Approved Quinte Region Source Protection Plan

Version Revisions:

Version 1	Dated September 2014, approved September 8, 2014, in effect January 1, 2015
Version 1.1	Dated September 2019, approved September 11, 2019, in effect September 16, 2019 ▪ Updated intake protection zone 2 mapping for City of Belleville and Town of Picton ▪ Updated wellhead protection areas for Village of Madoc
Version 1.2	Dated July 2023, July 7, 2023, in effect July 17, 2023 This amendment was proposed by the Quinte Region Source Protection Authority under Section 34 of the Clean Water Act, 2006 to establish an issue contributing area for nitrates in the raw water of the groundwater-based municipal drinking water system in the Municipality of Tweed. The amendment updates the mapping of the wellhead protection area for Tweed to include the issue contributing area and provides additional policy direction within the issues contributing area to address rising nitrate levels in the drinking water source.

Prepared by:
Quinte Region Source Protection Committee

Approved: July 7, 2023

Effective: July 17, 2023

Summary of Amendments

This plan was written under the Clean Water Act, 2006 through a provincially-funded and directed drinking water source protection initiative. The initial plan and policies were approved by the Ontario government on September 8, 2014. The plan initially came into effect, January 1, 2015.

Version 1.1 was created to reflect new technical work including a new well system for the Village of Madoc and updated intake protection zones 2 for the Town of Picton and the City of Belleville.

On September 11, 2019 the Ministry of the Environment, Conservation and Parks approved an update, version 1.1 of the Quinte Source Protection Plan, effective September 16, 2019. This amendment was proposed by the Quinte Region Source Protection Authority under Section 34 of the *Clean Water Act, 2006* to amend the mapping of the intake protection zones for the City of Belleville and the Town of Picton municipal surface water intakes. This amendment also conveys information about a new groundwater-based municipal drinking water system in the Village of Madoc, updates the mapping of the wellhead protection area for the Village of Madoc municipal well system, and provides this new system with the same level of protection as the other municipal drinking water systems in the Quinte Region Source Protection Plan. This new system was required to replace an existing well that had been experiencing quantity and quality concerns.

Version 1.2 was created to address a nitrate issue in the raw water at the Tweed municipal well system.

On July 7, 2023 the Ministry of the Environment, Conservation and Parks approved an update, version 1.2 of the Quinte Source Protection Plan, effective July 17, 2023. This amendment was proposed by the Quinte Region Source Protection Authority under Section 34 of the *Clean Water Act, 2006* to establish an issue contributing area for nitrates in the raw water of the groundwater-based municipal drinking water system in the Municipality of Tweed. The amendment updates the mapping of the wellhead protection area for Tweed to include the issues contributing area and provides additional policy direction within the issues contributing area to address the rising nitrate levels in the drinking water source.

The following changes were made to the Source Protection Plan as part of these Amendments:

Version	Description	Applicable System	Effective Date
1.0	Initial Quinte Region Source Protection Plan – Approved September 08, 2014	All	January 1, 2015
1.1	Amendment to revise the mapping of the intake protection zone 2 for the City of Belleville. Amendment to revise the mapping of the intake protection zone 2 for the Town of Picton. Amendment to add the Village of Madoc's new municipal drinking water well system to the Source Protection Plan and amend the mapping of the wellhead protection areas for the Madoc municipal well system.	Belleville Picton Madoc	September 16, 2019
1.2	Amendment to establish an issues contributing area related to high nitrate levels in Tweed drinking water system. This amendment includes the addition of the Tweed issues contributing area to the applicable areas on several polices within the Quinte Region Source Protection Plan.	Tweed	July 17, 2023

Executive Summary

The Quinte Region Source Protection Committee and staff at Quinte Conservation have compiled all the required components of the Source Protection Plan as outlined in the *Clean Water Act*, *2006*, and associated regulations. The Plan is supported by science and written to facilitate understanding by the policy implementers and people affected by the plan.

The primary purpose of a Source Protection Plan is to protect municipal drinking water sources from contamination and overuse. The plan, created under Ontario's *Clean Water Act*, *2006*, outlines a set of policies developed by the Quinte Region Source Protection Committee to address all the significant threats and some moderate and low threats identified in the Assessment Report.

Steps in the process to develop the Source Protection Plan included:

- **The Quinte Region Source Protection Committee** was created in the fall of 2007 to oversee a science-based planning process to develop a Terms of Reference, an Assessment Report and a Source Protection Plan to protect municipal sources of drinking water in the Quinte Source Protection Region;

- **Watershed Characterization, March 2008** is a summary of the known information about the Quinte Region Watershed;

- **The Terms of Reference, February 2009** was produced by the Source Protection Committee as a work plan to complete the Assessment Report and the Source Protection Plan for the Quinte Region;

- **The Assessment Report** presents the findings of various technical studies undertaken by Quinte Conservation and others;

- **The Explanatory Document** contains the rationale for the policies in the Source Protection Plan. It is a record of the policy development process and provides an explanation of how the Source Protection Committee arrived at the policies in the plan.

There are four municipal groundwater wells and seven municipal surface water intake systems in the Quinte Region. These municipal drinking water systems provide water for half of the residents in the region, with the remaining residents obtaining their water from private groundwater wells, shore wells or directly from a river or lake. Policies in the Source Protection Plan will address threats to drinking water.

The *Clean Water Act, 2006* prescribes 21 different activities that are considered drinking water threats, having the potential to adversely affect the quality or quantity of municipal drinking water sources. Significant threats are only found in close proximity to the municipal drinking water sources in wellhead protection areas and intake protection zones. Threats were

inventoried for each of the 11 systems in the Assessment Report with the two most numerous significant threats to the water sources identified as septic systems and fuel oil tanks.

To understand the nature of the threats, the Committee formed working groups whose members were persons with expertise in septic systems, fuel, agriculture, municipal planning, water system operation and emergency planning. Their input helped develop policies to prohibit or manage existing and future threats within the wellhead protection areas and intake protection zones.

The main goal of a Source Protection Plan is to ensure every existing significant drinking water threat activity ceases to be a significant risk and new significant drinking water threats are not created. When developing policies to address the various drinking water threats, the Committee chose from a variety of tools outlined in the *Clean Water Act, 2006*, such as education and outreach, municipal planning and bylaws, risk management plans and prohibition. When deciding on the most appropriate tool, the Source Protection Committee considered which tool or combinations would work best in local circumstances.

Significant threat policies for wellhead protection areas and intake protection zones are implemented either by municipalities or by provincial ministries. The municipalities with significant drinking water threats will be required to appoint Risk Management Officials and Inspectors to administer prohibition of activities and risk management plans. Municipalities will also be required to provide education and outreach and amend their official plans and zoning bylaws. Provincial ministries will be required to develop, review or amend approvals (permits and licenses) for drinking water threats activities.

There were 63 policies developed to address drinking water threats. These policies specify the implementing body, the policy objective, the applicable area, tools used, legal effect, effective date and monitoring plan requirements.

During preparation of the Source Protection Plan the Committee and staff at Quinte Conservation actively consulted with municipalities, provincial ministries, affected landowners, adjacent source protection regions, the Source Protection Authority and specialized working groups. Consultation undertaken exceeded the requirements for consultation set out in the *Clean Water Act, 2006* and Ontario Regulation 287/07.

Preventing contamination from entering water sources is the cost effective way to ensure protection of sources of drinking water and human health. The plan is a living document that will be monitored, reviewed and updated. This local initiative will preserve and protect sources of drinking water now and for future generations.

Acknowledgements

The Quinte Region Source Protection Committee (Table 2.1) wishes to acknowledge the financial and technical support of the Ministry of the Environment and the Ministry of Natural Resources and the technical and communications support of Conservation Ontario.

The Quinte Source Protection Authority (Quinte Conservation) is acknowledged for its support and the local management of the program. Quinte Conservation provided the staff and technical resources required by the Source Protection Committee during each stage of the plan development.

In addition, the following contributors assisted with the development of the Source Protection Plan;

Neighbouring Source Protection Regions

- Mississippi-Rideau Source Protection Region
- Cataraqui Source Protection Area
- Trent Conservation Coalition

The Member Municipalities

- See list in Chapter 1

The Consulting Firms

- Dillon Consulting Limited
- Golder Associates Limited
- XCG Consultants Limited
- Schroeter and Associates
- Schlumberger Canada Limited Waterloo Hydrogeologic Division
- Stantec Incorporated

The Working Groups

- Municipal Planners
- Sewage/Septic
- Fuel/Home Heating Oil
- Agriculture
- Emergency Response and Drinking Water System Operators

The General Public

- All the members of the public that attended and/or submitted comments during the public consultations.

Initially Prepared by the Following Quinte Source Protection Staff:

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Preface

The goal of source protection planning is to protect public health and to ensure a supply of clean and abundant drinking water by protecting municipal drinking water sources. With the passing of the *Clean Water Act* in 2006, Ontario embarked on a pro-active, science-based program to ensure safe, long-term supplies of public water. This visionary, risk-based approach is locally driven. It relies on expertise available in the Quinte Region and reflects local conditions and values through an open and transparent plan development process. Ontario's efforts to protect public drinking water sources are unique in the world and will create a lasting, positive legacy in our region and the province.

Our society has a shared responsibility to protect drinking water sources and to ensure that a tragedy such as the one which occurred in the Town of Walkerton in May, 2000, never happens again. This responsibility was taken very seriously by the Source Protection Committee and project staff team who worked diligently to produce the Source Protection Plan and the accompanying components.

After hearing Bruce Davidson, of the Concerned Citizens of Walkerton, speak about the Walkerton experience, it was recognized that protecting water sources not only protects public health but makes good economic sense.

The ultimate success of this plan depends on how the policies are understood and implemented by the public, the municipalities and the various government ministries involved. Every effort has been made to deliver a plan that is concise, straightforward, understandable, affordable and implementable, while still effectively addressing the threats to municipal drinking water sources in the Quinte Region.

This plan is the first step in a long term commitment in the province and the Quinte Region to ensure that our drinking water supplies are safe now and in the future. This commitment will require ongoing vigilance and updates to the Plan as new drinking water sources come into use and as new information, technology or methods of protecting drinking water come to light. In this respect, the Source Protection Plan is a living document and will be reviewed and updated on a regular basis.

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Chapter 1 Introduction

Protecting sources of drinking water is vital to ensure a long term supply of safe water to the residents of the Quinte watershed region (Map 1-1). The Quinte Source Protection Committee has prepared the following Source Protection Plan to protect municipal drinking water now and into the future.

1.1 Drinking Water Source Protection and the *Clean Water Act, 2006*

The *Clean Water Act*, *2006* (The Act) established the Drinking Water Source Protection Program in the Province of Ontario. The Act and associated Regulations created Source Protection Areas that are watershed based. Conservation Authorities provide the geographic framework for Source Protection Areas and Regions as they are established on a watershed basis.

1.2 The Source Protection Planning Process

The Act and Regulations called for the formation of 19 Source Protection Committees covering the drinking water sources for approximately 90 percent of Ontario's population. The Quinte Source Protection Committee is composed of a provincially-appointed Chair and 15 members that represent different sectors of the Quinte watershed including municipal, economic and public. Also serving on the Committee are two representatives from the Mohawks of the Bay of Quinte and liaison members from the Ministry of the Environment, Health Units (Hastings and Prince Edward Counties Health Unit and Kingston Frontenac Lennox and Addington Public Health), and the Quinte Source Protection Authority. The Committee was responsible for preparing the Source Protection Plan for the municipal drinking water sources located in the Quinte Source Protection Region.

The source protection planning process is intended to continue over the long-term and will be reviewed on a regular basis. Source protection is one component of watershed management and involves the following steps: scientific research, planning, monitoring, and the evaluation of success.

The Ministry of the Environment is the lead agency for drinking water source protection activities across the province. The Ministry of Natural Resources assists with project management and aspects of protecting quantities of water.

Conservation Authorities across Ontario serve as Source Protection Authorities to coordinate the local work. The Quinte Source Protection Authority is the 26-member board of the Quinte Conservation Authority. The Quinte Source Protection Authority (Quinte Conservation) managed the technical work required for this plan, and in 2007 formed the Quinte Source Protection Committee to oversee the work.

The Source Protection Committee was required to complete three tasks, as outlined in the *Clean Water Act, 2006*:

a) Develop a Terms of Reference to identify what work needs to be done and who is responsible to complete that work (Approved 2009);

b) Compile an Assessment Report that brings together the science and technical information required to develop a Source Protection Plan;

c) Produce a Source Protection Plan that will outline measures necessary to reduce or eliminate the threats identified in the Assessment Report.

This Source Protection Plan includes polices that make use of implementation tools such as public education, municipal land use planning and by-laws, risk management plans and prohibition of certain activities. Monitoring requirements were provided to assist in evaluating the effectiveness of the policies. Implementing bodies include provincial ministries to review prescribed instruments and municipalities to administer risk management plans, prohibition and education and outreach, and update their official plans and zoning by-laws.

The Source Protection Committee consulted with municipalities, stakeholder groups and the public and ensured that the Source Protection Plan was developed through an open and transparent process. Information related to the work has been shared at public open houses, through publications and municipal council meetings, and is posted on the Internet at www.quintesourcewater.ca.

1.3 Participants in the Process

There have been many participants in the process including municipalities, provincial government agencies, community groups, businesses, and permanent and seasonal residents.

1.3.1. Municipalities

All or part of the municipalities' land area listed below fall within the Quinte Source Protection Region.

The Corporation of the County of Prince Edward
The Corporation of the City of Belleville
The City of Quinte West
The Corporation of the Municipality of Centre Hastings
The Townships of Tudor and Cashel
The Town of Deseronto
The Municipality of Marmora and Lake
The Municipality of Tweed
The Corporation of the Township of Madoc
The Township of Tyendinaga
The Township of Stone Mills
The Township of Stirling-Rawdon
The Township of North Frontenac
The Township of Central Frontenac

The Township of South Frontenac
The Corporation of the Township of Addington Highlands
The Town of Greater Napanee
The County of Frontenac
The Corporation of Loyalist Township
The County of Lennox and Addington
The County of Hastings

1.3.2. Provincial Government

There are a number of provincial ministries that are closely involved in water management:

- Ministry of the Environment;
- Ministry of Natural Resources;
- Ministry of Municipal Affairs and Housing; and
- Ministry of Agriculture, Food, and Rural Affairs.

Two local health units have also been involved: the Hastings and Prince Edward Counties Health Unit and Kingston Frontenac Lennox and Addington Public Health.

1.3.3. The Mohawks of the Bay of Quinte

The Tyendinaga Mohawk Territory is located within the Quinte Source Protection Region. Early in the process, a partnership between the Quinte Source Protection Authority and the Mohawks of the Bay of Quinte was formed, to monitor both surface and groundwater at several test sites and to provide several workshops on the Mohawk Tyendinaga Territory. The Mohawks of the Bay of Quinte are concerned about the high percentage of private wells that are contaminated. Two members of the Mohawks of the Bay of Quinte were appointed to the Committee.

1.3.4. Adjacent Source Protection Regions

The Quinte Region Source Protection Authority and Committee have coordinated their efforts with the three neighbouring source protection regions, including the Cataraqui, Mississippi – Rideau, and Trent Conservation Coalition. The intent is to provide a consistent level of information, wherever possible, for the benefit of residents and municipalities that fall into more than one Source Protection Area.

1.3.5 Interested Stakeholders and Non Governmental Organizations

There are many stakeholders and non-governmental organizations in the Quinte area. The agricultural community, tourism and recreation sector, lake and river associations, and the manufacturing sector are well represented and each of these sectors is represented on the Quinte Source Protection Committee. Quinte Conservation also has a long history of interaction with many stakeholder groups and these established relationships have benefited the source protection process.

1.3.6. Working Groups

Several working groups were formed to provide expertise in various sectors including:

- Municipal Planners
- Sewage/Septic
- Fuel/Home Heating Oil
- Agriculture
- Emergency Response and Drinking Water System Operators

1.4. Scope and Objectives of the Source Protection Plan

This Quinte Region Source Protection Plan was written to protect the sources of 11 municipal drinking water systems and sensitive groundwater areas referred to as Significant Groundwater Recharge Areas and Highly Vulnerable Aquifers. The Plan was based on the technical findings of the Assessment Report. The objectives of the Source Protection Plan, as defined by the *Clean Water Act, 2006* are:

1) To protect existing and future municipal drinking water sources in the source protection area; and,
2) To ensure that for every area identified in the Assessment Report, as an area where an activity is, or would be, a significant drinking water threat:
    i. the activity never becomes a significant drinking water threat; or
    ii. if the activity is occurring when the Source Protection Plan takes effect, the activity ceases to be a significant drinking water threat; or
    iii. for every area identified in the assessment report as an area where a condition that results from a past activity is a significant drinking water threat, the condition ceases to be a significant drinking water threat.

Insert Map 1-1

Chapter 2 Overview of Source Protection Process

Development of the Source Protection Plan was based on science and years of technical work. The main steps in the process were:

1) Formation of the Source Protection Committee;
2) Preparation of a Watershed Characterization Report;
3) Development of a Terms of Reference; and
4) Completion of an approved Assessment Report.

2.1. Source Protection Committee – Fall 2007

The Quinte Source Protection Committee was created in the fall of 2007 to oversee a science-based planning process to develop a Terms of Reference, an Assessment Report and a Source Protection Plan to protect municipal sources of drinking water in the Quinte Source Protection Region.

This Committee was formed as outlined in the *Clean Water Act*, 2006, according to Ontario Regulation 288/07. The Committee is comprised of 15 members representing various sector interests of the Quinte Region, plus the provincially appointed Chair. In addition, there are two seats for First Nations representatives (Mohawks of the Bay of Quinte) and non-voting liaison members including a representative of the Source Protection Authority, the Ministry of the Environment and the Health Units. The members are as listed in Table 2.1.

The Committee met regularly. These meetings were open to the public and the minutes posted on the website www.quintesourcewater.ca.

The Quinte Region Source Protection Committee was renewed in 2018-2019 to comply with Ontario Regulation 288/07.

Table 2.1: Quinte Region Source Protection Committee

Original Committee Membership		Renewed Committee Membership	
Member	**Sector**	**Member**	**Sector**
Max Christie	Chair	Max Christie	Chair
Angela Genereaux	Economic	Jack Alexander	Economic
Gary Fox	Economic	Gary Fox	Economic
Heather Lang	Economic	Heather Lang	Economic
Rahmathulla Marikkar	Economic	Sandy Latchford	Economic
Terry Shea	Economic	Bryon Keene	Economic
Todd Kring	The Mohawks of the Bay of Quinte	Vacant	The Mohawks of the Bay of Quinte
Curtis Maracle	The Mohawks of the Bay of Quinte	Curtis Maracle	The Mohawks of the Bay of Quinte
Clarence Zieman	Municipal	Ron Hamilton	Municipal
Garnet Thompson	Municipal	Garnet Thompson	Municipal
Jo-Anne Albert	Municipal	Jo-Anne Albert	Municipal
Ron Hamilton	Municipal	Ron Hamilton	Municipal
Sandy Latchford	Municipal	Ernie Margetson	Municipal
Doug Parker	Other Interests	Gillian Ward	Other Interests
Eric Bauer	Other Interests	Josh Powles	Other Interests
Mel Plewes	Other Interests	Mel Plewes	Other Interests
Phil Norton	Other Interests	Phil Norton	Other Interests
Terry Kennedy	Other Interests	Terry Kennedy	Other Interests
Roger Cole/Mike Kirby	Quinte Region Source Protection Authority Liaison	Mike Kirby	Quinte Region Source Protection Authority Liaison
Daniella Molnar/Wendy Lavender	Ministry of the Environment Liaison	Mary Wooding	Ministry of the Environment Liaison
Andrew Landy	Health Units Liaison	Andrew Landy	Health Units Liaison

2.2 Watershed Characterization – March 2008

The Watershed Characterization Report is a summary of the known information about the Quinte Region. Descriptions of the physical attributes, history as well as land and water issues are provided in this report.

The Quinte Source Protection Region, illustrated by Map 1.1, is located in Eastern Ontario and covers an area of approximately 6,200 square kilometers. The Region consists of the Moira River Watershed at 2,880 square kilometres, the Napanee Region comprising the Salmon and Napanee River watersheds at a combined area of 1,955 square kilometres, and the Prince Edward Region at 1,365 square kilometres. The Quinte Region is home to approximately 117,000 residents with the majority living in the southern portions of the watershed. The northern areas are rugged and form part of the Precambrian Shield covering approximately 50 percent of the Region. This northern region can be described as largely forested with many wetlands and small lakes and is sparsely populated. To the south of the Shield, the area is underlain by Paleozoic limestone bedrock with large areas of thin soil cover as well as some isolated areas of significant soil depth along the south western boundary of the Moira River watershed. In the Prince Edward Region, the landscape is dominated by thin soil over limestone bedrock, with some areas of topographic relief provided by glacial deposits and bedrock escarpments.

The Region has many significant surface water features which include the Napanee, Salmon, and Moira Rivers draining from the northern Precambrian Shield area into the Bay of Quinte (a connecting link to Lake Ontario) at the south. The Prince Edward Region is drained by a number of small drainage courses leading outward from inland plateaus towards either Lake Ontario or the Bay of Quinte. Surface water is an important resource in the Quinte Region providing supply to seven municipal drinking water systems (see Table 2.2).

Groundwater is also an important source of drinking water in the Quinte Region providing supply to approximately 50 percent of the residents. Of these residents, the majority are on private wells, with approximately three percent on municipal ground water systems as listed in Table 2.2. Groundwater is typically found in a shallow, unconfined fractured bedrock aquifer made up of either limestone or Precambrian rock. The records for approximately 22,000 wells report that 95 percent obtain supply from bedrock aquifers and the remaining five percent from overburden aquifers. Well yields are typically low but sufficient for meeting residential demand; some exceptions do occur with high yield wells found in areas of highly fractured bedrock. Examples are the wells providing municipal supply to the Villages of Madoc, Tweed, and Deloro.

Table 2.2: Municipal Drinking Water Systems

Municipality	Population Served	Type of System	Source
Great Lakes			
City of Belleville	40,000	Surface Water	Bay of Quinte
Town of Picton (including Village of Bloomfield)	6,500	Surface Water	Bay of Quinte
Town of Deseronto	1,700	Surface Water	Bay of Quinte
Village of Wellington (The Corporation of the County of Prince Edward)	1,750	Surface Water	Lake Ontario
Hamlet of Point Anne (City of Belleville)	60	Surface Water	Bay of Quinte
Inland Water			
Town of Napanee	8,500	Surface Water *	Napanee River
Hamlet of Ameliasburgh (The Corporation of the County of Prince Edward)	175	Surface Water	Roblin Lake
Ground Water			
Village of Madoc	1,250	Ground water	Precambrian Aquifer
Village of Tweed	1,560	Ground water	Precambrian Aquifer
Village of Deloro	160	Ground water	Precambrian Aquifer
Peats Point Subdivision (The Corporation of the County of Prince Edward)	50	Ground water	Limestone Aquifer

* Backup intake

2.3 The Terms of Reference – February 2009

The Terms of Reference was produced as a work plan to complete the Assessment Report and the Source Protection Plan for the Quinte Region. It defines the Region, outlines the municipal drinking water systems and describes in detail the scope of work that needs to be done. It also lists the Source Protection Committee members, the staff and municipalities involved.

This document provided the guiding principles and mission statement for completion of the technical work. The focus of the work was on the municipal drinking water systems; however the scientific knowledge was based on the entire watershed through completion of a comprehensive watershed characterization report and water budget. In addition to this work, technical studies specific to municipal drinking water systems were required to identify vulnerable areas and inventory potential drinking water threats.

This work was completed by the Quinte Conservation Authority and a budget including a timeline was provided to ensure completion in a timely and affordable manner.

2.4 The Assessment Report

The Assessment Report is comprised of three parts; the report, a map booklet and numerous supporting documents in the appendices. The report compiled available knowledge in the Quinte watershed related to the sources of drinking water and presented the findings of various technical studies undertaken by Quinte Conservation and others. The Appendix of this document includes Water Budget Reports, Intake and Well Head Studies for the municipal drinking water systems, and documentation outlining the consultation throughout the development of the report. A copy of the Assessment Report is appended to this document and can also be found at www.quintesourcewater.ca .

2.4.1 Water Budget

A water budget is a scientific method of accounting for the quantity of water and how it moves through a watershed. The water budget process, as prescribed by the Province of Ontario, is a tiered approach. Starting at a simple scale (time and spatial) the process became more complex at each level if there was a concern about the availability of water in a given area. These different levels are called: Conceptual, Tier 1, Tier 2 and Tier 3 Water Budgets. The purpose of moving from one step (tier) to another is to provide an increased understanding of the water budget process and to focus in on areas where water shortages may be occurring.

For the Quinte area there were three levels of water budget completed. The Conceptual Water Budget was completed for the entire region. The Tier 1 Water Budget looked at the entire region's individual subwatersheds. Based on this work there were two subwatersheds identified as containing municipal drinking water systems with potential hydrologic stress. More detailed work in the Tier 2 Water Budget for the Village of Madoc and Ameliasburgh's subcatchments did not confirm hydrologic stress and therefore further work (e.g. Tier 3) was not required.

2.4.2 Groundwater

A key component of the source protection planning process is protecting the groundwater resource within the Quinte Source Protection Region. The level of protection is directly related to how vulnerable the groundwater is to contamination. The three main types of vulnerable areas for groundwater that exist in the Quinte Source Protection Region are:

- Highly Vulnerable Aquifers;
- Significant Groundwater Recharge Areas; and
- Wellhead Protection Areas.

A brief summary of these vulnerable areas is provided below and detailed information is available in the Assessment Report.

Highly Vulnerable Aquifers

Due to shallow soil conditions, the entire Quinte area was identified and mapped as a highly vulnerable aquifer. This designation was a direct result of the ease with which a contaminant can move into the underlying fractured bedrock aquifer. Evidence of this was provided by monitoring a network of test wells and precipitation gauges that showed a rapid response of the water table to rainfall events.

Significant Groundwater Recharge Areas

Significant groundwater recharge areas are locations where high volumes of groundwater recharge can occur. These areas are spread throughout the region but are isolated to small deposits of sand and gravel associated with eskers and kame moraine formations.

Wellhead Protection Areas (WHPA)

Wellhead Protection Areas are zones around a municipal well where land use activities have the potential to affect the quality of water supplying the well. There are four locations within the Quinte Source Protection Region where municipal groundwater supply systems exist:

- Peats Point Subdivision (Prince Edward County) – 1 well
- Village of Deloro – 1 well
- Village of Tweed – 2 wells
- Village of Madoc – 2 wells

For each of these systems, Wellhead Protection Areas (WHPAs) were delineated by utilizing the methodology as prescribed by the *Clean Water Act, 2006* and Regulations. The four main zones include:

- WHPA A: 100 metre radius
- WHPA B: 2 year Time of Travel
- WHPA C: 5 year Time of Travel

- WHPA D: 25 year Time of Travel

All of these systems obtain water from aquifers located in fractured bedrock that are recharged by precipitation. However at some systems the wells are located near surface water features which can impact the quality of ground water. In these situations it is also necessary to delineate zones in the surface water that can contribute to the well. This zone is called the WHPA E (2 hour time of travel in the surface water body).

2.4.3 Surface Water

Intake protection zones are areas around a municipal drinking water intake where land use activities can potentially affect water quality. These zones can include both the surrounding surface water and land that is in close proximity to the intake. The zones are determined by a variety of factors such as the time it would take for any materials spilled in or near the water to flow to the water intake. The intake protection zone is delineated according to an established set of Technical Rules, determined by minimum distances from the intake and by scientific method. Intake protection zones were established around the following seven municipal drinking water systems:

- City of Belleville
- Hamlet of Point Anne
- Town of Deseronto
- Town of Napanee (backup intake)
- Town of Picton
- Village of Wellington
- Hamlet of Ameliasburgh

Three zones may be established around an intake. A brief summary of these vulnerable areas is provided below and detailed information is available in the Assessment Report. Each zone provides opportunity for the Source Protection Committee or municipality to apply different levels of protective measures on activities planned or existing within the zone. These zones are:

- **IPZ 1** – a defined radius of one kilometre around the intake, (except for river systems which follow different rules explained in the Assessment Report). Where an IPZ 1 intersects land it is limited to 120 metres from the shoreline. The IPZ 1 is considered to be the most vulnerable zone.

- **IPZ 2** – generally the area on land and within a surface water body where water may flow to the intake, typically within two hours. The two hour time of travel is based on the amount of time normally required to shut down a drinking water system if a spill occurs. Where the IPZ 2 abuts a land mass the zone also includes the land within 120 metres from the shoreline as well as any transport pathways (ditches or storm water systems).

- **IPZ 3** – the total contributing area to the intake. The zone does not extend more than 120 metres inland from a water body unless a transport pathway exists. Activities in this

area would generally present less risk to the municipal drinking water, but the zone is established as activities in this zone may impact water quality.

2.4.4 Existing Significant Drinking Water Threats

Following the identification of vulnerable areas, an inventory of drinking water threats was completed for the wellhead protection areas and intake protection zones. A drinking water threat is an activity or condition that adversely affects or has the potential to adversely affect the quality or quantity of water that is used as a source of drinking water. In some cases a threat may not actually be causing an impact to the drinking water but has the potential to do so when improperly managed or adequate safeguards are not in place. A significant drinking water threat is determined in reference to the circumstances associated with the threat and the vulnerability score of the zone in which the activity is occurring. Vulnerability is ranked between a score of two and ten and generally a vulnerability score of eight or greater is required for a significant threat to occur, with the exception of Dense Non-Aqueous Phase Liquids (DNAPLs) where they may be a significant threat in wellhead protection areas with a lower score.

The *Clean Water Act, 2006* prescribes the following 21 different activities that may be considered drinking water threats.

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. Ontario Regulation 385/08, Section 3.

Nineteen of the above threats are related to water quality and two are for water quantity (numbers 19 and 20). In the Quinte Region, the water budget activities did not result in the determination of water quantity threats, therefore the Source Protection Committee was not able to include water quantity policies. The nineteen water quality threats may be both chemical and pathogenic in nature and are further broken down into various scenarios, called circumstances, for different land use activities. These circumstances are listed in the Provincial Table of Circumstances (MOE, 2010); chemical threats and pathogen threats. The Tables of Circumstances are used to review the activity, and the vulnerability of the zone in which it occurs to determine if it is a significant, moderate or low drinking water threat.

For the Quinte Source Protection Region an inventory was completed in each of the vulnerable areas to enumerate the occurrence of significant threats. This inventory provides necessary information for the source protection planning process to rank the threats posed by the individual activities and identify where these threats may be occurring. The results of the significant threat inventory are summarized in Table 2.3. This inventory indicated the Handling and Storage of Fuel (furnace oil) and Onsite Septic Systems were the two most numerous threats.

Table 2.3 Existing Significant Drinking Water Threats in the Quinte Region

Activity or Prescribed Drinking Water Threat	Total*
Handling and Storage of Fuel	118
Septic Systems (small residential)	159
Livestock Grazing	36
Application of Agricultural Source Material	38
Application of Pesticide	30
Sewage (large septic and sewage infrastructure)	9
Storage of Agricultural Source Material	7
Handling and Storage of DNAPLs	5
Handling and Storage of Pesticide	0
Application of Non Agricultural Source Material	4
Road Salt Application	2
Handling and Storage of Non Agricultural Source Material	3
Former Waste Disposal sites (Conditions)	2
Application of Commercial fertilizer	13
Handling and Storage of Organic Solvents	1
Waste Disposal Sites	11
Issues Based Threat Assessment	**Total***
Septic Systems (small residential)	29
Farm-related threats(Agricultural Source Material & Grazing)	62

* Totals are the best estimates of the number of existing significant threats. More than one type of threat can take place on a parcel of land.

Chapter 3 Development of the Source Protection Plan

3.1. The Source Protection Plan

The primary purpose of the Source Protection Plan (the Plan) is to outline a set of policies developed to address existing and future drinking water threats. The threats were addressed through the use of tools set out in the *Clean Water Act, 2006.* These tools range from prohibition of an activity to education and outreach. Consultation was extensive throughout the development of the Plan with consideration given to the economic implications for those responsible for implementation and those affected by the policy (e.g. landowners). This work was carried out following a set of guidance documents and Regulations provided by the Ministry of the Environment.

3.2 Methodology

The Quinte Source Protection Committee undertook development of the Source Protection Plan using the following methodology:

1) Review the goals and Mission Statement of the Source Protection Committee which is as follows:

   "*To develop a locally shaped comprehensive plan for the sustainable protection of public drinking water sources in the Quinte Source Protection Region that is both science based and reflective of local knowledge and experience and that will serve to protect public drinking water sources*."

2) Review the science of the Quinte Region Updated Assessment Report, 2011 to prioritize the number of and location of significant drinking water threats;
3) Complete background research on drinking water threat activities and any existing information including regulations that are relevant to the management of the threat;
4) Consider the tools available to assist in how best to address the drinking water threat;
5) Establish working groups to discuss policy concepts and how to deal with drinking water threats;
6) Establish draft policies specifying how drinking water threats will be addressed, who will be responsible for taking action, setting timelines for actions required and reporting requirements for monitoring effectiveness;
7) Pre-consult with the bodies responsible for implementing the policies to receive input and feedback. The implementers were asked to comment on ease of understanding, implementation dates, capacity to execute the policy and any potential barriers to implementation;
8) Revise draft policies based on input received during pre-consultation and ensure compliance with relevant regulations;
9) Prepare a draft Source Protection Plan;
10) Consult with the public on the draft Source Protection Plan;
11) Revise draft Source Protection Plan based on comments received;

12) Consult on the Proposed Source Protection Plan;
13) Prepare summary of comments received; and
14) Submit the Proposed Source Protection Plan to the Minister of the Environment.

Development of the Plan began in the spring of 2011 with notification to participating municipalities, affected landowners and stakeholders. Draft policies were then submitted to implementing bodies in October of 2011 for review and comment. Following the receipt of comments, revisions to the draft policies were made and a draft version of the Source Protection Plan was prepared for public consultation in April of 2012. From this process a total of 61 policies were developed to address all significant drinking water threats as well as some moderate and low threats. Ministry of the Environment comments received in 2013 resulted in the addition of two new policies to bring the total to 63. More information on the public consultation process is provided in Chapter 6.

3.3 Working Groups

Working groups were established for the most prevalent threats, providing valuable input during policy development and an understanding of the nature of the activity. A total of five groups were formed:

Municipal Planning – municipal planners, consulting planners, representatives of the Ministry of Municipal Affairs and Housing, Ministry of Environment planners;

Emergency Response and Municipal Water Treatment Plant Operators – representatives from municipalities and the Ontario Clean Water Agency;

Agriculture – members of the Ontario Federation of Agriculture, Hastings Federation of Agriculture, Prince Edward Federation of Agriculture, Ontario Soil and Crop Improvement Association , local land owners, and representatives of the Ontario Ministry of Agriculture, Food and Rural Affairs;

Septic Systems – municipal building officials, representatives of Health Units and sewage system installers;

Fuel Storage/Systems – home heating oil contractors, fuel delivery agents and insurance industry representatives.

Groups met on several occasions, as described in Chapter 6, to review the threats associated with the drinking water systems in the Quinte Source Protection Region and discussed options for addressing the threat. More information is provided in the Explanatory Document.

3.4 Tools

When developing policies to address the various drinking water threats, the Source Protection Committee chose from a variety of tools as specified in the *Clean Water Act, 2006*. These tools can generally be divided into non regulatory and regulatory tools. The non regulatory tools are considered to be a soft approach; an example is education and outreach to inform the public about the importance of protecting drinking water. Conversely a regulatory, or firm approach, would be to prohibit an activity using the powers of the *Clean Water Act, 2006*.

When choosing the most appropriate tool, the Source Protection Committee had to carefully consider which combinations of tools would work best in local circumstances. An outline of the available tools is summarized below.

Non Regulatory Tools (Soft)

Education and Outreach: This can inform landowners and others about the location of vulnerable areas around municipal drinking water supplies and the impact that specific activities may have on the drinking water supply. Examples of education and outreach are: promotion of best management practices, flyer deliveries, newspaper articles, publications, workshops, special events, and signs. Education and outreach can enhance the effectiveness of other approaches.

Stewardship Programs/Incentives: These promote the implementation of best management practices through provision of technical assistance and/or funding to landowners. This encourages landowners to make changes to their properties and practices so that they are less likely to impact drinking water sources. Examples of incentives are: stewardship grants, low interest loans, discount coupons, reduced fees for professional or municipal services, and public recognition of good work.

Specify Action: This is used when the available tools do not address a significant threat adequately or there are actions that can be taken to promote the protection of drinking water and achieve the objectives of the Source Protection Plan. Examples of specify action tools include municipalities enacting by-laws under the *Municipal Act, 2001* or the various ministries utilizing their respective powers under the Acts they administer.

Best Management Practices: These are generally-accepted, informally-standardized techniques, methods or processes that have been proven over time to accomplish given tasks.

Pilot Projects and Research: These are used to obtain more information about addressing a drinking water threat.

Municipal Operations / Infrastructure: Municipalities can demonstrate leadership by reducing specific risks to a source of drinking water (e.g. preparing an emergency response plan for spills).

Regulatory Tools (Hard)

Land Use Planning: Municipalities have the authority under the *Planning Act* to regulate development to protect sources of municipal drinking water. Zoning by-laws and official plans could be changed to prohibit or restrict new development in vulnerable areas that would create new significant threats. (e.g. no new gas stations near municipal wells).

Prescribed instruments: These are provincially issued documents with specific rules that govern activities on a property. They often contain rules to protect human health and the environment and may include: licenses, permits, approvals, orders or other legal provincial instruments. These documents could be examined and modified or revoked (e.g. existing certificate of approval for a sewage treatment plant may require more stringent effluent quality limits).

Prohibition: Section 57 of the *Clean Water Act, 2006* allows for prohibition of an activity where it is or would be a significant threat. This is a very strong approach and where ever possible it is preferable to use other tools to manage or reduce the risk created by an existing threat. Prohibition cannot be used for waste disposal and sewage related activities as these activities are already regulated by a Prescribed Instrument or by the Ontario Building Code.

Risk Management Plans: These are site specific documents that are permitted under Section 58 of the *Clean Water Act*, *2006*. A risk management plan is an agreement negotiated between the landowner and the risk management official that sets out the safety or protective measures and actions required to ensure that a significant threat activity is sufficiently managed. They are intended to be used on a site specific basis to address significant drinking water threat activities, where the threat is not managed by an existing regulatory and/or legislative process or instrument.

Restricted Land Use: This is used when Source Protection Plans rely on a Section 57 of the *Clean Water Act, 2006* prohibition or a Section 58 risk management plan, a Section 59 restricted land use may be used to designate vulnerable areas where these policies apply. This tool requires municipalities to develop an administrative process to ensure that (during the planning and building permit applications process) activities that are prohibited or require risk management plans are identified and the adequate steps are taken to comply with the Source Protection Plan policies. It can be seen as an early warning or ‘red flag’ system to avoid inadvertently approving applications or permits for activities that do not comply with the Source Protection Plan policies.

Land Securement: Under the *Clean Water Act, 2006*, municipalities or source protection authorities can acquire land through purchase, lease, or expropriation to protect a source of drinking water.

Monitoring: Requirements specified to allow assessment of the effectiveness of policies.

Chapter 4 Implementing the Plan

4.1 General Responsibilities

The Quinte Source Protection Plan (the Plan) focuses primarily on addressing significant threats to municipal drinking water systems. As a result the municipalities with Intake Protection Zones (IPZs) or Wellhead Protection Areas (WHPAs) are named as implementers of many policies. As well, provincial ministries that issue approvals related to water are also named as implementers in many policies. For significant threat policies the implementers must comply with the policies once the Source Protection Plan is approved by the Minister of the Environment and the information notice has been posted on Ontario's Environmental Registry www.ebr.gov.on.ca.

The Plan also includes polices that address moderate and low drinking water threats. These polices involve all municipalities in the Quinte Region including those without IPZs and WHPAs. Various ministries are also named as implementers of moderate and low drinking water threat policies. The implementers must have regard for these policies.

4.1.1 Municipalities with IPZs or WHPAs

Municipalities are named as implementers in many policies that address significant drinking water threats and are responsible to:

1) Administer Part IV of the *Clean Water Act, 2006* (Section 57 – prohibition, Section 58 – risk management plans and Section 59 – restricted land use). The municipality must:
    a) Assign or appoint a qualified risk management official and a qualified risk management inspector to administer and enforce policies using Part IV powers.
    b) Identify areas where activities are prohibited or require risk management plans as set out in the restricted land use policies.
2) Prohibit or control drinking water threats using planning tools under the *Planning Act* (e.g. Official Plans, Zoning Bylaws and Site Plan Control). The municipality shall amend Zoning Bylaws and Official Plans no later than at the time of their next planning review cycle required by Section 26 of the *Planning Act* to conform with applicable significant threat policies and identify designated vulnerable areas.
3) Other Approaches
   Municipalities are named as implementers in other policies that require specific action. These policies may require the municipality to write and enforce explicit bylaws. An example may be to require the decommissioning of septic systems and connection to a municipal sewage collection system if available.
4) Education and Outreach
    a) The municipality is encouraged to partner with the Source Protection Authority, other municipalities, provincial ministries, the Health Units and other stakeholder groups when developing education and outreach programs as required in the Plan.

b) The municipality is required to ensure that the education and outreach program is delivered to those affected by any significant threat policies.

5) Monitoring Requirements

Monitoring and reporting to the Source Protection Authority regarding policy implementation and other critical information that measures the success of the policy in adequately addressing the threat is required.

4.1.2. The Risk Management Official

Risk management officials, qualified under the *Clean Water Act, 2006*, have an important role in the administration of policies that use Part IV powers under the Act. The Part IV powers include prohibition (Section 57), requirement for risk management plans (Section 58) and restricted land use (Section 59). Once appointed by the municipality, the risk management official is responsible for:

1) Working with landowners to establish risk management plans when required for activities identified in the Source Protection Plan as per Section 58 of the *Clean Water Act, 2006*;
2) Ensuring that activities that are prohibited under Section 57 of the *Clean Water Act, 2006* are not conducted or undertaken;
3) Notifying a proponent of any planning application, proposal or building permit application where a proposed activity is prohibited or requires a risk management plan. Section 59 of the *Clean Water Act, 2006* is used as a flagging tool to identify areas where Section 57 or 58 policies apply (these policies are listed in Appendix C, List I); and
4) Submitting an annual report outlining the activities and progress related to Part IV policies to the Source Protection Authority.

4.1.3. The Risk Management Inspector

Risk management inspectors, qualified under the *Clean Water Act, 2006*, have an important role in the administration of policies that use Part IV powers under the Act. Once appointed by the municipality, the risk management inspector is responsible for:

1) Ensuring that risk management plans, once established, are being followed by carrying out inspections of properties with risk management plans;
2) Ensuring that activities that are prohibited under Section 57 of the *Clean Water Act, 2006* are not being carried out; and
3) Submitting an annual report outlining the activities and progress related to Part IV policies to the Source Protection Authority.

4.1.4 Provincial Ministries

The provincial ministries named as implementers in the Plan are responsible for:

1) Reviewing, amending or developing instruments to manage existing and future threats where identified in the Plan (See Appendix C, Lists C and D);
2) Monitoring and reporting to the Source Protection Authority how the policies are being implemented; and

3) Participating with the Source Protection Authority, municipalities, the Health Units and other stakeholder groups when developing education and outreach programs.

4.1.5. The Quinte Source Protection Authority

The Quinte Source Protection Authority is responsible for:

1) Assisting the municipalities with the understanding and implementation of the Plan;
2) Collaborating in the development of the education and outreach program as required; and
3) Reporting to the Ministry of the Environment on the implementation and effectiveness of the Plan.

4.2 Municipal Drinking Water Systems

Prince Edward County Drinking Water Systems

4.2.1 Peats Point – Well (groundwater influenced by surface water)

The Peats Point water system is within a small residential development servicing approximately 50 people, in the northern part of Prince Edward County. The community is located on a point of land extending into the Bay of Quinte that is approximately 800 metres long by 300 metres wide. Water supply to the community is provided by a single well located on the south side of the point at approximately 40 metres from the Bay. Land use in the area includes residential, open space, and agricultural land to the south. Not all of the residents within the wellhead protection area are serviced by this well. The well is influenced by surface water and therefore a vulnerable zone related to surface water was mapped in addition to the regular wellhead protection zones (WHPA E).

Through development of the Assessment Report, a threats assessment was completed resulting in a list of activities that are considered to be threats to this drinking water system and identifying areas where these threats may occur as shown on map 4-1. The circumstances under which drinking water threats would be considered significant, moderate, or low were used to create an inventory of existing significant threats. Policies were developed to eliminate and/or manage existing and future drinking water threats. Table 4.1 outlines which policies apply to the Peats Point drinking water system and identifies who is responsible to implement the policies.

Table 4.1 Applicable Policies for Peats Point Wellhead Protection Areas

		WHPA A (10)	WHPA B (10)	WHPA C (8)	WHPA D (6)	WHPA E (8.1)
General	G-1	●	●	●	●	●
	G-2	●	●	●		●
	G-3	●	●	●	●	●
	G-4	●●	●●	●●		
	G-5	●	●	●	●	
	G-6		●	●	●	
	G-7	●	●	●	●	●
	G-8	●●	●●			●●
	G-9	●●	●●	●●		●●
Waste Disposal	1-1-F	●	●	●		
	1-2-E	●	●	●		
	1-3-F	●	●	●		
	1-4-E					
	1-5-E					
	1-6-E&F	●	●	●	●	●
	1-7-E&F	●	●			
	1-8-E&F	●	●			
Sewage	2-1-E&F	●	●			
	2-2-E	●	●			
	2-3-F	●	●			
	2-4-E&F	●	●			
	2-5-E					
	2-6-F	●	●			
	2-7-E					
	2-8-F	●	●			●
Agriculture	3-1-E&F	●				
	3-2-E&F		●			●
	3-3-E&F	●	●			●
	3-4-E&F	●	●			●
Aquaculture	5-1-F					●
Commercial Fertilizer Application	8-1-E&F	●				
	8-2-E&F		●			
	8-3-E&F	●	●			
Commercial Fertilizer Storage	9-1-F	●				
	9-2-E&F	●	●			
	9-3-E&F	●	●			
Pesticides Application	10-1-E&F	●				
	10-2-E&F		●			●
	10-3-E&F	●	●			●
Pesticides Storage	11-1-E&F	●				
	11-2-E&F		●			
	11-3-E&F	●	●			
Road Salt Application	12-1-E&F	●	●	●	●	
	12-2-E&F	●	●	●	●	
	12-3-E&F					
	12-4-E&F					
Road Salt Storage	13-1-E&F	●	●			
	13-2-E&F	●	●			
Snow Storage	14-1-E&F	●	●			
	14-2-E&F	●	●			
Fuel	15-1-F	●	●			
	15-2-E&F	●				
	15-3-E	●	●			
	15-4-E	●				
	15-5-E&F	●	●			
	15-6-E	●	●			
DNAPL	16-1-E&F	●				
	16-2-E&F		●	●		
	16-3-E&F	●	●	●		
Organic Solvents	17-1-F	●	●			
	17-2-E	●	●			
	17-3-E&F	●	●			
Airplane De-icing	18-1-F	●	●			

vulnerability scores shown in brackets

● - Municipality responsible for implementation

● - Other responsible for implementation

Insert Map 4-1

4.2.2 Hamlet of Ameliasburgh – Intake

The Hamlet of Ameliasburgh is located on the north shore of Roblin Lake in the County of Prince Edward. The drinking water system is situated on the northwest shore of Roblin Lake and services 175 people. The treatment plant services half of the Roblin Lake community. There are 82 additional parcels around the lake that are un-serviced, obtaining water from either private wells or directly from the lake. Roblin Lake is an inland lake that has a surface area of one square kilometer and a total contributing watershed area of approximately four square kilometres.

Through development of the Assessment Report, a threats assessment was completed resulting in a list of activities considered to be threats to this drinking water system and identifying areas where these threats may occur as shown on map 4-2. The circumstances under which drinking water threats would be considered significant, moderate, or low were used to create an inventory of existing significant threats. Policies were developed to eliminate and/or manage existing and future drinking water threats. Table 4.2 outlines which policies apply to the Ameliasburgh drinking water system and identifies who is responsible to implement the policies.

Table 4.2 Applicable Policies for Ameliasburgh Intake Protection Zones

		IPZ-1 (10)	IPZ-2 (8)			
General	G-1	●	●			
	G-2	●	●			
	G-3	●	●			
	G-4					
	G-5					
	G-6					
	G-7	●	●			
	G-8	● ●	● ●			
	G-9	● ●	● ●			
Waste Disposal	1-1-F	●	●			
	1-2-E	●	●			
	1-3-F	●				
	1-4-E					
	1-5-E					
	1-6-E&F	●	●			
	1-7-E&F	●				
	1-8-E&F	●				
Sewage	2-1-E&F	●				
	2-2-E	●				
	2-3-F	●				
	2-4-E&F	●				
	2-5-E					
	2-6-F	●				
	2-7-E					
	2-8-F	●	●			
Agriculture	3-1-E&F					
	3-2-E&F	●	●			
	3-3-E&F	●	●			
	3-4-E&F	●	●			
Aquaculture	5-1-F	●	●			
Commercial Fertilizer Application	8-1-E&F					
	8-2-E&F	●				
	8-3-E&F	●				
Commercial Fertilizer Storage	9-1-F	●				
	9-2-E&F	●				
	9-3-E&F	●				
Pesticides Application	10-1-E&F					
	10-2-E&F	●				
	10-3-E&F	●				
Pesticides Storage	11-1-E&F	●				
	11-2-E&F					
	11-3-E&F	●				
Road Salt Application	12-1-E&F	●	●			
	12-2-E&F	●	●			
	12-3-E&F					
	12-4-E&F					
Road Salt Storage	13-1-E&F	●				
	13-2-E&F	●				
Snow Storage	14-1-E&F	●				
	14-2-E&F	●				
Fuel	15-1-F	●				
	15-2-E&F					
	15-3-E	●				
	15-4-E					
	15-5-E&F	●				
	15-6-E	●				
DNAPL	16-1-E&F					
	16-2-E&F					
	16-3-E&F					
Organic Solvents	17-1-F	●				
	17-2-E	●				
	17-3-E&F	●				
Airplane De-icing	18-1-F	●				

Vulnerability scores shown in brackets

● - Municipality responsible for implementation

● - Other responsible for implementation

Insert Map 4-2

4.2.3 Town of Picton – Two Intakes

The Town of Picton is situated on the east side of Prince Edward County on the Bay of Quinte. The drinking water system services 6,500 people in Picton and the Village of Bloomfield. Water is drawn from Picton Bay in the Bay of Quinte by one of two intake pipes. The north intake is not currently used but acts as a back-up should something happen to the south intake.

Through development of the Assessment Report, a threats assessment was completed resulting in a list of activities and conditions considered to be threats to this drinking water system and identifying areas where these threats may occur as shown on map 4-3. The circumstances under which drinking water threats would be considered significant, moderate, or low were used to create an inventory of existing significant threats. Policies were developed to eliminate and/or manage existing and future drinking water threats. Table 4.3 outlines which policies apply to the Picton drinking water system and identifies who is responsible to implement the policies.

The intake protection zone 2 for the Town of Picton was amended to include development that occurred on the landscape following the approval of the original intake protection zone 2. The amended zones were approved on September 11, 2019, which changes the effective date for policies relating to Picton's intake protection zone 2; therefore the effective date for these policies (i.e. the timeframe for policy implementation) is from September 16, 2019, when the amended Quinte Region Source Protection Plan came into effect.

Table 4.3 Applicable Policies for Picton Intake Protection Zones

		IPZ 1 (10)	IPZ 2 (9)	IPZ 3a (8)	IPZ 3b (6)	
General	G-1	●	●	●	●	
	G-2	●	●	●		
	G-3	●	●	●	●	
	G-4					
	G-5					
	G-6					
	G-7	●	●	●	●	
	G-8	● ●	● ●	● ●		
	G-9	● ●	● ●	● ●		
Waste Disposal	1-1-F	●	●			
	1-2-E	●	●			
	1-3-F	●	●			
	1-4-E		●			
	1-5-E		●			
	1-6-E&F	●	●	●		
	1-7-E&F	●	●			
	1-8-E&F	●	●			
Sewage	2-1-E&F	●				
	2-2-E	●				
	2-3-F	●				
	2-4-E&F	●				
	2-5-E	●	●	●		
	2-6-F	●	●			
	2-7-E	●	●	●		
	2-8-F	●	●	●		
Agriculture	3-1-E&F					
	3-2-E&F	●	●			
	3-3-E&F	●	●			
	3-4-E&F	●	●			
Aquaculture	5-1-F	●	●			
Commercial Fertilizer Application	8-1-E&F					
	8-2-E&F	●	●			
	8-3-E&F	●	●			
Commercial Fertilizer Storage	9-1-F	●				
	9-2-E&F	●				
	9-3-E&F	●				
Pesticides Application	10-1-E&F					
	10-2-E&F	●	●			
	10-3-E&F	●	●			
Pesticides Storage	11-1-E&F	●				
	11-2-E&F		●			
	11-3-E&F	●	●			
Road Salt Application	12-1-E&F	●	●			
	12-2-E&F	●	●			
	12-3-E&F	●				
	12-4-E&F	●				
Road Salt Storage	13-1-E&F	●	●			
	13-2-E&F	●	●			
Snow Storage	14-1-E&F	●	●			
	14-2-E&F	●	●			
Fuel	15-1-F	●				
	15-2-E&F					
	15-3-E	●				
	15-4-E					
	15-5-E&F	●				
	15-6-E	●				
DNAPL	16-1-E&F					
	16-2-E&F					
	16-3-E&F					
Organic Solvents	17-1-F	●				
	17-2-E	●				
	17-3-E&F	●				
Airplane De-icing	18-1-F	●	●			

Vulnerability scores shown in brackets

● - Municipality responsible for implementation

● - Other responsible for implementation

Insert Map 4-3

4.2.4 Wellington – Intake

The Village of Wellington is located in Prince Edward County along the north shore of Lake Ontario (see map 4-4). The drinking water system draws water from Lake Ontario from an intake located about 1,500 metres offshore in 8.5 metre depth of water. The Plant services approximately 1,750 people. The Village is also serviced with municipal sewage treatment. Land use around the intake is a mixture of predominantly agricultural and residential uses.

Lake Ontario provides a good source of drinking water to the Village of Wellington. According to the technical rules under the *Clean Water Act, 2006* this intake is classified as a Type A Intake (Great Lakes). Because this is a Great Lake system, the vulnerability scores for the Intake Protection Zones 1 and 2 are low resulting in no significant threats. Therefore policies for significant threats do not apply to the Wellington area.

Insert Map 4-4

Municipality of Marmora and Lake

4.2.5 Village of Deloro – Well

The Village of Deloro is a small community located north of Highway 7 on the fringe of the Precambrian Shield. The community, comprised of approximately 180 people, grew around the adjacent Deloro mine site (presently under remediation) where gold mines were originally developed and the property was later used for the processing of various ores. The community is serviced by water and sewer, with current water supply obtained from a single well which is operated by the Municipality of Marmora and Lake. This well is located at the southwestern end of the Village adjacent to residential and marginal agricultural lands. There is minimal commercial activity in the Village and the former Deloro mine site is to the east.

Through development of the Assessment Report, a threats assessment was completed resulting in a list of activities considered to be threats to this drinking water system and identifying areas where these threats may occur as shown on map 4-5. The circumstances under which drinking water threats would be considered significant, moderate, or low were used to create an inventory of existing significant threats. Policies were developed to eliminate and/or manage existing and future drinking water threats. Table 4.4 outlines which policies apply to the Deloro drinking water system and identifies who is responsible to implement the policies.

Table 4.4 Applicable Policies for Deloro Wellhead Protection Areas

		WHPA A (10)	WHPA B (10)	WHPA C (8)	WHPA D (6)
General	G-1	●	●	●	●
	G-2	●	●	●	
	G-3	●	●	●	●
	G-4	●●	●●	●●	
	G-5	●	●	●	●
	G-6		●	●	●
	G-7	●	●	●	●
	G-8	●●	●●		
	G-9	●●	●●	●●	
Waste Disposal	1-1-F	●	●	●	
	1-2-E	●	●	●	
	1-3-F	●	●	●	
	1-4-E				
	1-5-E				
	1-6-E&F	●	●	●	●
	1-7-E&F	●	●		
	1-8-E&F	●	●		
Sewage	2-1-E&F	●	●		
	2-2-E	●	●		
	2-3-F	●	●		
	2-4-E&F	●	●		
	2-5-E	●	●		
	2-6-F	●	●		
	2-7-E	●	●		
	2-8-F	●	●		
Agriculture	3-1-E&F	●			
	3-2-E&F		●		
	3-3-E&F	●	●		
	3-4-E&F	●	●		
Aquaculture	5-1-F				
Commercial Fertilizer Application	8-1-E&F	●			
	8-2-E&F		●		
	8-3-E&F	●	●		
Commercial Fertilizer Storage	9-1-F	●			
	9-2-E&F	●	●		
	9-3-E&F	●	●		
Pesticides Application	10-1-E&F	●			
	10-2-E&F		●		
	10-3-E&F	●	●		
Pesticides Storage	11-1-E&F	●			
	11-2-E&F		●		
	11-3-E&F	●	●		
Road Salt Application	12-1-E&F	●	●	●	●
	12-2-E&F	●	●	●	●
	12-3-E&F				
	12-4-E&F				
Road Salt Storage	13-1-E&F	●	●		
	13-2-E&F	●	●		
Snow Storage	14-1-E&F	●	●		
	14-2-E&F	●	●		
Fuel	15-1-F	●	●		
	15-2-E&F	●			
	15-3-E	●	●		
	15-4-E	●			
	15-5-E&F	●	●		
	15-6-E	●	●		
DNAPL	16-1-E&F	●			
	16-2-E&F		●	●	
	16-3-E&F	●	●	●	
Organic Solvents	17-1-F	●	●		
	17-2-E	●	●		
	17-3-E&F	●	●		
Airplane De-icing	18-1-F	●	●		

vulnerability scores shown in brackets

● - Municipality responsible for implementation

● - Other responsible for implementation

Insert Map 4-5

Municipality of Tweed

4.2.6 Village of Tweed – Two Wells

The Village of Tweed is a community of approximately 1,500 people located on the southern fringe of the Precambrian Shield along the western shore of Stoco Lake. The land use around the Village is a mixture of residential, commercial and open space with some areas of industrial land. Outside of the Village, particularly to the west, the land use is primarily agricultural and undeveloped rural land. Water supply to the Village is provided by two wells and sewage is collected and treated in a municipal sewage treatment facility. The two wells are located on the western edge of the community and are referred to as Well # 1 and Well # 3. In 2021, due to rising levels of nitrates in the raw water for the drinking water system, a nitrate issue was identified and an issues contributing area delineated in addition to the other wellhead protection areas A-D.

Through development of the Assessment Report, a threats assessment was completed resulting in a list of activities considered to be threats to this drinking water system and identifying areas where these threats may occur as shown on map 4-6. The circumstances under which drinking water threats would be considered significant, moderate, or low were used to create an inventory of existing significant threats. Policies were developed to eliminate and/or manage existing and future drinking water threats. Table 4.5 outlines which policies apply to the Tweed drinking water system and identifies who is responsible to implement the policies.

Table 4.5 Applicable Policies for Tweed Wellhead Protection Areas

		WHPA A (10)	WHPA B (10)	WHPA C (8)	WHPA D (6)	ICA
General	G-1	●	●	●	●	●
	G-2	●	●	●		●
	G-3	●	●	●	●	●
	G-4	●●	●●	●●		
	G-5	●	●	●	●	●
	G-6		●	●	●	●
	G-7	●	●	●	●	●
	G-8	●●	●●			
	G-9	●●	●●	●●		
Waste Disposal	1-1-F	●	●	●		●
	1-2-E	●	●	●		
	1-3-F	●	●	●		●
	1-4-E					
	1-5-E					
	1-6-E&F	●	●	●	●	●
	1-7-E&F	●	●			●
	1-8-E&F	●	●			●
Sewage	2-1-E&F	●	●			●
	2-2-E	●	●			●
	2-3-F	●	●			●
	2-4-E&F	●	●			●
	2-5-E	●	●			●
	2-6-F	●	●			●
	2-7-E	●	●			●
	2-8-F	●	●			●
Agriculture	3-1-E&F	●				
	3-2-E&F		●			●
	3-3-E&F	●	●			●
	3-4-E&F	●	●			●
Aquaculture	5-1-F					
Commercial Fertilizer Application	8-1-E&F	●				
	8-2-E&F		●			●
	8-3-E&F	●	●			●
Commercial Fertilizer Storage	9-1-F	●				
	9-2-E&F	●	●			●
	9-3-E&F	●	●			●
Pesticides Application	10-1-E&F	●				
	10-2-E&F		●			
	10-3-E&F	●	●			
Pesticides Storage	11-1-E&F	●				
	11-2-E&F		●			
	11-3-E&F	●	●			
Road Salt Application	12-1-E&F	●	●	●	●	
	12-2-E&F	●	●	●	●	
	12-3-E&F					
	12-4-E&F					
Road Salt Storage	13-1-E&F	●	●			
	13-2-E&F	●	●			
Snow Storage	14-1-E&F	●	●			●
	14-2-E&F	●	●			●
Fuel	15-1-F	●	●			
	15-2-E&F	●				
	15-3-E	●	●			
	15-4-E	●				
	15-5-E&F	●	●			
	15-6-E	●	●			
DNAPL	16-1-E&F	●				
	16-2-E&F		●	●		
	16-3-E&F	●	●	●		
Organic Solvents	17-1-F	●	●			
	17-2-E	●	●			
	17-3-E&F	●	●			
Airplane De-icing	18-1-F	●	●			

ICA = Issues Contributing Area vulnerability scores shown in brackets

● - Municipality responsible for implementation

● - Other responsible for implementation

Insert Map 4-6

Municipality of Centre Hastings and Township of Madoc

4.2.7 Village of Madoc – Two Wells (groundwater influenced by surface water)

The Village of Madoc, a community of approximately 1,500 people, is located in the northern portion of the Municipality of Centre Hastings along the southern fringe of the Canadian Shield. Land use is a mixture of commercial, residential, open space and industrial. Beyond the Village limits, land use is primarily agricultural and undeveloped land mixed with commercial, residential, and industrial with active mining operations. Water supply to the Village is provided by two wells on the west side of the Village with sewage treatment by municipal sewage lagoons at the south end of the community. The wells are influenced by surface water from Deer and Madoc Creeks and so related water quality issues from these sources were identified. Therefore vulnerable zones related to surface water were mapped in addition to the regular wellhead protection zones (WHPA E, F and Issues Contributing Area).

Due to inadequate water supply and naturally- occurring water quality problems from one of the original wells used to supply drinking water, the Municipality of Centre Hastings installed a new well in 2016. The technical work associated with the new well was approved on September 11, 2019 which changes the effective date for policies relating to the Madoc wellhead protection areas A-D. Therefore the effective date for these policies (i.e. the timeframe for policy implementation) is from September 16, 2019, when the amended Quinte Region Source Protection Plan came into effect.

Through development of the Assessment Report, a threats assessment was completed resulting in a list of activities considered to be threats to this drinking water system and identifying areas where these threats may occur as shown on map 4-7. The circumstances under which drinking water threats would be considered significant, moderate, or low were used to create an inventory of existing significant threats. Policies were developed to eliminate and/or manage existing and future drinking water threats. Table 4.6 outlines which policies apply to the Madoc drinking water system and identifies who is responsible to implement the policies.

As the vulnerable areas for the Madoc drinking water system extend outside the municipal boundary and into the neighbouring municipality to the north (Madoc Township) both municipalities will be responsible for implementing policies related to this drinking water system within their respective jurisdictions.

Table 4.6 Applicable Policies for Madoc Wellhead Protection Areas*

		WHPA A (10)	WHPA B (10)	WHPA C (8)	WHPA D (6)	WHPA E (8.1)	ICA**
General	G-1	●	●	●	●	●	●
	G-2	●	●	●		●	●
	G-3	●	●	●	●	●	●
	G-4	●●	●●	●●			
	G-5	●	●	●	●		
	G-6		●	●	●		
	G-7	●	●	●	●	●	
	G-8	●●	●●			●●	
	G-9	●●	●●	●●		●●	
Waste Disposal	1-1-F	●	●	●			
	1-2-E	●	●	●			
	1-3-F	●	●	●			
	1-4-E						
	1-5-E						
	1-6-E&F	●	●	●	●	●	●
	1-7-E&F	●	●				
	1-8-E&F	●	●				
Sewage	2-1-E&F	●	●				●
	2-2-E	●	●				●
	2-3-F	●	●				●
	2-4-E&F	●	●				●
	2-5-E	●	●				
	2-6-F	●	●				●
	2-7-E	●	●				●
	2-8-F	●	●			●	●
Agriculture	3-1-E&F	●					
	3-2-E&F		●			●	●
	3-3-E&F	●	●			●	●
	3-4-E&F	●	●			●	●
Aquaculture	5-1-F					●	
Commercial Fertilizer Application	8-1-E&F	●					
	8-2-E&F		●				
	8-3-E&F	●	●				
Commercial Fertilizer Storage	9-1-F	●					
	9-2-E&F	●	●				
	9-3-E&F	●	●				
Pesticides Application	10-1-E&F	●					
	10-2-E&F		●			●	
	10-3-E&F	●	●			●	
Pesticides Storage	11-1-E&F	●					
	11-2-E&F		●				
	11-3-E&F	●	●				
Road Salt Application	12-1-E&F	●	●	●	●		
	12-2-E&F	●	●	●	●		
	12-3-E&F						
	12-4-E&F						
Road Salt Storage	13-1-E&F	●	●				
	13-2-E&F	●	●				
Snow Storage	14-1-E&F	●	●				
	14-2-E&F	●	●				
Fuel	15-1-F	●	●				
	15-2-E&F	●					
	15-3-E	●	●				
	15-4-E	●					
	15-5-E&F	●	●				
	15-6-E	●	●				
DNAPL	16-1-E&F	●					
	16-2-E&F		●	●			
	16-3-E&F	●	●	●			
Organic Solvents	17-1-F	●	●				
	17-2-E	●	●				
	17-3-E&F	●	●				
Airplane De-icing	18-1-F	●	●				

vulnerability scores shown in brackets

● - Municipality responsible for implementation

● - Other responsible for implementation

*Areas cross municipal boundaries therefore WHPAs B-E apply to both the Municipality of Centre Hastings and Madoc Township

** Issues Contributing Area

Insert Map 4-7

City of Belleville

4.2.8 City of Belleville – Two Intakes

The City of Belleville has a population approaching 50,000 people, of which 40,000 are connected to municipal water. The Gerry O'Connor water treatment plant, located at the end of Sidney Street, takes water from the Bay of Quinte by one of two intake pipes. In addition to serving the City of Belleville, there are 400 people in Prince Edward County (Rossmore and Fenwood Gardens) that receive their drinking water from this system.

Through development of the Assessment Report, a threats assessment was completed resulting in a list of activities and conditions considered to be threats to this drinking water system and identifying areas where these threats may occur as shown on map 4-8. The circumstances under which drinking water threats would be considered significant, moderate, or low were used to create an inventory of existing significant threats. Policies were developed to eliminate and/or manage existing and future drinking water threats. Table 4.7 outlines which policies apply to the Belleville drinking water system and identifies who is responsible to implement the policies.

The intake protection zone 2 for the City of Belleville was amended to include development that occurred on the landscape following the approval of the original intake protection zone 2. The amended zones were approved in September 11, 2019, which changes the effective date for policies relating to Belleville's intake protection zone 2; therefore the effective date for these policies (i.e. the timeframe for policy implementation) is from September 16, 2019, when the amended Quinte Region Source Protection Plan came into effect.

Table 4.7 Applicable Policies for Belleville Intake Protection Zones

		IPZ 1 (9)	IPZ 2 (8.1)	IPZ 3 (7.2)		
General	G-1	●	●	●		
	G-2	●	●			
	G-3	●	●	●		
	G-4					
	G-5					
	G-6					
	G-7	●	●	●		
	G-8	● ●	● ●			
	G-9	● ●	● ●			
Waste Disposal	1-1-F	●				
	1-2-E	●				
	1-3-F	●				
	1-4-E	●	●			
	1-5-E	●	●			
	1-6-E&F	●	●	●		
	1-7-E&F	●				
	1-8-E&F	●				
Sewage	2-1-E&F					
	2-2-E					
	2-3-F					
	2-4-E&F					
	2-5-E	●				
	2-6-F	●				
	2-7-E	●				
	2-8-F	●	●			
Agriculture	3-1-E&F					
	3-2-E&F	●	●			
	3-3-E&F	●	●			
	3-4-E&F	●	●			
Aquaculture	5-1-F	●	●			
Commercial Fertilizer Application	8-1-E&F					
	8-2-E&F	●				
	8-3-E&F	●				
Commercial Fertilizer Storage	9-1-F					
	9-2-E&F					
	9-3-E&F					
Pesticides Application	10-1-E&F					
	10-2-E&F	●	●			
	10-3-E&F	●	●			
Pesticides Storage	11-1-E&F					
	11-2-E&F	●				
	11-3-E&F	●				
Road Salt Application	12-1-E&F	●	●			
	12-2-E&F	●	●			
	12-3-E&F					
	12-4-E&F					
Road Salt Storage	13-1-E&F	●				
	13-2-E&F	●				
Snow Storage	14-1-E&F	●				
	14-2-E&F	●				
Fuel	15-1-F					
	15-2-E&F					
	15-3-E					
	15-4-E					
	15-5-E&F					
	15-6-E					
DNAPL	16-1-E&F					
	16-2-E&F					
	16-3-E&F					
Organic Solvents	17-1-F					
	17-2-E					
	17-3-E&F					
Airplane De-icing	18-1-F	●				

vulnerability scores shown in brackets

● - Municipality responsible for implementation

● - Other responsible for implementation

Insert Map 4-8

City of Belleville

4.2.9 Hamlet of Point Anne – Intake (surface water influenced by groundwater)

Point Anne is a small hamlet east of the serviced area of the City of Belleville on the north shore of the Bay of Quinte. The community is a former company town (Point Anne Cement Company) with approximately 60 people serviced by a communal water supply system. The system is operated as a surface water intake but also has groundwater influences thus this system was also studied as a groundwater system. Sewage is not treated in a municipal sewage treatment plant, but is disposed of through onsite private sewage systems that may or may not be shared between some residences. Land use immediately adjacent to this community is predominantly industrial with a large aggregate quarry to the north and a marine construction company located to the east. Lands to the west are primarily residential and commercial.

Through development of the Updated Assessment Report, 2011, a threats assessment was completed resulting in a list of activities considered to be threats to this drinking water system and identifying areas where these threats may occur as shown on maps 4-9 and 4-10. The circumstances under which drinking water threats would be considered significant, moderate, or low were used to create an inventory of existing significant threats. Policies were developed to eliminate and/or manage existing and future drinking water threats. Table 4.8 outlines which policies apply to the Point Anne surface water system and table 4.9 for the groundwater system. These tables also identify who is responsible to implement the policies.

Table 4.8 Applicable Policies for Point Anne Intake Protection Zones

		IPZ 1 (10)	IPZ 2 (8.0)	IPZ 3a (7.0)	IPZ 3b (3.0)	
General	G-1	●	●	●	●	
	G-2	●	●			
	G-3	●	●	●	●	
	G-4					
	G-5					
	G-6					
	G-7	●	●	●	●	
	G-8	●●	●●			
	G-9	●●	●●			
Waste Disposal	1-1-F	●				
	1-2-E	●				
	1-3-F	●				
	1-4-E					
	1-5-E					
	1-6-E&F	●	●	●	●	
	1-7-E&F	●				
	1-8-E&F	●				
Sewage	2-1-E&F	●				
	2-2-E	●				
	2-3-F	●				
	2-4-E&F	●				
	2-5-E					
	2-6-F	●				
	2-7-E					
	2-8-F	●	●			
Agriculture	3-1-E&F					
	3-2-E&F	●	●			
	3-3-E&F	●	●			
	3-4-E&F	●	●			
Aquaculture	5-1-F	●	●			
Commercial Fertilizer Application	8-1-E&F					
	8-2-E&F	●				
	8-3-E&F	●				
Commercial Fertilizer Storage	9-1-F	●				
	9-2-E&F	●				
	9-3-E&F	●				
Pesticides Application	10-1-E&F					
	10-2-E&F	●				
	10-3-E&F	●				
Pesticides Storage	11-1-E&F	●				
	11-2-E&F					
	11-3-E&F	●				
Road Salt Application	12-1-E&F	●	●			
	12-2-E&F	●	●			
	12-3-E&F					
	12-4-E&F					
Road Salt Storage	13-1-E&F	●				
	13-2-E&F	●				
Snow Storage	14-1-E&F	●				
	14-2-E&F	●				
Fuel	15-1-F	●				
	15-2-E&F					
	15-3-E	●				
	15-4-E					
	15-5-E&F	●				
	15-6-E	●				
DNAPL	16-1-E&F					
	16-2-E&F					
	16-3-E&F					
Organic Solvents	17-1-F	●				
	17-2-E	●				
	17-3-E&F	●				
Airplane De-icing	18-1-F	●				

vulnerability scores shown in brackets

● - Municipality responsible for implementation

● - Other responsible for implementation

Table 4.9 Applicable Policies for Point Anne Wellhead Protection Areas

		WHPA A (10)	WHPA B (10)	WHPA C (8)		
General	G-1	●	●	●		
	G-2	●	●	●		
	G-3	●	●	●		
	G-4	● ●	● ●	● ●		
	G-5	●	●	●		
	G-6		●	●		
	G-7	●	●	●		
	G-8	● ●	● ●			
	G-9	● ●	● ●	● ●		
Waste Disposal	1-1-F	●	●	●		
	1-2-E	●	●	●		
	1-3-F	●	●	●		
	1-4-E					
	1-5-E					
	1-6-E&F	●	●	●		
	1-7-E&F	●	●			
	1-8-E&F	●	●			
Sewage	2-1-E&F	●	●			
	2-2-E	●	●			
	2-3-F	●	●			
	2-4-E&F	●	●			
	2-5-E					
	2-6-F	●	●			
	2-7-E					
	2-8-F	●	●			
Agriculture	3-1-E&F	●				
	3-2-E&F		●			
	3-3-E&F	●	●			
	3-4-E&F	●	●			
Aquaculture	5-1-F					
Commercial Fertilizer Application	8-1-E&F	●				
	8-2-E&F		●			
	8-3-E&F	●	●			
Commercial Fertilizer Storage	9-1-F	●				
	9-2-E&F	●	●			
	9-3-E&F	●	●			
Pesticides Application	10-1-E&F	●				
	10-2-E&F		●			
	10-3-E&F	●	●			
Pesticides Storage	11-1-E&F	●				
	11-2-E&F		●			
	11-3-E&F	●	●			
Road Salt Application	12-1-E&F	●	●	●		
	12-2-E&F	●	●	●		
	12-3-E&F					
	12-4-E&F					
Road Salt Storage	13-1-E&F	●	●			
	13-2-E&F	●	●			
Snow Storage	14-1-E&F	●	●			
	14-2-E&F	●	●			
Fuel	15-1-F	●	●			
	15-2-E&F	●				
	15-3-E	●	●			
	15-4-E	●				
	15-5-E&F	●	●			
	15-6-E	●	●			
DNAPL	16-1-E&F	●				
	16-2-E&F		●	●		
	16-3-E&F	●	●	●		
Organic Solvents	17-1-F	●	●			
	17-2-E	●	●			
	17-3-E&F	●	●			
Airplane De-icing	18-1-F	●	●			

vulnerability scores shown in brackets

● - Municipality responsible for implementation

● - Other responsible for implementation

Insert Map 4-9

Insert Map 4-10

Town of Deseronto

4.2.10 Town of Deseronto – Intake

The Town of Deseronto is located west of the Napanee River on the north shore of the Bay of Quinte. The drinking water system is located on the southern edge of town and serves a population of approximately 2,100. Land use around the intake is a mixture of predominantly residential and agricultural with some commercial, industrial, and institutional uses.

Through development of the Assessment Report, a threats assessment was completed resulting in a list of activities considered to be threats to this drinking water system and identifying areas where these threats may occur as shown on map 4-11. The circumstances under which drinking water threats would be considered significant, moderate, or low were used to create an inventory of existing significant threats. Policies were developed to eliminate and/or manage existing and future drinking water threats. Table 4.10 outlines which policies apply to the Deseronto drinking water system and identifies who is responsible to implement the policies.

Table 4.10 Applicable Policies for Deseronto Intake Protection Zones

		IPZ-1 (9)	IPZ-2 (8.1)	IPZ-3a (7.2)	IPZ-3b (2.7)	
General	G-1	●	●	●	●	
	G-2	●	●			
	G-3	●	●	●	●	
	G-4					
	G-5					
	G-6					
	G-7	●	●	●	●	
	G-8	● ●	● ●			
	G-9	● ●	● ●			
Waste Disposal	1-1-F	●				
	1-2-E	●				
	1-3-F	●				
	1-4-E					
	1-5-E					
	1-6-E&F	●	●	●		
	1-7-E&F	●				
	1-8-E&F	●				
Sewage	2-1-E&F					
	2-2-E					
	2-3-F					
	2-4-E&F					
	2-5-E	●				
	2-6-F	●				
	2-7-E	●				
	2-8-F	●	●			
Agriculture	3-1-E&F					
	3-2-E&F	●	●			
	3-3-E&F	●	●			
	3-4-E&F	●	●			
Aquaculture	5-1-F	●	●			
Commercial Fertilizer Application	8-1-E&F					
	8-2-E&F	●				
	8-3-E&F	●				
Commercial Fertilizer Storage	9-1-F					
	9-2-E&F					
	9-3-E&F					
Pesticides Application	10-1-E&F					
	10-2-E&F	●	●			
	10-3-E&F	●	●			
Pesticides Storage	11-1-E&F					
	11-2-E&F	●				
	11-3-E&F	●				
Road Salt Application	12-1-E&F	●	●			
	12-2-E&F	●	●			
	12-3-E&F					
	12-4-E&F					
Road Salt Storage	13-1-E&F	●				
	13-2-E&F	●				
Snow Storage	14-1-E&F	●				
	14-2-E&F	●				
Fuel	15-1-F					
	15-2-E&F					
	15-3-E					
	15-4-E					
	15-5-E&F					
	15-6-E					
DNAPL	16-1-E&F					
	16-2-E&F					
	16-3-E&F					
Organic Solvents	17-1-F					
	17-2-E					
	17-3-E&F					
Airplane De-icing	18-1-F	●				

vulnerability scores shown in brackets

● - Municipality responsible for implementation

● - Other responsible for implementation

Insert Map 4-11

Town of Greater Napanee

4.2.11 Napanee Backup – Intake

The Town of Greater Napanee backup municipal water supply intake is located in the Napanee River, south of the railway bridge. The intake draws water from the head pond of the Springside Dam and is located close to shore on the west bank of the river.

The A.L. Dafoe Water Purification Plant, located in the Town of Greater Napanee was built in the late 1880s and upgraded in 2004. The Plant services approximately 8,500 people. Under normal operation, raw water is drawn from Lake Ontario 18 km away. This intake is located within the Cataraqui Source Protection Area; however, if an emergency situation arises where transmission from Lake Ontario is interrupted for an extended period of time the Plant can draw water from the Napanee River through this backup intake.

Through development of the Assessment Report, a threats assessment was completed resulting in a list of activities considered to be threats to this drinking water system and identifying areas where these threats may occur as shown on map 4-12. The circumstances under which drinking water threats would be considered significant, moderate, or low were used to create an inventory of existing significant threats. Policies were developed to eliminate and/or manage existing and future drinking water threats. Table 4.11 outlines which policies apply to the Napanee drinking water system and identifies who is responsible to implement the policies.

Table 4. 11 Applicable Policies for Napanee Intake Protection Zones

		IPZ 1 (9)	IPZ 2 (8.1)	IPZ 3a (7.2)	IPZ 3b (2.7)	
General	G-1	●	●	●	●	
	G-2	●	●			
	G-3	●	●	●	●	
	G-4					
	G-5					
	G-6					
	G-7	●	●	●	●	
	G-8	● ●	● ●			
	G-9	● ●	● ●			
Waste Disposal	1-1-F	●				
	1-2-E	●				
	1-3-F	●				
	1-4-E					
	1-5-E					
	1-6-E&F	●	●	●		
	1-7-E&F	●				
	1-8-E&F	●				
Sewage	2-1-E&F					
	2-2-E					
	2-3-F					
	2-4-E&F					
	2-5-E	●				
	2-6-F	●				
	2-7-E					
	2-8-F	●	●			
Agriculture	3-1-E&F					
	3-2-E&F	●	●			
	3-3-E&F	●	●			
	3-4-E&F	●	●			
Aquaculture	5-1-F	●	●			
Commercial Fertilizer Application	8-1-E&F					
	8-2-E&F	●				
	8-3-E&F	●				
Commercial Fertilizer Storage	9-1-F					
	9-2-E&F					
	9-3-E&F					
Pesticides Application	10-1-E&F					
	10-2-E&F	●	●			
	10-3-E&F	●	●			
Pesticides Storage	11-1-E&F					
	11-2-E&F	●				
	11-3-E&F	●				
Road Salt Application	12-1-E&F	●	●			
	12-2-E&F	●	●			
	12-3-E&F					
	12-4-E&F					
Road Salt Storage	13-1-E&F	●				
	13-2-E&F	●				
Snow Storage	14-1-E&F	●				
	14-2-E&F	●				
Fuel	15-1-F					
	15-2-E&F					
	15-3-E					
	15-4-E					
	15-5-E&F					
	15-6-E					
DNAPL	16-1-E&F					
	16-2-E&F					
	16-3-E&F					
Organic Solvents	17-1-F					
	17-2-E					
	17-3-E&F					
Airplane De-icing	18-1-F	●				

vulnerability scores shown in brackets

● - Municipality responsible for implementation

● - Other responsible for implementation

Insert Map 4-12

Bayside

4.2.12 Bayside – Intake

The Bayside intake is located within the Trent Conservation Coalition Source Protection Region. It is situated in the Bay of Quinte between Belleville and Trenton and supplies drinking water to approximately 3,500 people in the Hamlet of Bayside in Quinte West and along Highway 2.

The intake is located outside of the Quinte Source Protection Region, however, the intake protection zones one and two extend into the Quinte Region, including properties in Prince Edward County on the southern shore of the Bay of Quinte as show on map 4-13.

Through development of the Trent Conservation Coalition Assessment Report, a completed threats assessment resulted in a list of activities considered to be threats to this drinking water system and identified areas where these threats may occur as shown on map 4-13. The circumstances under which drinking water threats would be considered significant, moderate, or low were used to create an inventory of existing significant threats.

The Trent Conservation Coalition Source Protection Committee's policies differed from the policies developed by the Quinte Source Protection Committee. Through negotiations it was agreed that the policies in the Quinte Source Protection Plan will apply to the small area of the Bayside IPZ in Prince Edward County and the Quinte Policies would apply to this small area. It was requested by the TCC that the Bayside drinking water intake be added to the applicable areas section of policies in the Quinte Source Protection Plan where a significant drinking water threat could be established in the future. (see table 4.12)

Table 4.12 Applicable Policies for Bayside Intake Protection Zones

		IPZ-1 (8)	IPZ-2 (6.4)			
General	G-1	●				
	G-2	●				
	G-3	●				
	G-4					
	G-5					
	G-6					
	G-7	●				
	G-8	● ●				
	G-9	● ●				
Waste Disposal	1-1-F					
	1-2-E					
	1-3-F					
	1-4-E					
	1-5-E					
	1-6-E&F	●				
	1-7-E&F					
	1-8-E&F					
Sewage	2-1-E&F					
	2-2-E					
	2-3-F					
	2-4-E&F					
	2-5-E	●				
	2-6-F	●				
	2-7-E					
	2-8-F	●				
Agriculture	3-1-E&F					
	3-2-E&F	●				
	3-3-E&F	●				
	3-4-E&F	●				
Aquaculture	5-1-F					
Commercial Fertilizer Application	8-1-E&F					
	8-2-E&F					
	8-3-E&F					
Commercial Fertilizer Storage	9-1-F					
	9-2-E&F					
	9-3-E&F					
Pesticides Application	10-1-E&F					
	10-2-E&F					
	10-3-E&F					
Pesticides Storage	11-1-E&F					
	11-2-E&F					
	11-3-E&F					
Road Salt Application	12-1-E&F	●				
	12-2-E&F	●				
	12-3-E&F					
	12-4-E&F					
Road Salt Storage	13-1-E&F					
	13-2-E&F					
Snow Storage	14-1-E&F					
	14-2-E&F					
Fuel	15-1-F					
	15-2-E&F					
	15-3-E					
	15-4-E					
	15-5-E&F					
	15-6-E					
DNAPL	16-1-E&F					
	16-2-E&F					
	16-3-E&F					
Organic Solvents	17-1-F					
	17-2-E					
	17-3-E&F					
Airplane De-icing	18-1-F					

Vulnerability scores shown in brackets

● - Municipality responsible for implementation

● - Other responsible for implementation

Insert Map 4-13

Chapter 5 Source Protection Policies

Section 22(2) of the *Clean Water Act*, *2006* states that the Source Protection Plan shall include a policy for every area where an activity is or would be a significant drinking water threat in the Updated Assessment Report, 2011. These policies must ensure the activity never becomes a significant drinking water threat or, if the activity is being engaged in, the activity ceases to be a significant threat. This does not mean that in all cases the activity will be stopped altogether, but may be managed in such a way that the activity no longer poses a risk to the source water.

Each policy outlines to which vulnerable area(s) the policy applies and who is responsible for implementation of that policy. Policies have been grouped and written to address all of the prescribed drinking water threats. These policies have been specifically written for the Quinte Region and an explanation of policy development and rationale may be found in the accompanying Explanatory Document.

5.1 Interpreting Policies

This chapter includes 63 policies. Each of these policies contains several components to make it a complete policy. The components of each policy are explained below. There are 54 policies that address the areas where drinking water threats could be significant in the Quinte Source Protection Region. Each grouping of policies is preceded by a brief explanation of the prescribed threat designed to help the reader understand the general reason for the policies. There are also nine general policies that address other source protection topics such as spills prevention and contingency planning, transport pathways and broad education and outreach programs.

5.1.1 Policy Text Components

Policy Numbering

The Committee adopted the following numbering system to organize all policies within the Plan.

a) The first number coincides with the numbers used for prescribed threats (see Chapter 2, Section 2.4.4). The exceptions are the general policies, numbered G-1 to G-9.

b) The second number refers to the sequence of policies under each threat category.

c) Finally, a letter is added to indicate whether the policy is referring to existing activities (E), future activities (F) or both (E & F). For example: Policy 1-1-F; is a Waste policy; it is the first policy for the threat; it is for future activities.

All agricultural threat policies were combined into one set, starting with the number 3. As a result there are no threat policies beginning with 4, 6, 7 or 21 (the other numbers for agricultural prescribed threats).

Policy Titles

All policies are titled to give the reader a brief description of the policy. For example: Policy 10-2-E & F: Risk Management Plan for Management of Non-Agricultural Application of Pesticides

Implementer

For each policy the implementer of the policy is clearly identified.

Applicable Areas

The applicable areas section describes the zones where the policy applies. For significant threat policies this is the area where activities could be a significant threat.

Tools

This section specifies the tool (Section 3.4) chosen to reach the objective of the policy and the Plan.

Legal Effect

There are three legal effects outlined in the *Clean Water Act, 2006* for the policies throughout this plan;

1) Must Conform – outlines that this effect is legally binding.
2) Have Regard To – directs a provincial ministry to amend a prescribed instrument for a moderate or low threat. Requires decisions under the *Planning Act* to have regard to policies for moderate and low threats.
3) Strategic (non-legally binding) – other types of policies that have been developed to achieve the Plans' objectives.

Effective Date

The effective date indicates the time-frame for policy implementation. For policies related to future activities the policies take effect immediately when the Plan takes effect. The Plan takes effect upon approval by the Ministry of the Environment and posting on Ontario's Environmental Registry. For policies related to existing activities, the Committee used a range of effective dates from one to five years. The Committee considered the level of effort required to implement the policies as well as the comments received from the implementers through the pre-consultation process when determining these timeframes.

Decisions on planning matters must conform to the applicable significant threat policies the day the Plan takes effect. Municipalities are required to update their Official Plans and Zoning Bylaws to reflect the policies in the next planning review cycle required by Section 26 of the *Planning Act.*

Effective dates may vary from system to system as amendments to the source protection plan occur. The effective date of the plan, along with a summary of any plan amendments can be

found in Section 6.3.6 Consultation on Assessment Report and Source Protection Plan Amendments 2019 on page199.

Monitoring Policy

The final component of the policy text is the monitoring policy. This allows the Source Protection Authority to determine the effectiveness of the Plan. This section gives instructions regarding when annual reports are due from the implementers and what the report should include. The Source Protection Authority must receive these reports in sufficient time to prepare its annual reports to the Ministry of the Environment.

5.2 The Policies

General Policies

Education and Outreach

An education and outreach program has been selected as a general policy to supplement many other policies. Education and outreach programs will promote:

- protection of water sources;
- awareness and understanding of the objectives of the Source Protection Plan;
- understanding of specific policies thereby encouraging their successful implementation;
- awareness and understanding of vulnerable areas;
- voluntary actions to address significant threats and protect water;
- understanding and use of best management practices;
- fulfillment of the legislative requirements of the Source Protection Plan.

Education and outreach may be delivered to the general public and/or to targeted groups of people, agencies, or any other body that is impacted or involved with the Plan.

Other Policies

In addition to policies that regulate significant drinking water threats, the *Clean Water Act*, *2006* states the Source Protection Plan may also include policies for non-prescribed drinking water threats. Although these policies are not legally binding, the Source Protection Committee determined that other policies were necessary to address situations that do not fall within the 21 prescribed drinking water threats. These policies include actions such as spills monitoring and emergency planning, management of transport pathways, household hazardous waste collections, and road signs erected to identify vulnerable areas.

For further details regarding policy development and rationale, refer to the accompanying Explanatory Document.

Policy G-1: Education and Outreach

Each municipality within the Source Protection Planning Area where drinking water threats could occur shall:

1) Develop and deliver an education and outreach program to all affected landowners and stakeholders making them aware of the vulnerable areas and the need to protect drinking water, describing any mandatory requirements and best management practices;
2) Harmonize the program with any existing education and outreach programs and share with other municipalities where this would result in increased efficiency and reduced cost;
3) Consult and cooperate with the Ontario Ministries, Health Units and Source Protection Authority (and any other agencies or stakeholders) to assist with the development and delivery of the education and outreach program where possible;
4) Describe the need for the preparation of emergency and spill contingency plans, and the process for doing so;
5) Ensure the program explains any incentive programs that may be available related to the specific significant threats;
6) Promote voluntary action to protect sources of drinking water and water conservation measures such as water saving fixtures, tips on how to save water in the house, water conserving appliances; and
7) Update educational information as required and include specific policy related information about:
    - Sewage
    - Agriculture
    - Pesticides
    - Fertilizer
    - Fuel
    - DNAPLs
    - Organic Solvents

Sewage

1) Ensure the program explains the purpose, details and implications of the onsite private sewage system inspection program; and

Ensure the program explains any mandatory decommissioning of existing on-site private sewage systems and any corresponding requirement to connect into an existing municipal sewage system.

Agriculture

1) Promote Environmental Farm Plan participation, voluntary nutrient management strategies and plans for farms where it is not a mandatory requirement under the *Nutrient Management Act, 2002*; and

Promote widespread adoption of best management practices for haulers/spreaders (e.g., pre-treatment of septage, method of incorporation into soil and timing of application). **Commercial Fertilizer/Pesticide**

1) Develop and deliver an education and outreach program to all affected landowners, municipal works departments, and application companies making them aware of the vulnerable zones and the need to protect drinking water, describing any mandatory requirements and best management practices for the application of commercial fertilizers;
2) Ensure the program explains the purpose and details of any fertilizer/pesticide free buffer zones around sensitive environmental features;
3) Promote the use of soil tests for determining fertilizer application rates, use of slow release fertilizers, and record keeping; and
1) Advocate the use of alternatives to pesticide such as natural and eco-friendly methods that do not rely on pesticides.

Fuel

1) Ensure the program explains to TSSA, Canadian Oil Heat Association, Fuel Delivery Agents and Heating Oil Contractors the purpose, details and implications of appropriate Codes and Regulations on the use and maintenance of oil burning equipment; including the annual maintenance, inspection, and filling requirements as specified in Section 13 of the CSA Ontario Installation Code for Oil-Burning Equipment (Based on CSA B139, with Ontario Amendments) 1st Edition/2006. Explain the importance of protecting drinking water and the location of vulnerable areas;
2) Distribute stickers to be placed on the tank and fill pipes indicating the location within a vulnerable area and contact numbers in the event of a spill; and
3) Educate insurance, real estate companies and banks on the threats associated with fuel while emphasizing awareness of the location of the vulnerable zones and measures being taken by property owners, fuel delivery agents and home heating oil contractors.

DNAPLs/ Organic Solvents

Provide information about Household Hazardous Waste programs and other options for the disposal of products containing DNAPLs and organic solvents.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

- **for the above threats that could be significant, the areas within the Quinte Region where they could be significant threats.**
- **for the above threats that could be moderate or low, the areas within the Quinte Region where they could be moderate or low threats.**

Tools: Education and Outreach pursuant to Section 26 of Ontario Regulation 287/07 and Section 22(7) of the *Clean Water Act, 2006.*

Legal Effect: Must conform (See Appendix C, List E) – for significant threats
Strategic (See Appendix C, List J) – for moderate and low threats

Effective Date: Within two years of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Policy (See Appendix C, List F and J):

The municipality shall report annually to the Quinte Source Protection Authority by February 1st on activities undertaken during the previous calendar year, as part of the education and outreach program for significant threats.

Policy G-2-F: Updating Spill Response Procedure and Emergency Response Plans

The Ministry of the Environment and the Spills Action Centre should update spill response procedures and emergency response plans for the purpose of protecting drinking water sources within a Wellhead Protection Area or Intake Protection Zone along highways, railway lines and shipping lanes.

Implementer: Ministry of the Environment

Applicable Areas: This policy applies to the following areas:

All vulnerable areas where the release of contaminants in an IPZ or WHPA could result in contamination of the drinking water supply.

Tools: Specify Action (Section 26(6) of Ontario Regulation 287/07).

Legal Effect: Strategic (See Appendix C, List J)

Effective Date: Within one year of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Policy (See Appendix C, List J):

The Ministry shall prepare an annual summary of the actions it has taken to achieve the outcomes of this Source Protection Plan policy and make that report available to the Quinte Source Protection Authority February 1st each year. It is recommended this annual report include any occurrence of spills in the vulnerable areas.

Policy G-3-E & F: Emergency Planning in Intake Protection Zones and Wellhead Protection Areas

- Each municipality should update Emergency Response Plans, spill contingency plans and spill prevention plans for the purpose of protecting drinking water sources within a Wellhead Protection Area or Intake Protection Zone along highways, railway lines, and shipping lanes.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

All vulnerable areas where the release of contaminants in an IPZ or WHPA could result in contamination of the drinking water supply.

Tools: Specify Action pursuant to Section 26(6) of Ontario Regulation 287/07.

Legal Effect: Strategic (See Appendix C, List J)

Effective Date: Within one year of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Policy (See Appendix C, List J):

The municipality should provide copies, when updated, of the Emergency Response Plan, spill contingency plans and spill prevention plans by February 1st to the Quinte Source Protection Authority and report annually on any emergencies during the previous calendar year that occurred in the IPZs or WHPAs including the measures taken during and after the emergency to protect the drinking water supply.

Policy G-4-E: Existing Transport Pathways – Well Decommissioning or Upgrading

For existing transport pathways (wells) within Wellhead Protection Areas:

1) Each municipality should require the decommissioning of known abandoned wells and upgrading or decommissioning of wells that do not meet the requirements of Regulation 903;
2) Each municipality should require wells constructed prior to the passing of Regulation 903 be upgraded to meet the current requirements for new well construction; and
3) The Ministry of the Environment is strongly encouraged to undertake an updated risk-based program analysis of the compliance program associated with the Wells Regulation 903 as amended, made under the Ontario Water Resources Act.
    a. The program analysis should consider:
        i. Increased MOE field presence with well contractors,
        ii. Complaint response prioritization where the presence of a transport pathway would endanger sources of municipal drinking water, and
        iii. Focusing resources in areas where improperly constructed, maintained or abandoned wells may increase the potential threat to municipal drinking water sources.

Implementer: Ministry of the Environment and Municipality

Applicable Areas: This policy applies to the following areas:

WHPA A, B and C – Deloro, Madoc, Tweed, Point Anne and Peats Point.

Tools: Transport Pathway policy pursuant to Section 27 of Ontario Regulation 287/07.

Legal Effect: Strategic (See Appendix C, List J)

Effective Date: Within three years of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Plan (See Appendix C, List J):

The Ministry shall prepare an annual summary of the actions it has taken to achieve the outcomes of this Source Protection Plan policy and make that report available to the Quinte Source Protection Authority February 1st each year. The municipality should include the number of wells and locations that have been upgraded or decommissioned during the review period.

Policy G-5-F: Transport Pathways Preventative Measures

All Transport Pathways
The municipality is strongly encouraged to oversee the creation of new transport pathways (including earth energy systems) within Wellhead Protection Areas so that they do not endanger the raw water supply of a municipal drinking water system. The municipality should require the proponent to demonstrate that the municipal water supply is not endangered. Depending on the type of transport pathway, this may include the requirement for studies and inspections.

Earth Energy Systems
The municipality should address specific requirements for geothermal/earth energy systems by ensuring that building permits are issued for earth energy systems in accordance with the Ontario Building Code.

The municipality should not issue any permits for vertical closed loop earth energy systems in the WHPA A and B zones. In the WHPA C and D zones, the municipality should require that the sealing of vertical boreholes be completed in a manner similar to that required for water wells as outlined in Ontario Regulation 903.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

All Transport Pathways
WHPA A – Deloro, Madoc, Tweed, Point Anne and Peats Point.

Earth Energy Systems – Vertical Closed Loop
WHPA A and B – Deloro, Madoc, Tweed, Point Anne and Peats Point.

Earth Energy Systems – Vertical Boreholes
WHPA C and D – Deloro, Madoc, Tweed, Point Anne (WHPA C only) and Peats Point.

Tools: Transport Pathway policy pursuant to Section 27(1b) of Ontario Regulation 287/07.

Legal Effect: Strategic (See Appendix C, List J)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect.

Monitoring Policy (See Appendix C, List J):

Each municipality should prepare a report for the Quinte Source Protection Authority by February 1st of each year summarizing how this policy was implemented and the number of Transport Pathways that have been proposed and approved during the previous calendar year.

Policy G-6-F: Inspections of Transport Pathways – Wells WHPA B, C and D

The Ministry of the Environment is strongly encouraged to undertake an updated risk-based program 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:

- Increased MOE field presence with well contractors;
- Complaint response prioritization where the presence of a transport pathway would endanger sources of municipal drinking water; and
- Focusing resources in areas where improperly constructed maintained or abandoned wells may increase the potential threat to municipal drinking water sources.

This policy complements Policy G-4-F.

Implementer: Ministry of the Environment

Applicable Areas: This policy applies to the following areas:

WHPA B, C and D – Deloro, Madoc, Tweed, Point Anne (WHPA B and C only) and Peats Point.

Tools: Transport Pathway policy pursuant to Section 27(1)(b) of Ontario Regulation 287/07.

Legal Effect: Strategic (See Appendix C, List J)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect.

Monitoring Policy (See Appendix C, List J):

The Ministry shall prepare an annual summary of the actions it has taken to achieve the outcomes of this Source Protection Plan policy and make that report available to the Quinte Source Protection Authority February 1st each year. It is recommended the report include the number of inspections conducted, deficiencies found and remedial measures taken during the previous calendar year.

Policy G-7-E & F: Management of Household Hazardous Waste

Each municipality should provide opportunities for its residents to dispose of household hazardous waste in an appropriate manner.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

All vulnerable areas where Hazardous Materials such as DNAPLs and Organic Solvents could be significant, moderate, or low drinking water threats.

Tools: General Education and Outreach pursuant to Section 22(7) of the *Clean Water Act, 2006.*

Legal Effect: Strategic (See Appendix C, List J)

Effective Date: Within one year of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Policy (See Appendix C, List J):

Each municipality should report annually by February 1st to the Quinte Source Protection Authority on activities undertaken related to the disposal of Household Hazardous Waste during the previous calendar year.

Policy G-8-E & F: Road Signs for Intake Protection Zones and Wellhead Protection Areas

The Ministry of Transportation, in collaboration with the Ministry of the Environment as well as in consultation with Source Protection Authorities, should design a sign to the appropriate Provincial standards, to identify the locations of Wellhead Protection Areas and Intake Protection zones. The Ministry of Transportation should manufacture, install and maintain the signs along provincial highways in the applicable areas noted below.

Municipalities will be responsible for the purchase, installation and maintenance of appropriate signs designed by the Province in collaboration with Source Protection Authorities. These signs should be placed on municipal arterial roads to identify the vulnerable areas in the applicable areas noted below.

Implementer: Municipality and Ministry of Transportation

Applicable Areas: This policy applies to the following areas:

WHPA's A and B with a vulnerability score of 10 and WHPA E and IPZ's with a vulnerability score of 8 or higher where major roads (Provincial, regional and municipal roads) cross through the vulnerable area.

Tools: General Education and Outreach pursuant to Section 22(7) of the *Clean Water Act, 2006.*

Legal Effect: Strategic (See Appendix C, List J)

Effective Date: Within two years of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Policy (See Appendix C, List J):

The municipality and Ministry of Transportation should provide annual records of the location and numbers of signs installed during the previous calendar year, in each of the vulnerable areas to the Quinte Source Protection Authority by February 1st of each year.

Policy G-9-F: Raw Water Sampling Under the Drinking Water Surveillance Program for Municipal Drinking Water Systems

The Ministry of the Environment should evaluate the need to expand the Drinking Water Surveillance Program and review the mandate of the program to include monitoring for contaminants originating from the threat activities identified in Assessment Reports. If expanded, the Ministry should review opportunities to include additional drinking water system owners. If additional drinking water systems can be added, municipalities that are not already included in the program should participate.

Implementer: Ministry of the Environment and the municipalities with municipal drinking water systems.

Applicable Areas: This policy applies to the following areas:

All WHPA As and IPZ 1s with a vulnerability score of 8 or higher.

Tools: Education and Outreach pursuant to Section 22(7) of the *Clean Water Act, 2006.*

Legal Effect: Strategic (See Appendix C, List J)

Effective Date: Within two years of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Policy (See Appendix C, List J):

The municipality and the Ministry of the Environment should provide an annual summary of implementation activities related to this policy to the Quinte Source Protection Authority by February 1st.

Waste Policies

Waste disposal sites have been listed as prescribed drinking water threats under the *Clean Water Act, 2006.* Waste disposal activities are considered to be possible threats to drinking water due to the potential for leaching of many different types of contaminants into ground and surface water. There are many different types of waste disposal sites which are necessary to deal with the waste produced within the Quinte Region. Few existing waste disposal sites are located within the vulnerable areas of municipal drinking water systems. Policies have been written to address future landfills, expansion of existing landfills and closed landfill sites that have been identified as a significant drinking water threat.

Policies have been developed by the Source Protection Committee to deal with both existing and future waste disposal activities that are or would be significant drinking water threats in the vulnerable areas. The general approach was to prevent the establishment of new waste disposal sites in vulnerable areas by requesting that the Ministry of the Environment and the municipality not approve new sites. For existing sites, the Ministry of the Environment has been asked to complete a review of instruments to ensure they are properly managed. Policies have also been developed to address potential concerns at closed landfill sites and waste disposal sites (that are not governed by prescribed instruments) to ensure that the drinking water source is protected.

For further details regarding policy development and rationale, refer to the accompanying Explanatory Document.

Policy 1-1-F: Prescribed Instrument for Prohibition of Future Waste Disposal Sites

New or expanding (future) waste disposal sites as defined in Part V of the *Environmental Protection Act* are prohibited where they would be a significant drinking water threat in the applicable areas. Policy 1-3-F is a complementary land use planning policy to this Prescribed Instrument policy.

Implementer: Ministry of the Environment

Applicable Areas: This policy applies to the following areas:

a) **WHPA A, B and C** (vulnerability score of 8 or greater) – Madoc, Tweed, Deloro, Peats Point and Point Anne.

b) **IPZ 1 and 2** (vulnerability score of 9 or greater) – Belleville (IPZ 1), Picton (IPZ 1 and 2), Ameliasburgh (IPZ 1), Point Anne (IPZ 1), Deseronto (IPZ 1) and Napanee (IPZ 1).

c) **Issues Contributing Area - Tweed**

Tools: Prescribed Instrument pursuant to Section 39(7) of the *Clean Water Act, 2006.*

Legal Effect: Must conform (See Appendix C, List C)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect.

Monitoring Policy (See Appendix C, List F):

The Ministry shall prepare an annual summary of the actions it has taken to achieve the outcomes of this Source Protection Plan policy and make that report available to the Quinte Source Protection Authority February 1st each year.

Policy 1-2-E: Prescribed Instrument for Management of Existing Waste Disposal Sites

Where an existing waste disposal site is in an area where this activity is a significant drinking water threat, the Ministry of the Environment shall ensure that the Environmental Compliance Approval that governs the waste disposal site includes appropriate terms and conditions to ensure that the waste disposal site ceases to be a significant drinking water threat.

If no Provincial Instrument is in place for the waste disposal site an instrument shall be used to identify any monitoring and remedial action measures necessary to ensure the activity ceases to be a significant drinking water threat.

Implementer: Ministry of the Environment

Applicable Areas: This policy applies to the following areas:

a) **WHPA A, B and C** (vulnerability score of 8 or greater) – Madoc, Tweed, Deloro, Peats Point and Point Anne.

b) **IPZ 1 and 2** (vulnerability score of 9 or greater) – Belleville (IPZ 1), Picton (IPZ 1 and 2), Ameliasburgh (IPZ 1), Point Anne (IPZ 1), Deseronto (IPZ 1) and Napanee (IPZ 1).

Tools: Prescribed Instrument pursuant to Section 43(1) of the *Clean Water Act, 2006.*

Legal Effect: Must Conform (See Appendix C, List C)

Effective Date: Within three years of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Policy (See Appendix C, List F):

The Ministry shall prepare an annual summary of the actions it has taken to achieve the outcomes of this Source Protection Plan policy and make that report available to the Quinte Source Protection Authority February 1st each year. The Ministry of the Environment should prioritize annual compliance inspections based on proximity to drinking water systems where significant threats are being managed through Prescribed Instruments.

Policy 1-3-F: Land Use Planning for Prohibition of Future Waste Disposal Sites

The municipality shall prohibit future waste disposal sites or the expansion of an existing waste disposal site where the following types of waste disposal sites would be significant drinking water threats. Sites that do not require an environmental compliance approval are exempt from this policy and are subject to Policy 1-7-E&F:

- Application of untreated septage to land;
- Storage, treatment, and discharge of tailings from mines;
- Land farming of petroleum refining waste;
- Land filling of hazardous waste;
- Land filling of municipal waste;
- Land filling of solid, non-hazardous industrial or commercial waste;
- Liquid industrial waste injection into a well;
- PCB (Polychlorinated biphenyl) waste storage;
- Storage of hazardous waste at disposal sites; and
- Storage of certain hazardous wastes.

Implementer: Municipality (Land Use Planning)

Applicable Areas: This policy applies to the following areas:

a) **WHPA A, B and C** (vulnerability score of 8 or greater) – Madoc, Tweed, Deloro, Peats Point and Point Anne.

b) **IPZ 1 and 2** (vulnerability score of 9 or greater) – Belleville (IPZ 1), Picton (IPZ 1 and 2), Ameliasburgh (IPZ 1), Point Anne (IPZ 1), Deseronto (IPZ 1) and Napanee (IPZ 1).

c) **Issues Contributing Area - Tweed**

Tools: Land Use Planning pursuant to Section 39(1)(a) of the *Clean Water Act, 2006* and the *Planning Act.*

Legal Effect: Must Conform (See Appendix C, List A)

Effective Date: The policy will be implemented when the Plan, or any plan amendment, as applicable, takes effect**.** Official Plans must be updated no later than the date of their next five year review required under Section 26 of the *Planning Act* and zoning by-laws must be updated within three years of the Official Plan amendments to bring them into conformity with the Official Plan.

Monitoring Policy (See Appendix C, List F):

The Municipality shall submit to the Quinte Source Protection Authority by February 1st of each year a summary of how this policy was implemented during the previous calendar year.

Policy 1-4-E: Prescribed Instrument – Conditions for Management of Closed Landfill Sites

The Ministry of the Environment shall issue appropriate instruments (e.g. Environmental Compliance Approvals, Provincial Officers Orders and Directors Orders) that include a requirement for a detailed environmental monitoring plan for the applicable landfill sites identified as conditions in Belleville and Picton. The instruments shall also identify any remedial action measures to adequately manage the risk.

Implementer: Ministry of the Environment

Applicable Areas: This policy applies to the following areas:

a) **Belleville IPZ 1 and 2 (Zwicks Park)**

b) **Picton IPZ 2 (Delhi Park)**

Tools: Prescribed Instrument pursuant to Section 39(7) of the *Clean Water Act, 2006.*

Legal Effect: Must Conform (See Appendix C, List C)

Effective Date: Within three years of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Policy (See Appendix C, List F):

The Ministry shall prepare an annual summary of the actions it has taken to achieve the outcomes of this Source Protection Plan policy and make that report available to the Quinte Source Protection Authority February 1st each year.

Policy 1-5-E: Management of Closed Landfill Sites

The municipality shall collect raw water samples quarterly from the Belleville and Picton intakes for monitoring of parameters indicative of landfill leachate. The results are to be compared with the results of the monitoring of any offsite contamination from the former landfill sites to assist in determining if contaminants leaching from the two former landfills are present at the drinking water system intakes.

If it is determined that contaminants are reaching the intake, the municipality shall take the appropriate remedial action to prevent contamination from the former landfill site from reaching the intake and verify that the treatment processes are adequate.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

a) **Belleville IPZ 1 and 2 (Zwicks Park)**

b) **Picton IPZ 2 (Delhi Park)**

Tools: Specify Action pursuant to Section 26(1)(v) of Ontario Regulation 287/07.

Legal Effect: Must Conform (See Appendix C, List E)

Effective Date: Within three years of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Policy (See Appendix C, List F):

The municipality shall:

1) Provide a report prepared by a qualified professional to the Quinte Source Protection Authority by February 1st of each year summarizing the results and analysis of the water quality monitoring, during the previous calendar year; and
2) Analyze the results of the monitoring as required by Policy 1-4-E and this policy to assess if impact from the landfill site on the drinking water system is occurring. These results for the previous calendar year are to be reviewed to determine if remedial action is required.

Policy 1-6-E & F: Prescribed Instrument for Management of Existing and Future Waste Disposal Sites (Moderate Threat)

Where a waste disposal site (existing and/or future) could be a moderate or low drinking water threat, the Ministry of the Environment should ensure that existing instruments that govern the waste disposal site include appropriate terms and conditions to make sure that:

1) The waste disposal site (existing) is a managed drinking water threat; or
2) The waste disposal site (future) never becomes a significant drinking water threat.

The Ministry of the Environment should consider the location of vulnerable areas for the protection of drinking water when issuing Environmental Compliance Approvals for new or expanding waste disposal sites.

If prescribed instruments are not in place for the waste disposal site (e.g. closed landfill) the Ministry should identify any monitoring and remedial action measures necessary to ensure the activity is not a threat to drinking water.

Note: For existing sites the policy applies when decisions are made on amendments to the Environmental Compliance Approval associated with changes to the waste site or operations.

Implementer: Ministry of the Environment

Applicable Areas: This policy applies to the following areas:

The Quinte Source Protection Region

Tools: Prescribed Instrument pursuant to Sections 39(7) and 43(1) of the *Clean Water Act, 2006.*

Legal Effect: Have Regard To (See Appendix C, List D)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect.

Monitoring Policy (See Appendix C, List J):

The Ministry shall prepare an annual summary of the actions it has taken to achieve the outcomes of this Source Protection Plan policy and make that report available to the Quinte Source Protection Authority February 1st each year.

Policy 1-7-E & F: Risk Management Plan for Waste Disposal Sites Not Regulated by Ontario Regulation 347/09

Existing and future waste disposal sites that do not require approval under the Environmental Protection Act (Certificate of Approval or Environmental Compliance Approval) are designated for the purpose of Section 58 of the *Clean Water Act, 2006* requiring a risk management plan in areas where they could be significant drinking water threats. This policy addresses the following threat sub categories:

- Waste Disposal Site - PCB Waste Storage;
- Waste Disposal Site - Storage Of Hazardous Waste At Disposal Sites; and
- Waste Disposal Site - Storage of wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste under Ontario Regulation 347/09.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

a) **Waste Disposal Site – PCB Waste Storage, Waste Disposal Site - Storage of wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste:**
WHPA A and B, and IPZ 1 (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point, Point Anne, Picton, and Ameliasburgh.

b) **Waste Disposal Site – Storage Of Hazardous Waste At Disposal Sites:**
WHPA A and B, IPZ 1 and 2 (vulnerability score of 9 or greater) – Madoc, Tweed, Deloro, Peats Point, Belleville (IPZ 1), Picton (IPZ 1 and 2), Deseronto (IPZ 1), Ameliasburgh (IPZ 1), Napanee (IPZ 1) and Point Anne (IPZ 1 and WHPA A and B).

c) **Issues Contributing Area - Tweed**

Tools: Risk Management Plan pursuant to Section 58 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List H)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities and within 2 years for existing activities.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the

mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006.*

Policy 1-8-E & F: Restricted Land Use Risk Management Plans for Waste Disposal Sites Not Regulated by Ontario Regulation 347/09

To assist the municipality with identifying areas where waste disposal sites require risk management plans (Policy 1-7-E & F), all land uses in the applicable areas are designated for the purpose of Section 59 (restricted land use) of the *Clean Water Act, 2006*.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

a) **Waste Disposal Site – PCB Waste Storage, Waste Disposal Site – Storage of wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste:**
WHPA A and B, and IPZ 1 (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point, Point Anne, Picton, and Ameliasburgh.

b) **Waste Disposal Site – Storage Of Hazardous Waste At Disposal Sites:**
WHPA A and B, IPZ 1 and 2 (vulnerability score of 9 or greater) – Madoc, Tweed, Deloro, Peats Point, Belleville (IPZ 1), Picton (IPZ 1 and 2), Deseronto (IPZ 1), Ameliasburgh (IPZ 1), Napanee (IPZ 1) and Point Anne (IPZ 1 and WHPA A and B).

c) Issues Contributing Area - Tweed

Note that in these areas this policy is applicable to commercial sites but not residential properties.

Tools: Restricted Land Use pursuant to Section 59 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List A and I)

Effective Date: The policy will be implemented when the Plan, or any plan amendment, as applicable, takes effect**.** Official Plans must be updated no later than the date of their next five year review required under Section 26 of the *Planning Act* and zoning by-laws must be updated within three years of the Official Plan amendments to bring them into conformity with the Official Plan.

Monitoring Policy (See Appendix C, List F):

The municipality shall submit an annual report to the Quinte Source Protection Authority by February 1st summarizing the actions it has taken to implement the policy.

Sewage Policies

Sewage systems are considered to be potential threats to drinking water due to the potential for leaching of contaminants such as chemicals and bacteria into ground or surface water. Given the largely rural nature of the Quinte Region, many homes are serviced by private septic systems. Urban centres have sewage systems related to sanitary sewer collection systems, sewage treatment plants and stormwater treatment ponds. Sewage systems are one of the most common drinking water threats found in the vulnerable areas around municipal drinking water supplies. Of the sewage activities that can be prescribed drinking water threats, septic systems, sanitary sewers, sewage lift stations, sewage treatment plants and stormwater ponds are found in the vulnerable areas of the Quinte Region.

Policies have been developed by the Quinte Source Protection Committee to deal with both existing and future sewage activities that are or would be significant drinking water threats in the vulnerable areas. There are a number of tools or means of dealing with the drinking water threats available to the Committee. The approach that was developed gave consideration to these tools as well as existing legislation such as the Ontario Building Code and *Ontario Water Resources Act*. The general approach was to manage existing threats through the use of available tools and to discourage the creation of new threats where possible. The creation of new threats was discouraged through application of land use planning policies to exclude development of septic systems and sewage treatment plants from the vulnerable areas. Prescribed instruments were recommended to consider appropriate measures for managing new threats in vulnerable areas as well as maintaining and operating any new facilities.

For further details regarding policy development and rationale, refer to the accompanying Explanatory Document.

Policy 2-1-E & F: Connection to Municipal Sewage Collection Systems – Private Sewage Systems (less than 10,000 litres/day) and Large Sewage Systems (greater than 10,000 litres/day)

Each municipality within the Source Protection Planning area where an existing or future onsite sewage system is or could be a significant drinking water threat, and where municipal services are available, shall require connection to the municipal system.

For existing onsite sewage systems the municipality shall require the landowner to connect into the municipal sewage system and decommission the existing onsite sewage system.

Where there is no capacity in the municipal services (waste water system), private onsite sewage systems shall be managed in the interim according to (Policy 2-2-E) or a prescribed instrument (Policy 2-4-E & F) until reserve capacity is available.

For future onsite sewage systems, where municipal services are not available, Policy 2-3-F will apply.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

a) **WHPA A and B** (vulnerability score of 10) – Deloro, Madoc, Peats Point, Point Anne and Tweed;

b) **IPZ 1** (vulnerability score of 10) – Picton, Point Anne and Ameliasburgh; and

c) **Issues Contributing Area** – Madoc and Tweed.

Tools: Specify Action pursuant to Section 26(1)(iv) of Ontario Regulation 287/07.

Legal Effect: Must Conform (See Appendix C, List E)

Effective Date: Within two years of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Policy (See Appendix C, List F):

The municipality shall prepare a report for the Quinte Source Protection Authority by February 1st of each year, summarizing for the previous calendar year, the following:

a) How this policy was implemented including copies of bylaws;
b) Number of services connected to the municipal system;
c) Decommissioning of septic systems; and

d) The number of septic systems remaining to be connected to the municipal system.

Policy 2-2-E: Inspection of Residential Onsite Sewage Systems (less than 10,000 litres/day)

In areas where existing private onsite sewage systems are identified as significant drinking water threats, the municipality is required by the Ontario Building Code to implement a mandatory inspection program. The municipality shall:

1) Follow the 'On-Site Sewage Maintenance Inspection' document dated March, 2011 as amended from time to time, developed by the Ministry of Municipal Affairs and Housing, to ensure a consistent approach to inspecting onsite systems across the province; and
2) Prioritize the inspections based on location, age of septic systems and other factors which would result in identifying systems that may need to be improved.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

a) **WHPA A and B** (vulnerability score of 10) – Deloro, Madoc, Peats Point, Point Anne and Tweed;

b) **IPZ 1** (vulnerability score of 10) – Picton, Point Anne and Ameliasburgh; and

c) **Issues Contributing Area** – Madoc and Tweed.

Tools: Specify Action pursuant to Section 26(1)(iv) of Ontario Regulation 287/07.

Legal Effect: Must Conform (See Appendix C, List E)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect and in accordance with the Ontario Building Code.

Note: The Ontario Building Code allows municipalities to start inspections upon approval of an Assessment Report. Each septic system in these zones must be inspected every five years.

Monitoring Policy (See Appendix C, List F):

The municipality shall prepare a report for the previous calendar year to the Quinte Source Protection Authority by February 1st of each year summarizing:

a) The number of inspections conducted;

b) The number and location of septic systems identified as non-compliant using the Ministry of Municipal Affairs and Housing On-Site Sewage Management Inspection protocol; and
c) A description of any identified deficiencies in the private sewage systems, and the compliance and enforcement action taken to achieve compliance.

Policy 2-3-F: New Development and Future Construction on Lots of Record with Proposed Sewage Systems (less than 10,000 litres/day and greater than 10,000 litres/day)

The municipality shall prohibit or discourage development based on future private onsite sewage systems where they would be significant drinking water threats. To accomplish this each municipality shall:

1) Review its Official Plan in consultation with the Source Protection Authority for its appropriateness and completeness of dealing with the development of land holdings with onsite sewage systems in areas where they would be significant drinking water threats;
2) Following the review of 1) above, prepare a draft official plan amendment (or include within five year update of same) that will include policies and mapping to discourage the development of new septic systems in these areas;
3) Review its comprehensive zoning by-law with the Source Protection Authority for its appropriateness and completeness for dealing with the development of land holdings with onsite sewage systems in areas where they would be significant drinking water threats;
4) Following the review of 3) above, prepare a draft zoning by-law amendment (or include as part of an update of the by-law) that will include zone provisions and regulations and mapping to appropriately regulate development in these areas; and
5) In cooperation with the Quinte Region Source Protection Authority, assess applications for development in areas where sewage systems would be a significant drinking water threat which may include the requirement of one or more of the following to be prepared by a qualified professional:
    i. Hydrogeological study,
    ii. Engineered sewage system design, and
    iii. Best management practices and site design.

The municipality shall only approve future development of onsite sewage systems when the above steps demonstrate that a future sewage system can be adequately managed and will not adversely impact the municipal water supply.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

a) **WHPA A and B** (vulnerability score of 10) – Deloro, Madoc, Peats Point, Point Anne and Tweed;

b) **IPZ 1** (vulnerability score of 10) – Picton, Point Anne and Ameliasburgh; and

c) **Issues Contributing Area** – Madoc and Tweed.

Tools: Land Use Planning pursuant to the *Planning Act* and Section 39(1)(a) of the *Clean Water Act, 2006.*

Legal Effect: Must Conform (See Appendix C, List A)

Effective Date: The policy will be implemented when the Plan, or any plan amendment, as applicable, takes effect**.** Official Plans must be updated no later than the date of their next five year review required under Section 26 of the *Planning Act* and zoning by-laws must be updated within three years of the Official Plan amendments to bring them into conformity with the Official Plan.

Monitoring Policy (See Appendix C, List F):

The municipality shall prepare a report for the previous calendar year to the Quinte Source Protection Authority by February 1st of each year summarizing the following:

a) Documentation on how the policy was implemented; and
b) Copies of applications and approvals for new sewage systems.

Policy 2-4-E & F: Prescribed Instrument for Management of Existing and Future Large Sewage Systems with Design Capacity Greater than 10,000 litres/day

Where existing and future onsite sewage systems with a design capacity greater than 10,000 litres per day that have or require a Certificate of Approval/Environmental Compliance Approval under the *Ontario Water Resources Act* and could be a significant threat, the Ministry of the Environment shall complete the following:

Existing Systems

If Policy 2-1-E & F cannot be met, then the Ministry shall:

1) Review and consider including adequate terms and conditions to address the drinking water threat including an emergency plan in the event of a failure of the system; and
2) Review and consider including requirements for onsite monitoring to ensure that the system is functioning as designed and require the proponent to have the system inspected regularly using a standard equal to or greater than the inspection protocols of the 'On-Site Sewage Maintenance Inspection', document dated March 2011 as amended from time to time, developed by the Ministry of Municipal Affairs and Housing.

Future Systems

If Policy 2-1-E & F cannot be met and where municipal studies have shown that an onsite sewage system can be supported by the area (Policy 2-3-F), then the Ministry shall:

1) Consider adequate terms and conditions, including an emergency plan in the event of a failure of the system, to ensure that the system does not become a significant drinking water threat; and
2) Consider terms and conditions to include requirements for onsite monitoring to ensure that the system is functioning as designed and require the proponent to have the system inspected regularly using a standard equal to or greater than the inspection protocols of the 'On-Site Sewage Maintenance Inspection', document dated March 2011 as amended from time to time, developed by the Ministry of Municipal Affairs and Housing.

Implementer: Ministry of the Environment

Applicable Areas: This policy applies to the following areas:

a) **WHPA A and B** (vulnerability score of 10) – Deloro, Madoc, Peats Point, Point Anne and Tweed;

b) **IPZ 1** (vulnerability score of 10) – Picton, Point Anne and Ameliasburgh; and

c) **Issues Contributing Area** – Madoc and Tweed.

Tools: Prescribed Instrument pursuant to Sections 39 and 43(1) of the *Clean Water Act, 2006.*

Legal Effect: Must Conform (See Appendix C, List C)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities and within 3 years for existing activities.

Monitoring Policy (See Appendix C, List F):

The Ministry shall prepare an annual summary of the actions it has taken to achieve the outcomes of this Source Protection Plan policy and make that report available to the Quinte Source Protection Authority February 1st each year.

Policy 2-5-E: Prescribed Instrument for Existing Sewage Infrastructure (sanitary sewer networks/pipes, pumping stations, stormwater ponds, Sewage Treatment Plant (STP) storage tanks, effluent discharges, and by-pass discharges)

Where existing sewage infrastructure is a significant drinking water threat the Ministry of the Environment shall ensure that the prescribed instrument (Certificate of Approval or Environmental Compliance Approval) include appropriate terms and conditions so that it ceases to be a significant drinking water threat.

The Director shall consider including conditions within the prescribed instrument to inspect sewage infrastructure to ensure it is functioning as designed and inclusion of an Emergency Plan.

Implementer: Ministry of the Environment

Applicable Areas: This policy applies to the following areas:

a) **Sanitary Sewer Networks/Pipes:**
WHPA A and B (vulnerability score of 10) – Deloro, Madoc and Tweed;
IPZ 1 (vulnerability score of 10) – Picton and
Issues Contributing Area –Tweed. .

b) **Pumping Stations and STP Storage Tanks:**
WHPA A, B and C (vulnerability score of 8 or greater) – Deloro, Madoc and Tweed;
IPZ 1 and 2 (vulnerability score of 9 or higher) – Picton (IPZ 1 and 2), Deseronto (IPZ 1), Napanee (IPZ 1) and Belleville (IPZ 1) and
Issues Contributing Area –Tweed.
.

c) **Stormwater Ponds, Effluent Discharges, and By-pass discharges:**
IPZ 1, 2 and 3 (vulnerability score of 8 or higher) – Picton (IPZ 1, 2 and 3a), Deseronto (IPZ 1 and 2), Napanee (IPZ 1 and 2) ,Belleville (IPZ 1 and 2) and Bayside (IPZ 1).

Tools: Prescribed Instrument pursuant to Section 43 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List C)

Effective Date: Within three years of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Policy (See Appendix C, List F):

The Ministry shall prepare an annual summary of the actions it has taken to achieve the outcomes of this Source Protection Plan policy and make that report available to the Quinte Source Protection Authority February 1st each year.

Policy 2-6-F: Prescribed Instrument for Management of Future Sewage Infrastructure (sanitary sewer networks, pumping stations, stormwater ponds, STP storage tanks, effluent discharges, and by-pass discharges)

Where the establishment of future Sewage Infrastructure would be a significant drinking water threat the Ministry of the Environment shall ensure the Prescribed Instrument includes appropriate terms and conditions to ensure it does not become a significant drinking water threat.

The Director shall consider the following:

1) That the proposed activity is not prohibited by Policy 2-8-F;
2) That the design includes requirements for Level 1 (as per the Ministry of the Environment's Stormwater Management and Planning Design Manual, 2003 as amended from time to time) treatment of stormwater prior to infiltration in stormwater management facilities when such a structure is being constructed in the WHPA A or B;
3) That the design includes requirements for 0.5 metre freeboard and emergency spillway to pass peak inflow without overtopping for all stormwater management facilities located in vulnerable areas that would be a significant threat;
4) Including an Emergency Plan;
5) That standby power is available at lift stations in the event of a power failure; and
6) That any new sanitary sewer and associated sanitary sewer service to the property line be hydrostatic tested to ensure compliance with *Ontario Provincial Standards for Roads and Public Works* Section 410.

Implementer: Ministry of the Environment

Applicable Areas: This policy applies to the following areas:

a) **Sanitary Sewer Networks/Pipes:**
WHPA A and B (vulnerability score of 10) – Deloro, Peats Point, Point Anne, Madoc and Tweed;
IPZ 1 (vulnerability score of 10) – Picton, Point Anne and Ameliasburgh; and
Issues Contributing Area – Madoc and Tweed.

b) **Pumping Stations and STP Storage Tanks:**
WHPA A and, B and C (vulnerability score of 8 or greater) – Deloro, Madoc, Peats Point and Tweed;
IPZ 1 (vulnerability score of 9 or higher) – Picton, Ameliasburgh, Point Anne, Deseronto and Belleville;

IPZ 2 (vulnerability score of 9 or higher) – Picton;
Issues Contributing Area – Madoc and Tweed.

c) **Stormwater Ponds, Effluent Discharges, and By-pass discharges:**
WHPA A and B (vulnerability score of 10) – Deloro, Peats Point, Point Anne, Madoc and Tweed;
IPZ 1 (vulnerability score of 8 or higher) – Picton, Ameliasburgh, Deseronto, Point Anne, Napanee, Belleville and Bayside;
IPZ 2 (vulnerability score of 9 or higher) – Picton;
IPZ 3 (vulnerability score of 8 or higher) – Picton;
WHPA E (vulnerability score of 8.1) – Madoc and Peats Point; and
Issues Contributing Area – Madoc and Tweed.

Tools: Prescribed Instrument pursuant to Section 39 of the *Clean Water Act, 2006.*

Legal Effect: Must Conform (See Appendix C, List C)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect.

Monitoring Policy (See Appendix C, List F):

The Ministry shall prepare an annual summary of the actions it has taken to achieve the outcomes of this Source Protection Plan policy and make that report available to the Quinte Source Protection Authority February 1st each year.

Policy 2-7-E: Managing Existing Sewage Infrastructure

For Existing Sewage Infrastructure where there is an existing significant threat the municipality shall:

1) Establish and/or maintain a regular inspection and maintenance program of the sewage infrastructure;
2) Respond to repair or replace any deficiencies noted in the inspection;
3) Review operational guidelines for the system to reduce the risk of bypasses;
4) Immediately contact the operators of the drinking water system if a bypass takes place in the vulnerable area;
5) Upgrade any infrastructure that is deficient or failing to meet effluent targets requirements;
6) Review and, if necessary, update the emergency plan for the system annually;
7) Encourage the separation of any existing combined sewers; and
8) Develop and/or continue to implement programs to reduce Inflow/infiltration to the sanitary sewer system and related infrastructure.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

a) **Sanitary Sewer Networks/Pipes:**
WHPA A and B (vulnerability score of 10) – Deloro, Madoc and Tweed;
IPZ 1 (vulnerability score of 10) – Picton; and
Issues Contributing Area – Madoc and Tweed.

b) **Pumping Stations and STP Storage Tanks:**
WHPA A and, B and C (vulnerability score of 8 or greater) – Deloro, Madoc and Tweed; and

IPZ 1 and 2 (vulnerability score of 9 or higher) – Picton (IPZ 1 and 2), Deseronto (IPZ 1) and Belleville (IPZ 1).

c) **Stormwater Ponds, Effluent Discharges, and By-pass discharges:**
IPZ 1, 2 and 3 (vulnerability score of 8 or higher) – Picton.

Tools: Specify Action pursuant to Section 26 of Ontario Regulation 287/07.

Legal Effect: Must Conform (See Appendix C, List E)

Effective Date: Within one year of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Policy (See Appendix C, List F):

By February 1st of each year the municipality shall provide to the Quinte Source Protection Authority all records of the inspection and maintenance program and report on the measures taken to repair or replace identified deficiencies, during the previous calendar year.

Policy 2-8-F: Land Use Planning for Prohibition of New Sewage Treatment Plants

Sewage Treatment Plants are prohibited in the vulnerable areas where they would be significant drinking water threats if proposed in the future.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

a) **WHPA A and B** (vulnerability score of 10) – Deloro, Peats Point, Point Anne, Madoc and Tweed;

b) **IPZ 1** (vulnerability score of 8 or higher) – Picton, Ameliasburgh, Deseronto, Point Anne, Napanee, Belleville and Bayside;

c) **IPZ 2** (vulnerability score of 8 or higher) – Picton, Ameliasburgh, Deseronto, Point Anne, Napanee and Belleville;

d) **IPZ 3** (vulnerability score of 8 or higher) – Picton;

e) **WHPA E** (vulnerability score of 8.1) – Madoc and Peats Point; and

f) **Issues Contributing Area** – Madoc and Tweed.

Tools: Land Use Planning pursuant to the *Planning Act* and Section 39(1)(a) of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List A)

Effective Date: The policy will be implemented when the Plan, or any plan amendment, as applicable, takes effect**.** Official Plans must be updated no later than the date of their next five year review required under Section 26 of the *Planning Act* and zoning by-laws must be updated within three years of the Official Plan amendments to bring them into conformity with the Official Plan.

Monitoring Policy (See Appendix C, List F):

The municipality shall provide records for the previous calendar year, of any proposed sewage treatment plants and provide the Quinte Source Protection Authority by February 1st of each year, and include mapping indicating that this proposed plant is now outside the vulnerable area.

Agricultural Policies

Agricultural activities are considered to be a threat to drinking water due to the potential for leaching of contaminants such as nitrogen, phosphorus, pesticides and bacteria into ground and surface water. Given the largely rural nature of the Quinte Region, agricultural activities are widespread throughout, however the number of such activities that are a significant threat within vulnerable areas of municipal drinking water systems is relatively small.

Policies have been developed by the Quinte Source Protection Committee to deal with both existing and future agricultural activities that are or would be significant drinking water threats in the vulnerable areas. There are a number of tools or means of dealing with the drinking water threats that were available to the Committee. The general approach was to raise awareness about drinking water source protection in the agricultural community and manage both existing and future threats. Prohibition of activities was only selected for small areas close to municipal wells. The management and prohibition of agricultural activities is considered to be relatively consistent with the *Nutrient Management Act, 2002*. However, the *Nutrient Management Act, 2002* does not apply to smaller farms. By prohibiting agricultural activities that are a significant threat in the WHPA A the Committee applied the intent of the *Nutrient Management Act, 2002* equitably to all farms. Specific details of the approach are provided in the actual agricultural policies.

For further details regarding policy development and rationale, refer to the accompanying Explanatory Document.

Policy 3-1-E & F: Prohibition of Agricultural Activities

The following existing and future agricultural activities located in the Wellhead Protection Area A that could be significant drinking water threats are prohibited and are designated for the purpose of Section 57 of the *Clean Water Act*:

- The application of agricultural source material (ASM);
- The handling and storage of agricultural source material;
- The application of non agricultural source material (NASM) (including treated septage);
- The handling and storage of non agricultural source material (including treated septage);
- The application of commercial fertilizer to land;
- The storage of commercial fertilizer;
- The application of pesticides to land;
- The handling and storage of pesticides; and
- The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

WHPA A (vulnerability score of 10) – Deloro, Madoc, Peats Point, Point Anne and Tweed.

Tools: Prohibition pursuant to Section 57 of the *Clean Water Act, 2006.*

Legal Effect: Must Conform (See Appendix C, List G)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities and within 2 years for existing activities.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006*.

Policy 3-2-E & F: Risk Management Plan for Managing Agricultural Activities (Agricultural Source Material (ASM), Non Agricultural Source Material (NASM), Grazing, Pasturing, Outdoor Confinement, Commercial Fertilizer and Pesticides)

The following existing and future agricultural activities in Intake Protection Zones and Wellhead Protection Areas (other than WHPA A) where they could be significant drinking water threats require a risk management plan and are therefore designated for the purposes of Section 58 of the *Clean Water Act, 2006*:

- The application of agricultural source material (ASM);
- The handling and storage of agricultural source material;
- The application of non agricultural source material (NASM) (including treated septage);
- The handling and storage of non agricultural source material (including treated septage);
- The application of commercial fertilizer to land;
- The storage of commercial fertilizer;
- The application of pesticides to land;
- The handling and storage of pesticides; and
- The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard.

The risk management official must establish a risk management plan for agricultural operations in the applicable areas. The risk management plan shall include, as a minimum:

1) Existing risk management measures that may already be in place. Such measures include an environmental farm plan, nutrient management plan, strategy, or other existing risk reduction measures in place to manage the activity;
2) Consideration of existing *Nutrient Management Act, 2002* standards and recognized environmental agricultural practices;
3) The risk management measures most suitable to reduce the risk posed by the activity;
4) The timing of plan implementation;
5) Consideration of environmental features and the location of the following:
    i. Vulnerable areas,
    ii. Watercourses,
    iii. Surface and subsurface drains including tile drainage and catch basins,
    iv. Water wells (both used and unused),
    v. Livestock confinement areas,
    vi. Storage (permanent and temporary) for both agricultural and non agricultural source material,
    vii. Maintenance facilities including pesticide, fertilizer, chemical and fuel storages,

viii. Areas for the application of pesticides, commercial fertilizers, agricultural source material and non agricultural source material;

6) Setbacks from surface water for application of ASM within IPZs and WHPA E. These setbacks are to be established in reference to requirements of the *Nutrient Management Act, 2002*, Best Management Practices and site conditions (e.g. land slope, soil permeability and crop type, application method and vegetated buffers);
7) Protocols and emergency response plans to be followed in the event of a spill of fuel, ASM, NASM, chemicals or pesticides, and any other measures necessary to reduce the risk of a release to the environment;
8) Monitoring and reporting requirements;
9) A procedure to address any change of activities or operations on the property that would warrant an update or change in the risk management plan;
10) An appropriate inspection cycle to monitor compliance with and effectiveness of the risk management plan; and
11) A provision in reference to Section 60 of Ontario Regulation 287/07 indicating that the risk management plan may not be transferred to another person without the written consent of the risk management official.

In the Issues Contributing Area for Tweed, the risk management plan shall include measures to ensure the application rates, timing and location are appropriate to ensure crop uptake of, and to reduce the potential for Nitrate runoff or infiltration. Records retention (i.e. soil sampling prior to applying nitrates) and reporting shall be required to confirm.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

a) **Application of ASM, Storage of ASM, Application of NASM, Handling and Storage of NASM, livestock grazing, pasturing, outdoor confinement:**
WHPA B, E and IPZ 1 and 2 (vulnerability score of 8 or greater) – Deloro (WHPA B), Madoc (WHPA B and E), Peats Point (WHPA B and E), Point Anne (WHPA B and IPZ 1 and 2), Tweed (WHPA B), Picton (IPZ 1 and 2), Ameliasburgh (IPZ 1 and 2), Belleville (IPZ 1 and 2), Deseronto (IPZ 1 and 2), Napanee (IPZ 1 and 2) and Bayside (IPZ 1) and
Issues Contributing Area – Madoc and Tweed.

b) **Application of Pesticide to Land:**

WHPA B, E and IPZ 1 and 2 (vulnerability score of 8.1 or greater) – Deloro (WHPA B), Madoc (WHPA B and E), Peats Point (WHPA B and E), Point Anne (WHPA B and IPZ 1), Tweed (WHPA B), Picton (IPZ 1 and 2), Ameliasburgh (IPZ 1), Belleville (IPZ 1 and 2), Deseronto (IPZ 1 and 2) and Napanee (IPZ 1 and 2).

c) **Handling and Storage of Pesticide:**
WHPA B and IPZ 1 and 2 (vulnerability score of 9 or greater) – Deloro (WHPA B), Madoc (WHPA B), Peats Point (WHPA B), Point Anne (WHPA B and IPZ 1), Tweed (WHPA B), Picton (IPZ 1 and 2), Ameliasburgh (IPZ 1), Belleville (IPZ 1), Deseronto (IPZ 1) and Napanee (IPZ 1).

d) **Application of Commercial Fertilizer to Land:**
WHPA B and IPZ 1 and 2 (vulnerability score of 9 or greater) – Deloro (WHPA B), Madoc (WHPA B), Peats Point (WHPA B), Point Anne (WHPA B and IPZ 1), Tweed (WHPA B), Picton (IPZ 1 and 2), Ameliasburgh (IPZ 1), Belleville (IPZ 1), Deseronto (IPZ 1) and Napanee (IPZ 1) and
Issues Contributing Area – Tweed.

e) **Handling and Storage of Commercial Fertilizer:**
WHPA B and IPZ 1 (vulnerability score of 10) –
Deloro (WHPA B), Madoc (WHPA B), Peats Point (WHPA B), Point Anne (WHPA B and IPZ 1), Tweed (WHPA B), Picton (IPZ 1) and Ameliasburgh (IPZ 1) and
Issues Contributing Area – Tweed.

Tools: Risk Management Plan pursuant to Section 58 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List H)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities, within three years for existing activities and within five years for existing activities in the Issues Contributing Area.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006*.

Policy 3-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for Agricultural Activities

To assist the municipality with identifying areas where agricultural activities are prohibited (Policy 3-1-E & F) or require risk management plans (Policy 3-2-E & F), all land uses in the applicable areas are designated for the purpose of Section 59 (restricted land use) of the *Clean Water Act, 2006*.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

a) **Application of Agricultural Source Material (ASM), Storage of ASM, Application of Non-Agricultural Source Material (NASM), Handling and Storage of NASM, livestock grazing, pasturing, outdoor confinement:**
WHPA A, B, E and IPZ 1 and 2 (vulnerability score of 8 or greater) – Deloro (WHPA A and B), Madoc (WHPA A, B and E), Peats Point (WHPA A, B and E), Point Anne (WHPA A and B and IPZ 1 and 2), Tweed (WHPA A and B), Picton (IPZ 1 and 2), Ameliasburgh (IPZ 1 and 2), Belleville (IPZ 1 and 2), Deseronto (IPZ 1 and 2), Napanee (IPZ 1 and 2) and Bayside (IPZ 1) and
Issues Contributing Area – Madoc and Tweed.

b) **Application of Pesticide to Land:**
WHPA A, B, E and IPZ 1 and 2 (vulnerability score of 8.1 or greater) – Deloro (WHPA A and B), Madoc (WHPA A, B and E), Peats Point (WHPA A, B and E), Point Anne (WHPA A and B and IPZ 1), Tweed (WHPA A and B), Picton (IPZ 1 and 2), Ameliasburgh (IPZ 1), Belleville (IPZ 1 and 2), Deseronto (IPZ 1 and 2) and Napanee (IPZ 1 and 2).

c) **Handling and Storage of Pesticide:**
WHPA A, B and IPZ 1 and 2 (vulnerability score of 9 or greater) – Deloro (WHPA A and B), Madoc (WHPA A and B), Peats Point (WHPA A and B), Point Anne (WHPA A and B and IPZ 1), Tweed (WHPA A and B), Picton (IPZ 1 and 2), Ameliasburgh (IPZ 1), Belleville (IPZ 1), Deseronto (IPZ 1) and Napanee (IPZ 1).

d) **Application of Commercial Fertilizer to Land:**
WHPA A and B and IPZ 1 and 2 (vulnerability score of 9 or greater) – Deloro (WHPA A and B), Madoc (WHPA A and B), Peats Point (WHPA A and B), Point Anne (WHPA A and B and IPZ 1), Tweed (WHPA A and B), Picton (IPZ 1 and 2), Ameliasburgh (IPZ 1), Belleville (IPZ 1), Deseronto (IPZ 1) and Napanee (IPZ 1)and

Issues Contributing Area – Tweed

e) **Handling and Storage of Commercial Fertilizer:**
WHPA A and B and IPZ 1 (vulnerability score of 10) – Deloro (WHPA A and B), Madoc (WHPA A and B), Peats Point (WHPA A and B), Point Anne (WHPA A and B and IPZ 1), Tweed (WHPA A and B), Picton (IPZ 1) and Ameliasburgh (IPZ 1)and **Issues Contributing Area** – Tweed.

Tools: Restricted Land Use pursuant to Section 59 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List A and I)

Effective Date: The policy will be implemented when the Plan, or any plan amendment, as applicable, takes effect**.** Official Plans must be updated no later than the date of their next five-year review required under Section 26 of the *Planning Act* and zoning by-laws must be updated within three years of the Official Plan amendments to bring them into conformity with the Official Plan.

Monitoring Policy (See Appendix C, List F):

The municipality shall submit an annual report to the Quinte Source Protection Authority by February 1st summarizing the actions it has taken in the previous year to implement the policy.

Policy 3-4-E & F: Prescribed Instrument for the Management of Agricultural Activities (Agricultural Source Material (ASM), Non-Agricultural Source Material (NASM), and Grazing)

Ontario Ministry of Agriculture, Food and Rural Affairs shall issue new or review and update existing Instruments for areas where existing and future agricultural activities could be a significant drinking water threat. Instruments shall contain terms and conditions to manage the activity so that it ceases to be or never becomes a significant drinking water threat. Additional measures could include implementation of best management practices, increased monitoring, and inspection frequency by the Ministry of the Environment.

In addition to any other risk management measures required through the Prescribed Instrument above, Instruments reviewed and issued within the Issues Contributing Area for Tweed, shall as a minimum ensure:

a) the application of ASM is not applied during restricted periods, or any other time when the soil is snow covered or frozen consistent with the limitations of subsection 52.2 – 52.4 of Ontario Regulation 267/03 under the Nutrient Management Act, 2002 to avoid runoff; and

b) measures are included within the prescribed instrument to ensure application rates, timing and location are appropriate for crop uptake of nitrogen and reduce potential for Nitrate runoff or infiltration, prior to applying nitrates or storing on land.

Within the Issues Contributing Area for Tweed, to reduce the risk to municipal drinking water sources from activities that are regulated under the Nutrient Management Act, where these activities are, or would be, a significant drinking water threat, the Ministry of Environment, Conservation, and Parks should consider source protection information as a criterion when setting inspection targets and priorities as part of the Ministry's on-farm compliance program.

Implementer: Ontario Ministry of Agriculture, Food and Rural Affairs and Ministry of the Environment

Applicable Areas: This policy applies to the following areas:

Application of ASM, Storage of ASM, Application of NASM, Handling and Storage of NASM, livestock grazing, pasturing, outdoor confinement:
WHPA A, B, E and IPZ 1 and 2 (vulnerability score of 8 or greater) – Deloro (WHPA A and B), Madoc (WHPA A, B and E), Peats Point (WHPA A, B and E), Point Anne (WHPA A and B and IPZ 1 and 2), Tweed (WHPA A and B), Picton (IPZ 1 and 2), Ameliasburgh (IPZ 1 and 2), Belleville (IPZ 1 and 2), Deseronto (IPZ 1 and 2), Napanee (IPZ 1 and 2) and Bayside (IPZ 1) and
Issues Contributing Area – Madoc and Tweed.

Tools: Prescribed Instrument pursuant to Sections 39(7) and 43(1) of the *Clean Water Act, 2006.*

Legal Effect: Must Conform (See Appendix C, List C)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities and within two years for existing activities.

Monitoring Policy (See Appendix C, List F):

The Ministry of Agriculture, Food & Rural Affairs and the Ministry of the Environment shall prepare annual summaries of the actions taken to achieve the outcomes of this Source Protection Plan policy and make that report available to the Quinte Source Protection Authority February 1st each year. Within the report the Ministry of Agriculture, Food and Rural Affairs should provide the number of applications for Nutrient Management Plans and Strategies received for the previous calendar year and the number and location of any Nutrient Management Plans and Strategies reviewed. The Ministry of the Environment should consider including in their report a summary of these inspections.

Aquaculture Policies

Aquaculture, also known as aquafarming, is the farming of aquatic organisms such as fish. It involves cultivation under controlled conditions in contrast to commercial fishing which is the harvesting of wild fish. Aquaculture facilities are located either in a water source or on land. These facilities may include tanks, raceways, ponds, pits and lakes and may include equipment to re-circulate the water to add oxygen and/or remove wastes.

Pathogens are identified as contaminants that could make their way into surface and groundwater as a result of the management of agricultural source material (ASM) from aquaculture, threatening the safety of drinking water sources in certain situations. In general, the province is responsible for aquaculture planning, site leasing, licenses and approvals for aquaculture sites, aquaculture training and education, the collection of statistics, the promotion of fish and aquaculture products, and the management of the industry's day-to-day operations.

The Committee has specified that the Ministries of the Environment and Natural Resources must consider the impact on drinking water sources prior to issuing approvals for any aquaculture related activities in zones where these activities would be a moderate or low threat.

For further details regarding policy development and rationale, refer to the accompanying Explanatory Document.

Policy 5-1-F: Management of Agricultural Source Material (Aquaculture) – Moderate and Low Threats

The Ministry of the Environment and the Ministry of Natural Resources should consider the potential impact on drinking water sources prior to issuing approvals for any aquaculture facilities under the *Ontario Water Resources Act* and the *Fish and Wildlife Conservation Act* in the zones where these activities would be a moderate or low threat if established in the future. These approvals should include a decommissioning plan upon closure of the facility.

Implementer: Ministry of the Environment and Ministry of Natural Resources

Applicable Areas: This policy applies to the following areas:

Moderate
IPZ 1 (vulnerability score of 9 or greater) – Belleville, Picton, Ameliasburgh, Point Anne, Deseronto and Napanee and

IPZ 2 (vulnerability score of 9 or greater) – Picton.

Low
WHPA E (vulnerability score of 8.1) – Madoc and Peats Point.

IPZ 2 (vulnerability score of 8 or 8.1) – Belleville, Point Anne, Deseronto, Napanee and Ameliasburgh.

Tools: Prescribed Instrument pursuant to Section 39 of the *Clean Water Act, 2006 for MOE.*
Specify Action pursuant to Section 26 of Ontario Regulation 287/07 for MNR

Legal Effect: Have Regard To (See Appendix C, List D) for MOE
Strategic (See Appendix C, List J) for MNR

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect.

Monitoring Policy (See Appendix C, List J):

The Ministry of the Environment and the Ministry of Natural Resources shall prepare an annual summary, if any applications were received, of the actions it has taken to achieve the outcomes of this Source Protection Plan policy and make that report available to the Quinte Source Protection Authority February 1st each year. This report should include the number of applications and any approvals issued to aquaculture operations in the Quinte Region.

Non-Agricultural Commercial Fertilizer Policies

Commercial fertilizers may threaten the safety of drinking water sources due to runoff, leaching, leaks or spills resulting from improper handling, storage or application. They are associated with many land uses including active recreational (golf courses, sports fields), institutional, industrial, commercial and residential.

The Ministry of the Environment has identified nitrogen and total phosphorus as chemicals that could affect drinking water sources under certain circumstances. Increased nitrate concentrations in groundwater sources may lead to adverse health effects while runoff rich in nutrients can lead to algae blooms in surface water that can produce toxins that are harmful to humans and animals.

The Quinte Region Source Protection Committee has created policies that call for the use of education and outreach, risk management plans, restricted land use and prohibition. The municipality will be the implementer of these policies.

For further details regarding policy development and rationale, refer to the accompanying Explanatory Document.

Policy 8-1-E & F: Prohibition of the Non-Agricultural Application of Commercial Fertilizer

The existing and future application of commercial fertilizer for non-agricultural uses is prohibited in WHPA A where it could be significant and is designated for the purposes of Section 57 of the *Clean Water Act, 2006*.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

WHPA A (vulnerability score of 10) – Deloro, Madoc, Tweed, Peats Point and Point Anne.

Tools: Pursuant to Section 57 of the *Clean Water Act, 2006.*

Legal Effect: Must Conform (See Appendix C, List G)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities and within 2 years for existing activities.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006*.

Policy 8-2-E & F: Risk Management Plan for Non-Agricultural Application of Commercial Fertilizer

The existing and future application of commercial fertilizer for non-agricultural uses, where it could be a significant drinking water threat, is designated for the purposes of Section 58 of the *Clean Water Act, 2006* and therefore requires a risk management plan. The risk management official shall establish a risk management plan for the application of commercial fertilizer in the applicable areas. The risk management plan shall contain, as a minimum:

1) Soil testing requirements to determine fertilizer application rates;
2) Best management practices for the application of commercial fertilizers;
3) Consideration of the use of slow release fertilizers;
4) Consideration of naturalizing land outside of play areas and increasing buffer zones along water courses;
5) Requirement for records for fertilizer applications be maintained;
6) Requirements for appropriate training of personnel in relevant best management practices, spill response etc.;
7) Requirements for any other measure deemed necessary to reduce the risk of a chemical release to the environment;
8) The timing of plan implementation;
9) Monitoring and reporting; and
10) A provision in reference to Section 60 of Ontario Regulation 287/07 indicating that the Plan may not be transferred to another person without the written consent of the risk management official.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

a) **WHPA B** (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point and Point Anne.

b) **IPZ 1 and 2** (vulnerability score of 9 or greater) – Belleville (IPZ 1), Picton (IPZ 1 and 2), Deseronto (IPZ 1), Ameliasburgh (IPZ 1), Napanee (IPZ 1) and Point Anne (IPZ 1).

c) **Issues Contributing Area –** Tweed.

Note that in these areas this policy is applicable to commercial use of fertilizers in parks, sports fields, golf courses etc. but not residential properties.

Tools: Risk Management Plan pursuant to Section 58 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List H)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities and within 2 years for existing activities.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006.*

Policy 8-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for the Non-Agricultural Application of Commercial Fertilizer

To assist the municipality with identifying areas where the application of commercial fertilizer for non-agricultural uses are prohibited (Policy 8-1-E & F) or require risk management plans (Policy 8-2-E & F), all land uses in the applicable areas are designated for the purpose of Section 59 (restricted land use) of the *Clean Water Act, 2006*.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

a) **Prohibition:**
WHPA A (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point and Point Anne.

b) **Risk Management Plans:**
WHPA B * (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point and Point Anne.

IPZ 1 and 2 * (vulnerability score of 9 or greater) – Belleville (IPZ 1), Picton (IPZ 1 and 2), Deseronto (IPZ 1), Ameliasburgh (IPZ 1), Napanee (IPZ 1) and Point Anne (IPZ 1)and

Issues Contributing Area – Tweed.
.

*Excluding residential use.

Tools: Restricted Land Use pursuant to Section 59 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List A and I)

Effective Date: The policy will be implemented when the Plan, or any plan amendment, as applicable, takes effect**.** Official Plans must be updated no later than the date of their next five year review required under Section 26 of the *Planning Act* and zoning by-laws must be updated within three years of the Official Plan amendments to bring them into conformity with the Official Plan.

Monitoring Policy (See Appendix C, List F):

The municipality shall submit an annual report to the Quinte Source Protection Authority by February 1st summarizing the actions it has taken to implement the policy.

Policy 9-1-F: Prohibition of Non-Agricultural Commercial Fertilizer Storage (greater than 2,500 kilograms or 2,500 litres; Nitrogen and Phosphorus)

The future storage of commercial fertilizer (greater than 2,500 kilograms or 2,500 litres; Nitrogen and Phosphorus) for non-agricultural uses is designated for the purposes of Section 57 of the *Clean Water Act, 2006* and is therefore prohibited in vulnerable areas where it would be a significant drinking water threat.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

WHPA A and IPZ 1 (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point, Point Anne, Picton and Ameliasburgh.

Tools: Prohibition pursuant to Section 57 of the *Clean Water Act, 2006.*

Legal Effect: Must Conform (See Appendix C, List G)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006*.

Policy 9-2-E & F: Risk Management Plan for Managing Handling and Storage of Non-Agricultural Commercial Fertilizer (greater than 2,500 kilograms or 2,500 litres; Nitrogen and Phosphorus)

The existing and future handling and storage of commercial fertilizer (greater than 2,500 kilograms or 2,500 litres; Nitrogen and Phosphorus) for non-agricultural uses is designated for the purposes of Section 58 of the *Clean Water Act, 2006* and therefore requires a risk management plan where it could be a significant drinking water threat. The risk management official shall establish a risk management plan for the storage and handling of commercial fertilizer in the applicable areas. The risk management plan shall contain, as a minimum:

1) Adequate measures for storage safety including proper storage facilities, leak detection and containments;
2) An emergency contingency plan;
3) Requirements for appropriate training of any personnel handling or storing commercial fertilizer;
4) Requirements for any other measure deemed necessary to reduce the risk of a release to the environment;
5) The timing of plan implementation;
6) Monitoring and reporting; and
7) A provision in reference to Section 60 of Ontario Regulation 287/07 indicating that the Plan may not be transferred to another person without the written consent of the risk management official.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

a) **Existing Fertilizer Storage**
WHPA A, B, and IPZ 1 (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point, Point Anne, Picton and Ameliasburgh and
Issues Contributing Area – Tweed.

b) **Future Fertilizer Storage**
WHPA B (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point and Point Anne and
Issues Contributing Area – Tweed.

Tools: Risk Management Plan pursuant to Section 58 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List H)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities and within 1 year for existing activities.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006*.

Policy 9-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for Handling and Storage of Non-Agricultural Commercial Fertilizer

To assist the municipality with identifying areas where the handling and storage of commercial fertilizer for non-agricultural uses is prohibited (Policy 9-1-F) or require risk management plans (Policy 9-2-E & F), all land uses in the applicable areas are designated for the purpose of Section 59 (restricted land use) of the *Clean Water Act, 2006.*

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

a) **Prohibition:**
WHPA A and IPZ 1 (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point, Point Anne, Picton and Ameliasburgh.

b) **Risk Management Plan:**
Existing Fertilizer Storage:
WHPA A (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point and Point Anne and
Issues Contributing Area – Tweed.

Existing and Future Fertilizer Storage:
WHPA B (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point and Point Anne and
Issues Contributing Area – Tweed.

Tools: Restricted Land Use pursuant to Section 59 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List A and I)

Effective Date: The policy will be implemented when the Plan, or any plan amendment, as applicable, takes effect**.** Official Plans must be updated no later than the date of their next five year review required under Section 26 of the *Planning Act* and zoning by-laws must be updated within three years of the Official Plan amendments to bring them into conformity with the Official Plan.

Monitoring Policy (See Appendix C, List F):

The municipality shall submit an annual report to the Quinte Source Protection Authority by February 1st summarizing the actions it has taken to implement the policy.

Non-Agricultural Pesticides Policies

Pesticides can threaten the safety of drinking water sources due to runoff, leaching, leaks or spills resulting from improper handling, storage or application. Pesticides are associated with many land uses including active recreational (golf courses, sports fields), institutional, industrial, commercial and residential.

There are many kinds of pesticides, but for the Drinking Water Source Protection Program, the pesticides of interest are the chemicals used to control weeds (herbicides), or fungi (fungicides), or those used as a soil fumigant to control fungi, nematodes and weeds. The chemicals of concern related to application of pesticides to land include:

- Atrazine
- Dicamba
- Dichlorophenoxy Acetic Acid (D-2,4)
- Dichloropropene – 1,3
- Glyphosate
- MCPA (2-methyl-4-chlorophenoxyacetic acid)
- MCPB (4(4-chloro-2-methylphenoxy) butanoic acid)
- Mecoprop
- Metalaxyl
- Metolachlor or s-Metolachlor
- Pendimethalin

Pesticides are potentially toxic to humans and other animals and may cause a variety of acute and delayed health effects in those exposed, including cancer.

Policies have been developed that require the use of risk management plans, restricted land use and prohibition. The municipality will be the implementer of these policies.

For further details regarding policy development and rationale, refer to the accompanying Explanatory Document.

Policy 10-1-E & F: Prohibition of the Non-Agricultural Application of Pesticides

The existing and future application of pesticide to land for non-agricultural uses is designated for the purposes of Section 57 of the *Clean Water Act, 2006* and is therefore prohibited where it could be a significant threat in the WHPA A.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

WHPA A (vulnerability score of 10) – Deloro, Madoc, Tweed, Peats Point and Point Anne.

Tools: Prohibition pursuant to Section 57 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List G)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities and within 2 years for existing activities.

Monitoring Policy (see Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006*.

Policy 10-2-E & F: Risk Management Plan for Management of Non-Agricultural Application of Pesticides

The existing and future application of pesticides for non-agricultural uses where it could be a significant threat is designated for the purposes of Section 58 of the *Clean Water Act, 2006* and requires a risk management plan. The risk management official shall establish a risk management plan for the application of pesticides in the applicable areas. The risk management plan shall contain, as a minimum:

1) Best management practices for the application of pesticides;
2) Requirements for records for pesticide applications;
3) Requirements for accreditation with the Integrated Pest Management Council of Canada;
4) Considerations for natural areas and increasing buffer zones along water courses;
5) Requirements for appropriate training of any personnel applying pesticides;
6) Any other measure deemed necessary to reduce the risk of a release to the environment;
7) The timing of plan implementation;
8) Monitoring and reporting; and
9) A reference to Section 60 of Ontario Regulation 287/07 indicating the Plan may not be transferred to another person without the written consent of the risk management official.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

a) **WHPA B** (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point and Point Anne.

b) **IPZ 1 and 2 and WHPA E** (vulnerability score of 8.1 or greater) – Belleville (IPZ 1 and 2), Picton (IPZ 1 and 2), Deseronto (IPZ 1 and 2), Ameliasburgh (IPZ 1), Napanee (IPZ 1 and 2), Point Anne (IPZ 1), Madoc (WHPA E) and Peats Point (WHPA E).

Tools: Risk Management Plan pursuant to Section 58 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List H)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities and within 2 years for existing activities.

Monitoring Policy (See Appendix C, List F):

The municipality shall submit an annual report to the Quinte Source Protection Authority by February 1st summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006*.

Policy 10-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for the Non-Agricultural Application of Pesticides

To assist the municipality with identifying areas where the application of pesticides for non-agricultural uses is prohibited (Policy 10-1-E & F) or requires a risk management plan (Policy 10-2-E & F), all land uses in the applicable areas are designated for the purpose of Section 59 (restricted land use) of the *Clean Water Act, 2006*.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

a) **Prohibition:**
WHPA A (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point and Point Anne.

b) **Risk Management Plans**:
WHPA B (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point and Point Anne.

IPZ 1 and 2 and WHPA E (vulnerability score of 8.1 or greater) – Belleville (IPZ 1 and 2), Picton (IPZ 1 and 2), Deseronto (IPZ 1 and 2), Ameliasburgh (IPZ 1), Napanee (IPZ 1 and 2), Point Anne (IPZ 1), Madoc (WHPA E) and Peats Point (WHPA E).

Tools: Restricted Land Use pursuant to Section 59 of the *Clean Water Act, 2006.*

Legal Effect: Must Conform (See Appendix C, List A and I)

Effective Date: The policy will be implemented when the Plan, or any plan amendment, as applicable, takes effect**.** Official Plans must be updated no later than the date of their next 5-year review required under Section 26 of the *Planning Act* and zoning by-laws must be updated within three years of the Official Plan amendments to bring them into conformity with the Official Plan.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the actions it has taken to implement the policy.

Policy 11-1-E & F: Prohibition of the Handling and Storage of Non-Agricultural Pesticides

The handling and storage of pesticides for non-agricultural uses is designated for the purposes of Section 57 of the *Clean Water Act, 2006* and is therefore prohibited in the applicable areas where it could be a significant drinking water threat.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

WHPA A and IPZ 1 (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point, Point Anne, Picton and Ameliasburgh.

Tools: Prohibition pursuant to Section 57 of the *Clean Water Act, 2006.*

Legal Effect: Must Conform (See Appendix C, List G)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities and within 2 years for existing activities.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006*.

Policy 11-2-E & F: Risk Management Plan for the Management of Handling and Storage of Non-Agricultural Pesticides

The existing and future handling and storage of pesticides for non-agricultural uses is designated for the purposes of Section 58 of the *Clean Water Act, 2006* and therefore requires a risk management plan where it could be a significant drinking water threat. The risk management official shall establish a risk management plan for the storage and handling of pesticides in the applicable areas. The risk management plan shall contain, as a minimum:

1) Adequate measures for safe storage including proper storage facilities, leak detection and containments;
2) An emergency contingency plan;
3) Requirements for appropriate training of personnel handling and storing pesticides;
4) Any other measure deemed necessary to reduce the risk of a release to the environment;
5) The timing of plan implementation;
6) Monitoring and reporting; and
7) A reference to Section 60 of Ontario Regulation 287/07 indicating the Plan may not be transferred to another person without the written consent of the risk management official.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

a) **WHPA B** (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point and Point Anne.

b) **IPZ 1 and 2** (vulnerability score of 9) – Picton (IPZ 2), Belleville (IPZ 1), Deseronto (IPZ 1) and Napanee (IPZ 1).

Tools: Risk Management Plan pursuant to Section 58 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List H)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities and within 2 years for existing activities.

Monitoring Plan (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006.*

Policy 11-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for Handling and Storage of Non-Agricultural Pesticides

To assist the municipality with identifying areas where the handling and storage of pesticides for non-agricultural uses are prohibited (Policy 11-1-E & F) or require risk management plans (Policy 11-2-E & F), all land uses in the applicable areas are designated for the purpose of Section 59 (restricted land use) of the *Clean Water Act, 2006.*

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

a) **Prohibition:**
WHPA A and IPZ 1 (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point, Point Anne, Picton and Ameliasburgh.

b) **Risk Management Plan:**
WHPA B (vulnerability score of 10) – Madoc, Tweed, Deloro, Peats Point and Point Anne.
IPZ 1 and 2 (vulnerability score of 9) – Picton (IPZ 2), Belleville (IPZ 1), Deseronto (IPZ 1) and Napanee (IPZ 1).

Tools: Restricted Land Use pursuant to Section 59 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List A and I)

Effective date: The policy will be implemented when the Plan, or any plan amendment, as applicable, takes effect**.** Official Plans must be updated no later than the date of their next five year review required under Section 26 of the *Planning Act* and zoning by-laws must be updated within three years of the Official Plan amendments to bring them into conformity with the Official Plan.

Monitoring Policy (See Appendix C, List F):

The municipality shall submit an annual report to the Quinte Source Protection Authority by February 1st summarizing the actions it has taken to implement the policy.

Road Salt Policies

Road salt has been listed as a prescribed drinking water threat under the *Clean Water Act, 2006*. The majority of road salt is used as a de-icer or an ice prevention agent. The most commonly used products are sodium chloride and calcium chloride because they are effective, inexpensive, readily available, and easy to use. The main reason road salt is considered a threat is due to the potential of these products to run off the roads and enter sources of drinking water (both ground and surface water). Road salting is required to maintain road safety and it is a common activity.

The Quinte Region Source Protection Committee has created policies that call for the use of specify action, risk management plans, restricted land use and prohibition.

For further details regarding policy development and rationale, refer to the accompanying Explanatory Document.

Policy 12-1-E & F: Salt Management Plan for Significant, Moderate, and Low Threats Related to Application of Road Salt

Where the existing and future application of road salt is a significant drinking water threat, municipalities shall prepare or, review and update their salt management plan to ensure compliance with the most up-to-date *Environment Canada's Code of Practice for the Environmental Management of Road Salts and Transportation Association of Canada* documents. Where the application of road salt is a moderate or low threat the municipality should follow the same procedure.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

a) **Significant:** Picton (IPZ 1)*****

b) **Moderate and Low:**
WHPA A, B, C and D and IPZ 1, 2 and 3(a) – Madoc, Tweed, Deloro, Peats Point, Belleville, Point Anne, Deseronto, Napanee, Ameliasburgh, Picton and Bayside. *****

***** Refer to Impervious Surface Area Maps in the Assessment Report to determine exact areas where policies apply. For Bayside refer to the Trent Conservation Coalition's Assessment Report.

Tools: Specify Action pursuant to Section 26 of Ontario Regulation 287/07.

Legal Effect: Must Conform (for significant) – See Appendix C, List E, Strategic (for moderate and low) – See Appendix C, List J

Effective Date: Within two years of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Plan (See Appendix C, List F and J):

For areas where the application of road salt is a significant threat the Municipality shall provide an up-to-date copy of their Salt Management Plan to the Quinte Source Protection Authority and shall report by February 1st if updates/changes are made to the Plan during the previous calendar year. Where the application of road salt is a moderate or low threat the municipality should follow the same procedure.

Policy 12-2-E & F: Salt Management Plan for Application of Road Salt

Where the application of road salt is a significant, moderate, or low drinking water threat the Ministry of Transportation should ensure their salt management plan is up-to-date to comply with *Environment Canada's Code of Practice for the Environmental Management of Road Salts and Transportation Association of Canada* documents.

Implementer: Ministry of Transportation

Applicable Areas: This policy applies to the following areas:

a) **Significant:** Picton (IPZ 1)*****

b) **Moderate and Low:**
WHPA A, B, C and D and IPZ 1, 2 and 3(a) – Madoc, Tweed, Deloro, Peats Point, Belleville, Point Anne, Deseronto, Napanee, Ameliasburgh, Picton and Bayside. *****

***** Refer to Impervious Surface Area Maps in the Assessment Report to determine exact areas where policies apply. For Bayside refer to the Trent Conservation Coalition's Assessment Report.

Tools: Specify Action pursuant to Section 26 of Ontario Regulation 287/07.

Legal Effect: Strategic (for significant) – See Appendix C, List K
Strategic (for moderate and low) – See Appendix C, List J

Effective Date: Within one year of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Policy (See Appendix C, List F):

The Ministry of Transportation shall provide an up-to-date copy of their Salt Management Plan to the Quinte Source Protection Authority upon request.

Policy 12-3-E & F: Risk Management Plan for the Management of Application of Road Salt

Where the existing and future application of road salt for commercial use is a significant drinking water threat, this activity is designated for the purposes of Section 58 of the *Clean Water Act, 2006* and therefore requires a risk management plan. The risk management official shall establish a risk management plan for the application of road salt. The risk management plan shall contain, as a minimum:

1) Any existing risk management measures already in place;
2) The measures most suitable to reduce the risk posed by the activity;
3) Provisions for consideration of the following:
    i. Vulnerable areas,
    ii. Water courses,
    iii. Storage facilities (permanent and temporary) for salt,
    iv. Site drainage;
4) Protocols and emergency measures to be followed in the event of a spill and any other measures deemed necessary to reduce the risk of a release to the environment;
5) Requirements for appropriate training of any personnel applying road salt;
6) The timing of plan implementation;
7) Monitoring and reporting requirements;
8) A provision that the risk management official is to be notified of any changes in operation such that the Plan can be updated; and
9) A provision in reference to Section 60 of Ontario Regulation 287/07 indicating that the Plan may not be transferred to another person without the written consent of the risk management official.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to parking lots on commercial properties and roads in the following areas:

Picton IPZ 1 (vulnerability score of 10)

Tools: Risk Management Plan pursuant to Section 58 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List H)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities and within two years for existing activities.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit an annual report by February 1st to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006*.

Policy 12-4-E & F: Restricted Land Use for the Application of Road Salt

To assist the municipality with identifying areas where the application of road salt requires a risk management plan (Policy 12-3-E & F), all paved areas in commercial land uses in the applicable areas are designated for the purpose of Section 59 (restricted land use) of the *Clean Water Act, 2006*.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

Picton IPZ 1 (vulnerability score of 10)

Tools: Restricted Land Use pursuant to Section 59 of the *Clean Water Act, 2006.*

Legal Effect: Must Conform (See Appendix C, List A and I)

Effective Date: The policy will be implemented when the Plan, or any plan amendment, as applicable, takes effect**.** Official Plans must be updated no later than the date of their next five year review required under Section 26 of the *Planning Act* and zoning by-laws must be updated within three years of the Official Plan amendments to bring them into conformity with the Official Plan.

Monitoring Policy (See Appendix C, List F):

The municipality shall submit an annual report to the Quinte Source Protection Authority by February 1st summarizing the actions it has taken to implement the policy.

Policy 13-1-E & F: Prohibition of Existing and Future Handling and Storage of Road Salt (between 500 – 5,000 tonnes and greater than 5,000 tonnes)

Where it could be a significant drinking water threat, the existing and future handling and storage of road salt is designated for the purposes of Section 57 of the *Clean Water Act, 2006* and is therefore prohibited.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

a) **WHPA A and B** (vulnerability score of 10) and **IPZ 1 and 2** (vulnerability score of 9) – Where the quantity of road salt is greater than 5,000 tonnes (Deloro, Madoc, Peats Point, Point Anne, Tweed, Belleville IPZ 1, Deseronto IPZ 1, Napanee IPZ 1, Ameliasburgh IPZ 2 and Picton IPZ 2).

b) **IPZ 1** (vulnerability score of 10) – Where the quantity of road salt is greater than 500 tonnes (Ameliasburgh, Point Anne and Picton).

Tools: Prohibition pursuant to Section 57 of the *Clean Water Act, 2006.*

Legal Effect: Must Conform (See Appendix C, List G)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities and within one year for existing activities.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006*.

Policy 13-2-E & F: Restricted Land Use for the Handling and Storage of Road Salt

To assist the municipality with identifying areas where the handling and storage of road salt are prohibited (Policy 13-1-E & F), all land uses in the applicable areas are designated for the purpose of Section 59 (restricted land use) of the *Clean Water Act, 2006*.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

a) **WHPA A and B** (vulnerability score of 10) and **IPZ 1 and 2** (vulnerability score of 9) – Where the quantity of road salt is greater than 5,000 tonnes (Deloro, Madoc, Peats Point, Point Anne, Tweed, Belleville IPZ 1, Deseronto IPZ 1, Napanee IPZ 1, Ameliasburgh IPZ 2 and Picton IPZ 2).

b) **IPZ 1** (vulnerability score of 10) – Where the quantity of road salt is greater than 500 tonnes (Ameliasburgh, Point Anne and Picton).

Tools: Restricted Land Use pursuant to Section 59 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List A and I)

Effective Date: The policy will be implemented when the Plan, or any plan amendment, as applicable, takes effect**.** Official Plans must be updated no later than the date of their next five year review required under Section 26 of the *Planning Act* and zoning by-laws must be updated within three years of the Official Plan amendments to bring them into conformity with the Official Plan.

Monitoring Policy (See Appendix C, List F):

The municipality shall submit an annual report to the Quinte Source Protection Authority by February 1st summarizing the actions it has taken to implement the policy.

Storage of Snow Policies

Snow storage has been listed as a prescribed drinking water threat under the *Clean Water Act, 2006*. Snow plowed from roads and parking lots can be contaminated with road salt, oil, grease and heavy metals from vehicles, litter, and airborne pollutants. It must therefore be stored and disposed of in an appropriate manner. Storing large quantities of snow in one location concentrates the contaminants in melt water, which results in a greater impact on the surrounding environment. If the storage area is large, a significant release of chemicals to groundwater or surface water can occur. The main source of sodium and chloride in snow is road salt. Other contaminants are generally from vehicle fluids, exhaust, brake linings and tire wear.

The Source Protection Committee has created policies that require the use of risk management plans and restricted land use to be implemented by the municipality.

For further details regarding policy development and rationale, refer to the accompanying Explanatory Document.

Policy 14-1-E & F: Risk Management Plan for the Storage of Snow

Where it could be a significant drinking water threat the storage area of snow is designated for the purposes of Section 58 of the *Clean Water Act, 2006.* The risk management official shall establish a risk management plan any future activity involving the storage of snow in vulnerable areas. The risk management plan shall contain, as a minimum:

1) The measures most suitable to reduce the risk posed by the activity as available through the Transportation Association of Canada best management practices manual;
2) Provisions for consideration of the following:
    i. Vulnerable areas,
    ii. Water courses,
    iii. Site selection and preparation,
    iv. Site drainage,
    v. Off-season maintenance,
    vi. Monitoring and record keeping,
    vii. Site decommissioning;
3) Monitoring and reporting requirements;
4) The timing of plan implementation;
5) Requirements for appropriate training of any personnel handling and removing snow;
6) An appropriate inspection cycle to monitor compliance with and effectiveness of the Plan; and
7) Include a reference to Section 60 of Ontario Regulation 287/07 indicating the Plan may not be transferred to another person without the written consent of the risk management official.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to private and public parking lots and roads in the following areas:

a) **WHPA A and B** (vulnerability score of 10) Deloro, Madoc, Peats Point, Point Anne, Tweed and **IPZ 1** (vulnerability score of 10) Ameliasburgh, Picton and Point Anne – Where the storage area is larger than 0.01 hectares.

b) **IPZ 1 and 2** (vulnerability score of 9) Ameliasburgh (IPZ 2), Picton (IPZ2), Belleville (IPZ1), Deseronto (IPZ1), and Napanee (IPZ1) – Where the storage area is larger than 1 hectare.

c) Issues Contributing Area – Tweed.

Tools: Risk Management Plan pursuant to Section 58 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List H)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities and within one year for existing activities.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006.*

Policy 14-2-E & F: Restricted Land Use for Risk Management Plans for the Storage of Snow

To assist the municipality with identifying areas where storage of snow requires a risk management plan (Policy 14-1-E & F), all land uses in the applicable areas are designated for the purpose of Section 59 (restricted land use) of the *Clean Water Act, 2006.*

Implementer: Municipality

Applicable Areas: This policy applies to private and public parking lots and roads in the following areas:

a) **WHPA A and B** (vulnerability score of 10) – Deloro, Madoc, Peats Point, Point Anne, Tweed and **IPZ 1** (vulnerability score of 10) Ameliasburgh, Picton and Point Anne.

b) **IPZ 1 and 2** (vulnerability score of 9) – Ameliasburgh (IPZ 2), Picton (IPZ2), Belleville (IPZ1), Deseronto (IPZ1) and Napanee (IPZ1)and

c) **Issues Contributing Area –** Tweed.

Tools: Restricted Land Use pursuant to Section 59 of the *Clean Water Act, 2006.*

Legal Effect: Must Conform (See Appendix C, List A and I)

Effective Date: The policy will be implemented when the Plan, or any plan amendment, as applicable, takes effect**.** Official Plans must be updated no later than the date of their next five year review required under Section 26 of the *Planning Act* and zoning by-laws must be updated within three years of the Official Plan amendments to bring them into conformity with the Official Plan.

Monitoring Policy (See Appendix C, List F):

The municipality shall submit an annual report to the Quinte Source Protection Authority by February 1st summarizing the actions it has taken to implement the policy.

Fuel Policies

The handling and storage of fuel are listed as prescribed drinking water threats under the *Clean Water Act, 2006.* These activities are considered to be a potential threat to drinking water due to the potential for spills and leaking of fuel. The need for fuel to heat homes and power vehicles and machinery means the presence of fuel storage tanks is common throughout the Quinte Region. Fuels can be highly mobile, and flow with groundwater or surface water for great distances making them difficult and very costly to clean up. Fuels are persistent in the environment. Handling and storage of fuel can be a significant threat to drinking water sources. Spills may occur during handling. Fuel storage tanks have the potential to leak and contaminate both ground and surface water. About 60 percent of Canada's contaminated sites involve petroleum hydrocarbon contamination (CCME, 2001*). Without adequate cleanup or management, these contaminants can impair municipal water sources.

Policies have been developed by the Source Protection Committee to deal with both existing and future fuel storage activities that are or would be significant drinking water threats in the vulnerable areas. There are a number of tools or means of dealing with the drinking water threats available to the Source Protection Committee. The general approach was to raise awareness about drinking water protection in the community, manage the threat from existing fuel tanks and prohibit future threats in vulnerable areas. Specific details of the approach are provided in the actual fuel storage policies.

For further details regarding policy development and rationale, refer to the accompanying Explanatory Document.

*Canadian Council of Ministers of the Environment (CCME).(April 30-May 1, 2001). Canadian Council of Ministers of the Environment, Canada-Wide Standards for Petroleum Hydrocarbons (PHC) in Soil. 8 pp.

Policy 15-1-F: Prohibition of the Future Handling and Storage of Fuel (storage tanks greater than 250 and less than 2,500 litres below grade and greater than 2,500 litres above and below grade)

The future handling and storage of fuel is designated for the purposes of Section 57 of the *Clean Water Act, 2006*.

The installation of new fuel storage tanks (greater than 250 and less than 2,500 litres) partially below and below grade is prohibited where they would be a significant drinking water threat in WHPA A.

The installation of new fuel storage tanks (greater than 2,500 litres) below or above grade is prohibited where they would be a significant drinking water threat in WHPA A and B and IPZ 1.

The replacement of existing tanks is exempt.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

a) **WHPA A** (vulnerability score of 10) – Fuel tanks of between 250 and 2,500 litres capacity installed partially below and completely below grade (Deloro, Madoc, Peats Point, Point Anne and Tweed),

b) **WHPA A, B and IPZ 1** (vulnerability score of 10) – Fuel tanks larger than 2,500 litres capacity installed below or above grade (Deloro, Madoc, Peats Point, Point Anne, Tweed, Picton and Ameliasburgh).

Tools: Prohibition pursuant to Section 57 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List G)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006*.

Policy 15-2-E & F: Management of Existing and Future Handling and Storage of Fuel (above grade storage tanks greater than 250 and less than 2,500 litres) – Moderate Drinking Water Threat

Where an 'at' or 'above' grade fuel storage tank (greater than 250 and less than 2,500 litres) could be a moderate drinking water threat, the municipality should require that tanks be replaced or installed in accordance with the *Canadian Standards Association Code* (B139, 2009) with a minimum requirement for a leak detection device and either double bottom or double walled tanks.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

WHPA A (vulnerability score of 10) – Fuel tanks of between 250 and 2,500 litres capacity installed at or above grade (Deloro, Madoc, Peats Point, Point Anne and Tweed).

Tools: Specify Action pursuant to Sections 32 and 26(1) of Ontario Regulation 287/07.

Legal Effect: Strategic (See Appendix C, List J)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities and within three years for existing activities.

Monitoring Policy (See Appendix C, List F):

The municipality shall submit a report for the Quinte Source Protection Authority by February 1st of each year to include:

a) Copies of any bylaws established to require double bottom or double walled tanks with leak detection; and
b) The number of fuel tanks that have been replaced and number of tanks that need to be upgraded to comply with the policy.

Policy 15-3-E: Risk Management Plan for Existing Handling and Storage of Fuel (storage tanks greater than 2,500 litres above and below grade)

The existing handling and storage of fuel in tanks of greater than 2,500 litres is designated for the purposes of Section 58 of the *Clean Water Act, 2006* where it is a significant drinking water threat. The risk management official shall establish a risk management plan for the handling and storage of fuel. The risk management plan shall contain, as a minimum:

1) Consideration to current approvals, precautionary measures and procedures;
2) Any changes deemed necessary to existing operating and maintenance practices;
3) Annual inspection protocols;
4) Measures for spill and secondary containments;
5) Emergency spill contingency measures;
6) Contaminant management plans where required;
7) Requirements for training and licensing;
8) The timing of plan implementation;
9) Monitoring programs and record keeping;
10) Reporting requirements; and
11) A reference to Section 60 of *Ontario Regulation 287/07* indicating the Plan may not be transferred to another person without the written consent of the risk management official.

The risk management plan will address any deficiencies in the existing measures that do not adequately manage the significant threat. Such measures would be developed in accordance with best management practices, the Ministry of the Environment Risk Management Catalogue, and relevant regulations and codes such as the Technical Standards and Safety Authority Liquid Fuel Handling Code 2007 as amended from time to time.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

WHPA A, B and IPZ 1 (vulnerability score of 10) – Deloro, Madoc, Peats Point, Point Anne, Tweed, Picton and Ameliasburgh.

Tools: Risk Management Plans pursuant to Section 58 of the *Clean Water Act, 2006.*

Legal Effect: Must Conform (See Appendix C, List H)

Effective Date: Within one year of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006.*

Policy 15-4-E: Risk Management Plan for Existing Handling and Storage of Fuel (storage tanks greater than 250 and less than 2,500 litres below and partially below grade)

The existing handling and storage of fuel in tanks of greater than 250 and less than 2,500 litres is designated for the purposes of Section 58 of the *Clean Water Act, 2006* where it is a significant drinking water threat. The risk management official shall establish a risk management plan for the handling and storage of fuel. The risk management plan shall contain, as a minimum:

1) Requirements for an annual maintenance inspection by a qualified licensed inspector (e.g. licensed oil burner technician by TSSA);
2) Requirements for correction of any deficiencies identified through the inspection; and
3) Requirements to address any deficiencies in the existing measures that do not adequately manage the existing significant threat in accordance with best management practices, the Ministry of the Environment Risk Management Catalogue, and relevant regulations and codes such as Section 13 of the Canadian Standards Association Ontario Installation Code for Oil Burning Equipment (Based on CSA B139, with Ontario Amendments) 1st edition/200 as amended from time to time.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

WHPA A (vulnerability score of 10) – Deloro, Madoc, Peats Point, Point Anne and Tweed.

Tools: Risk Management Plans pursuant to Section 58 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List H)

Effective Date: Within two years of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Policy: (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006.*

Policy 15-5-E & F: Restricted Land Use Designation Prohibition and Risk Management Plans for Handling and Storage of Fuel

To assist the municipality with identifying areas where handling and storage of fuel is prohibited (Policy 15-1-F) or require risk management plans (Policy 15-3-E and 15-4-E), all land uses in the applicable areas are designated for the purpose of Section 59 (restricted land use) of the *Clean Water Act, 2006*.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

WHPA A, B and IPZ 1 (vulnerability score of 10) – Deloro, Madoc, Peats Point, Point Anne, Tweed, Picton and Ameliasburgh.

Tools: Restricted Land Use pursuant to Section 59 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List A and I)

Effective date: The policy will be implemented when the Plan, or any plan amendment, as applicable, takes effect**.** Official Plans must be updated no later than the date of their next five year review required under Section 26 of the *Planning Act* and zoning by-laws must be updated within three years of the Official Plan amendments to bring them into conformity with the Official Plan.

Monitoring Policy (See Appendix C, List F):

The municipality shall submit an annual report to the Quinte Source Protection Authority by February 1st summarizing the actions it has taken to implement the policy.

Policy 15-6-E: Code Review for Handling and Storage of Fuel (storage tanks greater than 250 litres, installed above or below grade)

Where the handling and storage of fuel at a facility as defined in Section 1 of Ontario Regulation 213/01 is or would be a significant drinking water threat as described in Appendix B, the Ministry of Consumer Services and the Ministry of the Environment are strongly encouraged to consider source water protection during the next scheduled code review.

In addition, the TSSA is strongly encouraged to continue to include information regarding new code requirements and leak resistant technology in its communications products, and request fuel suppliers to:

> Promote to their customers the importance of regular maintenance as described in Section 13 of the Ontario Installation Code for Oil-burning Equipment to increase awareness of and compliance with this requirement (this could be accomplished by printing a reminder on the fuel bill).

Implementer: The Ministry of Consumer Services, Technical Standards and Safety Authority and Ministry of the Environment

Applicable Areas: This policy applies to the following areas:

WHPA A, B and IPZ 1 (vulnerability score of 10) – Deloro, Madoc, Peats Point, Point Anne, Tweed, Picton and Ameliasburgh.

Tools: Specify Action – Ministry of Consumer Services, Technical Standards and Safety Authority and Ministry of the Environment (Section 33 of the *Clean Water Act, 2006*).

Legal Effect: Strategic (See Appendix C, List J)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect.

Monitoring Policy (See Appendix C, List F):

The Ministry of Consumer Services shall prepare a summary of the actions it has taken to achieve the outcomes of this Source Protection Plan policy and when codes are reviewed, make the summary available to the Quinte Source Protection Authority by February 1st of the next year.

Dense Non-Aqueous Phase Liquid Policies

Dense non-aqueous phase liquids or DNAPLs are chemicals that are heavier or denser than water and do not dissolve easily in water. When spilled on the ground, these substances sink below the water table, creating contamination of the groundwater that can last for decades or centuries. DNAPLs are difficult to locate and remove from below the ground and complete cleanup is considered unattainable. Some common DNAPLs are dry cleaning chemicals, cleaning and degreasing solvents and varnishes. DNAPLs are used widely in many industries and are also found in smaller quantities in common household products like adhesives and cleaners. The most common DNAPLs are chlorinated solvents, for example, Trichloroethylene (TCE), which is used to clean metal products, and is also found in paint removers or strippers, spot removers and rug-cleaning fluids. The dense liquids that have been identified in the table of threats include:

- Dioxane-1,4
- Polycyclic Aromatic Hydrocarbons (PAHs)
- Tetrachloroethylene (PCE)
- Trichloroethylene
- Vinyl chloride (VC)

DNAPLs are considered dangerous and toxic to human health even at low levels. Some have been classified as carcinogenic to humans and animals. Because they are persistent in the environment, DNAPLs pose a threat at greater distances from wells than some other chemical threats. DNAPLs are also considered a very high risk based on the likely inability to remediate the aquifer and the time needed to replace a well. The Source Protection Committee has created policies that call for the use of education and outreach, specify action, risk management plans, restricted land use and prohibition. The municipality will be the implementer of these policies.

For further details regarding policy development and rationale, refer to the accompanying Explanatory Document.

Policy 16-1-E & F: Prohibition of Dense Non-Aqueous Phase Liquids (DNAPLs)

Where it would be a significant threat in Wellhead Protection Area A, the handling and storage of DNAPLs for commercial or industrial use is designated for the purposes of Section 57 of the *Clean Water Act, 2006* and is therefore prohibited.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

WHPA A (vulnerability score of 10) – Deloro, Madoc, Peats Point, Tweed and Point Anne.

Tools: Prohibition pursuant to Section 57 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List G)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities and within 2 years for existing activities.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006*.

Policy 16-2-E & F: Risk Management Plan for Managing the Handling and Storage of Dense Non-Aqueous Phase Liquids (DNAPLs)

The handling and storage of DNAPLs requires a risk management plan and is designated for the purposes of Section 58 of the *Clean Water Act, 2006* where it could be a significant drinking water threat. The risk management official shall establish a risk management plan for the commercial and industrial storage and handling of DNAPLs in the applicable areas. The risk management plan shall, as 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;
4) Require any other measure deemed necessary to reduce the risk of a release to the environment; and
5) Include a reference to Section 60 of Ontario Regulation 287/07 indicating the Plan may not be transferred to another person without the written consent of the risk management official.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

WHPA B and C – Deloro, Madoc, Peats Point, Tweed and Point Anne.

Tools: Risk Management Plan pursuant to Section 58 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List H)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect for future activities and within 2 years for existing activities.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006.*

Policy 16-3-E & F: Restricted Land Use for Handling and Storage of Dense Non-Aqueous Phase Liquids (DNAPLs)

To assist the municipality with identifying areas where DNAPLs are prohibited (Policy 16-1-E & F) or require risk management plans (Policy 16-2-E & F), all land uses in the applicable areas are designated for the purpose of Section 59 (restricted land use) of the *Clean Water Act, 2006*.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

WHPA A, B and C – Deloro, Madoc, Peats Point, Tweed and Point Anne.

Tools: Restricted Land Use pursuant to Section 59 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List A and I)

Effective Date: The policy will be implemented when the Plan, or any plan amendment, as applicable, takes effect**.** Official Plans must be updated no later than the date of their next five year review required under Section 26 of the *Planning Act* and zoning by-laws must be updated within three years of the Official Plan amendments to bring them into conformity with the Official Plan.

Monitoring Policy (See Appendix C, List F):

The municipality shall submit an annual report to the Quinte Source Protection Authority by February 1st summarizing the actions it has taken to implement the policy.

Organic Solvents Policies

A solvent is a substance capable of dissolving another substance to form a solution. Organic solvents contain carbon as their base (petroleum based). Organic solvents are used routinely in commercial industries. Examples are: chloroform, paint removers and other chemicals used in fungicides and pesticides. They are useful because they can dissolve oils, fats, resins, rubber, and plastics. For example, solvents can be used to dissolve dirt on machinery. They are found in paints, varnishes, lacquers, adhesives, glues, and degreasing/cleaning agents, and in the production of dyes, polymers, plastics, textiles, printing inks, agricultural products, and pharmaceuticals. Many organic solvents are recognized as carcinogens, reproductive hazards and neurotoxins.

The Source Protection Committee has created policies that call for the use of education and outreach, specify action, risk management plans, restricted land use and prohibition. The municipality will be the implementer of these policies.

For further details regarding policy development and rationale, refer to the accompanying Explanatory Document.

Policy 17-1-F: Prohibition for Future Handling and Storage of Organic Solvents

The future handling and storage of organic solvents where it would be a significant drinking water threat in WHPA A, B and IPZ 1 with a vulnerability score of 10 is designated for the purposes of Section 57 of the *Clean Water Act, 2006* and is therefore prohibited.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

WHPA A, B and IPZ 1 (vulnerability score of 10) – Deloro, Madoc, Peats Point, Point Anne, Tweed, Picton and Ameliasburgh.

Tools: Prohibition pursuant to Section 57 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List G)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006*.

Policy 17-2-E: Risk Management Plan for Handling and Storage of Organic Solvents

Where it is an existing significant drinking water threat, the handling and storage of organic solvents is designated for the purposes of Section 58 of the *Clean Water Act, 2006* and therefore requires a risk management plan. The risk management official shall establish a risk management plan for the commercial and industrial storage and handling of organic solvents in the applicable areas. The risk management plan shall contain, as a minimum:

1) Consideration for existing risk management measures;
2) Best management practices for the storage and handling of organic solvents are being used;
3) Consideration of the following:
    i. Vulnerable areas,
    ii. Water courses,
    iii. Surface drainage,
    iv. Water wells (both used and unused),
    v. Storage facilities (location, type of containment and secondary containment),
    vi. Areas where organic solvents are handled;
4) Protocols and emergency response program to be followed in the event of spill of organic solvents and any other measures deemed necessary to reduce the risk of a release to the environment;
5) Training requirements of staff in all aspects of the risk management plan;
6) The timing of plan implementation;
7) Monitoring and reporting; and
8) A reference to Section 60 of Ontario Regulation 287/07 indicating the Plan may not be transferred to another person without the written consent of the risk management official.

Implementer: Risk Management Official – Municipality

Applicable Areas: This policy applies to the following areas:

WHPA A, B and IPZ 1 (vulnerability score of 10) – Deloro, Madoc, Peats Point, Point Anne, Tweed, Picton and Ameliasburgh.

Tools: Risk Management Plans pursuant to Section 58 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List H)

Effective Date: Within two years of the Plan, or any plan amendment, as applicable, taking effect.

Monitoring Policy (See Appendix C, List F):

The risk management official shall submit a report by February 1st of each year to the Quinte Source Protection Authority summarizing the mandatory requirements for the previous calendar year, as specified in Section 65 of Ontario Regulation 287/07 under the *Clean Water Act, 2006*.

Policy 17-3-E & F: Restricted Land Use for Handling and Storage of Organic Solvents

To assist the municipality with identifying areas where organic solvents are prohibited (Policy 17-1-F) or require risk management plans (Policy 17-2-E), all land uses in the applicable areas are designated for the purpose of Section 59 (restricted land use) of the *Clean Water Act, 2006*.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

WHPA A, B and IPZ 1 (vulnerability score of 10) – Deloro, Madoc, Peats Point, Point Anne, Tweed, Picton and Ameliasburgh.

Tools: Restricted Land Use pursuant to Section 59 of the *Clean Water Act, 2006*.

Legal Effect: Must Conform (See Appendix C, List A and I)

Effective Date: The policy will be implemented when the Plan, or any plan amendment, as applicable, takes effect**.** Official Plans must be updated no later than the date of their next five year review required under Section 26 of the *Planning Act* and zoning by-laws must be updated within three years of the Official Plan amendments to bring them into conformity with the Official Plan.

Monitoring Policy (See Appendix C, List F):

The municipality shall submit an annual report to the Quinte Source Protection Authority by February 1st summarizing the actions it has taken to implement the policy.

Airplane De-icing

The management of runoff that contains chemicals used in the de-icing of aircraft has been listed as a prescribed drinking water threat under the *Clean Water Act, 2006*. The main chemical used to de-ice planes is ethylene glycol. The risk with the practice of airplane de-icing is that runoff which is not properly managed can contaminate surface water or groundwater. This can pose a threat to the drinking water supply. There are no existing aircraft de-icing activities identified in the Quinte Region that result in a significant threat to municipal drinking water supplies. In the future if an airport with de-icing facilities is proposed in a Well Head Protection Area (WHPA) A or B, or an Intake Protection Zone (IPZ) 1 or 2 with a vulnerability score of 9 or higher it will be considered a significant threat. The likelihood of this happening is small but nevertheless the Source Protection Plan needs to address that possibility.

The approach chosen was for the municipality to be involved in the development of the glycol management plan. This approach will ensure that the operators of the de-icing facility are aware of the vulnerable areas and that proper risk management and emergency measures are in place in the event of a containment breach. A specify action policy was chosen to achieve this result.

For further details regarding policy development and rationale, refer to the accompanying Explanatory Document.

Policy 18-1-F: Management of Runoff Containing Airplane De-icing Fluid

The municipality, where construction of an airport is being considered and airplane de-icing would be a significant drinking water threat, will work with the airport authority, the airport operator, the de-icing service provider, the air carriers and companies or individuals responsible for the disposal of the used de-icing fluid to ensure that the required Airplane De-Icing Fluid Management Plan addresses concerns related the drinking water supply. The plan shall include but is not limited to:

1) Contingency plans for emergency situations such as spills;
2) Details of the area where the de-icing operation will take place and the proximity to IPZs and WHPAs;
3) Details on the storage and handling of de-icing fluids;
4) Application details including operator training;
5) How the effluent will be contained;
6) How the effluent will be disposed;
7) General information on the companies that will be operating and using the de-icing facility;
8) De-icing fluid inventory control; and
9) Reporting plan – for reporting glycol use.

Implementer: Municipality

Applicable Areas: This policy applies to the following areas:

a) **WHPA A and B** (vulnerability score of 10) – Deloro, Madoc, Peats Point, Point Anne and Tweed;

b) **IPZ 1** (vulnerability score of 9 or greater) – Belleville, Picton, Ameliasburgh, Point Anne, Deseronto and Napanee; and

c) **IPZ 2** (vulnerability score of 9 or greater) – Picton.

Tools: Specify Action pursuant to Section 26 of Ontario Regulation 287/07.

Legal Effect: Must Conform (See Appendix C, List E)

Effective Date: When the Plan, or any plan amendment, as applicable, takes effect.

Monitoring Policy (See Appendix C, List F):

The municipality shall provide a copy of a report to the Quinte Source Protection Authority by February 1st of every year on the action taken by the municipality, for the previous calendar year, if an airport is developed in a zone where airplane de-icing could be a significant threat.

Chapter 6 Summary of Consultation

The preparation of the Source Protection Plan was an open and transparent process as required by the *Clean Water Act, 2006*. Source Protection Committee meetings were open to the public and media. A project website, www.quintesourcewater.ca, provided background information, digital copies of documents and studies, a calendar of Source Protection Committee and public meeting dates, meeting summaries and Committee minutes, links to the *Clean Water Act, 2006* and related regulations, and other information and related links.

This summary of consultation reviews the process of local consultation undertaken by the Quinte Region Source Protection Committee, Quinte Source Protection Authority and Quinte Conservation during the preparation of the Source Protection Plan and its supporting studies. It documents the consultation process for the:

- Terms of Reference;
- Assessment Report; and
- Source Protection Plan.

During preparation of these documents there was consultation with municipalities, provincial ministries, stakeholders and the general public. Consultation undertaken met and exceeded the requirements for consultation set out in the *Clean Water Act, 2006* and Ontario Regulation 287/07.

6.1 Terms of Reference

The Source Protection Committee prepared the Draft Proposed Terms of Reference and made it available on May 12, 2008 for a 35 day comment period that ended on June 17, 2008. Public meetings were held at Quinte Conservation on June 4, 2008 from 2:00 to 4:00 pm and from 7:00 to 9:00 pm. The Committee reviewed and finalized the document and, as required by the *Clean Water Act, 2006* and its regulations, it was submitted to the Source Protection Authority and then re-circulated for a 30 day comment period. Written comments were requested by Friday, September 19, 2008. In October 2008, the Proposed Terms of Reference was submitted, along with comments received during the second round of consultation, to the Ontario Minister of the Environment for review and approval. The Terms of Reference was approved in February, 2009. The Terms of Reference is available at www.quintesourcewater.ca or at the Quinte Conservation office.

6.2 Assessment Report

The following is a summary of the consultation undertaken for the Assessment Report, the Updated Assessment Report, 2011 and the Updated Assessment Report, 2014 and the Updated Assessment Report 2019. For complete details please refer to Appendix G in the Assessment Report available at www.quintesourcewater.ca.

During the preparation of the Assessment Report, preliminary consultation was held on the technical studies (more than required by regulation). Presentations were made to municipal councils once the vulnerability mapping was completed in early 2009. Seven public open houses were held in May and June of 2009. In January and February of 2010 all landowners in the most vulnerable areas were contacted by mail. They were provided with information about the source water protection project and over 40 percent of those contacted completed and returned a questionnaire.

Required consultation for the Assessment Report as per Ontario Regulation 287/07 was held during May, June and July of 2010. The Assessment Report was submitted to the Director of the Ministry of the Environment on August 13, 2010.

Work on an Updated Assessment Report began in 2010. Consultation as per Ontario Regulation 288/07 was held in April, May and June 2011 and the Report was submitted to the Director of the Ministry of the Environment on June 3, 2011. It was approved October 13, 2011.

The Assessment Report was updated again in 2013 to reflect threats verification and the issues based threat technical work related to the Village of Madoc wells. Concurrent public consultation for both the updated Assessment Report and the updated Proposed Source Protection Plan was held in November and December 2013.

The assessment report was updated in 2019. The update was required because intake protection zone maps for the City of Belleville and Town of Picton were revised to include recently developed lands. Concurrent public consultation for both the Assessment Report and the Approved Source Protection Plan was held in November and December 2016. The update was also required because the Village of Madoc was experiencing water supply challenges with Whytock municipal well and required an additional water source. The solution was to drill a new production well approximately 350 metres west of the existing Whytock well, the construction of a new water treatment building adjacent to the new well, and the decommissioning of the existing Whytock well. Concurrent public consultation was held in June and July 2019.

The assessment report was updated again in 2022. This amendment was required due to a rising trend of nitrate levels in the groundwater source for the Tweed Municipal Well System. This amendment included updates to the Assessment Report, an addendum to the Tweed Village Source Protection Study - Drinking Water Issues & Threats Final Report, and applicable maps to include the identification of the nitrate Issue, and delineation of an Issues Contributing Area.

6.3 Source Protection Plan

The Source Protection Committee and project staff at Quinte Conservation followed requirements in the *Clean Water Act*, 2006 and its regulations (O.Reg. 287/07) and adopted an approach through which decision-makers, implementers, local experts and residents could offer input into the planning process. Details showing how consultation affected policy development may be found in the accompanying Explanatory Document.

The Source Protection Committee actively consulted with municipalities (Table 6.1), provincial ministries, affected landowners, adjacent source protection regions, the Source Protection Authority and specialized working groups whose members were local experts on septic systems, fuel handling and storage, agriculture, municipal planning, emergency response and water system operation.

Table 6.1: 2011 Meetings with Municipal Councils and Staff

Date	Council or Staff Meeting
March 16, 2011	Frontenac County Council (with Cataraqui Area, Mississippi Rideau Region)
April 27, 2011	Lennox and Addington County Council (with Cataraqui Area)
May 3, 2011	Marmora and Lake Council
May 9, 2011	Belleville Council
May 10, 2011	Tweed Council
May 24, 2011	Greater Napanee Council
May 25, 2011	Centre Hastings Council
May 26, 2011	Prince Edward County Council
May 31, 2011	Belleville - staff
June 13, 2011	Deseronto Council
June 16, 2011	Quinte West Council
July 4, 2011	Madoc Township Council
November 8, 2011	Municipal Workshop on draft policies
November 15, 2011	Marmora and Lake Council (with Crowe Valley Conservation)
November 21, 2011	Tyendinaga Council
November 23, 2011	Hastings County Planning staff (with Lower Trent Conservation)

Planning Begins

A notice that planning was beginning was sent in the spring of 2011 to all those as required in Ontario Regulation 287/07 including persons known to the Source Protection Committee to be engaging in an activity that is or would be a significant drinking water threat.

Working Groups

The contribution of the working groups (Table 6.2) is noted in Section 3.3 of this Plan and also discussed in the Explanatory Document in Section 2.4. Five working groups were established. Three represented the most prevalent threat categories in the Quinte region: fuel, septic systems and agriculture. The other two working groups were municipal planning and emergency response and water treatment plant operators.

These groups were established by the Committee to obtain the expertise of local specialists with experience in the nature of the threat activity and how the threats may be addressed. The assistance and contribution of these local experts ensured that the Committee obtained input on draft policies concepts from those with local knowledge regarding the effect of the policies. Working groups provided valuable feedback to the Committee as policies evolved and were

refined. Consultation with the working groups occurred prior to the required pre-consultation on the draft policies.

Table 6.2: Meetings of Working Groups

Date	Group Name
May 27, 2008	Municipal Planners
November 18, 2008	Municipal Planners
April 21, 2009	Municipal Planners
September 10, 2009	Municipal Planners
November 4, 2010	Municipal Planners
December 6, 2010	Emergency Response and System Operators
January 20, 2011	Septic
February 3, 2011	Municipal Planners
February 18, 2011	Fuel
March 23, 2011	Agriculture
April 27, 2011	Consultation with member of Fuel Working Group
May 11, 2011	Sub group of Municipal Planners
June 28, 2011	Consultation with member of Fuel Working Group
August 15, 2011	Agriculture

6.3.1 Pre-Consultation on Draft Policies

The Source Protection Committee consulted on the preliminary draft source protection policies with the policy implementers, in accordance with Ontario Regulation 287/07, in the fall of 2011. The purpose was to identify any barriers or problems with implementation prior to taking the draft policies to the general public for comment.

Customized pre-consultation packages containing the draft policies and supporting background materials were sent as required by Ontario Regulation 287/07 to the policy implementers in October, 2011. A summary of the comments received and more information is available in the accompanying Explanatory Document.

6.3.2 Consultation on Draft Proposed Source Protection Plan

Formal consultation on the Draft Proposed Source Protection Plan began on April 12, 2012. In accordance with the requirements of Ontario Regulation 287/07, the notice and Draft Proposed Source Protection Plan were posted at www.quintesourcewater.ca (Figure 6.1). Within two hours of the posting of the Draft Plan, website statistics showed that there were more than 125 hits to that page. By the end of the 36 day comment period that ran until May 18, 2012, there were almost 500 views or hits to the page.

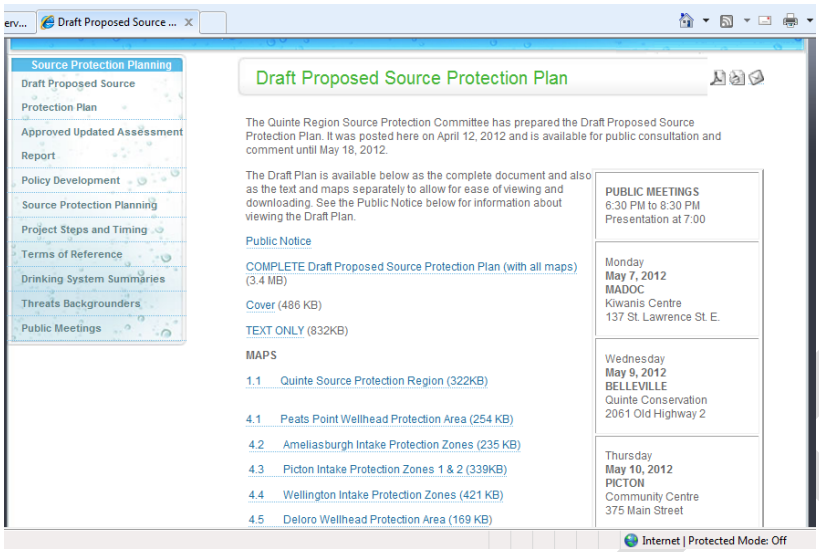
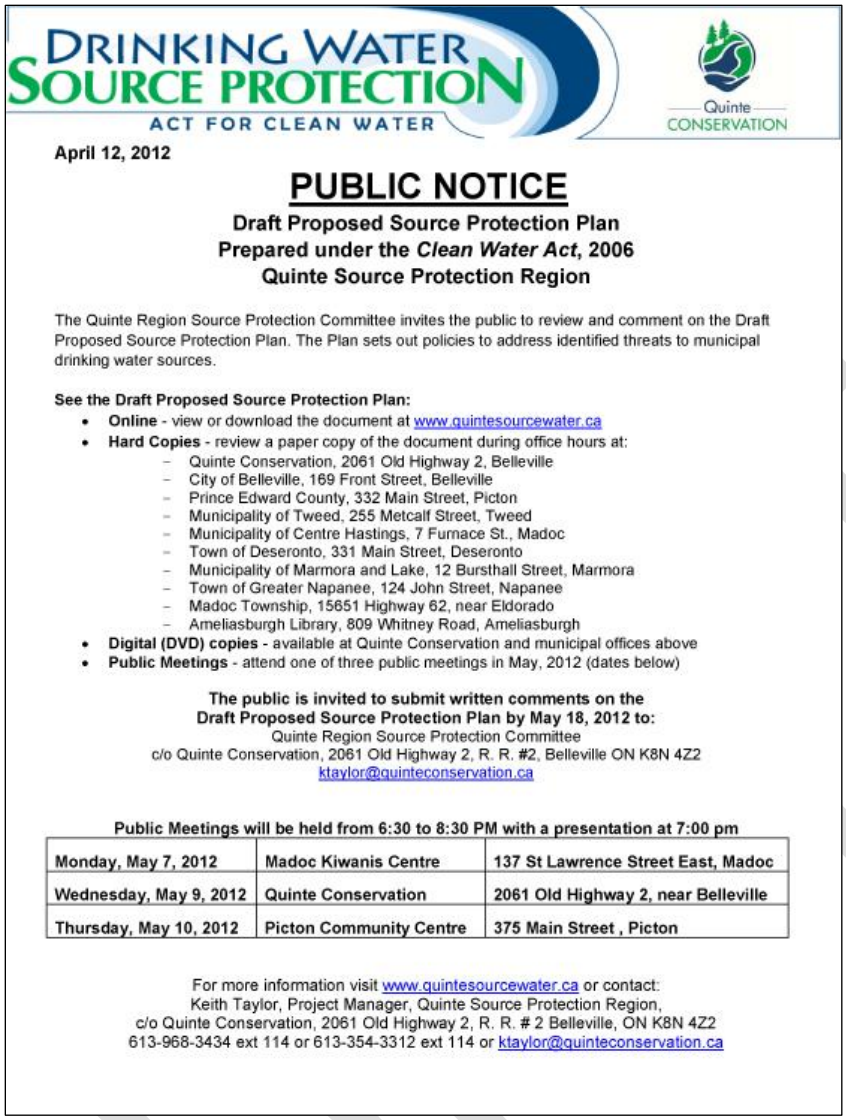


Figure 6.1: Example of Internet Posting – Draft Source Protection Plan

The Notice (Figure 6.2) and copies of the Draft Plan were sent to municipal clerks, applicable ministries, the Mohawks of the Bay of Quinte, the adjacent source protection regions, the Bay of Quinte Remedial Action Plan and others as required by Ontario Regulation 287/07. A letter and copy of the notice was also sent to persons known to the Source Protection Committee to be engaging in an activity that is or would be a significant drinking water threat.



DRINKING WATER SOURCE PROTECTION
ACT FOR CLEAN WATER

Quinte CONSERVATION

April 12, 2012

PUBLIC NOTICE

Draft Proposed Source Protection Plan
Prepared under the *Clean Water Act*, 2006
Quinte Source Protection Region

The Quinte Region Source Protection Committee invites the public to review and comment on the Draft Proposed Source Protection Plan. The Plan sets out policies to address identified threats to municipal drinking water sources.

See the Draft Proposed Source Protection Plan:

- **Online** - view or download the document at www.quintesourcewater.ca
- **Hard Copies** - review a paper copy of the document during office hours at:
  - Quinte Conservation, 2061 Old Highway 2, Belleville
  - City of Belleville, 169 Front Street, Belleville
  - Prince Edward County, 332 Main Street, Picton
  - Municipality of Tweed, 255 Metcalf Street, Tweed
  - Municipality of Centre Hastings, 7 Furnace St., Madoc
  - Town of Deseronto, 331 Main Street, Deseronto
  - Municipality of Marmora and Lake, 12 Bursthall Street, Marmora
  - Town of Greater Napanee, 124 John Street, Napanee
  - Madoc Township, 15651 Highway 62, near Eldorado
  - Ameliasburgh Library, 809 Whitney Road, Ameliasburgh
- **Digital (DVD) copies** - available at Quinte Conservation and municipal offices above
- **Public Meetings** - attend one of three public meetings in May, 2012 (dates below)

The public is invited to submit written comments on the Draft Proposed Source Protection Plan by May 18, 2012 to:
Quinte Region Source Protection Committee
c/o Quinte Conservation, 2061 Old Highway 2, R. R. #2, Belleville ON K8N 4Z2
ktaylor@quinteconservation.ca

Public Meetings will be held from 6:30 to 8:30 PM with a presentation at 7:00 pm

Monday, May 7, 2012	Madoc Kiwanis Centre	137 St Lawrence Street East, Madoc
Wednesday, May 9, 2012	Quinte Conservation	2061 Old Highway 2, near Belleville
Thursday, May 10, 2012	Picton Community Centre	375 Main Street , Picton

For more information visit www.quintesourcewater.ca or contact:
Keith Taylor, Project Manager, Quinte Source Protection Region,
c/o Quinte Conservation, 2061 Old Highway 2, R. R. # 2 Belleville, ON K8N 4Z2
613-968-3434 ext 114 or 613-354-3312 ext 114 or ktaylor@quinteconservation.ca

Figure 6.2: Notice of Draft Proposed Source Protection Plan

Notices were published in local daily and weekly newspapers (see Table 6.3). An example of a newspaper notice is provided in Figure 6.3. The Draft Plan was made available at 10 places in the region: at the Quinte Conservation office near Belleville and at eight municipal offices (seven municipalities with municipal drinking water systems and one with land in a vulnerable area) and one library (see Figure 6.3).

Table 6.3: Summary of Published Notices

Newspaper	Date Notice Appeared
Belleville Intelligencer	April 12, 2012
EMC Belleville	April 12, 2012
EMC Northeast	April 12, 2012
Picton Gazette	April 12, 2012
Napanee Beaver	April 12, 2012
Tweed News	April 18, 2012

The Picton Gazette
THURSDAY, APRIL 12, 2012
13

Canadian fiddling champion to play in Bloomfield

www.pictongazette.com

Scott Woods headlines benefit for Sonrise school

JASON PARKS
Staff writer

Upbeat and uplifting.

These two words could well describe Scott Woods' music. He is coming on April 19 to Emmanuel Baptist Church in Bloomfield to play a benefit for Sonrise Christian Academy.

Proceeds from the event will go towards the completion of the school's playground project.

This fast-paced, two-hour concert skillfully combines old-time fiddling with country gospel songs, perennial favourites, and a generous helping of humour.

Woods has performed to enthusiastic crowds throughout Canada, the U.S. and Holland. He has captured all the major Canadian fiddling titles, including Canadian Open Fiddle Champion, Canadian Grand Masters Fiddling Champion, and Canadian Fiddle Entertainer of the year.

For seven years he was the musical director and played the part of Don Messer in *Memories of Don Messer's Jubilee*, a tribute show which has toured across Canada.

In addition, he has several recordings to his credit, which will be available at the concert.

There are lots of things to watch for when Scott Woods takes to the stage. His keen sense of timing and his sharp wit will keep you on your toes. And speaking of toes, just try to keep them still as he plays those old time tunes!

Scott is backed up by his own four-piece show band.

Together, they stir up a storm of good music to lift your heart and feed your soul.

Tickets for The Scott Woods Show are available at Sonrise Christian Academy, 58 Johnson Street in Picton and Books & Company, 289 Main Street Picton. The show starts at 7 p.m.

FIDDLING FOR SONRISE Scott Woods and his band will be coming to Bloomfield's Emanuel Baptist Church on April 19 as part of a fundraising initiative for new playground equipment at Sonrise Christian Academy. (Submitted photo)

Oeno GALLERY Spring Group Exhibition
April 14 - June 5 2012

Thinking Outside The Box, Lucy Maki

Opening Reception Saturday April 14 5 - 8 PM
oenogallery.com
613.393.2216 2274 County Rd. 1, Bloomfield, ON

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DRINKING WATER SOURCE PROTECTION
ACT FOR CLEAN WATER
Quinte CONSERVATION

NOTICE OF PUBLIC MEETING
Comment Invited on the
Draft Proposed Source Protection Plan

The Quinte Region Source Protection Committee invites public comment on the Draft Proposed Source Protection Plan. The Draft Plan outlines policies to address identified threats to the water sources of the following municipal drinking water systems:

- City of Belleville - Main and Point Anne
- Prince Edward County - Peats Point, Village of Ameliasburgh, Town of Picton, Village of Wellington
- Municipality of Tweed - Village of Tweed
- Municipality of Centre Hastings - Village of Madoc
- Town of Deseronto
- Municipality of Marmora and Lake - Village of Deloro
- Town of Greater Napanee - Napanee Backup system

See the Draft Proposed Source Protection Plan at www.quintesourcewater.ca or during business hours at:

- Quinte Conservation, 2061 Old Highway 2, Belleville
- City of Belleville, 169 Front Street, Belleville
- Prince Edward County, 332 Main Street, Picton
- Municipality of Tweed, 255 Metcalf Street, Tweed
- Municipality of Centre Hastings, 7 Furnace Street, Madoc
- Town of Deseronto, 331 Main Street, Deseronto
- Municipality of Marmora and Lake, 12 Burshall Street, Marmora
- Town of Greater Napanee, 124 John Street, Napanee
- Madoc Township, 15651 Highway 62, near Eldorado
- Ameliasburgh Library, 809 Whitney Road, Ameliasburgh

Please submit comments in writing by Friday, May 18, 2012 to:
Quinte Region Source Protection Committee, c/o Quinte Conservation, 2061 Old Highway 2, R. R. #2, Belleville, K8N 4Z2 fax: 613-968-8240 email: ktaylor@quinteconservation.ca

Public Meetings from 6:30 PM to 8:30 PM with a presentation at 7:00 PM in:

MADOC	BELLEVILLE	PICTON
Monday, May 7	Wednesday, May 9	Thursday, May 10
Kiwanis Centre	Quinte Conservation	Community Centre
137 St. Lawrence Street E.	2061 Old Hwy. 2, near Wallbridge Loyalist Road	375 Main Street

For more information, please visit www.quintesourcewater.ca or contact:
Keith Taylor, Project Manager, at 613-968-3434 ext. 114 or ktaylor@quinteconservation.ca

Figure 6.3: Example of a newspaper notice that appeared in Quinte Region Newspapers

Two email newsletters to over 500 addresses were sent to those who had signed up on the website and who had requested email updates. The first, entitled *Comment on Drinking Water Source Protection Policies* was sent on April 12, 2012; the second newsletter, entitled *Public Meetings on Drinking Water Source Protection Policies*, was sent on May 2, 2012 as a reminder about the public meetings. Both newsletters included direct links to the Draft Proposed Source Protection Plan posted on the quintesourcewater.ca website.

Two media releases were issued; one on April 12 - *Comment on Draft Drinking Water Protection Policies* and another on April 26 - *Public Meetings on Drinking Water Policies*. The releases were posted on the quintesourcewater.ca and quinteconservation.ca websites and were covered in several local papers and by radio. The Draft Plan was explained in an April 12 podcast on the Quinte Conservation website. Public consultation on the draft plan was also promoted through social media on Twitter.

Also contacted by mail were the persons known to the Source Protection Committee to be engaging in an activity that is or would be a significant drinking water threat. There were 311 landowners contacted (see Table 6.4). The letter was customized for each drinking water system by listing the types of significant threats. The letter was further personalized by checking off the applicable significant threats on the list that applied to that particular property.

Table 6.4: Significant Threat Letters Mailed by System

Drinking Water System	Number of Letters Sent
Ameliasburgh	52
Belleville	1
Deloro	15
Deseronto	4
Madoc	82
Napanee Backup	7
Peats Point	31
Picton	54
Point Anne	16
Tweed	49
Wellington	0
TOTAL	311

Public Meetings

Ontario Regulation 287/07 required at least one public meeting, held more than 21 days after the draft plan was posted on the Internet. Three public meetings were held on the evenings of:

- May 7, 2012 at the Kiwanis Centre, 137 St. Lawrence Street East in Madoc;
- May 9, 2012 at Quinte Conservation, 2061 Old Highway 2 near Belleville; and
- May 10, 2012 at the Community Centre, 375 Main Street in Picton.

The meetings (Figure 6.4) offered printed information, posters, a presentation, question and answer period, and an opportunity to view, obtain and comment on the Draft Plan. Thirty-two people other than project staff and Committee members attended. The tone of the public

meetings was generally positive. A summary of questions and comments from the public meetings is available in the Explanatory Document.

Figure 6.4: Public Meeting at the Kiwanis Centre in Madoc on May 7, 2012

6.3.3 Consultation on the Proposed Source Protection Plan

Details of the consultation on the Proposed Source Protection Plan, a 30 day comment period, held by the Source Protection Authority, during July 2012 were attached to the documents that formed part of the submission of the Proposed Source Protection Plan to the Minister of the Environment in August, 2012.

Among the submitted documents were:

- any comments received by the Source Protection Authority during consultation on the Proposed Source Protection Plan;
- mailing lists of all parties that received notices during the planning process; and
- a summary of notification dates and consultation periods related to various notices issued throughout source protection plan development in relation to the Draft and Proposed SPP consultation periods.

6.3.4 Consultation on Updates to the Proposed Source Protection Plan and the Approved Assessment Report: Held Concurrently in 2013

A concurrent public consultation was held for the updates made to both the Proposed Source Protection Plan and the Approved Assessment Report in 2013. Those updates were as a result of the issues based threats work completed in 2013 for the Village of Madoc wells.

Threats verification work conducted in the spring and summer of 2013 also required updates in significant threats numbers to be made to Chapters 5 and 6 of the Assessment Report. The threats verification work led to a reduction in the number of threats. Research, field work, and landowner contact verified, for example, that there were fewer threats from home heating oil than previously enumerated. There was no formal public consultation required for these particular updates to the number of threats as no new parcels with significant threats were added and no related policies in the Proposed Source Protection Plan were affected.

Consultation undertaken was guided by requirements in Regulation 287/07, a memo from the Ministry of the Environment dated March 26, 2013 entitled “Technical Work and Source Protection Plan Revisions Updates – Consultation Requirements Summary”, and input from the Source Protection Committee.

Consultation was undertaken from October 31, 2013 to December 6, 2013. The consultation occurred while the Proposed Source Protection Plan, as submitted in August 2012, was still being reviewed by the Ministry of the Environment.

Steps taken to consult on the issues based threat assessment include:

a) A meeting was held with the clerks of Centre Hastings and the Township of Madoc on April 30, 2013 at Madoc Township Hall to discuss the new technical work.
b) Early outreach in the form of a letter and postage paid return questionnaire was sent to all those persons within the area where the new technical work was being undertaken in May, 2013.
c) Clerks of Centre Hastings and the Township of Madoc were contacted: in early October regarding the results of the technical work and the most appropriate dates for public meetings, in mid-October regarding public consultation, and were circulated a copy of the letter to all those whose activities in the issues contributing area are or could be a significant threat.
d) A notice and the proposed updates to both the Assessment Report and Proposed Source Protection Plan were published on the Internet (Figure 6.5) at www.quintesourcewater.ca on October 31, 2013 in accordance with the Ontario *Clean Water Act, 2006* and Ontario Regulation 288/07.
e) A copy of the Notice was personally delivered to the clerks of Centre Hastings and the Township of Madoc by the Project Manager on October 30, 2013. Clerks also received an invitation to pass on to members of council regarding the public meeting.
f) Paper copies of the proposed updates were made available for public review during business hours at Quinte Conservation and at the municipal offices of Centre Hastings and the Township of Madoc.
g) Letters with the notice, a backgrounder and map were sent to 54 persons known to the Source Protection Committee to be engaging in an activity that is or could be a significant drinking water threat. An example of the letter sent to these persons is provided in Appendix G of the updated Assessment Report.

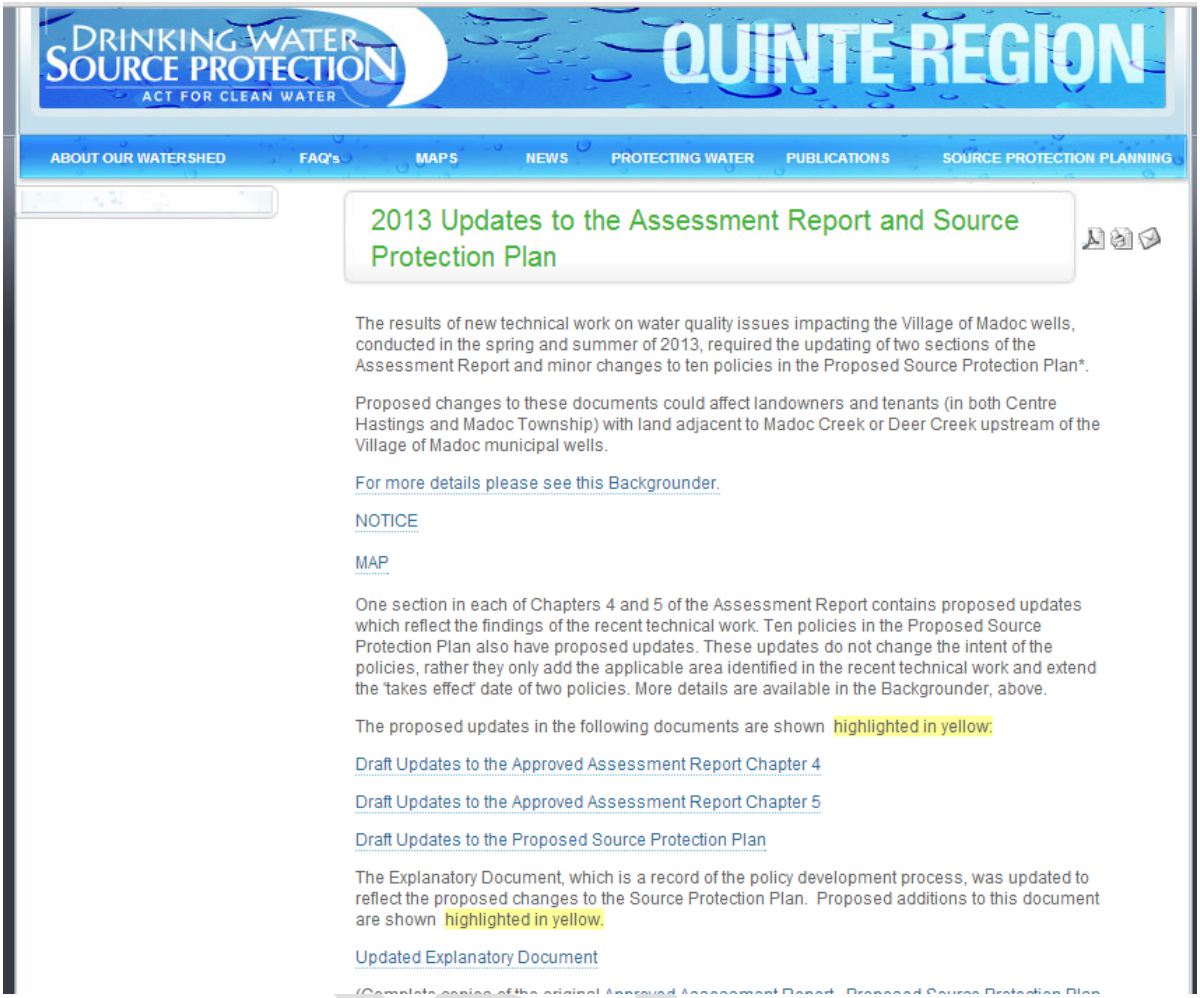


Figure 6.5: Example of Internet Posting

h) Newspaper advertisements appeared in the Community Press and Central Hastings News (EMC zone 2) on October 31. Figure 6.6.

i) An email newsletter was sent on October 31, 2013 to approximately 500 people that advised of the updates to the documents, the public consultation, and the opportunities to provide comment.

j) A public meeting was held on November 19, 2013 at the Madoc Township Hall from 6:30 to 8:30 PM with a presentation at 7:00. Twenty six people attended as well as two committee members and source protection staff.

Call to consider a management agreement

Continued from page 14

natives to deliver services, calling on Terry Murphy for comments. Murphy said QCA, which includes three former conservation authorities, has two engineers, two biologists, a health and safety representative, an ecologist and a planner. "Basically," he said, "the concept is the same as the Crowe except we are bigger and we have more staff. Earlier this year we were asked if we would consider putting together a proposal … and what would it cost to deliver program in the Crowe watershed." A committee was formed and a proposal put together covering all the program areas concentrating on core programs related to water management. Meetings with CVCA staff and tours of the dams followed. With regard to the distances involved, Murphy said delivering effective programs was possible. He indicated a QCA staff member lived in the Crowe watershed which could be a help with relation to those seeking permits, and mentioned a sub office with three staff members located in Tweed, leading him to say he didn't think distance would be an issue. He concluded, "Our board has authorized us to continue negotiating and has also made it very clear that regardless of what direction the board [CVCA] decides to go, we are still prepared to offer assistance to the Crowe staff."

Dave Daunter was the first member of the public to speak, having prepared a lengthy written presentation which extended past the five-minute limit, his opinion being that to support the motion to enter a service agreement would be a mistake, would have a major and negative impact on CVCA staff. He suggested the board work as a team with CVCA staff, the Trent Conservation Coalition and QCA to resolve issues.

Ritch Smith, representing Crowe Lake Waterway Association said their primary concern was with infrastructure regarding water level management, flood control and flood forecasting. He felt one of the things missing in CVCA was input from property owners, added CVCA wasn't "big enough to cut it today" and said his recommendation to the CLWA board was that the service agreement was a good idea and should be pursued.

Dave Golem, reeve of Limerick Township, acknowledged the huge effort involved in arriving at the current point, but said he didn't feel that board could, at this point, make an informed decision on the matter.

Bob Allen, president of Shaman Power which has a presence at the Marmora Dam, said there had been a long-term operation and maintenance contract in place since 1993 which he would like to see maintained. His concerns related to log operation, and timely support, saying the company provided revenue to CVCA. He was assured by Rand that under a service agreement, that all operations would be "at least as good as they are currently."

Marmora resident Fred Quarrie voiced concerns that if the proposal were to go ahead, the board would hold the liability. Board member Hector MacMillan spoke to the concern saying Quinte would simply be hired as a contractor to deliver the services.

Kathy Hamilton indicated that to the average person, the proposal sounded more like a takeover. She referred to a wish to see the excellent service provided by CVCA staff continue, saying the proposal represented "despicable treatment" of the employees.

Pat Stollard, representing the Steenburg Lake Community Association, suggested the package didn't provide enough detail about the service agreement or the evaluation of the current operating conditions at CVCA that led to the recommendation. He stated an understanding the ten host townships' concern over the long-term risk and liability, and added, "We are, however, concerned that this board may be rushing to find a solution without properly and fully evaluating all options …." He added that delegating responsibility to a third party would not absolve the board from risks.

Terry Murphy spoke, stressing that at this point it was strictly a proposal and that if the matter went forward then lawyers representing both sides would be involved in the discussions.

Terry Stinson of Algonquin Power, which has a presence on Cordova Lake, spoke of the importance of water levels to the business and said how pleased they had been with CVCA's management of the stop logs, and that operating from a distance might not be the best solution.

Former board member Jim Martin, said CVCA had lacked long-term planning, then thanked the committee for looking to the future, his thinking being that the proposal, "with a little more work, could take us into the future in really good shape."

Another previous board member, Bob Ireland, who is vice president of the Wollaston Lake Home and Cottage Association, said he felt there were inconsistencies within the proposal, the major item being the governance model which he said had not yet been worked out. He suggested "service level agreements are absolutely key in making something like this work." He also had an issue with only one CVCA board member potentially sitting on the QCA board. He had concerns with changes to personnel, saying those who had been working at CVCA for some time knew the watershed better than anyone else.

Vesa Koivusilo, a Crowe Lake property owner, wondered if there would be any consultation with lake associations or with residents of the area. He also asked that if the details couldn't be worked out, was there a way to back out.

Ron Gerow responded that the board was open to all in terms of helping to move forward with the long-term plan. He said, "What I see here today is a proposal that has been put together by Quinte and by our committee … There is a lot of detail to be worked out and if the board is of the mind that they wish to continue to entertain the proposal from Quinte, that the real work is yet to be undertaken in terms of the detail of the plan … The board has been very clear. They have given the committee the mandate to go and speak with Quinte in terms of the basics of a plan."

Board members were invited to comment with Suzanne Partridge saying that for her it would be necessary, not optional, to have a satellite office for area residents. Hector MacMillan suggested the board continue with the creation of an agreement with QCA, moving that "The board consider all public comments and that the sub committee further investigate the service agreement and report to the Full Authority Board on November 7. The resulting recorded vote, which was not weighted, ended in a tie which as Rand indicated, meant that it failed.

Following the meeting, Terry Murphy commented, "We were approached back in April by the Crowe board to entertain the idea of putting together a proposal to deliver services … The decision made today was their board decision and we have to respect that. We will continue to offer our professional assistance if the Crowe needs it …."

Ron Gerow indicated he appreciated the public's comments, then said, "I guess I am disappointed that the board has chosen not to continue to look at the proposal. I think it certainly had some merit and the building blocks for the base of the agreement will now never be known unless there is reconsideration by the board … The issues that led up to taking a look at the other alternatives are now back on the table again and what does that mean for our municipalities in terms of its future with the CVCA. My question to the Board in November will be how do we move forward from here …."

Barry Rand stressed that he was very impressed with the number of people in attendance, saying their input reflected the communities' interests and concerns about the future. I think it was a challenging decision for this board to make … From an operational point of view, the proposal is a significant departure in some ways from the way we currently operate and probably explains the breadth of opinions … The committee did work hard and came up with what they considered to be a reasonable proposal and the board has voted to not continue with that development."

Memories in Music

St. John's Anglican Church of Madoc hosted a full house of nostalgic music lovers for a Saturday night concert, October 26, featuring musical memories by local boys, Lorne Hagerman and Bob Ash, who started out in 1966 at Centre Hastings High School as The Trolls. Their jovial rendition was followed by a dynamic tribute of Neil Diamond tunes by Tim Hunt of Belleville. Photo: Diane Sherman

Figure 6.6: Example of Newspaper Notice

Figure 6.7: A public meeting was held on November 19, 2013 at the Madoc Township Hall

Information about this concurrent public consultation is also available in the updated Assessment Report and the Explanatory Document.

6.3.5 Targeted Consultation on Two New Waste Policies for Proposed Source Protection Plan: December 13, 2013 to January 15, 2014

Targeted consultation for two new waste related policies was held from December 13, 2013 to January 15, 2014.

In preliminary comments on the Proposed Source Protection Plan in November 2013, the Ministry of the Environment identified that the risk from small quantities of liquid waste (e.g. waste oil from a car dealership) was not presently adequately regulated in the Plan. As a result, the Source Protection Committee developed two new policies:

- Policy 1-7-E & F: Risk Management Plan for Waste Disposal Sites Not Regulated by Ontario Regulation 347/09, and
- Policy 1-8-E & F: Restricted Land Use Risk Management Plans for Waste Disposal Sites Not Regulated by Ontario Regulation 347/09

It was determined that these two new policies could affect activities on about one dozen properties located in the vulnerable areas of the Village of Madoc, Town of Picton and Village of Ameliasburgh municipal water supplies. As a result, a targeted consultation (as suggested by

the Ministry of the Environment) was held from December 12, 2013 to January 15, 2014 specifically for those property owners that could be affected by the two new policies.

The affected property owners were contacted in person by project staff in early December 2013 and then by letter (December 12, 2013) which included a notice and information package. Recipients were invited to provide written comment on or before Wednesday, January 15, 2014. Affected municipalities, Centre Hastings and Prince Edward County, were also notified by letter on December 13, 2013. Information about the consultation was posted on the project website at quintesourcewater.ca. No written comments were received.

Information about this targeted consultation is also available in the Explanatory Document.

6.3.6 Consultation on Assessment Report and Source Protection Plan Amendments 2019

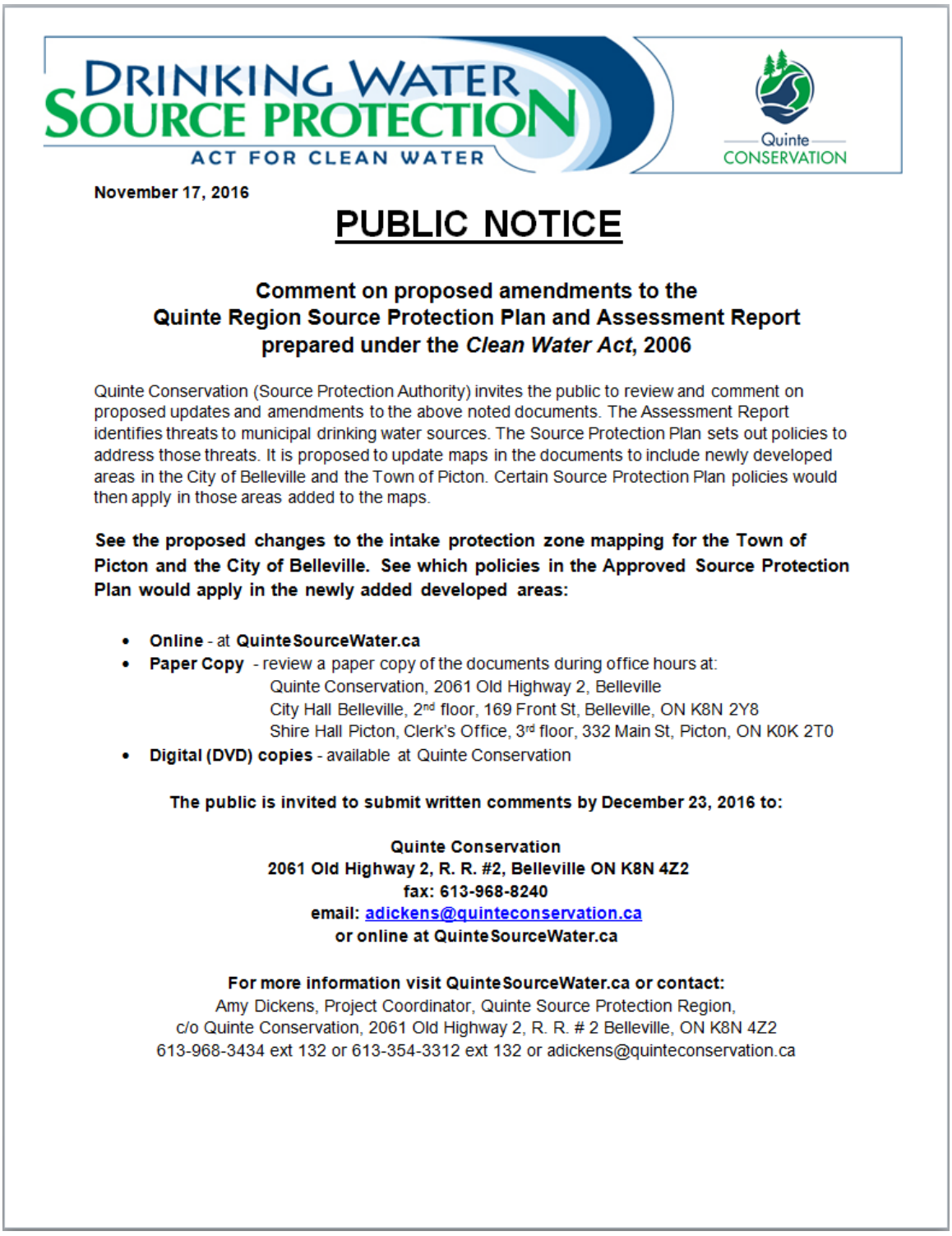
Maps in the Assessment Report and Source Protection Plan required updating because new areas of land had been developed within the City of Belleville and the Town of Picton since the original intake protection zone maps were created in 2009. There was the potential for contaminant spills or runoff from the recently developed areas that could impact the water sources. Maps were therefore updated to include the newly urbanized areas. As a result updates and amendments were required to the Assessment Report and Source Protection Plan.

Pre- consultation was conducted in summer 2016 with municipal staff and source protection branch staff of MOECC. Landowners engaged in possible significant threat activities in the affected areas were also contacted in person by project staff at Quinte Conservation.

On September 26, 2016 and October 13, 2016, respectively, municipal councils of the City of Belleville and Prince Edward County passed resolutions approving the proposed amendments. Letters were sent to 185 landowners in the affected areas on November 14, 2016, advising of the opportunity to comment, providing information about the amendments and enclosing the Notice (Figure 6.8 Notice). The 37 day public consultation began November 17, 2016. Written comments were requested by December 23, 2016.

Advertisements were purchased and appeared in the Picton Gazette and the Belleville EMC on November 17, 2016 (Figure 6.9: Example of newspaper notice). Proposed maps and proposed amendments were published on the Internet, and highlighted in a newsletter (Figure 10: Newsletter).

Information about this public consultation is also available in Appendix G of the Assessment Report and in Section 7.6 of the Explanatory Document.



DRINKING WATER SOURCE PROTECTION
ACT FOR CLEAN WATER

Quinte CONSERVATION

November 17, 2016

PUBLIC NOTICE

Comment on proposed amendments to the Quinte Region Source Protection Plan and Assessment Report prepared under the *Clean Water Act*, 2006

Quinte Conservation (Source Protection Authority) invites the public to review and comment on proposed updates and amendments to the above noted documents. The Assessment Report identifies threats to municipal drinking water sources. The Source Protection Plan sets out policies to address those threats. It is proposed to update maps in the documents to include newly developed areas in the City of Belleville and the Town of Picton. Certain Source Protection Plan policies would then apply in those areas added to the maps.

See the proposed changes to the intake protection zone mapping for the Town of Picton and the City of Belleville. See which policies in the Approved Source Protection Plan would apply in the newly added developed areas:

- **Online** - at **QuinteSourceWater.ca**
- **Paper Copy** - review a paper copy of the documents during office hours at:
  Quinte Conservation, 2061 Old Highway 2, Belleville
  City Hall Belleville, 2nd floor, 169 Front St, Belleville, ON K8N 2Y8
  Shire Hall Picton, Clerk's Office, 3rd floor, 332 Main St, Picton, ON K0K 2T0
- **Digital (DVD) copies** - available at Quinte Conservation

The public is invited to submit written comments by December 23, 2016 to:

Quinte Conservation
2061 Old Highway 2, R. R. #2, Belleville ON K8N 4Z2
fax: 613-968-8240
email: adickens@quinteconservation.ca
or online at QuinteSourceWater.ca

For more information visit QuinteSourceWater.ca or contact:
Amy Dickens, Project Coordinator, Quinte Source Protection Region,
c/o Quinte Conservation, 2061 Old Highway 2, R. R. # 2 Belleville, ON K8N 4Z2
613-968-3434 ext 132 or 613-354-3312 ext 132 or adickens@quinteconservation.ca

Figure 6.8: Notice of Public Consultation

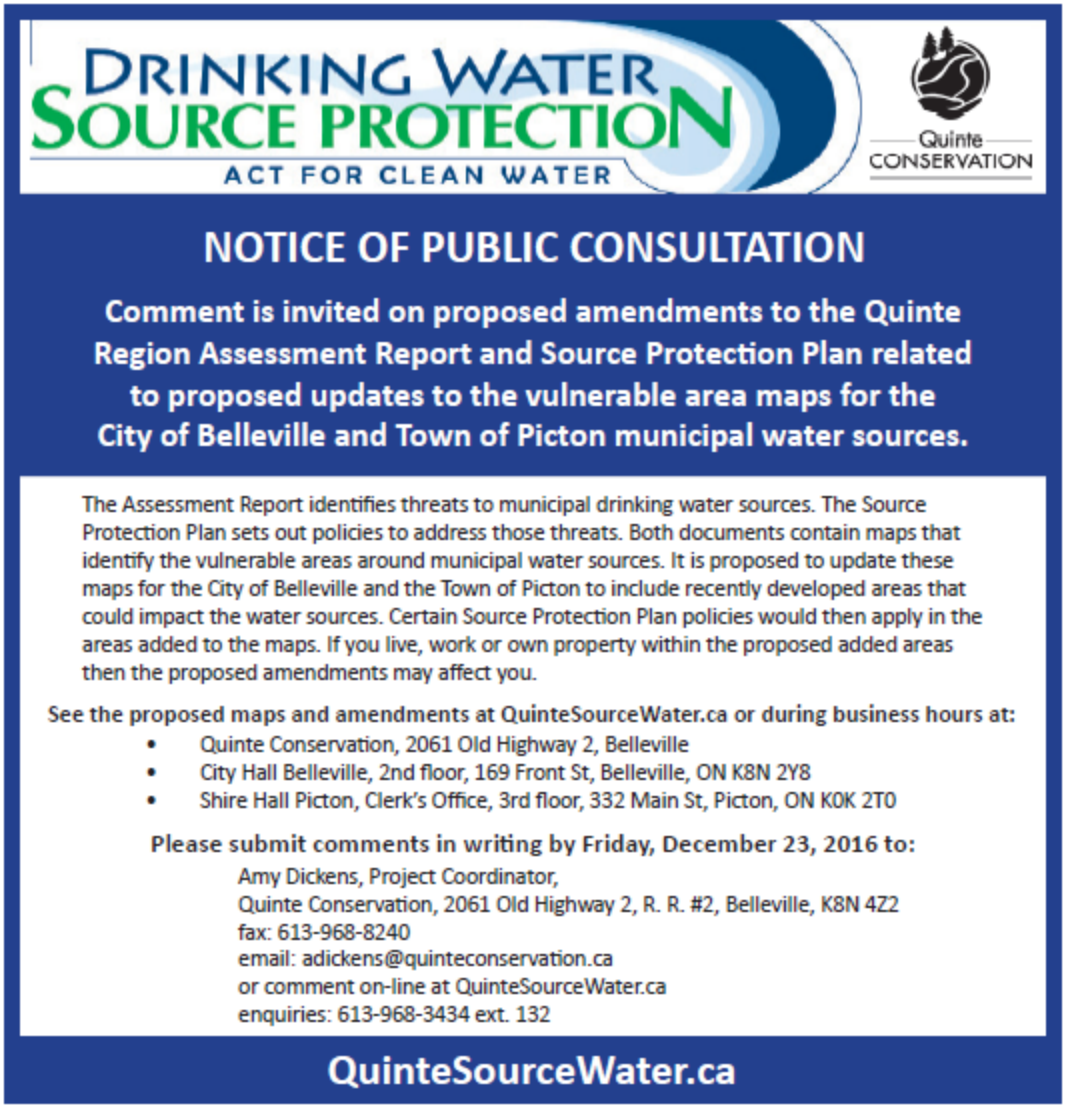


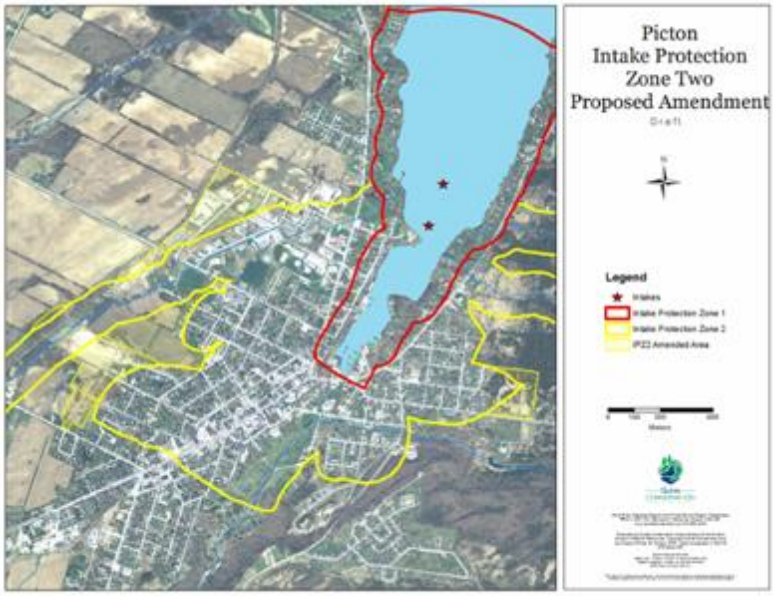
Figure 6.9: Example of Newspaper Advertisement

QUINTE REGION

DRINKING WATER SOURCE PROTECTION
ACT FOR CLEAN WATER

COMMENT INVITED ON PROPOSED AMENDMENTS

Volume 37 November 17, 2016



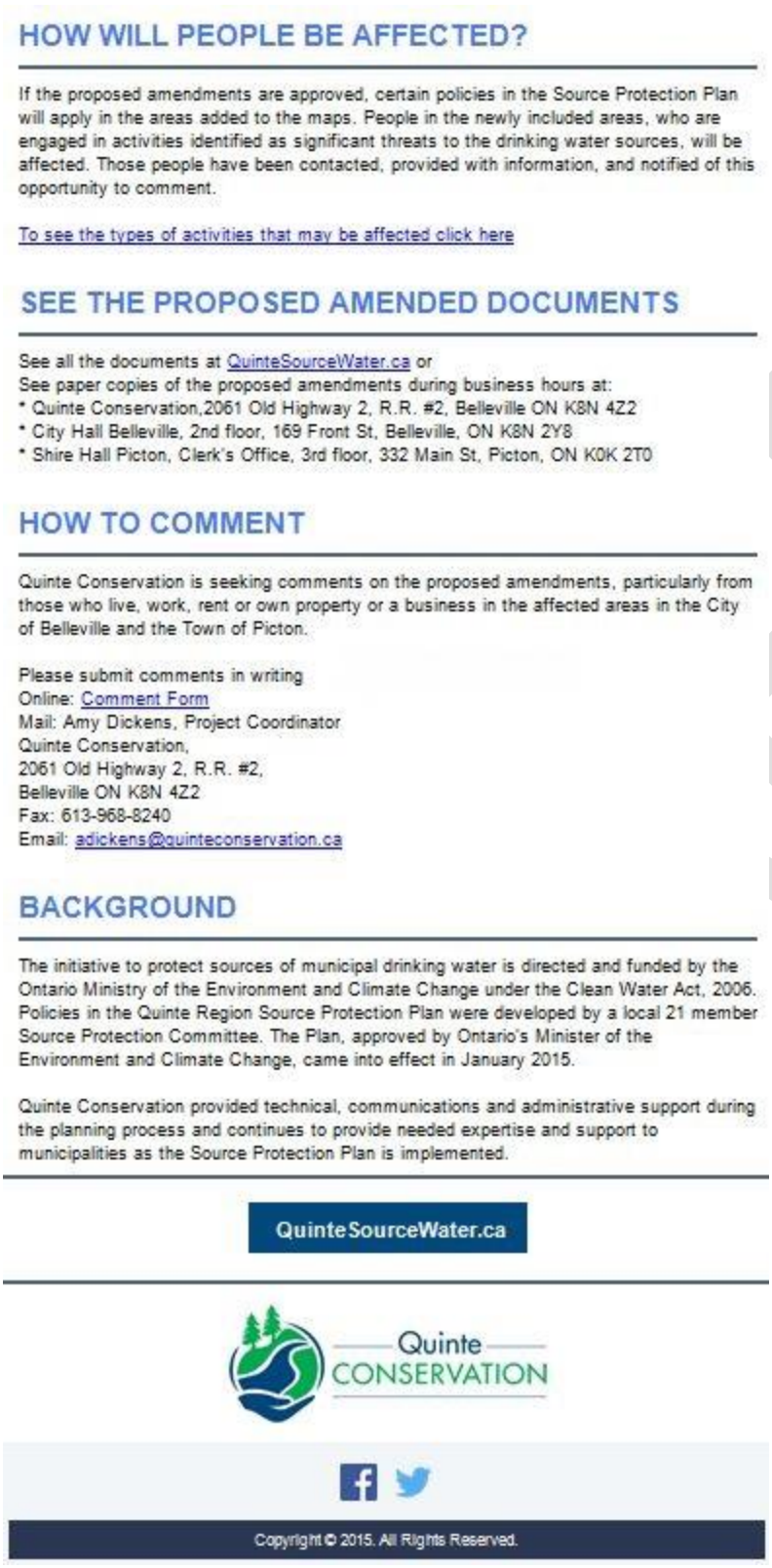
Proposed updates to the maps of vulnerable areas surrounding the drinking water sources for the City of Belleville and Town of Picton have triggered the need to amend the Quinte Region Source Protection Plan and its supporting documents.

The public is invited to provide comments on the proposed changes until Friday, December 23 2016.

WHY ARE CHANGES PROPOSED?

Since the original maps in the Assessment Report and Source Protection Plan were created in 2009, new areas of land have been developed within the City of Belleville and Town of Picton. Certain activities in these recently urbanized areas have the potential for contaminant spills or runoff that could impact the municipal water sources.
No policies in the Approved Source Protection Plan are changing. The amendments will replace the out of date maps with the newly revised maps. The maps show where the policies in the Plan apply.

For more and to see the proposed maps click here



HOW WILL PEOPLE BE AFFECTED?

If the proposed amendments are approved, certain policies in the Source Protection Plan will apply in the areas added to the maps. People in the newly included areas, who are engaged in activities identified as significant threats to the drinking water sources, will be affected. Those people have been contacted, provided with information, and notified of this opportunity to comment.

To see the types of activities that may be affected click here

SEE THE PROPOSED AMENDED DOCUMENTS

See all the documents at QuinteSourceWater.ca or
See paper copies of the proposed amendments during business hours at:
* Quinte Conservation,2061 Old Highway 2, R.R. #2, Belleville ON K8N 4Z2
* City Hall Belleville, 2nd floor, 169 Front St, Belleville, ON K8N 2Y8
* Shire Hall Picton, Clerk's Office, 3rd floor, 332 Main St, Picton, ON K0K 2T0

HOW TO COMMENT

Quinte Conservation is seeking comments on the proposed amendments, particularly from those who live, work, rent or own property or a business in the affected areas in the City of Belleville and the Town of Picton.

Please submit comments in writing
Online: Comment Form
Mail: Amy Dickens, Project Coordinator
Quinte Conservation,
2061 Old Highway 2, R.R. #2,
Belleville ON K8N 4Z2
Fax: 613-968-8240
Email: adickens@quinteconservation.ca

BACKGROUND

The initiative to protect sources of municipal drinking water is directed and funded by the Ontario Ministry of the Environment and Climate Change under the Clean Water Act, 2006. Policies in the Quinte Region Source Protection Plan were developed by a local 21 member Source Protection Committee. The Plan, approved by Ontario's Minister of the Environment and Climate Change, came into effect in January 2015.

Quinte Conservation provided technical, communications and administrative support during the planning process and continues to provide needed expertise and support to municipalities as the Source Protection Plan is implemented.

QuinteSourceWater.ca

Quinte CONSERVATION

Figure 6.10: Example of Newsletter

In response to the requirement of a new well system and subsequent technical work in the Village of Madoc, and after discussions with the Ministry of the Environment, Conservation and Parks the Quinte Region Source Protection Authority decided to combine the amendments for Belleville, Picton, and Madoc in to one single submission in 2019.

The Village of Madoc experienced water supply challenges with its existing municipal wells and required an additional water source. A new production well approximately 350 metres west of the existing Whytock well was therefore drilled, and a new water treatment building adjacent to the new well was constructed.

As part of this process, the Wellhead Protection Area for the Source Water Protection Program required an update, due to the change in well location. The Wellhead Protection Area (WHPA) was mapped around new well system, illustrating where and to what degree the groundwater is vulnerable to contamination. The original water taking model and report were updated. This update resulted in a slight shift to the previous Wellhead Protection Areas.

Starting July 1, 2018, a new regulation under the Safe Drinking Water Act and an amendment to Regulation 287/07 under the Clean Water Act require that all Source Water Protection technical work and report amendments be completed and approved by the Ministry of Environment and Conservation and Parks prior to the new system providing water to the residents in Madoc Village.

Amendments to the Quinte Region Source Protection Plan and the associated reports were therefore required before the new well system is brought online. These amendments included updates to the text in chapter 5 of the assessment report, and updates to all corresponding maps related to the Village of Madoc's WHPA. Similarly, maps were updated in the source protection plan to reflect the new WHPA. No new policies were added and no changes were proposed to the policies, however, the policies now apply in new geographic area (the new WHPAs). The source protection plan was updated to include new information about policy effective dates in the newly affected areas as the existing policies were simply extended to the new wellhead protection areas. Therefore, once the amendments were approved by the Ministry of the Environment, Conservation and Parks (MECP), the effective dates outlined on the policies commenced from the date the updated source protection plan took effect, as specified by the Minister.

On July 11, 2018 and September 5, 2018, respectively, municipal councils of the Municipality of Centre Hastings and Madoc Township passed resolutions approving the proposed amendments.

Early engagement with the Ministry of the Environment, Conservation and Parks was conducted February 2019. Early engagement allowed the MECP to provide early feedback on draft technical and policy work, prior to pre-consultation.

Pre-consultation commenced April 22 2019, with all implementing bodies. All agencies responsible for implementing policies within the source protection plan were provided with updated reports and maps, and comments were requested by May 13, 2019.

Letters were sent to all landowners in the new vulnerable areas on June 4, 2019, advising of the opportunity to comment, providing information about the amendments and enclosing the Notice (Figure 6.11 Notice). The 35 day public consultation began June 6, 2019. Written comments were requested by July 11, 2019.

Source Protection Plan Amendment to Add New Municipal Well

Official Public-Consultation Notice under Ontario Regulation 287/07

June 4, 2019

Dear LANDOWNER,

Proposed updates to the vulnerable areas surrounding the drinking water source for the Town of Madoc in the Municipality of Centre Hastings have triggered the need to amend the Quinte Region Source Protection Plan and its supporting documents. Therefore the Quinte Region Source Protection Authority is proposing an amendment to the Quinte Region Source Protection Plan under S.34 of the *Clean Water Act, 2006*.

You are receiving this notice because the proposed amendments could affect certain activities on your property at INSERT ADDRESS HERE. You are invited to provide comments on the proposed changes until **Thursday, July 11th, 2019.**

WHY ARE CHANGES PROPOSED?

The Village of Madoc is experiencing water supply challenges with its existing municipal wells and requires an additional water source. The solution includes a new production well approximately 350 metres west of the existing Whytock well, the construction of a new water treatment building adjacent to the new well, and the decommissioning of the existing Whytock well.

As part of this process, the Wellhead Protection Area for the Source Water Protection Program must be updated, due to the change in well location. This new well system now has a mapped Wellhead Protection Area (WHPA) which illustrates where and to what degree the groundwater is vulnerable to contamination. The original water taking model and report has been updated. This has resulted in a slight shift to the current Wellhead Protection Areas.

Starting July 1, 2018, a new regulation under the *Safe Drinking Water Act* and an amendment to Regulation 287/07 under the *Clean Water Act* require that all Source Water Protection technical work and report amendments be completed and approved by the Ministry of Environment and Conservation and Parks prior to the new system providing water to the residents in Madoc Village. An amendment to the Quinte Region Source Protection is required before the new well system is brought online.

PURPOSE AND RATIONALE OF AMENDMENT

An amendment to the Quinte Region Source Protection Plan, developed under Ontario's *Clean Water Act*, is needed so that the policies to protect drinking water sources set out in the Plan can apply within these new WHPAs. This will afford the same level of protection for these new drinking water sources as currently exists for all other municipal drinking water sources in the Quinte Source Protection Region.

The amendment will include updated mapping of the affected vulnerable areas and updated effective dates in the Source Protection Plan as well as updates to Section 5.7, Village of Madoc Groundwater Supply, in Chapter 5 of the Quinte Region Assessment Report with mapping and technical information.

PURPOSE OF THIS NOTICE

This notice is required under Ontario Regulation 287/07 because your property falls within the proposed wellhead protection areas for the Village of Madoc. The incorporation of the proposed new map as part of the Assessment Report and Source Protection Plan means that certain policies in the Source Protection Plan will apply in the areas added to the map. Persons in these newly included areas, who are engaged in activities identified as significant threats to the drinking water source, will be affected. The identification of a significant threat activity(s) does not necessarily mean that the water source has already been impacted but that the potential exists to contaminate the water source. This notice provides a public consultation comment opportunity prior to final submission to the Ministry of the Environment, Conservation and Parks.

It is important to note that no new policies will be added and no changes are proposed to the existing policies, however, the policies will now apply in the new geographic area (the new WHPAs) and implementing bodies will be responsible for implementing policies in the new areas. The policies included in the Quinte Region Source Protection Plan were approved by the Minister and have simply been extended to new areas within the region. The source protection plan has been updated to include new information about policy effective dates in newly affected areas. Therefore, the effective dates outlined on the policy will be from the approval date of this proposed amendment. For full policy text, please see the approved Quinte Region Source Protection Plan available at http://www.quintesourcewater.ca

Please be assured that, as per the *Municipal Freedom of Information and Protection of Privacy Act*, there is no personal identifying information in the Assessment Report or Source Protection Plan.

WHAT TYPE OF ACTIVITIES COULD BE AFFECTED?

The types of activities, when carried out in the updated areas identified on the proposed Madoc Wellhead Protection Area map that may be affected are:

- The handling and storage of fuel (tanks larger than 250 litres capacity)
- Handling and storage of non-agricultural pesticides
- Application of non-agricultural commercial fertilizers to non-residential properties
- Waste disposal site (e.g. storage of waste oil and PCBs)
- Some agricultural activities including: application, handling and storage of: nutrients (manure and bio-solids), pesticides and fertilizers; livestock grazing and pasturing and outdoor confinement
- The handling and storage of organic solvents
- PCB waste storage

- The handling and storage of waste oil
- The storage of snow (where the storage area is larger than 0.01 hectares)
- The commercial use of dense non-aqueous phase liquids.

Significant threat activity does not and will not occur on every property in the area proposed on the map. However, it is important to be aware that these activities represent a potential significant threat to the municipal drinking water source.

HOW TO COMMENT

The proposed amendments have been endorsed by both Township of Madoc and Municipality of Centre Hastings municipal councils and are now available for review at QuinteSourceWater.ca. Paper copies are also available for review at Centre Hastings Municipal Office, 7 Furnace Street, Madoc, Township of Madoc Municipal Office, 15651 Highway 62, Madoc, or at Quinte Conservation 2061 Old Highway 2, Belleville.

Your written comments on the proposed updates are invited on or before **Thursday July 11, 2019**. You may provide comments:

- **online:** at QuinteSourceWater.ca
- **mail**: Quinte Region Source Protection Authority, c/o Amy Dickens, Project Coordinator, Quinte Conservation, 2061 Old Highway 2, R. R. # 2 Belleville ON K8N 4Z2
- **email:** adickens@quinteconservation.ca
- **fax:** 613-968-8240

IN CONCLUSION

Quinte Conservation encourages you to ask questions, offer comments, and provide your input during this consultation period. More information is available at QuinteSourceWater.ca.

If you have questions, about how these updates may affect you or activities on your property, please do not hesitate to contact the undersigned at 613-968-3434 or 613-354-3312 ext 132 or via e-mail at adickens@quinteconservation.ca.

Your participation in this public consultation process is appreciated.

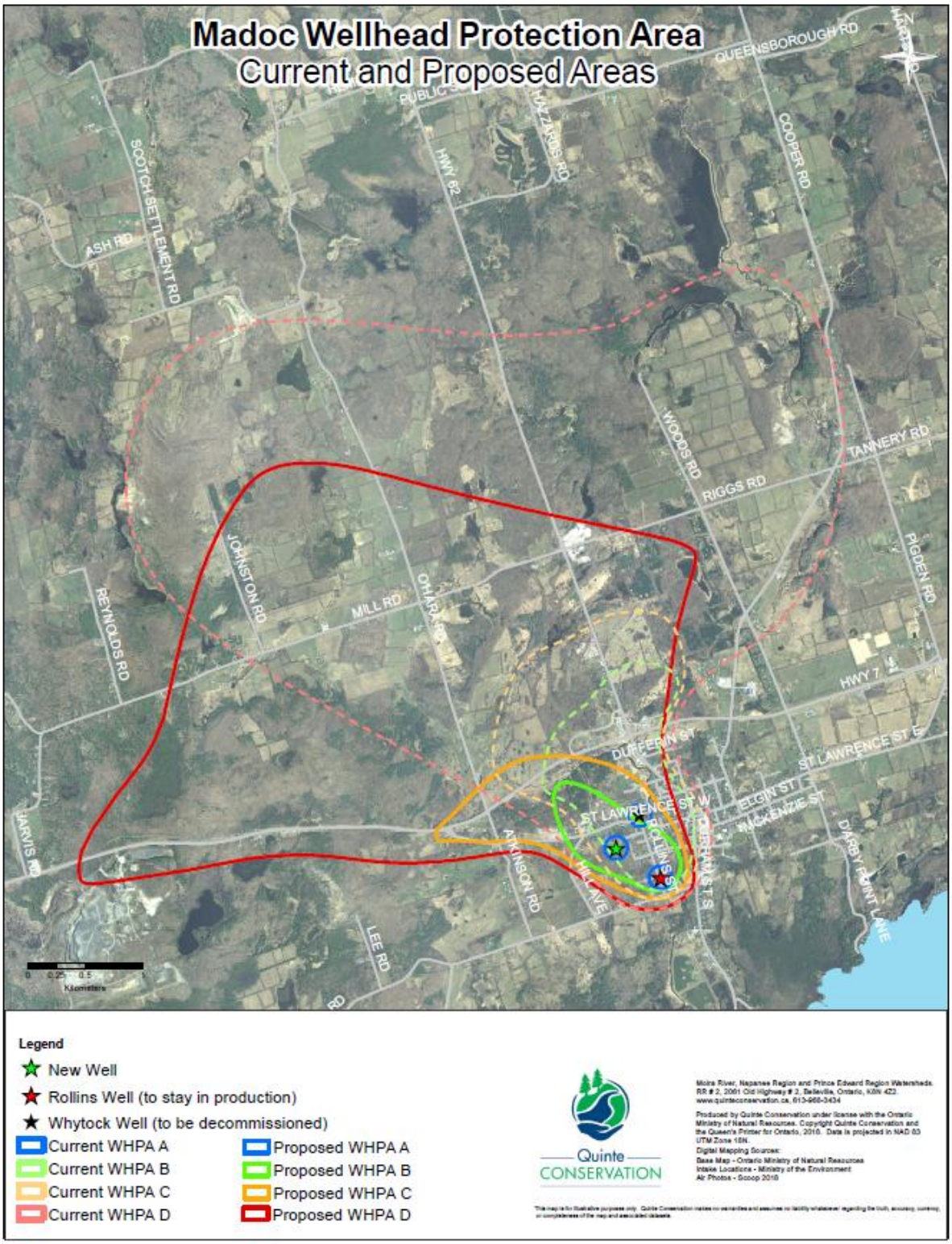
Yours truly,

Amy Dickens

Amy Dickens, Project Coordinator
adickens@quinteconservation.ca
(613) 968-3434 ext 132

Enclosures: Map, Notice

Page 3 of 3


Madoc Wellhead Protection Area
Current and Proposed Areas
QUEENSBOROUGH RD
HWY 62
HAZARDS RD
COOPER RD
SCOTCH SETTLEMENT RD
ASH RD
WOODS RD
TANNERY RD
RIGGS RD
JOHNSTON RD
MILL RD
O'HARA RD
REYNOLDS RD
RIGDEN RD
HWY 7
DUFFERIN ST
ST LAWRENCE ST E
ST LAWRENCE ST W
ELGIN ST
MACKENZIE ST
ROLLINS ST
WILLIAM ST
ATKINSON RD
HARVIS RD
LEE RD
DARBY POINT LANE
Legend
New Well
Rollins Well (to stay in production)
Whytock Well (to be decommissioned)
Current WHPA A
Current WHPA B
Current WHPA C
Current WHPA D
Proposed WHPA A
Proposed WHPA B
Proposed WHPA C
Proposed WHPA D
Quinte CONSERVATION

June 4, 2019

PUBLIC NOTICE

Source Protection Plan Amendment to Add New Municipal Well

Official Public-Consultation Notice under Ontario Regulation 287/07

Comment on proposed amendments to the Quinte Region Source Protection Plan and Assessment Report prepared under the *Clean Water Act*, 2006

Quinte Conservation (Source Protection Authority) invites the public to review and comment on proposed updates and amendments to the above noted documents. Proposed updates to the vulnerable areas surrounding the drinking water source for the Village of Madoc in the Municipality of Centre Hastings have triggered the need to amend the Quinte Region Source Protection Plan and its supporting documents. Therefore the Quinte Region Source Protection Authority is proposing an amendment to the Quinte Region Source Protection Plan under S.34 of the *Clean Water Act, 2006*.

See the proposed changes to the wellhead protection area mapping for the Village of Madoc. See which policies in the Approved Source Protection Plan would apply in the newly added areas:

- **Online** - at **QuinteSourceWater.ca**
- **Paper Copy** - review a paper copy of the documents during office hours at:
  - Quinte Conservation, 2061 Old Highway 2, Belleville
  - Centre Hastings Municipal Office, 7 Furnace Street, Madoc
  - Township of Madoc Municipal Office, 15651 Highway 62, Madoc

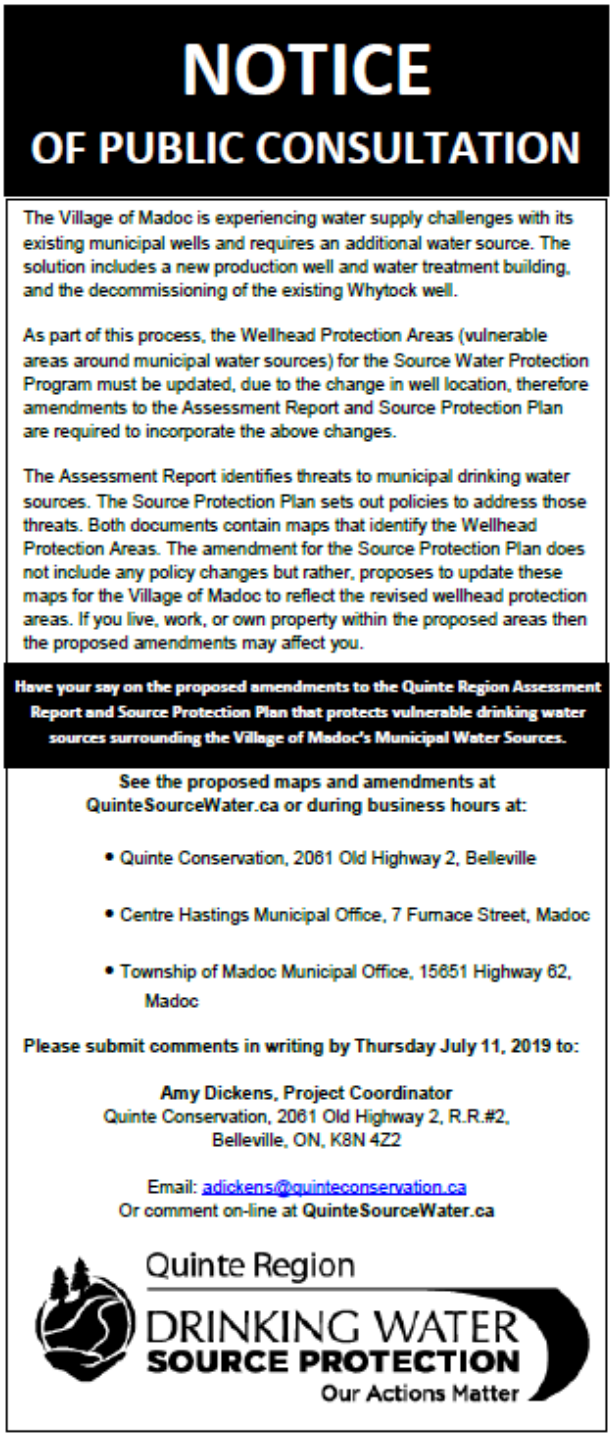
The public is invited to submit written comments by July 11, 2019 to:

Quinte Conservation
2061 Old Highway 2, R. R. #2, Belleville ON K8N 4Z2
fax: 613-968-8240
email: adickens@quinteconservation.ca
or online at QuinteSourceWater.ca

For more information visit QuinteSourceWater.ca or contact:
Amy Dickens, Project Coordinator, Quinte Source Protection Region,
c/o Quinte Conservation, 2061 Old Highway 2, R. R. # 2 Belleville, ON K8N 4Z2
613-968-3434 ext 132 or 613-354-3312 ext 132 or adickens@quinteconservation.ca

Figure 6.11: Madoc Public Consultation Notice

Advertisements were purchased and appeared in the Community Press and the Tweed News on June 6, 2019 (Figure 6.12: Example of newspaper notice). Proposed maps and proposed amendments were published on the Internet (Figure 6.13: Example of internet posting).



NOTICE
OF PUBLIC CONSULTATION

The Village of Madoc is experiencing water supply challenges with its existing municipal wells and requires an additional water source. The solution includes a new production well and water treatment building, and the decommissioning of the existing Whytock well.

As part of this process, the Wellhead Protection Areas (vulnerable areas around municipal water sources) for the Source Water Protection Program must be updated, due to the change in well location, therefore amendments to the Assessment Report and Source Protection Plan are required to incorporate the above changes.

The Assessment Report identifies threats to municipal drinking water sources. The Source Protection Plan sets out policies to address those threats. Both documents contain maps that identify the Wellhead Protection Areas. The amendment for the Source Protection Plan does not include any policy changes but rather, proposes to update these maps for the Village of Madoc to reflect the revised wellhead protection areas. If you live, work, or own property within the proposed areas then the proposed amendments may affect you.

Have your say on the proposed amendments to the Quinte Region Assessment Report and Source Protection Plan that protects vulnerable drinking water sources surrounding the Village of Madoc's Municipal Water Sources.

See the proposed maps and amendments at QuinteSourceWater.ca or during business hours at:

- Quinte Conservation, 2061 Old Highway 2, Belleville
- Centre Hastings Municipal Office, 7 Furnace Street, Madoc
- Township of Madoc Municipal Office, 15651 Highway 62, Madoc

Please submit comments in writing by Thursday July 11, 2019 to:

Amy Dickens, Project Coordinator
Quinte Conservation, 2061 Old Highway 2, R.R.#2,
Belleville, ON, K8N 4Z2

Email: adickens@quinteconservation.ca
Or comment on-line at **QuinteSourceWater.ca**

Quinte Region
DRINKING WATER
SOURCE PROTECTION
Our Actions Matter

Figure 6.12: Example of Newspaper Advertisement

QUINTE REGION DRINKING WATER SOURCE PROTECTION
Our Actions Matter

HOME ABOUT PROTECTING WATER

PUBLIC CONSULTATION MADOC MUNICIPAL WELL

HOME / PUBLIC CONSULTATION MADOC MUNICIPAL WELL

PUBLIC CONSULTATION SOURCE PROTECTION PLAN AMENDMENT TO ADD NEW MUNICIPAL WELL

Official Public-Consultation Notice under Ontario Regulation 287/07

Proposed updates to the vulnerable areas surrounding the drinking water source for the Village of Madoc in the Municipality of Centre Hastings have triggered the need to amend the Quinte Region Source Protection Plan and its supporting documents. Therefore the Quinte Region Source Protection Authority is proposing an amendment to the Quinte Region Source Protection Plan under S.34 of the Clean Water Act, 2006.

The public is invited to provide comments on the proposed changes until Thursday, July 11 th , 2019.

WHY ARE CHANGES PROPOSED?

The Village of Madoc is experiencing water supply challenges with its existing municipal wells and requires an additional water source. The solution includes a new production well approximately 350 metres west of the existing Whytock well, the construction of a new water treatment building adjacent to the new well, and the decommissioning of the existing Whytock well.

As part of this process, the Wellhead Protection Area for the Source Water Protection Program must be updated, due to the change in well location. This new well system now has a mapped Wellhead Protection Area (WHPA) which illustrates where and to what degree the groundwater is vulnerable to contamination. The original water taking model and report has been updated. This has resulted in a slight shift to the current Wellhead Protection Areas.

Starting July 1, 2018, a new regulation under the Safe Drinking Water Act and an amendment to Regulation 287/07 under the Clean Water Act require that all Source Water Protection technical work and report amendments be completed and approved by the Ministry of Environment and Conservation and Parks prior to the new system providing water to the residents in Madoc Village. An amendment to the Quinte Region Source Protection is required before the new well system is brought online.

PURPOSE AND RATIONALE OF AMENDMENT

An amendment to the Quinte Region Source Protection Plan, developed under Ontario's Clean Water Act, is needed so that the policies to protect drinking water sources set out in the Plan can apply within these new WHPAs. This will afford the same level of protection for these new drinking water sources as currently exists for all other municipal drinking water sources in the Quinte Source Protection Region.

The amendment will include updated mapping of the affected vulnerable areas and updated effective dates in the Source Protection Plan as well as updates to Section 5.7, Village of Madoc Groundwater Supply, in Chapter 5 of the Quinte Region Assessment Report with mapping and technical information.

HOW WILL PEOPLE BE AFFECTED?

It is important to note that no new policies will be added and no changes are proposed to the existing policies, however, if the proposed amendments are approved, the policies will now apply in the new geographic area (the new WHPAs). The source protection plan has been updated to include new information about policy effective dates in newly affected areas. People in the newly included areas, who are engaged in activities identified as potential significant threats to the drinking water sources, may be affected. Those people have been contacted, provided with information, and notified of this opportunity to comment. The policies outlined in Appendix 2 were approved by the Minister and have simply been extended to new areas within the region. Therefore, the effective dates outlined on the policy will be from the approval date of this proposed amendment for the newly affected areas. For full policy text, please see the approved Quinte Region Source Protection Plan available here.

Significant threat activities do not and will not occur on every property in the area outlined on the map. However, it is important to be aware that these activities represent a potential

Figure 6.13: Example of Internet Posting

Information about this public consultation is also available in Appendix G of the Assessment Report and in Section 7.6 of the Explanatory Document.

6.3.7 Consultation on Assessment Report and Source Protection Plan Amendments 2022

Amendments to the Assessment Report and Source Protection Plan were required to address a rising trend of nitrate levels in the groundwater source for the Tweed Municipal Well System. In response, the Quinte Region Source Committee identified nitrates as an Issue in the Tweed Municipal Well System and delineated an Issues Contributing Area. As a result, updates and amendments were required to the Assessment Report and Source Protection Plan.

On May 11,2022, the Municipality of Tweed passed a resolution approving the proposed amendments.

Early engagement with the Ministry of the Environment, Conservation and Parks (MECP) was conducted March 28 - May 2, 2022. Early engagement allowed the MECP to provide early feedback on draft technical and policy work, prior to pre-consultation.

Pre-consultation commenced June 17, 2022 with all implementing bodies. All agencies responsible for implementing policies within the source protection plan were provided with updated reports, maps, and policies. Comments were requested by July 8, 2022.

Letters were sent to all landowners in the new vulnerable areas on July 26, 2022, advising of the opportunity to comment, providing information about the amendments, and enclosing the Notice (Figure 6.14 Notice). The 35-day public consultation began July 26, 2022. Written comments were requested by August 31, 2022. Materials were left at the municipal office, Source Protection Authority office and on the website for an additional 7 days (September 7, 2022) to provide additional comment time.Advertisements were purchased and appeared in the Tweed News on July 27, 2022 and August 17, 2022. (Figure 6.15: Example of newspaper notice). Proposed maps and proposed amendments were published on the Internet (Figure 6.16: Example of internet posting) along with an online comment form (Figure 6.17: Sample of online comment form).

DRINKING WATER SOURCE PROTECTION
ACT FOR CLEAN WATER

Quinte CONSERVATION

Public Notice: Consultation on Proposed Amendments to The Quinte Region Assessment Report and Source Protection Plan

Official Public-Consultation Notice under Ontario Regulation 287/07

The Quinte Source Protection Plan is in effect to protect the groundwater that feeds the Tweed Municipal Wells. Recently the levels of nitrates in the raw water have been rising. In order to address this concern, the Quinte Region Source Protection Committee is proposing some changes to the Source Protection Plan and the Assessment Report. This includes adding an issues contributing area to the existing vulnerability mapping in the Assessment Report and updating any policies that are related to activities that could be causing the nitrate issue. You now have the opportunity to comment on these proposed amendments.

The public is invited to provide comments on the proposed changes until Wednesday August 31, 2022.

WHY ARE CHANGES PROPOSED?

The two municipal wells for the Village of Tweed draw water from the surrounding ground but are also influenced by the quality of water running off the surface of the ground. This is because soils are thin and highly permeable, and the fractured bedrock in the area has many cracks and crevices which allow surface water to enter the groundwater easily and quickly.
Water quality testing has shown the Village of Tweed is experiencing elevated levels of nitrates within the source water for the existing municipal wells. In response, the Quinte Region Source Protection Committee has prepared updates to the source protection plan and assessment report to address nitrate threats in the wellhead protection areas.

PURPOSE AND RATIONALE OF AMENDMENT

An amendment to the Quinte Region Source Protection Plan, developed under Ontario's *Clean Water Act*, is needed so that the policies to protect drinking water sources set out in the Plan can apply within all wellhead protection areas. In response to the increasing levels of nitrates in the groundwater, the Quinte Region Source Committee has identified nitrates as an Issue in the Tweed Municipal Well System and have delineated an Issues Contributing Area, extending across the Tweed Wellhead Protection Areas A-D. As such, activities on the land that have the potential to elevate nitrate levels in the groundwater, may need additional management measures to reduce the potential for contamination of the water source.

The proposed amendment includes updates to the Assessment Report, and applicable maps, to include the identification of the nitrate Issue, and delineation of the Tweed Issues Contributing Area.

The amendment also has implications on policies in the Quinte Source Protection Plan. Policies addressing land uses could be contributing to the increased nitrate levels in Tweed have all been amended to include the Tweed Issues Contributing Area in the "Applicable Areas" section of the

policy. Additionally, two agricultural-related policies (Policy 3-2-E&F and Policy 3-4-E&F) were amended to include additional measures within the policy text to address the rising nitrate levels.

HOW WILL PEOPLE BE AFFECTED?

It is important to note that **no** new policies are being proposed, however, a number of existing policies were amended to apply within the issues contributing area.

Only certain activities within the issues contributing area are considered to be potential significant threats to the water source. These activities include: operation of a waste disposal site, operation of a septic system, the use of commercial fertilizers, the storage of snow, and agriculture activities involving storage, handling and application of agricultural source material (whey and manure) and fertilizer, and grazing of livestock.

Under the *Clean Water Act, 2006* significant threat activities, both existing and potential, must be identified in the Assessment Report. The updated Assessment Report will include the results of this recent Issues Contributing Area technical work.

Similarly, the Source Protection Plan must be updated to reflect the changes to the Assessment Report so that identified significant threat activities can be addressed. Policies in the Plan related to the above activities were amended to apply within the Tweed Issues Contributing Area. It is important to note that no activities are prohibited by these amendments, rather implementation of additional risk management measures may be needed to address the potential threat.

Specifically, the proposed updates mean that parcels within the Tweed Issues Contributing Area with:

- Septic Systems will be inspected on a five-year mandatory inspection cycle in accordance with the Ontario Building Code, and that five-year inspection cycle will start once the newly Updated Assessment Report is approved. The purpose of these inspections is to ensure that septic systems are operating properly and not contaminating nearby groundwater.
- Snow Storage Operations may require risk management plans+ to address activities that could contribute nitrates into the soil and subsequently the groundwater. This may include measures such as installing snow fences to reduce mechanical snow removal activities required.

- Agricultural Operations may require risk management plans+ to address activities that could contribute nitrates into the soil and subsequently the groundwater. This may include measures such as testing soils for nitrate levels prior to spreading, or restricting storage, handling, and application of fertilizers and/or agricultural source materials.

+A risk management plan is a site-specific document negotiated after the approval of the Source Protection Plan. It is negotiated by the person engaged in the activity and an accredited risk management official appointed by a municipality. The intent is that the risk management plan be voluntarily negotiated wherever possible. This means there is opportunity for discussion, flexibility, and agreement as to how a significant drinking water threat will be regulated on a property in order to reduce the potential impact on drinking water sources. The risk management plan includes and accounts for any risk management measures that may already be in place such as a nutrient management plan. Risk management plans will vary in complexity depending on circumstances on each property. Many will be simple and straightforward.

People in the newly included areas, who are engaged in activities identified as potential significant threats to the drinking water sources, may be affected. Those people have been contacted, provided with information, and notified of this opportunity to comment.

Significant threat activities do not and will not occur on every property in the area outlined on the map. However, it is important to be aware that these activities represent a potential significant threat to the municipal water source.

DOCUMENTATION

In addition to the proposed amendment map the source protection plan, assessment report and supporting documents also need to be amended to reflect these changes. View and/or download: *quintesourcewater.ca*

- A copy of the public notice.
- A map of the proposed amendments to the Wellhead Protection Areas for the Village of Tweed.
- Assessment Report Proposed Updates, including:
    - Chapter 4 of the Assessment Report – this section discusses the methodology used in the Issue determination.
    - Section 5.6 of Chapter 5 of the Assessment Report –Groundwater Municipal Intakes – this section discusses the Tweed system and outlines how and why the zones were delineated. A rationale for the amendment is included.
    - Maps referred to in Section 5.6 of the Assessment Report.
    - Chapter 9 – updates to the Issues section of the Key Outcomes.
    - Appendix G of the Assessment Report – this appendix outlines the consultation process of this consultation period.
    - Appendix E-6 of the Assessment Report – this appendix includes an issues identification report referred to in Chapter 5. An addendum has been added to address the current nitrate levels in the municipal groundwater system's raw water.
- Quinte Region Source Protection Plan Proposed Updates, including:
    - The map of the Tweed Wellhead Protection Area included in the Source Protection Plan showing the proposed amendments.
    - The Explanatory Document that accompanies the Source Protection Plan. It explains how and why Source Protection Plan was developed. It has been amended to include this consultation process for these amendments.

See paper copies of the proposed amendments during business hours at:

- Quinte Conservation, 2061 Old Highway 2, Belleville
- Municipality of Tweed Municipal Office, 255 Metcalf St. Tweed

HOW TO COMMENT

Quinte Conservation is seeking comments on the proposed amendments, particularly from those who implement policies and those who may be engaging in significant threats in the newly affected areas in the Village of Tweed.

Please submit comments in writing by **Wednesday, August 31, 2022.**

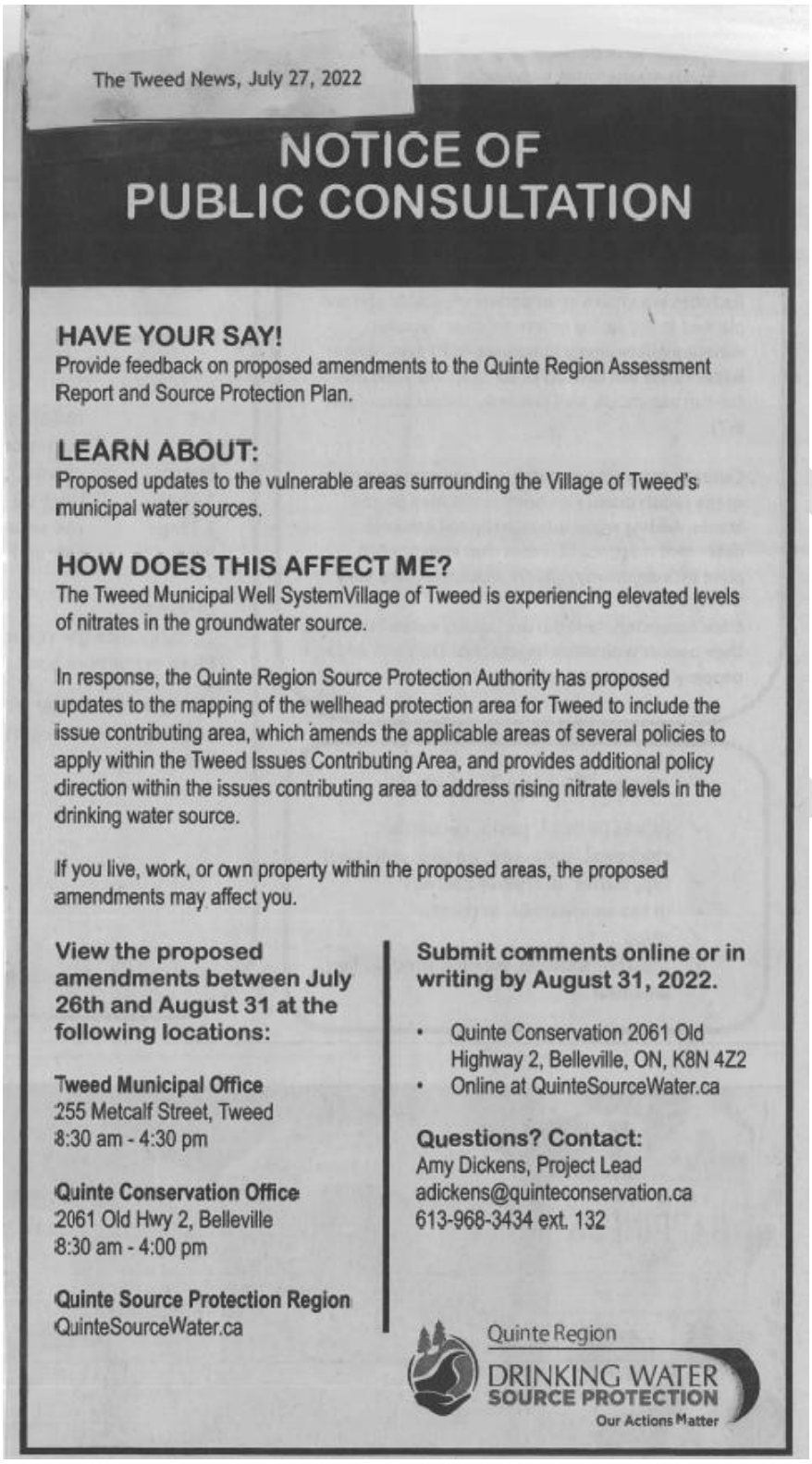
Online: Online comment form
Mail: Amy Dickens, Project Coordinator
Quinte Conservation,
2061 Old Highway 2, R.R. #2,
Belleville ON K8N 4Z2
Fax: 613-968-8240
Email: adickens@quinteconservation.ca

BACKGROUND

The initiative to protect sources of municipal drinking water is directed and funded by the Ontario Ministry of the Environment, Conservation and Parks under the *Clean Water Act, 2006*. Policies in the Quinte Region Source Protection Plan were developed by a local 21 member Source Protection Committee. The Plan, approved by Ontario's Minister of the Environment, Conservation and Parks, came into effect in January 2015.
Quinte Conservation provided technical, communications and administrative support during the planning process and continues to provide needed expertise and support to municipalities as the Source Protection Plan is implemented.

Page 4 of 4

Figure 6.14: Public Consultation Notice



The Tweed News, July 27, 2022

NOTICE OF PUBLIC CONSULTATION

HAVE YOUR SAY!

Provide feedback on proposed amendments to the Quinte Region Assessment Report and Source Protection Plan.

LEARN ABOUT:

Proposed updates to the vulnerable areas surrounding the Village of Tweed's municipal water sources.

HOW DOES THIS AFFECT ME?

The Tweed Municipal Well SystemVillage of Tweed is experiencing elevated levels of nitrates in the groundwater source.

In response, the Quinte Region Source Protection Authority has proposed updates to the mapping of the wellhead protection area for Tweed to include the issue contributing area, which amends the applicable areas of several policies to apply within the Tweed Issues Contributing Area, and provides additional policy direction within the issues contributing area to address rising nitrate levels in the drinking water source.

If you live, work, or own property within the proposed areas, the proposed amendments may affect you.

View the proposed amendments between July 26th and August 31 at the following locations:

Tweed Municipal Office
255 Metcalf Street, Tweed
8:30 am - 4:30 pm

Quinte Conservation Office
2061 Old Hwy 2, Belleville
8:30 am - 4:00 pm

Quinte Source Protection Region
QuinteSourceWater.ca

Submit comments online or in writing by August 31, 2022.

- Quinte Conservation 2061 Old Highway 2, Belleville, ON, K8N 4Z2
- Online at QuinteSourceWater.ca

Questions? Contact:
Amy Dickens, Project Lead
adickens@quinteconservation.ca
613-968-3434 ext. 132

Quinte Region
DRINKING WATER SOURCE PROTECTION
Our Actions Matter

6.15 Sample Newspaper Advertisement

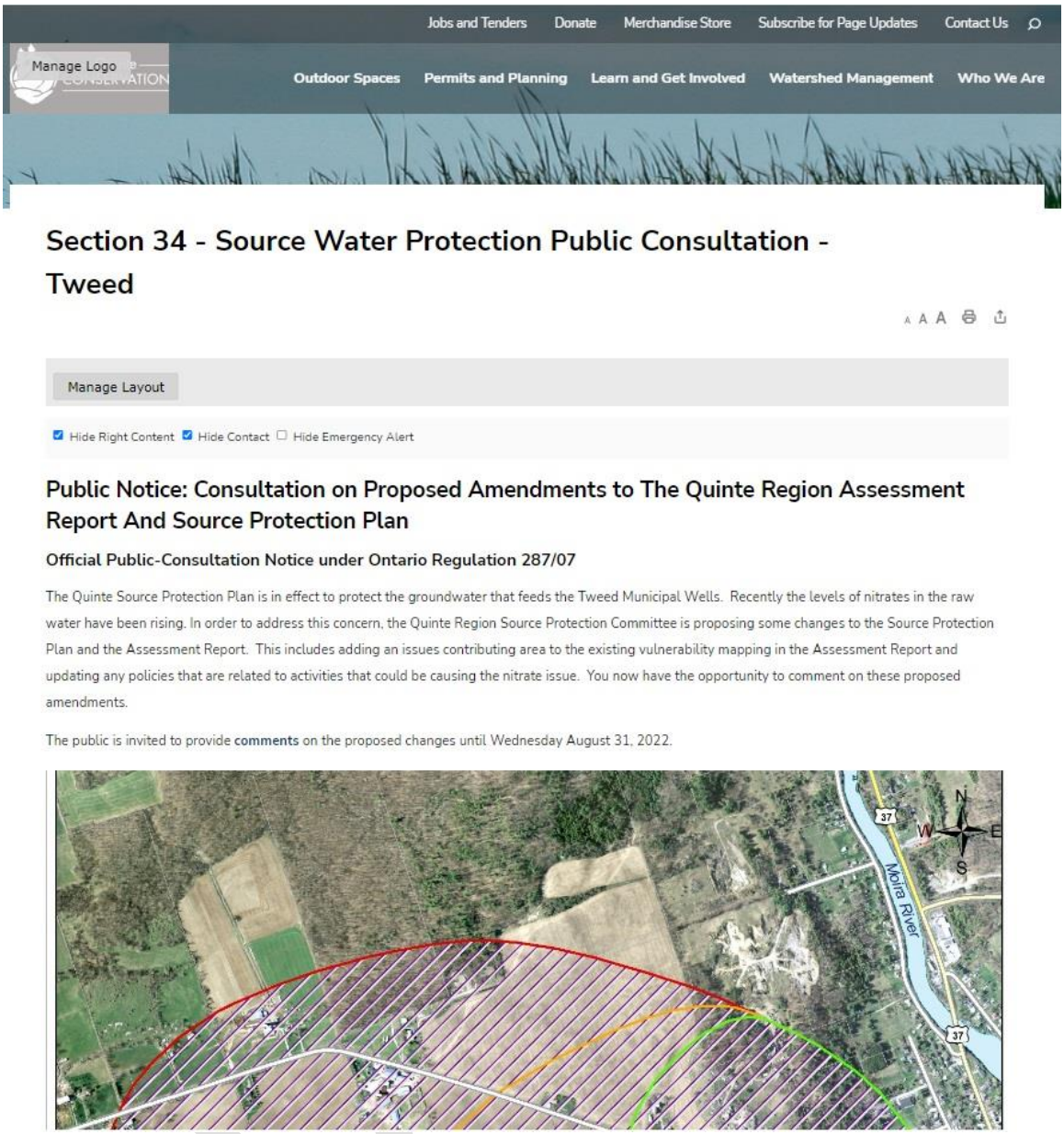
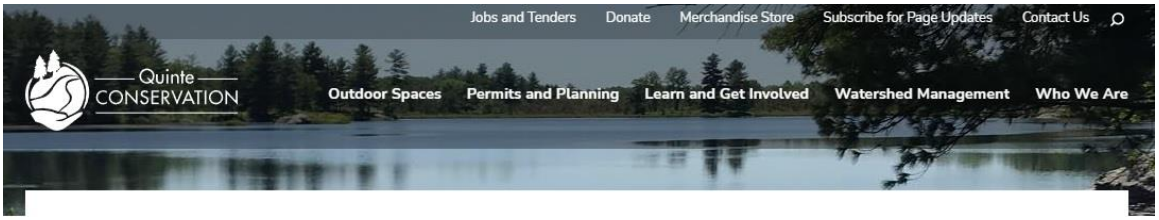


Figure 6.16 Sample Internet Posting



Public Consultation for Section 34 Amendment

Required fields are marked with asterisks (*)

NOTE: Information will be collected for internal use only and in accordance with the Municipal Freedom of Information and Protection of Privacy Act.

Did you receive a Section 34 notice in the mail? *

◉ Yes ○ No

Please provide any comments regarding Section 34 here: *

Would you like staff you follow up with you regarding your comments? *

○ Yes ○ No

For other comments or questions related to Source Water Protection in the Quinte region, please contact:

Amy Dickens, Source Water Protection Coordinator
adickens@quinteconservation.ca
613-968-3434 ext 132

Submit

Figure 6.17: Sample comment form

Chapter 7 Conclusion

The Quinte Source Protection Committee has prepared the Source Protection Plan to protect municipal drinking water supplies for the residents of the Quinte Region. This process was based on a watershed approach and entailed the engagement of local leaders and members of the community to develop a plan that is tailored to the Quinte Region. Compiling the science of the watershed and preparation of this plan has been an extensive undertaking and is precedent setting in the Quinte Region. Similar efforts have been ongoing across Ontario and the program is the first of its kind in the Province. This work was completed over a period of eight years and included an active public consultation and collaboration component which has vastly benefited the knowledge about water in the Quinte Region and increased awareness about the importance of protecting water.

In the Quinte Region, there are 11 municipal drinking water systems that provide water to approximately half of the watershed residents. These systems obtain water supply from a range of sources including the Bay of Quinte, Lake Ontario, groundwater aquifers as well as inland lakes and rivers. The areas around each system where the sources of water could become most easily contaminated were delineated and the sources of potential contamination were inventoried.

In consideration of the science, while reflecting on local knowledge and experience, the Committee developed a plan that includes policies to address both existing and future drinking water threats that could occur in the vulnerable areas. The goal of the Committee was to develop policies for the protection of municipal drinking water. The reasoning, consultation and research that were considered in development of the policies are provided in the accompanying Explanatory Document. This document helps provide an understanding of the rationale for the policies by summarizing information that influenced policy decisions.

The science and knowledge gathered throughout this process is wide-ranging and forms a strong foundation for development of plans to protect other sources of drinking water including private systems in the Quinte Region. Monitoring of the source protection activities in the Quinte Region by the Committee will assist in evaluating the success of the program and where future efforts may be required through the five year plan review cycle. Potential items for future consideration include the protection of private wells, aquatic pesticides, above grade storage of home heating oil, potential alternatives to the use of road salt, stormwater outfalls, earth energy systems and water quantity issues. More science, as it is gathered and understood, may show trends as a result of climate change. Policies may require modification or new policies may need to be developed to address new and emerging threats to drinking water sources.

The Committee identified, early on in the process, the importance of education and outreach in protecting our drinking water sources. Education and outreach can help to ensure that the policies are upheld and that awareness exists in our communities regarding the importance of acting responsibly to protect drinking water sources.

The Quinte Source Protection Committee has endeavored to produce a plan that is comprehensive, cost effective and easily understood. Everyone has a role in the protection of drinking water sources. This Plan provides municipalities and provincial ministries with the direction they require to fulfill their obligation to provide safe, clean and abundant municipal drinking water to the public. Preventing contamination from entering water sources is the cost effective way to help ensure clean sources of drinking water and protect human health. This local initiative will preserve and protect sources of drinking water for future generations and marks a historic moment in terms of protecting drinking water in the Quinte Region.

Appendices

Appendix A: Acronyms

ASM	Agricultural Source Material
DNAPL	Dense Non – Aqueous Phase Liquid
GIS	Geographical Information Systems
HVA	Highly Vulnerable Aquifer
IPZ	Intake Protection Zone
NASM	Non – Agricultural Source Material
OMAFRA	Ontario Ministry of Agriculture, Food, and Rural Affairs
RMP	Risk Management Plan
SGRA	Significant Groundwater Recharge Area
WHPA	Wellhead Protection Area
TSSA	Technical Safety Standards Association
STP	Sewage Treatment Plant

Appendix B: Glossary

Above grade or above ground storage – a tank located on or above the average level of the soil surface in the area surrounding a facility or structure.

Activity – one or a series of related processes, natural or human, that occurs within a geographical area and may be related to a particular land use.

Agricultural Source Materials (ASM) – substances that originate from agricultural activities such as livestock operations, applied to land to provide nutrients; may include farm animal manure, farm yard and manure storage runoff, wash waters from agricultural operations that are not mixed with human waste.

Aquaculture – also known as **aquafarming**, is the farming of aquatic organisms such as fish, crustaceans, molluscs and aquatic plants. Aquaculture involves cultivating freshwater and saltwater populations under controlled conditions, and can be contrasted with commercial fishing, which is the harvesting of wild fish.

Aquifer – underground formation that stores water found in layers of permeable rock, sand, or gravel through which ground water flows. Aquifers can be layered, and, generally speaking, the deeper the aquifer the more protected it is.

Assessment Report – a science-based technical document, prepared by the source protection committee under Section 15 of the *Clean Water Act, 2006,* to characterize the water quality and quantity within the source protection region, identify vulnerable areas, list activities or conditions that result in drinking water threats, and identify areas where these threats could occur.

Below grade storage – a tank located below the average level of the soil surface in the area surrounding a facility or structure. Basements and the floor of quarries are considered to be located below grade.

Best Management Practices – methods or techniques found to be the most effective and practical means in achieving an objective, such as preventing or minimizing pollution.

Clean Water Act, 2006 – a provincial act enacted to protect existing and future sources of drinking water.

Commercial Fertilizer – any substance or mixture of substances, containing nitrogen, phosphorus, potassium or other plant food, manufactured, sold or represented for use as a plant nutrient.

Condition – contamination of rock, soil, or water as a result from a past activity.
Contaminant – chemicals and pathogens which, when released into water, may adversely or have the potential to adversely affect water quality.

Dense Non-Aqueous Phase Liquids (DNAPLs) – chemicals (or a mixture of chemicals) that are denser than water and do not mix with water. Once spilled, they can sink and contaminate groundwater aquifers and surface water bodies. DNAPLs are very difficult to impossible to remove once they have entered a water source. Many of these liquids are suspected or proven to be carcinogenic (cancer-causing). Examples of DNAPLs include, but not limited to, furniture stripper, nail polish, dry cleaning fluid, aerosols, coolants, polychlorinated biphenyls (PCBs), creosote and degreasers. Depending on its chemical structure, a DNAPL can also be classified as an organic solvent.

Drinking Water – or **potable water** is water pure enough to be consumed or used with low risk of immediate or long term harm.

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) anything used for the collection, production, treatment, storage, supply or distribution of water, (b) anything 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 existing activity, possible future activity or existing condition that results from a past activity, (a) 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, or (b) that results in or has the potential to result in the raw water supply of an existing or planned drinking-water system failing to meet any standards prescribed by the regulations respecting the quality or quantity of water, and includes an activity or condition that is prescribed by the Regulations as a drinking water threat.

Existing activity or use – an activity that is undertaken, and/or a land use that is permitted in the current municipal planning documents, prior to the Source Protection Plan taking effect.

Fuel – defined in *The Canadian Environmental Protection Act, 1999* as any form of matter that is combusted or oxidized for the generation of energy. The fuels considered in the threats assessment are used in appliances and equipment, such as furnaces and generators, and to power motor vehicles. E.g. gasoline, diesel, fuel/home heating oil and kerosene.

Future activity or use – the establishment of an activity or development of a use which is not in existence or permitted on the day that the Source Protection Plan takes effect.

Groundwater – water below the water table contained in void spaces (pore spaces between rock and soil particles, or bedrock fracture). Water occurring in the zone of saturation in an aquifer or soil.

Groundwater Recharge Area – the area where an aquifer is replenished from (a) natural processes, such as the infiltration of rainfall and snowmelt and the seepage of surface water from lakes, streams, and wetlands, (b) from human interventions, such as the use of storm water management systems, and (c) whose recharge rate exceeds a specified threshold.

Groundwater under direct influence of surface water (GUDI) – a location in which water quality can be altered by the travel of pathogens and organic debris from nearby surface water to the groundwater. Groundwater characteristics such as turbidity, conductivity, pH and temperature can also change when surface water mixes with a groundwater source (well, spring, sinkhole).

Highly Vulnerable Aquifer (HVA) – an aquifer that can be easily affected by contamination from both human activities and natural processes. This vulnerability is a function of the thickness and permeability of overlaying layers, or by transport pathways to the aquifer.

Impervious Surface Area – the surface area of all highways and other impervious land surfaces used for vehicular traffic and parking, and all pedestrian paths.

Intake Protection Zone (IPZ) – area of land and water that contributes source water to a drinking water system intake within a specified distance, period of flow time (e.g. two hours), and/or contributing watershed area.

Issues Contributing Area (ICA) – an area within a vulnerable area where activities could contribute to a water quality issue(s). For the Village of Madoc wells this area is a 30 metre setback from a watercourse or wetland within the WHPA E or F. There are no other Issues Contributing Areas identified in the Quinte Region.

Livestock Density – a measure of the potential for generating, storing, and land applying ASM as a source of nutrients within a defined area. The livestock density is expressed in Nutrient Unit/Acre.

Managed land – land to which nutrients (ASM, fertilizer, NASM) are applied. It includes, but is not limited to, cropland, fallow land, improved pasture, golf courses, sports fields, and lawns. Managed lands can be broken into 2 subsets: agricultural managed land and non-agricultural managed land.

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,* (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, (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.

Non-Agricultural Source Materials (NASM) – any of the following materials, other than compost that meets the Compost Guidelines, or a commercial fertilizer, if the materials are intended to be applied to land as nutrients:

1) Pulp and paper biosolids;
2) Sewage biosolids;
3) Anaerobic digestion output, if less than 50 per cent, by volume, of the total amount of anaerobic digestion materials that were treated in the mixed anaerobic digestion facility were on-farm anaerobic digestion materials; and
4) Any other material that is not from an agricultural source and that is capable of being applied to land as a nutrient.

Nutrient Unit – the number of animals housed, or pastured, at one time on a Farm Unit, that generate enough manure to fertilize the same area of crop land base under the most limiting of either nitrogen or phosphorus as determined by OMAFRA's Nutrient Management software. Or, in the case where no animals are housed it is the weight or volume of manure or other biosolids used annually on a Farm Unit, that fertilizes the same area of crop land base under the most limiting of either nitrogen or phosphorus as determined by OMAFRA's Nutrient Management software.

Official Plan – a policy document prepared by a municipality that states the municipalities' strategic vision for community development and land use. The primary role of the official plan is to establish a series of municipal goals, objectives, and policies to manage and direct physical change and the effects on the social, economic, and natural environment within the municipality.

Onsite Sewage System – an absorption system of any size or flow or a system or facility for collecting, storing, treating, neutralizing, stabilizing, or disposing of sewage which is not a part of or connected to a sewage treatment works. These systems allow solids to decompose and settle in a tank, then liquids flow by gravity or pump/siphon to a drainage or tile field for soil absorption.

Organic Solvent – compounds that contain carbon atoms able to dissolve solids, gases, or liquids. Examples include methyl alcohol, benzene, acetone, and ether. Some organic solvents are flammable and pose a risk to human health. Depending on their properties, organic solvents can also be classified as dense non-aqueous phase liquids (DNAPLs).

Outdoor Confinement Area – defined under the *Nutrient Management Act, 2002*, Ontario Regulation 267/03 (Regulation) as an enclosure for livestock or game animals that has all of the following characteristics:

1) an unroofed area, with the exception of small wind or shade shelters that are under 20 m2 (200 ft2). Such shelters are considered part of the outdoor confinement area;
2) permanent or portable feeding or watering equipment;
3) a grazing or foraging area that accounts for less than 50 per cent of the animal's dry matter intake;

4) fences, pens, corrals or similar structures to confine the animals that are either permanent or temporary; and
5) access to a barn. The non-roofed area may be an outdoor confinement area. (See other Sections of the *Nutrient Management Act, 2002* for barn regulations).

Pesticide – any product that is used to directly or indirectly control a pest, including herbicides (used to control plants), insecticides (used to control insects), fungicides (used to control mold, mildew, and fungus), and rodenticides (used to control rodents such as mice and rats).

Prescribed Instrument – provincially issued documents with specific rules that govern activities on a specific property. They often contain rules to protect human health and the environment and may include; licenses, permits, approvals, orders or other legal provincial documents. They are listed in the *Clean Water Act, 2006* (Ontario Regulation 287/07) and fall under six Acts (*Environmental Protection Act*; *Ontario Water Resources Act*; *Pesticides Act*; *Safe Drinking Water Act*; *Aggregate Resources Act*; and *Nutrient Management Act*). Prescribed instruments can be relied upon to achieve the desired outcome for addressing a threat because the *Clean Water Act, 2006* mandates conformity of these instruments to certain policies in the Plan.

Prohibition – the act of forbidding or preventing the establishment or continuation of an activity that is a significant drinking water threat.

Raw Water – is natural water found in the environment, such as rainwater, ground water, and water from bodies like lakes and rivers. Water in this form is considered raw, as opposed to water which has been treated before consumption, such as drinking water.

Raw Water Supply – water outside a drinking water system that is a source of water for the system.

Restricted Land Use – a tool under Part IV of the *Clean Water Act, 2006* used as a screening mechanism for municipalities to identify areas where prohibition or risk management plans are required. During implementation, restricted land use makes certain development applications under the *Planning Act* or *Building Code Act, 1992* related to activities that would be a significant drinking water threat subject to stipulations. This provides municipalities the ability to prevent applications or building permits that would lead to the creation of significant drinking water threats.

Risk – the likelihood of a drinking water threat causing a drinking water source to become impaired, unusable, or compromising the effectiveness of a drinking water treatment process, resulting in the potential adverse human health effects.

Risk Management Inspector – a person appointed by the council of a municipality that is responsible for the inspection of Part IV of the *Clean Water Act,* and who has the qualifications prescribed in Ontario Regulation 287/07.

Risk Management Official – a person appointed by the council of a municipality that is responsible for the enforcement of Part IV of the *Clean Water Act,* and who has the qualifications prescribed in Ontario Regulation 287/07.

Risk Management Plan – a site-specific plan negotiated with the person undertaking an activity under Section 58 of the *Clean Water Act, 2006* to address significant drinking water threat activities. Note that this tool cannot be used for waste disposal and sewage-related activities that require a certificate of approval under the *Environmental Protection Act* or the *Ontario Water Resources Act,* or a permit under the Ontario Building Code.

Runoff – water that moves over land rather than being absorbed into the ground. Runoff is greatest after heavy rains or snowmelts, and can pick up and transport contaminants from a variety of sources such as landfills, sewers, farms, or industry.

Safe Drinking Water Act, 2002 – a provincial act enacted (1) to recognize that the people of Ontario are entitled to expect their drinking water to be safe and (2) to provide for the protection of human health and the prevention of drinking water health hazards through the control and regulation of drinking water systems and drinking water testing.

Septage – raw, untreated liquids and solids that are pumped out of septic tanks and holding tanks. Untreated septage has not been treated to reduce pathogens, and is considered waste.

Sewage – drainage from storm water ponds, sewers, residential, commercial and industrial facilities and such other matter or substance as is specified by *Ontario Water Resources Act*.

Sewage Infrastructure – any infrastructure for the collection, transmission, treatment and disposal of sewage or any part of such works, but does not include plumbing to which the *Building Code Act, 1992* applies.

Significant Groundwater Recharge Area (SGRA) – an area of land in which there is a volume of water moving from the surface into the ground and is critical for replenishment of the aquifer.

Source Protection – a program of education, stewardship, planning, infrastructure, and regulation activities that together serve to help prevent the contamination or overuse of source water.

Source Protection Area – lands and water that have been defined under Ontario Regulation 284/07 as the “study area” for an Assessment Report and a source protection plan under the *Clean Water Act, 2006.* These areas are based on the existing 36 Conservation Authority boundaries, with some exceptions. For administrative efficiency, some Source Protection Areas have been grouped together to form Source Protection Regions.

Source Protection Authority – a conservation authority or other person or body that is required to exercise powers and duties under the *Clean Water Act, 2006.*

Source Protection Committee – a group of individuals who have been appointed under the *Clean Water Act, 2006* by a Source Protection Authority to coordinate source protection activities for a source protection area or region.

Source Protection Plan – a document that is prepared by a source protection committee under Section 22 of the *Clean Water Act, 2006* to direct source protection activities in a source protection area or region. Each plan is approved by the Ministry of the Environment.

Source Protection Regions – two or more Source Protection Areas that have been grouped together under Ontario Regulation 284/07.

Source Water – untreated water that is found in groundwater aquifers and surface water lakes and rivers that is used to supply a drinking water system.

Specify Action – a policy tool that may be used when the available tools do not address a significant threat adequately or there are actions that can be taken to promote the protection of drinking water the specify action tool may be used to achieve the objective of the Source Protection Plan. Examples of specify action tools include Municipalities enacting by-laws under the *Municipal Act, 2001* or the various ministries utilizing their respective powers under the Acts they administer. Specific items could include things such as spills monitoring, emergency planning, management of transport pathways, household hazardous waste collections, and road signs erected to identify vulnerable areas.

Storage – the total volume of a substance that can be stored on a single property (in either single or multiple tank(s)).

Surface Water – water that is present on the earth's surface and may occur as rivers, lakes, wetlands, ponds, etc.

Surface Water Intake – structure through which surface water is drawn into a drinking water treatment plant.

Tables of Drinking Water Threats – the Ministry of the Environment publication "Table of Drinking Water Threats: *Clean Water Act, 2006"* dated December 12, 2008, as amended from time to time.

Terms of Reference – the work plan for development of the source protection plan that is subject to public comment and approval by the Ontario Minister of the Environment.

Time of Travel – with respect to groundwater, the length of time that is required for groundwater to travel a specified horizontal distance in the saturated zone; and with respect to

surface water, the length of time that is required for surface water to travel a specified distance within a surface water body.

Transport Pathways – any structure or alteration of land, resulting from human activity that increases the vulnerability and risk of a contaminate reaching a drinking water source. e.g. Tile drains, wells, storm sewers, ditches, and earth energy systems.

Underground storage – a buried tank or partially buried tank that is in direct contact with earth or backfill.

Vulnerable Area – a significant groundwater recharge area, a highly vulnerable aquifer, a surface water intake protection zone, or a wellhead protection area.

Waste Disposal Site – any land upon, into, in or through which, or building or structure in which waste is deposited, handled, stored, transferred, treated or processed, and any operation carried out or machinery or equipment used in connection with the depositing, disposal, handling, storage, transfer, treatment or processing of the waste.

Watershed – an area of land from which surface runoff, including water, sediments, nutrients, and contaminants drain into a common water body, such as a lake, river, stream, creek or estuary.

Wellhead Protection Area (WHPA) – an area of land surrounding a well, where human activities may need to be regulated to protect the quality and quantity of groundwater that supplies the well.

Appendix C: Compliance with Subsection 34(1) – (4) of Regulation 287/07

List A – Significant threat policies that affect decisions under the *Planning Act and Condominium Act, 1998*

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

Policy 1-3-F: Land Use Planning for Prohibition of Future Waste Disposal Sites

Policy 1-8-E & F: Restricted Land Use Risk Management Plans for Waste Disposal Sites Not Regulated by Ontario Regulation 347/09

Policy 2-3-F: New Development and Future Construction on Lots of Record with Proposed Sewage Systems (less than 10,000 litres/day and greater than 10,000 litres/day)

Policy 2-8-F: Land Use Planning for Prohibition of New Sewage Treatment Plants

Policy 3-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for Agricultural Activities

Policy 8-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans of the Non-Agricultural Application of Commercial Fertilizer

Policy 9-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for Handling and Storage of Non-Agricultural Commercial Fertilizer

Policy 10-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for the Non-Agricultural Application of Pesticides

Policy 11-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for Handling and Storage of Non-Agricultural Pesticides

Policy 12-4-E & F: Restricted Land Use for the Application of Road Salt

Policy 13-2-E & F: Restricted Land Use for the Handling and Storage of Road Salt

Policy 14-2-E & F: Restricted Land Use for Risk Management Plans for the Storage of Snow

Policy 15-5-E & F: Restricted Land Use Designation Prohibition and Risk Management Plans for Handling and Storage of Fuel

Policy 16-3-E & F: Restricted Land Use for Handling and Storage of Dense Non-Aqueous Phase Liquids (DNAPLs)

Policy 17-3-E & F: Restricted Land Use for Handling and Storage of Organic Solvents

List B – Moderate and low threat policies that affect decisions under the *Planning Act and Condominium Act, 1998*

There are no policies under this category.

List C – Significant threat policies that affect prescribed instrument decisions

Subsection 39(6), and clause 39(7)(a), section 43 and subsection 44(1) of the *Clean Water Act, 2006* apply to the following policies:

Policy 1-1-F: Prescribed Instrument for Prohibition of Future Waste Disposal Sites

Policy 1-2-E: Prescribed Instrument for Management of Existing Waste Disposal Sites

Policy 1-4-E: Prescribed Instrument – Conditions for Management of Closed Landfill Sites

Policy 2-4-E & F: Prescribed Instrument for Management of Existing and Future Large Sewage Systems with Design Capacity Greater than 10,000 litres/day

Policy 2-5-E: Prescribed Instrument for Existing Sewage Infrastructure (sanitary sewer networks/pipes, pumping stations, stormwater ponds, Sewage Treatment Plant (STP) storage tanks, effluent discharges, and by-pass discharges)

Policy 2-6-F: Prescribed Instrument for Management of Future Sewage Infrastructure (sanitary sewer networks, pumping stations, stormwater ponds, STP storage tanks, effluent discharges, and by-pass discharges)

Policy 3-4-E & F: Prescribed Instrument for the Management of Agricultural Activities (Agricultural Source Material (ASM), Non-Agricultural Source Material (NASM), and Grazing)

List D – Moderate and low threat policies that affect prescribed instrument decisions

Clause 39(7)(b) of the *Clean Water Act, 2006* applies to the following policies:

Policy 1-6-E & F: Prescribed Instrument for Management of Existing and Future Waste Disposal Sites (Moderate Threat)

Policy 5-1-F: Management of Agricultural Source Material (Aquaculture) – Moderate and Low Threats

Prescribed Instruments which apply to Source Protection Plan policies in Lists C and D (ss. 34(4)) of Ontario Reg 287/07

	Waste Disposal				Sewage			Agriculture	Aquaculture
	1-1-F	1-2-E	1-4-E	1-6-E & F	2-4-E & F	2-5-E	2-6-F	3-4-E & F	5-1-F
Aggregate Resources Act (MNR)									
Environmental Protection Act (MOE)	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	
Nutrient Management Act (OMAFRA)								**X**	
Ontario Water Resources Act (MOE)					**X**	**X**	**X**		**X**
Pesticides Act (MOE)									
Safe Drinking Water Act (MOE)									

List E – Significant threat policies that impose obligations on municipalities, source protection authorities and local boards

Section 38 and subsection 39(6) of the *Clean Water Act, 2006* applies to the following policies:

Policy G-1: Education and Outreach

Policy 1-5-E: Management of Closed Landfill Sites

Policy 2-1-E & F: Connection to Municipal Sewage Collection Systems – Private Sewage Systems (less than 10,000 litres/day) and Large Sewage Systems (greater than 10,000 litres/day)

Policy 2-2-E: Inspection of Residential Onsite Sewage Systems (less than 10,000 litres/day)

Policy 2-7-E: Managing Existing Sewage Infrastructure

Policy 12-1-E & F: Salt Management Plan for Significant, Moderate, and Low Threats Related to Application of Road Salt

Policy 18-1-F: Management of Runoff Containing Airplane De-icing Fluid

List F – Monitoring policies referred to in subsection 22(2) of the *Clean Water Act, 2006*

Section 45 of the *Clean Water Act, 2006* applies to the following policies:

Policy G-1: Education and Outreach

Policy 1-1-F: Prescribed Instrument for Prohibition of Future Waste Disposal Sites

Policy 1-2-E: Prescribed Instrument for Management of Existing Waste Disposal Sites

Policy 1-3-F: Land Use Planning for Prohibition of Future Waste Disposal Sites

Policy 1-4-E: Prescribed Instrument – Conditions for Management of Closed Landfill Sites

Policy 1-5-E: Management of Closed Landfill Sites

Policy 1-7-E & F: Risk Management Plan for Waste Disposal Sites Not Regulated by Ontario Regulation 347/09

Policy 1-8-E & F: Restricted Land Use Risk Management Plans for Waste Disposal Sites Not Regulated by Ontario Regulation 347/09

Policy 2-1-E & F: Connection to Municipal Sewage Collection Systems – Private Sewage Systems (less than 10,000 litres/day) and Large Sewage Systems (greater than 10,000 litres/day)

Policy 2-2-E: Inspection of Residential Onsite Sewage Systems (less than 10,000 litres/day)

Policy 2-3-F: New Development and Future Construction on Lots of Record with Proposed Sewage Systems (less than 10,000 litres/day and greater than 10,000 litres/day)

Policy 2-4-E & F: Prescribed Instrument for Management of Existing and Future Large Sewage Systems with Design Capacity Greater than 10,000 litres/day

Policy 2-5-E: Prescribed Instrument for Existing Sewage Infrastructure (sanitary sewer networks/pipes, pumping stations, stormwater ponds, Sewage Treatment Plant (STP) storage tanks, effluent discharges, and by-pass discharges)

Policy 2-6-F: Prescribed Instrument for Management of Future Sewage Infrastructure (sanitary sewer networks, pumping stations, stormwater ponds, STP storage tanks, effluent discharges, and by-pass discharges)

Policy 2-7-E: Managing Existing Sewage Infrastructure

Policy 2-8-F: Land Use Planning for Prohibition of New Sewage Treatment Plants

Policy 3-1-E & F: Prohibition of Agricultural Activities

Policy 3-2-E & F: Risk Management Plan for Managing Agricultural Activities (Agricultural Source Material (ASM), Non Agricultural Source Material (NASM), Grazing, Pasturing, Outdoor Confinement, Commercial Fertilizer and Pesticides)

Policy 3-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for Agricultural Activities

Policy 3-4-E & F: Prescribed Instrument for the Management of Agricultural Activities (Agricultural Source Material (ASM), Non-Agricultural Source Material (NASM), and Grazing)

Policy 8-1-E & F: Prohibition of the Non-Agricultural Application of Commercial Fertilizer

Policy 8-2-E & F: Risk Management Plan for Non-Agricultural Application of Commercial Fertilizer

Policy 8-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for the Non-Agricultural Application of Commercial Fertilizer

Policy 9-1-F: Prohibition of Non-Agricultural Commercial Fertilizer Storage (greater than 2,500 kilograms or 2,500 litres; Nitrogen and Phosphorus)

Policy 9-2-E & F: Risk Management Plan for Managing Handling and Storage of Non-Agricultural Commercial Fertilizer (greater than 2,500 kilograms or 2,500 litres; Nitrogen and Phosphorus)

Policy 9-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for Handling and Storage of Non-Agricultural Commercial Fertilizer

Policy 10-1-E & F: Prohibition of the Non-Agricultural Application of Pesticides

Policy 10-2-E & F: Risk Management Plan for Management of Non-Agricultural Application of Pesticides

Policy 10-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for the Non-Agricultural Application of Pesticides

Policy 11-1-E & F: Prohibition of the Handling and Storage of Non-Agricultural Pesticides

Policy 11-2-E & F: Risk Management Plan for the Management of Handling and Storage of Non-Agricultural Pesticides

Policy 11-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for Handling and Storage of Non-Agricultural Pesticides

Policy 12-1-E & F: Salt Management Plan for Significant, Moderate, and Low Threats Related to Application of Road Salt

Policy 12-2-E & F: Salt Management Plan for Application of Road Salt

Policy 12-3-E & F: Risk Management Plan for the Management of Application of Road Salt

Policy 12-4-E & F: Restricted Land Use for the Application of Road Salt

Policy 13-1-E & F: Prohibition of Existing and Future Handling and Storage of Road Salt (between 500 – 5,000 tonnes and greater than 5,000 tonnes)

Policy 13-2-E & F: Restricted Land Use for the Handling and Storage of Road Salt

Policy 14-1-E & F: Risk Management Plan for the Storage of Snow

Policy 14-2-E & F: Restricted Land Use for Risk Management Plans for the Storage of Snow

Policy 15-1-F: Prohibition of the Future Handling and Storage of Fuel (storage tanks greater than 250 and less than 2,500 litres below grade and greater than 2,500 litres above and below grade)

Policy 15-2-E & F: Management of Existing and Future Handling and Storage of Fuel (above grade storage tanks greater than 250 and less than 2,500 litres) – Moderate Drinking Water Threat

Policy 15-3-E: Risk Management Plan for Existing Handling and Storage of Fuel (storage tanks greater than 2,500 litres above and below grade)

Policy 15-4-E: Risk Management Plan for Existing Handling and Storage of Fuel (storage tanks greater than 250 and less than 2,500 litres below and partially below grade)

Policy 15-5-E & F: Restricted Land Use Designation Prohibition and Risk Management Plans for Handling and Storage of Fuel

Policy 15-6-E: Code Review for Handling and Storage of Fuel (storage tanks greater than 250 litres, installed above or below grade)

Policy 16-1-E & F: Prohibition of Dense Non-Aqueous Phase Liquids (DNAPLs)

Policy 16-2-E & F: Risk Management Plan for Managing the Handling and Storage of Dense Non-Aqueous Phase Liquids (DNAPLs)

Policy 16-3-E & F: Restricted Land Use for Handling and Storage of Dense Non-Aqueous Phase Liquids (DNAPLs)

Policy 17-1-F: Prohibition for Future Handling and Storage of Organic Solvents

Policy 17-2-E: Risk Management Plan for Handling and Storage of Organic Solvents

Policy 17-3-E & F: Restricted Land Use for Handling and Storage of Organic Solvents

Policy 18-1-F: Management of Runoff Containing Airplane De-icing Fluid

List G – Policies related to Part IV Section 57 of the *Clean Water Act, 2006*

The following policies relate to Section 57 (prohibition) of the *Clean Water Act*:

Policy 3-1-E & F: Prohibition of Agricultural Activities

Policy 8-1-E & F: Prohibition of the Non-Agricultural Application of Commercial Fertilizer

Policy 9-1-F: Prohibition of Non-Agricultural Commercial Fertilizer Storage (greater than 2,500 kilograms or 2,500 litres; Nitrogen and Phosphorus)

Policy 10-1-E & F: Prohibition of the Non-Agricultural Application of Pesticides

Policy 11-1-E & F: Prohibition of the Handling and Storage of Non-Agricultural Pesticides

Policy 13-1-E & F: Prohibition of Existing and Future Handling and Storage of Road Salt (between 500 – 5,000 tonnes and greater than 5,000 tonnes)

Policy 15-1-F: Prohibition of the Future Handling and Storage of Fuel (storage tanks greater than 250 and less than 2,500 litres below grade and greater than 2,500 litres above and below grade)

Policy 16-1-E & F: Prohibition of Dense Non-Aqueous Phase Liquids (DNAPLs)

Policy 17-1-F: Prohibition for Future Handling and Storage of Organic Solvents

List H – Policies related to Section 58 of the *Clean Water Act, 2006*

The following policies relate to Section 58 (risk management plans) of the *Clean Water Act*:

Policy 1-7-E & F: Risk Management Plan for Waste Disposal Sites Not Regulated by Ontario Regulation 347/09

Policy 3-2-E & F: Risk Management Plan for Managing Agricultural Activities (Agricultural Source Material (ASM), Non Agricultural Source Material (NASM), Grazing, Pasturing, Outdoor Confinement, Commercial Fertilizer and Pesticides)

Policy 8-2-E & F: Risk Management Plan for Non-Agricultural Application of Commercial Fertilizer

Policy 9-2-E & F: Risk Management Plan for Managing Handling and Storage of Non-Agricultural Commercial Fertilizer (greater than 2,500 kilograms or 2,500 litres; Nitrogen and Phosphorus)

Policy 10-2-E & F: Risk Management Plan for Management of Non-Agricultural Application of Pesticides

Policy 11-2-E & F: Risk Management Plan for the Management of Handling and Storage of Non-Agricultural Pesticides

Policy 12-3-E & F: Risk Management Plan for the Management of Application of Road Salt

Policy 14-1-E & F: Risk Management Plan for the Storage of Snow

Policy 15-3-E: Risk Management Plan for Existing Handling and Storage of Fuel (storage tanks greater than 2,500 litres above and below grade)

Policy 15-4-E: Risk Management Plan for Existing Handling and Storage of Fuel (storage tanks greater than 250 and less than 2,500 litres below and partially below grade)

Policy 16-2-E & F: Risk Management Plan for Managing the Handling and Storage of Dense Non-Aqueous Phase Liquids (DNAPLs)

Policy 17-2-E: Risk Management Plan for Handling and Storage of Organic Solvents

List I – Policies related to Section 59 of the *Clean Water Act, 2006*

The following policies relate to Section 59 (restricted land use) of the *Clean Water Act*:

Policy 1-8-E & F: Restricted Land Use Risk Management Plans for Waste Disposal Sites Not Regulated by Ontario Regulation 347/09

Policy 3-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for Agricultural Activities

Policy 8-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for the Non-Agricultural Application of Commercial Fertilizer

Policy 9-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for Handling and Storage of Non-Agricultural Commercial Fertilizer

Policy 10-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for the Non-Agricultural Application of Pesticides

Policy 11-3-E & F: Restricted Land Use for Prohibition and Risk Management Plans for Handling and Storage of Non-Agricultural Pesticides

Policy 12-4-E & F: Restricted Land Use for the Application of Road Salt

Policy 13-2-E & F: Restricted Land Use for the Handling and Storage of Road Salt

Policy 14-2-E & F: Restricted Land Use for Risk Management Plans for the Storage of Snow

Policy 15-5-E & F: Restricted Land Use Designation Prohibition and Risk Management Plans for Handling and Storage of Fuel

Policy 16-3-E & F: Restricted Land Use for Handling and Storage of Dense Non-Aqueous Phase Liquids (DNAPLs)

Policy 17-3-E & F: Restricted Land Use for Handling and Storage of Organic Solvents

List J – Strategic Action Policies

For the purposes of Section 33 of Ontario Regulation 287/07, the following policies are identified as strategic action policies.

Policy G-1: Education and Outreach

Policy G-2-F: Updating Spill Response Procedure and Emergency Response Plans

Policy G-3-E & F: Emergency Planning in Intake Protection Zones and Wellhead Protection Areas

Policy G-4-E: Existing Transport Pathways – Well Decommissioning or Upgrading

Policy G-5-F: Transport Pathways Preventative Measures

Policy G-6-F: Inspections of Transport Pathways – Wells WHPA B, C and D

Policy G-7-E & F: Management of Household Hazardous Waste

Policy G-8-E & F: Road Signs for Intake Protection Zones and Wellhead Protection Areas

Policy G-9-F: Raw Water Sampling Under the Drinking Water Surveillance Program for Municipal Drinking Water Systems

Policy 1-6-E & F: Prescribed Instrument for Management of Existing and Future Waste Disposal Sites (Moderate Threat)

Policy 5-1-F: Management of Agricultural Source Material (Aquaculture) – Moderate and Low Threats

Policy 12-1-E & F: Salt Management Plan for Significant, Moderate, and Low Threats Related to Application of Road Salt

Policy 12-2-E & F: Salt Management Plan for Application of Road Salt

Policy 15-2-E & F: Management of Existing and Future Handling and Storage of Fuel (above grade storage tanks greater than 250 and less than 2,500 litres) – Moderate Drinking Water Threat

Policy 15-6-E: Code Review for Handling and Storage of Fuel (storage tanks greater than 250 litres, installed above or below grade)

List K – Significant threat policies that have a non-legally binding commitment and which apply to bodies other than a municipality, local board or source protection authority.

Policy 12-2-E & F: Salt Management Plan for Application of Road Salt

Appendix D: Terms of Reference

The approved Terms of Reference is available at:

http://quintesourcewater.ca/site/images/stories/pdfs/publications/approved_terms_of_reference_february_5_2009.pdf

Appendix E: Assessment Report

The Assessment Report is available at:

http://quintesourcewater.ca/site/index.php?option=com_content&task=view&id=189&Itemid=155