DRINKING WATER SOURCE PROTECTION
ACT FOR CLEAN WATER

TRENT CONSERVATION COALITION
SOURCE PROTECTION REGION

Trent Source Protection Plan

Approved October 23, 2014

Effective January 1, 2015

Updated February 2, 2021

Crowe Valley Source Protection Area
Kawartha-Haliburton Source Protection Area
Lower Trent Source Protection Area
Otonabee-Peterborough Source Protection Area

Ontario

Made possible through the support
of the Government of Ontario

www.trentsourceprotection.on.ca

SUMMARY OF AMENDMENTS

The following list highlights the most recent amendments made to the Trent Source Protection Plan (as per s.22(1)(1) of the Clean Water Act, 2006, the Assessment Report is a component of the Trent Source Protection Plan) since its approval on October 23, 2014. These amendments are current as of December 21, 2021. A complete list of amendments can be found in Appendix 7.

To provide clarity regarding the decommission of the Blackstock well, a reference was added to section 5.3, Notice of Decommissioning of a Municipal Well in the Blackstock Drinking Water System – Region of Durham, January 2014.

The name of the Fraserville drinking water system was changed to Lansdowne planned Municipal System.

Transport pathways that did not intersect the vulnerable area were removed from Assessment Report Map 5-26a.

An amendment was made to Map 5-25c to included updated DNAPL threat data in the WHPA-D. As per

EBR Registry Number 013-2403, the Information Notice posted on the Environmental Bill of Rights describes the amendments approved by the Ministry of Environment, Conservation and Parks (MECP) on February 15, 2018 including:

- 8 new water quantity policies for a small area within the municipalities of Uxbridge and Scugog within Kawartha-Haliburton Source Protection Area. The amendment ensures consistency across Durham Region and with the CTC Source Protection Region.

As Per EBR Registry Number 019-0273, the information Notice posted on the Environmental Bill of Rights describes the amendments approved by MECP on August 20, 2019, including:

- An expanded and revised wellhead protection area around the new and existing wells of the Norwood drinking water system. Updated source protection plan mapping, including Policy Applicability Map

As Per EBR Registry Number 019-1345, the information Notice posted on the Environmental Bill of Rights describes the amendments approved by MECP on June 8, 2020 including:

- Updated WHPA around the new and existing wells of Pinewood and Stirling municipal well systems, including an updated Policy Applicability Map.

As Per EBR Registry Number 019-2141, the information Notice posted on the Environmental Bill of Rights describes the amendments approved by MECP on August 18, 2020 including:

- Updated WHPA around the new and existing wells of Canadiana Shores municipal well systems, including an updated Policy Applicability Map.

A comprehensive s.51 amendment was completed on December 21, 2021. For a full list of changes, please see Appendix 7.

As Per EBR Registry Number 019-4862, the information Notice posted on the Environmental Bill of Rights describes the amendments approved by MECP on February 2, 2022 including:

- Updated WHPA around the new and existing wells of Colborne drinking water system, including an updated Policy Applicability Map.

This source protection plan was prepared on behalf of the
Trent Conservation Coalition Source Protection Committee under the Clean Water Act, 2006.

TRENT CONSERVATION COALITION SOURCE PROTECTION COMMITTEE

Membership as of date of Plan Approval (October 23, 2014)

Jim Hunt (Chair)

Municipal
Dave Burton, *KHSPA municipalities*
Rob Franklin (Bruce Craig to June 2011), *GRSPA municipalities*
Dave Golem, *CVSPA municipalities*
Rosemary Kelleher-MacLennan, *LTSPA municipalities*
Gerald McGregor, *KHSPA municipalities*
Mary Smith, *OPSPA municipalities*
Richard Straka, *OPSPA municipalities*

Commercial/Industrial
Monica Berdin, *Recreation/Tourism*
Edgar Cornish, *Agriculture*
Kerry Doughty, *Aggregate/Mining*
Robert Lake, *Economic Development*
Glenn Milne, *Agriculture*
Bev Spencer, *Agriculture*
Dave Workman (Rick Johnson to June 2009)*, Commercial/Industrial*

Other Interests
Alanna Boulton, *Trent-Severn Waterway*
William Cornfield, *Drinking Water Expert*
Roberta Drew, *Public/Rural*
Michael Gibbs (Matt Taft to September 2010), *Public/Urban*
Terry Rees, *Waterfront Landowner*
Wayne Stiver, *Drinking Water Expert*
Alix Taylor (Mary Jane Conboy to March 2010)*, Environmental Non-Governmental Organization*

First Nations
Darla Blodgett, *Hiawatha First Nation*
Pam Crowe (to June 2012), *Alderville First Nation*
Mae Whetung (Tracey Taylor to July 2008, Wanita Dokis to November 2008), *Curve Lake First Nation*

Liaison
Atul Jain: acting (Anne Alexander / Tom Cathcart: acting), *Health Unit*
Wendy Lavender (Debbie Scanlon to January 2009, Wendy Lavender to June 2011, Clare Mitchell 2011 to 2012), *Ministry of the Environment and Climate Change,* Glenda Rodgers (Jim Kelleher to September 2010), *Source Protection Authority*

The Trent Conservation Coalition Source Protection Committee is a locally based committee comprised of 28 representatives from municipal government, First Nations, the commercial/industrial/agriculture sectors, and other interests. The committee's role is to develop source protection plans that establish policies for preventing, managing, or eliminating threats to sources of drinking water. In developing the plans, the committee members commit to the following:

- *Basing policies on the best available science, and where there is uncertainty, being mindful of the precautionary approach;*
- *Considering and incorporating local and traditional knowledge;*
- *Consulting with all stakeholders and in particular with impacted landowners, businesses, and municipalities;*
- *Ensuring that concerns from the public, as well as all stakeholders are heard and taken into consideration;*
- *Considering all economic impacts;*
- *Making decisions that are fair and reasonable through an open and transparent process; and*
- *Advocating for ongoing provincial funding to provide financial assistance to landowners, business owners, municipalities, and agencies for stewardship and other implementation measures.*

Current Membership (as of August 11, 2021)

Municipal
Lori Burtt, OPSPA municipalities
Bonnie Clark, *OPSPA municipalities*
Brent Devolin, *KHSPA municipalities*
Doug Elmslie, KHSPA *municipalities*
Rob Franklin, *GRSPA municipalities*
Rosemary Kelleher-MacLennan, *LTSPA municipalities*
George Offshack, LTSPA *municipalities*

Commercial/Industrial
Cyndy Broughton, *Recreation/Tourism*
Jessica Ferri, *Aggregate/Mining*
Robert Lake, *Economic Development*
Faye Langmaid, *Economic Development*
Glenn Milne, *Agriculture*
Bev Spencer, *Agriculture*
Dave Workman, *Commercial/Industrial*

Other Interests
Alanna Boulton, *Trent-Severn Waterway*
Rene Gagnon, *Drinking Water Expert*
Michael Gibbs, *Public/Urban*
Alexander Hukowich, *Drinking Water Expert*
Terry Rees, *Waterfront Landowner*
Richard Straka, *Public/Rural*
Alix Taylor, *Environmental Non- Governmental Organization*

First Nations
Darla Blodgett, *Hiawatha First Nation*
Kristin Muskratt, *First Nation Youth Representative*
Tracey Taylor, *Curve Lake First Nation*

Liaison
Julie Ingram, *Health Unit*
Mary Wooding, *Ministry of the Environment, Conservation and Parks*
Rhonda Bateman, *Source Protection Authority*

ACKNOWLEDGEMENTS

The committee would like to thank staff of the following organizations for their contributions in preparing the Trent Source Protection Plan for the Trent source protection areas.

Conservation Authorities

- Crowe Valley Conservation Authority
- Ganaraska Region Conservation Authority
- Kawartha Region Conservation Authority
- Lower Trent Region Conservation Authority
- Otonabee Region Conservation Authority

Consultants & Others

- XCG Consultants Ltd.
- EarthFX Inc.
- GENIVAR (formerly Jagger Hims Ltd.)
- IBI Group
- AECOM Canada Ltd.
- Harden Environmental Services Ltd.
- Greenland International Consulting Ltd.
- Intera Engineering Ltd.
- Bruce W. Kitchen, P. Eng., Consultant
- Peterborough Utilities Services Inc.
- Trent University
- Conservation Authorities Moraine Coalition
- Trent-Severn Waterway
- Ontario Ministry of the Environment and Climate Change
- Ontario Ministry of Natural Resources and Forestry
- Conservation Ontario

Municipalities

The following municipalities are located, either partially or entirely, within the Trent Conservation Coalition Source Protection Region. Ongoing communication has occurred with municipalities throughout the source protection planning process. Many have been involved with the development of the Trent Source Protection Plan.

- Township of Algonquin Highlands
- Township of Alnwick/Haldimand
- Township of Asphodel-Norwood
- Municipality of Brighton
- Township of Brock
- Township of Cavan Monaghan
- Municipality of Centre Hastings
- Municipality of Clarington
- Town of Cobourg
- Township of Cramahe
- Township of Douro-Dummer
- Regional Municipality of Durham
- Municipality of Dysart et al
- Township of Faraday
- Municipality of Trent Lakes (formerly Township of Galway-Cavendish & Harvey)
- County of Haliburton
- Township of Hamilton
- County of Hastings
- Township of Havelock-Belmont-Methuen
- Municipality of Highlands East
- City of Kawartha Lakes
- Township of Limerick
- Municipality of Marmora and Lake
- Township of Minden Hills
- Township of North Kawartha
- County of Northumberland
- Township of Otonabee-South Monaghan
- City of Peterborough
- County of Peterborough
- Municipality of Port Hope
- City of Quinte West
- Township of Scugog
- Township of Selwyn (formerly Township of Smith-Ennismore-Lakefield)
- Township of Stirling-Rawdon
- Municipality of Trent Hills
- Township of Tudor and Cashel
- Township of Wollaston

TRENT CONSERVATION COALITION SOURCE PROTECTION REGION

The Trent Conservation Coalition Source Protection Region extends across the Trent and Ganaraska River watersheds, covering a 14,500 square kilometre area stretching from Algonquin Park to the Bay of Quinte and Lake Ontario. Five conservation authorities within this region have worked with the source protection committee, local municipalities, and other stakeholders to facilitate the development of the Trent and Ganaraska Source Protection Plans.

Crowe Valley Conservation Authority

Ganaraska Region Conservation Authority

Kawartha Region Conservation Authority

Lower Trent Region Conservation Authority

Otonabee Region Conservation Authority

EXECUTIVE SUMMARY

This document is a source protection plan prepared to address significant drinking water threats in Kawartha-Haliburton, Crowe Valley, Lower Trent, and Otonabee-Peterborough Source Protection Areas (a separate plan has been developed for the Ganaraska Region Source Protection Area). This plan has been prepared in accordance with the requirements of the *Clean Water Act, 2006*.

The scope, purpose, and objectives of this plan can be found in Chapter 1. Chapter 2 provides the background to the source protection program and outlines contextual information relevant to understanding the policies described in Chapter 4. Chapter 3 discusses administration, including compliance, legal effect, amendments, and implementation of the policies. Chapter 4 contains the policies that have been developed by the Trent Conservation Coalition Source Protection Committee to fulfill the objectives of the plan. Chapter 4 is organized by prescribed drinking water threat and, in addition to the policies themselves, provides a summary of the circumstances that are considered in the determination of whether or not a particular instance of an activity is a significant drinking water threat. Local threats, monitoring for drinking water issues, water quantity, and other policies are also included in Chapter 4.

A number of appendices are included in this plan. This plan builds on the technical information reported in the Trent Assessment Report (2011), which can be found in Appendix 1. Appendix 2 includes 46 policy applicability maps that illustrate where the policies apply for each municipal drinking water system in the Trent source protection areas. The lists in Appendix 3 summarize the legal effect of the policies in the plan. Appendix 4 outlines the policies by implementing body, and is intended to be a quick reference for users of this plan. Appendix 5 contains a summary of all consultation activities undertaken during the preparation of the Terms of Reference, the Assessment Report, and the Source Protection Plan. Appendix 6 summarizes the policy codes by the implementing body and compliance /target date. Lastly, Appendix 7 summarizes the minor amendments made to the Plan under Section 51 of O.Reg 287/07.

This plan is to be treated as a living, evolving document, that is frequently subject to amendments and updates to improve and adapt to new science and technical rules as they arise.

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LIST OF ACRONYMS

ASM	Agricultural Source Materials
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene
CTC	Credit Valley-Toronto and Region-Central Lake Ontario Source Protection Region
D-2, 4	Dichlorophenoxy Acetic Acid
DNAPL	Dense Non-Aqueous Phase Liquid
E.coli	*Escherichia coli*
GUDI	Groundwater under Direct Influence of Surface Water
ICA	Issue Contributing Area
IPZ	Intake Protection Zone
MCPA	2-methyl-4-chlorophenoxyacetic acid
MCPB	4-(4-chloro-2-methylphenoxy) butanoic acid
MMAH	Ministry of Municipal Affairs and Housing
MNDMRF	Ministry of Northern Development, Mines, Natural Resources and Forestry
MOECC	Ministry of the Environment and Climate Change
MTO	Ministry of Transportation
NASM	Non-Agricultural Source Material
NPRI	National Pollutant Release Inventory
ODWSP	Ontario Drinking Water Stewardship Program
OMAFRA	Ontario Ministry of Agriculture, Food and Rural Affairs
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated biphenyl
PCE	Tetrachloroethylene
RMO	Risk Management Official
RMP	Risk Management Plan
SPA	Source Protection Area or Source Protection Authority (depending on context)
SPC	Source Protection Committee
SPR	Source Protection Region
SDWT	Significant Drinking Water Threat
TCC	Trent Conservation Coalition
WHPA	Wellhead Protection Area

CHAPTER 1: INTRODUCTION

This introductory chapter identifies the scope and purpose of the Trent Source Protection Plan (1.1) as well as provides the objectives of the plan (1.2).

1.1 SCOPE AND PURPOSE OF THE SOURCE PROTECTION PLAN

This document contains four source protection plans for the following source protection areas:

- Kawartha-Haliburton
- Crowe Valley
- Lower Trent
- Otonabee-Peterborough

These source protection areas have been grouped into a single plan to maintain a focus on the Trent River watershed. The Ganaraska Source Protection Plan has been developed separately for the Ganaraska Region Source Protection Area.

This report has been prepared in accordance with the *Clean Water Act*, *2006*, the *General* Regulation under the *Act (O. Reg. 287/07)*, and the *Terms of Reference* for each of the four applicable source protection areas. The *Clean Water Act, 2006* sets out a basic regulatory framework for communities to follow in developing an approach to protecting their *municipal* water supplies.

1.2 PLAN OBJECTIVES

The policies in this plan have been written to achieve the objectives identified in the *General* Regulation under the *Act*. These objectives are as follows:

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:
    - the activity never becomes a significant drinking water threat, or
    - if the activity is occurring when the source protection plan takes effect, the activity ceases to be a significant drinking water threat.

CHAPTER 2: BACKGROUND

This chapter provides background information and context to the remainder of the Trent Source Protection Plan. It describes the importance of source protection planning in Ontario (2.1), provides an overview of the source protection planning process in the Trent Conservation Coalition Source Protection Region (2.2), defines drinking water threats (2.3), and describes the steps taken to develop policies contained within the Plan (2.4).

2.1 DRINKING WATER SOURCE PROTECTION IN ONTARIO

This section establishes the importance of source protection planning (2.1.1) and provides a brief history of the *Clean Water Act, 2006* (2.1.2). The scope of this plan is the protection of existing and future municipal drinking water sources in the Trent source protection areas. Further, this stage of source protection planning has addressed the management of anthropogenic activities with the potential to cause an impact to water quality and quantity, as opposed to those that are naturally occurring.

2.1.1 IMPORTANCE OF SOURCE PROTECTION PLANNING

In May 2000, the drinking water supply in Walkerton, Ontario was compromised and became contaminated by the deadly bacteria *Escherichia coli* O157:H7 (*E. coli*). A number of people died and thousands became ill. In response to these events, the Government of Ontario established the Walkerton Commission of Inquiry. The purpose of the inquiry was to make recommendations to ensure the safety of water supplies in the Province of Ontario.

The Walkerton Inquiry stated that an approach using multiple barriers to prevent contamination to drinking water supplies would be the best line of defense. This multiple barrier approach includes a number of practices to protect drinking water. Some of these practices include robust water treatment, secure distribution systems, frequent water testing, training, and source protection planning.

Source protection planning is the first line of defense in this multiple barrier approach and seeks to prevent the contamination and overuse of surface water and groundwater sources of municipal drinking water. This is achieved by evaluating threats to these drinking water sources and establishing policies to prevent, manage, or eliminate the threats.

2.1.2 ONTARIO'S *CLEAN WATER ACT, 2006*

The *Clean Water Act, 2006* was passed by the Government of Ontario to establish a framework for drinking water source protection across the province. The purpose of the *Clean Water Act, 2006* is to protect Ontario's existing and future drinking water sources as part of an overall commitment to safeguard human health and the environment. A key focus of the legislation is the preparation of locally developed terms of reference, science-based assessment reports and source protection plans. The *Act* also assigns responsibilities, prescribes research and technical studies, and provides regulations in support of the development and implementation of source protection plans. The *Act* complements the existing roles and responsibilities that local municipalities have in place to protect and distribute municipal drinking water to residents in their jurisdiction.

The *Act* also mandates existing conservation authorities to perform the powers of source protection authorities for the purpose of source protection planning in a source protection area. Source protection areas are administrative

divisions that are based on watershed boundaries. In many parts of Ontario, two or more source protection areas work collaboratively to form a source protection region.

2.2 THE SOURCE PROTECTION PLANNING PROCESS

This section describes the framework of the source protection planning process. It provides an overview of the Trent Conservation Coalition Source Protection Region (2.2.1), source protection authorities (2.2.2), the source protection committee (2.2.3), and describes the key deliverables of the program (2.2.4).

2.2.1 TRENT CONSERVATION COALITION SOURCE PROTECTION REGION

The Trent Conservation Coalition Source Protection Region has been established in accordance with the *Act* as a partnership among the Crowe Valley, Ganaraska Region, Kawartha-Haliburton, Lower Trent, and Otonabee-Peterborough Source Protection Authorities. The Lower Trent Source Protection Authority acts as the lead for all five source protection authorities. The Trent Conservation Coalition Source Protection Region covers an area of approximately 14,500 square kilometres (km^2) and includes the entire Trent River watershed and two additional watersheds: the Ganaraska Region Source Protection Area, which drains into Lake Ontario (except for a small portion that drains into Rice Lake), and the southern portion of the Lower Trent Source Protection Area, which drains into both Lake Ontario and the Bay of Quinte. The source protection region also includes land outside of conservation authority jurisdiction.

The Trent source protection areas include the Crowe Valley, Kawartha-Haliburton, Lower Trent, and Otonabee-Peterborough Source Protection Areas. Together these areas cover a total of about 12,900 km^2 and they encompass the entire Trent River watershed. Many of the major watercourses in the area form the navigation channel of the Trent-Severn Waterway. About 43% of the population of the Trent source protection areas is served by 46 municipal residential drinking water systems, which include 31 groundwater systems and 15 surface water systems.

The five Source Protection Areas that make up the Trent Conservation Coalition Source Protection Region

The Ganaraska Region Source Protection Area covers 930 km^2 of land and contains approximately 114 km^2 of the Rice Lake watershed. About 70% of the population in the Ganaraska Region Source Protection Area (43,321 people) obtain their drinking water from 6 municipal residential drinking water systems, which include 3 groundwater systems and 3 surface water systems.

Drinking water systems in the Trent Conservation Coalition Source Protection Region include municipal systems of various sizes that draw raw water from both groundwater and surface water sources. Municipal residential drinking water systems are owned and/or operated by municipalities and serve residential developments. Small municipal residential systems serve fewer than 101 private residences, and large municipal residential systems serve more than 100 private residences.

2.2.2 SOURCE PROTECTION AUTHORITIES

Source protection authorities are administrative bodies mandated to satisfy the requirements of the *Act* in a source protection area. They are generally composed of the conservation authority boards of directors that are made up of representatives appointed by councils of the municipalities that form the conservation authority. Where the jurisdiction of a source protection authority has been expanded to include areas outside of the jurisdiction of a conservation authority, the source protection authority includes additional representation from the municipalities included in this expanded area.

2.2.3 SOURCE PROTECTION COMMITTEE

The *Act* assigns responsibilities to a source protection committee made up of individuals selected to represent municipal, economic, general public, and First Nations interests across the Region. The composition and operation of the Committee are prescribed under *O. Reg. 288/07* of the *Act*. The Chair was appointed by the Minister of the Environment and Climate Change on August 20, 2007 and the source protection committee was established in November 2007 following an open public process. In addition to the Chair, there are twenty-seven members: seven municipal representatives, seven representatives from the economic/industrial sector, seven members representing other interests, and three First Nations representatives. Three non-voting liaison members also sit on the Committee to represent the Ministry of the Environment and Climate Change, source protection authorities in the Region, and health units/departments. A list of source protection committee members can be found at the beginning of this document.

2.2.4 KEY DELIVERABLES

Source protection planning under the *Act* requires the development of three key deliverables: a terms of reference, assessment report, and source protection plan.

The terms of reference outlines the work plan, timeline, and responsibilities for the development of the assessment report and source protection plan, as well as lists the drinking water systems that are within its scope. A terms of reference for each source protection area in the Trent Conservation Coalition Source Protection Region has been completed, publicly reviewed, and approved by the Ministry of the Environment and Climate Change in January 2009.

The assessment report is a technical document developed in accordance with the terms of reference that identifies and evaluates threats to drinking water quality and quantity. The assessment report accomplishes this by compiling all relevant data on the applicable source protection areas and by applying scientific methodologies to assess the vulnerability of the municipal drinking water systems identified in the Terms of Reference. The methods used to complete the assessment report are outlined in the *Technical Rules* prepared by the Ministry of the Environment and Climate Change. The Trent Assessment Report was originally approved in October 2011, and is updated as required.

The source protection plan builds on the findings of the assessment report by establishing policies to manage, prevent or eliminate significant threats to drinking water quality and identifies who is responsible to take action. The plan also sets timelines for implementation. Where possible, the Source Protection Plan builds on current projects, programs and processes and recognizes or reinforces existing management practices relevant to drinking water source protection.

The terms of reference for each of the four Trent source protection areas, Trent Assessment Report, and Trent Source Protection Plan are available on the Trent Conservation Coalition website (www.trentsourceprotection.on.ca) or in hardcopy at the respective conservation authority office.

2.3 DRINKING WATER THREATS

Drinking water threats are activities that have the potential to impact the quality or quantity of drinking water sources. Drinking water quality and quantity threats are prescribed under the *Clean Water Act, 2006*. The *Clean Water Act, 2006* describes a comprehensive process by which activities are determined to be significant, moderate, or low drinking water threats based on type of vulnerable area in which the activity is undertaken, the vulnerability score of that area, and the nature of the activity. The *Act* requires Source Protection Committees (SPCs) across the Province to create policies to address significant Drinking Water Threats and provides individual SPCs with the discretion to create policies to address low and/or moderate Drinking Water Threats. Policies in this source protection plan only address activities that are *significan*t drinking water threats to the quality and quantity of drinking water sources in the Trent River watershed. This section provides a summary of the process of delineating and assigning vulnerability scores to vulnerable areas (2.3.1) and identifies the types of activities that can be considered significant drinking water threats (2.3.2).

2.3.1 DELINEATION AND SCORING OF VULNERABLE AREAS

The Trent Assessment Report documents the results of several technical studies that delineated the areas around municipal drinking water sources that are the most vulnerable to contamination and establishes vulnerability scores for each of these areas. The vulnerable areas delineated around surface water intakes are called *intake protection zones* (IPZ), and those delineated around groundwater wells are called *wellhead protection areas* (WHPA). These areas are further subdivided based on factors described below. Maps of intake protection zones and wellhead protection areas are provided in the Trent Assessment Report for each drinking water system in the Trent source protection areas.

Intake Protection Zones

Intake Protection Zone 1 (IPZ-1) is the area immediately adjacent to the intake. This zone is considered the most vulnerable area for surface water intakes due to its proximity to the intake, contaminants of concern entering this area would experience little to no dilution before reaching the intake.

The Intake Protection Zone 2 (IPZ-2) acts as a secondary protective zone that generally extends upstream of the IPZ-1. The IPZ-2 is defined as the area within and around a surface water body that may contribute water to an intake within a time of travel determined by water treatment plant operators to be sufficient for responding to a contamination event. This time has been defined as a 2-hour time of travel. Where the IPZ-2 abuts land, the area within a 120 metre setback of the high water mark of the related surface water body is included in the delineation.

Intake Protection Zone 3 (IPZ-3) is a protective zone where early warning activities such as monitoring may be effective. The IPZ-3 is defined as the area within each surface water body that may contribute water to the associated intake. Where the IPZ-3 abuts land, the area within a 120 metre setback of the high water mark of the related surface water body is included in the delineation.

Wellhead Protection Areas

Wellhead protection areas are delineated based on the length of time it takes for water to move from the ground surface, underground to the well. This delineation helps to identify the length of time it would take most contaminants to travel from the location of a spill or leak to the associated well. Once a contaminant comes into contact with a permeable surface, it will percolate through the layers of soil until it reaches an aquifer where it is then transported to the municipal well. The wellhead protection areas are as follows:

- WHPA-A: The area within a 100-metre radius from a wellhead, considered the most vulnerable area for groundwater intakes.
- WHPA-B: The area within which the time of travel to the well (within the aquifer) is up to and including 2 years (excluding WHPA-A).
- WHPA-C: The area within which the time of travel to the well (within the aquifer) is up to and including 5 years (excluding WHPA-A and WHPA-B).
- WHPA-D: The area within which the time of travel to the well (within the aquifer) is up to and including 25 years (excluding WHPA-A, WHPA-B, and WHPA-C).
- WHPA-E: This area is only delineated where a well is influenced by surface water (*i.e.,* the well is considered GUDI – groundwater under the direct influence of surface water). WHPA-E is delineated the same way as the IPZ-2 for a surface water intake from the point of interaction between the aquifer and the surface water body. If the point of interaction is not known, the WHPA-E is delineated from the point in the surface water body that is nearest to the well.

Each IPZ and WHPA has a vulnerability score that reflects its vulnerability to contamination. Vulnerability scores are based on a comprehensive risk assessment process set out in the *Technical Rules*. Vulnerable areas and their corresponding vulnerability scores provide the basis for identifying where activities are or could be water quality threats. Most activities can only be considered significant threats if undertaken in the vulnerable area closest to the drinking water source (*e.g.,* WHPA-A or IPZ-1). However, in some cases an activity can be a significant threat beyond these areas (*e.g.,* DNAPLs can be a significant threat in WHPA-A, WHPA-B, WHPA-C, WHPA-E, IPZ-1, and IPZ-2).

2.3.2 DRINKING WATER QUALITY THREATS

The *Clean Water Act, 2006* identifies 21 activities that are prescribed to be drinking water threats and allows source protection committees to add additional activities as "local threats". Other potential drinking water threats include conditions related to past activities and drinking water issues. Each of these types of drinking water threats are explained in this section.

2.3.2.1 PRESCRIBED DRINKING WATER THREATS

The activities prescribed to be drinking water threats under the *Clean Water Act, 2006* are those considered to be manmade. These activities, as listed in the *Act*, are provided below. Activities 1-18 and 21 are potential threats to water quality, and activities 19 and 20 are potential threats to water quantity[1].

[1] The water budget process that was completed for the Trent Assessment Report did not identify any sub-watersheds that were sufficiently stressed to allow activities 19 and 20 to become significant drinking water threats in the Trent source protection areas.

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

Each prescribed drinking water threat has a set of circumstances that determine whether a particular instance of the activity is a significant, moderate, or low drinking water threat in each type of vulnerable area. These circumstances reflect various aspects of the activity. For some activities, there are separate sets of circumstances that determine if the activity is a chemical threat or a pathogen threat. *Chemical* threats are the aspects of an activity that can result in chemical contamination of a drinking water source, and include a wide variety of substances. A *pathogen* threat is a micro-organism that causes disease, and often come from human or animal waste. Some activities are both *chemical* and *pathogen* threats. A synopsis of the circumstances that are considered to determine if a particular instance of an activity is identified as significant can be found in Chapter 4.

2.3.2.2 LOCAL DRINKING WATER THREATS

Threats not listed in the *Clean Water Act, 2006* can be included in the Trent Assessment Report with approval from the Ministry of the Environment and Climate Change only after a source protection committee has proven, using scientific methods and professional judgment, that the activity has the ability to impact human health as it relates to water quality. Due to the potential for pathogen contamination resulting from the congregation of waterfowl on landscaped areas adjacent to watercourses, the maintaining of open areas of mown grass for recreational activities that promote the congregation of waterfowl within or near surface waterbodies was approved as a local drinking water threat in the Lakefield and Peterborough intake protection zones.

2.3.2.3 CONDITIONS

The *Clean Water Act, 2006* allows for the identification of threats as a result of historical activities. If a contaminant is measured at unacceptable levels, and the source of the contaminant is no longer controlled by regulations, then it is considered a condition. To be considered a drinking water threat, there must be documented evidence of the condition, and the condition must meet a number of criteria set out by the *Technical Rules*. No conditions that are significant drinking water threats were identified in the Trent Assessment Report.

2.3.2.4 DRINKING WATER ISSUES

Drinking water issues exist where the concentration of a contaminant at a surface water intake or well related to a drinking water system may indicate a deterioration of the quality of the water for use as a source of drinking water. Only issues that are the result of anthropogenic (human) activity are considered significant threats under the *Clean Water Act, 2006*. The following drinking water issue related to anthropogenic activity was identified in the Trent Assessment Report:

- *E. coli* at the Stirling well system (Lower Trent Source Protection Area)

2.3.3 DRINKING WATER QUANTITY THREATS

The *Clean Water Act, 2006* identifies two activities that are prescribed to be drinking water quantity threats, explained in this section.

2.3.3.1 PRESCRIBED DRINKING WATER QUANTITY THREATS

The activities prescribed to be drinking water quantity threats under the *Clean Water Act, 2006* are those considered to be manmade. These activities, as they appear listed in the *Act*, are provided below. Activities 19 and 20 are potential threats to water quantity[2].

19) An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.
20) An activity that reduces the recharge of an aquifer.

2.3.3.2 WELLHEAD PROTECTION AREA-Q (WATER QUANTITY)

Water quantity vulnerable areas are determined differently than other vulnerable areas. Through a tiered process of water budget analyses, as set out in the Technical Rules under O. Reg. 287/07. Source Protection Committees are required to identify any areas with water quantity stress, determine the stress level in the Wellhead Protection Area-Q (WHPA-Q), and where the level is deemed significant or moderate, identify the type and location of activities that pose a drinking water quantity threat. At the final stage (Tier 3 Water Budget analysis), any WHPA-Q areas where significant or moderate drinking water stress has been identified is an area where significant drinking water quantity

[2] The water budget process that was completed for the Trent Assessment Report did not identify any subwatersheds that were sufficiently stressed to allow activities 19 and 20 to become significant drinking water threats in the Trent source protection areas. The water budget process undertaken in the CTC (Credit Valley-Toronto and Region-Central Lake Ontario) Source Protection Region Assessment Report identified a subwatershed sufficiently stressed to allow activities 19 and 20 to become significant drinking water threats in a small area within Uxbridge and Scugog Townships.

threat activities can occur. Within these areas, future activities which take water without returning it to the same source or which reduce recharge to the aquifer are considered significant water quantity threats. If the area has a significant risk level assigned then existing activities are also considered significant water quantity threats. There are two types of WHPA-Q: WHPA-Q1 and WHPA-Q2. WHPA-Q1 refers to the area where activities that take water without returning it to the same source may be a threat. WHPA-Q2 refers to the area where activities that reduce recharge may be a threat. Source Protection Plan policies must be developed to address significant water quantity threats. See Chapter 4 for more details on Water Quantity policies.

Table 2.1: Moderately Stressed Sub-Watersheds from CTC Tier-2 Water Budget Studies

Watershed	Sub-Watershed	Tier 2 Stress Level	Municipal DWS
Rouge River	Little Rouge River(RO02)	Moderate	Stouffville (PW1, PW2, PW3, PW5)
Duffins Creek	Stouffville/Reesor Creek (DU06)	Moderate	Stouffville (PW6) Uxville(MW1, MW2)

Subsequently, the Tier-3 Water Budget and Water Quantity Risk Assessment Studies completed in 2014 for the Stouffville (York Region) and Uxville (Durham Region) municipal wells (see above table) delineated WHPA-Q1 and WHPA-Q2 water quantity vulnerable areas. In summary, the Tier-3 York/Durham Water Budget and Water Quantity Risk Assessment provided the following results:

“Exposure” level under scenario G (Table 4 – Exposure Scenarios; Technical Rules, 2009) is high due to impacts to “other users:” 20% decrease in base flows to cold water streams in the Yonge Street Aquifer area, greater than 1m incremental drawdown in other permitted wells and under PSWs.

“Tolerance” levels of Stouffville and Uxville drinking water systems are assessed to be high.

“Uncertainty” level of analysis was assessed to be low.

Therefore as per Technical Rule 98(2) and 100(1), a “moderate” risk level is assigned to the Local Area WHPA-Q1/Q2).

Since York/Durham Tier 3 Local Area (WHPA-Q1/Q2) was assigned a moderate risk level, all existing consumptive water takings and recharge reductions within this local area are classed as moderate threats and all future consumptive water takings (requiring PTTW) and future recharge reductions are classed as significant threats (Ref # 4 & 8, Table 5: Water Quantity Drinking Water Threats; Technical Rules, 2009).

A small portion of the Local Area in the Region of Durham (within the municipalities of Uxbridge & Scugog) extends into Kawartha-Haliburton Source Protection Area, part of the Trent Conservation Coalition SPR (see Trent Source Protection Plan Appendix 2: Water Quantity Demand Q1 & Recharge Q2 map).

The Recharge Policy Z-1 (3) and (4) apply only if the area is covered by a Significant Groundwater Recharge Area (SGRA). As per the Trent Source Protection Plan Appendix 2 Water Quantity: Policy Z-1 WHPA Q2 and SGRA map, the area is covered by SGRA, and therefore these policies apply.

Policies are required to ensure that moderate threats in the local area from becoming significant and to prevent future significant threats (i.e. increase to an existing taking or a new taking or reduction in recharge).

The Trent Conservation Coalition Source Protection Committee is technically required to implement policies with respect to York/Durham Tier 3 Local Area coming under the jurisdiction of the Kawartha-Haliburton Source Protection Authority after the Ministry of the Environment and Climate Change (MOECC) approves the Toronto Region Source Protection Authority's (TRSPA) Updated Assessment Report. MOECC approved TRSPA's Updated Assessment Report on July 24, 2015.

2.4 DEVELOPMENT OF THE SOURCE PROTECTION PLAN

This section outlines the process by which the Trent Conservation Coalition Source Protection Committee developed the source protection policies found in this Plan (2.4.1). A review of the policy tools available to the Source Protection Committee is provided (2.4.2). An overview of the mandatory (2.4.3) and optional (2.4.4) policies is also included. The Explanatory Document that accompanies this plan is described (2.4.5), and a summary of the consultation activities undertaken to comply with the *Clean Water Act, 2006* follows (2.4.6). Lastly, a review of matters impacting boundary municipalities is discussed (2.4.7).

2.4.1 POLICY DEVELOPMENT PROCESS

The Trent Conservation Coalition Source Protection Committee began preparation of the Trent Source Protection Plan in early 2011. Each source protection area in the Trent Conservation Coalition Source Protection Region has a corresponding municipal working group that is made up of representatives from the municipalities located within that source protection area. The Chair of each of these groups sits on the Source Protection Committee. The Committee worked with the municipal working groups to develop the policies required for the Source Protection Plan.

For each of the 19 prescribed drinking water quality threats and the local threat, the municipal working groups first reviewed early policy concepts and provided feedback on these concepts to the Source Protection Committee. *Draft* source protection policies were then created based on the feedback from the Committee. Next, the *draft* source protection policies were reviewed by the municipal working groups who again submitted feedback to the Committee. Once the *draft* source protection policies were formulated they were circulated for pre-consultation to the identified implementing bodies. Following pre-consultation, the Committee reviewed the written comments received from municipalities, agencies, provincial government, as well as others listed as responsible for implementation. These comments indicated support for or against a particular approach used by the Committee. Following discussion of this feedback, the Committee decided to either amend or maintain the policies for inclusion in the *Draft* Proposed Trent Source Protection Plan.

Comments received on the *Draft* Proposed Trent Source Protection Plan were discussed by the Committee following the 37 day consultation period. In the majority of cases where suggestions for improved policy text were received, the Committee agreed with these amendments. The Committee also made changes to at least one of its policy approaches. Once the Committee had agreed with the amendments to the Plan, it was forwarded to the Trent Source Protection Authorities as the Proposed Trent Source Protection Plan, to be posted for the final consultation period. All written comments received by the Source Protection Authorities during this final 31 day consultation period were submitted with the Proposed Trent Source Protection Plan to the Minister of the Environment and Climate Change for consideration.

In 2013 the Ministry of the Environment and Climate Change completed a comprehensive policy review of the Source Protection Plans from across the province. The policies underwent a final review and revision as a result of comments received following this process.

2.4.2 POLICY TOOLS

The Committee's desired outcome for all source protection policies fell within one of two categories: to manage or to prohibit the drinking water threat. Further, some general policy approaches were taken to address a variety of activities. The *Clean Water Act, 2006* provides the Committee with a wide range of approaches or "tools" to rely on as a means of achieving their desired outcome. Some tools rely on voluntary participation (*e.g*., education and outreach, incentive programs), while others regulate a particular activity.

A summary of the tools available to the Committee for developing source protection policies is given in Table 2.1. These tools may be seen as a spectrum, ranging from what are sometimes called "soft" tools, such as education and outreach, to "hard" tools, such as prohibition and risk management plans.

The first three approaches given in the table are new authorities provided under the *Clean Water Act, 2006* that were created to address the gaps where significant threats could not be addressed by existing tools. The next four tools rely on existing legal powers or authorities by those that would ultimately be responsible for implementing the policies (*i.e*., province, municipalities, conservation authorities, other public bodies). Prescribed Instruments are a group of existing regulatory instruments that address a number of activities (*i.e*., Nutrient Management Plans, Environmental Compliance Approvals). Land use planning policies utilize existing municipal powers under the *Planning Act* and the *Condominium Act* to control the use and development of land. The final group, "other," relies on other existing legislative authorities already granted to the body responsible for implementing the policy (*e.g*., *Municipal Act* authority) and other ways of dealing with threats authorized in section 26 of the *General* Regulation under the *Clean Water Act, 2006*.

Table 2.2: Summary of Policy Tools

Tools		Explanation	
More Restrictive	Prohibition (section 57)	Prohibits an activity from taking place.	Part IV Powers under the *Clean Water Act, 2006*
	Risk Management Plans (section 58)	Risk management plans (RMPs) are site specific, locally negotiated plans that consist of a series of risk management measures and operational practices that address the threat, reflecting current practices where appropriate.	
	Restricted Land Uses (section 59)	Provides municipalities with an administrative procedure to avoid inadvertently approving development applications and building permits for activities that would conflict with Part IV policies in the Source Protection Plan.	
	Prescribed Instruments	Provincial permits or approval documents issued for an activity in a vulnerable area can be amended to include requirements to help manage associated risks to the raw water supply. Alternatively, a policy could prohibit the issuance of or revoke such an instrument.	Existing Approaches
	Land Use Planning Approaches	The use of municipal planning tools and processes to regulate future development.	
Less Restrictive	Incentive Programs	Creation of incentive programs to encourage participation in initiatives to reduce risks to sources of drinking water.	
	Education and Outreach	Programs that will help raise awareness about why and how drinking water sources should be protected.	
	Other	"Other" tools include the following: • Specify the actions to be taken to implement the Source Protection Plan policies or to achieve the Plan's objectives; • Establish stewardship programs; • Specify and promote best management practices; • Establish pilot programs; and • Govern research.	

2.4.3 MANDATORY POLICIES

The *Clean Water Act, 2006* specifies the required content for the Source Protection Plan. Mandatory policies can be separated into two groups: those written to address existing and future significant threats, and monitoring policies.

For areas where an activity is or would be a significant drinking water threat, policies must be included in the Plan to ensure that the activity ceases to be or does not become significant. For each of these significant drinking water threat policies, a corresponding monitoring policy must be written to ensure that the policies are being implemented.

2.4.4 OPTIONAL POLICIES

The *Clean Water Act, 2006* and the *General* Regulation under the *Act* also identify a number of optional policies that can be included in a Source Protection Plan at the discretion of the Source Protection Committee. The types of optional policies are as follows:

- For areas where a condition resulting from a past activity is a significant threat, policies intended to ensure the condition ceases to be significant;
- Policies to address activities and conditions identified as moderate and low threats;
- Policies governing:
    - Incentive programs and education and outreach programs, including for drinking water systems not in the terms of reference;
    - Spills prevention, contingency or response plans along highways, railways or shipping lanes within intake protection zones or wellhead protection areas;
    - Climate change data collection;
    - Transport pathways; and
    - Monitoring moderate or low threats elsewhere in the source protection region.

The Source Protection Committee has chosen to only include the following optional content in this source protection plan: policies addressing education and outreach program for First Nations drinking water systems, spills prevention, climate change data collection, and transport pathways. These policies can be found in Section 4.7.

2.4.5 EXPLANATORY DOCUMENT

An explanatory document must be prepared and submitted with the Source Protection Plan as outlined in section 40 of the *General* Regulation under *Act*. The purpose of this document is to provide the rationale for the policies included in the Plan and to explain the Source Protection Committee's policy decisions. The document allows stakeholders, the general public, municipalities, and the Minister of the Environment and Climate Change to understand the context and history behind the policies. This document must accompany the *Draft* Proposed Trent and Ganaraska Source Protection Plans for public consultation purposes.

The Explanatory Document was updated following the first formal consultation period to reflect how policies were changed as a result of comments received. Prior to submission to the Minister, the Explanatory Document will be forwarded with the Proposed Trent Source Protection Plan to the Trent Source Protection Authorities. The Trent Source Protection Authorities will then submit the Proposed Trent Source Protection Plan and the accompanying Explanatory Document to the Minister along with their own comments, if any, and any additional comments or municipal resolutions (made under section 24 of the *Act*) received by the Authorities.

The Minister will use the Explanatory Document to assist in understanding the rationale for the policies in the Plan, but it is neither formally reviewed nor approved by the Minister. The Minister may request changes to the Proposed Source Protection Plan before it is approved. If changes are made to the Plan, the Explanatory Document must also be updated to reflect those changes to the Plan.

The Explanatory Document must include the following content (where applicable):

- An explanation of the Source Protection Committee's policy decisions;
- The reasons why the section 57 prohibition tool was used to address the threat of an existing activity;
- A statement indicating that the Committee is of the opinion that non-regulatory measures are sufficient to address significant threats, when used as a stand-alone policy tool;
- A summary of pre-consultation comments received and an explanation of how they affected policy development;
- A summary of how financial implications may have affected policy decisions; and
- An explanation of how climate change considerations may have impacted policies.

2.4.6 CONSULTATION OPPORTUNITIES

The source protection planning process is transparent and interactive. The *Clean Water Act, 2006* and the *General* Regulation under the *Act* identify four consultation periods that are intended to engage stakeholders that are directly impacted by the Plan. These consultation opportunities are described in Table 2.2. Section 28 of the *General* Regulation requires the Plan to include a summary of all consultation activities undertaken during the preparation of the Terms of Reference, the Assessment Report, and the Source Protection Plan. This summary can be found in Appendix 5.

Table 2.3: Consultation Opportunities Related to Policy Development

Consultation Opportunity	Description
Notice of Plan Preparation	Source protection committees are required by section 19 of the *General* Regulation to formally give notice in their source protection region/area when they begin preparing the source protection plans.
Pre-Consultation	Refers to the legislated requirement detailed in sections 35 to 39 of the *General* Regulation to send notices to persons or bodies responsible for implementing policies and to government ministries that have obligations under the *Clean Water Act, 2006*.
Formal Consultation (*Draft* Proposed Trent Source Protection Plan)	The committee must publish a *Draft* Plan on the Internet and make it available for review and comment by the public for a minimum period of 35 days (section 41 of the *General* Regulation). Further, the committee must give notice and hold at least one public meeting at a location in the source protection region/area at least 21 days after making the plan available to the public.
Formal Consultation (Proposed Trent Source Protection Plan)	The committee must publish the proposed source protection plan on the Internet for inspection by the public for a minimum period of 30 days.

2.4.7 MATTERS IMPACTING BOUNDARY MUNICIPALITIES

The Trent Conservation Coalition Source Protection Committee has worked collaboratively with the three adjacent source protection regions (South Georgian Bay-Lake Simcoe, CTC, and Quinte) as source protection policies evolved. The primary intent of this working relationship was to ensure a consistent approach to addressing significant drinking water threats among the four source protection regions whenever possible. The policies of adjacent source

protection regions were considered on an ongoing basis by the Trent Conservation Coalition Source Protection Committee during the policy development process. Further, meetings were held between staff of adjacent source protection regions and municipalities regarding policy consistency for municipalities that are located within more than one source protection region. It is recognized that municipalities with shared boundaries will have additional challenges during implementation where policy approaches are different across source protection regions.

CHAPTER 3: ADMINISTRATION

This chapter discusses compliance with and implementation of this source protection plan. The compliance section (3.1) addresses the legal effect of the policies and the dates when these policies take effect. The implementation section (3.2) focuses on implementing the Plan and includes some discussion of financial considerations.

3.1 COMPLIANCE

This section includes a discussion of the types of legal effect (3.1.1), the timelines for compliance (3.1.2), and a description of the circumstances in which a source protection plan can be amended (3.1.3).

3.1.1 LEGAL EFFECT OF POLICIES

Legal effect refers to the legal authority given by the *Clean Water Act, 2006* to each policy. The legal effect of a particular policy is determined by the type of threat being addressed (*i.e.,* significant, moderate, or low), the policy tool, and the implementing body. The *Clean Water Act, 2006* allows for more than one type of legal effect*, e.g.*, "must conform/comply with" and "have regard to" which are legally binding, and "strategic" which is not legally binding. Taking a strategic approach to protect sources of drinking water is widely used to implement several policies in this Source Protection Plan.

A summary of the legal effect as it relates to the implementing bodies identified in the policies in this Source Protection Plan is provided in Table 3.1. A description of the types of legal effect as it applies to the various implementing bodies is provided in Table 3.2. Appendix 3 contains various lists that designate the appropriate legal provisions of each policy as outlined in the *Clean Water Act*, *2006*. Reference to each list in Appendix 3 is provided in Table 3.2.

Table 3.1: Legal Effect of Policies by Policy Tool and Implementing Body

Policy Tool	Implementing Body		
	Province	Municipality, Risk Management Official, Local Board, Conservation Authority, or Source Protection Authority	Other Bodies
SIGNIFICANT THREAT POLICIES – ACTIVITIES			
Part IV Tools [1]	N/A	Conform/Comply With	N/A
Prescribed Instruments	N/A[3]	N/A	N/A
Land Use Planning Approaches		Conform/Comply With	N/A
Education and Outreach / Incentive Programs	Strategic	Conform/Comply With	Strategic
Other [2]			
MONITORING POLICIES			
All Policy Tools	Conform/Comply With	Conform/Comply With	Conform/Comply With
OTHER			
Transport Pathways	Strategic	Strategic	Strategic
Extension of Education and Outreach Programs			
Climate Change Data Collection			
Collaboration with Other Jurisdictions			
Spill Prevention, Contingency or Response Plans along Highways, Railways or Shipping Lanes			

[1] Part IV Tools are Prohibition (section 57), Risk Management Plans (section 58), and Restricted Land Uses (section 59)

[2] Other approaches include: specify the action to be taken to implement the source protection plan or to achieve the plan's objectives; establish stewardship programs; specify and promote best management practices; and govern research.
N/A Not applicable

[3] It is acknowledged that the Ministry of Municipal Affairs has a role in approving updates to Official Plans made to achieve conformity with the Source Protection Plan

Table 3.2: Description of the Types of Legal Effect Provided under the Clean Water Act, 2006

Legal Effect	Reference (Appendix 3)	Description of Legal Effect
Must Conform/ Comply	List A	The *Act* requires decisions under the *Planning Act* and *Condominium Act*, *1998* ***to conform with*** significant threat/condition policies.
	List C	The *Act* requires decisions related to prescribed instruments ***to conform with*** significant threat/condition policies.
	List E	The *Act* requires municipalities, local boards, conservation authorities, or source protection authorities ***to comply with*** any obligations imposed on it to address a significant drinking water threat/condition, regardless of the particular tool or approach used in the policy.
	List F	The Source Protection Plan must designate a public body to carry out monitoring required by the *Act* and these public bodies ***must conform with*** the obligations set out in the monitoring policies.
	Lists G, H, I	Persons carrying out significant threat activities ***must conform with*** policies that use Part IV powers under the *Act*.
Have Regard to	List B	The *Act* requires decisions under the *Planning Act* and *Condominium Act*, *1998* ***to have regard*** to moderate and low threat/condition policies.
	List D	The *Act* requires decisions related to prescribed instruments ***to have regard*** to moderate and low threat/condition policies.
Strategic	List J	Significant, moderate, and low threat/condition policies to be implemented by bodies other than municipalities, local boards or source protection authorities and which do not rely on Part IV tools, prescribed instruments, or *Planning Act* tools.
		Other permitted policies governing: • Incentive programs and education and outreach programs, including for systems not in the terms of reference; • The update of spills prevention, contingency or response plans along highways, railways, or shipping lanes; • Climate change data collection; and • Transport pathways in WHPA or IPZ.
		Optional monitoring policies to be implemented by bodies other than municipalities, local boards, conservation authorities, or source protection authorities.
	List K	Significant threat policies to be implemented by stakeholders other than municipalities, local boards, or source protection authorities

3.1.2 EFFECTIVE, COMPLIANCE AND TARGET DATES

The only policy tool with a default effective date under the *Clean Water Act 2006* is Prohibition (Section 57), whereas all other policy tools are effective on the date the Source Protection Plan takes effect (January 1st, 2015). The effective date is the date specified in the Notice of Approval posted on the Environmental Bill of Rights Registry by the Minister of the Environment and Climate Change. The effective dates for policy tools used in this Source Protection Plan are summarized in Table 3.3.

Policy tools have various Compliance or Target Dates summarized in Table 3.3. Compliance dates are for Must Comply legally binding policies, and is the date by which the particular policy must be conformed to. Target dates are for Strategic policies, and are the dates by which the particular policy should be conformed to.

Table 3.3: Effective Date and Compliance/Target Date for Source Protection Policies by Policy Tool

Policy Tool	Effective Date[1]	Compliance / Target date[2]
Prohibition (section 57)	180 days after the notice of approval for this Source Protection Plan is posted on the Environmental Bill of Rights Registry	As determined by RMO
Risk Management Plans (section 58)	January 1st, 2015	Established within five years (provisions initiated within two years)
Restricted Land Uses (section 59)		Immediate when plan takes effect
Land Use Planning		Within five years
Monitoring Policies		Annual
Specify Actions		Various – see policy text
Other policy tools		

[1] **Effective Date** – the date determined by the Minister of the Environment and Climate Change upon which the Trent Source Protection Plan is deemed to be in effect (see 3.1.2).

[2] **Compliance/Target Date** – the date by which implementing bodies must conform to policies (see 3.1.2).

3.1.3 AMENDMENTS TO THIS PLAN

This Source Protection Plan will come into effect on the Effective Date specified in the Notice of Approval posted on the Environmental Bill of Rights Registry. Amendments are permitted in accordance with the situations prescribed by the *Clean Water Act, 2006* and the *General* Regulation. These situations are as follows:

1) One of the four Source Protection Authorities (Crowe Valley, Kawartha-Haliburton, Lower Trent, and Otonabee-Peterborough), after consulting with the Source Protection Committee, may propose amendments to the Trent Source Protection Plan.

2) The Minister of the Environment and Climate Change may order an amendment to the Trent Source Protection Plan.

3) When issuing the approval for the Trent Source Protection Plan, the Minister of the Environment and Climate Change can specify the date by which the Plan and the Trent Assessment Report should be updated.

3.2 IMPLEMENTATION

Any planning document is strengthened by its ability to be implemented once approved. This section discusses the practical considerations for enforcement of the contents of this Source Protection Plan (3.2.1), the annual review (3.2.2), and refers to the provisions in the *Act* that are in place to finance various aspects of the source protection planning process (3.2.3).

3.2.1 ENFORCEMENT

Many of the policies in this Source Protection Plan will be implemented through other existing plans and instruments. Details of how a particular policy will be implemented and enforced, as well as the consequences for non-compliance, therefore, differ depending on the particular plan or instrument being used.

Occurrences of non-compliance are anticipated to be rare, given an understanding of the importance of protecting drinking water by all parties involved. Nevertheless, the following clauses give an overview of compliance requirements; however they do not replace the details set out in the *Clean Water Act, 2006*:

- If a municipality fails to bring its Official Plan into conformity with the significant threat policies included in this Source Protection Plan by the date specified, the province has the authority to compel a municipality to complete this conformity exercise. The province may also, by order, amend a municipal Official Plan or Zoning By-law so that it conforms to the source protection policies.
- With respect to prescribed instruments, there are various methods of enforcement, depending on the governing statute.
- If an owner of a property subject to a risk management plan does not fulfill his or her obligations, the Environmental Review Tribunal Process could be triggered.
- If an individual or a corporation is found guilty of an offence under the *Clean Water Act, 2006*, he or she may incur financial penalties.
- Obstructing or providing false information to an employee or agent of a source protection authority or municipality is also subject to the penalties outlined in the *Clean Water Act, 2006*.

3.2.2 ANNUAL PROGRESS REPORT

The *Clean Water Act, 2006* requires that source protection authorities prepare an annual progress report describing the measures taken to address existing and future significant drinking water threats, the results of monitoring, and the progress that has been achieved in meeting the Source Protection Plan objectives. The annual progress report will rely on the following sources for information:

- Monitoring results associated with implementation of the policies;
- Annual reports prepared by the Risk Management Official;
- Information collected outside of the *Clean Water Act, 2006* (*i.e.*, raw water intake data collected by municipalities under the *Safe Drinking Water Act*);
- Information collected from certain public bodies (*i.e.,* technical studies, records related to a drinking water threat).
- Information gathered from property inspection (section 88 of the *Clean Water Act, 2006* provides the source protection authority power to enter property for the purpose of gathering information to prepare an annual progress report).

Further details on what information must be included in the annual progress report can be found in section 46 of the *Clean Water Act, 2006* and the *General* Regulation.

The annual progress report will be submitted to the Source Protection Committee with the opportunity to provide comments. The report, along with any comments from the Committee, will then be submitted to the Minister of the Environment and Climate Change by May 1, 2018 allowing them to monitor progress of this Source Protection Plan against its objectives.

The annual progress report will provide a basis for future amendments to this Source Protection Plan and will serve as important information in evaluating the implementation of the source protection program.

3.2.3 FINANCIAL CONSIDERATIONS

Municipalities, residents, the province, and persons undertaking activities that are significant drinking water threats share the responsibility for ensuring the safety of drinking water sources and are responsible for financing the implementation of the Source Protection Plan. The Province of Ontario has provided funding to develop the Source Protection Program since 2005, including capacity building at each conservation authority and costs related to the technical studies that form the foundation of the Trent Source Protection Plan. Municipalities have been a key participant in the source protection planning process since its inception. As a result, in-kind costs have been borne by municipalities in the Trent Source Protection Areas to assist in the development of the Trent Source Protection Plan.

The Explanatory Document discusses in further detail how financial implications were considered during policy development. Within the *Act,* some provisions are set out for financing various aspects of source protection, including stewardship programs and application of fees for Part IV policies. As stated in the *Act*, fees can be applied to applications received under section 58, 59 or 60 of the *Clean Water Act, 2006*, for agreeing to or establishing a risk management plan under section 56 or 58, for issuing a notice under section 59, for accepting a risk assessment under section 60, or for entering property or exercising any other powers under section 62. It is acknowledged that cost recovery mechanisms are not available for all policies contained within the Trent Source Protection Plan. Therefore, all implementing bodies will bear some costs for implementation.

Section 97 of the *Clean Water Act,* 2006 establishes the Ontario Drinking Water Stewardship Program. This program has provided financial assistance to landowners, businesses, and municipalities approved as a result of an application process. Landowners, businesses, and municipalities directly impacted by the future implementation of the Trent Source Protection Plan have been eligible for funding. The program has also provided for education and outreach programs to raise awareness of the importance and opportunities for individuals to take actions to protect sources of drinking water, and some funding for selected municipalities to acquire land adjacent to municipal drinking water systems.

CHAPTER 4: POLICIES

This chapter contains policies developed to address significant drinking water threats for the Trent source protection areas. Sections 4.1 and 4.2 describe the content and layout of the policies and the supporting policy applicability mapping. Sections 4.3 through 4.7 provide the policies themselves; these include general policies that apply to all significant drinking water threats (4.3), policies that apply to prescribed activities (4.4), policies that apply to the local threat added by the source protection committee (4.5), policies for monitoring of drinking water issues (4.6), and other policies that are permitted under the *Clean Water Act, 2006* (4.7).

4.1 POLICY FORMAT

This section is intended to provide the reader with all of the details necessary to interpret the policies in the Trent Source Protection Plan. For each of the prescribed drinking water threats, a threat summary is provided (4.1.1). The policy header identifies the policy number and the applicable area to which the policy applies (4.1.2). Each of the components of the policies contained in the Trent Source Protection Plan are described in Section 4.1.3.

4.1.1 THREAT SUMMARY

This section, located ahead of the policy description, is a summary of the various circumstances of an activity that are considered to determine if the activity is or would be a significant drinking water threat. The threat summary is provided for convenience, and the Tables of Drinking Water Threats should be consulted for purposes of determining whether or not a particular circumstance of an activity applies to the associated policy or policies.

4.1.2 POLICY HEADER

Each policy begins with a header that indicates the policy number and applicable area of each policy. A sample header and a description of each of its components are given below.

Sample Header: Policy No. _____ Applicable Area: groundwater  surface water 

Threat Subcategory	Applicable Policies[1]	Applicable Area		
		IPZ & WHPA-E		WHPA A-D

Policy No. Each policy has a unique alphanumeric identifier (*e.g.*, S-1). The letter reference is a code that indicates the drinking water threat addressed by the policy or, in some cases, the applicable group of policies. Letter codes are given in Table 4.1. The number reference is a sequential number used within each set of letter codes.

Map Colours: The coloured blocks at the right side of the policy header indicate the corresponding coloured area on the policy applicability maps for wellhead protection areas (groundwater) and intake protection zones (surface water), as relevant to the policy (see Section 4.2). Policy applicability maps for drinking water systems within the Trent source protection areas are provided in Appendix 2. Note that this colouration represents areas where the policy would apply in at least one threat circumstance.

Table 4.1: Policy Letter Codes

Code	Meaning of Code
G	General Policies (apply to various threats)
S	Sewage Systems
A	Agriculture
F	Fuel Handling and Storage
R	Road Salt
W	Waste Disposal
D	DNAPLs and Organic Solvents
N	Non-Agricultural Source Material
O	Snow Storage
Q	Aquaculture
P	Aircraft De-Icing
L	Local Threat (Waterfowl)
I	Monitoring for Drinking Water Issues
OT	Other Policies

4.1.3 POLICY COMPONENTS

This section gives the actual policy text, organized in tabular format.

Applicable Activities: Identifies the activity or activities to which the policy applies.

Applicable Policy Tool: Identifies the context in which the policy tool is to be used.

Policy No.: Identifies the code that indicates the drinking water threat addressed by the policy or, in some cases, the applicable group of policies.

Tool: Identifies the policy tool being applied to the activity (see Section 2.4.2). Each of the policy tools and their corresponding abbreviations are listed in Table 4.2.

Legal Effect: Indicates the legal effect of the policy (see Section 3.1.1). The abbreviations representing the legal effect of policies are listed in Table 4.3.

Implementer: Identifies the body responsible for implementation of the policy. Policies are listed by implementer in Appendix 4.

Existing/Future (E/F): Identifies whether the policy applies to existing or future activities. In some cases, policies apply to both existing and future instances of an activity.

Policy Text: Identifies the requirement(s) of the policy that will be undertaken by the implementing body. Where applicable, this component includes when the policy comes into effect (see Section 3.1.2).

Monitoring Policy: Identifies the applicable monitoring policy.

Table 4.2: Policy Tool Abbreviations

Abbreviation	Policy Tool
DEF	Definition
E & O	Education and Outreach
LUP	Land Use Planning
MON	Monitoring
PI	Prescribed Instrument
PRO	Prohibition
RES	Research
RLU	Restricted Land Use
RMP	Risk Management Plan
SA	Specify Action

Table 4.3: Legal Effect Abbreviations

Abbreviation	Legal Effect
MC	Must comply / conform
S	Strategic

4.2 POLICY APPLICABILITY MAPS

Policies apply to activities based on the type of vulnerable area within which the activity is or would be located or undertaken (*i.e.,* a wellhead protection area or an intake protection zone), the vulnerability score of that area, and the specific circumstances of the activity (see Sections 2.3.1 and 2.3.2 for more information about threat circumstances and vulnerability scores). To facilitate the understanding of where policies in this plan may apply for a given activity, a policy applicability map has been developed for each drinking water system in the Trent source protection areas.

Each map shows the parts of the vulnerable area for the associated drinking water system where the vulnerability score is high enough for a significant drinking water threat to be possible in at least one circumstance. The coloured areas on the maps represent the vulnerability scores of the associated areas (with an exception for threats related to dense non-aqueous phase liquids (DNAPLs), which can be a significant threat in the WHPA-C regardless of the vulnerability score of that area). The vulnerability scores associated with each colour are given in Table 4.4.

The policy header indicates the coloured parts of the applicability map where the associated policy would apply for the activities addressed by the policy. For example, in the sample wellhead protection area map and sample policy header shown in Figure 4.1, the policy related to the sample policy header would apply in the areas associated with the red portion of the map. In the sample intake protection zone map, that same policy would apply in the areas associated with both the yellow and orange portions of the map. Note that the policy applicability maps are given for convenience and that the Trent Assessment Report maps should be consulted for approved vulnerability mapping.

Table 4.4: Meanings of Policy Applicability Map Colours by Type of Vulnerable Area

Type of Vulnerable Area	Map Colours and Vulnerability Scores		
Wellhead Protection Area	10	8	WHPA-C (2,4,6)
Intake Protection Zone	10	9	8

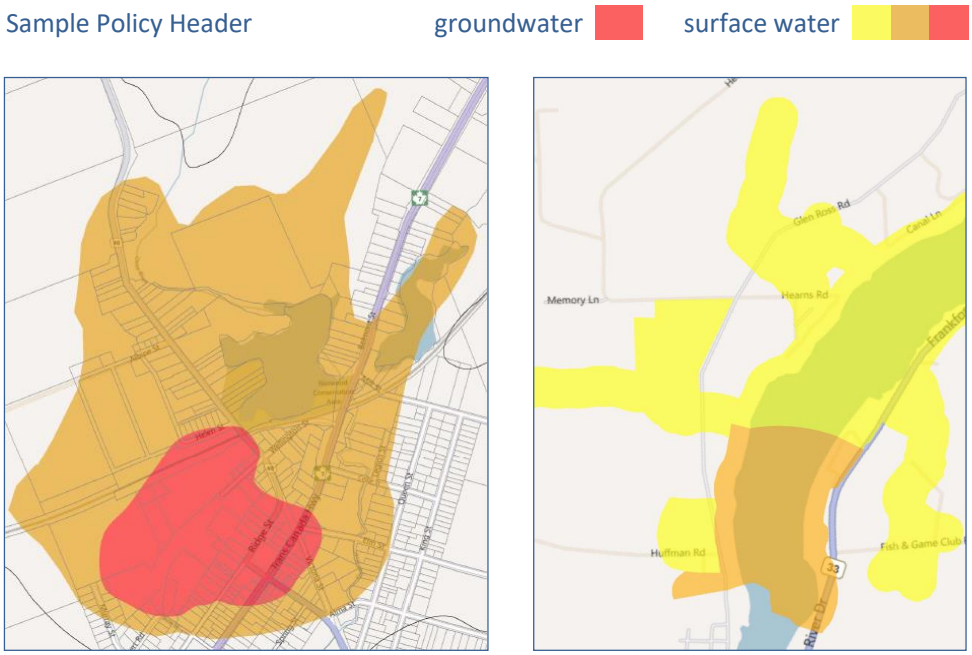

Figure 4.1: Sample policy header and sample applicability maps for wellhead protection area (left) and intake protection zone (right).

4.3 GENERAL POLICIES

The following policies are general approaches to addressing activities that are or would be significant drinking water threats. These policies generally apply to more than one activity (*i.e.*, prescribed drinking water threat). Applicable area headers are not provided for these policies since they universally apply to coloured areas on the policy applicability maps where an existing activity is a significant drinking water threat or would be in the future.

4.3.1 TRANSITION POLICY AND DEFINITION OF "EXISTING"/"FUTURE"

POLICY G-1: TRANSITION PROVISIONS

Applicable Activities: This policy applies to all policies in this source protection plan.

Policy No.	Tool	Legal Effect	Implementer	Policy Text
G-1(1)	DEF	MC	Various	A future significant drinking water threat is defined as the following: An activity that is proposed to commence after the date the Trent Source Protection Plan takes effect and is not an existing activity.
G-1(2)	DEF	MC	Various	An existing significant drinking water threat is defined as the following: a) An activity that has been engaged in prior to the date that the Trent Source Protection Plan takes effect and continues to occur; b) An agricultural activity[1] that has been engaged in at some time within the 10-year period prior to the date that the Trent Source Protection Plan takes effect; c) An activity that is related to a development proposal where an application was made under the *Planning Act*, *Condominium Act*, or *Building Code Act* on a day before the source protection plan takes effect, including but not limited to a matter listed in G-1(3); or d) An activity that is related to an application made for the issuance or amendment of a prescribed instrument on a day before the source protection plan takes effect.
G-1(3)	DEF	MC	Approval authority under the *Planning Act*	For the purposes of G-1(2), a matter is deemed to have commenced prior to the date that the Trent Source Protection Plan takes effect: a) In the case of a request for an official plan amendment, on the day the request is received; b) In the case of an official plan, an amendment to it or a repeal of it, on the day the bylaw adopting the plan, amendment or repeal is passed; c) In the case of a zoning bylaw or an amendment to it, on the day the bylaw is passed; d) In the case of an application for an amendment to a zoning bylaw, on the day the application is made; e) In the case of an application for an approval of development in a site plan control area under subsection 41 (4) of the *Planning Act*, on the day the application is made; f) In the case of an application for a minor variance under section 45 of the *Planning Act*, on the day the application is made; g) In the case of an application to amend or revoke an order under section 47 of the *Planning Act*, on the day the application is made; h) In the case of an application for the approval of a plan of subdivision under section 51 of the *Planning Act* or

				an application for the approval of, or an exemption from an approval of, a condominium under section 9 of the *Condominium Act, 1998*, on the day the application is made; or i) In the case of an application for a consent under section 53 of the *Planning Act*, on the day the application is made.
G-1(4)	DEF	MC	Various	The expansion of a significant drinking water threat is defined as the following: An increase in the scale of an activity already taking place on a property. The increase in scale may include, but is not limited to: a) Increasing the area of land where an activity is taking place; b) Increasing the amount of effluent or discharge from an activity; c) Increasing the quantity of chemical or pathogen containing material handled or stored; or d) Increasing the quantity of chemical or pathogen containing material applied. The expansion of existing and future activities will be managed using the tool specified by the relevant policy(ies) in this plan to ensure that the expansion of the activity does not increase the risk to drinking water. Where not otherwise specified in this plan, an expansion, alteration or replacement of an activity that would be more protective of municipal drinking water sources shall be permitted.

[1]Agricultural activities include:

1) The application of agricultural source material to land;
2) The storage of agricultural source material;
3) The application of commercial fertilizer to land;
4) The handling and storage of commercial fertilizer;
5) The application of pesticide to land;
6) The handling and storage of pesticide; and
7) The use of land as livestock grazing or pasturing land, an outdoor confinement area, or a farm-animal yard.

4.3.2 SUPPORTING POLICIES TO ADDRESS SIGNIFICANT DRINKING WATER THREATS

POLICY G-2: GENERAL PROVISIONS FOR POLICIES THAT USE PRESCRIBED INSTRUMENTS

Applicable Activities: Any of the following activities would be an existing or future significant drinking water threat, and a policy in this source protection plan specifies the use of a Prescribed Instrument:

i. Establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act;
ii. Establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage;
iii. Application of agricultural source material to land;
iv. Storage of agricultural source material;
v. Application of commercial fertilizer to land;
vi. Application of pesticide to land;
vii. Use of land as an outdoor confinement area or a farm-animal yard;
viii. Application of non-agricultural source material to land; and
ix. Handling and storage of non-agricultural source material.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
G-2(1)	PI	MC	OMAFRA MECP	E/F	The Prescribed Instruments will include provisions to ensure that the expansion of the activity does not result in significant drinking water threats.	G-2(2)
G-2(2)	MON	MC	OMAFRA MECP	E/F	The ministry shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) A summary of the reviews completed during the calendar year on the Prescribed Instruments for existing significant drinking water threats, including a summary of the provisions included to ensure that the activity(ies) cease to be significant drinking water threats; b) A summary of the reviews completed during the calendar year on the Prescribed Instruments for future activities, including a summary of the provisions included to ensure that the activity(ies) will not be significant drinking water threats; c) A summary of inspections carried out and any orders issued as a result of an inspection during the preceding calendar year; and	N/A

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
					d) Other content as specified in clauses S-3(3), A-2(2), and OT-1(7)	

POLICY G-3: LAND ACQUISITION IN VULNERABLE AREAS

Applicable Activities: All activities listed in section 1.1 of the *General* Regulation under the *Clean Water Act*, *2006* that are existing significant drinking water threats or that would be future significant drinking water threats. (These activities are listed in Section 2.3.2.1).

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
G-3(1)	SA	MC	Municipality	E/F	To prevent the activity causing the threat, consider the purchase of properties located in the most vulnerable areas on an ongoing basis. Criteria for evaluating the feasibility of purchasing land can include, but are not limited to: a) The nature of any existing and potential future significant drinking water threats; b) The availability of the lands for purchase; and c) The availability of funds and financial feasibility.	G-3(2)
G-3(2)	MON	MC	Municipality	E/F	The municipality shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) A summary of any land purchases within a vulnerable area and how significant drinking water threats were eliminated as a result of the purchase.	N/A

POLICY G-4: SUPPORT OF INCENTIVE PROGRAMS

Applicable Activities: All activities listed in section 1.1 of the *General* Regulation under the *Clean Water Act, 2006,* in addition to the applicable local threat, that are existing significant drinking water threats or that would be future significant drinking water threats. (These activities are listed in Section 2.3.2.1).

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
G-4(1)	SA	MC	Conservation Authority	E/F	Support and facilitate the implementation of existing incentive programs, such as the Ontario Drinking Water Stewardship Program (ODWSP), that promote and financially support the use of best management practices for activities that are or would be significant drinking water threats in the source protection area on an ongoing basis.	G-4(3)
G-4(2)	SA	MC	Conservation Authority	E/F	Seek out incentive programs that promote and financially support the implementation of best management practices for activities that are or would be significant drinking water threats in the source protection area on an ongoing basis.	G-4(3)
G-4(3)	MON	MC	Conservation Authority	E/F	The Conservation Authority shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) The number and nature of significant drinking water threats that have been addressed using funding or technical assistance from an incentive program in the preceding calendar year.	N/A

POLICY G-5: EDUCATION AND OUTREACH PROGRAM

Applicable Activities: Any of the following activities is an existing significant drinking water threat or would be a future significant drinking water threat:

a) Establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act;
b) Establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage;
c) Application of agricultural source material to land;
d) Storage of agricultural source material;
e) Application of commercial fertilizer to land;
f) Handling and storage of commercial fertilizer;
g) Application of pesticide to land;
h) Handling and storage of pesticide;
i) Use of land as livestock grazing or pasturing land, an outdoor confinement area, or a farm-animal yard;
j) Application of non-agricultural source material to land;
k) Handling and storage of non-agricultural source material;
l) Application of road salt;
m) Handling and storage of road salt;
n) Handling and storage of fuel;
o) Handling and storage of a dense non-aqueous phase liquid;
p) Handling and storage of an organic solvent;
q) Storage of snow; and
r) Maintaining open areas of mown grass for recreational activities that promote the congregation of waterfowl within or near surface water bodies.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
G-5(1)	E & O	MC	Municipality	E/F	***Requirement for Educational Program*** Develop and implement an ongoing education and outreach program within two years. The program will seek to educate anyone engaging in an activity that is or would be a significant drinking water threat and may include, but is not limited to: a) The location of vulnerable areas; b) Best management practices that can minimize or eliminate the impacts of the subject activities on the drinking water source; and c) The opportunities for funding under the Ontario Drinking Water Stewardship Program (ODWSP) or other applicable incentive programs.	G-5(7)

G-5(2)	E & O	MC	Municipality	E/F	Consult with relevant provincial ministries, industry associations, and other relevant organizations during the development of the education and outreach programs required by (1).	G-5(7)
G-5(3)	E & O	MC	Municipality	E/F	***Option for Alternate Implementing Body*** The municipality may enter into an agreement with a conservation authority or other third party that identifies the third party as the implementing body for the education and outreach program required by (1) and (2), and related reporting requirements (7).	G-5(7)
G-5(4)	E & O	MC	Municipality	E/F	***Option for Harmonization with Existing Programs*** The education and outreach program required by (1) can be harmonized with existing education and outreach programs, such as the Ontario Drinking Water Stewardship Program (ODWSP), where this would result in an increase in efficiency or cost-effectiveness.	G-5(7)
G-5(5)	E & O	MC	Municipality	E/F	***Specific Provisions for Fuel Storage Education Program*** Where an education and outreach program required by (1) is developed to address the storage of liquid fuel in a tank at a facility as defined in section 1 of O. Reg. 213/01 (Fuel Oil) made under the *Technical Standards and Safety Act*, 2000, the program will include, at a minimum: a) The mandatory requirements for fuel tank usage and maintenance; b) Best management practices for fuel tank usage and maintenance; c) Distribution of a sticker to be placed on oil tanks and fill pipes that indicates that the tank is located in a vulnerable area and provides a procedure to follow in the event of a fuel spill or leak, and a spill response contact number; and d) Coordinate with relevant associations to make use of existing stickers or to create a consistent product required to comply with (c).	G-5(7)

POLICY G-5 CONTINUED

G-5(6)	E & O	MC	Municipality	E/F	***Specific Provisions for Fuel Handling Education Program*** Where an education and outreach program required by (1) is developed to address the handling of liquid fuel in relation to its storage at a facility as defined in section 1 of O. Reg. 213/01 (Fuel Oil) made under the *Technical Standards and Safety Act*, *2000* or a facility as defined in section 1 of O. Reg. 217/01 (Liquid Fuels) made under the *Technical Standards and Safety Act*, *2000*, the program will focus on source protection and emergency response.[1]	G-5(7)
G-5(7)	MON	MC	Municipality	E/F	***Reporting Requirements*** The municipality shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) A summary of the activities undertaken as part of the education and outreach program in the preceding calendar year.	N/A

[1] As per S.1 O.Reg 213/01 *facility* means an installation where fuel oil or used oil, when such oil is used as a fuel, is handled, but does not include a facility referred to in Ontario Regulation 217/01 (Liquid Fuels) and as per S.1 O.Reg 217/01 *facility* means a permanent or mobile retail outlet, bulk plant, marina, cardlock/keylock, private outlet or farm where gasoline or an associated product is handled other than in portable containers

POLICY G-6: SIGNAGE FOR VULNERABLE AREAS

Applicability: This policy applies to all municipal drinking water systems in the Trent source protection areas.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
G-6(1)	E & O	S	MTO	E/F	In collaboration with the Ministry of the Environment, Conservation and Parks and in consultation with source protection authorities, design a sign to the appropriate provincial standards to identify the locations of wellhead protection areas and intake protection zones.	G-6(5)
G-6(2)	E & O	S	MTO	E/F	Manufacture, install, and maintain the signs required by (1) along provincial highways within wellhead protection areas with a vulnerability score of 10 and/or within intake protection zones or a wellhead protection area E with a vulnerability score of 8 or higher.	G-6(5)
G-6(3)	E & O	MC	Municipality	E/F	Purchase, install, and maintain the signs designed by the province in collaboration with the applicable source protection authorities. The signs should be placed where municipal roads are located within wellhead protection areas with a vulnerability score of 10 and/or intake protection zones or a wellhead protection area E with a vulnerability score of 8 or higher.	G-6(5)
G-6(4)	E & O	MC	Municipality	E/F	If similar signs are already in place, the sign identified in Policy G-6(3) will be used for all future replacement of the existing signs.	N/A
G-6(5)	MON	MC	MTO Municipality	E/F	The municipality and the ministry shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) A summary of the measures taken to implement (1), (2), and / or (3) for the preceding calendar year.	N/A

POLICY G-7: MONITORING AND LAND USE PLANNING FOR POLICIES THAT USE SECTION 57 PROHIBITION

Applicable Policy Tool: This policy applies wherever a policy in this source protection plan designates an activity for the purpose of section 57 (Prohibition) of the *Clean Water Act, 2006.*

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text
G-7(1)	MON	MC	RMO	E/F	The Risk Management Official will undertake the reporting requirements specified in section 65 of the *General* Regulation made under the *Clean Water Act, 2006* by February 1 each year for the preceding calendar year.
G-7(2)	LUP	MC	Approval authority under the *Planning Act*	F	The following land use activities are not permitted where they would be a future significant drinking water threat, unless stated otherwise in this source protection plan: a) The application or storage of agricultural source material; b) The management of agricultural source material (i.e., aquaculture); c) The application, handling, or storage of non-agricultural source material; d) The application, handling, or storage of commercial fertilizer; e) The application, handling, or storage of pesticide; f) The handling or storage of road salt; g) The storage of snow; h) The handling or storage of fuel; i) The handling or storage of a dense non aqueous phase liquid; j) The handling or storage of an organic solvent; or k) The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard.

POLICY G-8: GENERAL PROVISIONS FOR POLICIES THAT USE SECTION 58 RISK MANAGEMENT PLANS

Applicable Policy Tool: This policy applies wherever a policy in this source protection plan designates an activity for the purpose of section 58 (Risk Management Plan) of the *Clean Water Act, 2006.*

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
G-8(1)	RMP	MC	RMO	E/F	***Timelines for Risk Management Plans*** a) Risk management plans must be established within five years; b) The provisions of the risk management plan must be initiated within two years following agreement with the Risk Management Official, unless otherwise specified in the risk management plan.	G-8(4)
G-8(2)	RMP	MC	RMO	E/F	***Prioritization of Risk Management Plans by Risk Management Official*** Within one year, the Risk Management Official will prioritize the development of risk management plans for all existing significant drinking water threats within their jurisdiction.	G-8(4)
G-8(3)	RMP	MC	RMO	E/F	***Miscellaneous Provisions for Risk Management Plans*** Risk management plans required by policies in this source protection plan must: a) Address the portion of the property where the activity is a significant drinking water threat; b) Consider existing risk management measures being undertaken on the property; c) Include provisions to ensure that the expansion of any existing facilities, where applicable, does not result in significant drinking water threats; d) Include provisions for relocating the activity to the location on the property with the least risk, where applicable; e) Include provisions to address emergency response for occurrences that could result in a contamination event; and f) Include provisions to ensure that the Risk Management Official is notified of a change in ownership of the subject property, and to update the risk management plan accordingly. Where more than one significant drinking water threat has been identified on a property, a single risk management plan can be developed to address the threats.	G-8(4)

POLICY G-8 CONTINUED

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
G-8(4)	MON	MC	RMO	E/F	***Monitoring of Risk Management Plans*** The Risk Management Official will undertake the reporting requirements specified in section 65 of the *General* Regulation under the *Clean Water Act, 2006* by February 1 each year for the preceding calendar year.	N/A

POLICY G-9: SECTION 59 RESTRICTED LAND USES

Applicable Activities: Activities listed in section 1.1 of the *General* Regulation under the *Clean Water Act, 2006* that would be a future significant drinking water threat. (These activities are listed in Section 2.3.2.1).

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text
G-9(1)	RLU	MC	RMO	F	All land uses located in areas where an activity would be a significant drinking water threat that are also designated for the purposes of section 57 (Prohibition) or section 58 (Risk Management Plans) of the *Clean Water Act, 2006*, are designated as Restricted Land Uses for the purpose of section 59 of the *Clean Water Act, 2006*.
G-9(2)	SA	MC	Approval authority under the *Planning Act* and *Building Code Act*	F	Direct proponents applying for building permits related to the construction or change of use of a building, or applications related to the provisions of the *Planning Act* prescribed by the *Clean Water Act*[1], within areas identified in (1), to the Risk Management Official for the issuance of a notice under section 59 of the *Clean Water Act, 2006*.
G-9(3)	LUP	MC	Approval authority under the *Planning Act*	F	Add the section 59 notice from the Risk Management Official as an item required for a complete application under the *Planning Act*.

[1] Prescribed provisions of the *Planning Act* are given in section 62 of O. Reg. 287/07 and include applications for: official plan and zoning bylaw amendments, development in site plan control areas, minor variances, and approval of plans of subdivision, consents, and authorization of temporary uses.

POLICY G-10: GENERAL PROVISIONS FOR POLICIES THAT USE LAND USE PLANNING

Applicable Policies: This policy applies wherever a policy in this source protection plan affects decisions under the *Planning Act.*

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
G-10(1)	LUP	MC	Approval authority under the *Planning Act*	E/F	Complete the required updates no later than at the time of the next 5-year review in accordance with section 26 of the *Planning Act.*	G-10(2)
G-10(2)	MON	MC	Approval authority under the *Planning Act*	E/F	Report by February 1 each year to the applicable source protection authority on how the requirements of the policy were achieved. Where the approval authority is not the lower or single tier municipality, the report will be copied to all applicable municipalities and applicable Source Protection Authorities.	N/A

POLICY G-11: EMERGENCY RESPONSE PLANNING

Applicable Activities: All activities listed in section 1.1 of the *General* Regulation under the *Clean Water Act, 2006,* in addition to the applicable local threat, that are existing significant drinking water threats or that would be future significant drinking water threats. (These activities are listed in Section 2.3.2.1).

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
G-11(1)	SA	MC	Municipality	E/F	Update Municipal Master Emergency Plans and any other relevant documentation to identify vulnerable areas where significant drinking water threats can occur and outline reasonable actions to be implemented in the event that these areas are compromised.	G-11(2)
G-11(2)	MON	MC	Municipality	E/F	The municipality shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) A summary of how the requirements of the policy were achieved.	N/A

4.4 POLICIES FOR PRESCRIBED DRINKING WATER THREATS

This section includes policies that address prescribed drinking water threats. These policies are grouped based on the type of activity that they address. In some cases, activities within a group are further subdivided into additional subcategories. General policies may also apply for these activities (see Section 4.3).

4.4.1 SEWAGE SYSTEMS

THREAT SUMMARY

The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage is an activity prescribed to be a drinking water threat by the Clean Water Act, 2006. Given the variety of activities associated with sewage systems, this drinking water threat is divided into several subcategories. These subcategories are given in Table 4.5. The table also indicates the policies that may apply to each subcategory and the associated circumstance numbers from the Tables of Drinking Water Threats, which give details regarding where and in what circumstances a given instance of the subcategory is or would be a significant, moderate, or low drinking water threat. The circumstances that determine if the subcategory is a significant drinking water threat are summarized below.

Table 4.5: Summary of Sewage System Threats

Threat Subcategory Sewage System or Sewage Works:	Applicable Policies[1]	Applicable Area[2]					
		IPZ & WHPA-E				WHPA A-D	
Septic System	S-1 to S-5, S-9, S-10	10	-	-		10	-
Septic System Holding Tank	S-1 to S-5, S-9, S-10	10	-	-		10	-
Sanitary Sewers and Related Pipes	S-6, S-7, S-9, S-10	10	-	-		10	-
Combined Sewer Discharge from a Stormwater Outlet to Surface Water	S-2, S-3, S-9, S-10	10	9	8		-	-
Industrial Effluent Discharge	S-2, S-3, S-9, S-10	10	9	8		-	-
Storage of Sewage	S-2, S-3, S-9, S-10	10	9	-		10	8
Sewage Treatment Plant Bypass Discharge to Surface Water	S-2, S-3, S-9, S-10	10	9	8		-	-
Sewage Treatment Plant Effluent Discharges (Includes Lagoons)	S-2, S-3, S-9, S-10	10	9	8		-	-
Discharge of Untreated Stormwater from a Stormwater Retention Pond	S-3, S-8, S-9, S-10	10	9	8		10	-

[1]General policies may also apply for these activities (see Section 4.3).

[2]Indicates the minimum vulnerability score that would result in a significant threat in at least one threat circumstance (colour indicates the corresponding area on the policy applicability map – see Section 4.2).

SEPTIC SYSTEM

The septic system threat subcategory includes leaching bed systems and their associated treatment units, earth pit privies, privy vaults, greywater systems, and cesspools. The circumstances that are considered to determine if septic systems are significant threats are the legislation under which they are regulated (*i.e., Ontario Building Code Act* or *Ontario Water Resources Act*) and the potential for a spill from the holding tank to result in the presence of pathogens or a specific set of chemicals in groundwater or surface water. The applicable legislation is usually based on the design capacity of the system. Small systems (those with a design capacity less than or equal to 10,000 L/day) are subject to approval under the *Ontario Building Code Act*. Small systems most frequently service individual residences in rural areas, or hamlets or small villages that do not have municipal or communal sewage services. Large systems (those with a design capacity greater than 10,000 L/day) are subject to approval by the Ministry of the Environment, Conservation and Parks under the *Ontario Water Resources Act*. Further, regardless of size, systems that cannot be located within the confines on a single property are subject to approval by the Ministry of the Environment, Conservation and Parks under the *Ontario Water Resources Act*. Schools, campgrounds, larger businesses and communal systems are examples of facilities that may require a large system. Lastly, there are rare cases where a septic system is not subject to the *Ontario Building Code Act* or the *Ontario Water Resources Act.*

SEPTIC SYSTEM HOLDING TANK

The septic system holding tank threat subcategory includes sewage systems that require or use a holding tank for the retention of hauled sewage at the site where it is produced before its collection by a hauled sewage operator. Septic system holding tanks are often used in areas where the installation of a septic system is not possible (e.g., where a property is not of sufficient size to accommodate the tile bed associated with a septic system). The circumstances that are considered to determine if septic system holding tanks are significant threats are the legislation under which they are regulated (i.e., Ontario Building Code Act or Ontario Water Resources Act) and the potential for a spill from the septic system holding tank to result in the presence of pathogens or a specific set of chemicals in groundwater or surface water.

SANITARY SEWERS AND RELATED PIPES

The sanitary sewers and related pipes threat subcategory includes any part of a wastewater collection facility that collects or transmits sewage containing human waste, but does not include any part of the facility that is a sewage storage tank or works designed to carry out a designed bypass (there are separate threat circumstances for these exceptions). The circumstances that are considered to determine if sanitary sewers and related pipes are a significant drinking water threat are the volume of sewage conveyed by the system per day and the potential for the discharge from the system to result in the presence of pathogens or a specific set of chemicals in groundwater or surface water.

COMBINED SEWER DISCHARGE FROM A STORMWATER OUTLET TO SURFACE WATER

A combined sewer is a sewage system that conveys both stormwater and sanitary waste. This threat subcategory includes combined sewers that may discharge sanitary sewage containing human waste to surface water other than by way of a designed bypass. The circumstances that are considered to determine if this activity is a significant drinking water threat are the average daily discharge volume (on an annual basis) at the associated wastewater treatment facility and the potential for the discharge to result in the presence of pathogens or a specific set of chemicals in groundwater or surface water. Where the discharge may be a source of pathogen contamination, any

discharge volume is considered a significant drinking water threat.

INDUSTRIAL EFFLUENT DISCHARGE

The industrial effluent discharge subcategory includes systems that discharge to surface water and have as their primary function the collection, transmission, or treatment of industrial sewage. These activities can only be significant drinking water threats in an intake protection zone or wellhead protection area E. The circumstances that are considered to determine if the activity is a significant drinking water threat differ depending on whether the discharge from the system is a potential source of pathogens or of chemicals.

Where the discharge is a potential source of pathogens, the activity is considered a significant drinking water threat where its primary functions include conveying sewage from a meat plant. Where the discharge is a potential source of chemicals, the factors considered to determine if the activity is a significant drinking water threat are whether or not the system is part of a facility for which National Pollutant Release Inventory (NPRI) reporting is required and the potential for the discharge to result in the presence of a specific set of chemicals in groundwater or surface water.

STORAGE OF SEWAGE

The storage of sewage subcategory includes treatment tanks or storage tanks that are part of sewage works within the meaning of the Ontario Water Resources Act that treats or stores sanitary sewage containing human waste. The circumstances that are considered to determine if this activity is a significant drinking water threat are the average daily discharge volume (on an annual basis) at the associated wastewater treatment facility; the location of the tank in relation to grade; and the potential for the discharge to result in the presence of pathogens or a specific set of chemicals in groundwater or surface water. Where the discharge may be a source of pathogen contamination, any discharge volume is considered a significant drinking water threat.

SEWAGE TREATMENT PLANT BYPASS DISCHARGE TO SURFACE WATER

Sometimes the treatment capacity of a sewage treatment plant is overwhelmed and partially treated or untreated sanitary waste is released (bypassed) into the receiving surface water body. This is generally the result of an extreme wet weather event (i.e., significant rainfall or snow melt). The circumstances that are considered to determine if this activity is a significant drinking water threat are the average daily discharge volume (on an annual basis) at the associated wastewater treatment facility and the potential for the discharge to result in the presence of pathogens or a specific set of chemicals in groundwater or surface water. Where the discharge may be a source of pathogen contamination, any discharge volume is considered a significant drinking water threat.

SEWAGE TREATMENT PLANT EFFLUENT DISCHARGES (INCLUDES LAGOONS)

The sewage treatment plant effluent discharges subcategory includes lagoons and wastewater treatment facilities that discharge directly to land or surface water through a means other than a designed bypass. The circumstances that are considered to determine if this activity is a significant threat are the design average daily discharge volume (on an annual basis) of the facility and the potential for the discharge to result in the presence of pathogens or a specific set of chemicals in groundwater or surface water. Where the discharge may be a source of pathogen contamination, any discharge volume is considered a significant drinking water threat.

DISCHARGE OF UNTREATED STORMWATER FROM A STORMWATER RETENTION POND

The discharge of untreated stormwater subcategory includes facilities1 that are designed to discharge stormwater from a stormwater retention pond to land or surface water. The circumstances considered to determine if discharge of untreated stormwater from a stormwater retention pond is a significant drinking water threat are the size of the drainage area associated with the facility and the predominant land use in the drainage area.

[1] *Stormwater management facility* as defined in O. Reg. 525/98 (Approvals Exemptions) made under the *Ontario Water Resources Act.*

POLICY TEXT

POLICY S-1

Threat Subcategory Sewage System or Sewage Works:	Applicable Area					
	IPZ & WHPA-E			WHPA A-D		
Septic System	10	-	-	10	-	
Septic System Holding Tank	10	-	-	10	-	

Applicable Activities: Sewage systems as defined in section 1 of O. Reg. 332/12 (Building Code) made under the *Building Code Act, 1992* that are existing significant drinking water threats or would be future significant drinking water threats.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
S-1(1)	SA	MC	Municipality	E/F	Report by February 1 of each year to the applicable source protection authority on the implementation of the mandatory maintenance inspection program[1] for the preceding calendar year. The report must, at minimum, include the following information: a) The number and location of inspections carried out under the maintenance inspection program during the reporting year; b) The number and location of inspections that were not compliant with the septic inspection guideline; and c) For the properties identified in (b), a description of the deficiencies in the system, the orders issued by the inspector, and any follow-up with the system owner.	S-1(2)
S-1(2)	MON	MC	Municipality	E/F	Copy the municipality and building official on all reporting required by Policy S-1(1) unless the municipality is the Principal Authority under the *Ontario Building Code Act*.	N/A

[1] The details of the inspection program are specified in the Ontario Building Code (O. Reg. 332/12) and the Ministry of Municipal Affairs Sewage System Inspection Guideline.

POLICY S-2

Threat Subcategory Sewage System or Sewage Works:	Applicable Area					
	IPZ & WHPA-E			WHPA A-D		
Septic System	10	-	-	10	-	
Septic System Holding Tank	10	-	-	10	-	
Combined Sewer Discharge from a Stormwater Outlet to Surface Water	10	9	8	-	-	
Industrial Effluent Discharge	10	9	8	-	-	
Storage of Sewage	10	9	-	10	8	
Sewage Treatment Plant Bypass Discharge to Surface Water	10	9	8	-	-	
Sewage Treatment Plant Effluent Discharges (Includes Lagoons)	10	9	8	-	-	

Applicable Activities: Sewage works as defined in section 1(1) of the *Ontario Water Resources Act* that are existing significant drinking water threats and require a Prescribed Instrument.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
S-2(1)	PI	MC	MECP	E	Review all existing Prescribed Instruments related to these sewage activities to determine if they are adequate to ensure that the associated activities are not significant drinking water threats. If they are deemed to be inadequate for this purpose, they will be amended to include additional conditions that will ensure that the activities cease to be significant drinking water threats. All amendments to Prescribed Instruments required by this policy must be carried out within three years from the date that the plan takes effect or such other date as the applicable Director determines based on a prioritized review of Prescribed Instruments that govern the activity.	G-2(2)
S-2(2)	SA	S	MECP	E	Conduct regular inspections of the sewage works to ensure compliance with the amendments referred to in (1).	G-2(2)

POLICY S-3

Threat Subcategory Sewage System or Sewage Works:	Applicable Area				
	IPZ & WHPA-E			WHPA A-D	
Septic System	10	-	-	10	-
Septic System Holding Tank	10	-	-	10	-
Combined Sewer Discharge from a Stormwater Outlet	10	9	8	-	-
Industrial Effluent Discharge	10	9	8	-	-
Storage of Sewage	10	9	-	10	8
Sewage Treatment Plant Bypass Discharge to Surface Water	10	9	8	-	-
Sewage Treatment Plant Effluent Discharges (Includes Lagoons)	10	9	8	-	-
Discharge of Untreated Stormwater from a Stormwater Retention Pond	10	9	8	10	-

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
S-3(1)	PI	MC	MECP	F	Future occurrences of the activity shall only be permitted when: a) The proposed activity is intended to replace an existing activity or activities; b) The proposed activity would be more protective of drinking water; and c) The instrument for the proposed activity contains conditions that ensure that it does not become a significant drinking water threat.	G-2(2) S-3(3)
S-3(2)	LUP	MC	Approval Authority under the *Planning Act*	F	Future occurrences of the activity are prohibited. This does not apply for an activity that meets the conditions of Policy S-3(1).	G-10(2)
S-3(3)	MON	MC	MECP	F	Where a proposed future activity meets the conditions of Policy S-3(1), the following content is recommended to be included in the report required by Policy G-2(2): a) A description of how the replacement activity will be more protective of drinking water than the existing activity or activities; b) A description of the conditions of the Prescribed Instrument that will ensure that the activity does not become a significant drinking water threat; and	N/A

					c) A description of any orders issued as a result of an inspection.	

Applicable Activities: The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage that would be a future significant drinking water threat and would require a Prescribed Instrument, except a wastewater collection facility that collects or transmits sewage containing human waste.

POLICY S-4

Threat Subcategory Sewage System or Sewage Works:	Applicable Area					
	IPZ & WHPA-E			WHPA A-D		
Septic System	10	-	-	10	-	
Septic System Holding Tank	10	-	-	10	-	

Applicable Activities: Sewage systems as defined in section 1 of O. Reg. 332/12 (Building Code) made under the *Building Code Act, 1992* that are existing significant drinking water threats.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
S-4(1)	SA	MC	Municipality	E	Require by means of a bylaw that the system is connected to a municipal sewage collection system where connection is feasible given financial and technical constraints. This bylaw must be established within one year.	S-4(2)
S-4(2)	MON	MC	Municipality	E	The municipality shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) A summary of how (1) was satisfied; and b) A summary of any systems connected to municipal sewage collection.	N/A
S-4(3)	LUP	MC	Approval Authority under the *Planning Act*	E	Require a policy to support the objectives given in (1).	G-10(2)

POLICY S-5

Threat Subcategory Sewage System or Sewage Works:	Applicable Area				
	IPZ & WHPA-E			WHPA A-D	
Septic System	10	-	-	10	-
Septic System Holding Tank	10	-	-	10	-

Applicable Activities: Sewage systems as defined in section 1 of O. Reg. 332/12 (Building Code) made under the *Building Code Act, 1992* that would be future significant drinking water threats.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
S-5(1)	LUP	MC	Approval Authority under the *Planning Act*	F	Require a policy to support the following: a) Where connection to a municipal sewage collection system is feasible given financial and technical constraints, new development will be serviced by a municipal sewage collection system; and b) Where connection to a municipal sewage collection system is not feasible, new development will be serviced by a sewage system constructed to standards of the Ontario Building Code to ensure that the activity is not a significant drinking water threat.	G-10(2) S-5(2)
S-5(2)	MON	MC	Approval Authority under the *Planning Act*	F	The following content is recommended to be included in the report required by Policy G-10(2): a) A summary of any approvals of septic systems in areas where they would be significant threats. Where the approval authority is not the municipality, the report will be copied to the applicable municipality.	N/A

POLICY S-6

Threat Subcategory Sewage System or Sewage Works:	Applicable Area				
	IPZ & WHPA-E			WHPA A-D	
Sanitary Sewers and Related Pipes	10	-	-	10	-

Applicable Activities: Wastewater collection facilities that collect or transmit sewage containing human waste that are existing significant drinking threats.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
S-6(1)	SA	MC	Municipality	E	Within two years, ensure that there is an emergency response plan in place that is suitable to respond to a system failure that could result in the introduction of pathogens into surface water or groundwater.	S-6(2)
S-6(2)	MON	MC	Municipality	E	The municipality shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) Updates or amendments to the plan; b) Summary of training undertaken in support of the plan; and c) Summary of incidents that required the use of the emergency response plan.	N/A
S-6(3)	SA	MC	Municipality	E	Within one year, prioritize any maintenance and asset management activities to ensure that facilities located in vulnerable areas are given adequate priority.	S-6(4)
S-6(4)	MON	MC	Municipality	E	The municipality shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) The status of any maintenance and asset management activities at facilities in vulnerable areas; and b) After one year, a summary of how facilities were assessed.	N/A

POLICY S-7

Threat Subcategory Sewage System or Sewage Works:	Applicable Area				
	IPZ & WHPA-E			WHPA A-D	
Sanitary Sewers and Related Pipes	10	-	-	10	-

Applicable Activities: Wastewater collection facilities that collects or transmits sewage containing human waste that would be future significant drinking water threat and would require a Prescribed Instrument.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
S-7(1)	LUP	MC	Approval Authority under the *Planning Act*	F	Require that the activity complies with construction standards that will ensure that the activity is not a significant drinking water threat.	G-10(2)
S-7(2)	PI	MC	MECP	F	Ensure that the instrument contains conditions that ensure that the activity does not become a significant drinking water threat.	G-2(2)

POLICY S-8

Threat Subcategory Sewage System or Sewage Works:	Applicable Area				
	IPZ & WHPA-E			WHPA A-D	
Discharge of Untreated Stormwater from a Stormwater Retention Pond	10	9	8	10	-

Applicable Activities: Stormwater management facilities designed to discharge stormwater from a stormwater retention pond to land or surface water that are existing significant drinking water threats.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
S-8(1)	PI	MC	MECP	E	Review all existing Prescribed Instruments to determine if they are adequate to ensure that the associated activities are not significant drinking water threats. If they are deemed to be inadequate for this purpose, they will be amended to include additional conditions that will ensure that the activities cease to be significant drinking water threats. All amendments to Prescribed Instruments required by this policy must be carried out within three years from the date that the plan takes effect or such other date as the applicable Director determines based on a prioritized review of Prescribed Instruments that govern the activity.	G-2(2)
S-8(2)	SA	MC	Municipality	E	Develop and implement a stormwater management facility maintenance program within two years. The program will require regular inspection of stormwater management facilities to ensure that they are being sufficiently maintained such that the facility is not a significant drinking water threat.	S-8(3)
S-8(3)	MON	MC	Municipality	E	The municipality shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) A summary of activities undertaken as part of the maintenance program for the preceding calendar year.	N/A

POLICY S-9

Threat Subcategory Sewage System or Sewage Works:	Applicable Area					
	IPZ & WHPA-E				WHPA A-D	
Septic System	10	-	-		10	-
Septic System Holding Tank	10	-	-		10	-
Sanitary Sewers and Related Pipes	10	-	-		10	-
Combined Sewer Discharge from a Stormwater Outlet to Surface Water	10	9	8		-	-
Industrial Effluent Discharge	10	9	8		-	-
Storage of Sewage	10	9	-		10	8
Sewage Treatment Plant Bypass Discharge to Surface Water	10	9	8		-	-
Sewage Treatment Plant Effluent Discharges (Includes Lagoons)	10	9	8		-	-
Discharge of Untreated Stormwater from a Stormwater Retention Pond	10	9	8		10	-

Applicable Activities: The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage is an existing significant drinking water threat and both of the following conditions apply:

a) The system does not require a Prescribed Instrument; and

b) The *Building Code Act, 1992* does not apply to the system.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
S-9	RMP	MC	RMO	E	This activity is designated for the purpose of section 58 of the *Clean Water Act, 2006*. The risk management plan will be prepared in accordance with the general provisions given in policy G-8.	G-8(4)

POLICY S-10

Threat Subcategory Sewage System or Sewage Works:	Applicable Area				
	IPZ & WHPA-E			WHPA A-D	
Septic System	10	-	-	10	-
Septic System Holding Tank	10	-	-	10	-
Sanitary Sewers and Related Pipes	10	-	-	10	-
Combined Sewer Discharge from a Stormwater Outlet to Surface Water	10	9	8	-	-
Industrial Effluent Discharge	10	9	8	-	-
Storage of Sewage	10	9	-	10	8
Sewage Treatment Plant Bypass Discharge to Surface Water	10	9	8	-	-
Sewage Treatment Plant Effluent Discharges (Includes Lagoons)	10	9	8	-	-
Discharge of Untreated Stormwater from a Stormwater Retention Pond	10	9	8	10	-

Applicable Activities: The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage would be a future significant drinking water threat and both of the following conditions apply:

a) The system does not require a Prescribed Instrument; and

b) The *Building Code Act, 1992* does not apply to the system.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
S-10	PRO	MC	RMO	F	The activity is prohibited and designated for the purpose of section 57 of the *Clean Water Act, 2006*	G-7(1)

4.4.2 AGRICULTURE

THREAT SUMMARY

The following activities associated with agriculture are prescribed to be drinking water threats by the *Clean Water Act, 2006*:

1) The application of agricultural source material to land;
2) The storage of agricultural source material;
3) The application of commercial fertilizer to land;
4) The handling and storage of commercial fertilizer;
5) The application of pesticide to land;
6) The handling and storage of pesticide; and
7) The use of land as livestock grazing or pasturing land, an outdoor confinement area, or a farm-animal yard.

These activities are further divided into subcategories to reflect various aspects of the activities. Since most policies developed to address these activities rely on similar approaches, these activities are often considered as a group for the purpose of policies in this plan. However, each activity has a separate set of threat circumstances. Subcategories are given in Table 4.6. The table also indicates the policies that may apply to each activity and the associated circumstance numbers from the *Tables of Drinking Water Threats,* which give the full details regarding where and in what circumstances a given instance of these activities is or would be a significant, moderate, or low drinking water threat. Note that some activities may apply in contexts that are not related to agriculture (*e.g.,* golf courses; parks). The circumstances that determine if each subcategory is a significant drinking water threat are summarized below.

Table 4.6: Summary of Threats Associated with Agriculture

Drinking Water Threat		Applicable Policies[1]	Applicable Area[2]				
Category	Subcategory		IPZ & WHPA-E				WHPA A-D
Agricultural Source Material	Application	A-1, A-2, A-4	10	9	8		10
	Storage	A-1, A-2, A-4	10	9	8		10
Commercial Fertilizer	Application	A-1, A-2, A-4	10	9	-		10
	Handling & Storage	A-1, A-4	10	-	-		10
Pesticides	Application	A-1, A-3, A-4	10	9	8.1		10
	Handling & Storage	A-1, A-4	10	9	-		10
Livestock	Grazing & Pasturing	A-1, A-4	10	9	8		10
	Outdoor Confinement Area or Farm Animal Yard	A-1, A-2, A-4	10	9	8		10

[1] General policies may also apply for these activities (see Section 4.3)

[2] Indicates the minimum vulnerability score that would result in a significant threat in at least one threat circumstance (color indicates the corresponding area on the policy applicability maps – see Section 4.2)

AGRICULTURAL SOURCE MATERIAL

Agricultural source materials (ASM) include a variety of materials that may be sources of nutrients or pathogens. The *Clean Water Act, 2006* applies the definition given in the *General* Regulation made under the *Nutrient Management*

Act, which defines agricultural source materials as the following:

1) Manure produced by farm animals, including bedding materials;
2) Runoff from farm-animal yards and manure storages;
3) Wash water that has not been mixed with human body waste;
4) Organic materials produced by intermediate operations that process the above materials (*e.g.,* mushroom compost);
5) Anaerobic digestion output that does not include sewage biosolids or human body waste; and
6) Regulated compost that is derived from compost containing dead farm animals.

Both the application and the storage of ASM are prescribed drinking water threats. The circumstances that make these activities significant threats are described separately for each activity below.

Application

The circumstances that are considered to determine if the application of ASM is a significant threat differ depending on whether the activity is a potential source of pathogens or nutrients. Where the activity is a potential source of pathogen contamination, any application is a significant drinking water threat. Where the activity is a potential source of nutrient contamination, the amount of managed lands and livestock density are also considered (both of these factors are shown on maps in the Trent Assessment Report).

Storage

The circumstances that are considered to determine if the storage of ASM is a significant threat are the type of storage facility (*i.e.,* whether it is stored in or on a permanent nutrient storage facility or on a temporary field nutrient storage site); the location of the storage facility in relation to grade; and, where a spill from the storage facility is a potential source of nutrients, the quantity of stored material (as represented by livestock density, which is shown on maps in the Trent Assessment Report).

COMMERCIAL FERTILIZER

Commercial fertilizers are synthetic substances containing nitrogen, phosphorus, potassium or other chemicals intended for use as a plant nutrient or other substances that are intended to improve the physical condition of soils or to aid in plant growth or crop yields. Both the application and the handling and storage of commercial fertilizer are prescribed drinking water threats.

Application

The circumstances that make the application of commercial fertilizer a significant drinking water threat are the percent managed land in the area where it is applied and the local livestock density (both of these factors are shown on maps in the Trent Assessment Report).

Storage

The circumstances that make the storage of commercial fertilizer a significant drinking water threat are the mass of all materials stored that contain the commercial fertilizer; the type of storage (*i.e.,* whether it is stored where it is manufactured, processed, or wholesaled or whether it is stored for retail sale or stored in relation to its application to land); and the potential for a spill of the fertilizer (or material containing the fertilizer) to result in the presence of nitrogen or phosphorus in groundwater or surface water.

PESTICIDES

Pesticides include a variety of substances that may be a source of chemicals to a drinking water source. A pesticide as per the *Clean Water Act, 2006* is defined under the *Pesticide Act* as an organism, substance or thing that is manufactured, represented, sold or used as a means of directly or indirectly controlling, preventing, destroying, mitigating, attracting or repelling any pest or of altering the growth, development or characteristics of any plant life that is not a pest and includes any organism, substance or thing registered under the *Pest Control Products Act.* Substances or mixture of substances of interest under the *Clean Water Act, 2006* are as follows:

1) Atrazine
2) Dicamba
3) Dichlorophenoxy Acetic Acid (D-2,4)
4) Dichloropropene-1,3
5) Glyphosate
6) 2-methyl-4-chlorophenoxyacetic acid (MCPA)
7) 4-(4-chloro-2-methylphenoxy) butanoic acid (MCPB)
8) Mecoprop
9) Metalaxyl
10) Metolachlor or s-Metolachlor
11) Pendimethalin

The application and the handling and storage of a pesticide are prescribed drinking water threats. The circumstances that would make these activities significant threats are described separately for each activity below.

Application

The circumstances that make the application of a pesticide a significant threat are based on the potential for the activity to contaminate drinking water sources with chemicals. This potential is based on the type of chemical; the vulnerability score of the area and the amount of land (hectares) to which the pesticide is applied.

Storage

The circumstances that make the handling and storage of a pesticide a significant threat is based on the potential for a spill of the pesticide or material containing the pesticide to result in the presence of a chemical in a drinking water source. This depends on the type of storage (*i.e.*, if it is stored where it is manufactured, processed, or wholesaled; or stored for retail sale or use in extermination within the meaning of the *Pesticide Act*) and the mass of all stored materials that contain the pesticide.

LIVESTOCK

The use of land as livestock grazing or pasturing land, an outdoor confinement area[1], or a farm-animal yard are activities prescribed to be drinking water threats by the *Clean Water Act, 2006*. The circumstances that are considered to determine if these activities are significant drinking water threats include the concentration of local livestock density (given on maps in the Trent Assessment Report), the number of animals (by Nutrient Unit), and the potential for these activities to result in the presence of nutrients or pathogens in groundwater or surface water. Where the activity is a potential source of pathogens, only the vulnerability score of the area would determine if the activity is a significant threat.

[1] *Outdoor confinement area* as defined by the *General* Regulation (O. Reg. 267/03) made under the *Nutrient Management Act*

POLICY TEXT

POLICY A-1

Drinking Water Threat		Applicable Area				
Category	Subcategory	IPZ & WHPA-E				WHPA A-D
Agricultural Source Material	Application	10	9	8		10
	Storage	10	9	8		10
Commercial Fertilizer	Application	10	9	-		10
	Handling & Storage	10	-	-		10
Pesticides	Application	10	9	8.1		10
	Handling & Storage	10	9	-		10
Livestock	Grazing & Pasturing	10	9	8		10
	Outdoor Confinement Area or Farm Animal Yard	10	9	8		10

Applicable Activities: Any of the following activities is an existing significant drinking water threat (see Table 4.6):

a) The handling and storage of commercial fertilizer;
b) The use of land as livestock grazing or pasturing land;
c) The handling and storage of pesticide; and
d) The application of pesticide to land, where the activity does not require a Pesticide Permit under the Pesticides Act.
e) Any of the following activities where the activity does not require a Nutrient Management Plan or Strategy under the Nutrient Management Act, 2002:
   i. The application of commercial fertilizer to land;
   ii. The application of agricultural source material to land;
   iii. The storage of agricultural source material; and
   iv. The use of land as an outdoor confinement area, or a farm animal yard.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
A-1(1)	RMP	MC	RMO	E	The activity is designated for the purpose of section 58 of the *Clean Water Act, 2006*. The risk management plan will be prepared in accordance with the general provisions given in policy G-8.	G-8(4)
A-1(2)	RMP	MC	RMO	E	The risk management plan required by (1) will be developed in consideration of the requirements of any applicable Prescribed Instrument, as appropriate.	G-8(4)
A-1(3)	RMP	MC	RMO	E	The risk management plan required by (1) for the handling and storage of pesticide will ensure that any pesticide storage within the mandate of the Agrichemical Warehousing Standards Association obtains certification from that organization, and that documentation of the certification is provided to the Risk Management Official.	G-8(4)

Drinking Water Threat		Applicable Area				
Category	Subcategory	IPZ & WHPA-E				WHPA A-D
Agricultural Source Material	Application	10	9	8		10
	Storage	10	9	8		10
Commercial Fertilizer	Application	10	9	-		10
Livestock	Outdoor Confinement Area or Farm Animal Yard	10	9	8		10

Applicable Activities: Any of the following activities is an existing significant drinking water threat (see Table 4.6) and requires a Nutrient Management Plan or Strategy under the Nutrient Management Act, 2002:

a) The application of commercial fertilizer to land;
b) The application of agricultural source material to land;
c) The storage of agricultural source material; and
d) The use of land as an outdoor confinement area or a farm animal yard.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
A-2(1)	SA	S	OMAFRA MECP	E	Prioritize the review and inspection of properties located in the Trent source protection areas with Nutrient Management Plans or Strategies within one year.	G-2(2) A-2(2)
A-2(2)	MON	MC	OMAFRA MECP	E	The following content is recommended to be included in the report required by Policy G-2(2): a) A summary of the prioritization exercise completed for (1).	N/A
A-2(3)	PI	MC	OMAFRA	E	Following the prioritization developed under (1), review all existing Nutrient Management Plans or Strategies related to these activities to determine if they are adequate to ensure that the associated activities are not significant drinking water threats. If they are deemed to be inadequate for this purpose, they will be amended to include additional conditions that will ensure that the activities cease to be significant drinking water threats. All amendments required by this policy must be completed within three years from the date that the Plan takes effect or such other date as the applicable Director determines based on a prioritized review of Prescribed Instruments that govern the activity.	G-2(2)
A-2(4)	SA	S	MECP	E	Following the prioritization developed under (1), and allowing for any implementation schedules set out within the amendments completed under (3), initiate inspections of properties with Nutrient Management Plans or Strategies for compliance with these documents within three years.	G-2(2)

POLICY A-3

Drinking Water Threat		Applicable Area			
Category	Subcategory	IPZ & WHPA-E			WHPA A-D
Pesticides	Application	10	9	8.1*	10

Applicable Activities: The application of pesticide to land is an existing significant drinking water threat (see Table 4.6) and the activity requires a Pesticide Permit under the Pesticides Act.

*In addition to the coloured areas shown above, this policy also applies in the yellow-coloured area on the Frankford policy applicability map for the application of pesticide on an area greater than 10 hectares that may result in the presence of MCPA (2-methyl-4-chlorophenoxyacetic acid) in groundwater or surface water.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
A-3	PI	MC	MECP	E	Review all existing Pesticide Permits related to the activity to determine if they are adequate to ensure that the associated activities are not significant drinking water threats. If they are deemed to be inadequate for this purpose, they will be amended to include additional conditions that will ensure that the activities cease to be significant drinking water threats. All amendments required by this policy must be carried out within three years from the date that the plan takes effect or such other date as the applicable Director determines based on a prioritized review of Prescribed Instruments that govern the activity.	G-2(2)

POLICY A-4

Drinking Water Threat		Applicable Area				
Category	Subcategory	IPZ & WHPA-E				WHPA A-D
Agricultural Source Material	Application	10	9	8		10
	Storage	10	9	8		10
Commercial Fertilizer	Application	10	9	-		10
	Handling & Storage	10	-	-		10
Pesticides	Application	10	9	8.1		10
	Handling & Storage	10	9	-		10
Livestock	Grazing & Pasturing	10	9	8		10
	Outdoor Confinement Area or Farm Animal Yard	10	9	8		10

Applicable Activities: Any of the following activities that would be a future significant drinking water threat (see Table 4.6):

a) The application of agricultural source material to land;
b) The storage of agricultural source material;
c) The application of commercial fertilizer to land;
d) The handling and storage of commercial fertilizer;
e) The application of pesticide to land;
f) The handling and storage of pesticide; and
g) The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm animal yard.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
A-4(1)	PRO	MC	RMO	F	In a WHPA-A or IPZ-1[1], the activity is prohibited and designated for the purpose of section 57 of the *Clean Water Act, 2006*.	G-7(1)
A-4(2)	RMP	MC	RMO	F	The activity is designated for the purpose of section 58 of the *Clean Water Act, 2006*. The risk management plan will be prepared in accordance with the general provisions given in policy G-8.	G-8(4)
A-4(3)	RMP	MC	RMO	F	The risk management plan required by Policy A-4(2) will be developed in consideration of the requirements of any applicable Prescribed Instrument, as appropriate.	G-8(4)
A-4(4)	PI	MC	OMAFRA MECP	F	In a WHPA-A or IPZ-1[1], and where a Prescribed Instrument is required, future occurrences of the activity are not permitted.	G-2(2)

[1] Consult the Trent Assessment Report for maps of wellhead protection areas (WHPA) and intake protection zones (IPZ).

4.4.3 FUEL HANDLING & STORAGE

THREAT SUMMARY

The handling and storage of fuel is divided into subcategories for both fuel handling and fuel storage. The circumstances that are considered to determine if these activities are significant drinking water threats are summarized below.

FUEL STORAGE

Applicable Policies: F-1, F-2, and G-5

This drinking water threat refers to the storage of liquid fuel in a tank. The circumstances that are considered to determine if the activity is a significant drinking water threat are the volume of fuel stored, the type of fuel storage, the type of chemicals that may be released during a spill of the fuel, and the location of the storage in relation to grade. The specific circumstances that would result in a significant drinking water threat are different for wellhead protection areas and intake protection zones.

For an intake protection zone, the activity can be a significant drinking water threat where the volume of fuel stored is greater than 2500 litres; the fuel is stored at or above or partially above grade at a facility[1] but not at a bulk plant[2]; and a spill of the fuel has the potential to result in the presence of BTEX[3] or petroleum hydrocarbons F1 (nC6-nC10) in groundwater or surface water.

For a wellhead protection area, the activity can be a significant drinking water threat where the volume of fuel stored is greater than 250 litres: where the volume is greater than 250 litres but less than 2500 litres, the activity is a significant drinking water threat if located below or partially below grade; the fuel is stored at a facility[1] or a bulk plant[2]; and a spill of the fuel has the potential to result in the presence of BTEX[3] or petroleum hydrocarbons F1 (nC6-nC10) in groundwater or surface water. Where the volume is greater than 2500 litres, the activity is a significant drinking water threat under these circumstances, where a spill of the fuel has the potential to result in the presence of petroleum hydrocarbons F2 (>nC10-nC16), F3 (>nC16-nC34), and F4 (>nC34) in groundwater or surface water.

[1] *Facility* as defined in O. Reg. 213/01 (Fuel Oil) or O. Reg. 217/01 (Liquid Fuels) made under the *Technical Standards and Safety Act, 2000*.
[2] *Bulk plant* as defined in O. Reg. 217/01 (Liquid Fuels) made under the *Technical Standards and Safety Act, 2000*.
[3] *BTEX* is an acronym for benzene, toluene, ethylbenzene, and xylenes.

FUEL HANDLING

Applicable Policies: G-5

This drinking water threat refers to the handling of liquid fuel in relation to its storage. The circumstances that are considered to determine if the activity is a significant drinking water threat are the volume of fuel stored, the type of fuel storage, the type of chemicals that may be released during a spill of the fuel, and the location of the storage in relation to grade.

For wellhead protection areas and intake protection zones, the volume of stored fuel must exceed 2500 litres and a spill of the fuel must have the potential to result in the presence of BTEX[1] or petroleum hydrocarbons F1 (nC6-nC10) in groundwater or surface water. The circumstances related to the type of storage and the location of the storage in relation to grade are different for intake protection zones and wellhead protection areas. For intake protection zones, the fuel must be stored above grade at a facility[2] but not at a bulk plant[3]. For wellhead protection areas, fuel must be stored at a facility[2], bulk plant[3], or a facility that manufactures or refines fuel, but the location of the storage in relation to grade is not a consideration.

[1] *BTEX* is an acronym for benzene, toluene, ethylbenzene, and xylenes.

[2] *Facility* as defined in O. Reg. 213/01 (Fuel Oil) or O. Reg. 217/01 (Liquid Fuels) made under the *Technical Standards and Safety Act, 2000.*

[3] *Bulk plant* as defined in O. Reg. 217/01 (Liquid Fuels) made under the *Technical Standards and Safety Act, 2000.*

POLICY TEXT

POLICY F-1

Applicable Area: groundwater ■ surface water ■

Applicable Activities: Handling and storage of fuel that would be a future significant drinking water threat.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
F-1	PRO	MC	RMO	F	The activity is prohibited and designated for the purpose of section 57 of the *Clean Water Act, 2006* unless the fuel is stored for use in a back-up generator that is intended for use during a municipal emergency.	G-7(1)

POLICY F-2

Applicable Area: groundwater ■ surface water ■

Applicable Activities: Handling and storage of fuel that is an existing significant drinking water threat.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
F-2(1)	RMP	MC	RMO	E	The activity is designated for the purpose of section 58 of the *Clean Water Act, 2006*. The risk management plan will be prepared in accordance with the general provisions given in policy G-8.	G-8(4)
F-2(2)	RMP	MC	RMO	E	The risk management plan required by (1) must, at a minimum, specify the requirement to have the fuel tank inspected by a TSSA-certified technician at a frequency of no less than every 5 years or at discretion of the Risk Management Official.	G-8(4)

4.4.4 ROAD SALT

THREAT SUMMARY

Both the application and storage of road salt are activities prescribed to be drinking water threats by the *Clean Water Act, 2006*. The circumstances that are considered to determine if these activities are significant drinking water threats are summarized below.

ROAD SALT APPLICATION

Applicable Policies: R-1 through R-4, and G-5

This drinking water threat refers to the application of road salt. The circumstances that are considered to determine if the activity is a significant drinking water threat are the percentage of total impervious surface area in the area where the salt is applied and the potential for the application to result in the presence of sodium or chloride in groundwater or surface water. Total impervious surface area is determined from mapping included in the Trent Assessment Report that represents the surface area of all highways and other impervious land surfaces used for vehicular traffic, parking, and pedestrian paths. The activity is a significant drinking water threat in an area where the total impervious surface area is greater than 8% for an intake protection zone or 80% for a wellhead protection area.

ROAD SALT STORAGE

Applicable Policies: R-5, R-6, and G-5

This drinking water threat refers to the storage of road salt. The circumstances that are considered to determine if the activity is a significant drinking water threat are the mass of salt stored and the type of storage facility. The storage of salt can only be a significant threat where it is stored in a manner that may result in its exposure to precipitation or runoff and the mass of salt stored is greater than 500 tonnes for an intake protection zone or 5000 tonnes for a wellhead protection area. Salt storage in a salt dome or similar facility is not considered a significant drinking water threat.

POLICY TEXT

POLICY R-1 — Applicable Area: groundwater surface water

Applicable Activities: The application of road salt that is an existing significant drinking water threat or would be a future significant drinking water threat; and the activity is being undertaken on a municipal property or right of way, or on a private road or property.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
R-1(1)	RMP	MC	RMO	E/F	The activity is designated for the purpose of section 58 of the *Clean Water Act, 2006.* The risk management plan will be prepared in accordance with the general provisions given in policy G-8.	G-8(4)
R-1(2)	RMP	MC	RMO	E/F	Ensure that the risk management plan required by (1) includes provisions for the following: a) Ensure that a salt management plan is in place that contains provisions to ensure that the activity is not a significant drinking water threat; b) Where multiple road authorities operate within a vulnerable area, cross-boundary considerations will be addressed on an ongoing basis by all road authorities responsible for the application of road salt; c) Where salt is applied by a contractor: i) Ensure that contractors are made aware of the requirements of the Salt Management Plan; and ii) Require the contractor to advise the municipality with responsibility for the drinking water system promptly if an alternate road salt product is used for road maintenance. d) Updating of the salt management plan within one year of the approval of an updated assessment report; and e) Annual reporting on activities undertaken as part of the salt management plan to the Risk Management Official.	G-8(4)

POLICY R-2 — Applicable Area: groundwater surface water

Applicable Activities: The application of road salt that is an existing significant drinking water threat or would be a future significant drinking water threat; and the application is being undertaken by the Ministry of Transportation.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
R-2(1)	SA	S	MTO	E/F	Ensure that efforts continue to identify and implement improved ways to pragmatically and logistically address the issue of salt contamination. These efforts will include the implementation of a salt management plan that contains provisions for mitigating the effects of road salt on wellhead protection areas and intake protection zones. The salt management plan must include provisions for the following: a) Where multiple road authorities operate within a vulnerable area, cross-boundary considerations will be addressed on an ongoing basis by all road authorities responsible for the application of road salt; b) Where salt is applied by a contractor: i) Ensure that contractors are made aware of the requirements of the salt management plan; and ii) Require the contractor to advise the municipality with responsibility for the drinking water system if an alternate product is used for road maintenance. c) Updating of the salt management plan within one year of the approval of an updated assessment report; and d) Annual reporting on activities undertaken as part of the salt management plan to the source protection authority.	R-2(2)
R-2(2)	MON	MC	MTO	E/F	The ministry shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) A summary of any changes to the salt management plan identified in (1) made in the preceding calendar year.	N/A

POLICY R-3 ——— Applicable Area: groundwater surface water

Applicable Activities: The application of road salt that is an existing significant drinking water threat or would be a future significant drinking water threat.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
R-3(1)	RES	S	MTO	E/F	Continue ongoing investigation and implementation of innovative practices and mitigative technologies regarding road salt application and the management of infiltration and runoff.	R-3(3)
R-3(2)	RES	S	MTO	E/F	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 Trent source protection areas.	R-3(3)
R-3(3)	MON	MC	MTO	E/F	The ministry shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) The nature of relevant research initiatives as they arise; and b) A summary of relevant research activities every five years.	N/A

POLICY R-4 — Applicable Area: groundwater surface water

Applicable Activities: The application of road salt that would be a future significant drinking water threat.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
R-4(1)	SA	S	MTO	F	Consider the location of vulnerable areas during the planning and Environmental Assessment processes for the construction of roads, other impervious land surfaces used for vehicular traffic and parking, and all impervious pedestrian paths.	R-4(2)
R-4(2)	MON	MC	MTO	F	The ministry shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority and the municipality. Recommended contents of the report include, but are not limited to: a) With respect to policy R-4(2), every five years the annual report should include a summary of how (1) was achieved for any roads within their jurisdiction.	N/A
R-4(3)	LUP	MC	Approval Authority under the *Planning Act*	F	Consider areas where the activity is a significant drinking water threat as set out in impervious surface area mapping in the Trent Assessment Report during the planning processes for the construction of roads, other impervious land surfaces used for vehicular traffic and parking, and all impervious pedestrian paths.	G-10(2)

POLICY R-5 Applicable Area: groundwater surface water

Applicable Activities: The storage of road salt that is an existing significant drinking water threat.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
R-5	RMP	MC	RMO	E	The activity is designated for the purpose of section 58 of the *Clean Water Act, 2006*. The risk management plan will be prepared in accordance with the general provisions given in policy G-8.	G-8(4)

POLICY R-6 Applicable Area: groundwater surface water

Applicable Activities: The storage of road salt that would be a future significant drinking water threat.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
R-6	PRO	MC	RMO	F	The activity is prohibited and designated for the purpose of section 57 of the *Clean Water Act, 2006*.	G-7(1)

4.4.5 WASTE DISPOSAL

THREAT SUMMARY

The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act* is an activity prescribed to be a drinking water threat by the *Clean Water Act, 2006.* Given the variety of activities associated with waste disposal sites, this drinking water threat is divided into several subcategories. The circumstances that determine if each threat subcategory is or would be a significant drinking water threat are summarized in Table 4.7.

Applicable Policies: W-1 through W-4, and G-5

Table 4.7: Summary of Threat Circumstances for Waste Disposal Threats

Subcategory	Circumstances Considered to Determine if Significant Threat
Application of untreated septage to land	• Potential for pathogen contamination, only the vulnerability score of the area is considered • Potential for nutrient contamination, the area of land to which the sewage is applied is also considered
Storage, treatment and discharge of tailings from mines	• Type and location of storage • Type of chemical found in a discharge from the storage area • Whether or not a facility is required to report to the National Pollutant Release Inventory
Landfarming of petroleum refining waste; Landfilling (hazardous waste, municipal waste, industrial waste)	• The size of area where the land disposal is undertaken • The type of chemical that the discharge may contain
Liquid industrial waste injection into a well	• Combined rate of discharge of all wells located at the site • The type of chemical that the discharge may contain
PCB waste storage	• Stored below grade in a facility or engineered cell • Stored in drums above or at grade • Stored in storage tanks below grade • Stored in a storage tank that is installed partially below grade • Stored in an outdoor area and not in a container
Storage of hazardous waste at disposal sites	• Location of storage • The type of chemical
Storage of wastes described in clause (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste (“other” waste)	• Location of storage • The type of chemical

POLICY TEXT

POLICY W-1

Applicable Area: groundwater surface water

Applicable Activities: The establishment, operation or maintenance of a waste disposal site[1] within the meaning of Part V of the *Environmental Protection Act* is an existing significant drinking water threat and the activity requires a Prescribed Instrument.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
W-1	PI	MC	MECP	E	Review all existing Prescribed Instruments related to these activities to determine if they are adequate to ensure that the associated activities are not significant drinking water threats. If they are deemed to be inadequate for this purpose, they will be amended to include additional conditions that will ensure that the activities cease to be significant drinking water threats. All amendments to Prescribed Instruments required by this policy must be carried out within three years from the date that the plan takes effect or such other date as the applicable Director determines based on a prioritized review of Prescribed Instruments that govern the activity.	G-2(2)

POLICY W-2

Applicable Area: groundwater surface water

Applicable Activities: The establishment, operation or maintenance of a waste disposal site[1] within the meaning of Part V of the *Environmental Protection Act* would be a future significant drinking water threat and the activity would require a Prescribed Instrument except for a Prescribed Instrument issued for a mobile PCB waste destruction unit where that unit will be used for the sole purpose of the on-site destruction of PCB waste that originated on that site.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
W-2(1)	PI	MC	MECP	F	Future occurrences of the activity are not permitted.	G-2(2)
W-2(2)	LUP	MC	Approval authority under the *Planning Act*	F	Future occurrences of the activity are prohibited.	G-10(2)

POLICY W-3 Applicable Area: groundwater surface water

Applicable Activities: The establishment, operation or maintenance of a waste disposal site[1] within the meaning of Part V of the *Environmental Protection Act* is an existing significant drinking water threat and the activity does not require a Prescribed Instrument.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
W-3	RMP	MC	RMO	E	The activity is designated for the purpose of section 58 of the *Clean Water Act, 2006*. The risk management plan will be prepared in accordance with the general provisions given in policy G-8.	G-8(4)

POLICY W-4 Applicable Area: groundwater surface water

Applicable Activities: The establishment, operation or maintenance of a waste disposal site[1] within the meaning of Part V of the *Environmental Protection Act* would be a future significant drinking water threat and the activity would not require a Prescribed Instrument.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
W-4(1)	PRO	MC	RMO	F	The activity is prohibited and designated for the purpose of section 57 of the *Clean Water Act, 2006.*	G-7(1)
W-4(2)	RMP	MC	RMO	F	W-4(1) does not apply if the activity is the storage of wastes described in clauses (p), (q), (r), (s), (t), or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste. Future instances of that activity are designated for the purpose of section 58 of the *Clean Water Act, 2006*. The risk management plan will be prepared in accordance with the general provisions given in policy G-8.	G-8(4)

[1] As per S.1 *Environmental Protection Act, 1990*, *waste disposal site* means:

(a) any land upon, into, in or through which, or building or structure in which, waste is deposited, disposed of, handled, stored, transferred, treated or processed, and

(b) any operation carried out or machinery or equipment used in connection with the depositing, disposal, handling, storage, transfer, treatment or processing referred to in clause (a).

4.4.6 DNAPLS AND ORGANIC SOLVENTS

THREAT SUMMARY

Both DNAPLs (dense non-aqueous phase liquids) and organic solvents are activities prescribed to be drinking water threats by the *Clean Water Act, 2006*. The policies developed to address these activities rely on similar approaches, so these activities are considered as a group for the purpose of this plan. However, the circumstances and locations that determine if each activity is a significant drinking water threat are different. These factors are summarized in Table 4.8 below.

Table 4.8: Summary of DNAPL and Organic Solvent Threats

Drinking Water Threat		Applicable Policies[1]	Applicable Area[2]	
Category	Subcategory		IPZ & WHPA-E	WHPA A-D
DNAPLs	Storage	D-1, D-2, D-3, G-5	10	WHPA A-C
	Handling	D-1, D-2, D-3, G-5	10	WHPA A-C
Organic Solvents	Storage	D-1, D-2, D-3, G-5	10	10

[1]General policies may also apply for these activities (see Section 4.3)

[2]Indicates the minimum vulnerability score that would result in a significant threat in at least one threat circumstance (colour indicates the corresponding area on the policy applicability maps – see Section 4.2) (DNAPLs are significant threats within WHPA A-C irrespective of vulnerability score)

DENSE NON-AQUEOUS PHASE LIQUIDS (DNAPLS)

A dense non-aqueous phase liquid (DNAPL) is a liquid that is denser than water and has a minimal solubility in water. These substances are of special concern because of their ability to sink to the bottom of an aquifer. Both the handling and storage of DNAPLs are prescribed drinking water threats. The circumstances considered to determine if these activities are significant drinking water threats are the location of the handling or storage in relation to grade and the potential for a spill of the DNAPL to result in the presence of any of the following substances in groundwater or surface water:

- Dioxane-1,4
- Polycyclic Aromatic Hydrocarbons (PAHs)
- Tetrachloroethylene (PCE)
- Trichloroethylene or another DNAPL that could degrade to Trichloroethylene
- Vinyl Chloride or another DNAPL that could degrade to Vinyl Chloride

For intake protection zones, these activities are or would be significant drinking water threats where the handling or storage takes place at or above grade; for wellhead protection areas, they are significant drinking water threats regardless of their location in relation to grade. There is no minimum quantity of DNAPL that would result in a significant drinking water threat. However, for practical reasons, DNAPLs present in very small quantities (*e.g.,* household cosmetics) were not considered significant drinking water threats.

ORGANIC SOLVENTS

Organic solvents are substances that dissolve or disperse other organic substances. The majority of organic solvents are used in industrial and commercial applications; however, these chemicals can also be found in small quantities in common household products such as paints, adhesives, degreasers, and cleaning agents. The storage of an organic solvent is an activity prescribed to be a drinking water threat by the *Clean Water Act, 2006*. The circumstances that are considered to determine if the activity is a significant drinking water threat are the volume of stored solvent, the location of the stored solvent in relation to grade, and the potential for a spill of the solvent to result in the presence of any of the following substances in groundwater or surface water:

- Carbon Tetrachloride
- Chloroform
- Methylene Chloride
- Pentachlorophenol

POLICY TEXT

POLICY D-1 — Applicable Area: groundwater surface water

Applicable Activities: The handling and storage of a dense non-aqueous phase liquid and/or the handling and storage of an organic solvent is an existing significant drinking water threat (see Table 4.8).

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
D-1	RMP	MC	RMO	E	The activity is designated for the purpose of section 58 of the *Clean Water Act*, 2006. The risk management plan will be prepared in accordance with the general provisions given in policy G-8.	G-8(4)

POLICY D-2 — Applicable Area: groundwater* surface water

Applicable Activities: The handling and storage of a dense non-aqueous phase liquid and/or the handling and storage of an organic solvent would be a future significant drinking water threat (see Table 4.8).

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
D-2	PRO	MC	RMO	F	Activity is prohibited and designated for the purpose of section 57 of the *Clean Water Act, 2006.*	G-7(1)

* Wellhead protection areas B and C for the Village of Havelock Municipal Drinking Water System are exempt from Policy D-2.

POLICY D-3 — Applicable Area: Havelock WHPA B and C for DNAPL
Havelock WHPA B for Storage of Organic Solvents

Applicable Activities: The handling and storage of a dense non-aqueous phase liquid and/or the handling and storage of an organic solvent would be a future significant drinking water threat (see Table 4.8).

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
D-3(1)	RMP	MC	RMO	F	The activity is designated for the purpose of section 58 of the *Clean Water Act, 2006*. The risk management plan will be prepared in accordance with the general provisions given in policy G-8.	G-8(4)
D-3(2)	RMP	MC	RMO	F	The risk management plan required by (1) must, at a minimum: 1) Establish adequate measures for storage safety including proper storage facilities, leak detection and containment; 2) Include an emergency contingency plan; 3) Specify appropriate training of personnel; and 4) Require any other measure deemed necessary to reduce the risk of a release to the environment.	G-8(4)

4.4.7 NON-AGRICULTURAL SOURCE MATERIAL

THREAT SUMMARY

Non-agricultural source materials (NASM) include a variety of materials that may be sources of nutrients or pathogens. The *Clean Water Act* applies the definition given in the *General* Regulation made under the *Nutrient Management Act* (Ontario Regulation 267/03). The *Nutrient Management Act* identifies the following materials that are intended to be applied to land as nutrients, but that are not necessarily produced on a farm:

- Pulp and paper biosolids;
- Sewage biosolids;
- Anaerobic digestion output where less than 50% of the total material is on-farm anaerobic digestion materials (anaerobic digestion is a process used to decompose organic matter by bacteria in an oxygen-limited environment); and
- Any other material that is not from an agricultural source and that is capable of being applied to land as a nutrient (such as materials from dairy product or animal food manufacturing).

Both the application and storage of NASM are prescribed drinking water threats.

APPLICATION

Applicable Policies: N-1, N-2, N-3, and G-5

The circumstances that make the application of NASM a significant threat are based on the potential for the activity to contaminate drinking water sources with pathogens or nutrients. Where the activity is a potential source of pathogen contamination, the vulnerability score and type of NASM are considered. Where the activity is a potential source of nutrient contamination, the local concentrations of managed lands, livestock density, and vulnerability scores are considered.

Where the non-agricultural source material is listed as Category 1, existing application activities will be managed through Policy G-5 Education and Outreach.

STORAGE

Applicable Policies: N-1, N-2, N-3, and G-5

The circumstances that make the storage of NASM a significant threat are based on the potential for a spill of the material or runoff from the storage area to result in the presence of pathogens or nutrients in a drinking water source. The factors that are considered to determine if the activity is a significant threat are the type of storage site, the location of the stored NASM with respect to grade, the quantity of stored material, and in the case of pathogens the type of NASM being stored.

Where the non-agricultural source material is listed as Category 1, existing storage activities will be managed through Policy G-5 Education and Outreach.

POLICY TEXT

POLICY N-1 — Applicable Area: groundwater surface water

Applicable Activities: The application, handling, or storage of non-agricultural source material is an existing significant drinking water threat and the activity requires a Prescribed Instrument.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
N-1	PI	MC	OMAFRA	E	Review all existing Prescribed Instruments related to these activities to determine if they are adequate to ensure that the associated activities are not significant drinking water threats. If they are deemed to be inadequate for this purpose, they will be amended to include additional conditions that will ensure that the activities cease to be significant drinking water threats. All amendments to Prescribed Instruments required by this policy must be carried out within three years from the date that the Trent Source Protection Plan takes effect or such other date as the applicable Director determines based on a prioritized review of Prescribed Instruments that govern the activity.	G-2(2)

POLICY N-2 — Applicable Area: groundwater surface water

Applicable Activities: The application, handling, or storage of non-agricultural source material would be a future significant drinking water threat.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
N-2	PRO	MC	RMO	F	The activity is prohibited and designated for the purpose of section 57 of the *Clean Water Act, 2006*. This policy does not apply for non-agricultural source material listed as Category 1 non-agricultural source material per the *General* Regulation (O. Reg. 267/03) made under the *Nutrient Management Act, 2002*.	G-7(1)

POLICY N-3 Applicable Area: groundwater surface water

Applicable Activities: The application, handling, or storage of non-agricultural source material would be a future significant drinking water threat.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
N-3	RMP	MC	RMO	F	Where the non-agricultural source material is listed as Category 1 non-agricultural source material per the *General* Regulation (O. Reg. 267/03) made under the *Nutrient Management Act, 2002*, the activity is designated for the purpose of section 58 of the *Clean Water Act, 2006.* The risk management plan will be prepared in accordance with the general provisions given in policy G-8.	G-8(4)

4.4.8 SNOW STORAGE

THREAT SUMMARY

Applicable Policies: O-1, O-2, and G-5

The storage of snow is a prescribed drinking water threat under the *Clean Water Act, 2006*. Typically, this includes snow that is pushed into large piles on a property (*e.g.,* stored in parking lots) or snow transported to a central site from other locations (*e.g.,* snow disposal sites). For practical considerations, the policy specifically excludes snow stored along the side of roads as a result of snow plowing.

The circumstances that make the storage of snow a significant threat are based on the potential for the activity to contaminate drinking water sources with chemicals as a result of runoff. Whether or not the activity is a potential source of contamination depends on several factors: if the snow is stored at/above or below grade, the type of chemical contaminant, the size of the snow storage site, as well as its specific location (vulnerability score).

POLICY TEXT

POLICY O-1 — Applicable Area: groundwater surface water

Applicable Activities: The storage of snow that is an existing significant drinking water threat, where the snow is not stored along the side of a road as a result of snow plowing.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
O-1(1)	SA	MC	Municipality	E	Assess the feasibility of relocating the activity to a site where it would not be a significant drinking water threat within one year. If an appropriate alternate site is identified, the activity will be relocated to the alternate site within two years.	O-1(2)
O-1(2)	MON	MC	Municipality	E	The municipality shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) The results of the feasibility exercise identified in (1).	N/A
O-1(3)	RMP	MC	RMO	E	If an appropriate alternate site is not identified per (1), the activity is designated for the purpose of section 58 of the *Clean Water Act*, *2006*. The risk management plan will be prepared in accordance with the general provisions given in policy G-8.	G-8(4)

POLICY O-2 — Applicable Area: groundwater surface water

Applicable Activities: The storage of snow that would be a future significant drinking water threat, where the snow is not stored along the side of the road as a result of snow plowing.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
O-2	PRO	MC	RMO	F	The activity is prohibited and designated for the purpose of section 57 of the *Clean Water Act, 2006*.	G-7(1)

4.4.9 AQUACULTURE

THREAT SUMMARY

Aquaculture involves farm-raising cultured fish in facilities located either in the water or on land. The facilities may include tanks, raceways, ponds, pits and lakes. The facilities may re-circulate the water, and may use systems to add oxygen and remove wastes. Aquaculture is considered a form of agriculture, and would therefore likely be permitted by municipalities wherever agricultural uses are allowed.

The circumstances that make the management of agricultural source material from aquaculture a significant drinking water threat is based on the potential for the activity to contaminate drinking water sources with pathogens. The primary sources of pathogens in agricultural source material from aquaculture are from the water which contains fish manure and by-products, and from the settled solids (manure and by-products). If the incoming water to an aquaculture facility is contaminated with pathogens from other sources, it can negatively impact fish health, cause a food safety issue, or increase the pathogens in the water. Likewise, if dead fish are not removed from the water, they can be a source of pathogens.

In most areas this activity cannot be a significant drinking water threat. However, since *E. coli* was identified as a drinking water issue for the Stirling drinking water system, activities that are a potential source of pathogens in the issue-contributing area (ICA) for that system is a significant drinking water threat. The issue contributing for Stirling was delineated as the WHPA-A, WHPA-B, and WHPA-E for that system (see Trent Assessment Report Map 5-28f). Therefore, aquaculture activities are considered significant drinking water threats in the WHPA-A, WHPA-B, and WHPA-E for the Stirling drinking water system.

POLICY TEXT

POLICY Q-1 — Applicable Area: Stirling Issues Contributing Area

Applicable Activities: The management of agricultural source material (aquaculture) that is an existing significant drinking water threat. (This activity can only be a significant drinking water threat if undertaken within the Stirling Issue-Contributing Area).

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
Q-1	RMP	MC	RMO	E	The activity is designated for the purpose of section 58 of the *Clean Water Act, 2006*. The risk management plan will be prepared in accordance with the general provisions given in policy G-8.	G-8(4)

POLICY Q-2 — Applicable Area: Stirling Issues Contributing Area

Applicable Activities: The management of agricultural source material (aquaculture) that would be a future significant drinking water threat. (This activity can only be a significant drinking water threat if undertaken within the Stirling Issue-Contributing Area).

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
Q-2	PRO	MC	RMO	F	The activity is prohibited and designated for the purpose of section 57 of the *Clean Water Act, 2006*.	G-7(1)

4.4.10 AIRCRAFT DE-ICING

THREAT SUMMARY

Applicable Policies: P-1

Aircraft that have frost, ice, or snow on any of their critical structures (*e.g.,* wings) are not permitted to attempt take-off under the Canadian Aviation regulations. During weather conditions that would result in frost, ice, or snow, aircraft may be sprayed with de-icing and/or anti-icing fluids prior to leaving the ground. The management of runoff from de-icing of an aircraft is identified as a prescribed threat under the *Clean Water Act, 2006* due to the potential for runoff from the locations where de-icing takes place to enter a drinking water source.

The factors that are considered in the determination of whether or not the activity is a significant drinking water threat are as follows:

- The type of vulnerable area (*i.e.,* wellhead protection area or intake protection zone);
- The vulnerability score of the area; and
- The classification of the airport as remote, small, regional, or national (only regional and national airports can be significant drinking water threats).

POLICY TEXT

POLICY P-1 — Applicable Area: groundwater surface water

Applicable Activities: The management of runoff that contains chemicals used in the de-icing of aircraft that that is an existing significant drinking water threat or would be a future significant drinking water threat.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
P-1(1)	RMP	MC	RMO	E/F	The activity is designated for the purpose of section 58 of the *Clean Water Act, 2006*. The risk management plan will be prepared in accordance with the general provisions given in policy G-8.	G-8(4)
P-1(2)	SA	S	Relevant airport authorities or operators	F	Include appropriate design standards and management practices in the development of any future airport facilities.	P-1(3)
P-1(3)	MON	MC	Source Protection Authority	E/F	Request and report on information from relevant airport authorities, operators, and Transport Canada by February 1 of each year where a future airport facility has been designed in the previous calendar year, to identify how the recommendations outlined in (2) were considered.	N/A
P-1(4)	SA	MC	RMO	F	Where an airport is being considered, work with the airport operator, the deicing service provider, the air carriers using the airport, and the companies or individuals responsible for disposal of the used deicing fluid to ensure that the risk management plan recognizes and addresses concerns related to the drinking water supply. The risk management plan should be consistent with the *Guidelines for Aircraft Ground Icing Operations* (Transport Canada, 2005)[1].	G-8(4)

[1] Transport Canada (2005) *Guidelines for Aircraft Ground Icing Operations* - TP 14052.

4.5 LOCAL THREATS

4.5.1 LANDSCAPING THAT PROMOTES WATERFOWL CONGREGATION

THREAT SUMMARY

Due to the potential for pathogen contamination resulting from the congregation of waterfowl on landscaped areas adjacent to watercourses, the maintaining of open areas of mown grass for recreational activities that promote the congregation of waterfowl within or near surface water bodies is considered a local drinking water threat in the Lakefield and Peterborough intake protection zones. This activity would be considered a significant threat within Lakefield and Peterborough intakes protection zones 1 and 2 (Trent Assessment Report Maps 4-7c, 4-7h, 4-8c, and 4-8h, 2011).

Policy L-1 — Applicable Area: Lakefield and Peterborough Intake Protection Zones 1 and 2

Applicable Activities: Maintaining open areas of mown grass for recreational activities that promote the congregation of waterfowl within or near surface water bodies is an existing significant drinking water threat or would be a future significant drinking water threat.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
L-1(1)	SA	MC	Municipality	E/F	Develop a waterfowl management plan to reduce the presence of waterfowl on properties owned by the municipality. The plan must follow an adaptive approach to waterfowl management that includes habitat modification and ongoing monitoring of the plan's effectiveness. The plan may include, but is not limited to site alterations to reduce the attractiveness of the property to waterfowl, such as planting of shoreline vegetation and installation of physical barriers. The provisions of the plan will be implemented within five years.	L-1(4)
L-1(2)	SA	MC	Municipality	E/F	Within one year, post signage at any areas frequently used by the public to feed waterfowl. The signs will indicate that the feeding of waterfowl is prohibited because it can have a negative impact on water quality.	L-1(4)
L-1(3)	SA	MC	Municipality	E/F	Establish a bylaw to prohibit the feeding of waterfowl at municipally owned parks and mown areas. This bylaw must be established within one year.	L-1(4)
L-1(4)	MON	MC	Municipality	E/F	The municipality shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the Otonabee-Peterborough Source Protection Authority. Recommended contents of the report include, but are not limited to: a) A summary of the activities undertaken as part of the waterfowl management plan and the results of any related monitoring activities.	N/A

4.6 MONITORING FOR DRINKING WATER ISSUES

Originally two drinking water issues caused by human activity were identified in the Trent Assessment Report. These were a nitrate issue at the Blackstock drinking water system and an E. coli issue at the Stirling drinking water system. Monitoring policies permissible under the Clean Water Act, 2006 for the two drinking water issues were developed (I-1 for the Blackstock drinking water system and I-2 for the Stirling drinking water system).
The Blackstock well with the issue has now been decommissioned and therefore Policy I-1 has been removed from the Source Protection Plan.

Policy I-2 is intended to identify any changes or trends in the quality of source water at the Stirling Drinking Water System. The Trent Conservation Coalition Source Protection Committee created this policy to help evaluate effectiveness of specific threat policies and determine if there has been improvement in E. coli levels in the raw water over time.

Applicable Activities: Monitoring for *E. coli*

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
I-2	MON	MC	Township of Stirling-Rawdon	E/F	The municipality shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the Lower Trent Source Protection Authority. Recommended contents of the report include, but are not limited to: a) A summary of any *E. coli* monitoring data for raw and treated water that relate to the Stirling drinking water system collected during the preceding calendar year; and b) A summary of any actions taken at the water treatment plant to address the presence of *E.coli* in the drinking water.	N/A

4.7 OTHER POLICIES

This section includes several optional policies that are permitted by the *Clean Water Act, 2006.*

4.7.1 TRANSPORTATION CORRIDORS

POLICY OT-1

Applicable Activities: Spills along transportation corridors

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
OT-1(1)	SA	S	Municipality	E/F	Update local emergency response plans and/or spill contingency plans to address a potential spill along highways as defined in the *Highway Traffic Act*[1], shipping lanes, and railways. Emergency response plans should include: a) The location of all applicable wellhead protection areas and intake protection zones; b) Specific procedures for responding to a spill; c) A communications protocol; and d) The location of available spill response materials.	OT-1(3)
OT-1(2)	SA	S	Municipality	E/F	Review and update the emergency response plans annually.	OT-1(3)
OT-1(3)	MON	S	Municipality	F	The municipality shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) A summary of the updates that occurred as a result of (1) and (2).	N/A

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
OT-1(4)	SA	S	MECP	E/F	Update their emergency response plans and/or spill contingency plans for highways as defined in the *Highway Traffic Act*[1], shipping lanes, and railways by: a) Revising their notification protocol to directly notify all potentially affected water treatment plant operators; b) Using available data and models to predict the extent and duration of contamination caused by the spill, and to help determine the parties to be notified; and c) Ensure that information about the predicted extent and duration of contamination caused by the spill is communicated to all responsible parties who are responding to the spill (*e.g.,* the originators of the spill, emergency response/clean-up personnel, municipal health departments, and water treatment plant operators).	G-2(2) OT-1(7)
OT-1(5)	SA	S	MECP	E/F	Conduct testing of their emergency response plans and/or spill contingency plans commencing within three years, followed by regular emergency response preparedness exercises to address a potential spill (frequency and priority to be determined in consultation).	G-2(2) OT-1(7)
OT-1(6)	SA	S	MECP	E/F	Provide mapping of all vulnerable areas to the Spills Action Centre to assist in spill response.	G-2(2) OT-1(7)
OT-1(7)	MON	S	MECP	E/F	The following content is recommended to be included in the report required by policy G-2(2): a) A summary of updates that occurred as a result of (4) b) The results of testing response/contingency plans per (5); and c) Confirmation of mapping being provided per (6).	N/A

[1] As per *Highway Traffic Act, 1990*, "highway" includes a common and public highway, street, avenue, parkway, driveway, square, place, bridge, viaduct or trestle, any part of which is intended for or used by the general public for the passage of vehicles and includes the area between the lateral property lines thereof.

4.7.2 TRANSPORT PATHWAYS

POLICY OT-2

Applicable Activities: Transport pathways[1] within Wellhead Protection Areas A, B and C, E (with a score of 8 or 9[2]) and Intake Protection Zones 1 and 2.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
OT-2(1)	SA	S	Municipality	E/F	Develop and initiate within two years an ongoing education and outreach program that is designed to inform the owners and operators of transport pathways about the following: a) The potential for the transport pathway to endanger the municipal water supply; b) Best management practices for upgrading transport pathways to minimize the potential for impacts to the water supply; and c) For wells subject to Ontario Regulation 903 of the *Ontario Water Resources Act*, their legal obligations with respect to well construction, maintenance, and abandonment. The education and outreach program can be harmonized with existing education and outreach programs, such as the Ontario Drinking Water Stewardship Program (ODWSP) or the Policy G-5 program, where this would result in an increase in efficiency or cost-effectiveness. The municipality may enter into an agreement with a conservation authority or other third party that identifies the third party as the implementing body for this policy, and related reporting requirements.	OT-2(3)

OT-2(2)	SA	S	Municipality	F	In a WHPA-A or IPZ-1, establish a bylaw prohibiting the approval of a proposal to engage in an activity that will result in the creation of a new transport pathway (including geothermal heating systems).[3] This bylaw must be established within one year.	OT-2(3)
OT-2(3)	MON	S	Municipality	E/F	The municipality shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) A summary of the activities undertaken as part of the education and outreach program; b) A summary of any bylaws created to satisfy (2). As per Ontario Regulation 287/07, Section 27(3) notice to the source protection area and source protection committee of person, activity, proposed and approvals.	N/A
OT-2(4)	SA	S	MECP	E/F	The Ministry of the Environment, Conservation and Parks (MECP) is strongly encouraged to undertake an updated risk-based analysis of the compliance program associated with the Wells Regulation 903 as amended, made under the *Ontario Water Resources Act*. The program analysis should consider: a) Increased MECP field presence with well contractors; b) Complaint response prioritization where the presence of a transport pathway would endanger sources of municipal drinking water; and c) Focusing resources in areas where improperly constructed, maintained, or abandoned wells may increase the potential threat to municipal drinking water sources. Action to implement this analysis should be initiated within two years from the date the Source Protection Plan takes effect.	OT-2(5)

OT-2(5)	MON	S	MECP	E/F	The ministry shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) A summary of the program analysis completed under (4).	N/A

[1] Transport pathway means a condition of land resulting from human activity that increases the vulnerability of a raw water supply of a drinking water system contained in this Source Protection Plan. Transport pathways may include, but are not limited to, the following:

For groundwater systems:

a) Wells or boreholes;
b) Unused or abandoned wells;
c) Pits and quarries;
d) Mines;
e) Construction activities involving deep excavations (such as building foundations, basements, parking garages);
f) Underground storm sewer, sanitary sewer & water distribution system infrastructure

For surface water systems:

a) Storm drainage infrastructure (e.g. storm sewer lines, culverts, ditches); and
b) Tile drains.

[2] WHPA E with Vulnerability Score of 8 include Stirling and Buckhorn Lake Estates. WHPA E with Vulnerability Score of 9 includes Crystal Springs.

[3] Ontario Regulation 287/07, Section 27(3): If a person applies to a municipality for approval of a proposal to engage in an activity in a WHPA or a surface water IPZ that may result in the creation of a new transport pathway or the modification of an existing transport pathway, the municipality shall give the source protection authority and the source protection committee notice of the proposal and shall include a description of the proposal, the identity of the person responsible for the proposal and a description of the approvals the person requires to engage in the proposed activity.

4.7.3 EXTENSION OF EDUCATION PROGRAMS TO FIRST NATIONS COMMUNITIES

POLICY OT-3

Applicable Activities: Education and Outreach for Drinking Water Systems not in the Terms of Reference

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
OT-3(1)	E & O	S	Municipality	E/F	Municipalities are encouraged to extend education and outreach programs into First Nations reserves.	OT-3(2)
OT-3(2)	MON	S	Municipality	E/F	The municipality shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) A summary of any initiatives extended to First Nations reserves, and the outcomes of those initiatives.	N/A

4.7.4 COLLECTION OF CLIMATE CHANGE DATA

POLICY OT-4

Applicable Activities: Climate change data collection

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
OT-4(1)	SA	S	Various (See Policy Text)	E/F	Environment Canada; the Ministry of the Environment, Conservation and Parks; the Ministry of Natural Resources and Forestry, municipalities, and conservation authorities are encouraged to collect climate change data on an ongoing basis with a focus on the potential impact of climate change on vulnerable areas and on the drinking water supplies within those areas.	OT-4(3)
OT-4(2)	SA	S	MECP MNDMNRF	E/F	The Province of Ontario is encouraged to provide ongoing funding to local agencies to collect climate data to expand existing climate change data collection programs to include a focus on the potential effects on municipal drinking water systems in the Trent source protection areas.	OT-4(3)
OT-4(3)	MON	S	Various [See OT-4(1)]	E/F	Report by February 1 each year to the applicable source protection authority providing details of any climate change data collection initiatives undertaken in (1) and (2) impacting the Trent source protection areas for the preceding calendar year.	N/A

4.7.5 COLLABORATION WITH OTHER JURISDICTIONS

POLICY OT-5

Applicable Activities: Collaboration with other jurisdictions

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
OT-5(1)	SA	S	MECP	E/F	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, Conservation and Parks is requested to reach out to conservation authorities, Environment Canada, United States government agencies, and others to discuss the findings and policies arising from source protection planning.	OT-5(2)
OT-5(2)	MON	S	MECP	E/F	The Ministry shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies and make that report available to the applicable Source Protection Authority. Recommended contents of the report include, but are not limited to: a) Details of any collaboration opportunities related to Lake Ontario and source protection planning which impacts the Trent source protection areas for the preceding calendar year.	N/A

4.8 WATER QUANTITY

This section includes several policies permitted by the Clean Water Act, 2006. These policies are applicable to the WHPA Q1 and WHPA Q2 zone within the Trent Conservation Coalition boundary and apply regardless of vulnerability score.

In consultation with Municipalities, Durham Region prefers the Trent Conservation Coalition to adopt CTC (Credit Valley-Toronto and Region-Central Lake Ontario) Source Protection Region policies due to:

- The separation between Demand and Recharge Policies;
- The Lake Simcoe policies are based on Lake Simcoe Protection Plan.

WHPA-Q1 refers to the area where activities that take water without returning it to the same source may be a threat. WHPA-Q2 refers to the area where activities that reduce recharge may be a threat.

WATER QUANTITY DEMAND (WHPA Q1)

POLICY Y-1

APPLICABLE AREA – WHPA Q1 

Applicable Activity: Taking Water without Returning It to the Same Aquifer.

Any activity that takes water from an aquifer, without returning the water to that aquifer is a threat if it results in a depletion of available supply which could impair the long-term viability of a water system.

Municipal and private wells are typical examples of such water taking activities, along with industrial uses such as agriculture irrigation and aggregate extraction below the water table which requires pumping operations. When a Permit to Take Water (PTTW) is required, the province assesses the request to determine if the water taking is sustainable and issues a PTTW with appropriate conditions, to protect the ecosystem and other users. A PTTW is not generally required for private domestic wells as the amount of water taken is generally less than 50,000 litres per day which is the minimum threshold requiring approval.

This activity is a threat to drinking water sources as Taking water without returning it to the same aquifer can lead to the depletion of water in the aquifer, which reduces the amount of water available for municipal water supplies. If the available water in the aquifer drops below the safe threshold levels, municipal wells cannot produce enough to supply water demands which can lead to a water shortage.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
Y-1(1)-	Prescribed Instrument	Must Comply	MECP	F - Moderate Risk Area	<u>Permit to Take Water Policies in WHPA-Q1 with Significant Water Quantity Threats</u> Within the Tier 3 Water Budget WHPA-Q1 where a water taking is or would be a significant water quantity threat, the Ministry of the Environment, Conservation and Parks shall ensure each water taking threat ceases to be, or does not become significant, through actions the Director considers appropriate on a case by case basis, such as: 1) [6] Reviewing all existing Permits to Take Water, located within WHPA-Q1 with a significant risk level, in consultation with other Ministries (as required), the affected municipality, relevant conservation authorities, and permit holders, and amend the permits where necessary to ensure that:	G-2(2)

[6] Policy Y-1(1)1) Reviewing all existing Permits to Take Water is not applicable to the Trent Source Protection Plan. Existing permits to take water are not significant drinking water threat as WHPA Q1 in TCC region is of a moderate risk level, and therefore references to existing water takings or significant risk levels do not apply within the WHPA Q1 in TCC region. This policy was included to retain consistency with the CTC Source Protection Plan policies and reduce cross boundary issues.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
					a) municipal water supply requirements for the allocated and planned quantity (per the current approved population and employment projections of the most recent Growth Plan for the Greater Golden Horseshoe) will be met on a sustainable basis; and b) the hydrological integrity of municipal wells in the vulnerable areas will be maintained 2) Issuing Permits to Take Water for new or increased takings, located within WHPA-Q1 with moderate risk levels, only if it can be satisfactorily demonstrated, using the findings of the most recently approved Tier 3 Water Budget Model and other available data, where appropriate, that the taking: a) can be maintained on a sustainable basis; b) will not affect the ability of the aquifer to meet the municipal water supply requirements for the current and planned service capacity; and c) will ensure the hydrological integrity of municipal wells will be maintained.	
Y-1(2)	Land Use Planning	Must Comply	Planning Approval Authority	F - Moderate Risk Area	<u>Planning Policies in WHPA-Q1 with Significant Water Quantity Threats</u> Within the Tier 3 Water Budget WHPA-Q1 where a water taking is or would be a significant water quantity threat, the relevant Planning Approval Authority shall ensure water taking does not become a significant drinking water threat by: 1) Only permitting new development if the new development does not require a new or amended Permit to Take Water; 2) Only providing final approval for new development that requires a new or amended Permit to Take Water once the Ministry of the Environment, Conservation and Parks has determined that the proposed taking will not become a significant water quantity threat;	Y-1(3)

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
					3) Only approving settlement area expansions within WHPA-Q1 as part of a municipal comprehensive review where the applicable provincial planning criteria have been met and the following has been demonstrated: a) the aquifer has sufficient capacity to sustainably provide municipal water services to the expanded settlement area; b) the expansion will not adversely impact the aquifers ability to meet the municipal water supply requirements for current and planned service capacity, for other permitted takings, or for wastewater receiving bodies; and c) the hydrological integrity of municipal wells will be maintained.	
Y-1(3)	Monitoring	Must Comply	Planning Approval Authority	F - Moderate Risk Area	The municipality or planning authority shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies for the preceding calendar year, and make that report available to the applicable Municipalities and the Source Protection Authority.	N/A
Y-1(4)[7]	Specify Action	Strategic	MMAH, MECP	F - Moderate Risk Area	<u>Growth Management/Planning Ministries to Review Growth in WHPA-Q1 with Significant Water Quantity Threats</u> Within a Tier 3 Water Budget WHPA-Q1 identified as having significant water quantity threats, the Provincial Ministries specified below should undertake the following to ensure the provision and distribution of water supply for municipal population and employment growth forecasts does not create a new, or increase an existing, significant water quantity threat: 1) The Ministry of Municipal Affairs and Housing in consultation with the Ministry of the Environment, Conservation and Parks and any affected municipalities should use the Tier 3 Water Budget information and other available data to ensure that municipal Official Plan growth forecasts and distributions will not result in creating or worsening a significant water	Y-1(5)

[7] Policy Y-1(4) is not applicable to the Trent Source Protection Plan as WHPA Q1 in TCC region is of a moderate risk level, and therefore references to Growth Management Plans for significant risk levels do not apply with the WHPA Q1 in TCC region. This policy was simply included to retain consistency with the CTC Source Protection Plan policies and reduce cross boundary issues.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
					quantity threat, given water quantity constraints identified in Tier 3 Water Budget model areas; and 2) The Ministry of Municipal Affairs and Housing should take into consideration water quantity constraints identified through Tier 3 Water Budgets, and other available data, during its review of the population forecasts contained in the Growth Plan for the Greater Golden Horseshoe, in consultation with relevant municipalities.	
Y-1(5)[8]	Monitoring	Must Comply	MECP	F - Moderate Risk Area	The ministry shall prepare, by February 1 each year, an annual summary of the actions it has taken to achieve the outcomes of the source protection plan policies for the preceding calendar year, and make that report available to the applicable Source Protection Authority. Reporting shall include information related to the effectiveness of the policies in ensuring a threat ceases to be, or does not become significant, and any actions required to respond to a drinking water threat during the reporting period.	N/A
Y-1(6)	Specify Action	Must Comply	Municipality	F - Moderate Risk Area	<u>Municipal Water Conservation Plans</u> Municipalities responsible for the production, treatment, and storage of water, who have a municipal well and/or whose residents are served by a municipal water supply within the Tier 3 Water Budget WHPA-Q1 shall develop and/or update Water Conservation Plans to ensure they are an effective tool to support sustainable water quantity by reducing consumption and therefore the demand for water.	Y-1(3)
Y-1(7)	Specify Action	Strategic	MECP	F - Moderate Risk Area	<u>Tier 3 Model Updates</u>[9] The MECP should adopt and fund a Tier 3 Water Budget Model in a WHPA-	Y-1(5)

[8] Policy Y-1(5) is not applicable as a monitoring policy to policy Y-1(4) in the Trent Source Protection Plan as policy Y-1(4) is only applicable to significant drinking water threats and the WHPA Q1 in TCC region is of a moderate risk level. This policy is not applicable at this time and was included to retain consistency with the CTC Source Protection Plan policies and reduce cross boundary issues.

[9] The references to significant risk level, exiting takings, and cease to be in Policy Y-1(7)(1) does not apply in the Trent SPP, and the policy is only applicable for the WHPA Q1 with a moderate risk level, future takings. Policy Y-1(7) was included to retain consistency with the CTC Source Protection Plan policies and reduce cross boundary issues.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
					Q1 identified as having a moderate or significant risk level and undertake the following to ensure it is maintained as the primary model to review existing and future Permits to Take Water, to allow municipalities and other provincial ministries (i.e., MMA and Ministry of Infrastructure) to evaluate growth projections and distributions, and to facilitate the review of planning applications by municipalities, where necessary, to ensure that these activities cease to be, or do not become, significant drinking water threats: 1) Through the PTTW program, require municipal takers in WHPA-Q1 to monitor water quantity and supply data on a regular basis to assist in the upkeep of the model to determine any increase or reduction in significant water quantity threats; 2) Use the model with the most up-to-date data as an analysis and decision making tool; and 3) When necessary, contribute to funding for new continuous flow gauging stations in key surface water features and enhance conservation authorities existing Hydrometric Network in WHPA-Q1 to monitor long term trends in surface water quantity, study impacts of urbanization and climate change on aquifer recharge, and facilitate calibration of the model.	

4.8.2 WATER QUANTITY RECHARGE (WHPA Q2)

POLICY Z-1

APPLICABLE AREA – WHPA Q2  AND SGRA 

Applicable Activity: Recharge Reduction

When recharge to an aquifer is reduced, the available water supply becomes depleted and can impair the long-term viability of a water system. Typical examples which reduce recharge include existing and planned land use developments, such as residential subdivisions, employment areas and undifferentiated suburban lands. Any conversions of land to an impervious surface, such as paved parking lots, do not let water travel through the ground to recharge the aquifer.

This activity is a threat to drinking water sources as activities that reduce the recharge of an aquifer, reduces the water available for municipal water supplies. Impervious surfaces impede the ability for the aquifer to recharge and continue to provide water over the long term.

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
Z-1	Land Use Planning	Must Comply	Planning Approval Authority	F - Moderate Risk Area	<u>Recharge Policy</u> For applications under the Planning Act within the Tier 3 Water Budget WHPA-Q2 identified as having significant water quantity threats, the relevant Planning Approval Authority shall ensure recharge reduction does not become a significant drinking water threat by: 1) Requiring new development for lands zoned Low Density Residential (excluding subdivisions) or zoned Agricultural to implement best management practices such as Low Impact Development (LID) with the goal to maintain predevelopment recharge. 2) Requiring that all site plan (excluding an application for one single family dwelling) and subdivision applications for new residential, commercial, industrial and institutional uses provide a water balance assessment for the proposed development to the satisfaction of the Planning Approval Authority which addresses each of the following requirements: a) maintain pre-development recharge to the greatest extent feasible through best management practices such as LID, minimizing impervious surfaces, and lot level infiltration; b) where pre-development recharge cannot be maintained on site,	Y-1(3)

Policy No.	Tool	Legal Effect	Implementer	E/F	Policy Text	Monitoring Policy
					implement and maximize off-site recharge enhancement (within the same WHPA-Q2) to compensate for any predicted loss of recharge from the development; and 3) Only approving settlement area expansions as part of a municipal comprehensive review where it has been demonstrated that recharge functions will be maintained on lands designated Significant Groundwater Recharge Areas within WHPA-Q2. 4) Amending municipal planning documents to reference most current Assessment Reports in regards to the Significant Groundwater Recharge Areas within WHPA-Q2.	

GLOSSARY

TERM	DEFINITION
Activity (Land Use Activity)	One or a series of related processes, natural or anthropogenic that occur within a geographical area and may be related to a particular land use. As per S.*2 Clean Water Act 2006*, "activity" includes a land use.
Drinking Water	(a) water intended for human consumption, or (b) water that is required by an *Act*, regulation, order, municipal by-law or other document issued under the authority of an *Act*, (i) to be potable, or (ii) to meet or exceed the requirements of the prescribed drinking water quality standards.
Drinking Water System	A system of works, excluding plumbing, that is established for the purpose of providing users of the system with drinking water and that includes, (a) any thing used for the collection, production, treatment, storage, supply or distribution of water, (b) any thing related to the management of residue from the treatment process or the management of the discharge of a substance into the natural environment from the treatment system, and (c) a well or intake that serves as the source or entry point of raw water supply for the system.
Drinking Water Threat	An activity or condition that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source of drinking water, and includes an activity or condition that is prescribed by the regulations as a drinking water threat.
Land Use	A particular use of space at or near the earth's surface with associated activities, substances and events related to a particular land use designation.
Implementer	The body responsible for implementation of the policy.
Issue Contributing Area	The geographic area that encompasses the source of a drinking water issue. Under the *Clean Water Act*, all activities that contribute to the issue in the Issue Contributing Area become significant drinking water threats.
Municipal Drinking Water System	A drinking water system or part of a drinking water system, (a) that is owned by a municipality or by a municipal service board established under the *Municipal Act*, 2001 or a city board established under the *City of Toronto Act*, *2006*; (b) that is owned by a corporation established under sections 9, 10 ,and 11 of the *Municipal Act*, *2001* in accordance with section 203 of that *Act* or under sections 7 and 8 of the *City of Toronto Act*, *2006* in accordance with sections 148 and 154 of that *Act*; or (c) from which a municipality obtains or will obtain water under the terms of a contract between the municipality and the owner of the system, or (d) that is in a prescribed class.

National Airport	An airport that serves the national capital region or the Greater Toronto Area, or an airport with annual passenger traffic of 200,000 persons or more.
Official Plan	An official plan prepared in accordance with part III of the *Planning Act.*
Operating Authority	In respect of a drinking water system, the person or entity that is given responsibility by the owner for the operation, management, maintenance or alteration of the system.
Planning Board	A board established under section 9 or 10 of the *Planning Act.*
Prescribed Instrument	An instrument that is issued or otherwise created under a provision prescribed by the regulations of: (a) the *Aggregate Resources Act*; (b) the *Conservation Authorities Act*; (c) the *Crown Forest Sustainability Act*, 1994; (d) the *Environmental Protection Act*; (e) the *Mining Act*; (f) the *Nutrient Management Act*, 2002; (g) the *Oil, Gas and Salt Resources Act*; (h) the *Ontario Water Resources Act*; (i) the *Pesticides Act*; or (j) any other *Act* or regulation prescribed by the regulations.
Provincial Tables of Circumstances	The Ministry of the Environment, Conservation and Parks publication "Provincial Tables of Circumstances", dated March 2014, as amended from time to time, accessible via the source protection homepage of ontario.ca or the reports and legislation page of trentsourceprotection.on.ca.
Regional Airport	An airport with an annual passenger traffic that is less than 200,000 persons and that is not a remote airport or a small airport.
Regulatory Authority	An entity responsible for issuing a Prescribed Instrument.
Restricted Land Uses	A tool provided under section 59 of the *Clean Water Act, 2006* used to identify where either a section 57 prohibition or section 58 risk management plan policies are required for future significant drinking water threats.
Risk Management Official	The Risk Management Official appointed under Part IV of the *Clean Water Act, 2006*. The Risk Management Official is responsible for making decisions about risk management plans and risk assessments and must meet the prescribed criteria in the regulations under the *Clean Water Act, 2006*.
Risk Management Plan	A tool available under section 58 of the *Clean Water Act, 2006.* The risk management plan identifies the measures that a person engaged in an activity will take to ensure the activity is no longer a significant drinking water threat.
Significant Drinking Water Threat	A drinking water threat which poses or has the potential to pose a significant risk to drinking water.

Significant Threat Policy	(a) a policy set out in a source protection plan that, for an area identified in the assessment report as an area where an activity is or would be a significant drinking water threat, is intended to achieve an objective referred to in paragraph 2 of subsection 22 (2) under the *Clean Water Act, 2006*, or (b) a policy set out in a source protection plan that, for an area identified in the assessment report as an area where a condition that results from a past activity is a significant drinking water threat, is intended to achieve the objective of ensuring that the condition ceases to be a significant drinking water threat.
Source Protection Area	An area established by subsection 4 (1) of the *Clean Water Act, 2006*, or by the regulations.
Source Protection Plan	A plan prepared under the *Clean Water Act, 2006* intended to protect existing and future sources of drinking water.
Specify Actions	Policies that specify the actions to be taken to implement the source protection plan or to achieve the plan's objectives.
Spill	Has the same meaning as in subsection 91(1) of the *Environmental Protection Act:* when used with reference to a pollutant, means a discharge, (a) into the natural environment, (b) from or out of a structure, vehicle or other container, and (c) that is abnormal in quality or quantity in light of all the circumstances of the discharge.
Tables of Drinking Water Threats	The Ministry of the Environment, Conservation and Parks publication "Table of Drinking Water Threats: *Clean Water Act, 2006*" dated July 1, 2018, as amended from time to time, accessible via trentsourceprotection.on.ca.
Technical Rules	The Ministry of the Environment, Conservation and Parks document titled "Technical Rules: Assessment Report" as amended from time to time, and made under section 107 of the *Clean Water Act*, 2006.
Total Impervious Surface Area	The surface area of all highways and other impervious land surfaces used for vehicular traffic, parking, and pedestrian paths.
Transport Pathways	A condition of land resulting from human activity that increases the vulnerability of a raw water supply of a drinking water system set out in clause 15 (2) (e) of the *Act*.
Transportation Corridors	A term defining highways (as outlined in subsection 1 (1) of the *Highway Traffic Act)*, railway lines or shipping lanes.