been identified are requested to update emergency preparedness/contingency plans to include the location of municipal intakes, actions to be taken to protect drinking water sources should an incident occur, and the requirement for inclusion of the protection of drinking water sources in emergency preparedness exercises.

d. by February 1 of each year, the Ministry of the Environment and Climate Change shall prepare and submit to the Source Protection Authority a report summarizing their actions for the previous year, including the number, type, and location of spills reported within intake protection zones three, adjusted thresholds, and actions taken or recommended to improve the efficiency and effectiveness of the spill reporting system.

e. the Source Protection Department of the Halton Region and Hamilton Region Conservation Authorities shall consult with the owners of facilities where these significant drinking water threats have been identified to request an invitation to observe the emergency preparedness exercises carried out in the vicinity of the Halton-Hamilton Source Protection Region, and to request to view a copy of the emergency preparedness plans when amended.
T-53-C/S To facilitate the effective implementation of policies for significant drinking water threats and assist in municipal decision-making,

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:

i. the establishment, operation or maintenance of a system that collects, stores, transmits, treats, or disposes of sewage
ii. the application or storage of agricultural source material
iii. the application, or handling and storage of commercial fertilizer
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

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.

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.

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.

T-54-C Where the future application, or handling and storage of category 1 non-agricultural source material would be a significant drinking water threat,

a. within two years of the date that the Source Protection Plan comes into effect, the City of Hamilton and the Region of Halton, in collaboration with the Source Protection Department of the Conservation Authorities and the Hamilton and Halton Watershed Stewardship Programs, are requested to develop and implement education and outreach programs to promote best management practices regarding these activities for the protection of source water.
b. the City of Hamilton and the Region of Halton shall document any new and existing education and outreach programs established regarding the application, handling or storage of category 1 non-agricultural source material, the nature of the programs, the number of persons contacted, and the location of the participants and report this information to the Source Protection Authority by February 1 of each year.

**T-55-C** Within a wellhead protection area Q1, where an increased or new water taking would be a significant drinking water threat,

a. the Ministry of the Environment and Climate Change shall ensure that groundwater Permit to Take Water approvals include appropriate terms and conditions to demonstrate that the taking will not adversely impact the aquifer’s ability to meet municipal and other water supply requirements. The following conditions should be considered for inclusion – a phased approach to assess impacts before fully approved and the requirement for appropriate monitoring.

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.

c. the Ministry of the Environment and Climate Change shall document the number and locations of permit applications that were reviewed or issued for water takings and their actions taken and report this information to the Source Protection Authority by February 1 of each year with copies of any issued permits.

d. the municipal planning authority shall report actions taken to implement part (b) of this policy to the Source Protection Authority by February 1 of each year.

**T-56-C** To ensure **consumptive demand** does not become a significant drinking water threat,

a. the City of Hamilton and the Region of Halton shall work to reduce consumption by strengthening watermain leak detection programs in areas serviced by a well located within a wellhead protection area Q1 within two years of the date that the Source Protection Plan takes effect, and shall initiate a watermain leak reduction strategy as deemed required by the municipality, within the following year.

b. the City of Hamilton and Region of Halton shall report actions taken to implement this policy to the Source Protection Authority by February 1 of each year until the program is implemented and every five years thereafter.
**T-57-C** To encourage community involvement in safeguarding drinking water sources where *consumptive demand* could result in a significant drinking water threat in a wellhead protection area Q1,

a. within two years of the date that the Source Protection Plan takes effect, the City of Hamilton and the Region of Halton shall develop or enhance Water Conservation Plans to support sustainable drinking water sources.

b. within two years of the date that the Source Protection Plan takes effect, the City of Hamilton and the Region of Halton shall review and where necessary enhance and enforce outdoor water use programs.

c. the City of Hamilton and the Region of Halton shall provide the Source Protection Authority with copies of their Water Conservation Plans as they are amended and shall report on actions taken to implement the Plans by February 1 of each year.

**T-58-C** Within a wellhead protection area Q2 where a future reduction in recharge would be a significant drinking water threat,

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.

b. the municipal planning authority shall report on actions taken to implement this policy to the Source Protection Authority by February 1 of each year.

**T-59-C** Within a wellhead protection area Q2 where a future reduction in recharge would be a significant drinking water threat,

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.

b. the municipal planning authority shall report on actions taken to implement this policy to the Source Protection Authority by February 1 of each year.
3.2.2 Local Threat Policies

**L-1-S** Where the conveyance of oil in pipelines across open water bodies is an existing significant threat to lake-based drinking water sources,

a. fuel pipeline owners are recommended to conduct inline pipeline integrity testing and visual inspections of pipeline crossings at open water bodies at a frequent timing of every three years.

b. the Source Protection Department of the Conservation Authorities shall consult with fuel pipeline owners to determine if pipeline integrity testing and visual inspections have occurred and to request a report on the findings of the testing and inspections, and actions taken.

**L-2-S** To reduce the risks to drinking water sources from the construction of pipelines conveying oil across open water bodies,

a. the National Energy Board and the Ontario Energy Board in their consideration of any oil pipeline application where this activity would be a significant drinking water threat are requested to ensure that the applicant has complied with or included appropriate design standards, monitoring, and maintenance practices that when implemented will prevent a pipeline from becoming a significant drinking water threat.

b. the Source Protection Department of the Halton Region and Hamilton Conservation Authorities shall consult with the National Energy Board and the Ontario Energy Board to determine if pipeline design standards and the requirements for monitoring and maintenance practices in vulnerable areas consider drinking water source protection.
3.3 Other Policies

3.3.1 Transport Pathways

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:

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.

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.

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.

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 Authorities, shall implement the incentive program to decommission unused wells.

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.

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.

g. Repealed

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.
3.3.2 Climate Data

O-2-S To ensure that data on the climate conditions in the Source Protection Area are gathered on an ongoing basis, the following policies apply:

a. The municipalities, the conservation authorities, the Ministries of the Environment and Natural Resources, and Environment Canada are supported and encouraged in their efforts to collect and/or interpret the hydrogeological, hydrological, and climate data for the Source Protection Areas and are requested to share the data as appropriate in a timely manner.

b. The Ministry of the Environment and Climate Change is requested, in collaboration with Environment Canada, to install best practical instrumentation to provide monitoring of current speed and direction and water chemistry of Lake Ontario in the nearshore source water.

c. Environment Canada is requested to review its monitoring network to ensure appropriate locations are utilized for climate stations, and that data for all necessary parameters, including solar radiation, used to monitor climate change are being collected.

d. The Ministry of the Environment and Climate Change, in collaboration with the conservation authorities, is requested to review its monitoring networks for groundwater and surface water to ensure appropriate locations and adequate construction of monitoring wells and stations are utilized, and that data for all necessary parameters that could be used to monitor climate change are being collected.

3.3.3 Repealed

O-3-S Repealed

3.3.4 Disposal of Imported Fill

O-4-S The municipalities and the conservation authorities are requested to develop and implement an education and outreach program for rural landowners, contractors, and developers based on Ministry of the Environment and Climate Change guidance to best protect drinking water sources during the importation of fill.
3.3.5 Spill Prevention Plans, Spill Contingency Plans, and Emergency Response Plans along Highways, Railway Lines, or Shipping Lanes

O-5-S To ensure spill prevention plans, contingency plans, and emergency response plans are updated for the purpose of protecting drinking water sources with respect to spills that occur within a wellhead protection area or intake protection zone along highways, railway lines, or shipping lanes, the following policies apply:

a. The municipalities are requested to incorporate the location of wellhead protection areas and intake protection zones into their emergency response plans in order to protect drinking water sources when a spill occurs along highways, rail lines, or in shipping lanes.

b. The Ministry of the Environment and Climate Change is requested to provide mapping of vulnerable areas to assist the Spills Action Centre in responding to reported spills along transportation corridors.

c. The municipalities are requested to implement an education and outreach program to encourage all transportation businesses that ship goods through wellhead protection areas and intake protection zones to prepare spill prevention plans and spill contingency plans, to review these plans annually, and to update them, as required.

O-6-S The Hamilton Port Authority is requested to advise vessel operators using Hamilton Harbour and western Lake Ontario shipping lanes, and the companies that lease space on port lands that the Halton Region and the City of Hamilton municipal drinking water intakes are located near the shore of Lake Ontario in proximity of the Burlington Canal and the shipping lanes and require that they review and/or update their spill control plans to confirm that they include:

i. the location of the municipal drinking water intakes,

ii. enhanced best practices for spill containment and cleanup to protect drinking water supplies, and

iii. the City of Hamilton and Halton Region emergency contact information.

3.3.6 Lake Ontario Outreach

O-7-S The Source Protection Branch of the Ministry of the Environment and Climate Change is requested to reach out to the Ontario Region of Environment Canada to share information about water resources obtained through the source protection planning process. This sharing of information could result in an update to the document "Environmental Sensitivity Atlas for Lake Ontario's Canadian Shoreline" to include maps of the current drinking water infrastructure, as well as the current knowledge and understanding of the conditions of the Canadian shoreline of Lake Ontario.
These optional policies will ensure that the findings of source protection planning will benefit other agencies and governing bodies.

O-8-S To raise the profile of the importance of Lake Ontario as a source of drinking water for residents of Ontario and to encourage collaboration on protecting our shared drinking water sources, the Ministry of the Environment and Climate Change is requested to reach out to Environment Canada, New York State, and United States government agencies to discuss the findings and policies arising from source protection planning.
4. References

All Provincial statutes and regulations are available on the provincial website eLaws
http://www.e-laws.gov.on.ca


APPENDIX A

Assessment Reports for

Halton Region
Source Protection Area
and
Hamilton Region
Source Protection Area

And

the Explanatory Document
in support of the Source Protection Plan

(electronic versions are also available
at www.protectingwater.ca)
Digital copies of the Assessment Reports and the Explanatory Document
APPENDIX B

Collaboration and Consultation
Appendix B.1 Collaboration

Source protection planning under the *Clean Water Act, 2006* is a community-wide initiative that requires municipal representatives, residents, and business owners to work together with provincial agencies and conservation authorities. In this area, Halton Region Conservation Authority (Conservation Halton) and Hamilton Conservation Authority work together as the **Halton-Hamilton Source Protection Region**.

During the development of the Assessment Reports and the Source Protection Plans for the two Source Protection Areas, the authorities provided administrative, scientific, and technical support to the Source Protection Committee.

The Halton-Hamilton Source Protection Committee was assembled to implement the requirements of the *Clean Water Act, 2006*. The Committee is required to work cooperatively with municipalities, conservation authorities, and provincial agencies and to represent the broad interests of those that live and work within the Region. The Committee is charged with preparing three documents — a Terms of Reference, an Assessment Report, and a Source Protection Plan — for each Source Protection Area.

The Halton-Hamilton Source Protection Committee comprised 16 members during the planning stages of the program between 2007 and 2015 and during implementation comprises 10 members. The Minister of the Environment and Climate change appointed the chair of the Source Protection Committee, Robert Edmondson. The other 9 members of the Committee were appointed by the Source Protection Authorities. As required by law, the Committee is composed as follows:

- one-third municipal representatives
- one-third agricultural, industrial, or commercial representatives
- one-third general public representation, including health and environmental interests.

The Halton-Hamilton Source Protection Committee members are listed below with their period of involvement:

**Chair**
Robert Edmondson, 2014 to present

**Municipal Sector**
- Councillor Judi Partridge, City of Hamilton – 2011 to present
- Adam Gilmore, Halton Region – 2016 to present
- David Rodgers – 2016 to present

**Agricultural Sector**
- Nick DiGirolamo, Ontario Federation of Agriculture – Halton – 2007 to present
- Gavin Smuk, Ontario Federation of Agriculture – Hamilton-Wentworth – 2007 to present

**Industrial/Commercial Sectors**
- Michael Kandravy, Suncor Energy Products Partnership – 2016 to present

**General Public Interest**
- Dave Braden – 2007 to present
- Glenn Powell – 2007 to present

**Environmental Interest**
- Dr. Turlough Finan – 2009 to present
The following persons have also been members of the Committee in the past and contributed to the process:

**Past Chair**
Doug Cuthbert – 2007 to 2013

**Municipal Sector**
Chris Shrive, City of Hamilton – 2008 to 2014
Dave Kerr, City of Hamilton – 2007 to 2008
Mary Lou Tanner, Halton Region – 2007 to 2008
Councillor Margaret McCarthy, City of Hamilton – 2007 to 2010
Jacqueline Weston, Halton Region – 2008 to 2010
Bert Posedowski, City of Hamilton – 2014 to 2016
Barry Lee, Halton Region – 2007 to 2015
David Simpson, Halton Region – 2010 to 2016
Councillor Susan Fielding, Township of Puslinch – 2007 to 2015

**Industrial/Commercial Sectors**
Teri Yamada, Golf Industry Representative – 2007 to 2012
Peter Ashenhurst, Home Builders Representative - 2007 to 2013
Melanie Horton, Aggregate Sector Representative – 2007 to 2016
Michael Barton, Home Builders Representative – 2014 to 2016

**Environmental Interest**
Paul Attack – 2009 to 2014
Betty Hansen – 2007 to 2009
Mark Sproule-Jones – 2008 to 2009
Daisy Radigan – 2014 to 2016

**General Public Interest**
Adam Kuehnbaum – 2007 to 2011
Andrea Doherty – 2011 to 2016

Advisors to the program during development of the Source Protection Plan included:
- Mary Wooding, Ministry of the Environment and Climate change Liaison
- John Westlake, Ministry of the Environment Liaison
- Wesley Wright, Ministry of the Environment Liaison
- Nicole Mathews, Halton Region Health Protection Services, Medical Officer of Health Liaison
- Dave King, Hamilton Public Health Services, Medical Officer of Health Liaison
- Tony Colaco, Halton Region Health Protection Services, Medical Officer of Health Liaison
- Kathy Menyes, Conservation Halton Liaison
- Scott Peck, Hamilton Conservation Authority Liaison
Technical experts assisted in the peer review of the underlying studies in the Assessment Reports and in policy development for the Plan.

We thank all those involved for their contribution.
Appendix B.2 Consultation

The source protection planning process is open and transparent and offers many opportunities for government, private sector, and community participants to provide input. The Committee took the source protection message to the public as well as inviting people to get involved in protecting their drinking water sources and to share their local knowledge and drinking water concerns. In an effort to raise awareness of the Clean Water Act and source protection planning, staff participated in many community and local association events.

The Clean Water Act and the General Regulation set out the requirements for consultation on the three required documents – Terms of Reference, Assessment Report, and Source Protection Plan. Each consultation process required notification to stakeholders, the public, and the municipalities, and consultation for a minimum length of time.

Terms of Reference

Draft proposed Terms of Reference were prepared for the Halton Region and the Hamilton Region Source Protection Areas in accordance with the requirements of the General Regulation. Prior to submission of the documents to the Ministry of the Environment, the Source Protection Committee released the documents for public review on May 27, 2008 and requested that comments be received by July 3, 2008. In addition, public meetings were held for both the Halton Region and the Hamilton Region Terms of Reference on June 17 and 19, 2008. The documents were finalized and submitted to the Source Protection Authorities for endorsement and submitted to the Minister of the Environment on August 7, 2008. The Terms of Reference for each Area were approved on May 25, 2009.

Assessment Reports

On September 9, 2010, the Source Protection Committee released the Draft Proposed Assessment Reports for the Halton Region and the Hamilton Region Source Protection Areas for public review and comment. Newsletters, newspaper announcements, and emails notified the public and municipalities that the reports were available for viewing and downloading online. Owners of land within mapped vulnerable areas were notified of the findings of the vulnerable area delineation and the threats assessment in two letters. These landowners were also contacted by the Hamilton-Halton Watershed Stewardship Program about available funding that could be used to reduce the risks to drinking water sources.

The Source Protection Committee held four public meetings on the assessment findings for the Halton Region and the Hamilton Region Source Protection Areas on October 1 and October 4, 2010. Comments received before October 26, 2010 were considered and the reports finalized.

The Source Protection Committee released the Proposed Assessment Reports to the Source Protection Authorities and a public consultation was held between November 5 and December 5, 2010. Again, notification was sent to all stakeholders and municipalities. Comments received were submitted with the reports to the Ministry of the Environment on December 16, 2010. Notification of the approval of the two reports was posted on the Environmental Registry on January 11, 2012.

In autumn 2011, some initial modelling to identify significant threats to the source water for the Lake Ontario based municipal intakes was finalized by the Lake Ontario Collaborative. The Source Protection Committee initialized an amendment to the two approved Assessment Reports to include the findings of this work. The revisions comprised the inclusion of a report on the modelling as an appendix to the report and a rewording of report text to reflect this inclusion and the identification of significant threats and updated intake protection zones.

The Proposed Updated Assessment Reports were released for public consultation between October 12 and November 11, 2011 with notification of the release sent directly to stakeholders affected by the amendments. Comments received were submitted with the reports to the Ministry of the Environment on
December 5, 2011. Following discussions with the Ministry, Director’s approval was received for the Assessment Report for the Halton Region Source Protection Area on February 1, 2012, and on February 9, 2012 for the Hamilton Region report.

Technical work continued throughout 2014 and again study findings were brought into the Assessment Reports. The two Assessment Reports were updated to include water quantity risk assessments with new wellhead protection areas and a revised threats assessment, and new work on the event-based modelling for the Lake Ontario intake threats assessment. A 60-day public consultation period with one public meeting was held in December 2014 and January 2015. Because new geographic areas are delineated as wellhead protection areas, direct contact with landowners affected was made. All comments received during the consultation period and subsequent comments received from the Ministry of the Environment and Climate Change were considered by the Source Protection Committee before finalizing the reports.

The City of Hamilton initiated a Class Environmental Assessment process to establish a backup well for their Greensville municipal well supply with completion scheduled for early 2018. Assessments of vulnerability and sustainability for the new well’s source water were completed in concert with updates to the mapping of the existing well’s protection areas due to cumulative impacts. The findings of the studies, new mapping and subsequent policy discussion were brought into the Assessment Report for the Hamilton Region Source Protection Area and this Plan under section 34 of the Clean Water Act. Personalized letters were sent to each landowner within the newly mapped vulnerable areas, the technical reports were released on the source protection website (www.protectingwater.ca) and public meetings held July 11, 2017 and November 16, 2017 provided an opportunity for the public to review and discuss the results of the studies and the proposed amendments to the documents. Also at this time, the Assessment Reports were corrected for small typographical errors and missing words under section 51 of the Act. The Assessment Reports dated October 2017 are used to support this Plan and are included in Appendix A.

Source Protection Plan

Consultation on policies included in the Source Protection Plan began in 2010 with the formation of the Planners’ Working Group, which comprises planning representatives from each of the municipalities and conservation authorities within the Halton-Hamilton Source Protection Region and liaisons from the Source Protection Committee. This group discussed the threats to drinking water sources and policy needs associated with these threats and provided advice to the Source Protection Committee. The Group benefited from the expertise of other municipal staff and invited guests.

A notice that the Halton-Hamilton Source Protection Committee was beginning to prepare source protection plans under the Clean Water Act was sent mid-June 2011 to all landowners within the vulnerable areas where significant threats are possible, municipal clerks, Conservation Halton and Hamilton Conservation Authority. The letters included an overview of source protection planning, listed the identified significant threat activities occurring on each property, if any, and invited the landowners to contact source protection staff to discuss the program, the municipal well supplies, and the significant threat activities identified.

The Source Protection Committee reviewed the policy directives and draft policies, modified them when necessary, and on August 23, 2011, endorsed the policies for pre-consultation with municipalities, agencies, and stakeholders designated in the policies to be responsible for their implementation.

The policies were released to the municipalities through the Planners’ Working Group on August 31, 2011 and meetings were held with each municipality in early September 2011 to assist those completing the reviews. Formal packages were submitted to implementing bodies in mid-October and pre-consultation comments were received by December 31, 2011. Draft policies were modified in response to comments received and follow-up discussions.

The Source Protection Committee endorsed the final draft proposed policies for public consultation on January 24, 2012. Halton Region’s review of the draft policies was delayed until April 27, 2012; however, the Source Protection Committee carried on with the scheduled release of the Plan for public consultation. The Draft Proposed Plan and Explanatory Document were endorsed for release to the public on February 21, 2012. Public consultation was held between February 27 and April 26, 2012. Notification letters and e-mails were sent to landowners, municipal clerks, Conservation Halton, Hamilton Conservation Authority, the
planners’ working group, other interested parties, neighbouring source protection areas, implementing bodies, and operators of facilities with significant threat activities. A media release and newspaper advertisements were also distributed to local newspapers in March and April. Four public meetings were held between 6:30 and 8:30 p.m. on the evenings of April 16 through 19 in Milton, Greensville, Hamilton, and Carlisle. All comments received were considered by the Committee and changes made, as appropriate.

On May 15, 2012 the Halton-Hamilton Source Protection Committee endorsed the Proposed Plan and the Explanatory Document for release to the Source Protection Authorities. The Halton Region Authority released the documents for public consultation at their meeting on May 24 and the Hamilton Region Authority released the documents at their meeting on June 7. Public consultation was held between June 8 and July 19, 2012.

Comments received on the Proposed Plan were submitted with the Plan to the Minister of the Environment in August 2012 for consideration during the formal review and approval process. Recommendations were received from the Ministry of the Environment on the Proposed Plan in June and November 2013 and January 2014. The Source Protection Committee considered all recommendations and revised the Plan accordingly. The Committee also included a map of the Cedarvale wellhead protection area and issue contributing area and revised policies to address the potential significant threat activities. The pre-consultation process was followed when policies were new to implementing bodies and notification letters were sent on January 13, 2014 to the landowners now included in the Cedarvale protection areas.

The Committee released the Plan for public consultation between March 4 and April 4, 2014 and held one public meeting in the Georgetown area on March 24, 2014. All comments received during consultation were considered by the Committee.

With the completion of a water quantity study for Kelso and Campbellville well fields in 2014, the Source Protection Committee developed policies to address the two prescribed threat activities for water quantity. Again the Plan was released for public consultation. This time, the Plan was released with the updated Assessment Reports and the findings of the water quantity study. The public consultation period was for 60 days through December 2014 and January 2015 with the outreach mainly in the Milton area where landowners are primarily affected by the amendments to the documents. One public meeting was held on January 22, 2015 in Campbellville. All comments received were considered by the Committee prior to finalizing the Source Protection Plan for submission to the Halton Region and the Hamilton Region Source Protection Authorities. The Authorities endorsed the submission of the updated Plan to the Ministry of the Environment and Climate Change at their meetings held March 26 and April 2, 2015.

Following resubmission of the Plan to the Ministry of the Environment and Climate Change, the Source Protection Committee met on June 18, 2015 to discuss changes to a policy as requested by Halton Region and changes to the Assessment Reports as requested by the Ministry. A follow-up e-mail survey responded to a change the CTC Source Protection Committee made to the Cedarvale issue contributing area that affected the Halton-Hamilton policies. The Plan and Assessment Reports were approved for finalization and resubmission to the Ministry for review and approval on July 24, 2015.

Upon completion of the technical assessments of the City of Hamilton’s Greensville municipal well for vulnerability and sustainability, the study findings and new wellhead protection area mapping were added to the Assessment Report for the Hamilton Region Source Protection Area and the vulnerability mapping to this Source Protection Plan. Proposed edits were discussed by the Source Protection Committee and released for public consultation October 16 through December 1, 2017. Letters were sent to all affected landowners and implementing bodies. Policies are unchanged.
APPENDIX C

Clean Water Act, 2006 Part III
Policy Lists

To fulfill the requirements of
Ontario Regulation 287/07 subsections 34 (1) to (3)
### Table C-1  Compliance lists

<table>
<thead>
<tr>
<th>LIST</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Significant threat policies that affect decisions under the <em>Planning Act</em> and <em>Condominium Act</em>, 1998 (not all policies refer to the <em>Condominium Act</em>)</td>
</tr>
<tr>
<td>B</td>
<td>Moderate and low threat policies that affect decisions under the <em>Planning Act</em> and <em>Condominium Act</em>, 1998</td>
</tr>
<tr>
<td>C</td>
<td>Significant threat policies that affect prescribed instrument decisions</td>
</tr>
<tr>
<td>D</td>
<td>Moderate and low threat policies that affect prescribed instrument decisions</td>
</tr>
<tr>
<td>E</td>
<td>Significant threat policies that impose obligations on municipalities, source protection authorities and local boards</td>
</tr>
</tbody>
</table>

#### A
Clause 39 (1)(a), subsections 39 (2), (4) and (6), and sections 40 and 42 of the *Clean Water Act, 2006* apply to the following policies:

- G-1 d.
- G-1 e.
- G-1 f.
- T-3-C a.
- T-3-C b.
- T-3-C c.
- T-3-C d.
- T-3-C e.
- T-3-C f.
- T-3-C g.
- T-3-C h.
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### Table C-1 Compliance lists continued

<table>
<thead>
<tr>
<th>LIST</th>
<th>TITLE</th>
<th>POLICIES</th>
</tr>
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</table>
| **F** | Monitoring policies referred to in subsection 22 (2) of the *Clean Water Act, 2006* | Section 45 of the *Clean Water Act, 2006* applies to the following policies:  
- T-1-C b.  
- T-2-C b.  
- T-3-C b., d.  
- T-4-C b.  
- T-5-C b.  
- T-6-C b.  
- T-7-C b.  
- T-8-C b.  
- T-9-C b.  
- T-10-C b.  
- T-11-C b.  
- T-12-S b.  
- T-13-C b.  
- T-14-C b.  
- T-15-S b.  
- T-16-S c.  
- T-17-C b.  
- T-18-C b.  
- T-19-C b., c.  
- T-20-C c.  
- T-21-C b.  
- T-22-S b.  
- T-23-S c.  
- T-24-C b.  
- T-25-C c.  
- T-26-C b.  
- T-27-C b.  
- T-28-C b.  
- T-29-C c.  
- T-31-C b.  
- T-32-C c., d.  
- T-33-S b.  
- T-34-C/S b.  
- T-35-C/S b.  
- T-36-S e.  
- T-37-C b.  
- T-38-S b.  
- T-39-C b.  
- T-40-C c.  
- T-41-C b.  
- T-42-S b.  
- T-43-C b.  
- T-44-C c.  
- T-45-C c.  
- T-46-S b.  
- T-47-C c.  
- T-48-C b.  
- T-49-S b.  
- T-51-C b.  
- T-52-C d., e.  
- T-53-C d.  
- T-54-C b.  
- T-55-C c., d.  
- T-56-C b.  
- T-57-C c.  
- T-58-C b.  
- T-59-C b.  
- L-1-S b.  
- L-2-S b. |
| **G** | Policies related to section 57 of the *Clean Water Act, 2006* | The following policies relate to section 57 (prohibition) of the *Clean Water Act*:  
- G-4  
- T-3-C c. |
| **H** | Policies related to section 58 of the *Clean Water Act, 2006* | The following policies relate to section 58 (risk management plans) of the *Clean Water Act*:  
- G-1 a.  
- G-3  
- T-20-C b.  
- T-25-C b.  
- T-29-C b.  
- T-32-C b.  
- T-40-C b.  
- T-44-C b.  
- T-45-C b.  
- T-47-C b. |
**Table C-1  Compliance lists continued**

<table>
<thead>
<tr>
<th>LIST</th>
<th>TITLE</th>
<th>POLICIES</th>
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</table>
| I    | Policies related to section 59 of the *Clean Water Act, 2006* | The following policies relate to section 59 (restricted land use) of the *Clean Water Act*:  
  - G-1 b.  
  - G-2  
  - T-3-C c.  
  - T-20-C a.  
  - T-25-C a.  
  - T-29-C a.  
  - T-40-C a.  
  - T-44-C a.  
  - T-45-C a.  
  - T-47-C a. |
| J    | Strategic action policies | For the purpose of section 33 of Ontario Regulation 287/07, the following policies are identified as strategic action policies:  
  - 0-1-S a., b., c., d., e., f., g., h.  
  - 0-2-S a., b., c., d.  
  - 0-4-S  
  - 0-5-S a., b., c.  
  - 0-6-S  
  - T-34-S  
  - T-35-S  
  - T-36-S a., b., c., d.  
  - T-37-S  
  - T-49-S |
| K    | Significant threat policies to be implemented by stakeholders other than municipalities, local boards, or source protection authorities |  
  - T-12-S a.  
  - T-16-S a.  
  - T-22-S a.  
  - T-23-S a.  
  - T-29-S d.  
  - T-33-S a.  
  - T-36-S a., b., c., d.  
  - T-38-S a.  
  - T-42-S a.  
  - T-46-S a.  
  - T-49-S a.  
  - T-52-S a., c.  
  - T-53-S c.  
  - L-1-S a.  
  - L-2-S a. |
### Table C-2 Prescribed instruments which apply to Source Protection Plan policies in Lists C and D of Table C-1

(ss 34(4) of Ontario Regulation 287/07)

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<td>T-1-C a.</td>
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<td>Conform with</td>
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<td>G-1 c.</td>
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* Due to the modernization of the approval process for prescribed instruments adopted by the province in 2010, environmental compliance approvals for sewage works are administered through the Environmental Protection Act whereas previously issued approvals exist as certificates of approval under the Ontario Water Resources Act.
APPENDIX D

Glossary of Terms
Glossary of Terms

**Cesspool:**
an underground container for the temporary storage of sewage.

**Combined sewer:**
sewers that carry both stormwater and sanitary wastes in one pipe.

**Condensate:**
gas oil, naphtha and other relatively light hydrocarbons which remain liquid at normal temperature and pressure.

**Consumptive Demand:**
the amount of water that is taken from a water source and not returned locally to the same source of water within a reasonable amount of time.

**Crude Oil:**
a naturally occurring, unrefined petroleum product composed of hydrocarbon deposits. Crude oil can be refined to produce usable products such as gasoline, diesel, and various forms of petrochemicals.

**Drinking Water Sources:**
drinking water comes from surface water, groundwater, or from collected precipitation. Surface water includes rivers, lakes, and reservoirs. Groundwater is pumped from wells that tap into water-bearing sediment and rock units below ground.

**Earth Pit Privy:**
a latrine consisting of an excavation in the ground topped by an outhouse.

**Existing Threat:**
an activity that commenced, or has been engaged, in a location in a vulnerable area within ten years prior to the Source Protection Plan taking effect where there would be a drinking water threat. It includes any expansion of the activity only on the same parcel of land.

**Extensive Grazing:**
grazing of farm animals in pastures that typically provide all the nutritional needs of the animals with stocking densities of less than one nutrient unit per acre (Streamside Grazing, 2007). The majority of Ontario's unimproved pastures are managed as extensive grazing areas.

**Farm Animal:**
as defined in the *Nutrient Management Act, 2002*:

- livestock, including poultry and ratites
- fur-bearing animals
- bees
- cultured fish
- deer and elk
- game animals and birds
- any additional animals, birds, or fish prescribed by the regulations

**Farm-animal Yard:**
fenced, outdoor livestock areas associated with a barn or other outbuilding that is lined with concrete or paved with impervious material, other than land meeting the definition of an outdoor confinement area. Food and water are not provided in farm-animal yards. They are generally used as outdoor exercise areas or holding areas when barns are being cleaned.

**Future Threat:**
any activity in a vulnerable area where there could be a drinking water threat that is not defined as an existing threat within this Source Protection Plan.
Greywater: sewage from a home that is derived from fixtures other than toilets.

Halton-Hamilton Source Protection Region: Ontario Regulation 284/07 defines a Source Protection Region as a consolidation of two or more Source Protection Areas. Halton-Hamilton Source Protection Region joins Halton Region Source Protection Area and Hamilton Region Source Protection Area, which are the equivalent jurisdictions of Halton Region Conservation Authority (Conservation Halton) and Hamilton Conservation Authority. The Region and Areas are shown on Figure 1.

Holding Tank: a tank designed for temporary storage of sanitary sewage discharged into it.

Industrial Effluent Discharge: a sewage works that discharges to surface water and has as its primary function the collection, transmission, or treatment of industrial sewage. National Pollutant Release Inventory reporting must be required of the facility.

Intake Protection Zone: areas of land and water that contribute source water to a drinking water system intake within a specified distance, period of flow time, and/or watershed area and within which it is desirable to regulate or monitor drinking water threats.

Issue: a chemical or pathogen that exits in source water at a concentration, or has an increasing concentration that, if it continues, may deteriorate the quality of the water for use as drinking water.

Issue Contributing Area: an area of water flowing toward an intake or well within a vulnerable area where threats related to an identified issue must be addressed to have the water source remain viable for drinking water.

Leaching Bed: an absorption system constructed as trenches or as a filter bed to which effluent from a treatment unit is applied. Leaching beds may be constructed wholly in ground or partly or wholly raised above ground, as required by local conditions. It comprises soil, pipes and backfill.

Legislative Tools: includes tools specified in existing legislation that could be used to protect drinking water sources. This includes prescribed instruments as defined below.

Multi-barrier Approach: an integrated system of water management aimed at reducing the contamination of drinking water from source to tap. The approach includes the protection of water supplies, appropriate treatment and testing, reliable distribution systems, and professional training for water managers.

Municipal Planning Authority: as established under section 14.1 of the Planning Act. The applicable level of government for implementation of a policy has been established through legislation and delegation of planning approval authorities.

Nutrient Unit: a way of quantifying the amount of nutrients that farm animals generate and to characterize the size of farms. A nutrient unit is the amount of nutrients that give the fertilizer replacement value the lower of 43 kilograms of nitrogen or 55 kilograms of phosphate.

Outdoor Confinement Area: as defined in Ontario Regulation 267/03, made pursuant to the Nutrient Management Act, 2002, an enclosure with the following characteristics:

1. It has no roof, except as described in characteristic #3.
2. It is composed of fence, pens, corrals, or similar structures.
3. It may contain a shelter to protect the animals from the wind or another shelter with a roof of an area of less than 20 square metres.
4. It has permanent or portable feeding or watering equipment.
5. The animals are fed or watered at the enclosure.
6. The animals may or may not have access to other buildings or structures for shelter, feeding, or watering.
7. Grazing and foraging provide less than 50 percent of dry matter intake.

**Prescribed Instruments:** some legislation requires the issuance of an instrument, i.e., a permit or license, for an activity to be carried out. For example, environmental compliance approvals are issued to owners of wastewater treatment plants, and nutrient management plans are required by farm operators under specified circumstances. Specific instruments have been prescribed under the *Clean Water Act, 2006* and can be modified through policy to protect drinking water sources better.

**Prescribed Threats:** twenty-one activities are prescribed in Ontario Regulation 287/07 section 1.1(1) as drinking water threats. Nineteen of these activities can affect water quality and two can affect water quantity. The water quality threats are listed in Table 1 and are discussed in the Assessment Reports and the Explanatory Document.

**Privy Vault:** a latrine in which the receptacle for human waste consists of a constructed vault from which the waste is periodically removed.

**Risk Management Official:** person appointed under Part IV of the *Clean Water Act, 2006* by the council of a single-tier municipality, and the council of the upper or low-tier municipality that has authority to pass by-laws respecting water production, treatment, and storage under the *Municipal Act, 2001*.

**Salt Storage Facility:** a designated area for the storage of road salt or salt/sand mixtures transported to the site in bulk.

**Sanitary Sewage:** liquid or water borne waste from industrial, commercial, or domestic origins. Domestic sewage could include human body waste, toilet or other bathroom waste, and shower, tub, culinary, sink and laundry waste.

**Septic System:** small septic systems are regulated under the Ontario Building Code where the system or all systems on one parcel of land have a design capacity of 10,000 litres per day or less, and where they are located on the same parcel of land as the building they serve. Large septic systems include all others. Both large and small systems are listed in the Ministry of the Environment and Climate Changes’s Tables of Drinking Water Threats as including:

(a) an earth pit privy
(b) a privy vault
(c) a greywater system
(d) a cesspool
(e) a leaching bed system and its associated treatment unit

**Septic Tank:** a watertight vault in which sanitary sewage is collected for the purpose of removing scum, grease and solids from the liquid without the addition of air and in which solids settling and anaerobic digestion of the sanitary sewage takes place.

**Sewage System:** defined in the Ontario Building Code where the system or all systems on one parcel of land have a design capacity of 10,000 litres per day or less, and where they are located on the same parcel of land as the building they serve, as:

(a) a chemical toilet, an incinerating toilet, a recirculating toilet, a self-contained portable toilet and all forms of privy including a portable privy, an earth pit privy, a pail privy, a privy vault and a composting toilet system
(b) a greywater system
(c) a cesspool
(d) a leaching bed system
(e) a system that requires or uses a holding tank for the retention of hauled sewage at the site where it is produced before its collection by a hauled sewage system

**Sewage Works:**
the equipment, piping, tanks, etc., used for the collection, transmission, treatment, and disposal of sewage and described in the certificate of approval issued under the *Ontario Water Resources Act* or environmental compliance approval issued under the *Environmental Protection Act* for the facility.

**Snow Storage Facility:**
a designated purposely designed storage area used for the stockpiling of snow transported to the site for storage and melting.

**Stormwater:**
stormwater management ponds are typically designed to remove suspended sediment from runoff in urban areas. However, urban stormwater runoff may also contain nutrients, bacteria, heavy metals, oil and grease, pesticides, sodium, and chloride. Some of these contaminants may also be removed through treatment methods, but many are not. Thus, all stormwater discharging from a retention pond is considered untreated.

**Tables of Drinking Water Threats:**
tables prepared by the Ministry of the Environment and Climate Change that list the prescribed threats to drinking water sources and circumstances correlated with their level of risk to drinking water sources when occurring within vulnerable areas.

**Tier 3 Water Budget and Water Quantity Risk Assessment:**
the assessment of stresses on the sustainability of the municipal well water sources is completed as a tiered process. A Tier 3 assessment is required when a subwatershed, in which a municipal well water supply is located, has been found to have demands placed on the water that are higher than the threshold water available. The Tier 3 study is focused on the sustainability of the local area of the water supply instead of the subwatershed.

**Transport Pathway:**
any structure or land alteration or condition resulting from a naturally occurring process or human activity that would increase the probability of a contaminant reaching a drinking water source, such as utility corridors, poorly constructed wells or earth energy systems, and abandoned pits and quarries.

**Watershed(s):**
an area of land that drains water into a waterbody such as a lake or river. Watershed may refer to the drainage of surface water or groundwater and the two drainage areas may not be coincident in a given area.

**Wellhead Protection Area:**
an area that is related to a well and within which it is desirable to regulate or monitor drinking water threats (see Assessment Reports).

**Works:**
see “sewage works” above.