



Source Protection Plan

Raisin-South Nation Source Protection Region

Région de protection des sources de Raisin-Nation Sud
Plan de protection des sources

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Important Notice

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

- Raisin Region Source Protection Area.
- South Nation Source Protection Area.

Policies apply to both Source Protection Areas unless otherwise stated.

Effective Date

The effective date for the Raisin Region Source Protection Plan and the South Nation Source Protection Plan is April 1, 2015. As of this date, the policies in these plans have legal effect as provided by the *Ontario Clean Water Act, 2006*.

Accompanying Explanatory Document

The Explanatory Document accompanies this Source Protection Plan under separate cover. The document includes background information, considerations, and rationale for each policy.

Avis important

Ce document contient deux plans de protection des sources aux zones de protection des sources suivantes:

- Zone de protection des sources de la région Raisin et
- Zone de protection des sources de la Nation Sud.

Les politiques, intentions et justifications s'appliquent aux deux zones de protection des sources à moins d'avis contraire.

Date d'entrée en vigueur

La date d'entrée en vigueur du plan de protection des sources de la région Raisin et le plan de protection des sources de la Nation Sud est le 1er avril 2015. À partir de cette date, les politiques de ces plans auront une portée juridique dans le cadre de la *Loi sur l'eau saine de l'Ontario, 2006*.

Document explicatif d'accompagnement

Le document explicatif accompagnera ce plan de protection des sources sous pli séparé. Le document fournit des informations en matière de contexte, considérations et justifications pour chaque politique.

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1 Introduction

1.1 Importance of Source Protection

Drinking water comes from lakes, rivers, streams and underground sources (aquifers) located across the region. Drinking water sources can be easily contaminated and have a limited tolerance for stress. As a result, long-term problems can develop that are costly or even impossible to correct. In order to make sure we have enough clean water for drinking and other uses, we need to protect sources by managing the influences on them.

The goal of Source Protection is to ensure that drinking water sources are clean and safe before they are treated. Ultimately, this can save money related to water treatment, and will help to protect the source for long-term use. The Source Protection Plan is part of a science-based, multi-barrier approach to providing clean water from source to tap in the Raisin-South Nation Source Protection Region.

The *Clean Water Act, 2006* provided the legislative framework for Source Protection in Ontario. Unlike other legislation, the *Clean Water Act, 2006* does not apply a standard set of policies across Ontario. Instead, the *Clean Water Act, 2006* requires local Source Protection Regions, through multi-stakeholder Committees created across Ontario, to develop a Source Protection Plan.

For the purpose of this Plan, the sources of drinking water are municipal surface water intakes and municipal ground water wells. In order to create the Source Protection Plan, the municipal drinking water sources were identified and their vulnerability was assessed. This information can be found in the Terms of Reference and Assessment Report documents.

1.2 Source Protection Region

The geographic area to which a Source Protection Plan applies is called a Source Protection Area. A Source Protection Area, for the purposes of the *Clean Water Act, 2006*, is established as the area over which a Conservation Authority has jurisdiction under the *Conservation Authorities Act, 1990*. The Raisin Region Source Protection Area includes the jurisdiction of the Raisin Region Conservation Authority (RRCA) and additional watershed-based areas to the south west (Hoasic Creek) and north (Rigaud River). The total area of the Raisin Region Source Protection Area is approximately 2,000 km². The South Nation Source Protection Area includes the jurisdiction of South Nation Conservation (SNC) with the addition of the Town of Prescott and an additional watershed-based area to the north-east. The total area of the South Nation Source Protection Area is approximately 5,000 km².

The Raisin Region Source Protection Area combined with the South Nation Source Protection Area form the Raisin-South Nation Source Protection Region. The Source Protection Areas and the Source Protection Region are shown on Map 1 (Appendix F).

1.3 Source Protection Authorities

The Ministry of the Environment and Climate Change oversees the *Clean Water Act, 2006* provincially, but the Conservation Authorities of Ontario administer the program at the local level. Conservation Authorities were selected based on their local knowledge and experience protecting water resources. Conservation Authorities are referred to as Source Protection Authorities when undertaking the responsibilities under the *Clean Water Act, 2006*. The role of the Source Protection Authority is to establish the Source Protection Committee, submit deliverables to the Ministry of the Environment and Climate Change for review and approval, and to report annually on policy implementation.

The Raisin Region Source Protection Authority and the South Nation Source Protection Authority jointly oversee the Source Protection program in the Raisin-South Nation Source Protection Region.

1.4 Source Protection Committee

Source Protection Committees were established for each of the 19 Source Protection Regions in Ontario. The committees are made up of municipal, public, and sector representatives appointed by the Source Protection Authority (SPA). Committee Chairs were appointed by the Minister of the Environment. The committees are responsible for preparing the Terms of Reference, Assessment Reports and Source Protection Plans to meet the requirements of the *Clean Water Act, 2006*. The Committees are required to follow the *Clean Water Act, 2006*, its regulations, Director’s rules and guidance material created by the Province, in addition to working collaboratively with municipalities and Source Protection Authorities.

The Raisin-South Nation Source Protection Committee is made up of 15 members plus a chairperson. The 15 member committee represents the interests of the local municipalities, agricultural sector, commercial and industrial sectors as well as the general public. There are additional (non-voting) liaisons representing each Source Protection Authority, the Ministry of the Environment and Climate Change, and the local Health Unit. The committee make-up is shown below.

SPC Chair			
Municipal Representatives (5)	Sector Representatives (5)	General Public Representatives (5)	Non-Voting Liaisons (4)
<ul style="list-style-type: none"> City of Ottawa City of Cornwall Leeds & Grenville Prescott-Russell Stormont, Dundas & Glengarry 	<ul style="list-style-type: none"> Agriculture (3) Aggregates (1) Commercial / Industrial (1) 	<ul style="list-style-type: none"> St. Lawrence River Restoration Council Clean Water Committee Eastern Ontario Water Resources Committee 2 citizens at-large 	<ul style="list-style-type: none"> Raisin Region SPA South Nation SPA Eastern Ontario Health Unit Ministry of the Environment and Climate Change

1.5 Terms of Reference

The Terms of Reference, one each per Source Protection Area, were submitted to the Ministry of the Environment and Climate Change in May of 2009. The drinking water systems where Source Protection Plans will apply were identified in the Terms of Reference and are listed below and shown on Map 2 (Appendix F).

Source Protection Area	Municipality	Drinking Water System	Source Water
Raisin Region Source Protection Area	Township of South Stormont	Long Sault	Surface Water
	City of Cornwall	Cornwall	Surface Water
	Township of South Glengarry	Glen Walter	Surface Water
		Lancaster	Surface Water
		Redwood Estates	Groundwater
	Township of North Glengarry	Alexandria	Surface Water
		Glen Robertson	Groundwater
South Nation Source Protection Area	Town of Prescott	Prescott	Surface Water
	Township of Edwardsburgh / Cardinal	Cardinal	Surface Water
		Bennett Street, Spencerville	Groundwater
	Township of South Dundas	Morrisburg	Surface Water
	Township of North Dundas	Winchester	Groundwater
		Chesterville	Groundwater
	Township of South Stormont	Newington	Groundwater
	Township of North Stormont	Finch	Groundwater
		Crysler	Groundwater
		Moose Creek	Groundwater
	Russell Township	Embrun-Marionville ¹	Groundwater
	City of Ottawa	Greely	Groundwater
		Vars	Groundwater
	The Nation Municipality	Limoges	Groundwater
	Village of Casselman	Casselman	Surface Water
	City of Clarence-Rockland	Rockland	Surface Water
	Township of Alfred-Plantagenet	Wendover	Surface Water
Lefavre		Surface Water	
City of Hawkesbury	Hawkesbury	Surface Water	

The Terms of Reference is available for viewing at the local Conservation Authority, or it may be downloaded over the internet from the following website:

<http://www.yourdrinkingwater.ca>.

¹ The Embrun-Marionville well has since been decommissioned. Activities which were identified as drinking water threats in the original assessment report have since been removed.

1.6 Assessment Report

The Assessment Reports, one each per Source Protection Area, were submitted to the Ministry of the Environment and Climate Change in July of 2011. They were formally accepted by the Minister and posted to the Ontario Environmental Registry on January 23, 2012.

The Assessment Reports provide detailed technical analyses and mapping of the physical and human geography of the region. A water quantity threats assessment was completed using a tiered water budget process. Any existing water quality issues were reviewed and documented. Highly vulnerable aquifers, significant groundwater recharge areas, Wellhead Protection Areas, and Intake Protection Zones were delineated and evaluated with respect to susceptibility to contamination. Human activities in vulnerable areas that are or would be significant drinking water threats were also identified.

The Assessment Report identifies a provincial list of 21 prescribed activities that are considered drinking water threats. Source Protection Policies will address the following activities where they are (currently) or would be (in the future) significant threats:

1. The establishment, operation or maintenance of a waste disposal site (Part V of the *Environmental Protection Act, 1990*)
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

The latest version of the Assessment Report is available for viewing at the local Conservation Authority, or it may be downloaded over the internet from the following website:

<http://www.yourdrinkingwater.ca>.

1.7 Source Protection Planning Process

The Source Protection Committee established the Source Protection Policy Working Group to develop draft policies. The draft policies were brought back to the public Source Protection Committee meetings for review and approval. The Working Group met with various industry experts and municipal staff to receive input related to policy development. The Working Group reviewed all the technical research and background documents for each threat and developed preliminary policy recommendations for the Source Protection Committee's consideration. Each Working Group meeting focused on developing policies for a particular sector and threat category.

The Working Group evaluated and discussed each policy option. The group then weighed each policy option against any possible alternatives, cost implications, and the availability of existing regulatory and non-regulatory tools and instruments. When evaluating different policy options, the group considered the following guiding principles:

- Effectiveness (would the policy effectively protect sources of drinking water)
- Appropriateness (would the policy be practical and avoid regulatory duplication)
- Fiscal Responsibility (would the policy be cost-effective and reasonable)

1.8 Consultation

The Raisin-South Nation Source Protection Committee (SPC) and the Raisin Region and South Nation Source Protection Authorities have an ongoing commitment to public consultation. From the beginning, the Raisin-South Nation SPC has taken an open and interactive approach to consultation with the public by offering a variety of opportunities and tools for input. The SPC's communication with municipalities, stakeholders, property owners, First Nations groups and Source Protection partners exceeds requirements as legislated by the Regulation.

Throughout the process, an ongoing level of public feedback has been integrated into the development of Terms of Reference (TOR), the development of both Assessment Reports (AR), and ultimately into the development of this Source Protection Plan (SPP). A detailed summary of the methodology used for public consultation for the TOR, AR and SPP is presented in Appendix C.

2 Policy Development Process

The Source Protection Plans across Ontario all have the same purpose – to protect drinking water sources and ensure that significant threat activities are addressed in vulnerable areas. The Source Protection Committee was given various policy tools to address significant threat activities. These tools are described in detail in this section. The policies only apply to activities where they are a significant threat.

2.1 Source Protection Plan Objectives

Ontario Regulation 287/07, Section 22 (1) lists the following two objectives for all Plans developed in Ontario:

- “1. To protect existing and future drinking water sources in the source protection area.*
- 2. To ensure that, for every area identified in an assessment report as an area where an activity is or would be a significant drinking water threat,*
 - i. the activity never becomes a significant drinking water threat, or*
 - ii. if the activity is occurring when the source protection plan takes effect, the activity ceases to be a significant drinking water threat. O. Reg. 246/10, s. 12.”*

2.2 Description of Policy Tools

The goal of a Source Protection Plan is to manage or eliminate activities that are, or would become, significant drinking water threats. In most circumstances, property owners are able to manage significant threats to reduce the risk and allow the activity to continue.

The *Clean Water Act, 2006* provides several policy tools to accomplish this goal, including:

- Land use planning
- Prescribed Instruments
- Part IV Tools: prohibition, Risk Management Plans and restricted land uses
- Incentives
- Education and outreach
- Specify actions

Land Use Planning

Municipalities can use zoning by-laws and Official Plans to direct new development to appropriate areas where it would not pose a threat to drinking water. These planning documents can also be used to prohibit or restrict new development in highly vulnerable areas that would create new significant threats. For example, Source Protection Policies could direct the Municipality to use land-use planning to ban new waste disposal sites near municipal wells, or chemical storage facilities upstream from a surface water intake. Land-use planning policies can be general (leaving the mechanism up to the Municipality) or name the specific Planning Act tools to be used (ex. zoning by-laws or site plan control).

Prescribed Instruments

A 'Prescribed Instrument' refers to a permit or other legal document issued by the Provincial government allowing an activity to take place. Specific instruments from the following Acts have been prescribed in the *Clean Water Act, 2006* for use in Source Protection planning:

- *Environmental Protection Act, 1990*
- *Ontario Water Resources Act, 1990*
- *Pesticides Act, 1990*
- *Safe Drinking Water Act, 2002*
- *Aggregate Resources Act, 1990*
- *Environmental Assessment Act, 1990*
- *Nutrient Management Act, 2002*

Prescribed Instruments generally contain provisions to protect human health and the environment. These provisions can be amended, if needed, to include additional considerations for protecting source water. For example, the *Nutrient Management Act, 2002* requires certain farms to prepare a Nutrient Management Plan, Strategy, or Non-agricultural Source Material Plan. A policy could specify that the Ontario Ministry of Agriculture, Food and Rural Affairs should review these documents to ensure that they are also protecting sources of drinking water. The issuer of the instrument is always the policy implementer.

Using existing instruments reduces the layers of regulation relating to the activity and works within a framework which is already familiar to the landowner. Other policy tools are only used for significant drinking water threats where the Source Protection Committee identified gaps in the existing regulation or if there is no applicable instrument.

Prohibition (Section 57)

Prohibition under Part IV of the *Clean Water Act, 2002* is a very effective way to prevent new significant threats from developing in vulnerable areas. This tool is useful when dealing with serious threats which pose a high level of risk. Prohibition ultimately ensures that hazardous activities get located in less vulnerable areas in the watershed.

The Source Protection Committee used prohibition for some future activities which pose a high level of risk (such as handling and storage of an organic solvent). Moving forward, the businesses that use these types of chemicals would either locate outside of the vulnerable area or use a less harmful product. Other tools, such as Risk Management Plans, were used to manage the existing instances of these types of threats.

Risk Management Plans (Section 58)

A Risk Management Plan is a site-specific document which is locally established between the Risk Management Official and the person engaged in the activity that poses a significant threat. One Risk Management Plan can be used to address all identified threats on the property and would only address the portion of the property where the threat is significant. Development of the Risk Management Plan will take current best management practices on the property into consideration.

If a landowner has a Prescribed Instrument which addresses the threat, the issuer of the instrument and the Risk Management Official will ensure it is protective enough. If it is, the landowner is not required to complete a Risk Management Plan.

Restricted Land Uses (Section 59)

The restricted land uses tool is a complimentary policy for prohibition or Risk Management Plan policies. It does not mean that land use is prohibited. Designating land uses in the vulnerable area for the purpose of Section 59 (restricted land uses) will ensure that future developments under the *Planning Act, 1990* or Building Code are reviewed by the Risk Management Official. This prevents the accidental approval of activities which do not conform with the Part IV policies (Risk Management Plans or prohibition) in the vulnerable area. The restricted land uses tool also ties Source Protection policies to applicable law under the Building Code.

The Section 59 tool is an effective way to identify land uses associated with drinking water threats at the front end of the planning process. If an applicant wishes to develop in the vulnerable area he or she will discuss the development with the Risk Management Official to determine if a Risk Management Plan is required, or if the planned activities are permitted in the vulnerable area. In most cases the application can proceed after receiving a notice from the Risk Management Official.

Incentive Programs

Source Protection Committees can require that incentives be offered to landowners to address both existing and future significant threats on their property. Such programs can be used as a complimentary policy for all threats or address a specific threat.

Education and Outreach

Education and outreach is an important component of Source Protection. The goal of an education/outreach policy is to make the general public aware of the objectives of Source Protection. Education/outreach also acts as a compliment to other policies and ensures that landowners understand why certain policies apply within their area. A strong education/outreach campaign will increase the effectiveness of other policy tools. The responsibility for implementing education/outreach policies can be directed at any public body but can also be delegated or shared between organizations.

Specify Action

Specify action policies direct a public body or organization to take certain steps to implement a Source Protection Plan or achieve its objectives. For example, municipalities have the authority to enact by-laws for specific matters within their jurisdiction under the *Municipal Act, 2001*. A policy could direct the Municipality to create a mandatory connection by-law in areas where septic systems are a significant drinking water threat.

Specify action policies must identify the body or organization which will undertake the action and provide details on how this action may be undertaken.

Other Approaches

Other tools that could be included in a Source Protection Plan include stewardship programs, promotion of best management practices, pilot programs to investigate new approaches to protecting source water, and research initiatives.

2.3 Areas Where Policies Apply

The Assessment Reports document where the vulnerable areas are, and which activities are or would be significant threats. In the Raisin-South Nation Source Protection Region, the significant threats were limited to the most vulnerable areas around drinking water sources. For groundwater supplies, these areas are known as Wellhead Protection Areas. For surface water sources, they are known as Intake Protection Zones. Appendix F contains the maps of vulnerable areas in the Raisin-South Nation Source Protection Region.

Wellhead Protection Areas

Wellhead Protection Areas (WHPAs) were delineated for each municipal wellhead identified in the *Terms of Reference* and identify the location of the underground water source, the direction the water travels towards the well, and the time it takes to travel to the well. Each wellhead location has four distinct WHPAs:

- WHPA-A (100m radius around the well);
- WHPA-B (time of travel to the well \leq two years) ;
- WHPA-C (time of travel to the well \leq five years); and
- WHPA-D (time of travel to the well \leq twenty-five years).

The susceptibility to contamination for each WHPA was scored and evaluated through a vulnerability assessment. High scores (8 to 10) indicate that contaminants can quickly penetrate the soil and reach the aquifer; Lower scores (2 to 6) indicate that there may be some degree of natural protection overlying the aquifer (e.g. layers of clay which can restrict the vertical movement of contaminants towards the source water).

Intake Protection Zones

Intake Protection Zones (IPZs) were delineated for each municipal system identified in the *Terms of Reference*, drawing from a surface water source. Similar to WHPAs they identify the location of the source water, the direction the water travels towards the intake pipe, and the land area upstream where runoff could enter the intake. Each surface water system has distinct IPZs:

- IPZ-1 (a fixed radius of 200m or 1km depending on the source water);
- IPZ-2 (the area within which the time of travel to the intake is \leq 2 hours); and,
- IPZ-3 (where applicable, the total contributing area where runoff could affect the source water).

The susceptibility to contamination for each IPZ was scored and evaluated through a vulnerability assessment. The scores were based on several criteria including: distance from the intake pipe; the time a contaminant takes to travel to the intake; the ratio of land to water within the zone; the depth of the intake pipe; and the assimilative capacity of the source water. High scores (8 to 10) indicate that contaminants can quickly reach the intake and pose a high risk to the quality of the source water. Lower scores indicate that source water is less vulnerable to contamination.

2.4 Circumstances Where Policies Apply

The list of prescribed drinking water threats is accompanied by the Provincial Tables of Circumstances. The Circumstances describe in which vulnerable areas and under which conditions the activities could be considered significant, moderate or low threats to drinking water sources. The Circumstances always relate to a vulnerable area (e.g. Wellhead Protection Area, Intake Protection Zone), the vulnerability score (e.g. 8 or higher) and often times either a threshold volume or amount of contaminant involved (e.g. > 5000 L), and/or the method in which something is stored (e.g. above ground vs. below ground). The percentage of managed lands and livestock density is also considered for some agricultural activities. Significant threats are mostly restricted to WHPA and IPZ areas where the vulnerability score is 8 or higher.

Lookup Tables for each drinking water system highlight which policies may apply to the different activities/areas are found in Appendix D. The general circumstances for each prescribed threat that make the activity a significant threat are outlined in Appendix E. The latest Assessment Report should be consulted to identify the official areas where policies apply.

2.5 General Provisions

Legal Effect

The *Clean Water Act, 2006* requires Municipalities, Local Boards or Source Protection Authorities to comply with any obligations imposed on it to address a significant drinking water threat.

Additionally, the Act requires that:

- decisions under the *Planning Act, 1990* and *Condominium Act, 1998* to conform to significant threat policies;
- decisions related to Prescribed Instruments to conform with significant threat policies; and that
- persons carrying out significant threat activities must conform with policies that use Part IV powers under the *Clean Water Act, 2006*.

The legal effect for the policies in this Plan are described in Appendix A – Director’s List.

Default Timelines Established by the *Clean Water Act, 2006*

In certain situations the *Clean Water Act, 2006* sets out fixed timelines for policy implementation. The following tools must all conform to the significant drinking water threat policies of the Source Protection Plan immediately when the Plan takes effect:

- Future *Planning Act, 1990* decisions;
- Future Prescribed Instrument decisions; and
- All part IV policies (restricted land uses, Risk Management Plans, and prohibition) applied to future activities.

For this reason it is important that municipalities have a Risk Management Official appointed before the Plan is approved. The Risk Management Official will be responsible for establishing the timelines related to establishing Risk Management Plans for existing activities.

The timeline for implementation for all other policy tools is specified within the policy text.

Default Implementer for *Clean Water Act, 2006* Tools (Part IV)

Where a policy in the Source Protection Plan uses tools from Part IV of the *Clean Water Act, 2006* (restricted land uses, Risk Management Plans and prohibition), the policy is implemented by the Risk Management Official. The Municipality that has the authority to pass by-laws with respect to water production, treatment, and storage (under the *Municipal Act, 2001*) is responsible for enforcement (Section 47, *Clean Water Act, 2006*) by appointing the Risk Management Official. A Municipality may enter into an agreement to share this position with another Municipality or may delegate this responsibility to a Board of Health, Planning Board, or a Conservation Authority.

Default Implementer: *Planning Act, 1990* Tools

Where a policy in the Source Protection Plan is implemented through the *Planning Act, 1990* and *Condominium Act, 1998*, including changes to the Official Plan and zoning by-laws, the implementing body is the Planning Approval Authority.

3 Policies to Address Specific Threats

Note that the following policies include separate criteria for the Winchester system, where applicable.

The new criteria aligns the new system servicing Winchester with the 2021 Technical Rules. These policies have been developed as part of a Section 34 amendment to address the immediate need for the new system. The remainder of the Source Protection Plan is currently being updated through the ongoing Section 36 amendment process. Once the Section 36 amendment is approved, the Winchester policies introduced through this Section 34 amendment will be integrated into the newly approved Source Protection Plan to ensure consistency across the region.

3.1 Agriculture

Overview

Agricultural activities such as the storage and land-application of agricultural source material have the potential to result in contaminants like nitrogen, phosphorus, and pathogens being introduced into drinking water sources. It only takes one animal to contaminate a drinking water source with pathogens. If these contaminants enter source water they can cause human health issues.

Policy Intent

Policy AG-1 directs the Ontario Ministry of Agriculture, Food and Rural Affairs to review existing and future instruments under the *Nutrient Management Act, 2002*. Nutrient Management instruments already include best management practices, have a proven track-record, and are familiar to farmers. The review will ensure the instruments are also appropriate to protect source water.

Policy AG-2 captures agricultural activities which are not subject to the *Nutrient Management Act, 2002*. In these cases, the activity poses a significant risk to drinking water and there is no instrument prescribed for these situations. A Risk Management Plan will be established with the person carrying out the activity in order to ensure that drinking water sources are being protected. The Risk Management Plan will take into account any existing best management practices and will closely follow the principles of a Nutrient Management Plan or Environmental Farm Plan.

Policy AG-1

Existing and future agricultural activities subject to a Prescribed Instrument

Where the following activities are or could be an existing or future significant threat, the threat shall be managed through the *Nutrient Management Act, 2002* (as amended):

- storage and application of agricultural source material;
- the handling, storage, and application of non-agricultural source material;
- the use of land for an outdoor confinement area or a farm-animal yard; and
- the application of commercial fertilizer to land.

The Ontario Ministry of Agriculture, Food and Rural Affairs will work with farmers to review existing and future Nutrient Management Plans, Strategies, and Non-Agricultural Source Material Plans to ensure that they contain best management practices to ensure that agricultural activities are not, or do not, become a significant drinking water threat. Instruments that exist before the day the Source Protection Plan takes effect must be reviewed and, if necessary, amended within three years.

Note: Additional policies apply. See *MONITORING-3*.

Policy AG-2

Existing and future agricultural activities subject to a Risk Management Plan

The following activities are designated for the purpose of Section 58 of the *Clean Water Act, 2006* (Risk Management Plan), where the activity is or could be a significant drinking water threat for activities that are not subject to the requirements of the *Nutrient Management Act, 2002 (as amended)*:

- the storage and application of agricultural source material (ASM);
- the use of land for livestock grazing/pasturing or outdoor confinement area/farm-animal yard; and
- the handling, storage, and application of commercial fertilizer.

The Risk Management Plan will be based upon the same principles as the requirements of a Nutrient Management Plan/Strategy or Environmental Farm Plan. The Risk Management Plan will include these conditions where appropriate:

- Requiring soil samples be done at least once every five years (the default value of 101 ppm of plant available phosphorus and 251 ppm of plant available potassium can be used in place of the first soil test)
- Based on soil samples, fertilizer and ASM shall be used at the appropriate rates
- Requiring the establishment of minimum vegetative buffers from surface water
- Requiring structural or management alterations needed to meet current best management practices (i.e. nutrient management standards for runoff)
- No ASM or fertilizer shall be spread within the WHPA-A (100 m around the wellhead)

Risk Management Plans or voluntary Nutrient Management Plans/Strategies prepared by a person certified by the Ontario Ministry of Agriculture, Food and Rural Affairs under the Nutrient Management Act which meet the expectations of Section 58 (15) of the *Clean Water Act, 2006* and Source Protection Plan shall be accepted by the Risk Management Official.

Note: Additional policies apply. See *MONITORING-1*, *GENERAL-5*, and *GENERAL-6*.

Winchester

The following activities are designated for the purpose of Section 58 of the *Clean Water Act, 2006* (Risk Management Plan), where the activity is or could be a significant drinking water threat:

- the storage and application of agricultural source material (ASM);
- the handling, storage, and application of non-agricultural source material (NASM) Processed Organic Waste; or Waste Biomass;
- the use of land for livestock grazing/pasturing or outdoor confinement area/farm-animal yard; and
- the handling, storage, and application of commercial fertilizer.

The Risk Management Plan will be based upon the same principles as the requirements of a Nutrient Management Plan/Strategy or Environmental Farm Plan. The Risk Management Plan will include these conditions where appropriate:

- Requiring soil samples be done at least once every five years
- Based on soil samples, fertilizer and ASM shall be used at the appropriate rates
- Requiring mitigation measures, including structural or management alterations, to prevent runoff that could pose a risk to drinking water from entering surface water, such as a berm or the establishment of minimum vegetative buffers between application areas and surface water
- Requiring any other alterations needed to meet current best management practices (i.e. nutrient management standards for runoff)
- No ASM, NASM, or fertilizer shall be spread within the WHPA-A (100 m around the wellhead)
- Any other measure that protects drinking water or which are necessary to meet the test of “ceases to be a significant drinking water threat” to the satisfaction of the Risk Management Official
- Any other measures required to mitigate the potential risk to drinking water to the satisfaction of the Risk Management Official

If a person has a prescribed instrument under the *Nutrient Management Act* or *Environmental Protection Act* that regulates the activity or activities the person is or is proposing to be engaged in at the particular location, and the prescribed instrument contains conditions to ensure that it conforms to the significant threat policies above, the person may apply to the Risk Management Official for an exemption from the Risk Management Plan requirement above. This is in accordance with section 61 of Regulation 287/07.

Note: Additional policies apply. See *MONITORING-1*, *GENERAL-5*, and *GENERAL-6*.

3.2 Chemicals

Overview

Chemicals like organic solvents and dense non-aqueous phase liquids pose an acute threat to sources of drinking water. These chemicals are used in a wide variety of sectors and have the potential to contaminate source water through spills and leaks. There have been real-world examples of these types of contaminants impairing drinking water sources within Ontario. Once these chemicals enter a water source they are extremely difficult to remove.

Policy Intent

Policy CHEM-1 describes the Risk Management Plan for existing chemical threats. The Risk Management Plan will ensure compliance with any applicable best management practices and risk management measures.

Policy CHEM-2 prohibits the future handling and storage of specific chemicals which are listed in the prescribed threat circumstances. These chemicals should not be used within the most vulnerable areas. The vulnerable areas are generally not very large, and businesses which typically use these chemicals should be located a safe distance from the vulnerable area. These businesses could also eliminate the significant risk by using a less harmful chemical.

Policy CHEM-1

Risk Management Plans for existing chemical threats

The following activities are designated for the purpose of Section 58 of the *Clean Water Act, 2006* (Risk Management Plan) where the activity is an existing significant drinking water threat:

- the handling and storage of an organic solvent;
- the non-residential handling and storage of dense non-aqueous phase liquids (DNAPLs); and
- the management of runoff that contains chemicals used in the de-icing of aircraft.

The Risk Management Plan shall include:

- Up-to-date best management practices regarding handling and storage of organic solvents and DNAPLs and the management of runoff containing chemicals used in the de-icing of aircraft
- A spills response plan which includes procedures to contact the local drinking water plant operator
- Consideration of alternative products which would not cause a significant threat.

Risk Management Plans shall be prepared in accordance with the provisions listed in policy GENERAL-5.

This policy is not intended to capture residential use of incidental volumes of DNAPLs.

Note: Additional policies apply. See: *MONITORING-1*, *GENERAL-5*, and *GENERAL-6*.

Policy CHEM-2

Prohibition of future chemical threats

The following activities are designated for the purpose of Section 57 of the *Clean Water Act, 2006* (prohibition) where the activity would be a significant drinking water threat:

- the handling and storage of an organic solvent;
- the non-residential handling and storage of dense non-aqueous phase liquids (DNAPLs);
and
- the management of runoff that contains chemicals used in the de-icing of aircraft.

This prohibition takes effect when the Source Protection Plan takes effect.

This policy is not intended to capture residential use of incidental volumes of DNAPLs

Note: Additional policies apply. See: *MONITORING-1* and *GENERAL-6*.

3.3 Fuel

Overview

Fuel oil contains benzene, toluene, ethylbenzene, and xylene. These chemicals are known to impact human health and some are known carcinogens. Fuel also contains petroleum hydrocarbons. When these compounds enter drinking water they can negatively affect reproductive, respiratory, immune, and nervous system health.

Policy Intent

Policy FUEL-1 acknowledges that fuel oil (regulated under O. Reg. 213/01) is a necessity for home heating. In these situations, a Risk Management Plan requires future and existing fuel tanks to meet certain minimum standards to mitigate the risk related to spills and leaks. The Risk Management Plan requirements are similar to the requirements for most home insurance policies and existing Technical Safety and Standards Authority (TSSA) regulations. A provision was included to ensure annual inspections are completed by a certified Oil Burner Technician.

Policy FUEL-2 contains Risk Management Plan conditions which are tailored to liquid fuels (regulated under O. Reg. 217/01). This policy applies to existing and future private outlets, including farms. It also applies to existing licensed facilities (marinas, bulk facilities, cardlocks, etc.).

Policy FUEL-3 requires drinking water plant operators to review and amend existing permits for fuel storage in drinking water plants to ensure they are protective of drinking water sources.

Policy FUEL-4 prohibits the future storage and handling of liquid fuels (regulated under O. Reg. 217/01). These facilities generally store larger quantities of fuel and should be located outside of the most vulnerable areas in the future. This does not apply to private outlets and farms.

Policy FUEL-1

Existing and future fuel oil storage (O. Reg. 213/01) subject to a Risk Management Plan

The future and existing handling and storage of fuel as defined under Ontario Regulation 213/01 except for the handling and storage of fuel regulated under the *Safe Drinking Water Act, 2002* is designated for the purpose of Section 58 of the *Clean Water Act, 2006* (Risk Management Plan) where this activity is a significant drinking water threat.

The Risk Management Plan shall include the following risk management measures:

DESIGN & OPERATION STANDARDS

- Single-walled steel tanks with side-feed must be replaced immediately
- The replacement of single-walled steel tanks with bottom-feed when the tank is 15 years old (or earlier if a leak detection device indicates a leak)
- The replacement of double-bottom steel tanks with bottom-feed when the tank is 25 years old (or earlier if a leak detection device indicates a leak)
- The installation of oil lines in a manner that protects them from physical damage
- In all cases, new installations of fuel tanks shall meet the most up-to-date standards/technologies available (ex. more leak resistant than a single walled tank)
- Decommissioning of unused fuel oil tanks in accordance with Section 6.16 of the *Ontario Installation Code for Oil-Burning Equipment*.

TRAINING

- Information on procedures to be followed in the event of a spill for businesses and home owners
- Education related to basic filling precautions and procedures for spills during handling (from the *Ontario Installation Code for Oil-Burning Equipment*)

If yearly inspections are required under Section 13 of the Ontario Installation Code for Oil-Burning Equipment the Risk Management Official/Inspector shall request evidence to show that yearly inspections are being done by a certified Oil Burner Technician.

Note: Additional policies apply. See: *MONITORING-1*, *GENERAL-5*, and *GENERAL-6*.

Policy FUEL-2

Risk Management Plan for liquid fuels (O. Reg. 217/01)

The following activities are designated for the purpose of Section 58 of the *Clean Water Act, 2006* (Risk Management Plan) where they are or could be a significant drinking water threat:

- the existing and future handling and storage of liquid fuels (under O. Reg. 217/01) at private outlets and farms; and
- the existing handling and storage of liquid fuels (under O. Reg. 217/01) at facilities other than private outlets and farms.

The Risk Management Plan shall include the following content:

- New installations for private outlets and farms must be above ground if possible and installed in accordance with O. Reg. 217/01 and the Liquid Fuels Handling Code
- Tanks and piping must be tested and monitored in accordance with Section 7 of the Liquid Fuels Handling Code
- Dispensing operations must be in compliance with Section 6 of the Liquid Fuels Handling Code
- Detailed procedures to be followed in event of a spill
- Unused tanks must be decommissioned in accordance with the Liquid Fuels Handling Code

Note: Additional policies apply. See: *MONITORING-1*, *GENERAL-5* and *GENERAL-6*.

Policy FUEL-3

Future and existing fuel oil storage at a drinking water facility subject to a Prescribed Instrument

Where fuel handling and storage at a municipal drinking water system facility is identified as a significant drinking water threat regulated under the *Safe Drinking Water Act, 2002* (SDWA), the approving director under Part V of the SDWA will require the owner to assess if the storage of fuel in any part of the drinking water system is a significant threat. In order to address any significant threats, alteration of the works/operating procedures shall include:

- Secondary containment
- Spill/leak detection and spill response procedures as per Condition 16 of the license
- Collision protection
- Protection of oil lines from physical damage

The Director will require the owner to apply to the Ministry within 90 days of receiving the Ministry's concurrence with the assessment, to amend the Drinking Water Works Permit/License to include the required alterations/operating procedures.

Instruments that exist before the day the plan takes effect must be reviewed and, if necessary, amended within three years.

Note: Additional policies apply. See: *MONITORING-3*.

Policy FUEL-4

Prohibition of future liquid fuel facilities (O. Reg. 217/01)

The future handling and storage of liquid fuel as defined in the *Technical Standards and Safety Act, 2000*, O. Reg. 217/01 (as amended) at facilities other than private outlets and farms is designated for the purpose of Section 57 of the *Clean Water Act, 2006* (prohibition) where it would be significant drinking water threat.

This prohibition takes effect when the Source Protection Plan takes effect.

Note: Additional policies apply. See: *MONITORING-1* and *GENERAL-6*.

3.4 Pesticides

Overview

Pesticides include herbicides, insecticides, and fungicides. These types of compounds can contain a number of harmful chemicals which can enter sources of drinking water. In Ontario there is a Cosmetic Pesticide Ban in effect for most properties; however, some operations are exempt from this ban (including natural resource management and golf courses). These types of operations must have a license or accreditation to apply pesticides in Ontario.

Policy Intent

Policy PEST-1 captures all existing and future pesticide operations regulated under the *Pesticide Act, 1990*. Instruments issued under the *Pesticide Act, 1990* will be reviewed to ensure they are protective of drinking water sources.

Policy PEST-2 requires a Risk Management Plan for the application of pesticides which are not regulated by an instrument where they are a significant threat. This Risk Management Plan would include conditions similar to those found in the Ontario Pesticide Education Program.

Policy PEST-3 prohibits the storage of pesticides at retail or commercial outlets. These types of operations are associated with larger volumes of stored pesticides.

Policy PEST-1

Existing and future application of pesticide to agricultural or commercial land subject to a Prescribed Instrument

Where the application of pesticides to agricultural or commercial land could be a significant threat, the Ministry of the Environment and Climate Change shall ensure that permits issued under the *Pesticide Act, 1990* and O. Reg. 63/09 (as amended) contain conditions which ensure that pesticide application is not, or does not become, a significant drinking water threat.

It is recommended that the Ministry of the Environment and Climate Change ensure permits take drinking water sources into account when including conditions regarding emergency response measures and spill contingency plans.

Instruments that exist before the day the Plan takes effect must be reviewed and, if necessary, amended within three years.

Note: Additional policies apply. See: *MONITORING-3*.

Policy PEST-2

Existing and future application, storage and handling of pesticide subject to a Risk Management Plan

The application, storage and handling of pesticides is designated for the purpose of Section 58 of the *Clean Water Act, 2006* (Risk Management Plan) where this activity could be a significant drinking water threat and is not subject to the requirements of the Cosmetic Pesticide Ban or *Pesticide Act, 1990*. This includes application of pesticides for public health & safety, natural resource management, golf courses and sports fields, and the existing commercial handling and storage of pesticides. The Risk Management Plan should be based on appropriate environmental standards and/or the Ontario Pesticide Education Program and shall specify that only licensed operators can apply pesticides.

Emergency response measures to address spills and an emergency response plan shall be updated to include identification of the vulnerable areas and contact information for the operator of the drinking water system.

Note: Additional policies apply. See: *MONITORING-1*, *GENERAL-5* and *GENERAL-6*.

Policy PEST-3

Prohibition of future commercial storage and handling of pesticide

The future commercial application, storage and handling of pesticides where they are manufactured or processed is designated for the purpose of Section 57 of the *Clean Water Act, 2006* (prohibition) where this activity could be a significant drinking water threat.

This prohibition takes effect when the Source Protection Plan takes effect.

Note: Additional policies apply. See: *MONITORING-1* and *GENERAL-6*.

3.5 Salt and Snow

Overview

The road salt application rate has been steadily increasing in Ontario as roads and parking lots continue to develop across the landscape. Road salt can contaminate drinking water with sodium and/or chloride which is difficult to remove. Similarly, melting snow piles release chemicals from paved surfaces including oil/grease, heavy metals, and cyanide. Currently, the Code of Practice for the Environmental Management of Road Salts recommends that a Salt Management Plan be completed by any road authority that uses more than 500 tonnes of road salt in a year or that applies salt in a vulnerable area .

Policy Intent

Policy SALT-1 recognizes that salt application is related to public health and safety. Municipalities are required to create/update a Salt Management Plan which outlines best management practices for salt application. The policy also suggests staff be trained (e.g. *Smart About Salt*) to ensure appropriate application of salt, especially in the vulnerable areas.

Policy SALT-2 requires a Risk Management Plan for any existing snow or salt storages where they are a significant threat.

Policy SALT-3 prohibits the future storage of snow and salt where it is a significant threat. The threat circumstances (ex. the percentage of impervious surface areas, size of the snow pile, covered vs. uncovered salt storage) will dictate if a significant drinking water threat exists.

Policy SALT-4 outlines requirements for the Ministry of Transportation on all Provincial roadways in the vulnerable areas and supports the Ministry's ongoing pilot programs and mitigation technology research initiatives.

Policy SALT-5 is a non-legally binding policy which promotes education/outreach regarding salt application on private property.

Policy SALT-1

Municipal Salt Management Plans for future and existing application of road salt

Where the future and existing application of road salt could be a significant drinking water threat, the Municipality shall develop or review/update their Salt Management Plan.

The Salt Management Plan will include at a minimum:

- Management of sodium or chloride compounds used for dust suppression
- Minimizing application of road salt and/or use of alternative compounds
- Training for staff (such as the Smart About Salt program)
- Implementation of best management practices for salt application outlined by Environment Canada and the Transportation Association of Canada

The Salt Management Plan will be initiated within one year and completed within two years of the Source Protection Plan taking effect, after which it shall be reviewed annually to ensure it includes all current best management practices outlined by Environment Canada and the Transportation Association of Canada.

Note: Additional policies apply. See: *MONITORING-6*.

Policy SALT-2

Risk Management Plans for existing storage of road salt and snow

Existing handling and storage of road salt and storage of snow is designated for the purpose of Section 58 of the *Clean Water Act, 2006* (Risk Management Plans) where it could be a significant threat. The Risk Management Plan shall include up-to-date best management practices regarding snow and salt storage and management of snow melt-water.

Note: Additional policies apply. See: *MONITORING-1*, *GENERAL-5* and *GENERAL-6*.

Winchester

Existing partially exposed storage and handling of greater than 500 kg of road salt is designated for the purpose of Section 58 of the *Clean Water Act, 2006* (Risk Management Plans) where it could be a significant threat. The Risk Management Plan shall include up-to-date best management practices regarding salt storage.

Note: Additional policies apply. See: *MONITORING-1*, *GENERAL-5* and *GENERAL-6*.

Policy SALT-3

Prohibition of future storage of salt and snow

Future storage and handling of road salt and storage of snow is designated for the purpose of Section 57 of the *Clean Water Act, 2006* (prohibition) where it would be a significant drinking water threat.

This prohibition takes effect when the Source Protection Plan takes effect.

Note: Additional policies apply. See: *MONITORING-1* and *GENERAL-6*.

Winchester

Prohibition of future storage of road salt

Future partially exposed storage and handling of greater than 500 kg of road salt is designated for the purpose of Section 57 of the *Clean Water Act, 2006*, where it would be a significant drinking water threat, and is therefore prohibited.

Existing and future exposed storage and handling of greater than 20 kg of road salt is designated for the purpose of Section 57 of the *Clean Water Act, 2006*, where it would be a significant drinking water threat, and is therefore prohibited.

This prohibition takes effect when the Source Protection Plan or any plan amendment, as applicable, takes effect.

Note: Additional policies apply. See: MONITORING-1 and GENERAL-6.

Policy SALT-4

Ministry of Transportation Salt Management Plans for the application of road salt

Where future/existing salt application would be a significant drinking water threat on Provincial network roadways, the Ministry of Transportation and their supporting de-icing contractors are strongly recommended to continue the proactive implementation of their Salt Management Plans and to continue the use of best management practices within the Wellhead Protection Areas and Intake Protection Zones.

The Ministry of Transportation is strongly recommended to continue their on-going investigation and implementation of innovative practices and new mitigative technologies regarding road salt application and the management of infiltration and runoff.

The Ministry of Transportation is strongly recommended to actively consider the creation of pilot projects to utilize new practices and mitigative technologies for road salt application or the management of runoff that could benefit drinking water sources in the Raisin-South Nation Source Protection Region.

Note: Additional policies apply. See: *MONITORING-7*.

Policy SALT-5

Education and outreach for private facilities through the Salt Institute

It is recommended that the Salt Institute implement an education and outreach program which targets private facility managers and salt application contractors in areas where salt application, handling and storage could be a significant drinking water threat. This program may be based on the 'Smart About Salt' program, or may include Best Management Practices from the Transportation Association of Canada, 2003 or Best Practices for Salt Use on Private Roads, Parking Lots and Sidewalks (Environment Canada, 2004).

This program should be initiated within two years of the Source Protection Plan taking effect.

Winchester

Salt application, handling, and storage education and outreach

The Raisin-South Nation Source Protection Authority and the local municipality shall develop and implement an ongoing education and outreach program for:

- the application of road salt on commercial/industrial properties; and,
- for the handling and storage of Road Salt at volumes between 100 kg and 500 kg, where these activities would be a significant drinking water threat.

This program may be based on the 'Smart About Salt' program and may include signage, best management practices, social media campaigns, and stickers for commercial salt boxes.

This program should be initiated within two years of the Plan, or any plan amendment, as applicable, taking effect.

Snow (Winchester)

Overview

Snow clearing collects contaminants from paved surfaces, which accumulate in snow piles over the winter. Melting snow piles then release chemicals which infiltrate into the ground and flow into rivers and streams.

The infiltration or discharge of snowmelt from the storage of snow on a site where the predominant land use is commercial or industrial by any means other than a storm water drainage system outfall is a drinking water threat.

A snow dump is a location used for the storage of snow from a different location during snow removal. Snow dumps often include snow from various land uses. Snow dumps that typically receive snow from areas where the predominant land use is industrial or commercial are a drinking water threat.

A Snow Disposal Facility is a snow meltwater management facility as part of a sewage work that requires approval under section 53 of the Ontario Water Resources Act (OWRA, 1990), or that is regulated by an Environmental Activity and Sector Registry (EASR).

Policy Intent

Policy SNOW-1 requires education and outreach regarding snow storage on commercial and industrial sites.

Policy SNOW-2 prohibits existing and future storage of snow at snow dumps.

Policies SNOW-3 and SNOW-4 require that existing and future approvals of Snow Disposal Facilities under the *Ontario Water Resources Act* ensure that they would not cause a significant drinking water threat through their stormwater drainage system outfall.

Policy SNOW-1

Education and Outreach for snow storage on industrial and commercial sites

The Raisin-South Nation Source Protection Authority and the local municipality shall develop and implement an ongoing education and outreach program for the storage of snow on a site where the land use is predominantly commercial or industrial, where it would be a significant drinking water threat.

This program should be initiated within two years of the Plan, or any plan amendment, as applicable, taking effect.

Policy SNOW-2

Prohibition of Snow Dumps

The existing and future storage of snow at a snow dump is designated for the purpose of section 57 of the Clean Water Act, where it is or would be a significant drinking water threat and is therefore prohibited.

This policy should be implemented immediately upon the Plan, or any plan amendment, as applicable, taking effect.

Policy SNOW-3

Prescribed Instrument for Existing Stormwater Drainage System Outfall that Serves a Snow Disposal Facility or Area

Existing approvals from the Ministry of the Environment, Conservation and Parks under the Ontario Water Resources Act, 1990 for stormwater drainage system outfalls that serve a Snow Disposal Facility or Area should be reviewed and amended to ensure that the activity is not a significant drinking water threat or ceases to be a significant drinking water threat. At a minimum, the amended prescribed instrument should include reference to the applicable vulnerable area and appropriate risk management measures to protect the source of drinking water.

Prescribed instruments should be reviewed and amended within three years of the Source Protection Plan taking effect, or any plan amendment, as applicable.

Note: Additional policies apply. See: *MONITORING-3*.

Policy SNOW-4

Prohibition for Future Stormwater Drainage System Outfall that Serves a Snow Disposal Facility or Area

The Ministry of the Environment, Conservation and Parks, through approvals under Section 53 of the Ontario Water Resources Act, 1990, shall not permit the establishment of a stormwater drainage system outfall that serves a Snow Disposal Facility or Area, where it would be a significant drinking water threat.

This policy should be implemented immediately upon the Plan, or any plan amendment, as applicable, taking effect.

3.6 Sewage

Overview

Sewage systems are essential for residential and commercial development but can also pose a serious risk to sources of drinking water. There is potential for a number of sewage contaminants to enter source water including pathogens, phosphorus, chloride, lead, and acetone.

Policy Intent

Policy SEWG-1 recognizes that exfiltration of sewage can occur from associated sanitary sewers and related pipes. The policy requires an inspection of pipes in the vulnerable areas on a regular basis. It also requires new pipes in the area to be installed to a more protective standard; this will reduce the frequency of inspections.

Policy SEWG-2 requires a review of existing Approvals for sewage works.

Policy SEWG-3 prohibits future sewage works in the most vulnerable areas. This policy contains an exemption for expansions and upgrades to sewage treatment works which will result in full servicing to developments. Full servicing reduces the contamination risk related to private on-site sewage systems.

Policy SEWG-4 references existing requirements under the Ontario Building Code for private on-site sewage (septic systems). This policy also requires municipalities to prioritize connection to municipal services in these areas (where available) and consider deepening wells, where appropriate, to reduce the number of significant drinking water threats.

Policy SEWG-5 describes the planning requirements for future developments in the vulnerable areas in relation to proper review of on-site sewage systems.

Policy SEWG-6 requires that approvals for large septic systems be reviewed to ensure they are protective of drinking water sources.

Policy SEWG-7 addresses stormwater management facilities where they are a significant threat. Future facilities within the Wellhead Protection Area A (WHPA A) and Intake Protection Zone 1 (IPZ 1) are prohibited. The existing (and future outside of the WHPA A and IPZ 1) approvals are to be reviewed to ensure they are protective enough. These conditions are suggested based on feedback from municipal water managers and current urban runoff research and peer-reviewed literature.

Policy SEWG-1

Sanitary sewer maintenance program

The Municipality shall implement a sanitary sewer inspection and maintenance program where sanitary sewers could be a significant threat. The program will include cleaning and camera inspection to identify areas of in/exfiltration. Exfiltration testing may be used where camera inspection is not feasible. Existing sanitary sewers shall be inspected no later than five years after the date the Plan takes effect; thereafter, they shall be inspected every five years after the most recent inspection has been completed. The Municipality shall also ensure that future applicants are aware of the requirements described below for new sanitary sewers where they are a significant threat.

New or replacement sanitary sewers shall be inspected no later than ten years after the date the Plan takes effect; thereafter, they shall be inspected every ten years after the most recent inspection has been completed.

Where new or replacement sanitary sewers and related pipes would be a significant drinking water threat, the Ministry of the Environment and Climate Change shall ensure that the Prescribed Instrument (Environmental Compliance Approval required under the *Ontario Water Resources Act, 1990*) includes appropriate terms and conditions to manage the threat so that it does not become significant. Where the Director considers it appropriate, terms and conditions will include requiring that new or replacement sanitary sewers and related pipes be constructed of watermain quality pipe and pressure tested in place at a pressure of 350 kPa (50 psi) using the testing methodology in Ontario Provincial Standard Specification 412 (OPSS 412).

This policy takes effect when the Source Protection Plan takes effect.

Note: Additional policies apply. See: *MONITORING-5* and *MONITORING-3*.

Winchester

Policy SEWG-1A

Wastewater collection facilities maintenance program

The Municipality shall implement a wastewater collection facility inspection and maintenance program where force main and rising main portion of the sanitary sewers could be a significant threat. The program will include cleaning and camera inspection to identify areas of in/exfiltration. Exfiltration testing may be used where camera inspection is not feasible.

Existing wastewater collection facilities and associated parts, including sanitary sewers, sewage pumping stations, lift station wet wells, holding tanks or tunnels, shall be inspected no later than five years after the date the Plan takes effect; thereafter, they shall be inspected every five years after the most recent inspection has been completed. The Municipality shall also ensure that future applicants are aware of the requirements described below for new wastewater collection facilities and associated parts where they are a significant threat.

New or replacement force main and rising main sanitary sewers shall be inspected no later than ten years after the date the Plan takes effect; thereafter, they shall be inspected every ten years after the most recent inspection has been completed.

Note: Additional policies apply. See: MONITORING-5.

Policy SEWG-1B

Wastewater collection facilities subject to Prescribed Instrument

Where new or replacement force main and rising main sanitary sewers and associated parts would be a significant drinking water threat, the Ministry of the Environment, Conservation and Parks shall ensure that the Prescribed Instrument (Environmental Compliance Approval required under the *Ontario Water Resources Act, 1990*) includes appropriate terms and conditions to manage the threat so that it does not become significant. Where the activity is associated with low-risk systems that qualify for Consolidated Linear Infrastructure preauthorization, the municipality shall consult with the Source Protection Authority to ensure the works consider sources of drinking water.

Where the Director considers it appropriate, terms and conditions will require that new or replacement wastewater collection facilities be constructed of watermain quality pipe and pressure tested according to the appropriate Ontario Provincial Standard.

This policy takes effect when the Source Protection Plan, or any plan amendment, as applicable, takes effect.

Note: Additional policies apply. See: MONITORING-3.

Policy SEWG-2

Existing sewage works

Existing Approvals under the *Ontario Water Resources Act, 1990* (as amended) for:

- storage of sewage;
- sewage treatment plant effluent discharges;
- sewage treatment plant bypass discharges to surface water;
- combined sewer discharge from a stormwater outlet to surface water; and
- industrial effluent discharges;

shall be reviewed to ensure they contain conditions to protect sources of drinking water where they would be a significant drinking water threat. If the instrument does not meet these requirements, the Ministry of the Environment and Climate Change (MOECC) shall amend it to include additional terms and conditions to manage the threat.

Instruments that exist before the day the plan takes effect must be reviewed and, if necessary, amended within three years.

These policies take effect when the Source Protection Plan takes effect.

Note: Additional policies apply. See: *MONITORING-3*.

Winchester

Existing wastewater treatment facilities, sewer overflows, and industrial effluent discharges

Existing Approvals from the Ministry of the Environment, Conservation and Parks under the *Ontario Water Resources Act, 1990* (as amended) for wastewater collection and treatment facilities and associated parts, including:

- Wastewater Treatment Facilities and Associated Parts;
- Outfall of a Combined Sewer Overflow (CSO), or a Sanitary Sewer Overflow (SSO) from a Manhole or Wet Well; and
- Industrial Effluent Discharges

shall be reviewed to ensure they contain conditions to protect sources of drinking water where they would be a significant drinking water threat. If the instrument does not meet these requirements, the Ministry of the Environment, Conservation and Parks (MECP) shall amend it to include additional terms and conditions to manage the threat.

Where the activity is associated with low-risk systems that qualify for Consolidated Linear Infrastructure preauthorization, the municipality shall consult with the Source Protection Authority to ensure the works consider sources of drinking water.

Instruments that exist before the day the plan takes effect must be reviewed and, if necessary, amended within three years.

These policies take effect when the Source Protection Plan, or any plan amendment, as applicable, takes effect.

Note: Additional policies apply. See: *MONITORING-3*.

Policy SEWG-3

Prohibition of future sewage works

The following activities regulated under the *Ontario Water Resources Act, 1990* (as amended) shall not be established where they could be a significant drinking water threat:

- storage of sewage;
- sewage treatment plant effluent discharges;
- sewage treatment plant bypass discharges to surface water;
- combined sewer discharge from a stormwater outlet to surface water ; and
- industrial effluent discharges which discharge to surface water and have their primary function in the collection, transmission or treatment of industrial sewage.

The aforementioned activities are exempt from this prohibition if:

- The new sewage treatment plant will replace an existing sewage treatment plant; or
- The expansion to existing municipal sewage treatment will provide full services to a new or existing development which is partially serviced or a development where on-site septic systems are failing.

Accordingly, decisions relating to Prescribed Instruments (Environmental Compliance Approvals) must conform with this policy. In addition, decisions made by planning authorities under the *Planning Act, 1990* must conform with this policy.

This prohibition takes effect when the Source Protection Plan takes effect.

Note: Additional policies apply. See: *MONITORING-2* and *MONITORING-3*.

Winchester

Prohibition of future wastewater treatment facilities, sewer overflow, and industrial effluent discharges

The Ministry of the Environment, Conservation and Parks shall ensure that the following activities regulated under the *Ontario Water Resources Act, 1990* (as amended) shall not be established where they could be a significant drinking water threat:

- Wastewater Treatment Facilities and Associated Parts;
- Outfall of a Combined Sewer Overflow (CSO), or a Sanitary Sewer Overflow (SSO) from a Manhole or Wet Well; and
- Industrial Effluent Discharges.

The aforementioned activities are exempt from this prohibition if:

- The new wastewater treatment facility will replace an existing wastewater treatment facility; or
- The expansion to existing municipal wastewater treatment facilities will provide full services to a new or existing development which is partially serviced or a development where on-site septic systems are failing.

Accordingly, decisions relating to Prescribed Instruments (Environmental Compliance Approvals) must conform with this policy. In addition, decisions made by planning authorities under the *Planning Act, 1990* must conform with this policy.

This prohibition takes effect when the Source Protection Plan, or any plan amendment, as applicable, takes effect.

Note: Additional policies apply. See: *MONITORING-2* and *MONITORING-3*.

Policy SEWG-4

Existing and future on-site sewage systems (septic systems)

- a. When the Source Protection Plan takes effect, the Municipality shall manage existing and future septic systems and septic system holding tanks where they would be a significant drinking water threat through the *Ontario Building Code Act, 1992* and Ontario Regulation 315/10 (as amended) in accordance with the On-Site Sewage System Maintenance Inspections Program (MMAH, 2011, as updated).

The Municipality shall also ensure that existing septic systems and septic system holding tanks are decommissioned where inspectors determine the need for replacement or when connecting to municipal services. This would require the tank to be pumped out and collapsed/backfilled. The leaching bed can degrade naturally.

- b. Where existing or future septic systems or septic system holding tanks are or would be a significant threat (including large septic systems >10,000 L/day) the Municipality shall, within one year of the Plan taking effect, require connection to municipal sewer services (capacity permitting) by passing a Mandatory Connection By-law (under the authority of the *Municipal Act, 2001*) where services are available at the property line in the following situations:

- Failure of a Phase II inspection;
- Principal Authority deems the existing system inadequate to service a proposed redevelopment/renovation; or
- For new development on existing vacant lots of record.

The Municipality shall also explore the potential of municipal servicing within the significant threat areas which currently have private services.

- c. It is strongly recommended that the City of Ottawa explore the opportunity to deepen the Shadow Ridge Municipal Well to the Nepean aquifer to reduce the significant threats related to septic systems and septic system holding tanks in the Village of Greely within one year of the Plan taking effect.

Note: Additional policies apply. See: *MONITORING-3 and MONITORING-5*.

Winchester

Existing and future on-site sewage works (septic systems and holding tanks)

- d. When the Source Protection Plan takes effect, the Municipality shall manage existing and future septic systems and septic system holding tanks where they would be a significant drinking water threat through the *Ontario Building Code Act, 1992* and Ontario Regulation 315/10 (as amended) in accordance with the On-Site Sewage System Maintenance Inspections Program (MMAH, 2011, as updated).

The Municipality shall also ensure that existing septic systems and septic system holding tanks are decommissioned where inspectors determine the need for replacement or when

connecting to municipal services. This would require the tank to be pumped out and collapsed/backfilled. The leaching bed can degrade naturally.

e. Where existing or future septic systems or septic system holding tanks are or would be a significant threat (including large septic systems >10,000 L/day) the Municipality shall, within one year of the Plan taking effect, require connection to municipal sewer services (capacity permitting) by passing a Mandatory Connection By-law (under the authority of the *Municipal Act, 2001*) where services are available at the property line in the following situations:

- Failure of a Phase II inspection;
- Principal Authority deems the existing system inadequate to service a proposed redevelopment/renovation; or
- For new development on existing vacant lots of record.

The Municipality shall also explore the potential of municipal servicing within the significant threat areas which currently have private services.

f. The City of Ottawa explored the opportunity to deepen the Shadow Ridge Municipal Well to the Nepean aquifer to reduce the significant threats related to septic systems and septic system holding tanks in the Village of Greely and plans to move forward with drilling a new deeper well.

Note: Additional policies apply. See: *MONITORING-3 and MONITORING-5.*

Policy SEWG-5

Planning requirements for future and proposed on-site sewage

For development of proposed lots or for any future development of properties with septic systems and/or septic system holding tanks that could be a significant drinking water threat, the responsible planning authority shall:

- If relevant, require a lot grading plan to be prepared and submitted
- Ensure that the review process for future development and/or lot creation (especially lots less than 1 hectare) considers the protection of municipal source water (e.g. the lot size for any proposed development that would include a small on-site sewage system shall be based on the Ministry of the Environment and Climate Change's Guidelines for Individual On-site Sewage Systems). The hydro-geological assessment to determine appropriate development density shall be conducted by a professional licensed to carry out that work (P.Ge. or P.Eng. with training in hydrogeology)

This policy takes effect when the Source Protection Plan takes effect.

Note: Additional policies apply. See: *MONITORING-2*.

Policy SEWG-6

Large (>10000 L/Day) on-site sewage systems

Where existing and future large (>10000 L/day) on-site septic systems and septic system holding tanks are, or would be, a significant drinking water threat, the Ministry of the Environment and Climate Change shall ensure that the Environmental Compliance Approval under the *Ontario Water Resources Act, 1990* (as amended) includes appropriate terms and conditions to ensure that it ceases to be, or never becomes, a significant drinking water threat.

Instruments that exist before the day the Plan takes effect must be reviewed and, if necessary, amended within three years.

This policy takes effect when the Source Protection Plan takes effect.

Note: Additional policies apply. See: *MONITORING-3*.

Policy SEWG-7

Existing and future discharge from stormwater management facilities

- a. Approvals under the *Ontario Water Resources Act, 1990*, for the existing operation and maintenance of stormwater management facilities and the future establishment, operation and maintenance of stormwater management facilities outside of a Wellhead Protection Area A or Intake Protection Zone 1 where stormwater discharge would be a significant drinking water threat, shall be reviewed to ensure they contain conditions to protect sources of drinking water.

If the instrument does not meet these requirements, the MOECC shall amend it to include additional terms and conditions to manage the threat. It is recommended that conditions include:

- All future facilities should be built to Enhanced Level Protection (as described in the Stormwater Management Planning and Design Manual, MOECC 2003 as amended)
- Addition of water quality criteria monitoring for the prescribed threat chemicals (pathogens, aluminum, arsenic, cadmium, chloride, chromium VI, copper, glyphosate, lead, mecoprop, mercury, nickel, nitrogen, polycyclic aromatic hydrocarbons, petroleum hydrocarbons F1 to F4, total phosphorus, zinc) in addition to regular total suspended solids monitoring requirements to help develop a baseline for effluent quality and identify spikes in contaminants for future investigation
- Ensure existing ponds are inspected yearly, and prioritize upgrades/retrofits to ponds/systems in vulnerable areas are prioritized
- Sediment volumes should be measured yearly and provided to the Ministry of the Environment and Climate Change to ensure compliance
- Naturalization around ponds to act as spill buffers
- Contain a contingency plan for catastrophic events (>100 year flood) and emergency response

Instruments that exist before the day the Plan takes effect must be reviewed and, if necessary, amended within three years.

- b. The future establishment, operation, and maintenance of a stormwater management facility is prohibited within the WHPA-A or IPZ-1 where stormwater discharges would be a significant drinking water threat. Accordingly, decisions relating to Prescribed Instruments (Environmental Compliance Approvals) must conform with these policies. In addition, decisions made by planning authorities under the *Planning Act, 1990* must conform with these policies.

These policies take effect when the Source Protection Plan takes effect.

Note: Additional policies apply. See: *MONITORING-2* and *MONITORING-3*.

Winchester

Existing and future discharge from storm water management facilities

c. Approvals from the Ministry of the Environment, Conservation and Parks under the Ontario Water Resources Act, 1990, for existing and future Storm Water Management Facilities and Drainage Systems, including an outfall from a Storm Water Management Facility or a Storm Water Infiltration Facility where they would be a significant drinking water threat, shall be reviewed to ensure they contain conditions to protect sources of drinking water.

Where the activity is associated with low-risk systems that qualify for Consolidated Linear Infrastructure preauthorization, the municipality shall consult with the Source Protection Authority to ensure the works consider sources of drinking water.

Where an existing instrument does not meet these requirements, the Ministry of the Environment, Conservation and Parks shall amend it to include additional terms and conditions to manage the threat.

It is recommended that approval conditions include:

- All future facilities should be built to Enhanced Level Protection (as described in the Stormwater Management Planning and Design Manual, Ministry of the Environment, Conservation and Parks, 2003, as amended).
- Addition of water quality criteria monitoring for chemicals and contaminants associated with the upstream development in addition to regular total suspended solids monitoring requirements to help develop a baseline for effluent quality and identify spikes in contaminants for future investigation.
- Ensure existing ponds are inspected yearly, and prioritize upgrades/retrofits to ponds/systems in vulnerable areas are prioritized; requirements should be included in the Operation and Maintenance manual to protect drinking water sources.
- Sediment volumes should be measured yearly and provided to the Ministry of the Environment, Conservation and Parks to ensure compliance.
- Naturalization around ponds to act as spill buffers.
- Contain a contingency plan for catastrophic events (>100-year flood) and emergency response.

d. Instruments that exist before the day the Plan takes effect must be reviewed and, if necessary, amended within three years.

These policies take effect when the Source Protection Plan takes effect.

Note: Additional policies apply. See: MONITORING-2 and MONITORING-3.

3.7 Waste Disposal Sites

Overview

Waste sites undergo thorough reviews to ensure they are located in the most appropriate, and least vulnerable, areas. Future waste sites will not be permitted where they would pose a significant threat to drinking water. Prescribed Instruments for existing sites will be reviewed to ensure that they are operating in a manner that protects drinking water sources. Some waste disposal sites (ex. Polychlorinated Biphenyl (PCB) storage) are not regulated through a Prescribed Instrument. These sites are addressed in a separate policy.

Policy Intent

Policy WASTE 1 describes the modern operational, design, monitoring, reporting and training requirements for existing waste sites where they are a significant threat.

Policy WASTE-2 refers to the prohibition of future waste sites (note: this does not include bio-solids which are regulated under the *Nutrient Management Act, 2002*).

Policy WASTE-3 requires a Risk Management Plan for existing waste sites which do not require a Prescribed Instrument. This policy does not apply to waste regulated by the MOECC through other means such as Director's Instructions, the waste generation reporting system, or waste manifest system. For these types of waste, best management practices will be promoted through education policy GENERAL-1 outlined in Section 3.8.

Policy WASTE-4 addresses prohibition of future waste sites through Section 57 of the *Clean Water Act, 2006*. This gives some support to the land-use planning prohibition in WASTE-2. This policy does not apply to waste regulated by the MOECC through other means such as Director's Instructions, the waste generation reporting system, or waste manifest system. For these types of waste, best management practices will be promoted through education policy GENERAL-1 outlined in Section 3.8.

Policy WASTE-1

Existing Environmental Compliance Approvals for waste sites

Where an existing waste disposal site is a significant drinking water threat, the Ministry of the Environment and Climate Change shall ensure that the Approvals (under the *Environmental Protection Act, 1990* or *Ontario Water Resources Act, 1990*) include conditions and reporting requirements to manage the risk so that it ceases to be a significant threat.

If the Environmental Compliance Approval is not sufficient to manage the risk, the Ministry of the Environment and Climate Change shall amend it to include additional terms and conditions. It is recommended that the following conditions be included:

- Operations manuals should be reviewed to ensure they have appropriate contingencies and monitoring requirements;
- Setbacks should be increased from wellheads and intake zones, as appropriate;
- Requirements should be added regarding closure and abandonment of waste sites to ensure they do not pose a risk to drinking water sources;
- Protective conditions should be added for groundwater and surface water during spreading of hauled sewage; and
- Conditions relating to maintenance of mine tailings storage ponds and closure plans for these ponds to ensure sources of drinking water are protected.

Instruments that exist before the day the Plan takes effect must be reviewed and, if necessary, amended within three years.

Note: Additional policies apply. See: *MONITORING-3*.

Policy WASTE-2

Prohibition of future waste sites

The future establishment of a waste disposal site shall be prohibited where it is a significant drinking water threat.

Accordingly, decisions relating to Prescribed Instruments (Environmental Compliance Approvals) must conform with this policy. In addition, decisions made by planning authorities under the *Planning Act, 1990* must conform with this policy.

This policy does not apply to waste that is registered with the MOECC waste generation reporting system, or waste that is approved to be transported off-site using the MOECC manifest process or waste that is subject to Director's Instructions.

This policy takes effect when the Source Protection Plan takes effect.

Note: Additional policies apply. See: *MONITORING-2* and *MONITORING-3*.

Policy WASTE-3

Risk Management Plans for existing waste sites without a Prescribed Instrument

Where the *Environmental Protection Act, 1990* (as amended) does not require an approval, the existing operation or maintenance of a waste disposal site is designated for the purpose of Section 58 of the *Clean Water Act, 2006* (Risk Management Plan) where this activity is a significant drinking water threat. This includes, but is not limited to, PCB waste storage. The Risk Management Plan shall include the following:

- Inclusion of the most up-to-date best management practices regarding PCB waste storage, waste, and other harmful compounds
- A spill/emergency response plan which includes procedures to contact the local drinking water plant operator

This policy does not apply to waste that is registered with the MOECC waste generation reporting system, or waste that is approved to be transported off-site using the MOECC manifest process or waste that is subject to Director's Instructions.

Note: Additional policies apply. See: *MONITORING-1*, *GENERAL-5*, and *GENERAL-6*.

Policy WASTE-4

Prohibition of future waste sites without a Prescribed Instrument

Where the *Environmental Protection Act, 1990* (as amended) does not require an approval, the future establishment, operation or maintenance of a waste disposal site is designated for the purpose of Section 57 of the *Clean Water Act, 2006* (prohibition) where it would be a significant drinking water threat. This includes, but is not limited to, PCB waste storage.

This policy does not apply to waste that is registered with the MOECC waste generation reporting system, or waste that is approved to be transported off-site using the MOECC manifest process or waste that is subject to Director's Instructions.

This prohibition takes effect when the Source Protection Plan takes effect.

Note: Additional policies apply. See: *MONITORING-1* and *GENERAL-6*.

Liquid Hydrocarbon Pipelines (Winchester)

Overview

Liquid Hydrocarbon Pipelines transmit or distribute liquid hydrocarbons to terminals and distribution centers; specifically, within the meaning of Ontario Regulation 210/01 under the *Technical Safety and Standards Act* or that are subject to the *National Energy Board Act*. It does not capture pipelines that move liquefied natural gas or liquid petroleum gas.

Liquid hydrocarbon pipelines exist in the Raisin-South Nation SPR (major lines include Enbridge and TransNorthern); however, none have been identified as a significant drinking water threat.

There is potential for existing pipelines could be converted to liquid hydrocarbon pipelines (i.e. the

Line 9 conversion), or a new source protection area could be established that encompasses an existing pipeline.

The goal for reducing or eliminating this drinking water threat is to prevent spills due to pipeline ruptures and to have appropriate spill response.

Policy Intent

Policy PIPE-1 recommends pipeline owners develop and review existing spill prevention, spill management, risk reduction, and Contingency Plans.

Policy PIPE-2 recommends the Canada Energy Regulator and the Ontario Energy Board provide the Source Protection Authority the location of any new proposed pipeline within the Source Protection Area and are asked to ensure that the applicant has complied with or included appropriate design standards, monitoring, and maintenance practices to prevent a pipeline from becoming a significant drinking water threat.

PIPE-1 and PIPE-2 are non-legally binding.

Policy PIPE-1

Emergency response planning for liquid hydrocarbon pipelines where they would be a significant drinking water threat

Where establishment and operation of a liquid hydrocarbon pipeline would be a significant drinking water threat, it is strongly recommended that the pipeline develop and review existing spill prevention, spill management, risk reduction and Contingency Plans to ensure the following:

- Spill response timeframes are established;
- Notification protocols are established with the Spills Action Centre to ensure direct notification to potentially affected water treatment plant operators;
- That appropriate pipeline system failure and shut down measures and policies are included;
- That the pipeline design and operational best management practices are in place (including potential additional design and operational best management practices); and
- A provision is included in the Contingency Plan that the facility owner work with the local municipality to ensure that testing of the Contingency Plan is carried out regularly (frequency and priority to be determined in consultation).

Policy PIPE-2

Notice and planning for future liquid hydrocarbon pipelines where they would be a significant drinking water threat

Where the establishment and operation of a liquid hydrocarbon pipeline would be a significant drinking water threat, the pipeline proponent, the Canada Energy Regulator, and Ontario Energy Board are encouraged to provide the Source Protection Authority the location of any new proposed pipeline within the Source Protection Region.

The Canada Energy Regulator, and the Ontario Energy Board are also requested to ensure that the applicant has complied with or included appropriate design standards (including location of safety valves), monitoring, and maintenance practices (including integrity management programs) to prevent a pipeline from becoming a significant drinking water threat.

3.8 General Policies

This section contains policies which address broad topics such as education and outreach, implementation timelines, and recommended actions. Policies GENERAL-7 to GENERAL-13 are non-legally binding and relate to permissible content outside of the significant drinking water threats.

Policy GENERAL-1

Source Protection - Education and Outreach

The Municipality shall establish an education and outreach program where activities could be a significant drinking water threat. The program shall be targeted at residents, farms, and businesses. The program shall promote:

- General Source Protection awareness including the location of vulnerable areas
- Best management practices to reduce or eliminate impacts from activities which pose a threat to source water
- Proper septic system care and maintenance
- Awareness of Ontario's cosmetic pesticide ban and best management practices where pesticides are used under an exemption from the ban
- The importance of complying with all content of the Pesticide Safety Course and best management practices regarding the handling and storage of pesticides
- Area-wide education and outreach programs promoting integrated pest management and alternative pest control, targeting golf courses and sports fields
- Participation in the Environmental Farm Plan Program
- Awareness regarding non-agricultural source material application for landowners
- Safer alternatives to dense non-aqueous phase liquids and organic solvents
- Proper disposal of dense non-aqueous phase liquids and organic solvents; program will target both commercial/industrial and residential landowners
- Awareness of stormwater management relating to storm-drains and the dangers linked to dumping chemicals into drains within the urban sewer catchment area
- The creation and promotion of a year-round depot drop-off for hazardous wastes
- Working with the Source Protection Authority to access funding or other applicable incentive programs
- Best management practices for waste that is not regulated by the MOECC through means other than Prescribed Instruments.

The Municipality shall establish an education and outreach program to inform people about the importance of proper construction, operation and maintenance of their oil burning equipment (furnace, generator) and promote alternative fuel options. The program could include:

- Distribution of a sticker to be placed on oil tanks that indicates that the tank is located in a vulnerable area and provides a procedure to be followed in the event of a fuel spill or leak, including a spill response contact number
- Promotion of existing incentive programs including incentive programs for switching to alternative fuel sources

- Provide information relating to:
 - The mandatory requirements for fuel tank usage and maintenance
 - The best management practices for fuel tank usage and maintenance
- Promotion of the importance of having pollution liability insurance

Once established, these programs shall be on-going with materials being disseminated intermittently as deemed appropriate. Education and outreach programs should be harmonized with existing education and outreach programs where this would result in an increase in efficiency or cost-effectiveness.

The Municipality may enter into an agreement with a third party to implement the education and outreach program and/or any related reporting.

The program shall be implemented within two years of the Plan taking effect.

Note: Additional policies apply. See: *MONITORING-4*.

Policy GENERAL-2

Defining existing activities

For the purpose of the Source Protection Plan, an activity will be considered existing if:

- It occurred on the property within the last 12 months before the Plan takes effect, or in the case of activities related to agriculture, wherever the local zoning permitted agricultural uses prior to the plan taking effect
- It has not yet occurred but is associated with a development for which a complete application for regulatory or planning approvals has been submitted and accepted before the day the Plan takes effect

Winchester

Where a policy of the Source Protection Plan has been modified by an amendment, an activity subject to that policy which was not subject to a similar policy before the amendment shall be considered existing if it meets the criteria established above, in relation to the date the amendment takes effect.

Policy GENERAL-3

Timeline for Official Plan and by-law conformity

Where a Source Protection policy specifies that Section 39.1 (planning decisions), Section 40 (Official Plan) and Section 42 (zoning by-laws) of the *Clean Water Act*, 2006 apply, the respective Planning Approval Authority shall amend the Official Plan no later than the time of the five year review period. Zoning by-laws must be updated within three years of the Official Plan amendments to bring them into conformity with the Official Plan (Section 26(9) of the *Planning Act*, 1990).

Note: *Planning Act*, 1990 decisions must conform immediately when the Plan takes effect.

Policy GENERAL-4

Timeline for existing Prescribed Instrument conformity

Prescribed Instruments which exist on the day the Plan takes effect must be reviewed and, if necessary, amended within three years from the date the Plan takes effect.

Policy GENERAL-5

Provisions for Risk Management Plans (Section 58, *Clean Water Act*, 2006)

The timeline for establishing a Risk Management Plan is left to the discretion of the Risk Management Official. Additionally, where a policy in this Source Protection Plan requires the development of a Risk Management Plan (RMP), the RMP must only address the portion of the property where the activity is a significant drinking water threat and must consider all existing risk management measures being undertaken on the subject property.

Where policies in this Source Protection Plan require the development of a RMP for more than one type of significant drinking water threat on the same property, a single RMP may be developed to address all threats.

Policy GENERAL-6

Restricted land uses

To ensure the application of Section 57 (prohibition) and 58 (Risk Management Plan) of the *Clean Water Act*, 2006, all land-uses as defined in local zoning by-laws are designated for the purpose of Section 59 (restricted land uses) of the *Clean Water Act*, 2006 within the vulnerable areas.

This applies specifically to these policies related to significant threats in Wellhead Protection Areas and Intake Protection Zones:

- **AG-2: Existing and future agricultural activities subject to a Risk Management Plan**
- CHEM-1: Risk Management Plans for existing chemical threats
- CHEM-2: Prohibition of future chemical threats
- FUEL-1: Existing and future fuel oil storage (O. Reg. 213/01) subject to a Risk Management Plan
- FUEL-2: Risk Management Plan for liquid fuels (O. Reg. 217/01)
- FUEL-4: Prohibition of future liquid fuel facilities (O. Reg. 217/01)
- PEST-2: The existing and future application, storage, and handling of pesticide subject to a Risk Management Plan
- PEST-3: Prohibition of future commercial storage and handling of pesticide
- SALT-2: Risk Management Plans for existing storage of road salt and snow
- SALT-3: Prohibition of future storage of salt and snow
- WASTE-3: Risk Management Plans for existing waste sites without a Prescribed Instrument
- WASTE-4: Prohibition of future waste sites without a Prescribed Instrument

If the applicant can demonstrate to the satisfaction of the approval authority that a significant drinking water threat activity will not occur, notice under s. 59 (2) is not required.

Policy GENERAL-7

Earth (Geothermal) energy systems

Section 27 (3) and (4) of O. Reg. 287/07 (under the *Clean Water Act, 2006*) requires municipalities to provide notice to the Source Protection Authority when pathways are created or modified. The Municipality should review new earth energy systems within Wellhead Protections Areas (WHPAs) to ensure they do not endanger the municipal drinking water system.

It is recommended that the Municipality:

- prohibit the installation of all types of earth energy systems in WHPA-A ;
- require* a qualified hydrogeologist to oversee the design and installation of new earth energy projects (with the exception of horizontal closed loop systems) in WHPA-B to ensure that the construction of the system meets the requirements of the Ontario Building Code and does not result in groundwater contamination. For a residential system, the hydrogeologist should assess the potential of encountering problems (such as multiple aquifers, cross-connection of aquifers and differing water quality) and make recommendations to mitigate them, including alterations to the design of the system; and
- keep relevant records for new earth energy systems within WHPAs,

*The Canadian Standards Association requires that a commercial/institutional system be designed and inspected by a professional engineer and require that a hydrogeologist undertake a site survey.

Policy GENERAL-8

Municipal sewer-use by-law

Where sewage, organic solvents, and/or dense non-aqueous phase liquids (DNAPLs) could be a significant threat, Municipalities should consider creating or strengthening sewer-use by-laws to place limits on waste discharges. This by-law should encourage best management practices to reduce release of sewage, organic solvents and DNAPLs into sewers.

The Municipality shall report to the Source Protection Authority when sewer-use by-laws come into effect or are updated or strengthened to include limits on waste discharges.

Note: Additional policies apply. See: *MONITORING-5*.

Policy GENERAL-9

Update of municipal emergency response plans

For areas which include a Wellhead Protection Area or an Intake Protection Zone along a transportation corridor (railways, highways as defined in Subsection 1(1) of the *Highway Traffic Act, 1990*, St. Lawrence Seaway, and the Ottawa River) it is recommended that the Municipality update their Emergency Response Plans to include:

- Maps of the Wellhead Protection Areas and Intake Protection Zones
- Emergency contact numbers and protocols for the respective water treatment plant operating authority
- Measures to prevent contamination of the drinking water source from spills and/or chemicals used to deal with an emergency (including fire suppressants)

Policy GENERAL-10

Spills Action Center - identification of vulnerable areas

Within one year of the Source Protection Plan taking effect, it is recommended that the Spills Action Centre review and update contact information and procedure cards to include the Intake Protection Zone and Wellhead Protection Area delineations and updated procedures for contacting drinking water plant operators who may be affected by the spill. This will ensure that drinking water sources are protected in the event of a spill originating from transportation corridors (rail, highways as defined in Subsection 1(1) of the *Highway Traffic Act, 1990*, St. Lawrence Seaway and the Ottawa River)..

It is recommended that the Spills Action Centre work with all levels of the St. Lawrence Seaway authority including the Great Lakes Pilot Authority and the St. Lawrence Seaway Management Corporation to ensure that Seaway pilots are aware of Intake Protection Zones and understand the procedures to follow in the event of a spill.

Policy GENERAL-11

Support for Ministry of Transportation signage initiative

In accordance with Section 22 (7) of the *Clean Water Act, 2006*, the Ministry of Transportation, in collaboration with the Ministry of the Environment and Climate Change as well as in consultation with Source Protection Authorities (SPAs), 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 within the Wellhead Protection Areas with a vulnerability score of 10, and/or within an Intake Protection Zone or Wellhead Protection Area E with a vulnerability score of 8 or higher.

Municipalities will be responsible for the purchase, installation and maintenance of appropriate signs designed by the Province in collaboration with the SPAs. These signs should be placed, at a minimum, where municipal arterial roads are located within Wellhead Protection Areas with a vulnerability score of 10, and/or an Intake Protection Zone or Wellhead Protection Area E with a vulnerability score of 8 or higher.

The above policies will be implemented as part of an overall education and outreach plan within each Source Protection Area.

This policy should be implemented within two years after the effective date of the Plan.

Policy GENERAL-12

Updates to the Ontario Pesticide Education Program (Ministry of the Environment and Climate Change)

It is recommended that the Ministry of the Environment and Climate Change work with the Ontario Pesticides Education Program Committee to review the Ontario Pesticides Education Program and consider the incorporation of Source Protection information into the education. The pesticide education materials should teach pesticide applicators how to find out if their lands are in a Wellhead Protection Area or an Intake Protection Zone.

Policy GENERAL-13

Incentive programs

It is strongly recommended that Ministry of the Environment and Climate Change continue to support and facilitate the implementation of existing incentive programs that protect drinking water sources, such as the Ontario Drinking Water Stewardship Program (ODWSP). It is also recommended that the Ministry of the Environment and Climate Change promote and encourage other Provincial incentive programs that promote the implementation of best management practices for activities that are significant drinking water threats.

3.9 Monitoring Policies

The *Clean Water Act, 2006* requires that Source Protection Plans include monitoring policies for each significant threat policy (as per Subsection 22(2)). The monitoring policies will help the Source Protection Authority create annual progress reports relating to policy implementation. The monitoring policies will also help to ensure that the Source Protection policies are effective and are being properly implemented. The *Clean Water Act, 2006* includes specific legal requirements for monitoring policies which are directed at public bodies (as per Subsection 22(5) and 45).

In this Plan, a single monitoring policy text was established for each policy tool where possible. For example, all Risk Management Plan policies will have the same monitoring policy.

Policy MONITORING-1

Part IV *Clean Water Act, 2006* tools (restricted land uses, Risk Management Plans and prohibition)

The Risk Management Official shall report annually by February 1st to the Source Protection Authority on the significant threat policies that designate an activity for the purpose of Section 58 (Risk Management Plans) or Section 57 (prohibition) of the *Clean Water Act, 2006*. This report will include the information required in Section 65 of Regulation 287/07 (information on the establishment and enforcement of Risk Management Plans, inspections and abatement measures in addition to descriptions of the administrative, enforcement and compliance results) related to the previous calendar year.

Additionally, the Risk Management Official shall inform the Source Protection Authority of the method/procedure used to implement GENERAL-6 (restricted land uses).

Policy MONITORING-2

Planning Act, 1990 policies

The local planning authority shall, annually by February 1st, provide the Source Protection Authority with the following information for the previous calendar year:

- A copy of the sections of the Official Plan and zoning by-laws which were amended to conform with the Source Protection Plan;
- A copy of any approvals made under the *Planning Act, 1990* for applications for properties in the designated land uses listed in GENERAL-6 (restricted land uses); and
- A copy of the permit for approvals made under a change of use by-law, if applicable, for properties in designated land uses listed in GENERAL-6 (restricted land uses), when the permit is issued.

Policy MONITORING-3

Prescribed Instruments

By February 1st of each year, the Ministries shall prepare an annual summary of the actions taken to achieve the outcomes of the Source Protection policies in the previous calendar year and make that report available to the Source Protection Authority.

Additionally, it is strongly recommended that the Ministry responsible for approval, inspections, and enforcement for each Prescribed Instrument include the following in their annual report:

- The number of instruments which have been reviewed and changes made including amendments to Environmental Compliance Approvals, Nutrient Management Plans/Strategies or Non-Agricultural Source Material Plans;
- Compliance and enforcement relating to Prescribed Instruments for significant threat activities; and
- Prioritized inspections in the vulnerable areas.

Policy MONITORING-4

Education and Outreach

By February 1st of each year, the Municipality or designate shall report to the Source Protection Authority with a description of the actions/measures they have taken in the previous calendar year to implement the education/outreach program described in the Source Protection Plan.

The report shall also include an evaluation of the program and suggestions to improve its effectiveness.

Policy MONITORING-5

Specify Action

Where a policy requires the Municipality to implement a specific action, the Municipality shall report to the Source Protection Authority annually by February 1st on the steps taken to implement this policy.

Policy MONITORING-6

Salt Management Plans and chloride monitoring

Where salt application could be a significant drinking water threat, the Municipality shall send the Source Protection Authority a copy of their updated or existing Salt Management Plan within two years of the Plan taking effect. If the Salt Management Plan is updated or amended, the updated version shall be sent to the Source Protection Authority when it is completed.

The results of any chloride monitoring at a municipal groundwater well shall be reported to the Source Protection Authority when available.

Policy MONITORING-7

Salt Management Plans for the Ministry of Transportation

For the areas where salt application could be a significant drinking water threat, the Ministry of Transportation (MTO) shall send the Source Protection Authority a copy of their existing Salt Management Plan (SMP) upon request. The MTO shall send subsequent copies of the SMP as needed when it is updated, including any results from research and/or pilot projects.

4 Policy Implementation

4.1 Responsibilities

Provincial ministries and municipalities are responsible for implementing the legally binding policies in this Plan. Other agencies and bodies have been strongly encouraged to implement a variety of non-legally binding policies that will greatly contribute to the protection of municipal drinking water.

Source Protection Authorities (SPAs) will continue to oversee the Source Protection process in the future by supporting and coordinating with implementers as required. The SPAs are also responsible for compiling feedback from the monitoring policies and using this information to prepare annual progress reports.

4.2 Timelines

Each policy in the Source Protection Plan has a date by which it is required to be implemented. The compliance date is usually indicated within the policy wording. Where the date is not specified there is a default timeline established through the *Clean Water Act, 2006*. The timeline for development of Risk Management Plans for existing threats is left to the discretion of the Risk Management Official. This allows flexibility for landowners to receive funding or grants for work that may be required on their property. Future activities in the vulnerable areas will be screened prior to applying for approvals. If required, a Risk Management Plan will be developed prior to the activity being established.

4.3 Annual Progress Report

The *Clean Water Act, 2006* requires that each Source Protection Authority prepare an annual progress report which will outline the measures taken to address all significant drinking water threats, the results of any related monitoring, and the steps taken to achieve the Source Protection Plan's objectives. The annual report will inform any future amendments to the Source Protection Plan. The annual reports require:

- monitoring results of implementation of the policies;
- reports prepared by a Risk Management Official;
- reports from municipal actions; and,
- information gathered from property inspections.

Additionally, the Minister of Environment may, at any time, require that the Plan undergo a review to update information on the location of new groundwater wells and drinking water intakes, the vulnerability scores of these new systems, and any emerging areas of concern.

4.4 Updating the Plan

The Source Protection Plan is a living document that will be reviewed and improved periodically. The reviews will be based on feedback received from affected stakeholders during implementation. This feedback will be captured in the annual progress report, which will highlight policies that may need to be reviewed or amended.

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Appendix A: Director's List

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Director's List

The Directors List is meant to ensure that, where the Source Protection Committee intends for a policy to be given legal effect under the *Clean Water Act, 2006*, the Source Protection Committee does so in a manner that complies with the Regulation (s.34 (1)). The following lists specify the sections of the *Clean Water Act, 2006* which apply to each policy.

List A – Significant threat policies that affect decisions under the *Planning Act, 1990* 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:

- SEWG-3
- SEWG-5
- SEWG-7 (b)
- WASTE-2
- GENERAL-2
- GENERAL-3
- GENERAL-6

List B - Moderate and low threat policies that affect decisions under the *Planning Act, 1990* and *Condominium Act, 1998*

- None.

List C - Significant threat policies that affect Prescribed Instrument decisions

Subsection 39 (6), clause 39 (7) (a), Section 43 and Subsection 44 (1) of the *Clean Water Act, 2006* apply to the following policies:

- AG-1
- FUEL-3
- PEST-1
- SEWG-1
- SEWG-2
- SEWG-3
- SEWG-6
- SEWG-7
- WASTE-1
- WASTE-2
- GENERAL-2
- GENERAL-4

List D - Moderate and low threat policies that affect Prescribed Instrument decisions

- None

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:

- SALT-1
- SEWG-1
- SEWG-4
- SEWG-5
- GENERAL-1

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:

- MONITORING-1
- MONITORING-2
- MONITORING-3
- MONITORING-5
- MONITORING-6
- MONITORING-7

List G - Policies related to Section 57 of the *Clean Water Act, 2006*

The following policies relate to Section 57 (prohibition) of the *Clean Water Act, 2006*:

- CHEM-2
- FUEL-4
- PEST-3
- SALT-3
- WASTE-4
- GENERAL-2
- GENERAL-6

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, 2006*:

- AG-2
- CHEM-1
- FUEL-1
- FUEL-2
- PEST-2
- SALT-2
- WASTE-3
- GENERAL-2
- GENERAL-5
- GENERAL-6

List I - Policies related to Section 59 of the *Clean Water Act, 2006*

The following policies relate to Section 59 (restricted land uses) of the *Clean Water Act, 2006*:

- GENERAL-2
- GENERAL-6

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:

- GENERAL-6
- GENERAL-7
- GENERAL-8
- GENERAL-9
- GENERAL-10
- GENERAL-11
- GENERAL-12
- GENERAL-13
- MONITORING-4

List K – Policies which do not fit under the previous lists

- SALT-4
- SALT-5

Prescribed Instruments which apply to Source Protection Plans

The following table lists Prescribed Instruments which apply to Source Protection Plan policies in Lists C and D above (s. 34(4) of O.Reg. 287/07).

Prescribed Instrument	Policy
<i>Aggregate Resources Act, 1990</i>	None
<i>Environmental Protection Act, 1990</i>	WASTE-1, WASTE-2,
<i>Nutrient Management Act, 2002</i> – nutrient management strategies	AG-1
<i>Nutrient Management Act, 2002</i> – nutrient management plans	AG-1
<i>Nutrient Management Act, 2002</i> – NASM plans	AG-1
Municipal Drinking Water License / Permit (s.40, 44, <i>Safe Drinking Water Act, 2002</i>)	FUEL-3
s. 53, <i>Ontario Water Resources Act, 1990</i>	SEWG-1, SEWG-2, SEWG-3, SEWG-6, SEWG-7, WASTE-1, WASTE-2
<i>Pesticides Act, 1990</i>	PEST-1

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Appendix B: Glossary

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Glossary

Agricultural Source Material

Agricultural source material is treated or untreated material that is capable of being applied to land as a nutrient. Farmers use manure on their farmland, but residential landowners can also apply manure as lawn fertilizer.

The definition from O. Reg. 267/03 includes the following additional categories:

- Manure produced by farm animals, including bedding materials
- Runoff from farm-animal yards and manure storages
- Wash water that has not been mixed with human body waste (e.g. from the milking center)
- Organic materials produced by intermediate operations that process the above materials (e.g. mushroom compost)
- Anaerobic digestion output that does not include sewage bio-solids or human body waste (anaerobic digestion is a process used to decompose organic matter by bacteria in an oxygen-limited environment)
- Regulated compost (which contains dead farm animals)

ASM does not include compost that meets the Compost Guidelines, or a commercial fertilizer.

Animal Yard, Confinement Area

An animal confinement area is defined as an enclosure for livestock or game animals that has all of the following characteristics:

- An unroofed area (with the exception of small wind or shade shelters that are under 20 m²/200 ft²);
- A grazing or foraging area that accounts for less than 50 per cent of the animals' dry matter intake; or
- Fences, pens, corrals or similar structures to confine the animals that are either permanent or temporary allowed access to a barn.

Aquifer

From the Latin for "water carrier", a geological formation (typically porous material, such as sand or gravel, or fractured rock) that stores and is capable of transmitting water in sufficient quantities to serve as a sustainable source of water supply.

Assessment Report

The Assessment Report is a technical document which contains information on threats to drinking water quality and quantity for municipal sources. The Assessment Report identifies vulnerable areas and the land-use activities that may pose a threat. This provides a scientific foundation for the Source Protection process. Assessment reports contain information on water budgets, ground and surface water flow, groundwater recharge areas, Intake Protection Zones, and Wellhead Protection Areas where contaminants may enter a drinking water source.

The Assessment Report is a living document which will be amended and updated over time as new studies and reports are completed.

Circumstances

Circumstances specify details about what makes an activity a threat. The circumstances were developed because the risk to drinking water can vary depending on the specific details of the activity. Details may include the type of chemical being used, volume of storage and whether storage is above or below ground. For example, the volume of fuel storage which poses a threat is dependent on whether it is stored above or below grade (above ground or in a basement).

Clean Water Act, 2006

The *Clean Water Act, 2006* lays out requirements for Source Protection committees to list activities that are or would be drinking water threats in vulnerable areas. Through regulations and technical rules, the Province has set out which activities, at a minimum, must be considered drinking water threats under specific circumstances. Specifically, Section 1.1 of Ontario Regulation 287/07 (General) lists activities that are prescribed as drinking water threats and the Tables of Drinking Water Threats in the Technical Rules specifies under what circumstances these activities are categorized as significant, moderate or low drinking water threats.

Conservation Authority

Conservation authorities (CAs) are local, community based agencies which work with municipalities to manage a watershed. CAs are directed to ensure the conservation, restoration, and responsible management of Ontario's water, land and natural habitats while considering human, environmental, and economic needs.

Source Protection is carried out on a watershed scale; for this reason the CA forms the functional unit of the Source Protection Region.

Decommissioning (Septic System)

For the purpose of this Plan, decommissioning of a septic system refers to disconnecting it from the dwelling, pumping out the tank, and collapsing and backfilling the tank or removing the tank entirely. The disturbed area should be returned to grade.

Dense Non-Aqueous Phase Liquid

In general, a dense non-aqueous phase liquid (DNAPL) is defined as a heavier-than water organic liquid that is only slightly soluble in water. DNAPLs can flow through fractures or fissures in fractured rock and clay to sink vertically to the water table and then eventually settle below the water table.

The primary classes of DNAPLs include:

- 1,4-Dioxane
- Tetrachloroethylene (Perchloroethylene [PCE])
- Trichloroethylene [TCE]
- Vinyl Chloride [VC]
- Polycyclic Aromatic Hydrocarbons [PAHs]

Any other DNAPL compound which can degrade into one of the above chemicals is also a significant threat.

DNAPL contaminated sites have proven to be complex to investigate and both challenging and costly to remediate. It may take many decades for natural groundwater dissolution or natural breakdown of the DNAPL to dissipate DNAPL sources. 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 fluids, aerosols, coolants, polychlorinated biphenyls (PCBs), creosote and degreasers.

Environmental Compliance Approval

Environmental Compliance Approvals (ECAs) were formerly known as Certificates of Approval (C of A). C of A's were issued by the Ontario Ministry of the Environment and Climate Change (MOECC) allowing the regulated discharge of contaminants into the natural environment under Section 9 of the *Environmental Protection Act, 1990*. The *Open for Business Act, 2010* has since changed this process. As of October 31, 2011, the C of A has been replaced by the ECA and an Environmental Activity and Sector Registry (which does not require an approval). The ECAs are expected to be similar to the C of As, but can be used to address multiple activities at a site.

Intake Protection Zone

Intake Protection Zones (IPZs) are areas (land and water) near and upstream of a drinking water intake where human activities may need to be regulated to protect the quality and quantity of surface water that supplies the intake.

Land-farming of Petroleum Refining Waste

Land-farming is a treatment process that is performed in the upper soil zone or in bio-treatment cells. Contaminated soils, sediments, or petroleum-based sludges are incorporated into the soil and periodically turned over (tilled) to aerate the mixture.

Non-Agricultural Source Material

Non-agricultural source material (NASM) means 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:

- pulp and paper bio-solids
- sewage bio-solids
- anaerobic digestion output, if less than 50 %, 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
- any other material that is not from an agricultural source and that is capable of being applied to land as a nutrient

Organic Solvents

Organic solvents are compounds which are able to dissolve solids, gases and liquids. This includes:

- Carbon tetrachloride
- Chloroform
- Methylene chloride
- Pentachlorophenol

Some organic solvents are flammable and pose a risk to human health.

Pathogen

A pathogen is a disease-causing organism such as virus, bacterium, prion, or fungus.

Pesticide

The pesticides which pose a significant threat to drinking water are:

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

Polychlorinated Biphenyl

Polychlorinated biphenyls (PCB) are man-made substances which were widely used in transformers and capacitors. Due to the toxicity of PCBs, they are no longer used Ontario. PCBs which have not been destroyed are often stored at identified sites. The storage of these chemicals could be a significant threat to drinking water in certain areas.

Prescribed Instrument

A Prescribed Instrument is an instrument defined in Ontario Regulation 287/07 for which a decision to issue, create or amend must conform with significant threat policies set out in the Source Protection Plan.

Public Body

A public body is a municipality, local board or conservation authority, a ministry, board, commission, agency or official of the Government of Ontario, or a body prescribed by the regulations made under the *Clean Water Act, 2006*.

Risk Management Plan

A Risk Management Plan is a site-specific plan established under Section 58 of the *Clean Water Act, 2006* to address significant drinking water threat activities, where the threat cannot be addressed through different means, such as a Prescribed Instrument. This tool cannot be used for waste disposal and sewage-related activities that require an Environmental Compliance Approval under the *Environmental Protection Act, 1990* or the *Ontario Water Resources Act, 1990*, or a permit under the Ontario Building Code.

Secondary Containment (fuel storage)

Secondary containment, provides a barrier between the tank and the environment. The barrier holds any leaks between the tank and the barrier so that the leak is detected. The barrier is shaped so that a leak will be directed towards the interstitial monitor.

Barriers include:

- Double-walled or jacketed tanks, in which an outer wall partially or completely surrounds the primary tank;
- Internally fitted liners (bladders); and
- Leak-proof excavation liners that partially or completely surround the tank.

Clay and other earthen materials cannot be used as barriers.

Significant Drinking Water Threat

A drinking water threat that as identified in the Source Protection Plan and table of drinking water threats which poses or has the potential to pose a significant risk to drinking water.

Source Protection Area

A Source Protection Area is those lands and waters 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*.

Source Protection Authority

A Source Protection Authority is 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 Source Protection Committee is 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 Source Protection Plan is 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. Each Plan is approved by the Ontario Ministry of the Environment and Climate Change.

Source Protection Region

A Source Protection Region is two or more Source Protection areas that have been grouped together under Ontario Regulation 284/07.

Source Water

Source water is untreated water that is found in groundwater aquifers and surface water lakes and rivers that is used to supply a drinking water system.

Stormwater

Stormwater refers to any water runoff which makes its way into water bodies via the storm sewer system. For the purpose of this Plan the threat to drinking water is limited to stormwater discharge from management facilities. Stormwater management facilities are designed for the treatment, retention, infiltration and/or control of storm water. This definition also applies to the system of managing stormwater, including stormwater pipes that discharge directly into streams or water bodies.

Vulnerable Area

A vulnerable area is: (a) A significant groundwater recharge area, (b) a highly vulnerable aquifer, (c) an Intake Protection Zone, or (d) a Wellhead Protection Area.

Waste Disposal Sites

Waste disposal sites include:

- Application of untreated septage to land (hauled sewage)
- Storage, treatment and discharge of tailings from mines
- Polychlorinated biphenyl (PCB) storage
- Land-farming of petroleum refining waste (biodegradation of petroleum waste)
- Liquid industrial waste injection into a well
- Landfilling (hazardous, municipal, industrial, commercial waste)
- Storage of hazardous waste at a disposal site
- Storage of wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste

Wellhead Protection Area

A Wellhead Protection Area (WHPA) is the area of land surrounding a well, where human activities may need to be regulated to protect the quality and quantity of ground water that supplies that well.

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Appendix C: Consultation

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Summary of Consultation

This appendix is intended to chronicle the process of local consultation carried out by the Raisin-South Nation Source Protection Committee, the Raisin Region Source Protection Authority, and the South Nation Source Protection Authority. This summary documents the consultation for the Terms of Reference, the Assessment Report and the Source Protection Plan. Municipalities, provincial ministries, stakeholders, and the general public have all been asked to collaborate and provide input. The Source Protection Committee has endeavored to exceed the requirements for public consultation as legislated under the *Clean Water Act, 2006* and Ontario Regulation 287/07.

Terms of Reference

Public consultation for the Terms of Reference was completed in accordance with Ontario Regulation 287/07. The following is a brief summary of efforts relating to the Terms of Reference for Source Protection Planning.

The proposed Terms of Reference was posted to www.yourdrinkingwater.ca on August 19, 2008 and circulated to all municipalities, First Nations, watershed committees, neighbouring source protection regions and various technical working groups. The posting of the Terms of Reference was advertised in local newspapers the weeks of September 8 and 22, 2008.

Four public open houses were held throughout the Source Protection Region in April 2008. Three were held in the South Nation Source Protection Area (Navan, Finch, and Johnstown). A public open house was also held in the Raisin Region Source Protection Area (Alexandria). A draft Terms of Reference was circulated to key stakeholders sector events including the Ontario Federation of Agriculture Eastern Summit on September 25, 2008 in Kemptville and at the Dundas Federation of Agriculture meeting of October 1, 2008 in Chesterville.

A total of 87 comments were submitted by 35 individuals and organizations on the Terms of Reference. It was submitted to the Ontario Ministry of the Environment and Climate Change for final approval in May 2009.

Assessment Report

A consultation process was implemented for both the Draft and Proposed versions of the Assessment Report (AR). Procedures were undertaken in accordance with Ontario Regulation 287/07. Correspondence was sent to 600 property owners, living in vulnerable areas at the onset of the draft proposed version of the AR, to invite participation in the impending AR process. The media campaign to provide notice for the draft proposed AR posting and invite participation in the open houses targeted 29 print and broadcast outlets throughout region.

Six open houses were held throughout late September and early October 2010 across the region. Two events were held in in the Raisin Region Source Protection Area (Alexandria and Lancaster) and four took place within the South Nation Source Protection Area (Alfred, Embrun, Chesterville and Spencerville). A total of 55 visitors attended these public sessions, serving as a valuable forum for information and dialogue with local municipalities, stakeholders and property owners.

During the first posting in September 2010, 14 comments were received on the draft proposed Assessment Report. Over the course of the second posting in November 2010, no written comments were received.

Throughout 2010, as the AR was being developed, the Source Protection Committee made a collaborative effort to share the data and mapping being prepared for the draft document. A total of 35 Source Protection presentations / meetings took place with municipal council members and staff, stakeholder groups, First Nations and property owners. The “Early Engagement” process also included public information sessions on Source Water Protection and Best Management Practices, landowner forums, and formal presentations to municipal councils. As a result of this activity, the overall response to the proposed AR by both municipalities and the general public was encouraging. The final versions of the Raisin Region Source Protection Area and South Nation Source Protection Area ARs were approved by the Ontario Ministry of the Environment and Climate Change in October of 2011 and posted on the provincial Environmental Registry in January 2012.

Source Protection Plan

In January 2011, the Source Protection Committee and program staff actively began development of the next phase of the Source Protection process with the commencement of the Source Protection Plan and the drafting of Source Protection policies.

Notice of Plan Preparation Commencement

The Raisin-South Nation Source Protection Committee is required under Section 19 of General Regulation 287/07 to formally give notice in their respective Source Protection Areas when they began preparation of their Source Protection Plans. This directive was fulfilled by notifying the clerks of each municipality within both Source Protection Areas. Approximately 450 letters went out to those property owners who could be engaging in one or more activities considered significant drinking water threats. Property owners were invited to become involved in the process by contacting us to provide details on their properties and activities. One on one discussions took place between the Source Protection Committee members and staff and many of these property owners. Subsequently details surrounding properties have been clarified and confirmed. In addition, letters of Plan Preparation Commencement were also sent to the St. Lawrence Seaway Management Corporation and the Mohawk Council of Akwesasne in October 2011.

Pre-consultation on Preliminary Draft Policies

Under Ontario Regulation 287/07 (Sections 35 to 39) the term “Pre-Consultation” refers to a legislated requirement to send notices to persons or bodies responsible for implementing policies, and to government ministries that have obligations under the *Clean Water Act, 2006*. The Source Protection Committee complied with this legislation by focusing its pre-consultation on the parties that would be responsible for implementation.

Notices were sent out at the beginning of November 2011 to provincial ministries, municipalities, public health units, Source Protection Authorities and other potential implementing bodies. Two municipal staff and councillors forums were held to update municipalities on the Source Protection Plan and discuss preliminary policies as well as

implementation issues. Municipal council and staff round table discussions also took place on an ongoing basis throughout the Raisin-South Nation Source Protection Region.

Consultation on the Draft Proposed Source Protection Plan

Criteria for formal consultation on Draft Proposed Source Protection Plans are prescribed in Section 41 of Ontario Regulation 287/07. In accordance with this legislation, on March 1, 2012, the Draft Proposed Source Protection Plan for the Raisin-South Nation Source Protection Region was posted on the internet at www.yourdrinkingwater.ca for a 35 day public comment period. In addition, four public open houses were held in Greely, Alexandria, Winchester and Casselman.

Bilingual public notices outlining information on the comment period and the four community open houses were posted in regional media. Notices and links to the Draft Proposed Source Protection Plan document were also sent to municipalities responsible for implementing policies, all government ministries that have obligations under the *Clean Water Act, 2006* as well as to approximately 450 property owners identified as living in vulnerable areas.

130 participants attended the four public open houses. Overall, discussion took place with 185 property owners over the course of this phase of consultation. Feedback was also provided by the general public as well as implementing bodies such as municipalities, provincial ministries and other agencies. The public comment period closed on April 5, 2012 and 155 written comments were received from 25 individual commenting sources.

Consultation on the Proposed Source Protection Plan

Criteria for formal consultation on Proposed Source Protection Plans are prescribed in Section 42 of Ontario Regulation 287/07. In accordance with this legislation, on June 22, 2012, the Proposed Source Protection Plan for the Raisin-South Nation Source Protection Region was posted on the internet at www.yourdrinkingwater.ca for a 40 day public comment period.

Bilingual public notices outlining information on the comment period were posted in regional media. Notices and links to the proposed Source Protection Plan document were also sent to municipalities responsible for implementing policies and all government ministries that have obligations under the *Clean Water Act, 2006*.

The public comment period closed on August 1, 2012 and approximately 90 written comments were received from 10 individual commenting sources.

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Appendix D: Activities, Vulnerable Areas, Threats and Policy Tables

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Activities, Vulnerable Areas, Threats and Policy Tables

The following series of tables have been developed to assist landowners, municipalities, provincial ministries and other stake-holders identify for each municipal drinking water system:

- which activities could be significant threats;
- where the activity may be a significant threat;
- which policies apply; and,
- who is responsible for implementing the policies.

Policies have been written to address each of the prescribed activities and their associated sub-threats, as declared in the Assessment Report and where the risk assessment identifies significant threats based on circumstances defined in the Tables of Drinking Water Threats. The figure below explains how to read the “activities, vulnerable areas, threats and policies” tables.

Prescribed Activity	W-FA				Policy Code and Implementer					
	A	B	C	D	Municipality			MCE		
Waste Disposal Sites										
1.1 Application of Septage	X	X*	-	-	WASTE:2			WASTE:1	WASTE:2	
1.2 Mine Tailings	X	X*	-	-	WASTE:2	WASTE:3	WASTE:4	WASTE:1	WASTE:2	
1.3 Land-farming Petroleum Waste	X	X*	-	-	WASTE:2			WASTE:1	WASTE:2	
1.4 Landfill - Hazardous Waste	X	X*	-	-	WASTE:2			WASTE:1	WASTE:2	
1.5 Landfill - Municipal Waste	X	X	X**	-	WASTE:2			WASTE:1	WASTE:2	
1.6 Landfill - Industrial/Commercial	X	X	X**	-	WASTE:2			WASTE:1	WASTE:2	
1.7 Liquid Waste Injection	X	X	X**	-	WASTE:2			WASTE:1	WASTE:2	
1.8 PCB Waste Storage	X	X*	-	-	WASTE:2	WASTE:3	WASTE:4			
1.9 Storage of Hazardous Waste	X	X*	-	-	WASTE:2			WASTE:1	WASTE:2	
1.10 Storage of Other Waste	X	X*	-	-	WASTE:2			WASTE:1	WASTE:2	
Sewage Works										
2.1 Combined Sewer Discharge	-	-	-	-	SEW:3			SEW:2		
2.2 Stormwater Pond Effluent	X	X*	-	-	SEW:7			SEW:7		
2.3 Industrial Effluent Discharges	-	-	-	-	SEW:3			SEW:2		
2.4 Sanitary Sewers and Pipes	X	X*	-	-	SEW:1			SEW:1		
2.5 Septic Systems	X	X*	-	-	SEW:4	SEW:5		SEW:5	SEW:6	

The prescribed threat id and sub-threat id are listed in the first column (i.e. 1.5 means threat 1, sub-threat 5)

Drinking water threats have been grouped together by similar activity types.

These entries indicate if and within which vulnerable area the corresponding activity may be or could be a significant threat for the particular drinking water system.

The Policy Code corresponding to the activity is identified here. An activity may have one or more policies attributed to it. Policies are colour coded by the implementer.

Note:

The tables are provided for assistance.
The circumstances under which an activity is or may be occurring need to be evaluated.
Please consult the latest version of the Assessment Report to verify applicability.

Table 1: Bennett Street - Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	W-PA				Policy Code and Implementer				
	A	B	C	D	Municipality			MCE	
Waste Disposal Sites					Municipality			MCE	
1.1	X	X	-	-	WASTE2			WASTE1	WASTE2
1.2	X	X	-	-	WASTE2	WASTE3	WASTE4	WASTE1	WASTE2
1.3	X	X	-	-	WASTE2			WASTE1	WASTE2
1.4	X	X	-	-	WASTE2			WASTE1	WASTE2
1.5	X	X	X	-	WASTE2			WASTE1	WASTE2
1.6	X	X	X	-	WASTE2			WASTE1	WASTE2
1.7	X	X	X	-	WASTE2			WASTE1	WASTE2
1.8	X	X	-	-	WASTE2	WASTE3	WASTE4		
1.9	X	X	-	-	WASTE2			WASTE1	WASTE2
1.10	X	X	-	-	WASTE2			WASTE1	WASTE2
Sewage Works					Municipality			MCE	
2.1	-	-	-	-	SEWG3			SEWG2	
2.2	X	X	-	-	SEWG7			SEWG7	
2.3	-	-	-	-	SEWG3			SEWG2	
2.4	X	X	-	-	SEWG1			SEWG1	
2.5	X	X	-	-	SEWG4	SEWG5		SEWG5	SEWG6
2.6	X	X	-	-	SEWG4	SEWG5		SEWG5	SEWG6
2.7	-	-	-	-	SEWG3			SEWG2	SEWG3
2.8	X	X	-	-	SEWG3			SEWG2	SEWG3
2.9	X	X	X	-	SEWG3			SEWG2	SEWG3
Agricultural Activities					Municipality			OMAFRA	
3	X	X	-	-	AG2			AG-1	
4	X	X	-	-	AG2			AG-1	
5	-	-	-	-					
6	X	X	-	-	AG2			AG-1	
7	X	X	-	-	AG2			AG-1	
8	-	-	-	-	AG2			AG-1	
9	X	X	-	-	AG2				
21.1	X	X	-	-	AG2			AG-1	
21.2	X	X	-	-	AG2			AG-1	
Pesticides					Municipality			MCE	
10	X	X	-	-	FEST-2			FEST-1	
11	X	X	-	-	FEST-2	FEST-3			
Salt and Snow					Municipality			MTO	SI
12	-	-	-	-	SALT-1			SALT-4	SALT-5
13	X	X	-	-	SALT-2	SALT-3			
14	X	X	-	-	SALT-2	SALT-3			
Fuel					Municipality			MCE	
15	X	X	-	-	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals					Municipality				
16	X	X	X	-	CHM1	CHM2			
17	X	X	-	-	CHM1	CHM2			
18	X	X	-	-	CHM1	CHM2			
Water Quantity									
19	-	-	-	-					
20	-	-	-	-					
Threat Applicability					Policy Implementer				
X	The policy applies in this area.							Municipality	
X*	The policy applies in a portion of this area where the vulnerability score is 10.							MCE	
X**	The policy applies in a portion of this area where the vulnerability score is 8 or higher.							OMAFRA	
-	No policies apply in this area as the activity is not considered a significant threat.							MTO	
^	This activity is not a significant threat within the Source Protection Area.							Salt Institute	

Table 2: Chesterville – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	W-PA				Policy Code and Implementer					
	A	B	C	D						
Waste Disposal Sites					Municipality			MCE		
1.1	Application of Septage	X	X*	-	-	WASTE:2			WASTE:1	WASTE:2
1.2	Mine Tailings	X	X*	-	-	WASTE:2	WASTE:3	WASTE:4	WASTE:1	WASTE:2
1.3	Land-farming Petroleum Waste	X	X*	-	-	WASTE:2			WASTE:1	WASTE:2
1.4	Landfill - Hazardous Waste	X	X*	-	-	WASTE:2			WASTE:1	WASTE:2
1.5	Landfill - Municipal Waste	X	X	X**	-	WASTE:2			WASTE:1	WASTE:2
1.6	Landfill - Industrial/Commercial	X	X	X**	-	WASTE:2			WASTE:1	WASTE:2
1.7	Liquid Waste Injection	X	X	X**	-	WASTE:2			WASTE:1	WASTE:2
1.8	PCB Waste Storage	X	X*	-	-	WASTE:2	WASTE:3	WASTE:4		
1.9	Storage of Hazardous Waste	X	X*	-	-	WASTE:2			WASTE:1	WASTE:2
1.10	Storage of Other Waste	X	X*	-	-	WASTE:2			WASTE:1	WASTE:2
Sewage Works					Municipality			MCE		
2.1	Combined Sewer Discharge	-	-	-	-	SEWG:3			SEWG:2	
2.2	Stormwater Pond Effluent	X	X*	-	-	SEWG:7			SEWG:7	
2.3	Industrial Effluent Discharges	-	-	-	-	SEWG:3			SEWG:2	
2.4	Sanitary Sewers and Pipes	X	X*	-	-	SEWG:1			SEWG:1	
2.5	Septic Systems	X	X*	-	-	SEWG:4	SEWG:5		SEWG:5	SEWG:6
2.6	Septic Holding Tanks	X	X*	-	-	SEWG:4	SEWG:5		SEWG:5	SEWG:6
2.7	Sewage Treatment Bypass	-	-	-	-	SEWG:3			SEWG:2	SEWG:3
2.8	Sewage Treatment Effluent	X	X*	-	-	SEWG:3			SEWG:2	SEWG:3
2.9	Storage of Sewage	X	X	X**	-	SEWG:3			SEWG:2	SEWG:3
Agricultural Activities					Municipality			OMAFRA		
3	Application of ASM	X	X*	-	-	AG:2			AG:1	
4	Storage of ASM	X	X*	-	-	AG:2			AG:1	
5	Management of ASM [^]	-	-	-	-					
6	Application of NASM	X	X*	-	-	AG:2			AG:1	
7	Storage of NASM	X	X*	-	-	AG:2			AG:1	
8	Application of Fertilizer	-	-	-	-	AG:2			AG:1	
9	Storage of Commercial Fertilizer	X	X*	-	-	AG:2				
21.1	Grazing - ASMGeneration	X	X*	-	-	AG:2			AG:1	
21.2	Pasturing - Farm Animals	X	X*	-	-	AG:2			AG:1	
Pesticides					Municipality			MCE		
10	Application of Pesticides	X	X*	-	-	FEST:2			FEST:1	
11	Storage of Pesticides	X	X*	-	-	FEST:2	FEST:3			
Salt and Snow					Municipality			MTO		SI
12	Application of Road Salt	-	-	-	-	SALT:1			SALT:4	SALT:5
13	Storage of Road Salt	X	X*	-	-	SALT:2	SALT:3			
14	Storage of Snow	X	X*	-	-	SALT:2	SALT:3			
Fuel					Municipality			MCE		
15	Storage of Fuel	X	X*	-	-	FUEL:1	FUEL:2	FUEL:4	FUEL:3	
Chemicals					Municipality					
16	Storage of DNAPLs	X	X	X	-	CHM:1	CHM:2			
17	Storage of Organic Solvents	X	X*	-	-	CHM:1	CHM:2			
18	Aircraft De-icing	X	X*	-	-	CHM:1	CHM:2			
Water Quantity										
19	Consumptive Activity [^]	-	-	-	-					
20	Aquifer Depletion [^]	-	-	-	-					
Threat Applicability								Policy Implementer		
X	The policy applies in this area.								Municipality	
X*	The policy applies in a portion of this area where the vulnerability score is 10.								MCE	
X**	The policy applies in a portion of this area where the vulnerability score is 8 or higher.								OMAFRA	
-	No policies apply in this area as the activity is not considered a significant threat.								MTO	
^	This activity is not a significant threat within the Source Protection Area.								Salt Institute	

Table 3: Chrysler – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	W-PA				Policy Code and Implementer				
	A	B	C	D	Municipality			MCE	
Waste Disposal Sites					Municipality			MCE	
1.1	X	X	-	-	WASTE2			WASTE1	WASTE2
1.2	X	X	-	-	WASTE2	WASTE3	WASTE4	WASTE1	WASTE2
1.3	X	X	-	-	WASTE2			WASTE1	WASTE2
1.4	X	X	-	-	WASTE2			WASTE1	WASTE2
1.5	X	X	X	-	WASTE2			WASTE1	WASTE2
1.6	X	X	X	-	WASTE2			WASTE1	WASTE2
1.7	X	X	X	-	WASTE2			WASTE1	WASTE2
1.8	X	X	-	-	WASTE2	WASTE3	WASTE4		
1.9	X	X	-	-	WASTE2			WASTE1	WASTE2
1.10	X	X	-	-	WASTE2			WASTE1	WASTE2
Sewage Works					Municipality			MCE	
2.1	-	-	-	-	SEWG3			SEWG2	
2.2	X	X	-	-	SEWG7			SEWG7	
2.3	-	-	-	-	SEWG3			SEWG2	
2.4	X	X	-	-	SEWG1			SEWG1	
2.5	X	X	-	-	SEWG4	SEWG5		SEWG5	SEWG6
2.6	X	X	-	-	SEWG4	SEWG5		SEWG5	SEWG6
2.7	-	-	-	-	SEWG3			SEWG2	SEWG3
2.8	X	X	-	-	SEWG3			SEWG2	SEWG3
2.9	X	X	X	-	SEWG3			SEWG2	SEWG3
Agricultural Activities					Municipality			OMAFRA	
3	X	X	-	-	AG2			AG-1	
4	X	X	-	-	AG2			AG-1	
5	-	-	-	-					
6	X	X	-	-	AG2			AG-1	
7	X	X	-	-	AG2			AG-1	
8	-	X*	-	-	AG2			AG-1	
9	X	X	-	-	AG2				
21.1	X	X	-	-	AG2			AG-1	
21.2	X	X	-	-	AG2			AG-1	
Pesticides					Municipality			MCE	
10	X	X	-	-	FEST-2			FEST-1	
11	X	X	-	-	FEST-2	FEST-3			
Salt and Snow					Municipality			MTO	SI
12	-	-	-	-	SALT-1			SALT-4	SALT-5
13	X	X	-	-	SALT-2	SALT-3			
14	X	X	-	-	SALT-2	SALT-3			
Fuel					Municipality			MCE	
15	X	X	-	-	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals					Municipality				
16	X	X	X	-	CHM1	CHM2			
17	X	X	-	-	CHM1	CHM2			
18	X	X	-	-	CHM1	CHM2			
Water Quantity									
19	-	-	-	-					
20	-	-	-	-					
Threat Applicability					Policy Implementer				
X	The policy applies in this area.								Municipality
X*	The policy applies in a portion of this area where the vulnerability score is 10.								MCE
X**	The policy applies in a portion of this area where the vulnerability score is 8 or higher.								OMAFRA
-	No policies apply in this area as the activity is not considered a significant threat.								MTO
^	This activity is not a significant threat within the Source Protection Area.								Salt Institute

Table 4: Placeholder

Table 5: Finch – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	WHPA				Policy Code and Implementer					
	A	B	C	D						
Waste Disposal Sites					Municipality			MCE		
1.1	Application of Septage	X	X	-	-	WASTE2			WASTE1	WASTE2
1.2	Mine Tailings	X	X	-	-	WASTE2	WASTE3	WASTE4	WASTE1	WASTE2
1.3	Land-farming Petroleum Waste	X	X	-	-	WASTE2			WASTE1	WASTE2
1.4	Landfill - Hazardous Waste	X	X	-	-	WASTE2			WASTE1	WASTE2
1.5	Landfill - Municipal Waste	X	X	X	-	WASTE2			WASTE1	WASTE2
1.6	Landfill - Industrial/Commercial	X	X	X	-	WASTE2			WASTE1	WASTE2
1.7	Liquid Waste Injection	X	X	X	-	WASTE2			WASTE1	WASTE2
1.8	PCB Waste Storage	X	X	-	-	WASTE2	WASTE3	WASTE4		
1.9	Storage of Hazardous Waste	X	X	-	-	WASTE2			WASTE1	WASTE2
1.10	Storage of Other Waste	X	X	-	-	WASTE2			WASTE1	WASTE2
Sewage Works					Municipality			MCE		
2.1	Combined Sewer Discharge	-	-	-	-	SEWG3			SEWG2	
2.2	Stormwater Pond Effluent	X	X	-	-	SEWG7			SEWG7	
2.3	Industrial Effluent Discharges	-	-	-	-	SEWG3			SEWG2	
2.4	Sanitary Sewers and Pipes	X	X	-	-	SEWG1			SEWG1	
2.5	Septic Systems	X	X	-	-	SEWG4	SEWG5		SEWG5	SEWG6
2.6	Septic Holding Tanks	X	X	-	-	SEWG4	SEWG5		SEWG5	SEWG6
2.7	Sewage Treatment Bypass	-	-	-	-	SEWG3			SEWG2	SEWG3
2.8	Sewage Treatment Effluent	X	X	-	-	SEWG3			SEWG2	SEWG3
2.9	Storage of Sewage	X	X	X	-	SEWG3			SEWG2	SEWG3
Agricultural Activities					Municipality			OMAFRA		
3	Application of ASM	X	X	-	-	AG2			AG-1	
4	Storage of ASM	X	X	-	-	AG2			AG-1	
5	Management of ASM	-	-	-	-					
6	Application of NASM	X	X	-	-	AG2			AG-1	
7	Storage of NASM	X	X	-	-	AG2			AG-1	
8	Application of Fertilizer	-	-	-	-	AG2			AG-1	
9	Storage of Commercial Fertilizer	X	X	-	-	AG2				
21.1	Grazing - ASMGeneration	X	X	-	-	AG2			AG-1	
21.2	Pasturing - Farm Animals	X	X	-	-	AG2			AG-1	
Pesticides					Municipality			MCE		
10	Application of Pesticides	X	X	-	-	FEST-2			FEST-1	
11	Storage of Pesticides	X	X	-	-	FEST-2	FEST-3			
Salt and Snow					Municipality			MTO		SI
12	Application of Road Salt	-	-	-	-	SALT-1			SALT-4	SALT-5
13	Storage of Road Salt	X	X	-	-	SALT-2	SALT-3			
14	Storage of Snow	X	X	-	-	SALT-2	SALT-3			
Fuel					Municipality			MCE		
15	Storage of Fuel	X	X	-	-	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals					Municipality					
16	Storage of DNAPLs	X	X	X	-	CHM1	CHM2			
17	Storage of Organic Solvents	X	X	-	-	CHM1	CHM2			
18	Aircraft De-icing	X	X	-	-	CHM1	CHM2			
Water Quantity										
19	Consumptive Activity [^]	-	-	-	-					
20	Aquifer Depletion [^]	-	-	-	-					
Threat Applicability								Policy Implementer		
X	The policy applies in this area.								Municipality	
X*	The policy applies in a portion of this area where the vulnerability score is 10.								MCE	
X**	The policy applies in a portion of this area where the vulnerability score is 8 or higher.								OMAFRA	
-	No policies apply in this area as the activity is not considered a significant threat.								MTO	
^	This activity is not a significant threat within the Source Protection Area.								Salt Institute	

Table 6: Glen Robertson – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	W-PA				Policy Code and Implementer				
	A	B	C	D	Municipality			MCE	
Waste Disposal Sites					Municipality			MCE	
1.1	X	X	-	-	WASTE:2			WASTE:1	WASTE:2
1.2	X	X	-	-	WASTE:2	WASTE:3	WASTE:4	WASTE:1	WASTE:2
1.3	X	X	-	-	WASTE:2			WASTE:1	WASTE:2
1.4	X	X	-	-	WASTE:2			WASTE:1	WASTE:2
1.5	X	X	X	-	WASTE:2			WASTE:1	WASTE:2
1.6	X	X	X	-	WASTE:2			WASTE:1	WASTE:2
1.7	X	X	X	-	WASTE:2			WASTE:1	WASTE:2
1.8	X	X	-	-	WASTE:2	WASTE:3	WASTE:4		
1.9	X	X	-	-	WASTE:2			WASTE:1	WASTE:2
1.10	X	X	-	-	WASTE:2			WASTE:1	WASTE:2
Sewage Works					Municipality			MCE	
2.1	-	-	-	-	SEWG:3			SEWG:2	
2.2	X	X	-	-	SEWG:7			SEWG:7	
2.3	-	-	-	-	SEWG:3			SEWG:2	
2.4	X	X	-	-	SEWG:1			SEWG:1	
2.5	X	X	-	-	SEWG:4	SEWG:5		SEWG:5	SEWG:6
2.6	X	X	-	-	SEWG:4	SEWG:5		SEWG:5	SEWG:6
2.7	-	-	-	-	SEWG:3			SEWG:2	SEWG:3
2.8	X	X	-	-	SEWG:3			SEWG:2	SEWG:3
2.9	X	X	X	-	SEWG:3			SEWG:2	SEWG:3
Agricultural Activities					Municipality			OMAFRA	
3	X	X	-	-	AG:2			AG:1	
4	X	X	-	-	AG:2			AG:1	
5	-	-	-	-					
6	X	X	-	-	AG:2			AG:1	
7	X	X	-	-	AG:2			AG:1	
8	-	-	-	-	AG:2			AG:1	
9	X	X	-	-	AG:2				
21.1	X	X	-	-	AG:2			AG:1	
21.2	X	X	-	-	AG:2			AG:1	
Pesticides					Municipality			MCE	
10	X	X	-	-	FEST:2			FEST:1	
11	X	X	-	-	FEST:2	FEST:3			
Salt and Snow					Municipality			MTO	SI
12	-	-	-	-	SALT:1			SALT:4	SALT:5
13	X	X	-	-	SALT:2	SALT:3			
14	X	X	-	-	SALT:2	SALT:3			
Fuel					Municipality			MCE	
15	X	X	-	-	FUEL:1	FUEL:2	FUEL:4	FUEL:3	
Chemicals					Municipality				
16	X	X	X	-	CHM:1	CHM:2			
17	X	X	-	-	CHM:1	CHM:2			
18	X	X	-	-	CHM:1	CHM:2			
Water Quantity									
19	-	-	-	-					
20	-	-	-	-					
Threat Applicability					Policy Implementer				
X	The policy applies in this area.							Municipality	
X*	The policy applies in a portion of this area where the vulnerability score is 10.							MCE	
X**	The policy applies in a portion of this area where the vulnerability score is 8 or higher.							OMAFRA	
-	No policies apply in this area as the activity is not considered a significant threat.							MTO	
^	This activity is not a significant threat within the Source Protection Area.							Salt Institute	

Table 7: Greely – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	W-PA				Policy Code and Implementer				
	A	B	C	D	Municipality			MCE	
Waste Disposal Sites					Municipality			MCE	
1.1	X	X	-	-	WASTE2			WASTE1	WASTE2
1.2	X	X	-	-	WASTE2	WASTE3	WASTE4	WASTE1	WASTE2
1.3	X	X	-	-	WASTE2			WASTE1	WASTE2
1.4	X	X	-	-	WASTE2			WASTE1	WASTE2
1.5	X	X	X	-	WASTE2			WASTE1	WASTE2
1.6	X	X	X	-	WASTE2			WASTE1	WASTE2
1.7	X	X	X	-	WASTE2			WASTE1	WASTE2
1.8	X	X	-	-	WASTE2	WASTE3	WASTE4		
1.9	X	X	-	-	WASTE2			WASTE1	WASTE2
1.10	X	X	-	-	WASTE2			WASTE1	WASTE2
Sewage Works					Municipality			MCE	
2.1	-	-	-	-	SEWG3			SEWG2	
2.2	X	X	-	-	SEWG7			SEWG7	
2.3	-	-	-	-	SEWG3			SEWG2	
2.4	X	X	-	-	SEWG1			SEWG1	
2.5	X	X	-	-	SEWG4	SEWG5		SEWG5	SEWG6
2.6	X	X	-	-	SEWG4	SEWG5		SEWG5	SEWG6
2.7	-	-	-	-	SEWG3			SEWG2	SEWG3
2.8	X	X	-	-	SEWG3			SEWG2	SEWG3
2.9	X	X	X	-	SEWG3			SEWG2	SEWG3
Agricultural Activities					Municipality			OMAFRA	
3	X	X	-	-	AG2			AG-1	
4	X	X	-	-	AG2			AG-1	
5	-	-	-	-					
6	X	X	-	-	AG2			AG-1	
7	X	X	-	-	AG2			AG-1	
8	-	-	-	-	AG2			AG-1	
9	X	X	-	-	AG2				
21.1	X	X	-	-	AG2			AG-1	
21.2	X	X	-	-	AG2			AG-1	
Pesticides					Municipality			MCE	
10	X	X	-	-	FEST-2			FEST-1	
11	X	X	-	-	FEST-2	FEST-3			
Salt and Snow					Municipality			MTO	SI
12	-	-	-	-	SALT-1			SALT-4	SALT-5
13	X	X	-	-	SALT-2	SALT-3			
14	X	X	-	-	SALT-2	SALT-3			
Fuel					Municipality			MCE	
15	X	X	-	-	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals					Municipality				
16	X	X	X	-	CHM1	CHM2			
17	X	X	-	-	CHM1	CHM2			
18	X	X	-	-	CHM1	CHM2			
Water Quantity									
19	-	-	-	-					
20	-	-	-	-					
Threat Applicability					Policy Implementer				
X	The policy applies in this area.							Municipality	
X*	The policy applies in a portion of this area where the vulnerability score is 10.							MCE	
X**	The policy applies in a portion of this area where the vulnerability score is 8 or higher.							OMAFRA	
-	No policies apply in this area as the activity is not considered a significant threat.							MTO	
^	This activity is not a significant threat within the Source Protection Area.							Salt Institute	

Table 8: Limoges – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	WHPA				Policy Code and Implementer					
	A	B	C	D						
Waste Disposal Sites					Municipality			MCE		
1.1	Application of Septage	X	-	-	-	WASTE:2			WASTE:1	WASTE:2
1.2	Mine Tailings	X	-	-	-	WASTE:2	WASTE:3	WASTE:4	WASTE:1	WASTE:2
1.3	Land-farming Petroleum Waste	X	-	-	-	WASTE:2			WASTE:1	WASTE:2
1.4	Landfill - Hazardous Waste	X	-	-	-	WASTE:2			WASTE:1	WASTE:2
1.5	Landfill - Municipal Waste	X	X**	-	-	WASTE:2			WASTE:1	WASTE:2
1.6	Landfill - Industrial/Commercial	X	X**	-	-	WASTE:2			WASTE:1	WASTE:2
1.7	Liquid Waste Injection	X	X**	-	-	WASTE:2			WASTE:1	WASTE:2
1.8	PCB Waste Storage	X	-	-	-	WASTE:2	WASTE:3	WASTE:4		
1.9	Storage of Hazardous Waste	X	-	-	-	WASTE:2			WASTE:1	WASTE:2
1.10	Storage of Other Waste	X	-	-	-	WASTE:2			WASTE:1	WASTE:2
Sewage Works					Municipality			MCE		
2.1	Combined Sewer Discharge	-	-	-	-	SEWG:3			SEWG:2	
2.2	Stormwater Pond Effluent	X	-	-	-	SEWG:7			SEWG:7	
2.3	Industrial Effluent Discharges	-	-	-	-	SEWG:3			SEWG:2	
2.4	Sanitary Sewers and Pipes	X	-	-	-	SEWG:1			SEWG:1	
2.5	Septic Systems	X	-	-	-	SEWG:4	SEWG:5		SEWG:5	SEWG:6
2.6	Septic Holding Tanks	X	-	-	-	SEWG:4	SEWG:5		SEWG:5	SEWG:6
2.7	Sewage Treatment Bypass	-	-	-	-	SEWG:3			SEWG:2	SEWG:3
2.8	Sewage Treatment Effluent	X	-	-	-	SEWG:3			SEWG:2	SEWG:3
2.9	Storage of Sewage	X	X**	-	-	SEWG:3			SEWG:2	SEWG:3
Agricultural Activities					Municipality			OMAFRA		
3	Application of ASM	X	-	-	-	AG:2			AG:1	
4	Storage of ASM	X	-	-	-	AG:2			AG:1	
5	Management of ASM	-	-	-	-					
6	Application of NASM	X	-	-	-	AG:2			AG:1	
7	Storage of NASM	X	-	-	-	AG:2			AG:1	
8	Application of Fertilizer	-	-	-	-	AG:2			AG:1	
9	Storage of Commercial Fertilizer	X	-	-	-	AG:2				
21.1	Grazing - ASMGeneration	X	-	-	-	AG:2			AG:1	
21.2	Pasturing - Farm Animals	X	-	-	-	AG:2			AG:1	
Pesticides					Municipality			MCE		
10	Application of Pesticides	X	-	-	-	FEST:2			FEST:1	
11	Storage of Pesticides	X	-	-	-	FEST:2	FEST:3			
Salt and Snow					Municipality			MTO		SI
12	Application of Road Salt	-	-	-	-	SALT:1			SALT:4	SALT:5
13	Storage of Road Salt	X	-	-	-	SALT:2	SALT:3			
14	Storage of Snow	X	-	-	-	SALT:2	SALT:3			
Fuel					Municipality			MCE		
15	Storage of Fuel	X	-	-	-	FUEL:1	FUEL:2	FUEL:4	FUEL:3	
Chemicals					Municipality					
16	Storage of DNAPLs	X	X	X	-	CHM:1	CHM:2			
17	Storage of Organic Solvents	X	-	-	-	CHM:1	CHM:2			
18	Aircraft De-icing	X	-	-	-	CHM:1	CHM:2			
Water Quantity										
19	Consumptive Activity^	-	-	-	-					
20	Aquifer Depletion^	-	-	-	-					
Threat Applicability								Policy Implementer		
X	The policy applies in this area.								Municipality	
X*	The policy applies in a portion of this area where the vulnerability score is 10.								MCE	
X**	The policy applies in a portion of this area where the vulnerability score is 8 or higher.								OMAFRA	
-	No policies apply in this area as the activity is not considered a significant threat.								MTO	
^	This activity is not a significant threat within the Source Protection Area.								Salt Institute	

Table 9: Moose Creek – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	W-PA				Policy Code and Implementer				
	A	B	C	D	Municipality			MCE	
Waste Disposal Sites					Municipality			MCE	
1.1	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
1.2	X	X*	-	-	WASTE-2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
1.4	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
1.5	X	X**	X**	-	WASTE-2			WASTE-1	WASTE-2
1.6	X	X**	X**	-	WASTE-2			WASTE-1	WASTE-2
1.7	X	X**	X**	-	WASTE-2			WASTE-1	WASTE-2
1.8	X	X*	-	-	WASTE-2	WASTE-3	WASTE-4		
1.9	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
1.10	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
Sewage Works					Municipality			MCE	
2.1	-	-	-	-	SEWG-3			SEVG-2	
2.2	X	X*	-	-	SEWG-7			SEVG-7	
2.3	-	-	-	-	SEVG-3			SEVG-2	
2.4	X	X*	-	-	SEVG-1			SEVG-1	
2.5	X	X*	-	-	SEVG-4	SEVG-5		SEVG-5	SEVG-6
2.6	X	X*	-	-	SEVG-4	SEVG-5		SEVG-5	SEVG-6
2.7	-	-	-	-	SEVG-3			SEVG-2	SEVG-3
2.8	X	X*	-	-	SEVG-3			SEVG-2	SEVG-3
2.9	X	X**	X**	-	SEVG-3			SEVG-2	SEVG-3
Agricultural Activities					Municipality			OMAFRA	
3	X	X*	-	-	AG-2			AG-1	
4	X	X*	-	-	AG-2			AG-1	
5	-	-	-	-					
6	X	X*	-	-	AG-2			AG-1	
7	X	X*	-	-	AG-2			AG-1	
8	-	-	-	-	AG-2			AG-1	
9	X	X*	-	-	AG-2				
21.1	X	X*	-	-	AG-2			AG-1	
21.2	X	X*	-	-	AG-2			AG-1	
Pesticides					Municipality			MCE	
10	X	X*	-	-	FEST-2			FEST-1	
11	X	X*	-	-	FEST-2	FEST-3			
Salt and Snow					Municipality			MTO	SI
12	-	-	-	-	SALT-1			SALT-4	SALT-5
13	X	X*	-	-	SALT-2	SALT-3			
14	X	X*	-	-	SALT-2	SALT-3			
Fuel					Municipality			MCE	
15	X	X*	-	-	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals					Municipality				
16	X	X	X	-	CHEM1	CHEM2			
17	X	X*	-	-	CHEM1	CHEM2			
18	X	X*	-	-	CHEM1	CHEM2			
Water Quantity									
19	-	-	-	-					
20	-	-	-	-					
Threat Applicability					Policy Implementer				
X	The policy applies in this area.							Municipality	
X*	The policy applies in a portion of this area where the vulnerability score is 10.							MCE	
X**	The policy applies in a portion of this area where the vulnerability score is 8 or higher.							OMAFRA	
-	No policies apply in this area as the activity is not considered a significant threat.							MTO	
^	This activity is not a significant threat within the Source Protection Area.							Salt Institute	

Table 10: Newington – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	W-PA				Policy Code and Implementer					
	A	B	C	D						
Waste Disposal Sites					Municipality			MCE		
1.1	Application of Septage	X	X	-	-	WASTE-2			WASTE-1	WASTE-2
1.2	Mine Tailings	X	X	-	-	WASTE-2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	Land-farming Petroleum Waste	X	X	-	-	WASTE-2			WASTE-1	WASTE-2
1.4	Landfill - Hazardous Waste	X	X	-	-	WASTE-2			WASTE-1	WASTE-2
1.5	Landfill - Municipal Waste	X	X	X	-	WASTE-2			WASTE-1	WASTE-2
1.6	Landfill - Industrial/Commercial	X	X	X	-	WASTE-2			WASTE-1	WASTE-2
1.7	Liquid Waste Injection	X	X	X	-	WASTE-2			WASTE-1	WASTE-2
1.8	PCB Waste Storage	X	X	-	-	WASTE-2	WASTE-3	WASTE-4		
1.9	Storage of Hazardous Waste	X	X	-	-	WASTE-2			WASTE-1	WASTE-2
1.10	Storage of Other Waste	X	X	-	-	WASTE-2			WASTE-1	WASTE-2
Sewage Works					Municipality			MCE		
2.1	Combined Sewer Discharge	-	-	-	-	SEWG-3			SEVG-2	
2.2	Stormwater Pond Effluent	X	X	-	-	SEWG-7			SEVG-7	
2.3	Industrial Effluent Discharges	-	-	-	-	SEVG-3			SEVG-2	
2.4	Sanitary Sewers and Pipes	X	X	-	-	SEVG-1			SEVG-1	
2.5	Septic Systems	X	X	-	-	SEVG-4	SEVG-5		SEVG-5	SEVG-6
2.6	Septic Holding Tanks	X	X	-	-	SEVG-4	SEVG-5		SEVG-5	SEVG-6
2.7	Sewage Treatment Bypass	-	-	-	-	SEVG-3			SEVG-2	SEVG-3
2.8	Sewage Treatment Effluent	X	X	-	-	SEVG-3			SEVG-2	SEVG-3
2.9	Storage of Sewage	X	X	X	-	SEVG-3			SEVG-2	SEVG-3
Agricultural Activities					Municipality			OMAFRA		
3	Application of ASM	X	X	-	-	AG-2			AG-1	
4	Storage of ASM	X	X	-	-	AG-2			AG-1	
5	Management of ASM	-	-	-	-					
6	Application of NASM	X	X	-	-	AG-2			AG-1	
7	Storage of NASM	X	X	-	-	AG-2			AG-1	
8	Application of Fertilizer	-	-	-	-	AG-2			AG-1	
9	Storage of Commercial Fertilizer	X	X	-	-	AG-2				
21.1	Grazing - ASM Generation	X	X	-	-	AG-2			AG-1	
21.2	Pasturing - Farm Animals	X	X	-	-	AG-2			AG-1	
Pesticides					Municipality			MCE		
10	Application of Pesticides	X	X	-	-	FEST-2			FEST-1	
11	Storage of Pesticides	X	X	-	-	FEST-2	FEST-3			
Salt and Snow					Municipality			MTO		SI
12	Application of Road Salt	-	-	-	-	SALT-1			SALT-4	SALT-5
13	Storage of Road Salt	X	X	-	-	SALT-2	SALT-3			
14	Storage of Snow	X	X	-	-	SALT-2	SALT-3			
Fuel					Municipality			MCE		
15	Storage of Fuel	X	X	-	-	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals					Municipality					
16	Storage of DNAPLs	X	X	X	-	CHEM1	CHEM2			
17	Storage of Organic Solvents	X	X	-	-	CHEM1	CHEM2			
18	Aircraft De-icing	X	X	-	-	CHEM1	CHEM2			
Water Quantity										
19	Consumptive Activity [^]	-	-	-	-					
20	Aquifer Depletion [^]	-	-	-	-					
Threat Applicability								Policy Implementer		
X	The policy applies in this area.								Municipality	
X*	The policy applies in a portion of this area where the vulnerability score is 10.								MCE	
X**	The policy applies in a portion of this area where the vulnerability score is 8 or higher.								OMAFRA	
-	No policies apply in this area as the activity is not considered a significant threat.								MTO	
^	This activity is not a significant threat within the Source Protection Area.								Salt Institute	

Table 11: Redwood Estates – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	W-PA				Policy Code and Implementer					
	A	B	C	D						
Waste Disposal Sites					Municipality			MCE		
1.1	Application of Septage	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
1.2	Mine Tailings	X	X*	-	-	WASTE-2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	Land-farming Petroleum Waste	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
1.4	Landfill - Hazardous Waste	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
1.5	Landfill - Municipal Waste	X	X**	X**	-	WASTE-2			WASTE-1	WASTE-2
1.6	Landfill - Industrial/Commercial	X	X**	X**	-	WASTE-2			WASTE-1	WASTE-2
1.7	Liquid Waste Injection	X	X**	X**	-	WASTE-2			WASTE-1	WASTE-2
1.8	PCB Waste Storage	X	X*	-	-	WASTE-2	WASTE-3	WASTE-4		
1.9	Storage of Hazardous Waste	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
1.10	Storage of Other Waste	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
Sewage Works					Municipality			MCE		
2.1	Combined Sewer Discharge	-	-	-	-	SEWG-3			SEWG-2	
2.2	Stormwater Pond Effluent	X	X*	-	-	SEWG-7			SEWG-7	
2.3	Industrial Effluent Discharges	-	-	-	-	SEWG-3			SEWG-2	
2.4	Sanitary Sewers and Pipes	X	X*	-	-	SEWG-1			SEWG-1	
2.5	Septic Systems	X	X*	-	-	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.6	Septic Holding Tanks	X	X*	-	-	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.7	Sewage Treatment Bypass	-	-	-	-	SEWG-3			SEWG-2	SEWG-3
2.8	Sewage Treatment Effluent	X	X*	-	-	SEWG-3			SEWG-2	SEWG-3
2.9	Storage of Sewage	X	X**	X**	-	SEWG-3			SEWG-2	SEWG-3
Agricultural Activities					Municipality			OMAFRA		
3	Application of ASM	X	X*	-	-	AG-2			AG-1	
4	Storage of ASM	X	X*	-	-	AG-2			AG-1	
5	Management of ASM [^]	-	-	-	-					
6	Application of NASM	X	X*	-	-	AG-2			AG-1	
7	Storage of NASM	X	X*	-	-	AG-2			AG-1	
8	Application of Fertilizer	-	X*	-	-	AG-2			AG-1	
9	Storage of Commercial Fertilizer	X	X*	-	-	AG-2				
21.1	Grazing - ASM Generation	X	X*	-	-	AG-2			AG-1	
21.2	Pasturing - Farm Animals	X	X*	-	-	AG-2			AG-1	
Pesticides					Municipality			MCE		
10	Application of Pesticides	X	X*	-	-	FEST-2			FEST-1	
11	Storage of Pesticides	X	X*	-	-	FEST-2	FEST-3			
Salt and Snow					Municipality			MTO		SI
12	Application of Road Salt	-	-	-	-	SALT-1			SALT-4	SALT-5
13	Storage of Road Salt	X	X*	-	-	SALT-2	SALT-3			
14	Storage of Snow	X	X*	-	-	SALT-2	SALT-3			
Fuel					Municipality			MCE		
15	Storage of Fuel	X	X*	-	-	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals					Municipality					
16	Storage of DNAPLs	X	X	X	-	CHEM1	CHEM2			
17	Storage of Organic Solvents	X	X*	-	-	CHEM1	CHEM2			
18	Aircraft De-icing	X	X*	-	-	CHEM1	CHEM2			
Water Quantity										
19	Consumptive Activity [^]	-	-	-	-					
20	Aquifer Depletion [^]	-	-	-	-					
Threat Applicability								Policy Implementer		
X	The policy applies in this area.								Municipality	
X*	The policy applies in a portion of this area where the vulnerability score is 10.								MCE	
X**	The policy applies in a portion of this area where the vulnerability score is 8 or higher.								OMAFRA	
-	No policies apply in this area as the activity is not considered a significant threat.								MTO	
^	This activity is not a significant threat within the Source Protection Area.								Salt Institute	

Table 12: Vars – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	W-PA				Policy Code and Implementer					
	A	B	C	D						
Waste Disposal Sites					Municipality			MCE		
1.1	Application of Septage	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
1.2	Mine Tailings	X	X*	-	-	WASTE-2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	Land-farming Petroleum Waste	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
1.4	Landfill - Hazardous Waste	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
1.5	Landfill - Municipal Waste	X	X	-	-	WASTE-2			WASTE-1	WASTE-2
1.6	Landfill - Industrial/Commercial	X	X	-	-	WASTE-2			WASTE-1	WASTE-2
1.7	Liquid Waste Injection	X	X	-	-	WASTE-2			WASTE-1	WASTE-2
1.8	PCB Waste Storage	X	X*	-	-	WASTE-2	WASTE-3	WASTE-4		
1.9	Storage of Hazardous Waste	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
1.10	Storage of Other Waste	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
Sewage Works					Municipality			MCE		
2.1	Combined Sewer Discharge	-	-	-	-	SEWG-3			SEVG-2	
2.2	Stormwater Pond Effluent	X	X*	-	-	SEVG-7			SEVG-7	
2.3	Industrial Effluent Discharges	-	-	-	-	SEVG-3			SEVG-2	
2.4	Sanitary Sewers and Pipes	X	X*	-	-	SEVG-1			SEVG-1	
2.5	Septic Systems	X	X*	-	-	SEVG-4	SEVG-5		SEVG-5	SEVG-6
2.6	Septic Holding Tanks	X	X*	-	-	SEVG-4	SEVG-5		SEVG-5	SEVG-6
2.7	Sewage Treatment Bypass	-	-	-	-	SEVG-3			SEVG-2	SEVG-3
2.8	Sewage Treatment Effluent	X	X*	-	-	SEVG-3			SEVG-2	SEVG-3
2.9	Storage of Sewage	X	X	-	-	SEVG-3			SEVG-2	SEVG-3
Agricultural Activities					Municipality			OMAFRA		
3	Application of ASM	X	X*	-	-	AG-2			AG-1	
4	Storage of ASM	X	X*	-	-	AG-2			AG-1	
5	Management of ASM [^]	-	-	-	-					
6	Application of NASM	X	X*	-	-	AG-2			AG-1	
7	Storage of NASM	X	X*	-	-	AG-2			AG-1	
8	Application of Fertilizer	-	-	-	-	AG-2			AG-1	
9	Storage of Commercial Fertilizer	X	X*	-	-	AG-2				
21.1	Grazing - ASMGeneration	X	X*	-	-	AG-2			AG-1	
21.2	Pasturing - Farm Animals	X	X*	-	-	AG-2			AG-1	
Pesticides					Municipality			MCE		
10	Application of Pesticides	X	X*	-	-	FEST-2			FEST-1	
11	Storage of Pesticides	X	X*	-	-	FEST-2	FEST-3			
Salt and Snow					Municipality			MTO		SI
12	Application of Road Salt	-	-	-	-	SALT-1			SALT-4	SALT-5
13	Storage of Road Salt	X	X*	-	-	SALT-2	SALT-3			
14	Storage of Snow	X	X*	-	-	SALT-2	SALT-3			
Fuel					Municipality			MCE		
15	Storage of Fuel	X	X*	-	-	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals					Municipality					
16	Storage of DNAPLs	X	X	X	-	CHEM1	CHEM2			
17	Storage of Organic Solvents	X	X*	-	-	CHEM1	CHEM2			
18	Aircraft De-icing	X	X*	-	-	CHEM1	CHEM2			
Water Quantity										
19	Consumptive Activity [^]	-	-	-	-					
20	Aquifer Depletion [^]	-	-	-	-					
Threat Applicability								Policy Implementer		
X	The policy applies in this area.								Municipality	
X*	The policy applies in a portion of this area where the vulnerability score is 10.								MCE	
X**	The policy applies in a portion of this area where the vulnerability score is 8 or higher.								OMAFRA	
-	No policies apply in this area as the activity is not considered a significant threat.								MTO	
^	This activity is not a significant threat within the Source Protection Area.								Salt Institute	

Table 13: Winchester – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	W-PA				Policy Code and Implementer					
	A	B	C	D						
Waste Disposal Sites					Municipality			MCE		
1.1	Application of Septage	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
1.2	Mine Tailings	X	X*	-	-	WASTE-2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	Land-farming Petroleum Waste	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
1.4	Landfill - Hazardous Waste	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
1.5	Landfill - Municipal Waste	X	X	X**	-	WASTE-2			WASTE-1	WASTE-2
1.6	Landfill - Industrial/Commercial	X	X	X**	-	WASTE-2			WASTE-1	WASTE-2
1.7	Liquid Waste Injection	X	X	X**	-	WASTE-2			WASTE-1	WASTE-2
1.8	PCB Waste Storage	X	X*	-	-	WASTE-2	WASTE-3	WASTE-4		
1.9	Storage of Hazardous Waste	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
1.10	Storage of Other Waste	X	X*	-	-	WASTE-2			WASTE-1	WASTE-2
Sewage Works					Municipality			MCE		
2.1	Combined Sewer Discharge	-	-	-	-	SEWG-3			SEVG-2	
2.2	Stormwater Pond Effluent	X	X*	-	-	SEWG-7			SEVG-7	
2.3	Industrial Effluent Discharges	-	-	-	-	SEVG-3			SEVG-2	
2.4	Sanitary Sewers and Pipes	X	X*	-	-	SEVG-1			SEVG-1	
2.5	Septic Systems	X	X*	-	-	SEVG-4	SEVG-5		SEVG-5	SEVG-6
2.6	Septic Holding Tanks	X	X*	-	-	SEVG-4	SEVG-5		SEVG-5	SEVG-6
2.7	Sewage Treatment Bypass	-	-	-	-	SEVG-3			SEVG-2	SEVG-3
2.8	Sewage Treatment Effluent	X	X*	-	-	SEVG-3			SEVG-2	SEVG-3
2.9	Storage of Sewage	X	X	X**	-	SEVG-3			SEVG-2	SEVG-3
Agricultural Activities					Municipality			OMAFRA		
3	Application of ASM	X	X*	-	-	AG-2			AG-1	
4	Storage of ASM	X	X*	-	-	AG-2			AG-1	
5	Management of ASM [^]	-	-	-	-					
6	Application of NASM	X	X*	-	-	AG-2			AG-1	
7	Storage of NASM	X	X*	-	-	AG-2			AG-1	
8	Application of Fertilizer	-	-	-	-	AG-2			AG-1	
9	Storage of Commercial Fertilizer	X	X*	-	-	AG-2				
21.1	Grazing - ASMGeneration	X	X*	-	-	AG-2			AG-1	
21.2	Pasturing - Farm Animals	X	X*	-	-	AG-2			AG-1	
Pesticides					Municipality			MCE		
10	Application of Pesticides	X	X*	-	-	FEST-2			FEST-1	
11	Storage of Pesticides	X	X*	-	-	FEST-2	FEST-3			
Salt and Snow					Municipality			MTO		SI
12	Application of Road Salt	-	-	-	-	SALT-1			SALT-4	SALT-5
13	Storage of Road Salt	X	X*	-	-	SALT-2	SALT-3			
14	Storage of Snow	X	X*	-	-	SALT-2	SALT-3			
Fuel					Municipality			MCE		
15	Storage of Fuel	X	X*	-	-	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals					Municipality					
16	Storage of DNAPLs	X	X	X	-	CHEM1	CHEM2			
17	Storage of Organic Solvents	X	X*	-	-	CHEM1	CHEM2			
18	Aircraft De-icing	X	X*	-	-	CHEM1	CHEM2			
Water Quantity										
19	Consumptive Activity [^]	-	-	-	-					
20	Aquifer Depletion [^]	-	-	-	-					
Threat Applicability								Policy Implementer		
X	The policy applies in this area.								Municipality	
X*	The policy applies in a portion of this area where the vulnerability score is 10.								MCE	
X**	The policy applies in a portion of this area where the vulnerability score is 8 or higher.								OMAFRA	
-	No policies apply in this area as the activity is not considered a significant threat.								MTO	
^	This activity is not a significant threat within the Source Protection Area.								Salt Institute	

Table 14: Alexandria – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	IPZ			Policy Code and Implementer					
	1	2	3	Municipality			MCE		
Waste Disposal Sites				Municipality			MCE		
1.1	Application of Septage	X	-	-	WASTE2			WASTE-1	WASTE-2
1.2	Mine Tailings	X	-	-	WASTE2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	Land-farming Petroleum Waste	X	-	-	WASTE2			WASTE-1	WASTE-2
1.4	Landfill - Hazardous Waste	X	-	-	WASTE2			WASTE-1	WASTE-2
1.5	Landfill - Municipal Waste	X	-	-	WASTE2			WASTE-1	WASTE-2
1.6	Landfill - Industrial/Commercial	X	-	-	WASTE2			WASTE-1	WASTE-2
1.7	Liquid Waste Injection	-	-	-	WASTE2			WASTE-1	WASTE-2
1.8	PCB Waste Storage	X	-	-	WASTE2	WASTE-3	WASTE-4		
1.9	Storage of Hazardous Waste	X	-	-	WASTE2			WASTE-1	WASTE-2
1.10	Storage of Other Waste	X	-	-	WASTE2			WASTE-1	WASTE-2
Sewage Works				Municipality			MCE		
2.1	Combined Sewer Discharge	X	X	-	SEWG-3			SEWG-2	
2.2	Stormwater Pond Effluent	X	X	-	SEWG-7			SEWG-7	
2.3	Industrial Effluent Discharges	X	X	-	SEWG-3			SEWG-2	
2.4	Sanitary Sewers and Pipes	X	-	-	SEWG-1			SEWG-1	
2.5	Septic Systems	X	-	-	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.6	Septic Holding Tanks	X	-	-	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.7	Sewage Treatment Bypass	X	X	-	SEWG-3			SEWG-2	SEWG-3
2.8	Sewage Treatment Effluent	X	X	-	SEWG-3			SEWG-2	SEWG-3
2.9	Storage of Sewage	X	-	-	SEWG-3			SEWG-2	SEWG-3
Agricultural Activities				Municipality			QMAFRA		
3	Application of ASM	X	X	-	AG-2			AG-1	
4	Storage of ASM	X	X	-	AG-2			AG-1	
5	Management of ASM	-	-	-					
6	Application of NASM	X	X	-	AG-2			AG-1	
7	Storage of NASM	X	X	-	AG-2			AG-1	
8	Application of Fertilizer	-	-	-	AG-2			AG-1	
9	Storage of Commercial Fertilizer	X	-	-	AG-2				
21.1	Grazing - ASMGeneration	X	X	-	AG-2			AG-1	
21.2	Pasturing - Farm Animals	X	X	-	AG-2			AG-1	
Pesticides				Municipality			MCE		
10	Application of Pesticides	X	-	-	FEST-2			FEST-1	
11	Storage of Pesticides	X	-	-	FEST-2	FEST-3			
Salt and Snow				Municipality			MTO	S.I.	
12	Application of Road Salt	X	-	-	SALT-1			SALT-4	SALT-5
13	Storage of Road Salt	X	-	-	SALT-2	SALT-3			
14	Storage of Snow	X	-	-	SALT-2	SALT-3			
Fuel				Municipality			MCE		
15	Storage of Fuel	X	-	-	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals				Municipality					
16	Storage of DNAPLs	X	-	-	CHEM1	CHEM2			
17	Storage of Organic Solvents	X	-	-	CHEM1	CHEM2			
18	Aircraft De-icing	X	X	-	CHEM1	CHEM2			
Water Quantity									
19	Consumptive Activity^	-	-	-					
20	Aquifer Depletion^	-	-	-					
Threat Applicability							Policy Implementer		
X	The policy applies in this area.							Municipality	
-	No policies apply in this area as the activity is not considered a significant threat.							MCE	
^	This activity is not a significant threat within the Source Protection Area.							QMAFRA	
								MTO	
								Salt Institute	

Table 15: Cardinal – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	IPZ			Policy Code and Implementer					
	1	2	3	Municipality			MCE		
Waste Disposal Sites				Municipality			MCE		
1.1	Application of Septage	X	-	#	WASTE2			WASTE-1	WASTE-2
1.2	Mine Tailings	-	-	#	WASTE2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	Land-farming Petroleum Waste	-	-	#	WASTE2			WASTE-1	WASTE-2
1.4	Landfill - Hazardous Waste	-	-	#	WASTE2			WASTE-1	WASTE-2
1.5	Landfill - Municipal Waste	-	-	#	WASTE2			WASTE-1	WASTE-2
1.6	Landfill - Industrial/Commercial	-	-	#	WASTE2			WASTE-1	WASTE-2
1.7	Liquid Waste Injection	-	-	#	WASTE2			WASTE-1	WASTE-2
1.8	PCB Waste Storage	-	-	#	WASTE2	WASTE-3	WASTE-4		
1.9	Storage of Hazardous Waste	-	-	#	WASTE2			WASTE-1	WASTE-2
1.10	Storage of Other Waste	-	-	#	WASTE2			WASTE-1	WASTE-2
Sewage Works				Municipality			MCE		
2.1	Combined Sewer Discharge	X	-	#	SEWG3			SEWG-2	
2.2	Stormwater Pond Effluent	X	-	#	SEWG-7			SEWG-7	
2.3	Industrial Effluent Discharges	X	-	#	SEWG-3			SEWG-2	
2.4	Sanitary Sewers and Pipes	-	-	#	SEWG-1			SEWG-1	
2.5	Septic Systems	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.6	Septic Holding Tanks	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.7	Sewage Treatment Bypass	X	-	#	SEWG-3			SEWG-2	SEWG-3
2.8	Sewage Treatment Effluent	X	-	#	SEWG-3			SEWG-2	SEWG-3
2.9	Storage of Sewage	-	-	#	SEWG-3			SEWG-2	SEWG-3
Agricultural Activities				Municipality			QMAFRA		
3	Application of ASM	X	-	#	AG-2			AG-1	
4	Storage of ASM	X	-	#	AG-2			AG-1	
5	Management of ASM	-	-	#					
6	Application of NASM	X	-	#	AG-2			AG-1	
7	Storage of NASM	X	-	#	AG-2			AG-1	
8	Application of Fertilizer	-	-	#	AG-2			AG-1	
9	Storage of Commercial Fertilizer	-	-	#	AG-2				
21.1	Grazing - ASM Generation	X	-	#	AG-2			AG-1	
21.2	Pasturing - Farm Animals	X	-	#	AG-2			AG-1	
Pesticides				Municipality			MCE		
10	Application of Pesticides	-	-	#	FEST-2			FEST-1	
11	Storage of Pesticides	-	-	#	FEST-2	FEST-3			
Salt and Snow				Municipality			MTO	S.I.	
12	Application of Road Salt	-	-	#	SALT-1			SALT-4	SALT-5
13	Storage of Road Salt	-	-	#	SALT-2	SALT-3			
14	Storage of Snow	-	-	#	SALT-2	SALT-3			
Fuel				Municipality			MCE		
15	Storage of Fuel	-	-	#	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals				Municipality					
16	Storage of DNAPLs	-	-	#	CHEM1	CHEM2			
17	Storage of Organic Solvents	-	-	#	CHEM1	CHEM2			
18	Aircraft De-icing	X	-	#	CHEM1	CHEM2			
Water Quantity									
19	Consumptive Activity^	-	-	#					
20	Aquifer Depletion^	-	-	#					
Threat Applicability							Policy Implementer		
X	The policy applies in this area.							Municipality	
-	No policies apply in this area as the activity is not considered a significant threat.							MCE	
^	This activity is not a significant threat within the Source Protection Area.							QMAFRA	
#	The vulnerable area, IPZ-3 is not applicable for this intake.							MTO	
								Salt Institute	

Table 16: Casselman – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	IPZ			Policy Code and Implementer				
	1	2	3	Municipality			MCE	
Waste Disposal Sites				Municipality			MCE	
1.1	X	X	-	WASTE2			WASTE-1	WASTE-2
1.2	X	X	-	WASTE2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	X	X	-	WASTE2			WASTE-1	WASTE-2
1.4	X	X	-	WASTE2			WASTE-1	WASTE-2
1.5	X	X	-	WASTE2			WASTE-1	WASTE-2
1.6	X	X	-	WASTE2			WASTE-1	WASTE-2
1.7	-	-	-	WASTE2			WASTE-1	WASTE-2
1.8	X	-	-	WASTE2	WASTE-3	WASTE-4		
1.9	X	X	-	WASTE2			WASTE-1	WASTE-2
1.10	X	-	-	WASTE2			WASTE-1	WASTE-2
Sewage Works				Municipality			MCE	
2.1	X	X	-	SEWG-3			SEWG-2	
2.2	X	X	-	SEWG-7			SEWG-7	
2.3	X	X	-	SEWG-3			SEWG-2	
2.4	X	-	-	SEWG-1			SEWG-1	
2.5	X	-	-	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.6	X	-	-	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.7	X	X	-	SEWG-3			SEWG-2	SEWG-3
2.8	X	X	-	SEWG-3			SEWG-2	SEWG-3
2.9	X	X	-	SEWG-3			SEWG-2	SEWG-3
Agricultural Activities				Municipality			OMAFRA	
3	X	X	-	AG-2			AG-1	
4	X	X	-	AG-2			AG-1	
5	-	-	-					
6	X	X	-	AG-2			AG-1	
7	X	X	-	AG-2			AG-1	
8	-	-	-	AG-2			AG-1	
9	X	-	-	AG-2				
21.1	X	X	-	AG-2			AG-1	
21.2	X	X	-	AG-2			AG-1	
Pesticides				Municipality			MCE	
10	X	X	-	FEST-2			FEST-1	
11	X	X	-	FEST-2	FEST-3			
Salt and Snow				Municipality			MTO	S.I.
12	X	-	-	SALT-1			SALT-4	SALT-5
13	X	X	-	SALT-2	SALT-3			
14	X	X	-	SALT-2	SALT-3			
Fuel				Municipality			MCE	
15	X	-	-	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals				Municipality				
16	X	-	-	CHEM1	CHEM2			
17	X	-	-	CHEM1	CHEM2			
18	X	X	-	CHEM1	CHEM2			
Water Quantity								
19	-	-	-					
20	-	-	-					
Threat Applicability				Policy Implementer				
X	The policy applies in this area.						Municipality	
-	No policies apply in this area as the activity is not considered a significant threat.						MCE	
^	This activity is not a significant threat within the Source Protection Area.						OMAFRA	
							MTO	
							Salt Institute	

Table 17: Cornwall – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	IPZ			Policy Code and Implementer					
	1	2	3	Municipality			MCE		
Waste Disposal Sites				Municipality			MCE		
1.1	Application of Septage	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.2	Mine Tailings	-	-	#	WASTE-2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	Land-farming Petroleum Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.4	Landfill - Hazardous Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.5	Landfill - Municipal Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.6	Landfill - Industrial/Commercial	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.7	Liquid Waste Injection	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.8	PCB Waste Storage	-	-	#	WASTE-2	WASTE-3	WASTE-4		
1.9	Storage of Hazardous Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.10	Storage of Other Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
Sewage Works				Municipality			MCE		
2.1	Combined Sewer Discharge	X	-	#	SEWG-3			SEWG-2	
2.2	Stormwater Pond Effluent	X	-	#	SEWG-7			SEWG-7	
2.3	Industrial Effluent Discharges	X	-	#	SEWG-3			SEWG-2	
2.4	Sanitary Sewers and Pipes	-	-	#	SEWG-1			SEWG-1	
2.5	Septic Systems	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.6	Septic Holding Tanks	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.7	Sewage Treatment Bypass	X	-	#	SEWG-3			SEWG-2	SEWG-3
2.8	Sewage Treatment Effluent	X	-	#	SEWG-3			SEWG-2	SEWG-3
2.9	Storage of Sewage	-	-	#	SEWG-3			SEWG-2	SEWG-3
Agricultural Activities				Municipality			OMAFRA		
3	Application of ASM	X	-	#	AG-2			AG-1	
4	Storage of ASM	X	-	#	AG-2			AG-1	
5	Management of ASM	-	-	#					
6	Application of NASM	X	-	#	AG-2			AG-1	
7	Storage of NASM	X	-	#	AG-2			AG-1	
8	Application of Fertilizer	-	-	#	AG-2			AG-1	
9	Storage of Commercial Fertilizer	-	-	#	AG-2				
21.1	Grazing - ASMGeneration	X	-	#	AG-2			AG-1	
21.2	Pasturing - Farm Animals	X	-	#	AG-2			AG-1	
Pesticides				Municipality			MCE		
10	Application of Pesticides	-	-	#	PEST-2			PEST-1	
11	Storage of Pesticides	-	-	#	PEST-2	PEST-3			
Salt and Snow				Municipality			MTO	S.I.	
12	Application of Road Salt	-	-	#	SALT-1			SALT-4	SALT-5
13	Storage of Road Salt	-	-	#	SALT-2	SALT-3			
14	Storage of Snow	-	-	#	SALT-2	SALT-3			
Fuel				Municipality			MCE		
15	Storage of Fuel	-	-	#	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals				Municipality					
16	Storage of DNAPLs	-	-	#	CHEM1	CHEM2			
17	Storage of Organic Solvents	-	-	#	CHEM1	CHEM2			
18	Aircraft De-icing	-	-	#	CHEM1	CHEM2			
Water Quantity									
19	Consumptive Activity^	-	-	#					
20	Aquifer Depletion^	-	-	#					
Threat Applicability							Policy Implementer		
X	The policy applies in this area.							Municipality	
-	No policies apply in this area as the activity is not considered a significant threat.							MCE	
^	This activity is not a significant threat within the Source Protection Area.							OMAFRA	
#	The vulnerable area, IPZ-3 is not applicable for this intake.							MTO	
								Salt Institute	

Table 18: Glen Walter – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	IPZ			Policy Code and Implementer					
	1	2	3	Municipality			MCE		
Waste Disposal Sites				Municipality			MCE		
1.1	Application of Septage	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.2	Mine Tailings	-	-	#	WASTE-2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	Land-farming Petroleum Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.4	Landfill - Hazardous Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.5	Landfill - Municipal Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.6	Landfill - Industrial/Commercial	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.7	Liquid Waste Injection	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.8	PCB Waste Storage	-	-	#	WASTE-2	WASTE-3	WASTE-4		
1.9	Storage of Hazardous Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.10	Storage of Other Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
Sewage Works				Municipality			MCE		
2.1	Combined Sewer Discharge	-	-	#	SEWG-3			SEWG-2	
2.2	Stormwater Pond Effluent	-	-	#	SEWG-7			SEWG-7	
2.3	Industrial Effluent Discharges	-	-	#	SEWG-3			SEWG-2	
2.4	Sanitary Sewers and Pipes	-	-	#	SEWG-1			SEWG-1	
2.5	Septic Systems	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.6	Septic Holding Tanks	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.7	Sewage Treatment Bypass	-	-	#	SEWG-3			SEWG-2	SEWG-3
2.8	Sewage Treatment Effluent	-	-	#	SEWG-3			SEWG-2	SEWG-3
2.9	Storage of Sewage	-	-	#	SEWG-3			SEWG-2	SEWG-3
Agricultural Activities				Municipality			OMAFRA		
3	Application of ASM	-	-	#	AG-2			AG-1	
4	Storage of ASM	-	-	#	AG-2			AG-1	
5	Management of ASM	-	-	#					
6	Application of NASM	-	-	#	AG-2			AG-1	
7	Storage of NASM	-	-	#	AG-2			AG-1	
8	Application of Fertilizer	-	-	#	AG-2			AG-1	
9	Storage of Commercial Fertilizer	-	-	#	AG-2				
21.1	Grazing - ASMGeneration	-	-	#	AG-2			AG-1	
21.2	Pasturing - Farm Animals	-	-	#	AG-2			AG-1	
Pesticides				Municipality			MCE		
10	Application of Pesticides	-	-	#	PEST-2			PEST-1	
11	Storage of Pesticides	-	-	#	PEST-2	PEST-3			
Salt and Snow				Municipality			MTO	S.I.	
12	Application of Road Salt	-	-	#	SALT-1			SALT-4	SALT-5
13	Storage of Road Salt	-	-	#	SALT-2	SALT-3			
14	Storage of Snow	-	-	#	SALT-2	SALT-3			
Fuel				Municipality			MCE		
15	Storage of Fuel	-	-	#	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals				Municipality					
16	Storage of DNAPLs	-	-	#	CHEM1	CHEM2			
17	Storage of Organic Solvents	-	-	#	CHEM1	CHEM2			
18	Aircraft De-icing	-	-	#	CHEM1	CHEM2			
Water Quantity									
19	Consumptive Activity^	-	-	#					
20	Aquifer Depletion^	-	-	#					
Threat Applicability							Policy Implementer		
X	The policy applies in this area.							Municipality	
-	No policies apply in this area as the activity is not considered a significant threat.							MCE	
^	This activity is not a significant threat within the Source Protection Area.							OMAFRA	
#	The vulnerable area, IPZ-3 is not applicable for this intake.							MTO	
								Salt Institute	

Table 19: Hawkesbury – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	IPZ			Policy Code and Implementer					
	1	2	3	Municipality			MCE		
Waste Disposal Sites				Municipality			MCE		
1.1	Application of Septage	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.2	Mine Tailings	X	-	#	WASTE-2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	Land-farming Petroleum Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.4	Landfill - Hazardous Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.5	Landfill - Municipal Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.6	Landfill - Industrial/Commercial	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.7	Liquid Waste Injection	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.8	PCB Waste Storage	X	-	#	WASTE-2	WASTE-3	WASTE-4		
1.9	Storage of Hazardous Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.10	Storage of Other Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
Sewage Works				Municipality			MCE		
2.1	Combined Sewer Discharge	X	X	#	SEWG-3			SEWG-2	
2.2	Stormwater Pond Effluent	X	X	#	SEWG-7			SEWG-7	
2.3	Industrial Effluent Discharges	X	X	#	SEWG-3			SEWG-2	
2.4	Sanitary Sewers and Pipes	X	-	#	SEWG-1			SEWG-1	
2.5	Septic Systems	X	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.6	Septic Holding Tanks	X	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.7	Sewage Treatment Bypass	X	X	#	SEWG-3			SEWG-2	SEWG-3
2.8	Sewage Treatment Effluent	X	X	#	SEWG-3			SEWG-2	SEWG-3
2.9	Storage of Sewage	X	-	#	SEWG-3			SEWG-2	SEWG-3
Agricultural Activities				Municipality			OMAFRA		
3	Application of ASM	X	X	#	AG-2			AG-1	
4	Storage of ASM	X	X	#	AG-2			AG-1	
5	Management of ASM	-	-	#					
6	Application of NASM	X	X	#	AG-2			AG-1	
7	Storage of NASM	X	X	#	AG-2			AG-1	
8	Application of Fertilizer	-	-	#	AG-2			AG-1	
9	Storage of Commercial Fertilizer	X	-	#	AG-2				
21.1	Grazing - ASMGeneration	X	X	#	AG-2			AG-1	
21.2	Pasturing - Farm Animals	X	X	#	AG-2			AG-1	
Pesticides				Municipality			MCE		
10	Application of Pesticides	X	-	#	PEST-2			PEST-1	
11	Storage of Pesticides	X	-	#	PEST-2	PEST-3			
Salt and Snow				Municipality			MTO	S.I.	
12	Application of Road Salt	-	-	#	SALT-1			SALT-4	SALT-5
13	Storage of Road Salt	X	-	#	SALT-2	SALT-3			
14	Storage of Snow	X	-	#	SALT-2	SALT-3			
Fuel				Municipality			MCE		
15	Storage of Fuel	X	-	#	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals				Municipality					
16	Storage of DNAPLs	X	-	#	CHEM1	CHEM2			
17	Storage of Organic Solvents	X	-	#	CHEM1	CHEM2			
18	Aircraft De-icing	X	-	#	CHEM1	CHEM2			
Water Quantity									
19	Consumptive Activity^	-	-	#					
20	Aquifer Depletion^	-	-	#					
Threat Applicability							Policy Implementer		
X	The policy applies in this area.							Municipality	
-	No policies apply in this area as the activity is not considered a significant threat.							MCE	
^	This activity is not a significant threat within the Source Protection Area.							OMAFRA	
#	The vulnerable area, IPZ-3 is not applicable for this intake.							MTO	
								Salt Institute	

Table 20: Lancaster – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	IPZ			Policy Code and Implementer					
	1	2	3	Municipality			MCE		
Waste Disposal Sites				Municipality			MCE		
1.1	Application of Septage	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.2	Mine Tailings	-	-	#	WASTE-2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	Land-farming Petroleum Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.4	Landfill - Hazardous Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.5	Landfill - Municipal Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.6	Landfill - Industrial/Commercial	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.7	Liquid Waste Injection	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.8	PCB Waste Storage	-	-	#	WASTE-2	WASTE-3	WASTE-4		
1.9	Storage of Hazardous Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.10	Storage of Other Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
Sewage Works				Municipality			MCE		
2.1	Combined Sewer Discharge	-	-	#	SEWG-3			SEWG-2	
2.2	Stormwater Pond Effluent	-	-	#	SEWG-7			SEWG-7	
2.3	Industrial Effluent Discharges	-	-	#	SEWG-3			SEWG-2	
2.4	Sanitary Sewers and Pipes	-	-	#	SEWG-1			SEWG-1	
2.5	Septic Systems	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.6	Septic Holding Tanks	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.7	Sewage Treatment Bypass	-	-	#	SEWG-3			SEWG-2	SEWG-3
2.8	Sewage Treatment Effluent	-	-	#	SEWG-3			SEWG-2	SEWG-3
2.9	Storage of Sewage	-	-	#	SEWG-3			SEWG-2	SEWG-3
Agricultural Activities				Municipality			OMAFRA		
3	Application of ASM	-	-	#	AG-2			AG-1	
4	Storage of ASM	-	-	#	AG-2			AG-1	
5	Management of ASM	-	-	#					
6	Application of NASM	-	-	#	AG-2			AG-1	
7	Storage of NASM	-	-	#	AG-2			AG-1	
8	Application of Fertilizer	-	-	#	AG-2			AG-1	
9	Storage of Commercial Fertilizer	-	-	#	AG-2				
21.1	Grazing - ASMGeneration	-	-	#	AG-2			AG-1	
21.2	Pasturing - Farm Animals	-	-	#	AG-2			AG-1	
Pesticides				Municipality			MCE		
10	Application of Pesticides	-	-	#	PEST-2			PEST-1	
11	Storage of Pesticides	-	-	#	PEST-2	PEST-3			
Salt and Snow				Municipality			MTO	S.I.	
12	Application of Road Salt	-	-	#	SALT-1			SALT-4	SALT-5
13	Storage of Road Salt	-	-	#	SALT-2	SALT-3			
14	Storage of Snow	-	-	#	SALT-2	SALT-3			
Fuel				Municipality			MCE		
15	Storage of Fuel	-	-	#	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals				Municipality					
16	Storage of DNAPLs	-	-	#	CHEM1	CHEM2			
17	Storage of Organic Solvents	-	-	#	CHEM1	CHEM2			
18	Aircraft De-icing	-	-	#	CHEM1	CHEM2			
Water Quantity									
19	Consumptive Activity^	-	-	#					
20	Aquifer Depletion^	-	-	#					
Threat Applicability							Policy Implementer		
X	The policy applies in this area.							Municipality	
-	No policies apply in this area as the activity is not considered a significant threat.							MCE	
^	This activity is not a significant threat within the Source Protection Area.							OMAFRA	
#	The vulnerable area, IPZ-3 is not applicable for this intake.							MTO	
								Salt Institute	

Table 21: Lefavre – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	IPZ			Policy Code and Implementer					
	1	2	3	Municipality			MCE		
Waste Disposal Sites				Municipality			MCE		
1.1	Application of Septage	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.2	Mine Tailings	X	-	#	WASTE-2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	Land-farming Petroleum Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.4	Landfill - Hazardous Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.5	Landfill - Municipal Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.6	Landfill - Industrial/Commercial	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.7	Liquid Waste Injection	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.8	PCB Waste Storage	-	-	#	WASTE-2	WASTE-3	WASTE-4		
1.9	Storage of Hazardous Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.10	Storage of Other Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
Sewage Works				Municipality			MCE		
2.1	Combined Sewer Discharge	X	-	#	SEWG-3			SEWG-2	
2.2	Stormwater Pond Effluent	X	-	#	SEWG-7			SEWG-7	
2.3	Industrial Effluent Discharges	X	-	#	SEWG-3			SEWG-2	
2.4	Sanitary Sewers and Pipes	-	-	#	SEWG-1			SEWG-1	
2.5	Septic Systems	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.6	Septic Holding Tanks	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.7	Sewage Treatment Bypass	X	-	#	SEWG-3			SEWG-2	SEWG-3
2.8	Sewage Treatment Effluent	X	-	#	SEWG-3			SEWG-2	SEWG-3
2.9	Storage of Sewage	X	-	#	SEWG-3			SEWG-2	SEWG-3
Agricultural Activities				Municipality			OMAFRA		
3	Application of ASM	X	-	#	AG-2			AG-1	
4	Storage of ASM	X	-	#	AG-2			AG-1	
5	Management of ASM	-	-	#					
6	Application of NASM	X	-	#	AG-2			AG-1	
7	Storage of NASM	X	-	#	AG-2			AG-1	
8	Application of Fertilizer	-	-	#	AG-2			AG-1	
9	Storage of Commercial Fertilizer	-	-	#	AG-2				
21.1	Grazing - ASMGeneration	X	-	#	AG-2			AG-1	
21.2	Pasturing - Farm Animals	X	-	#	AG-2			AG-1	
Pesticides				Municipality			MCE		
10	Application of Pesticides	X	-	#	PEST-2			PEST-1	
11	Storage of Pesticides	X	-	#	PEST-2	PEST-3			
Salt and Snow				Municipality			MTO	S.I.	
12	Application of Road Salt	-	-	#	SALT-1			SALT-4	SALT-5
13	Storage of Road Salt	X	-	#	SALT-2	SALT-3			
14	Storage of Snow	X	-	#	SALT-2	SALT-3			
Fuel				Municipality			MCE		
15	Storage of Fuel	-	-	#	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals				Municipality					
16	Storage of DNAPLs	-	-	#	CHEM1	CHEM2			
17	Storage of Organic Solvents	-	-	#	CHEM1	CHEM2			
18	Aircraft De-icing	X	-	#	CHEM1	CHEM2			
Water Quantity									
19	Consumptive Activity^	-	-	#					
20	Aquifer Depletion^	-	-	#					
Threat Applicability							Policy Implementer		
X	The policy applies in this area.							Municipality	
-	No policies apply in this area as the activity is not considered a significant threat.							MCE	
^	This activity is not a significant threat within the Source Protection Area.							OMAFRA	
#	The vulnerable area, IPZ-3 is not applicable for this intake.							MTO	
								Salt Institute	

Table 22: Long Sault – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	IPZ			Policy Code and Implementer					
	1	2	3	Municipality			MCE		
Waste Disposal Sites				Municipality			MCE		
1.1	Application of Septage	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.2	Mine Tailings	-	-	#	WASTE-2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	Land-farming Petroleum Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.4	Landfill - Hazardous Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.5	Landfill - Municipal Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.6	Landfill - Industrial/Commercial	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.7	Liquid Waste Injection	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.8	PCB Waste Storage	-	-	#	WASTE-2	WASTE-3	WASTE-4		
1.9	Storage of Hazardous Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.10	Storage of Other Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
Sewage Works				Municipality			MCE		
2.1	Combined Sewer Discharge	-	-	#	SEWG-3			SEWG-2	
2.2	Stormwater Pond Effluent	-	-	#	SEWG-7			SEWG-7	
2.3	Industrial Effluent Discharges	-	-	#	SEWG-3			SEWG-2	
2.4	Sanitary Sewers and Pipes	-	-	#	SEWG-1			SEWG-1	
2.5	Septic Systems	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.6	Septic Holding Tanks	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.7	Sewage Treatment Bypass	-	-	#	SEWG-3			SEWG-2	SEWG-3
2.8	Sewage Treatment Effluent	-	-	#	SEWG-3			SEWG-2	SEWG-3
2.9	Storage of Sewage	-	-	#	SEWG-3			SEWG-2	SEWG-3
Agricultural Activities				Municipality			OMAFRA		
3	Application of ASM	-	-	#	AG-2			AG-1	
4	Storage of ASM	-	-	#	AG-2			AG-1	
5	Management of ASM	-	-	#					
6	Application of NASM	-	-	#	AG-2			AG-1	
7	Storage of NASM	-	-	#	AG-2			AG-1	
8	Application of Fertilizer	-	-	#	AG-2			AG-1	
9	Storage of Commercial Fertilizer	-	-	#	AG-2				
21.1	Grazing - ASMGeneration	-	-	#	AG-2			AG-1	
21.2	Pasturing - Farm Animals	-	-	#	AG-2			AG-1	
Pesticides				Municipality			MCE		
10	Application of Pesticides	-	-	#	PEST-2			PEST-1	
11	Storage of Pesticides	-	-	#	PEST-2	PEST-3			
Salt and Snow				Municipality			MTO	S.I.	
12	Application of Road Salt	-	-	#	SALT-1			SALT-4	SALT-5
13	Storage of Road Salt	-	-	#	SALT-2	SALT-3			
14	Storage of Snow	-	-	#	SALT-2	SALT-3			
Fuel				Municipality			MCE		
15	Storage of Fuel	-	-	#	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals				Municipality					
16	Storage of DNAPLs	-	-	#	CHEM1	CHEM2			
17	Storage of Organic Solvents	-	-	#	CHEM1	CHEM2			
18	Aircraft De-icing	-	-	#	CHEM1	CHEM2			
Water Quantity									
19	Consumptive Activity^	-	-	#					
20	Aquifer Depletion^	-	-	#					
Threat Applicability							Policy Implementer		
X	The policy applies in this area.							Municipality	
-	No policies apply in this area as the activity is not considered a significant threat.							MCE	
^	This activity is not a significant threat within the Source Protection Area.							OMAFRA	
#	The vulnerable area, IPZ-3 is not applicable for this intake.							MTO	
								Salt Institute	

Table 23: Morrisburg – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	IPZ			Policy Code and Implementer					
	1	2	3	Municipality			MCE		
Waste Disposal Sites				Municipality			MCE		
1.1	Application of Septage	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.2	Mine Tailings	-	-	#	WASTE-2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	Land-farming Petroleum Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.4	Landfill - Hazardous Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.5	Landfill - Municipal Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.6	Landfill - Industrial/Commercial	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.7	Liquid Waste Injection	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.8	PCB Waste Storage	-	-	#	WASTE-2	WASTE-3	WASTE-4		
1.9	Storage of Hazardous Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.10	Storage of Other Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
Sewage Works				Municipality			MCE		
2.1	Combined Sewer Discharge	X	-	#	SEWG-3			SEWG-2	
2.2	Stormwater Pond Effluent	X	-	#	SEWG-7			SEWG-7	
2.3	Industrial Effluent Discharges	X	-	#	SEWG-3			SEWG-2	
2.4	Sanitary Sewers and Pipes	-	-	#	SEWG-1			SEWG-1	
2.5	Septic Systems	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.6	Septic Holding Tanks	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.7	Sewage Treatment Bypass	X	-	#	SEWG-3			SEWG-2	SEWG-3
2.8	Sewage Treatment Effluent	X	-	#	SEWG-3			SEWG-2	SEWG-3
2.9	Storage of Sewage	-	-	#	SEWG-3			SEWG-2	SEWG-3
Agricultural Activities				Municipality			OMAFRA		
3	Application of ASM	X	-	#	AG-2			AG-1	
4	Storage of ASM	X	-	#	AG-2			AG-1	
5	Management of ASM	-	-	#					
6	Application of NASM	X	-	#	AG-2			AG-1	
7	Storage of NASM	X	-	#	AG-2			AG-1	
8	Application of Fertilizer	-	-	#	AG-2			AG-1	
9	Storage of Commercial Fertilizer	-	-	#	AG-2				
21.1	Grazing - ASMGeneration	X	-	#	AG-2			AG-1	
21.2	Pasturing - Farm Animals	X	-	#	AG-2			AG-1	
Pesticides				Municipality			MCE		
10	Application of Pesticides	-	-	#	PEST-2			PEST-1	
11	Storage of Pesticides	-	-	#	PEST-2	PEST-3			
Salt and Snow				Municipality			MTO	S.I.	
12	Application of Road Salt	-	-	#	SALT-1			SALT-4	SALT-5
13	Storage of Road Salt	-	-	#	SALT-2	SALT-3			
14	Storage of Snow	-	-	#	SALT-2	SALT-3			
Fuel				Municipality			MCE		
15	Storage of Fuel	-	-	#	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals				Municipality					
16	Storage of DNAPLs	-	-	#	CHEM1	CHEM2			
17	Storage of Organic Solvents	-	-	#	CHEM1	CHEM2			
18	Aircraft De-icing	-	-	#	CHEM1	CHEM2			
Water Quantity									
19	Consumptive Activity^	-	-	#					
20	Aquifer Depletion^	-	-	#					
Threat Applicability							Policy Implementer		
X	The policy applies in this area.							Municipality	
-	No policies apply in this area as the activity is not considered a significant threat.							MCE	
^	This activity is not a significant threat within the Source Protection Area.							OMAFRA	
#	The vulnerable area, IPZ-3 is not applicable for this intake.							MTO	
								Salt Institute	

Table 24: Prescott – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	IPZ			Policy Code and Implementer					
	1	2	3	Municipality			MCE		
Waste Disposal Sites				Municipality			MCE		
1.1	Application of Septage	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.2	Mine Tailings	-	-	#	WASTE-2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	Land-farming Petroleum Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.4	Landfill - Hazardous Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.5	Landfill - Municipal Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.6	Landfill - Industrial/Commercial	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.7	Liquid Waste Injection	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.8	PCB Waste Storage	-	-	#	WASTE-2	WASTE-3	WASTE-4		
1.9	Storage of Hazardous Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.10	Storage of Other Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
Sewage Works				Municipality			MCE		
2.1	Combined Sewer Discharge	X	-	#	SEWG-3			SEWG-2	
2.2	Stormwater Pond Effluent	X	-	#	SEWG-7			SEWG-7	
2.3	Industrial Effluent Discharges	X	-	#	SEWG-3			SEWG-2	
2.4	Sanitary Sewers and Pipes	-	-	#	SEWG-1			SEWG-1	
2.5	Septic Systems	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.6	Septic Holding Tanks	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.7	Sewage Treatment Bypass	X	-	#	SEWG-3			SEWG-2	SEWG-3
2.8	Sewage Treatment Effluent	X	-	#	SEWG-3			SEWG-2	SEWG-3
2.9	Storage of Sewage	-	-	#	SEWG-3			SEWG-2	SEWG-3
Agricultural Activities				Municipality			OMAFRA		
3	Application of ASM	X	-	#	AG-2			AG-1	
4	Storage of ASM	X	-	#	AG-2			AG-1	
5	Management of ASM	-	-	#					
6	Application of NASM	X	-	#	AG-2			AG-1	
7	Storage of NASM	X	-	#	AG-2			AG-1	
8	Application of Fertilizer	-	-	#	AG-2			AG-1	
9	Storage of Commercial Fertilizer	-	-	#	AG-2				
21.1	Grazing - ASMGeneration	X	-	#	AG-2			AG-1	
21.2	Pasturing - Farm Animals	X	-	#	AG-2			AG-1	
Pesticides				Municipality			MCE		
10	Application of Pesticides	-	-	#	PEST-2			PEST-1	
11	Storage of Pesticides	-	-	#	PEST-2	PEST-3			
Salt and Snow				Municipality			MTO	S.I.	
12	Application of Road Salt	-	-	#	SALT-1			SALT-4	SALT-5
13	Storage of Road Salt	-	-	#	SALT-2	SALT-3			
14	Storage of Snow	-	-	#	SALT-2	SALT-3			
Fuel				Municipality			MCE		
15	Storage of Fuel	-	-	#	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals				Municipality					
16	Storage of DNAPLs	-	-	#	CHEM1	CHEM2			
17	Storage of Organic Solvents	-	-	#	CHEM1	CHEM2			
18	Aircraft De-icing	-	-	#	CHEM1	CHEM2			
Water Quantity									
19	Consumptive Activity^	-	-	#					
20	Aquifer Depletion^	-	-	#					
Threat Applicability							Policy Implementer		
X	The policy applies in this area.							Municipality	
-	No policies apply in this area as the activity is not considered a significant threat.							MCE	
^	This activity is not a significant threat within the Source Protection Area.							OMAFRA	
#	The vulnerable area, IPZ-3 is not applicable for this intake.							MTO	
								Salt Institute	

Table 25: Rockland – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	IPZ			Policy Code and Implementer					
	1	2	3	Municipality			MCE		
Waste Disposal Sites				Municipality			MCE		
1.1	Application of Septage	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.2	Mine Tailings	X	-	#	WASTE-2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	Land-farming Petroleum Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.4	Landfill - Hazardous Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.5	Landfill - Municipal Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.6	Landfill - Industrial/Commercial	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.7	Liquid Waste Injection	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.8	PCB Waste Storage	-	-	#	WASTE-2	WASTE-3	WASTE-4		
1.9	Storage of Hazardous Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.10	Storage of Other Waste	-	-	#	WASTE-2			WASTE-1	WASTE-2
Sewage Works				Municipality			MCE		
2.1	Combined Sewer Discharge	X	-	#	SEWG-3			SEWG-2	
2.2	Stormwater Pond Effluent	X	-	#	SEWG-7			SEWG-7	
2.3	Industrial Effluent Discharges	X	-	#	SEWG-3			SEWG-2	
2.4	Sanitary Sewers and Pipes	-	-	#	SEWG-1			SEWG-1	
2.5	Septic Systems	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.6	Septic Holding Tanks	-	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.7	Sewage Treatment Bypass	X	-	#	SEWG-3			SEWG-2	SEWG-3
2.8	Sewage Treatment Effluent	X	-	#	SEWG-3			SEWG-2	SEWG-3
2.9	Storage of Sewage	X	-	#	SEWG-3			SEWG-2	SEWG-3
Agricultural Activities				Municipality			OMAFRA		
3	Application of ASM	X	-	#	AG-2			AG-1	
4	Storage of ASM	X	-	#	AG-2			AG-1	
5	Management of ASM	-	-	#					
6	Application of NASM	X	-	#	AG-2			AG-1	
7	Storage of NASM	X	-	#	AG-2			AG-1	
8	Application of Fertilizer	-	-	#	AG-2			AG-1	
9	Storage of Commercial Fertilizer	-	-	#	AG-2				
21.1	Grazing - ASMGeneration	X	-	#	AG-2			AG-1	
21.2	Pasturing - Farm Animals	X	-	#	AG-2			AG-1	
Pesticides				Municipality			MCE		
10	Application of Pesticides	X	-	#	PEST-2			PEST-1	
11	Storage of Pesticides	X	-	#	PEST-2	PEST-3			
Salt and Snow				Municipality			MTO	S.I.	
12	Application of Road Salt	-	-	#	SALT-1			SALT-4	SALT-5
13	Storage of Road Salt	X	-	#	SALT-2	SALT-3			
14	Storage of Snow	X	-	#	SALT-2	SALT-3			
Fuel				Municipality			MCE		
15	Storage of Fuel	-	-	#	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals				Municipality					
16	Storage of DNAPLs	-	-	#	CHEM1	CHEM2			
17	Storage of Organic Solvents	-	-	#	CHEM1	CHEM2			
18	Aircraft De-icing	X	-	#	CHEM1	CHEM2			
Water Quantity									
19	Consumptive Activity^	-	-	#					
20	Aquifer Depletion^	-	-	#					
Threat Applicability							Policy Implementer		
X	The policy applies in this area.							Municipality	
-	No policies apply in this area as the activity is not considered a significant threat.							MCE	
^	This activity is not a significant threat within the Source Protection Area.							OMAFRA	
#	The vulnerable area, IPZ-3 is not applicable for this intake.							MTO	
								Salt Institute	

Table 26: Wendover – Activities, Vulnerable Areas, Threats and Policies

Prescribed Activity	IPZ			Policy Code and Implementer					
	1	2	3	Municipality			MCE		
Waste Disposal Sites				Municipality			MCE		
1.1	Application of Septage	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.2	Mine Tailings	X	-	#	WASTE-2	WASTE-3	WASTE-4	WASTE-1	WASTE-2
1.3	Land-farming Petroleum Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.4	Landfill - Hazardous Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.5	Landfill - Municipal Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.6	Landfill - Industrial/Commercial	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.7	Liquid Waste Injection	-	-	#	WASTE-2			WASTE-1	WASTE-2
1.8	PCB Waste Storage	X	-	#	WASTE-2	WASTE-3	WASTE-4		
1.9	Storage of Hazardous Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
1.10	Storage of Other Waste	X	-	#	WASTE-2			WASTE-1	WASTE-2
Sewage Works				Municipality			MCE		
2.1	Combined Sewer Discharge	X	X	#	SEWG-3			SEWG-2	
2.2	Stormwater Pond Effluent	X	X	#	SEWG-7			SEWG-7	
2.3	Industrial Effluent Discharges	X	X	#	SEWG-3			SEWG-2	
2.4	Sanitary Sewers and Pipes	X	-	#	SEWG-1			SEWG-1	
2.5	Septic Systems	X	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.6	Septic Holding Tanks	X	-	#	SEWG-4	SEWG-5		SEWG-5	SEWG-6
2.7	Sewage Treatment Bypass	X	X	#	SEWG-3			SEWG-2	SEWG-3
2.8	Sewage Treatment Effluent	X	X	#	SEWG-3			SEWG-2	SEWG-3
2.9	Storage of Sewage	X	-	#	SEWG-3			SEWG-2	SEWG-3
Agricultural Activities				Municipality			OMAFRA		
3	Application of ASM	X	X	#	AG-2			AG-1	
4	Storage of ASM	X	X	#	AG-2			AG-1	
5	Management of ASM	-	-	#					
6	Application of NASM	X	X	#	AG-2			AG-1	
7	Storage of NASM	X	X	#	AG-2			AG-1	
8	Application of Fertilizer	-	-	#	AG-2			AG-1	
9	Storage of Commercial Fertilizer	X	-	#	AG-2				
21.1	Grazing - ASMGeneration	X	X	#	AG-2			AG-1	
21.2	Pasturing - Farm Animals	X	X	#	AG-2			AG-1	
Pesticides				Municipality			MCE		
10	Application of Pesticides	X	-	#	PEST-2			PEST-1	
11	Storage of Pesticides	X	-	#	PEST-2	PEST-3			
Salt and Snow				Municipality			MTO	S.I.	
12	Application of Road Salt	X	-	#	SALT-1			SALT-4	SALT-5
13	Storage of Road Salt	X	-	#	SALT-2	SALT-3			
14	Storage of Snow	X	-	#	SALT-2	SALT-3			
Fuel				Municipality			MCE		
15	Storage of Fuel	X	-	#	FUEL-1	FUEL-2	FUEL-4	FUEL-3	
Chemicals				Municipality					
16	Storage of DNAPLs	X	-	#	CHEM1	CHEM2			
17	Storage of Organic Solvents	X	-	#	CHEM1	CHEM2			
18	Aircraft De-icing	X	-	#	CHEM1	CHEM2			
Water Quantity									
19	Consumptive Activity^	-	-	#					
20	Aquifer Depletion^	-	-	#					
Threat Applicability							Policy Implementer		
X	The policy applies in this area.							Municipality	
-	No policies apply in this area as the activity is not considered a significant threat.							MCE	
^	This activity is not a significant threat within the Source Protection Area.							OMAFRA	
#	The vulnerable area, IPZ-3 is not applicable for this intake.							MTO	
								Salt Institute	

Appendix E: Circumstances where Activities could be Significant Threats

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Circumstances where Activities could be Significant Threats

An activity can be considered a significant threat if the manner in which it is occurring meets certain conditions. These conditions are provided in the *Tables of Drinking Water Threats*. This appendix provides a general overview of the circumstances as they apply in the Raisin Region Source Protection Area and South Nation Source Protection Area. The actual tables of circumstances should be referenced to identify if an activity is or is not a significant threat.

Interpreting this appendix

Where an activity could be considered a significant threat, the vulnerable area and vulnerability score are sometimes identified in a table. Numbers appearing in parentheses beside the vulnerable area identify the minimum score required to consider the circumstance significant (e.g. the notation IPZ (9) would indicate the activity could be significant in an IPZ where the score is 9 or higher).

* * *

Waste Disposal Sites

Application of untreated septage to land

This activity is a significant threat to vulnerable areas for the land application in any quantity as such:

Application Area	WHPA (10)	IPZ (10)	IPZ (9)
< 1 ha			
1 ha to 10 ha		✓	
> 10 ha	✓	✓	✓

Storage, treatment and discharge of tailings from mines

This activity is a significant threat depending on the vulnerable area, where the main tailings are stored, and the nature of the facility (e.g. requirement to submit a report to National Pollutant Release Inventory, NRPI) as such:

Vulnerable Area	Score	Storage Location	NRPI Notice Required
WHPA	10	Pit	Either (Yes or No)
		Surface	Yes
IPZ	10	Surface	Either (Yes or No)
	9	Surface	Yes

Landfarming of petroleum refining waste

This activity is a significant threat based on the vulnerable area and the surface area of the site where the land disposal is undertaken as such:

Vulnerable Area	Score	Land Disposal Area
WHPA	10	> 10 ha
IPZ	10	> 1 ha
	9	> 10 ha

Landfilling (hazardous waste)

This activity is a significant threat based on the vulnerable area and the fill area of the land disposal site as follows:

Vulnerable Area	Score	Area
WHPA	10	Any Size
IPZ	10	> 1 ha
	9	> 10 ha

Landfilling (municipal waste)

This activity is a significant threat based on the vulnerable area and the fill area of the land disposal site as follows:

Vulnerable Area	Score	Area
WHPA	10	Any Size
	8	> 10 ha
IPZ	10	> 1 ha
	9	> 10 ha

Landfilling (solid, non-hazardous industrial or commercial waste)

This activity is a significant threat based on the vulnerable area and the fill area of the land disposal site as follows:

Vulnerable Area	Score	Area
WHPA	10	Any Size
	8	> 10 ha
IPZ	10	> 1 ha
	9	> 10 ha

Liquid industrial waste injection into a well

The activity is a significant threat based on the vulnerable area and the combined rate of discharge of all wells located at the site as follows:

Vulnerable Area	Score	Rate of Discharge
WHPA	10	> 380 m ³ /year
	8	> 38,000,000 m ³ /year

PCB waste storage

The activity is a significant threat based on the vulnerable area and the location and nature of how the PCB material is stored as follows:

Vulnerable Area	Score	Storage Method
WHPA	10	Below grade in a facility or engineered cell
		Below or partially below grade in a storage tank
		Outdoor area and not in a container
IPZ	10	Outdoor area and not in a container

Landfilling (storage of hazardous waste at disposal site)

This activity is a significant threat based on the vulnerable area and the location where the hazardous material is stored as follows:

Vulnerable Area	Score	Storage Location
WHPA	10	Stored at or above grade, below or partially below grade
IPZ	10	Stored at or above grade or partially below grade
	9	Stored at or above grade or partially below grade

Landfilling (storage of waste described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste, *Environmental Protection Act, 1990*)

This activity is a significant threat based on the vulnerable area and the location where the material is stored as follows:

Vulnerable Area	Score	Storage Location
WHPA	10	Stored below, partially below, at or above grade
IPZ	10	Stored at or above grade

Sewage Works

Combined sewer discharge from a stormwater outlet to surface water

The system is a combined sewer that may discharge sanitary sewage containing human waste into surface water. The activity is significant if occurring in an IPZ with a vulnerability score of 8 or higher.

Stormwater from a stormwater retention pond

The activity is a significant threat depending on the vulnerable area, score, drainage area and land-use as follows:

Vulnerable Area	Score	Drainage Area	Land Use
WHPA	10	> 100 ha	Rural, agricultural, low or high density
		> 10 ha	Industrial/commercial
IPZ	10	> 10 ha	Rural, agricultural, low density residential
		> 1 ha	High density residential or industrial/commercial
	9	> 100 ha	Rural, agricultural, low or high density
		> 10 ha	Industrial/commercial
	8	> 100 ha	Industrial/commercial

Industrial effluent discharges

This activity is significant when occurring in an IPZ, generally with a score of 8 or higher. Additional considerations may include the nature of the effluent and whether or not the facility is required to submit to the National Pollutant Release Inventory (NRPI).

Sanitary sewers and related pipes

This sub-threat activity excludes sewage storage tanks and designed bypasses. Sanitary sewers and related pipes are a significant threat due to potential for pathogen contamination of source water through accidental discharge. This activity is a significant threat in vulnerable areas (IPZ and WHPA) with a score of 10 due to pathogen contaminants.

Septic systems

All sewage systems described in the *Building Code Act, 1992* (i.e. septic tanks and holding tanks) and sewage works described in the *Ontario Water Resources Act, 1990* are considered to be significant threats in WHPAs and IPZs where the vulnerability score is 10.

Septic system holding tank

All sewage systems described in the *Building Code Act, 1992* (i.e. septic tanks and holding tanks) and sewage works described in the *Ontario Water Resources Act, 1990* are considered to be significant threats in WHPAs and IPZs where the vulnerability score is 10.

Sewage treatment plant bypass discharge to surface water

The bypass is part of a wastewater treatment facility that may discharge sanitary sewage containing human waste. The activity is significant if occurring in an IPZ with a vulnerability score of 8 or higher.

Sewage treatment plant effluent discharges (including lagoons)

The activity is a significant threat depending on the vulnerable area, score, where the system discharges (land or water), and the system design capacity as follows:

Vulnerable Area	Score	Discharging To	Design Capacity
WHPA	10	Surface Water	Any size
		Land	> 17,500 m ³ /day average daily rate
IPZ	10	Surface Water	Any size
		Land	> 2,500 m ³ /day average daily rate
	9	Surface Water	Any Size
		Land	> 17,500 m ³ /day average daily rate
	8	Surface Water	Any Size
		Land	>50,000 m ³ /day average daily rate

Storage of Sewage (e.g. Treatment Plant Tanks)

The activity is a significant threat depending on the vulnerable area, score, storage location and the system design capacity as follows:

Vulnerable Area	Score	Storage Location	Design Capacity
WHPA	10	Above Grade	Any size
		Below Grade	Any size
	8	Below Grade	>50,000 m ³ /day average daily rate
IPZ	10	Above Grade	Any size
		Below Grade	Any size
	9	Above Grade	Any Size

Agricultural Activities

The application of agricultural source material to land

This activity is always a significant threat due to pathogen contaminants in the identified vulnerable areas regardless of the quantity applied.

Contaminant	Quantity of ASM Applied	WHPA (10)	IPZ (10)	IPZ (9)	IPZ (8)
Pathogens	Any quantity	✓	✓	✓	✓

For chemical contaminants (nitrogen and phosphorus), the activity is a significant threat based on the vulnerable area, vulnerability score and the percentage of managed lands and livestock density of the area as such:

Managed Land Percentage	Livestock Density	WHPA (10)	IPZ (10)	IPZ (9)
< 40 %	> 1.0 NU/Acre	✓	✓	
40 – 80 %	0.5 – 1.0 NU/Acre		✓	
	> 1.0 NU/Acre	✓	✓	✓
> 80%	< 0.5 NU/Acre	✓	✓	
	0.5 – 1.0 NU/Acre	✓	✓	✓
	> 1.0 NU/Acre	✓	✓	✓

The storage of agricultural source material

In some circumstances, the amount of material being stored, and the nature of the storage facility (permanent or temporary, and above or below grade) is taken into account, when assessing if and where the activity is considered a significant threat due to pathogens as such:

Facility Type	Location	WHPA (10)	IPZ (10)	IPZ (9)	IPZ(8)
Permanent	Above Grade	✓	✓	✓	✓
	Partly Above Grade	✓	✓	✓	✓
	Below Grade	✓	✓		
Temporary	Above Grade	✓	✓	✓	✓

For determination of chemical threat significance the criteria is expanded to include the amount or volume available to land apply at a certain rate as such:

Land Apply Rate	Facility Type	Location	WHPA (10)	IPZ (10)	IPZ (9)
0.5 to 1.0 NU/Acre	Permanent	Above Grade		✓	
		Partly Above Grade	✓	✓	
		Below Grade	✓		
	Temporary	Above Grade		✓	
> 1.0 NU/Acre	Permanent	Above Grade	✓	✓	✓
		Partly Above Grade	✓	✓	✓
		Below Grade	✓		
	Temporary	Above Grade	✓	✓	✓

The management of agricultural source material

There are no circumstances where this activity is considered a significant threat. No policies are required.

The application of non-agricultural source material to land

This activity is always a significant threat due to pathogen contaminants in the identified vulnerable areas regardless of the quantity applied as such:

Contaminant	Quantity of NASM Applied	WHPA (10)	IPZ (10)	IPZ (9)	IPZ (8)
Pathogens	Any quantity	✓	✓	✓	✓

For chemical contaminants, the activity is a significant threat based on the vulnerable area, vulnerability score and the percentage of managed lands and livestock density of the area as such:

Manage Land Percentage	Livestock Density	WHPA (10)	IPZ (10)	IPZ (9)
< 40 %	> 1.0 NU/Acre	✓	✓	
40 – 80 %	0.5 – 1.0 NU/Acre		✓	
	> 1.0 NU/Acre	✓	✓	✓
> 80%	< 0.5 NU/Acre	✓	✓	
	0.5 – 1.0 NU/Acre	✓	✓	✓
	> 1.0 NU/Acre	✓	✓	✓

The handling and storage of non-agricultural source material to land

In some circumstances, the nature of the storage facility (above, partially above or below grade) and the NASM generator is taken into account, when assessing if and where the activity is considered a significant threat due to pathogens as such:

NASM Generator	Location	WHPA (10)	IPZ (10)	IPZ (9)	IPZ (8)
Meat Plant	Above Grade	✓	✓	✓	✓
	Partly Above Grade	✓	✓	✓	✓
	Below Grade	✓	✓		

For determination of chemical threat significance the criteria is expanded to include the mass of nitrogen stored in the material as such:

Mass of Nitrogen	Facility Type	Location	WHPA (10)	IPZ (10)	IPZ (9)
0.5 to 5.0 Tonnes	Permanent	Above Grade		✓	
		Partly Above Grade	✓	✓	
		Below Grade	✓		
	Temporary	Above Grade	✓	✓	
> 5.0 Tonnes	Permanent	Above Grade	✓	✓	✓
		Partly Above Grade	✓	✓	✓
		Below Grade	✓		
	Temporary	Above Grade	✓	✓	✓

The application of commercial fertilizer to land

In some circumstances, the percentage of managed lands and livestock density within the vulnerable area is taken into account, when assessing if the activity is considered a significant threat. If the managed land percentage in the vulnerable area is more than 80%, this activity could be a significant threat.

Managed Land Percentage	Livestock Density	WHPA (10)	IPZ (10)	IPZ (9)
Managed Land < 40%	> 1 NU / acre	✓	✓	
Managed Land 40 – 80 %	0.5 – 1.0 NU / acre		✓	
Managed Land 40 – 80 %	> 1 NU / acre	✓	✓	✓
Managed Land > 80%	< 0.5 NU /acre	✓	✓	
Managed Land > 80%	> 0.5 NU / acre	✓	✓	✓

The handling and storage of commercial fertilizer

Significant threats are triggered if the total mass of all materials stored that contain fertilizer, in any form including liquid or solid, is more than 2,500 kg.

Circumstance	WHPA (10)	IPZ (10)
Amount stored for retail sale or in relation to its application > 2500 kg	✓	✓

The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard

For pathogen contaminants, the activity is a significant threat for one or more animals as such:

Contaminant	Number of animals	WHPA (10)	IPZ (10)	IPZ (9)	IPZ (8)
Pathogens	One or more	✓	✓	✓	✓

For chemical contaminants, the activity is a significant threat based on the vulnerable area, the score and the amount of nutrient units generated per land area as such:

Activity	Circumstance	WHPA (10)	IPZ (10)	IPZ (9)
Grazing or Pasture	0.5 NU/acre to 1 NU/acre	✓	✓	
Grazing or Pasture	> 1 NU/acre	✓	✓	✓
Confinement area	120 to 300 NU/ha	✓	✓	
Confinement area	> 300 NU/ha	✓	✓	✓

Pesticides

The application of pesticide to land

Generally, the application of pesticides is significant for the areas identified if the field size is greater than 10 hectares for groundwater systems, and greater than 1 hectare for surface water systems. There are some exceptions, where certain pesticides are significant threats if applied to smaller areas of land.

Contaminant	Land Area, WHPA (10)			Land Area, IPZ (score)		
	< 1ha	1 to 10 ha	> 10 ha	< 1ha	1 to 10 ha	> 10 ha
Atrazine			✓		✓ (10)	✓ (9,10)
Dicamba			✓		✓ (10)	✓ (9,10)
D-2,4			✓		✓ (10)	✓ (9,10)
Dichloropropene-1,3			✓		✓ (10)	✓ (9,10)
Glyphosate						✓ (9,10)
MCPA		✓	✓	✓ (10)	✓ (9,10)	✓ (9,10)
MCPB			✓		✓ (10)	✓ (9,10)
Mecoprop		✓	✓	✓ (10)	✓ (9,10)	✓ (9,10)
Matalaxyl			✓		✓ (10)	✓ (9,10)
Metolachlor			✓			✓ (10)
Pendimethalin					✓ (10)	✓ (10)

The handling and storage of pesticide

Generally, the activity is a significant threat where the amount being stored is greater than 2500 kg, within a vulnerable area having a score of 10. Two chemicals (MCPA and Mecoprop) have lower thresholds: vulnerability score of 10 for greater than 250kg stored, and vulnerability score of 9 or higher in surface water scenarios for storage of 2500kg or more.

Contaminant	Mass Stored	WHPA (10)	IPZ(10)	IPZ (9)
<ul style="list-style-type: none"> • Atrazine • Dicamba • D-2,4 • Dichloropropene-1,3 • Glyphosate • MCPB • Matalaxyl • Metolachlor • Pendimethalin 	> 2500 kg	✓	✓	
<ul style="list-style-type: none"> • Mecoprop • MCPA 	> 2500 kg	✓	✓	✓
<ul style="list-style-type: none"> • Mecoprop • MCPA 	> 250 kg	✓	✓	

Salt and Snow

The application of road salt

The percentage of surfaces within a vulnerable area where road salt can be applied is taken into consideration when determining if this activity is a significant threat as follows:

Vulnerable Area	Score	Impervious Surface Area Percentage
WHPA	10	> 80 %
IPZ	10	> 8 %
	9	> 80 %

The handling and storage of road salt

The amount of road salt being stored in the vulnerable area determines whether the activity is a significant threat (assuming the salt is stored in a manner that may result in exposure to precipitation or runoff) as follows:

Vulnerable Area	Score	Amount of Road Salt Stored
WHPA	10	> 5,000 tonnes
IPZ	10	> 500 tonnes
	9	> 5,000 tonnes

The storage of snow

The location and land area where the snow is stored is taken into account when considering if this activity is a significant threat as follows:

Vulnerable Area	Score	Location	Storage Area
WHPA	10	Above Grade	> 1 ha
		Below Grade	> 0.01 ha
IPZ	10	Above Grade	> 0.01 ha
	9	Above Grade	> 1 ha

Fuel

The handling and storage of fuel

Fuel policies have been drafted for residential circumstances and commercial circumstances. Residential: means installation (including homes) where fuel oil or used oil (when such oil is used as a fuel) is handled. This encompasses fuel oil storage for furnaces, boilers, water heaters and standby generators but excludes vehicles, lawnmowers and portable storage like jerry cans. Commercial: means a permanent or mobile retail outlet, bulk plant, marina, cardlock/keylock, private outlet or farm where gasoline or an associated product is handled other than in portable containers.

Generally, fuel storage is a significant threat if the amount stored above grade is greater than 2500L. For groundwater systems, the activity is a significant threat for volumes greater than 250 L stored below grade or partly below grade (this includes residential basements).

Fuel Quantity	Storage Location	WHPA (10)	IPZ (10)
> 2500 L	Above Ground	✓	✓
	Below or Partially Below Grade	✓	✓
> 250 L	Below or Partially Below Grade	✓	

Chemicals

The handling and storage of a dense non-aqueous phase liquid

This activity is a significant threat to groundwater sources regardless of the vulnerability score in all WHPA-A, B and C areas. The activity is a significant threat to surface water sources in IPZ-1 areas where the vulnerability score is 10.

Activity	WHPA-A	WHPA-B	WHPA-C	IPZ-1 (10)
	(regardless of vulnerability score)			
Handling and storage of DNAPL	✓	✓	✓	✓

The handling and storage of an organic solvent

Generally, this activity is a significant threat if the amount of organic solvent stored above grade is greater than 250L. In some circumstances, the threat is significant to groundwater sources, if the amount of organic solvent stored below grade is greater than 25L.

Contaminant	Amount	Storage Location	WHPA (10)	IPZ (10)
Carbon Tetrachloride	25 – 250 L	Partially Below Grade	✓	
		Below Grade	✓	
	250 – 2500 L	Above Grade	✓	✓
		Partially Below Grade	✓	✓
		Below Grade	✓	✓
	> 2500 L	Above Grade	✓	✓
		Partially Below Grade	✓	✓
		Below Grade	✓	✓
	Chloroform and / or Methylene Chloride	250 – 2500 L	Partially Below Grade	✓
Below Grade			✓	
> 2500 L		Above Grade	✓	✓
		Partially Below Grade	✓	✓
		Below Grade	✓	
Pentachlorophenol		> 2500 L	Above Grade	
	Partially Below Grade		✓	✓
	Below Grade		✓	

The management of runoff that contains chemicals used in the de-icing of aircraft

This activity is a significant threat to groundwater sources only for National airports. This activity is a significant threat to surface water sources for National and Regional airports.

Airport Designation	WHPA(10)	IPZ (10)	IPZ (9)
Remote airport			
Small airport			
Regional airport			✓
National airport	✓	✓	✓

Water Quantity

This prescribed activities associated with water quantity are determined to be not significant threats in the Raisin-South Nation Source Protection Area.

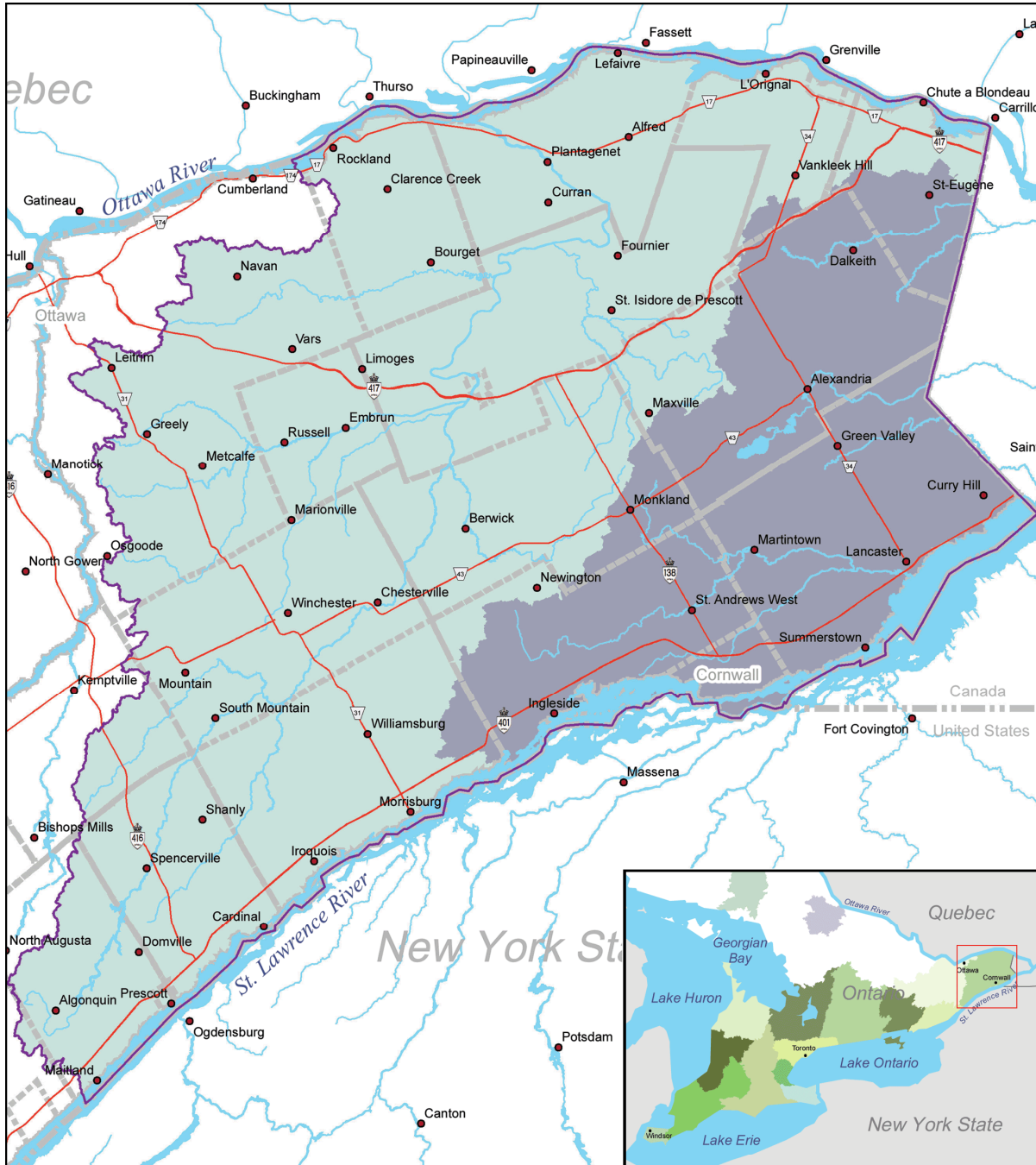
Appendix F: Maps

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

Map 1: Raisin-South Nation Source Protection Region



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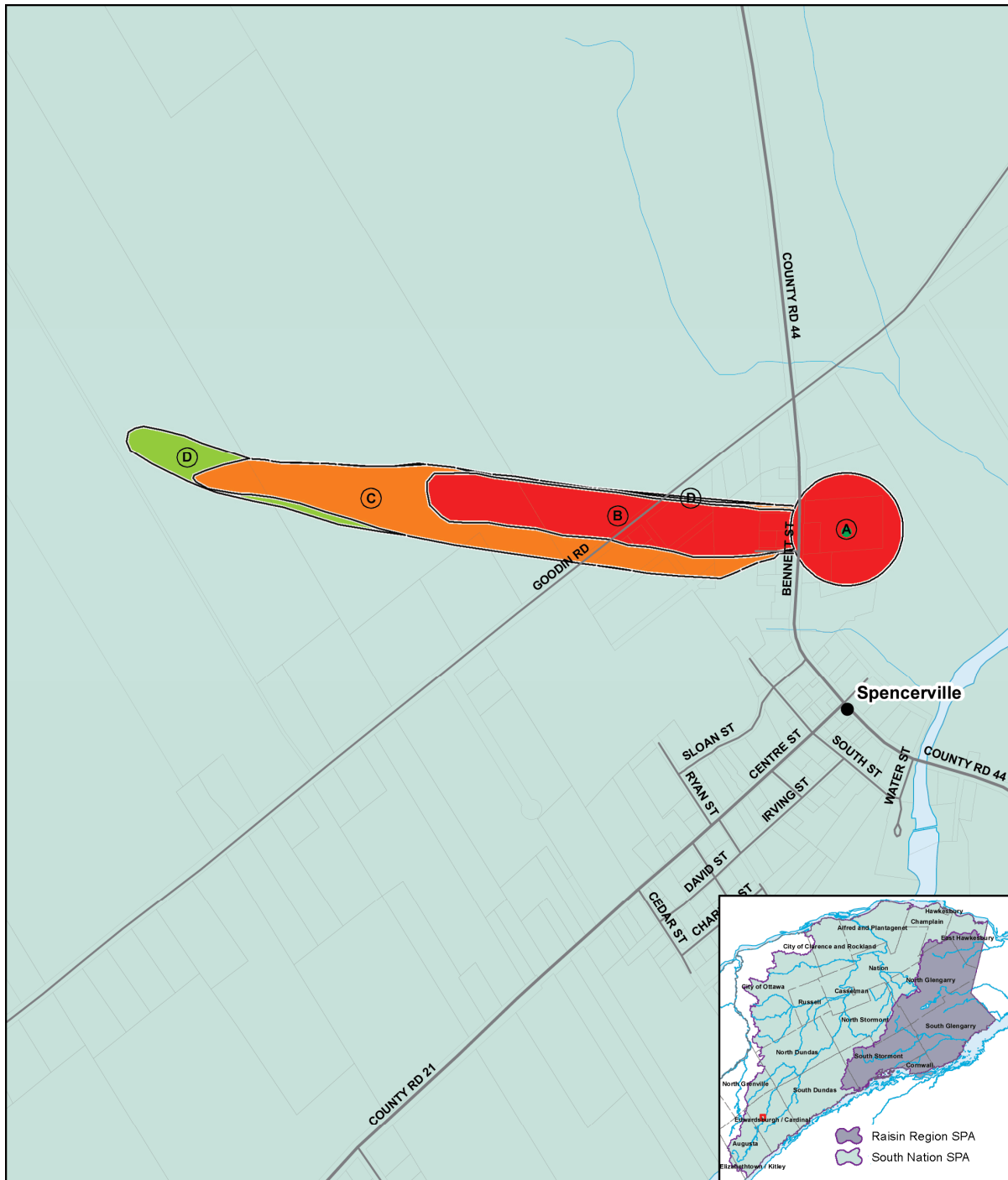
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-  Source Protection Region Boundary
-  Raisin Region Source Protection Area
-  South Nation Source Protection Area
-  Municipal Boundary



Map 3: Vulnerable Areas – Bennett Street, Spencerville



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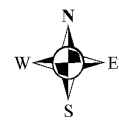
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Legend		
● Villages/Towns	▭ Property Boundary	▭ Municipal Boundary
—+— Railway Tracks	● Wellhead	
— Primary Roads		
— Secondary Roads		
— Other Roads		

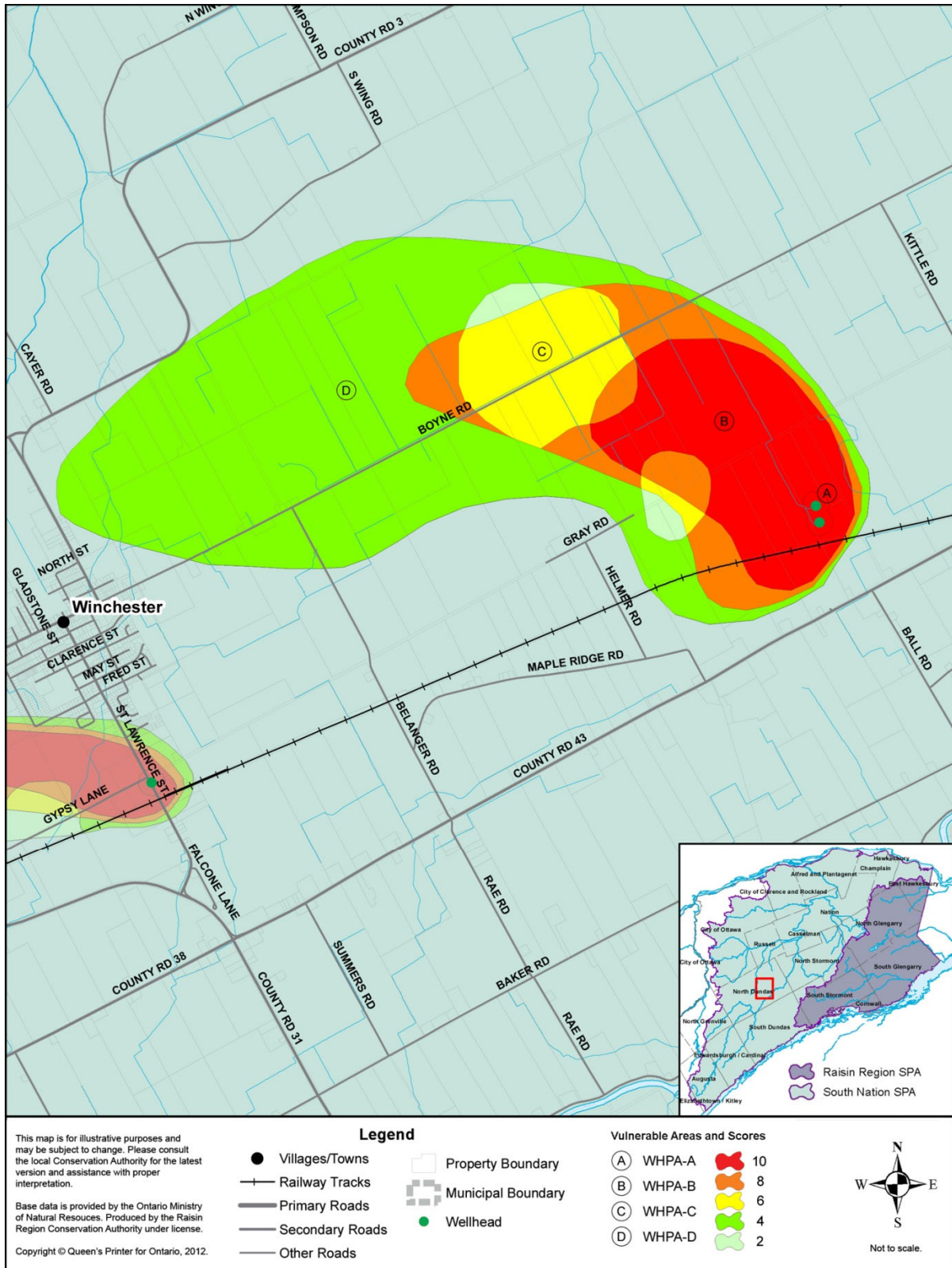
Vulnerable Areas and Scores

(A) WHPA-A		10
(B) WHPA-B		8
(C) WHPA-C		6
(D) WHPA-D		4
		2

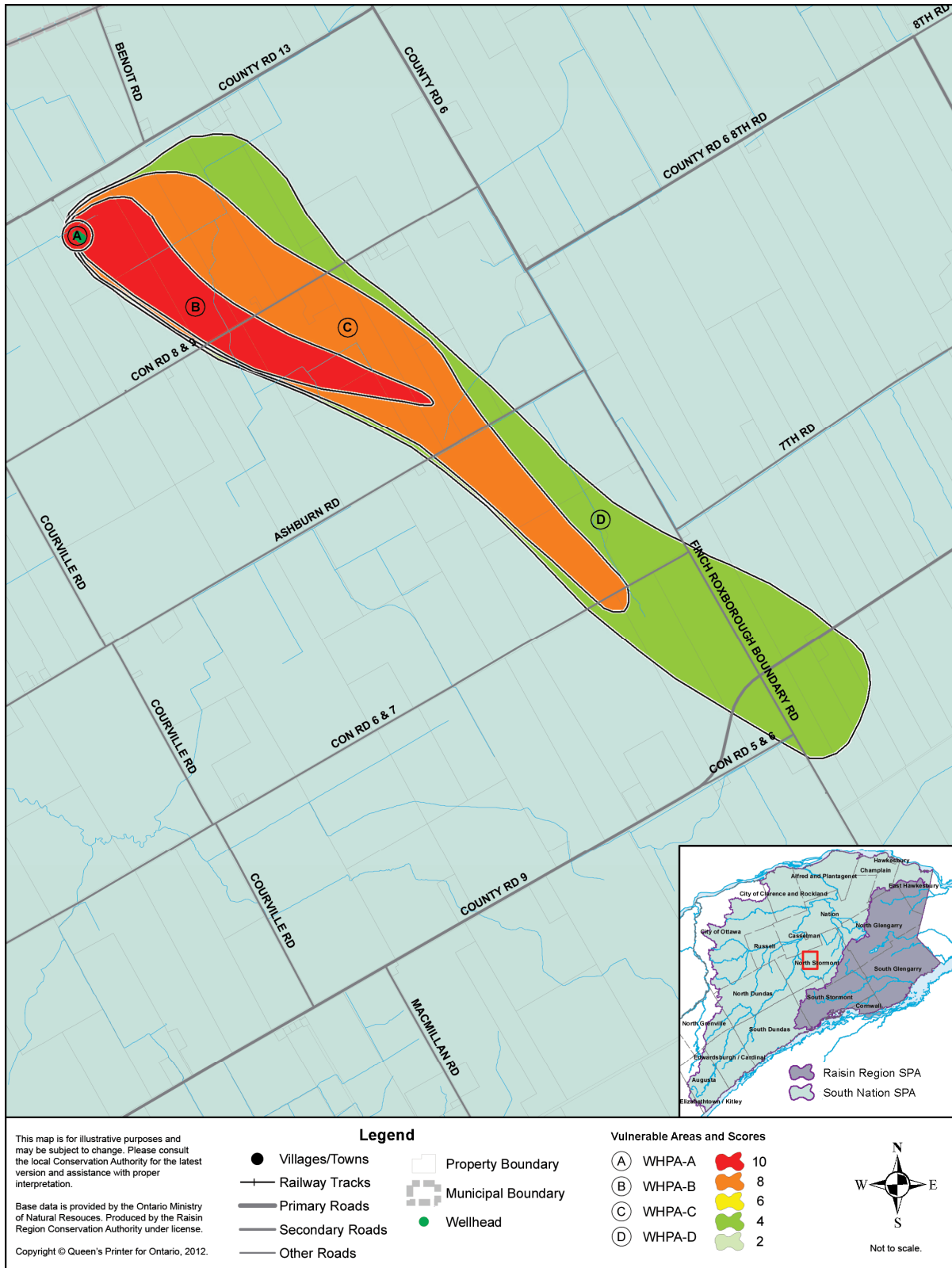


Not to scale.

Map 4: Vulnerable Areas – Chesterville

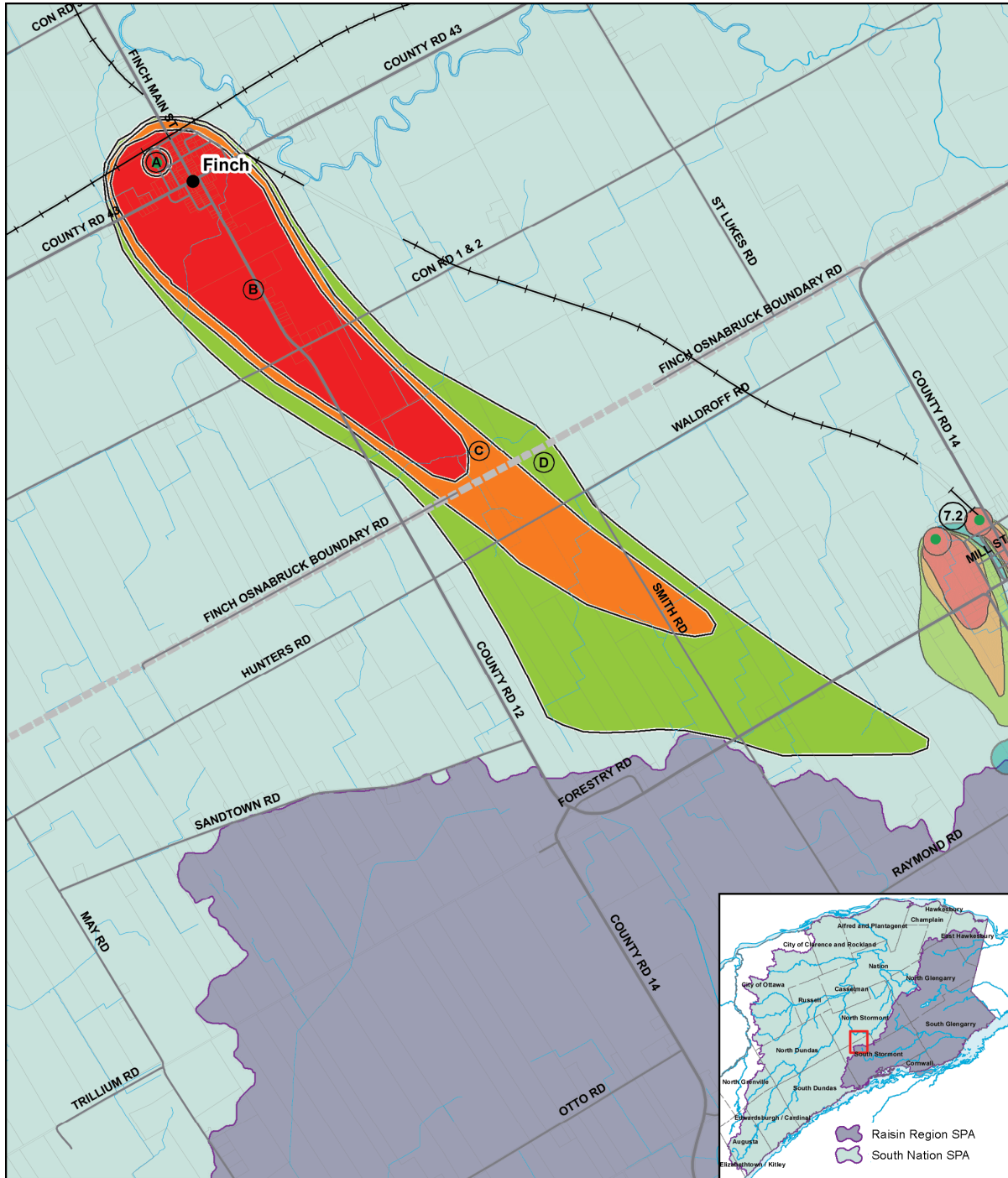


Map 5: Vulnerable Areas – Crysler



Map 6: Placeholder (left blank intentionally)

Map 7: Vulnerable Areas – Finch



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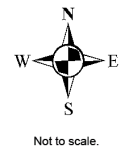
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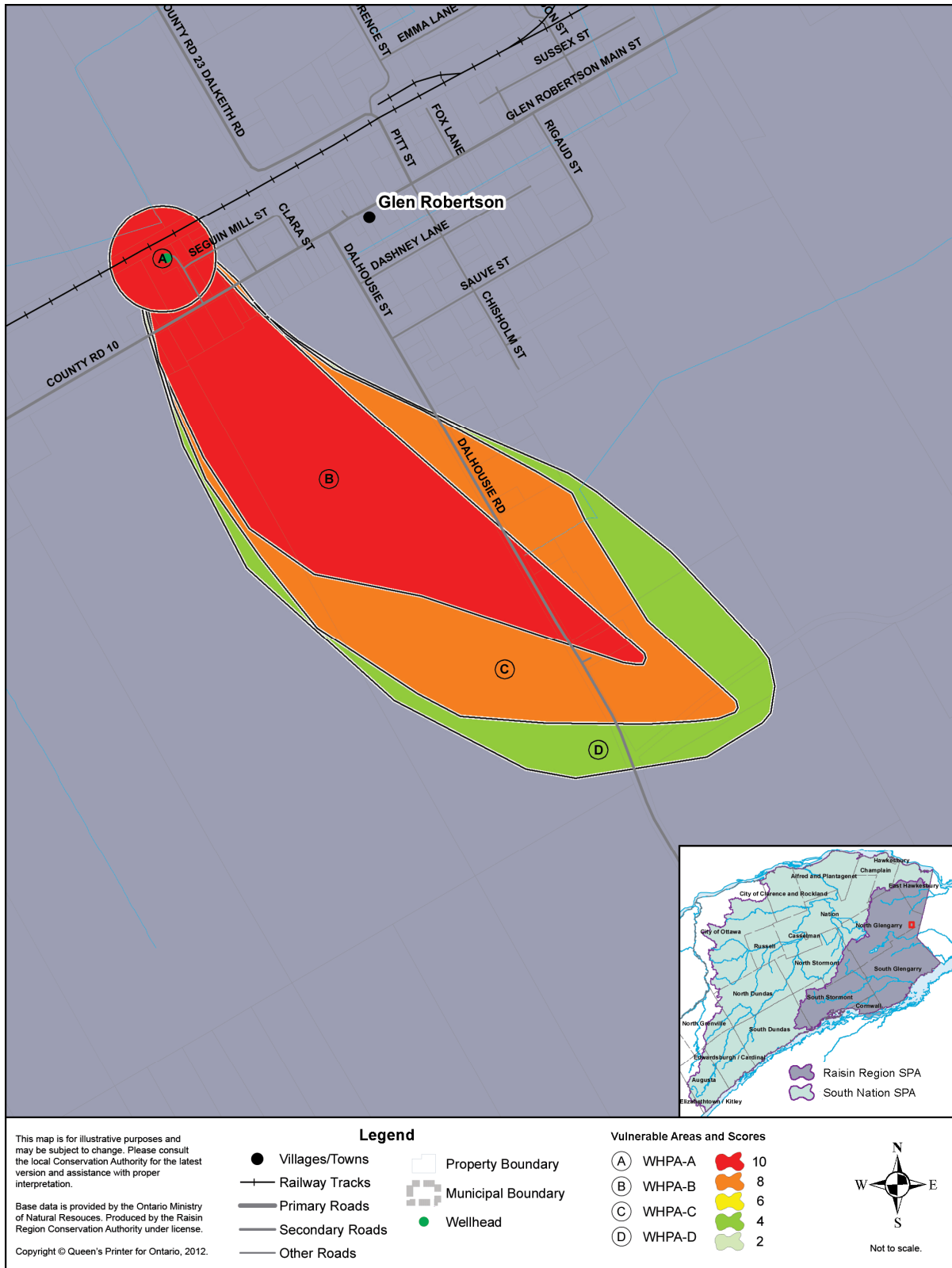
- Legend**
- Villages/Towns
 - +— Railway Tracks
 - Primary Roads
 - Secondary Roads
 - Other Roads
 - Property Boundary
 - Municipal Boundary
 - Wellhead

Vulnerable Areas and Scores

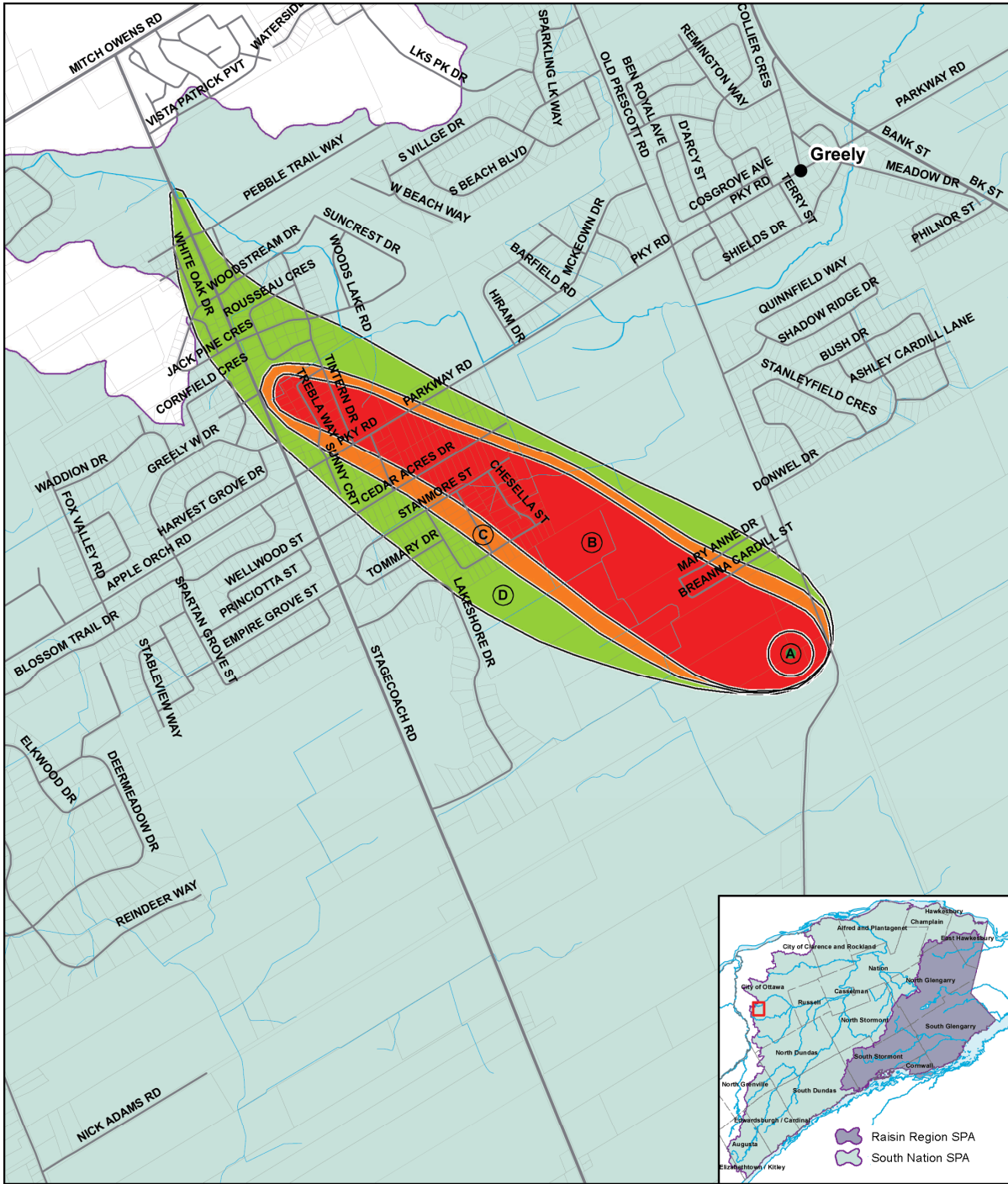
- (A) WHPA-A 10
- (B) WHPA-B 8
- (C) WHPA-C 6
- (D) WHPA-D 4



Map 8: Vulnerable Areas – Glen Robertson



Map 9: Vulnerable Areas – Greely



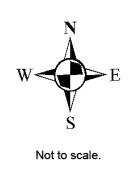
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- Legend**
- Villages/Towns
 - +— Railway Tracks
 - Primary Roads
 - Secondary Roads
 - Other Roads
 - Property Boundary
 - Municipal Boundary
 - Wellhead

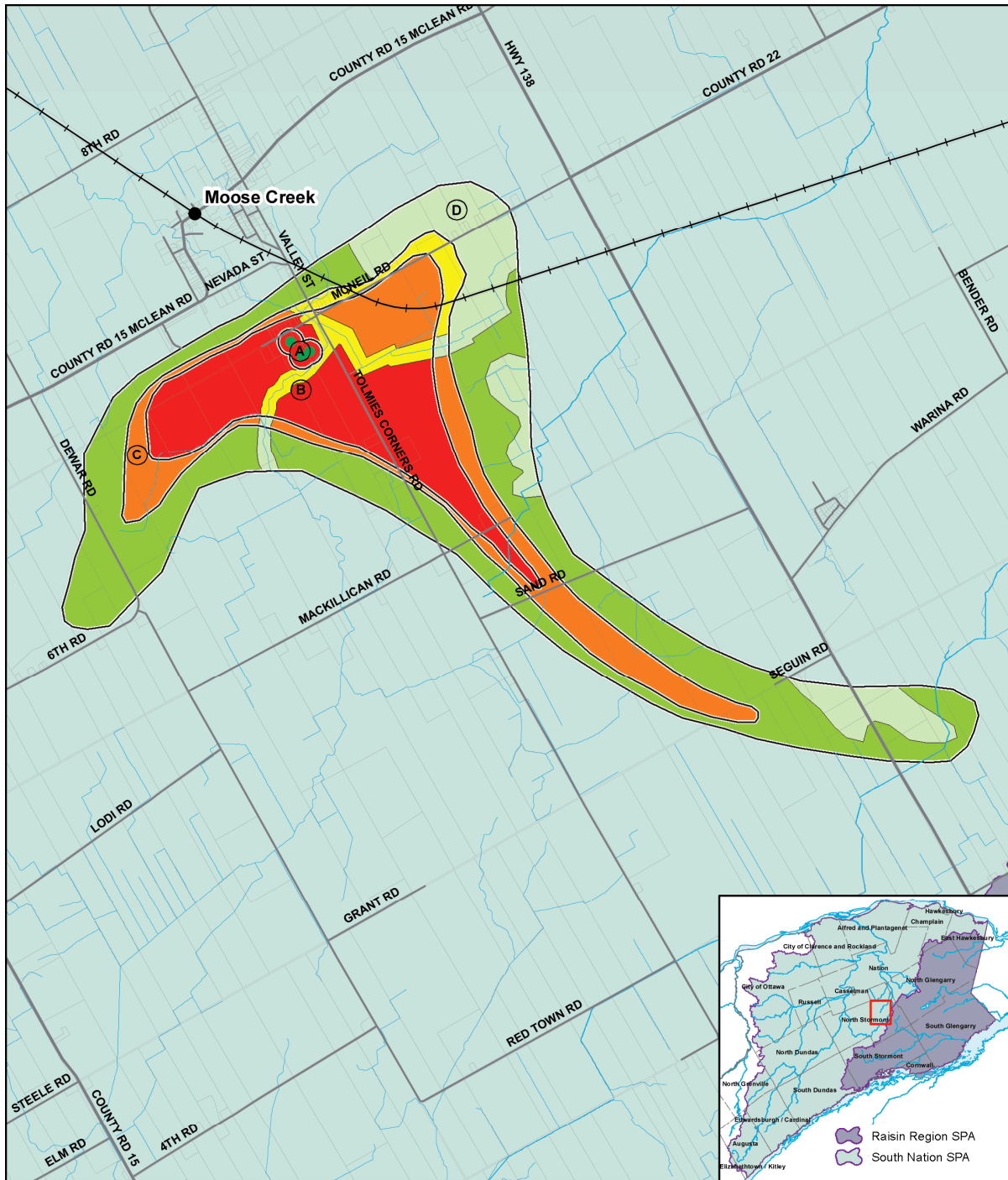
- Vulnerable Areas and Scores**
- (A) WHPA-A 10
 - (B) WHPA-B 8
 - (C) WHPA-C 6
 - (D) WHPA-D 4



Map 10: Vulnerable Areas – Limoges



Map 11: Vulnerable Areas – Moose Creek



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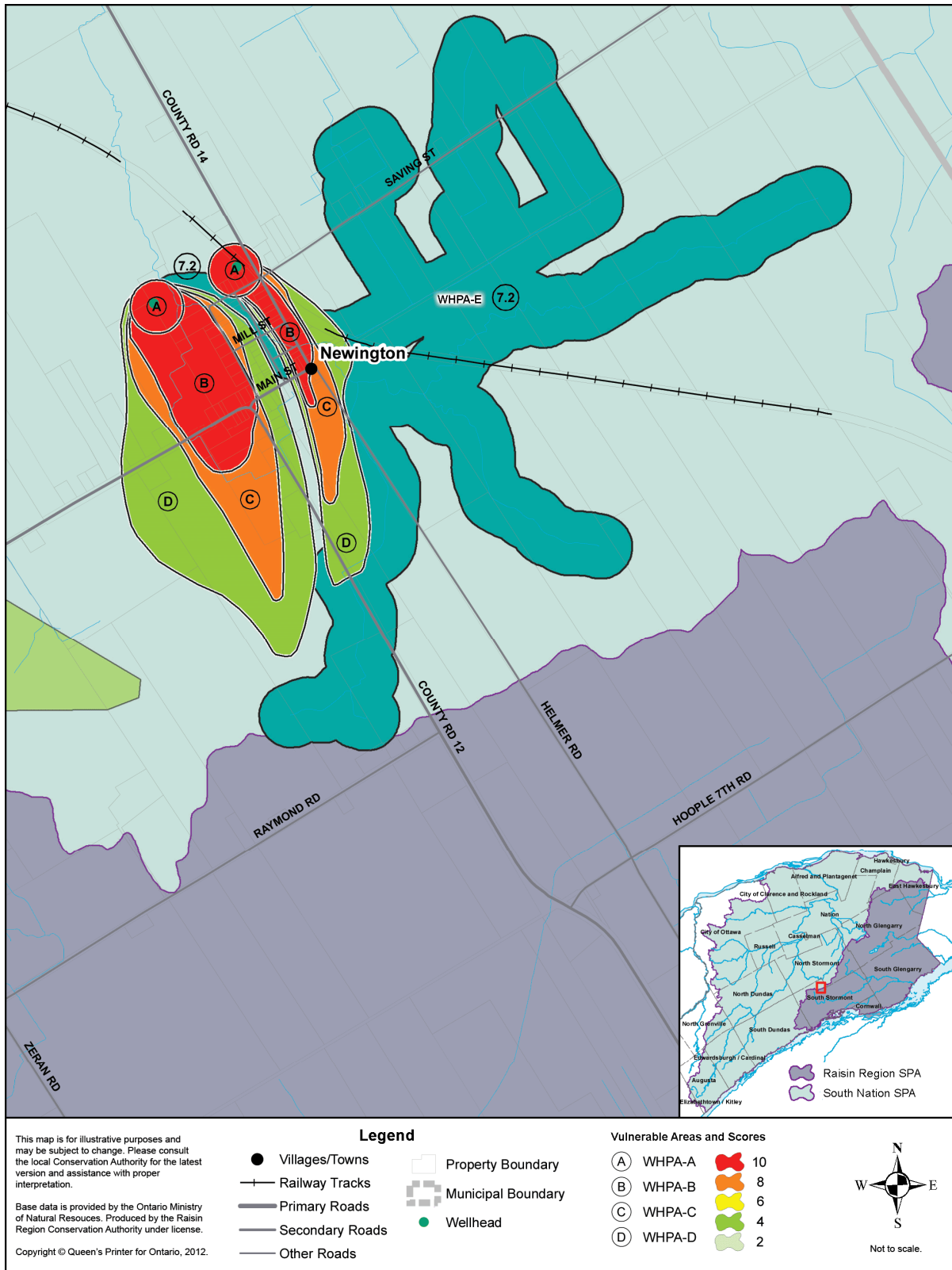
- Legend**
- Villages/Towns
 - +— Railway Tracks
 - Primary Roads
 - Secondary Roads
 - Other Roads
 - Property Boundary
 - Municipal Boundary
 - Wellhead

Vulnerable Areas and Scores

- (A) WHPA-A 10
- (B) WHPA-B 8
- (C) WHPA-C 6
- (D) WHPA-D 2



Map 12: Vulnerable Areas – Newington



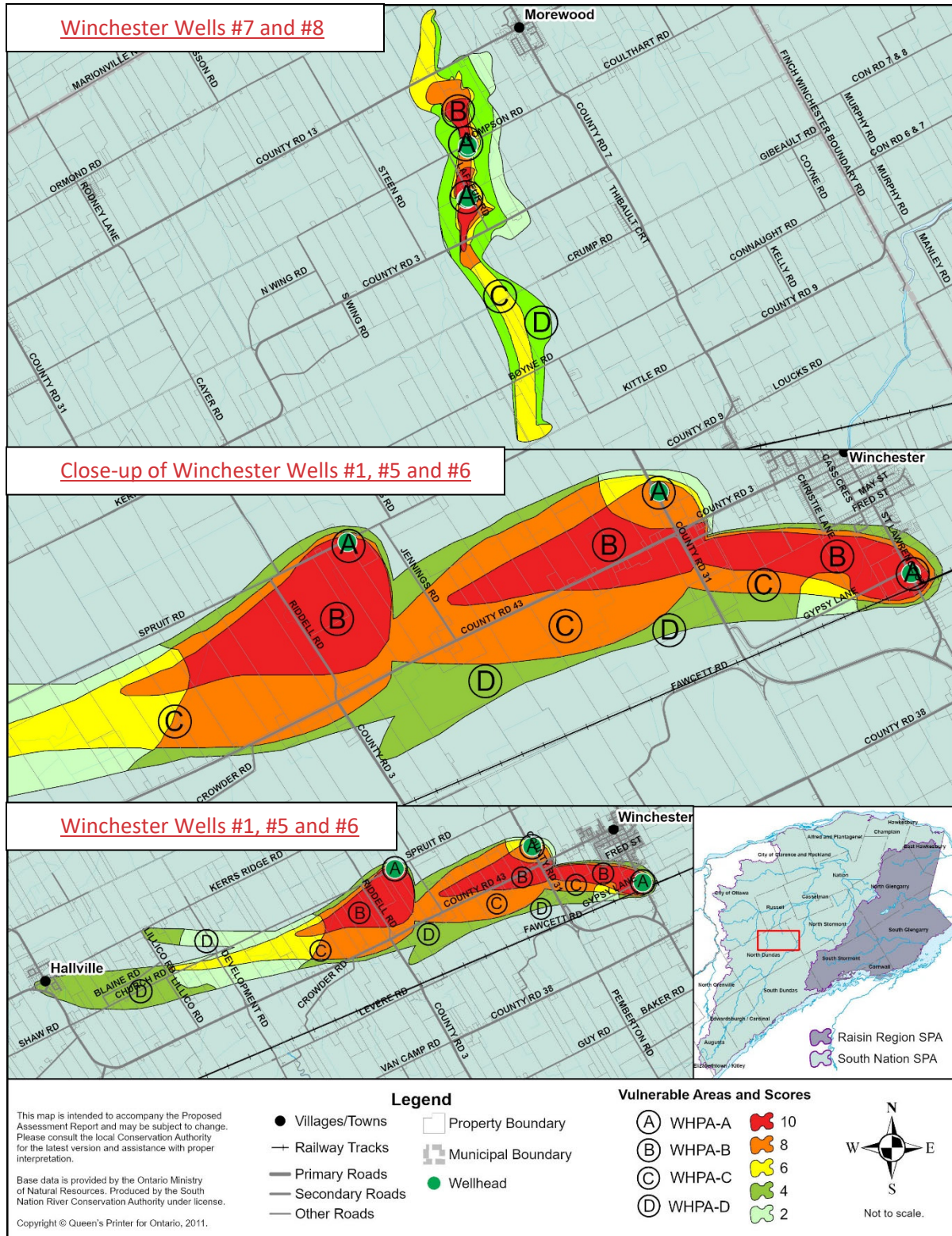
Map 13: Vulnerable Areas – Redwood Estates

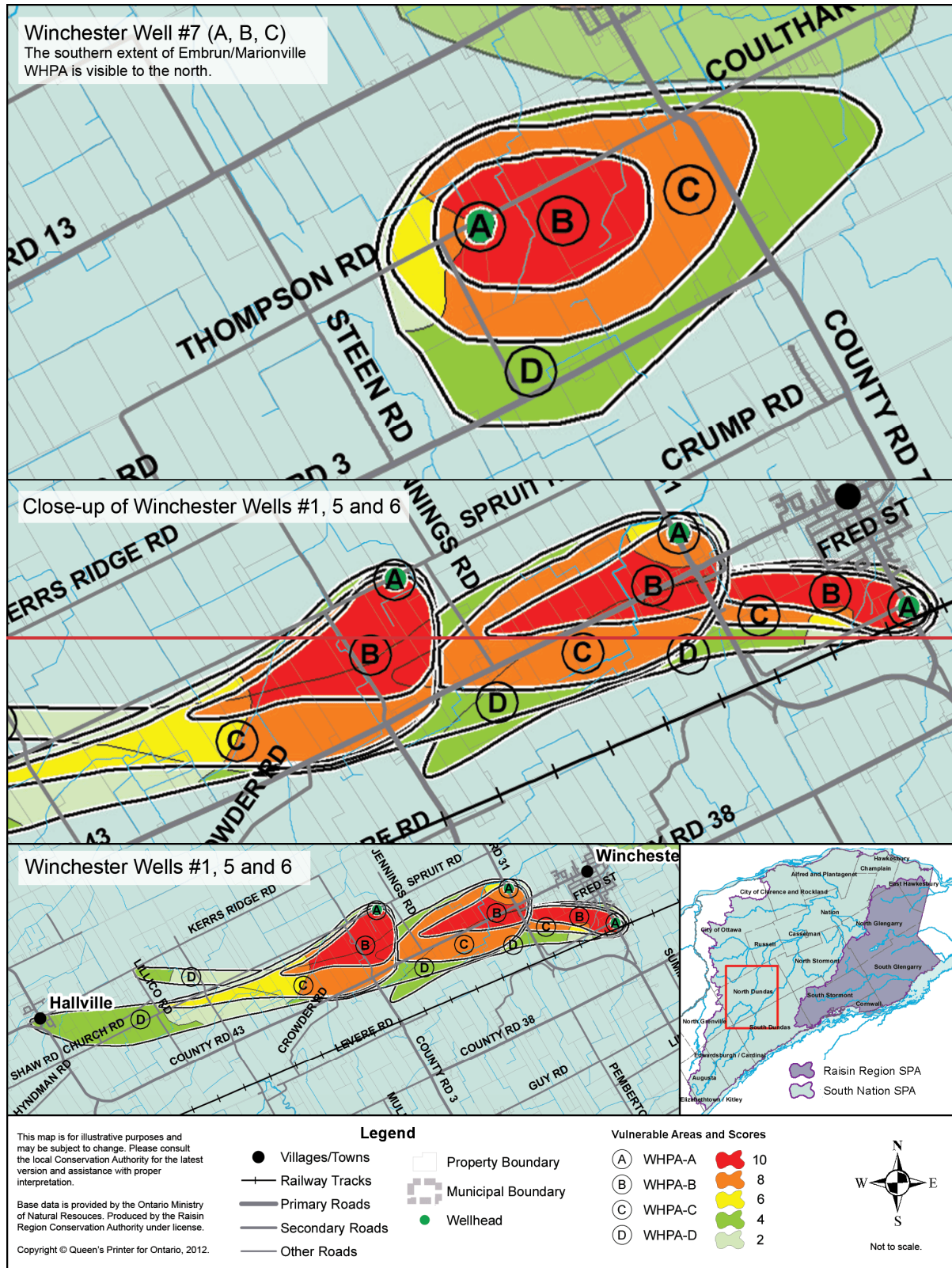


Map 14: Vulnerable Areas – Vars

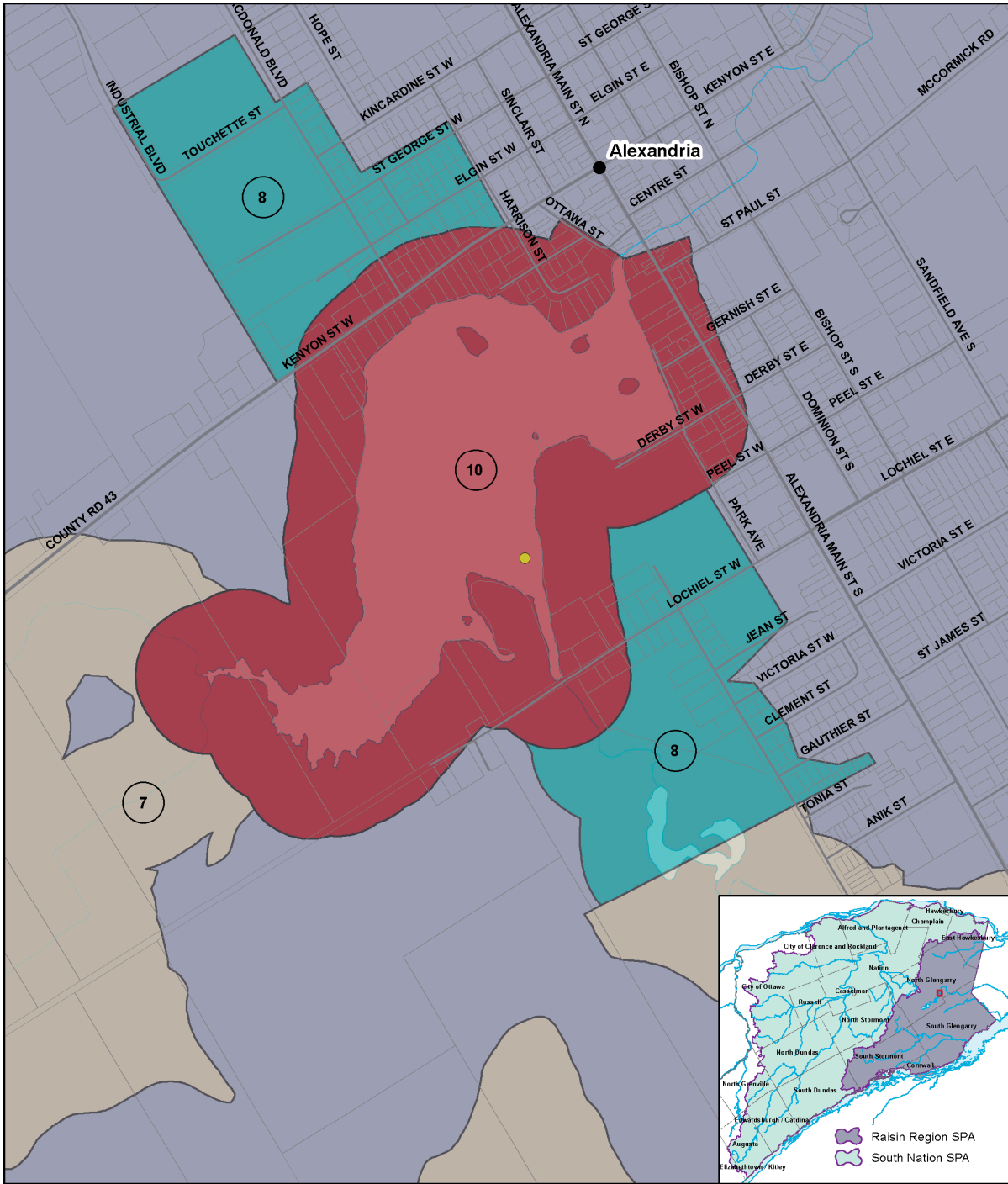


Map 15: Vulnerable Areas – Winchester





Map 16: Vulnerable Areas – Alexandria

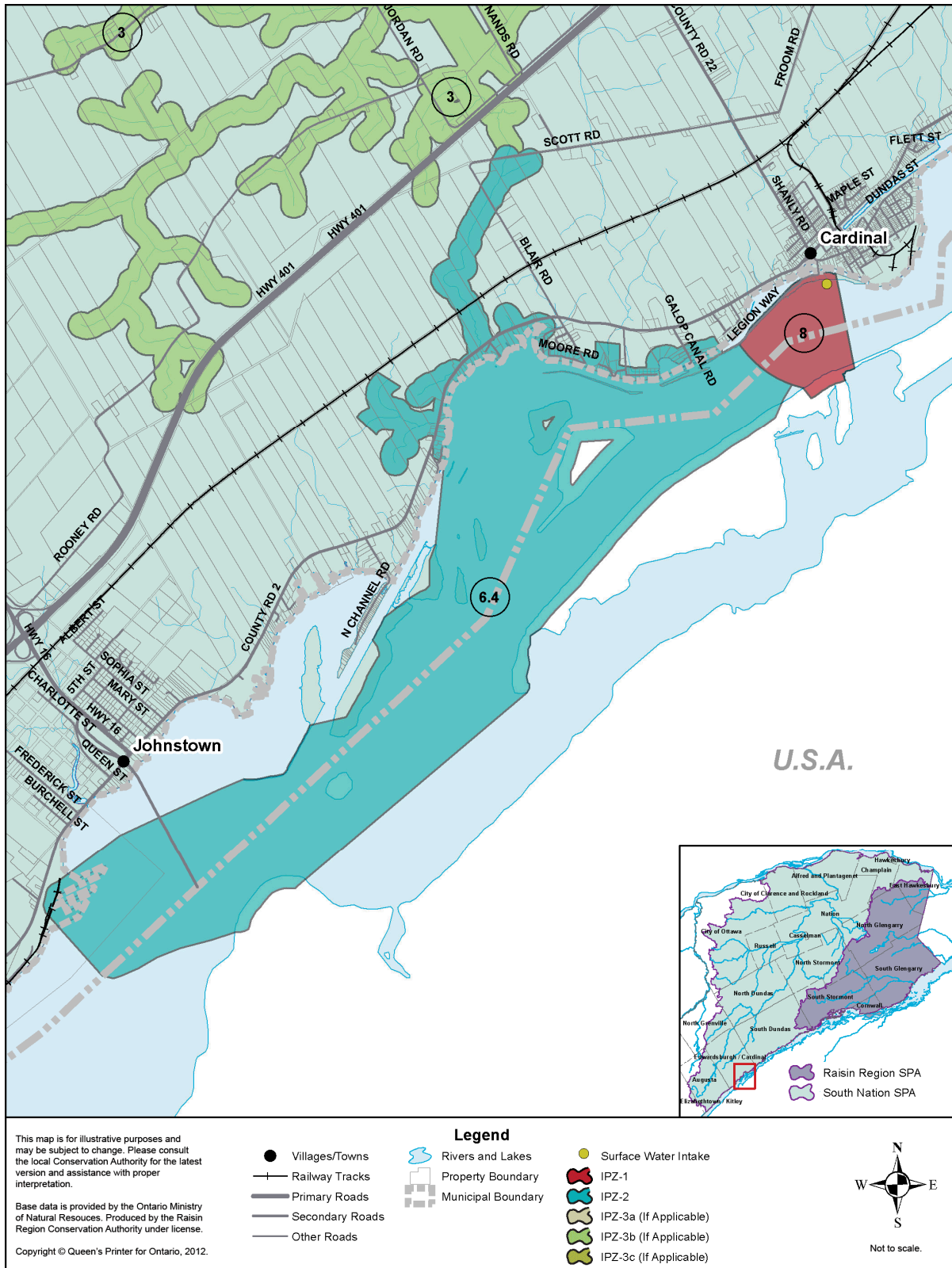


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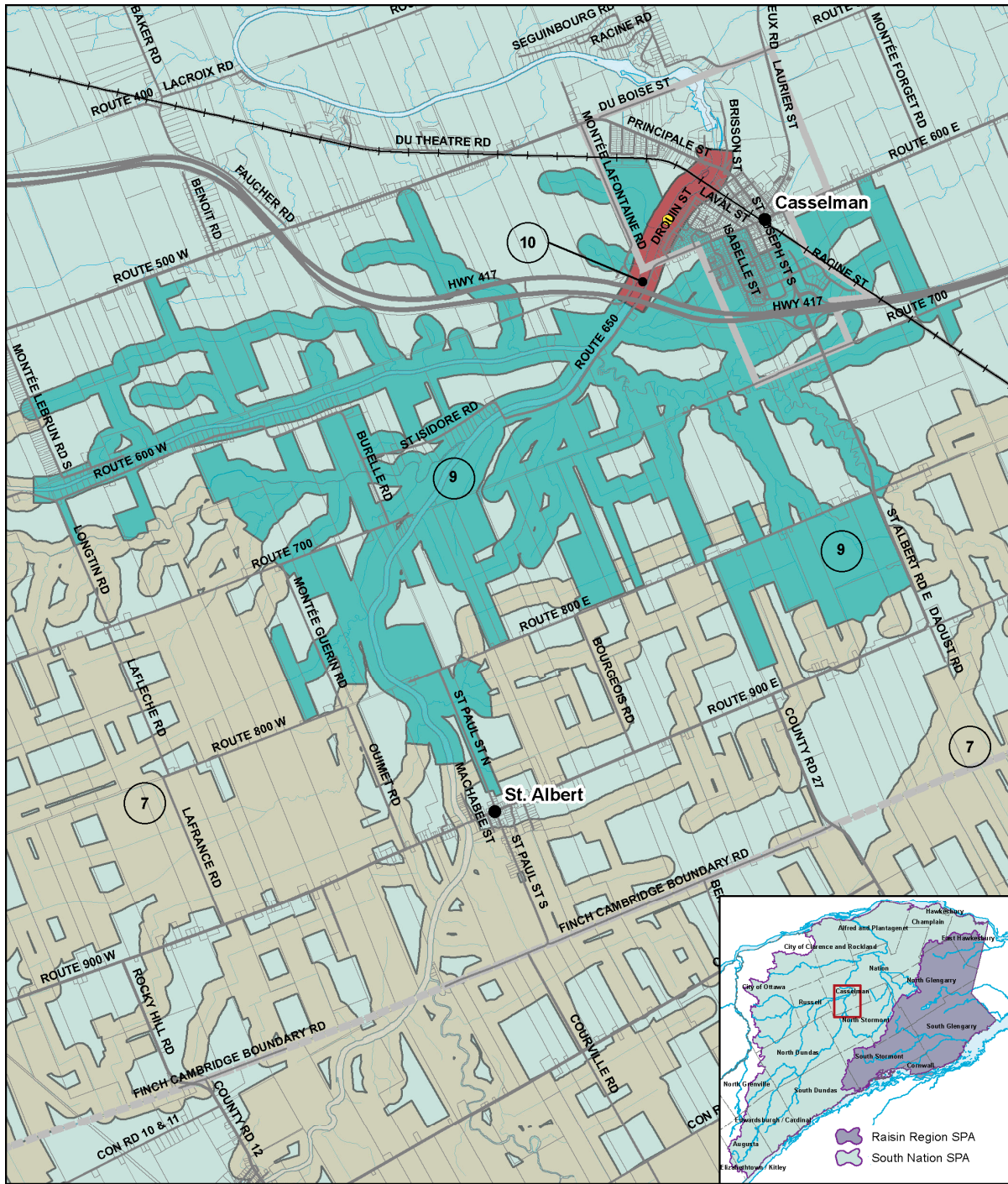
- | | | |
|--------------------|----------------------|--------------------------|
| ● Villages/Towns | 🌊 Rivers and Lakes | ● Surface Water Intake |
| —+— Railway Tracks | 🏠 Property Boundary | 🔴 IPZ-1 |
| — Primary Roads | 🏡 Municipal Boundary | 🔵 IPZ-2 |
| — Secondary Roads | | 🟡 IPZ-3a (If Applicable) |
| — Other Roads | | 🟢 IPZ-3b (If Applicable) |
| | | 🟠 IPZ-3c (If Applicable) |



Map 17: Vulnerable Areas – Cardinal



Map 18: Vulnerable Areas – Casselman



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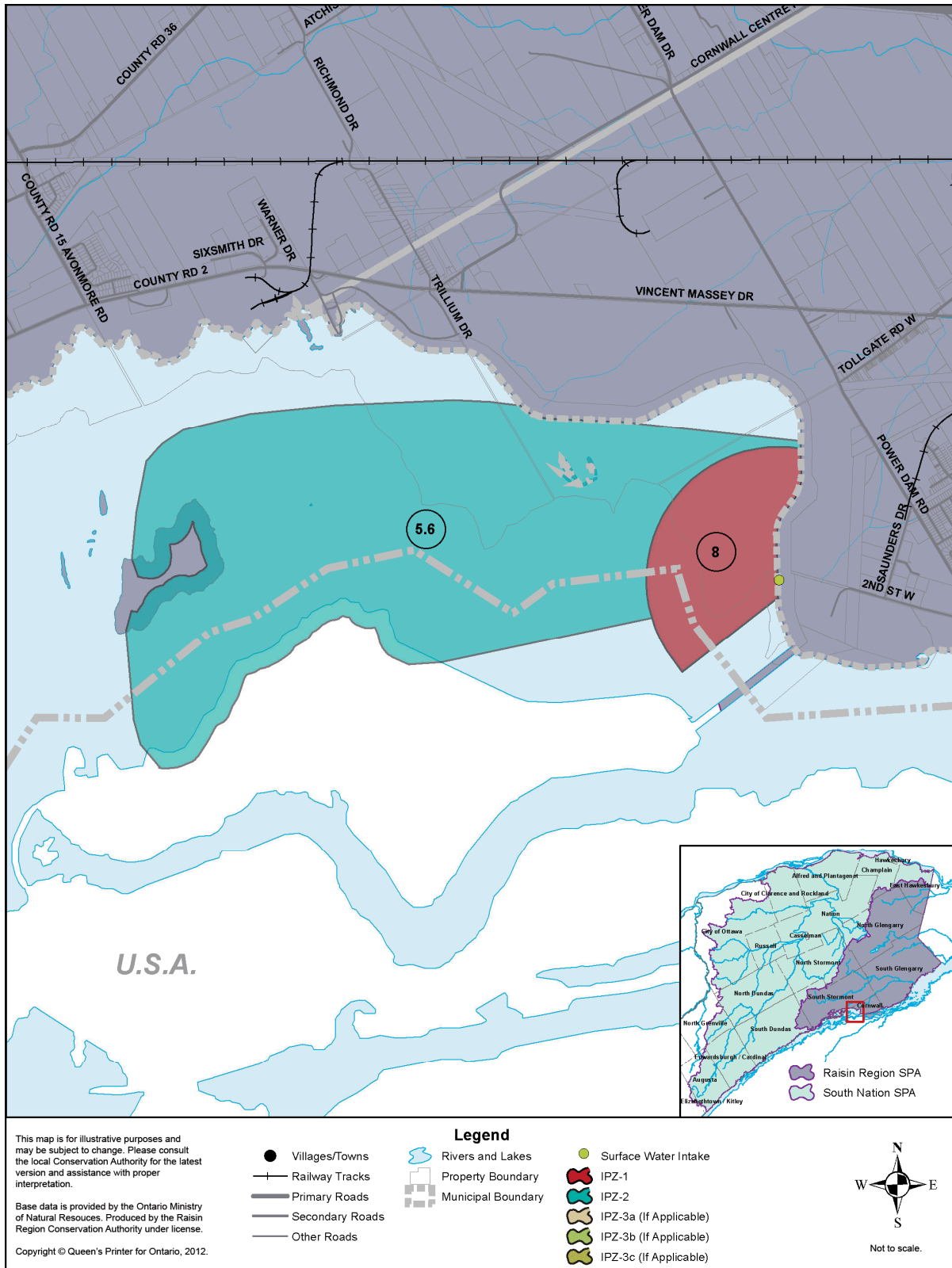
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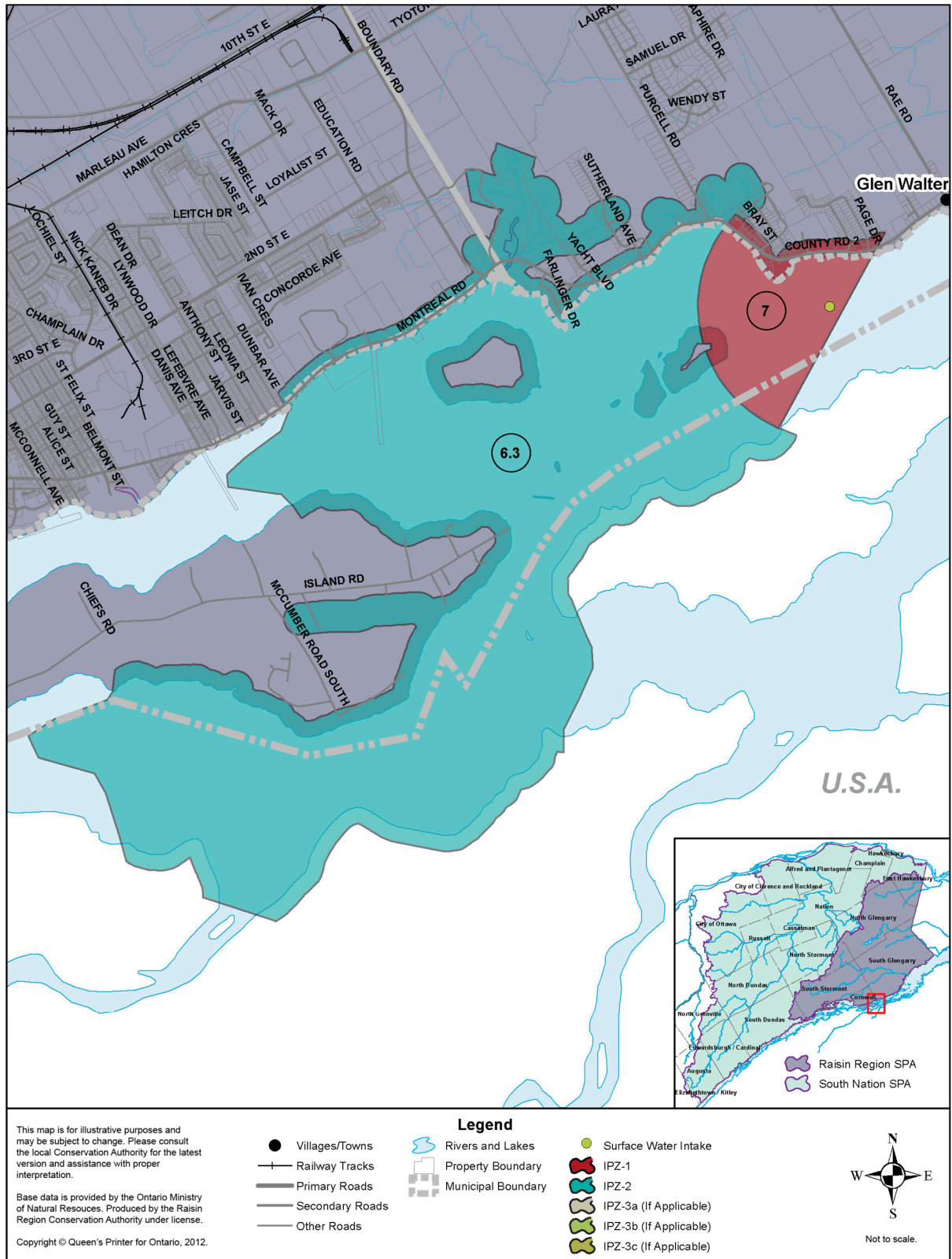
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| —+— Railway Tracks | ▭ Property Boundary | 🔴 IPZ-1 |
| — Primary Roads | ▭ Municipal Boundary | 🔵 IPZ-2 |
| — Secondary Roads | | 🟡 IPZ-3a (If Applicable) |
| — Other Roads | | 🟢 IPZ-3b (If Applicable) |
| | | 🟠 IPZ-3c (If Applicable) |



Map 19: Vulnerable Areas – Cornwall



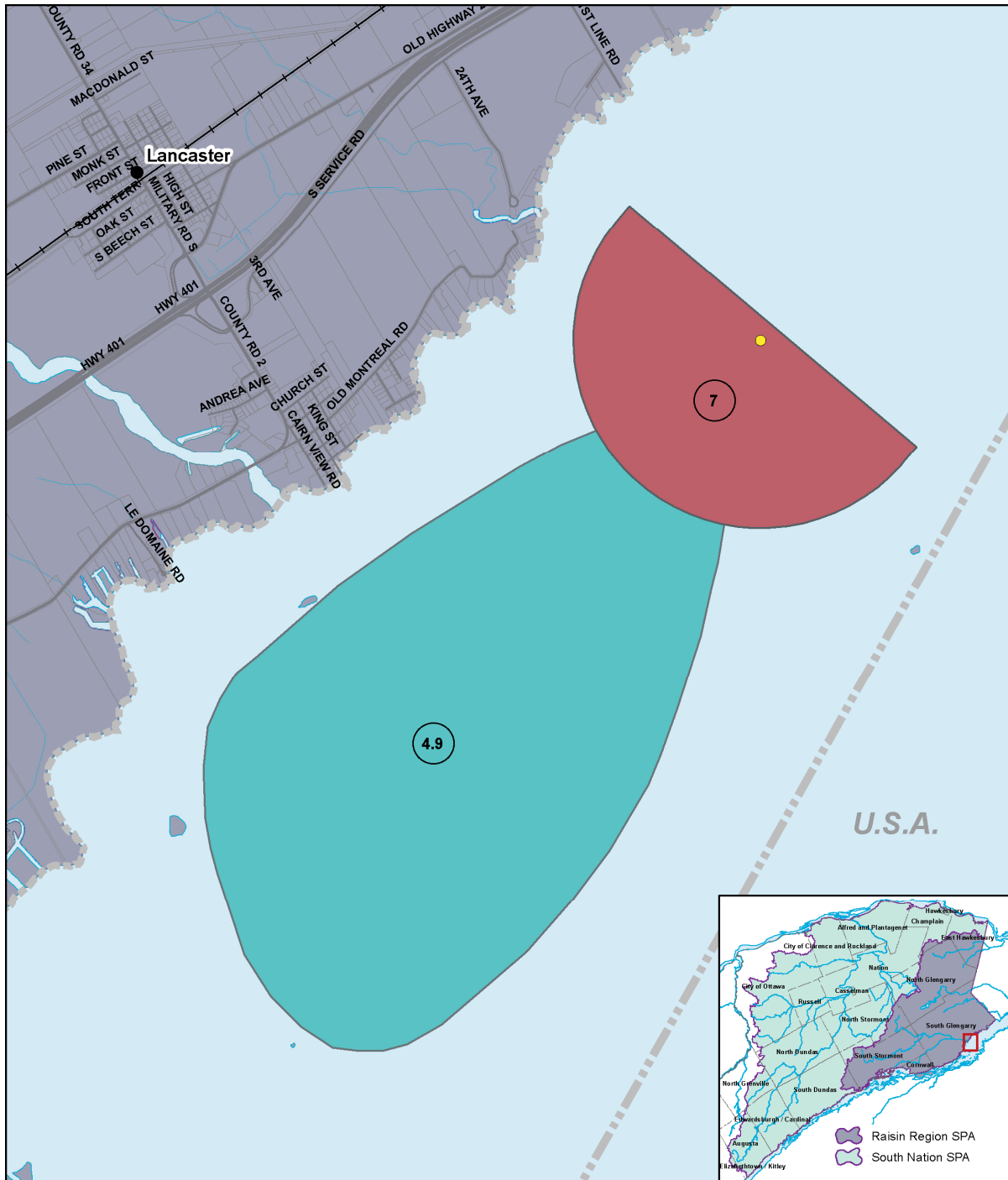
Map 20: Vulnerable Areas – Glen Walter



Map 21: Vulnerable Areas – Hawkesbury



Map 22: Vulnerable Areas – Lancaster

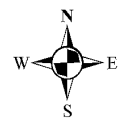


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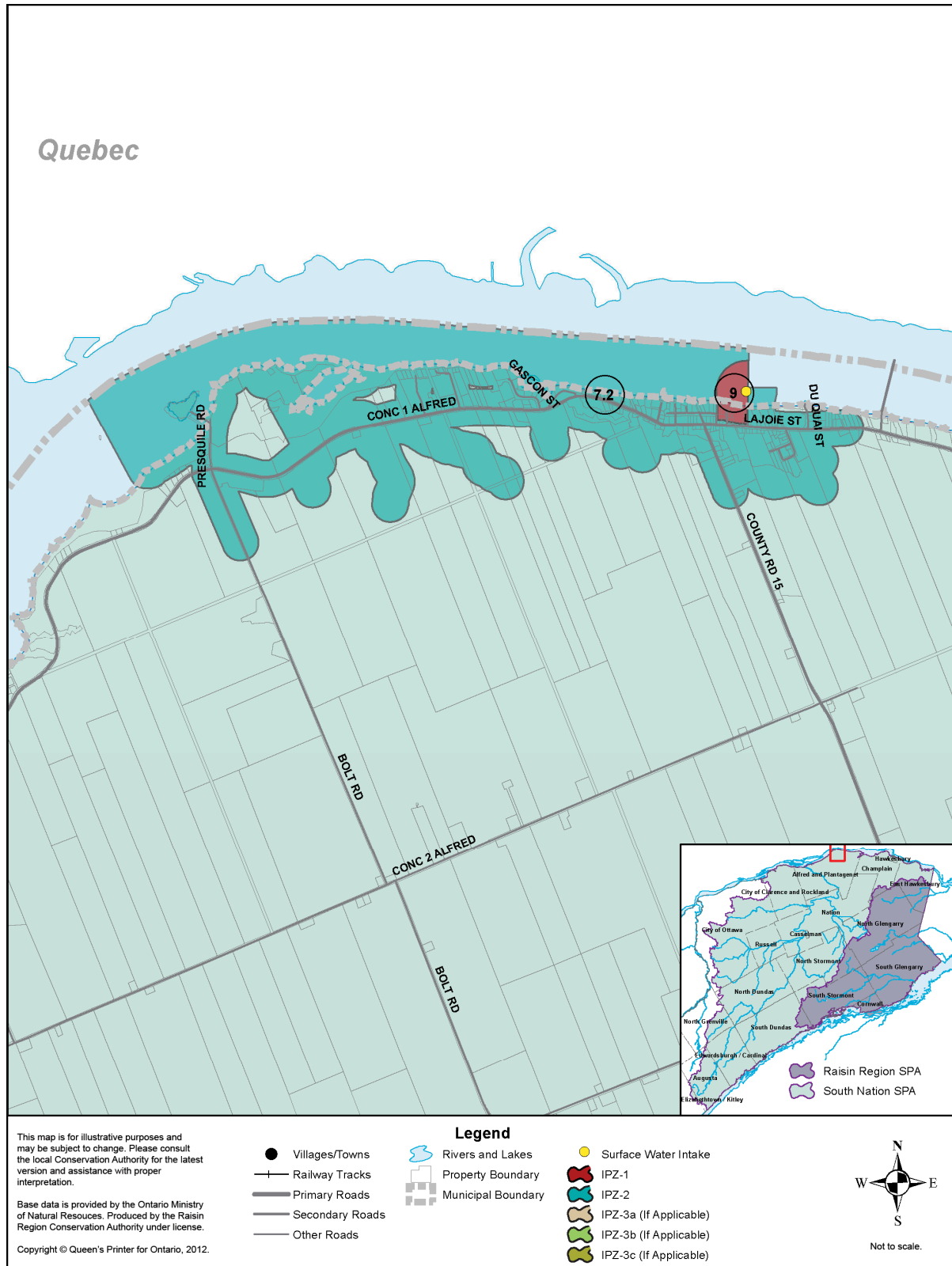
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|--------------------|----------------------|--------------------------|
| ● Villages/Towns | 🌊 Rivers and Lakes | ● Surface Water Intake |
| —+— Railway Tracks | 🏠 Property Boundary | 🔴 IPZ-1 |
| — Primary Roads | 🏢 Municipal Boundary | 🔵 IPZ-2 |
| — Secondary Roads | | 🟡 IPZ-3a (If Applicable) |
| — Other Roads | | 🟢 IPZ-3b (If Applicable) |
| | | 🟠 IPZ-3c (If Applicable) |

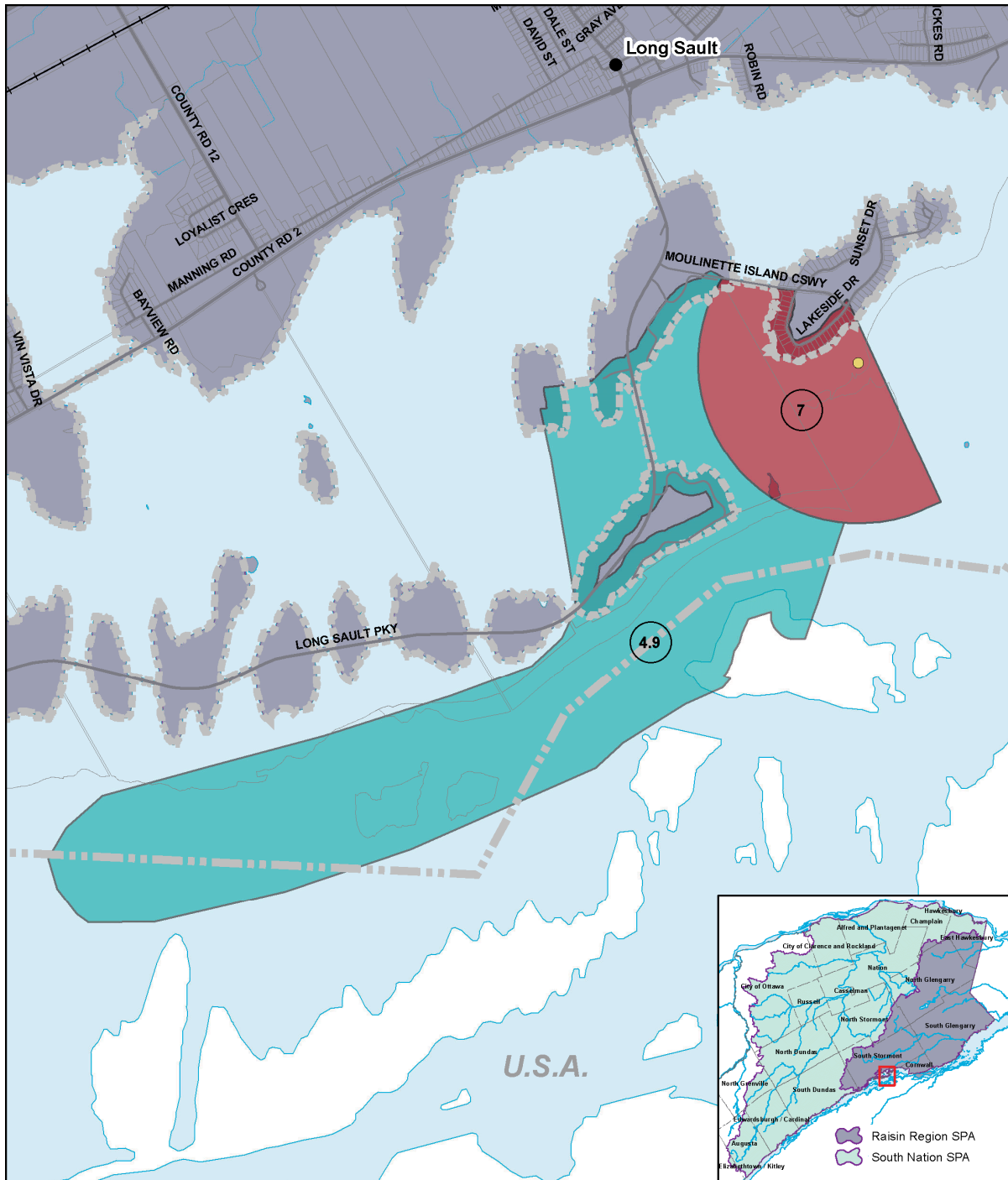


Not to scale.

Map 23: Vulnerable Areas – Lefavre



Map 24: Vulnerable Areas – Long Sault



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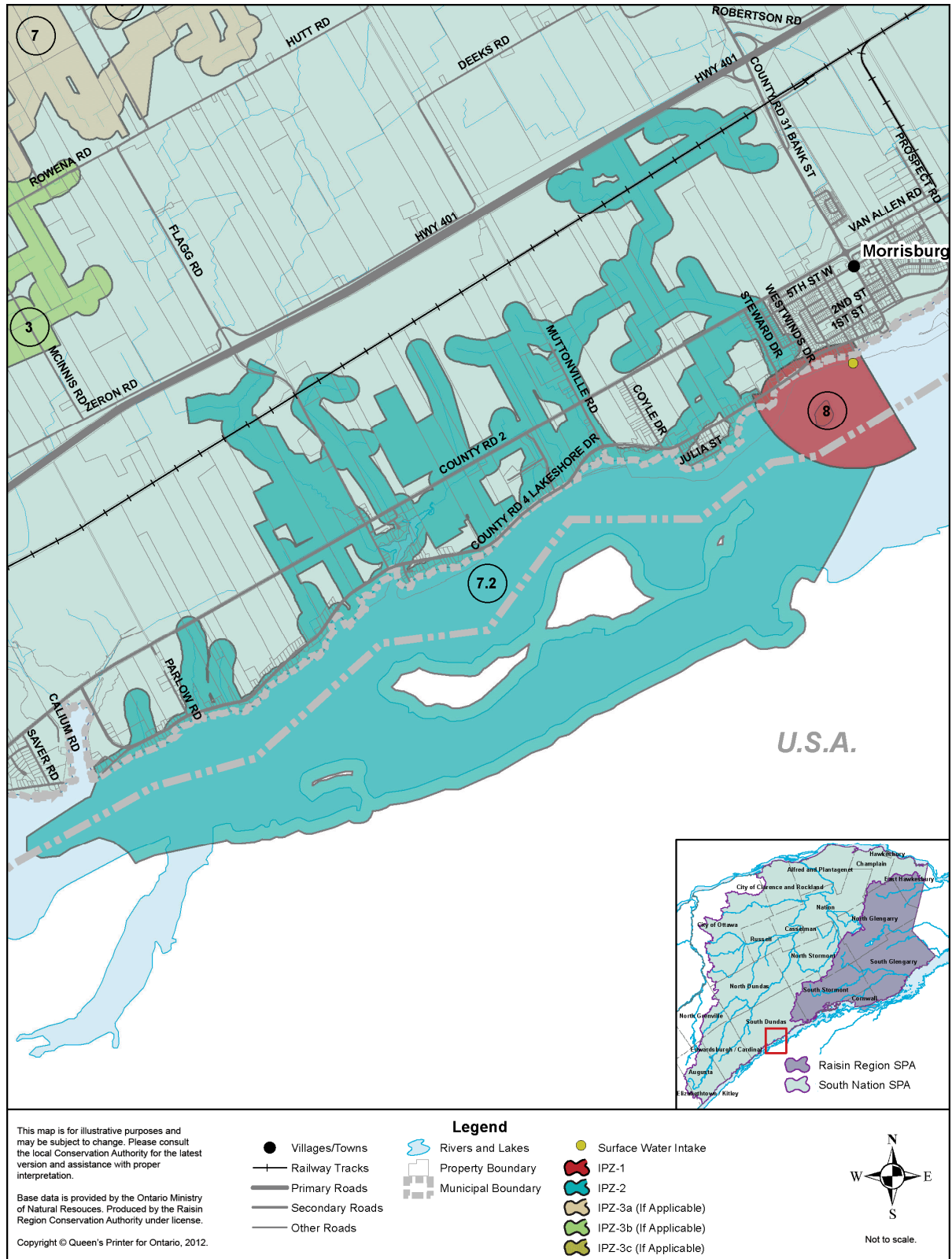
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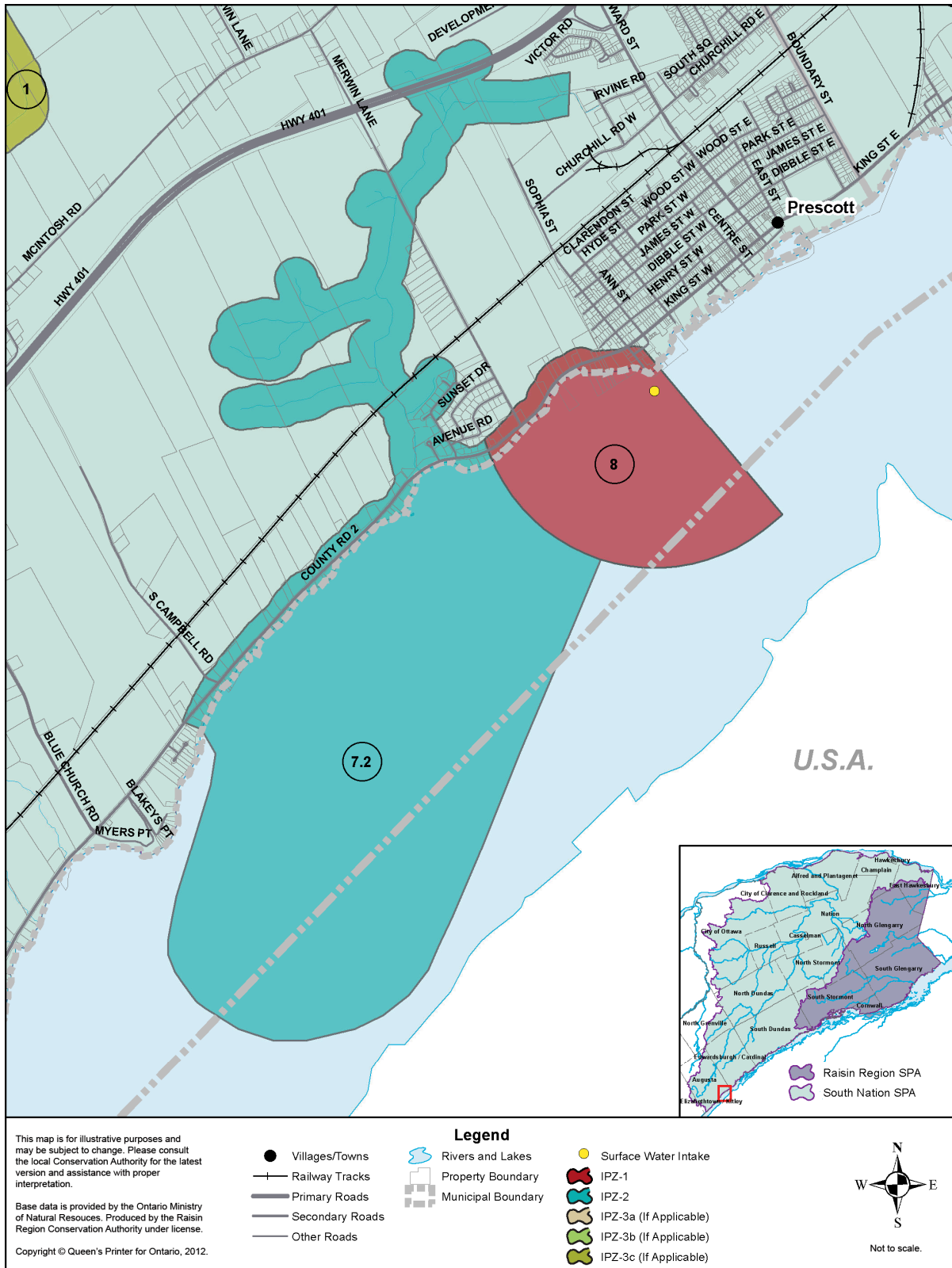
- | | | |
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| ● Villages/Towns | 🌊 Rivers and Lakes | ● Surface Water Intake |
| —+— Railway Tracks | 🏠 Property Boundary | 🔴 IPZ-1 |
| — Primary Roads | 🏢 Municipal Boundary | 🔵 IPZ-2 |
| — Secondary Roads | | 🟢 IPZ-3a (If Applicable) |
| — Other Roads | | 🟡 IPZ-3b (If Applicable) |
| | | 🟠 IPZ-3c (If Applicable) |



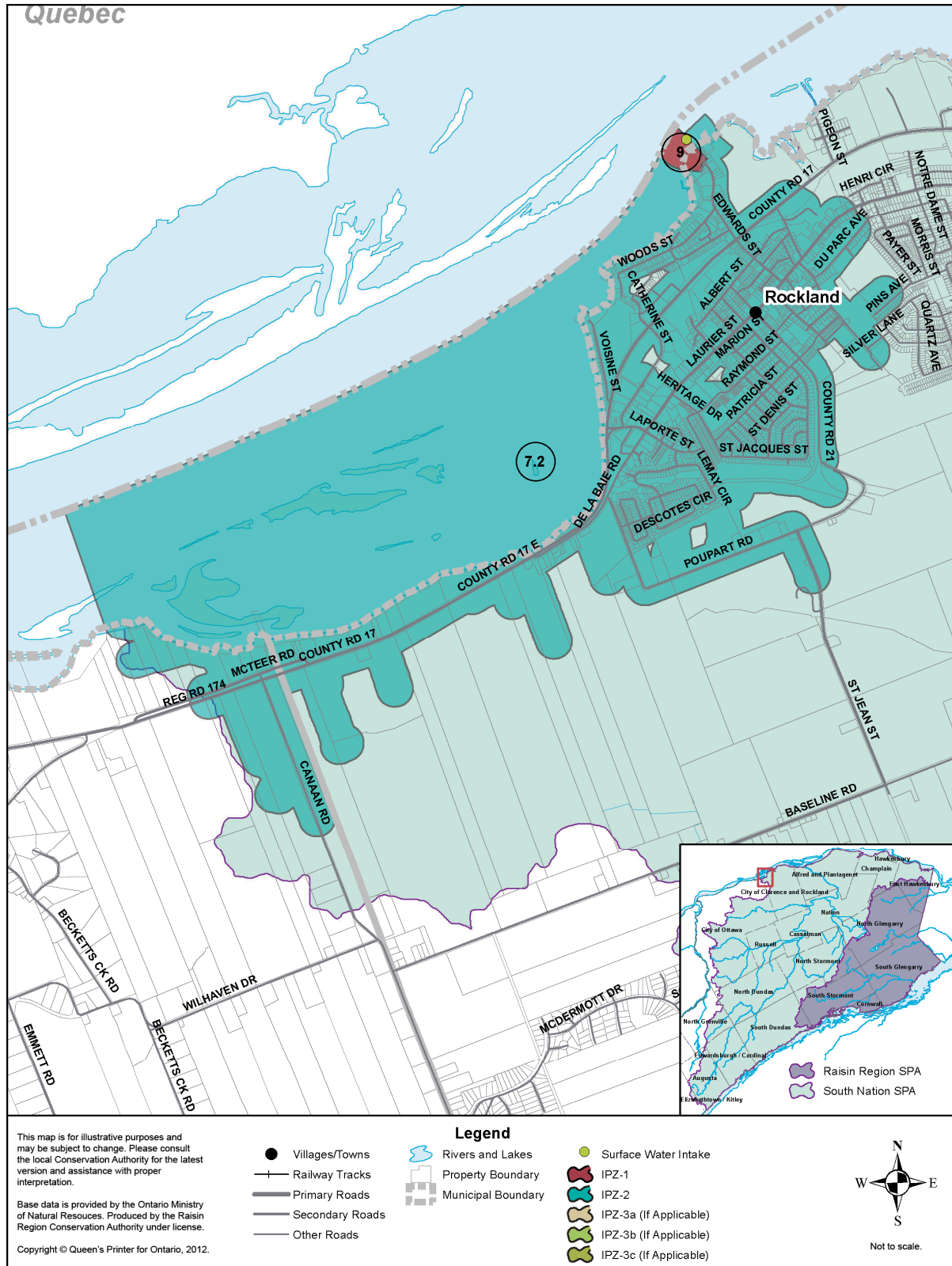
Map 25: Vulnerable Areas – Morrisburg



Map 26: Vulnerable Areas – Prescott



Map 27: Vulnerable Areas – Rockland



Map 28: Vulnerable Areas – Wendover

