SOURCE PROTECTION PLAN

North Bay-Mattawa Source Protection Area

Under the *Clean Water Act*, 2006

nbmca.ca

Version date: January 26, 2026

incorporating amendments to the March 5, 2015, approved document

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Components of the Source Protection Plan

In addition to this document, which is primarily a compilation of policies, the Source Protection Plan (SP Plan) includes three other documents ~~all revised from their original versions and approved in 2015:~~

- Terms of Reference ~~- (http://actforcleanwater.ca/index.php?page=terms-of-reference-2)~~
- ~~-~~Assessment Report~~-~~ ~~(http://actforcleanwater.ca/index.php?page=UpdatedAR)~~
- Explanatory Document ~~(http://actforcleanwater.ca/index.php?page=source-protection-plan)~~

More information on these is provided in Chapter ~~One~~ 1 of this document. The Terms of Reference outlines the scope of the project, identifying which drinking water systems will be included in the SP Plan. The Assessment Report summarizes the scientific understanding of the area with respect to the movement of water and the risks for contamination and/or depletion. The Explanatory Document provides the rationale for the policies and should be used to assist in the interpretation of the SP Plan.

Electronic copies of these documents are available for download at **www.actforcleanwater.ca**. ~~In addition to being available for download at the links above,~~ ~~h~~Hardcopies are available for viewing at the North Bay-Mattawa Conservation Authority ~~O~~office~~, 15 Janey Ave., North Bay, ON, P1C 1N1. (Telephone 705-474-5420).~~

~~You may also request an electronic copy.~~

Contact Details

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This document was prepared on behalf of the North Bay-Mattawa Source Protection Committee under the *Clean Water Act*, 2006 (O. Reg. 287/07) with funding from the Government of Ontario.

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Table of Contents

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GIS Staff at the Lake ~~/Data Specialist~~Simcoe Region Conservation Authority
~~North Bay-Mattawa Conservation Authority,~~
~~15 Janey Avenue, North Bay, ON P1C 1N1. Telephone: (705) 474-5420~~

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Acronyms

AR: Assessment Report

CWA: *Clean Water Act*, 2006.

IPZ: Intake Protection Zone

IPZ-ICA: Intake Protection Zone - Issue Contributing Area

MECP: Ministry of the Environment, Conservation and Parks. Formerly known as the Ministry of the Environment and Climate Change (MOECC), as well as Ministry of Environment (MOE).

MNR: Ministry of Natural Resources and Forestry. Formerly known as the Ministry of Natural Resources and Forestry (MNRF).

MTO: Ministry of Transportation

O. Reg.: Ontario Regulation (common short reference).

OMAFA: Ontario Ministry of Agriculture, Food and Agribusiness. Formerly known as Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA).

SP: A continuous shorthand reference for "Source Protection," used because of the frequency of the terminology throughout the program and documentation. (Area, Authority, Committee, Plan, etc. are all terms that frequently are prefixed with SP).

SPA: The Source Protection Authority (also SP Authority)

SPC: The Source Protection Committee (also SP Committee).

SP Plan: The North Bay-Mattawa Source Protection Plan, this document.

TSSA: The Technical Standards and Safety Authority.

WHPA: Wellhead Protection Area

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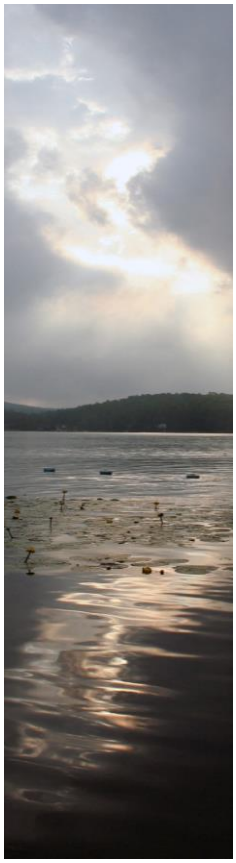
Chapter 1: Introduction



Water is critical to all aspects of our lives, so it is important that we ensure there are safe and reliable sources for all our uses – now and in the future.

Our drinking water comes from lakes, rivers, streams, and underground sources (aquifers), all of which are linked in a watershed. It is critical to recognize that drinking water sources have a limited capacity and can be contaminated. Problems that develop due to overuse or contamination can be costly or even impossible to correct. We need to protect sources by managing the influences on them. The best way to do that is through a plan, developed on a watershed basis, because water flows across the political boundaries of cities and towns. The *Clean Water Act (2006)* provides the legislative framework for drinking water source protection in Ontario. The *Clean Water Act* and its regulations are administered by the Ministry of Environment, Conservation and Parks.

The objectives of Source Protection Plans are defined in legislation; specifically, O. Reg. 287/07, Section 22 (1) states:

"22(1) Every source protection plan shall set out the following as objectives of the plan:

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."

The Source Protection Plan (SP Plan) is a combination of four key documents including the Terms of Reference, the Assessment Report, the Explanatory Document, and the SP Plan (policy document). The Terms of Reference outlines the scope of the local project and the Assessment Report summarizes the scientific understanding of the vulnerability of the drinking water sources. That understanding provides the basis for policies in the SP Plan.

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1.1 Governance of the Source Protection Planning Process

1.1.1 Source Protection Authority (SP Authority)

While the Ministry of the Environment, Conservation and Parks (MECP) administers the *Clean Water Act*, Conservation Authorities ~~are contracted to~~ deliver the source protection program on a watershed basis at the local level. Conservation Authorities were selected because they operate at the watershed scale, have experience protecting water resources and their membership is comprised of municipalities, which ultimately are responsible for the safe operation and integrity of municipal water supplies.

The board of each Conservation Authority forms the basis of the Source Protection Authority with additional representation from municipalities that have territory within the Source Protection Area but are not members of the Conservation Authority (see Table 1-1).

Table 1-1. Source Protection Authority Members and the Municipalities Represented

Jurisdiction	Representative (January 2026)
Bonfield, Township of	Steve Featherstone
Callander, Municipality of	Grant McMartin
Calvin, ~~Township~~ Municipality of	Bill Moreton (Vice Chair)
Chisholm, Township of	Nunzio Scarfone
East Ferris, Municipality of	Lauren Rooyakkers
Joly, Township of	None
Machar, Township of	None
Mattawa, Town of	Lorne Mick
Mattawan, Municipality of ~~Township~~	Michelle Lahaye
Nipissing, Township of	Steve Kirkey
North Bay, City of	Peter Chirico
North Bay, City of	Lana Mitchell (Chair)
North Bay, City of	Chris Mayne
Papineau-Cameron, Township of	Shelley Belanger
Powassan, Municipality of	Dave Britton
South River, Village of	Teri Brandt
Strong, Township of	Jim Ronholm

Past representatives: John Houle (Bonfield); Yvon Foisy (Bonfield); June Lagassie (Bonfield); Heather Busch (Callander); Doug Brydges (Callander); Rob Noon (Callander); Irene Smit (Callander); Greg O'Connor (Calvin); Danielle Albright (Calvin); Dean Grant (Calvin); Sandi Cross (Calvin); Cecil Reid (Chisholm); Dan Corbeil (East Ferris); Pauline Rochefort (East Ferris); Rick Champagne (East Ferris); Steve Trahan (East Ferris); Sue Moss (Joly); Nicolas Walters (Mattawa); Conrad Blake (Mattawan); Carole Curran (Mattawan); Liz Smith (Nipissing); Pat Haufe (Nipissing); Tom Marchant (Nipissing); Marc Charron (North Bay); Mac Bain (North Bay); Tanya Vrebosch (North Bay); Sarah Campbell (North Bay); Simon Blakeley (North Bay); Dave Mendecino (North Bay); Ed Valenti (North Bay);

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Alvina Neault (Papineau-Cameron); George Thompson (Powassan); Gerry Giesler (Powassan); Jeffrey Dickerson (South River); Les Mahon (South River); Vi Monpetit (Strong).

The Conservation Authority assists the Source Protection Authority in its responsibilities to:

- establish a Source Protection Committee (SPC) in accordance with the regulations;
- assist the SPC in exercising and performing the committee's powers and duties under the *Clean Water Act*;
- provide scientific, technical and administrative support and resources to the SPC;
- submit components of the SP Plan as completed by the SPC to the Director (Conservation and Source Protection Branch, MECP) or the Minister (MECP), as appropriate, for review and approval; and
- report annually to the Minister on the progress of implementation of the SP Plan.

1.1.2 Source Protection Committee (SPC)

~~SP~~ Source Protection p~~P~~lanning is a collaborative process involving local residents and stakeholders in the development of policies that suit local conditions and needs. There are ten seats on the SPC representing ~~the~~ local interests. There are three seats for municipal representatives, three for economic sector representatives, including agriculture, three for public-at-large representatives, and one for a first nations representative, to be appointed by Nipissing First Nation. ~~of the local municipalities, agricultural sector, commercial and industrial sectors, First Nations communities, and the general public.~~ There are also ~~two~~ ~~(~~non-voting~~)~~ liaisons representing the Ministry of the Environment, Conservation and Parks (MECP), ~~and~~ the North Bay-Parry Sound District Health Unit (NBPSDHU), and the North Bay-Mattawa Conservation Authority (NBMCA). The Chair of the Source Protection Committee is appointed by the Minister of the Environment, Conservation and Parks.

The *Clean Water Act*, its regulations, technical rules, and guidance material created by the Province of Ontario direct and inform the SPC in development of the SP Plan.

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Table 1-2. Source Protection Committee Members and the Sectors Represented

Member	Role / Representation	Term of Service
Jason Trottier	Chair	January 2026 to present
Beverley Hillier	Municipal	January 2011 to present
~~Randy McLaren~~Tim McKenna	Municipal	~~September 2010 to present~~October 2020 to present
~~Tim McKenna~~Vacant	Municipal	~~October 2020 to present~~
~~George Stivrins~~Sheldon Crawford	Commercial/Industrial	~~December 2007 to present~~June 2025 to present
Peter Murray	Transportation	January 2018 to present
Maurice Schlosser	Agricultural	December 2007 to present

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Member	Role / Representation	Term of Service
~~John MacLachlan~~Simon Foster	Public-at-large	~~December 2007 to present*~~June 2025 to present
Andrea Labelle~~Lucy Emmott~~	Public-at-large	July 2019 to present~~December 2007 to present~~
~~Andrea Labelle~~Vacant	Public-at-large	~~July 2019 to present~~
Vacant	First Nation	

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Past representatives: Jeff Celentano, Chair (July 2014 to August 2019); Barbara Groves, Chair (August 2007 to August 2013); Wayne Belter, Chair (September 2019 – August 2025); Hector Lavigne, Municipal (January 2018 to January 2020); Ian Kilgour, Municipal (December 2007 to January 2011); George Onley, Municipal (December 2007 to December 2014); Kathy Parker, Municipal (December 2007 to November 2009); Laurier Therrien, Municipal (March 2010 to July 2010); Randy McLaren, Municipal (September 2010 to June 2025); Dennis MacDonald, Transportation (December 2007 to December 2017); George Stirvins, Commercial/Industrial (December 2007- June 2025); Roy Warriner, Public-at-large (December 2007 to March 2019); John MacLachlan, Public-at-large (December 2007-January 2025 and as Acting Chair August 2013 to July 2014), Lucy Emmot, Public-at-Large (December 2007 – June 2025).

1.1.3 Implementing Bodies

Each policy of the SP Plan names a specific agency or individual that is responsible for implementing the policy (Implementing Body) in the manner set out in Appendix A: Legal Effect of Policies on Existing Legislation. The majority of policies are designed to be implemented by a regulatory authority, such as a municipal council, provincial ministry, local board, or the Source Protection Authority. These bodies may require a person engaged in a significant threat activity to undertake certain actions. Some policies identify a corporation or agency as the 'person' engaged in the activity and also as the implementing body.

~~Individuals who own p~~Property owners in vulnerable areas should be aware of the SP Plan and its policies, even though they may not be the Implementing Body. Each ~~individual~~ property owner should do their own due diligence to ensure activities on their property are in accordance with these policies. This should include entering ~~into~~ discussions with an Implementing Body if the individual believes they are engaged in a significant threat activity.

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1.2 Source Protection Area

The North Bay-Mattawa Source Protection Area is comprised of the jurisdiction of the North Bay-Mattawa Conservation Authority (NBMCA) plus the South River watershed~~,~~ and covers approximately 4,000 km² (Figure 1-2).

~~1.3 Prescribed Activities of the *Clean Water Act*~~

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~~SP Plans must address specific activities that could pose a threat to drinking water sources. There are 22 activities prescribed in s. 1.1 (1) O. Reg. 287/07 of the *Clean Water Act*. The Assessment Report identifies which of these are existing or potential significant threat activities for each municipal drinking water source. Twenty of the activities relate to water quality and two (#19 and #20) relate to water quantity.~~

~~1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act*.~~

~~2.1. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.~~

~~3.1. The application of agricultural source material to land.~~

~~4.1. The storage of agricultural source material.~~

~~5.1. The management of agricultural source material.~~

~~6.1. The application of non-agricultural source material to land.~~

~~7.1. The handling and storage of non-agricultural source material.~~

~~8.1. The application of commercial fertilizer to land.~~

~~9.1. The handling and storage of commercial fertilizer.~~

~~10.1. The application of pesticide to land.~~

~~11.1. The handling and storage of pesticide.~~

~~12.1. The application of road salt.~~

~~13.1. The handling and storage of road salt.~~

~~14.1. The storage of snow.~~

~~15.1. The handling and storage of fuel.~~

~~16.1. The handling and storage of a dense non-aqueous phase liquid.~~

~~17.1. The handling and storage of an organic solvent.~~

~~18.1. The management of runoff that contains chemicals used in the de-icing of aircraft.~~

~~19.1. 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.~~

~~20.1. An activity that reduces the recharge of an aquifer.~~

~~21.1. The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm animal yard.~~

~~22.1. The establishment and operation of a liquid hydrocarbon pipeline.~~

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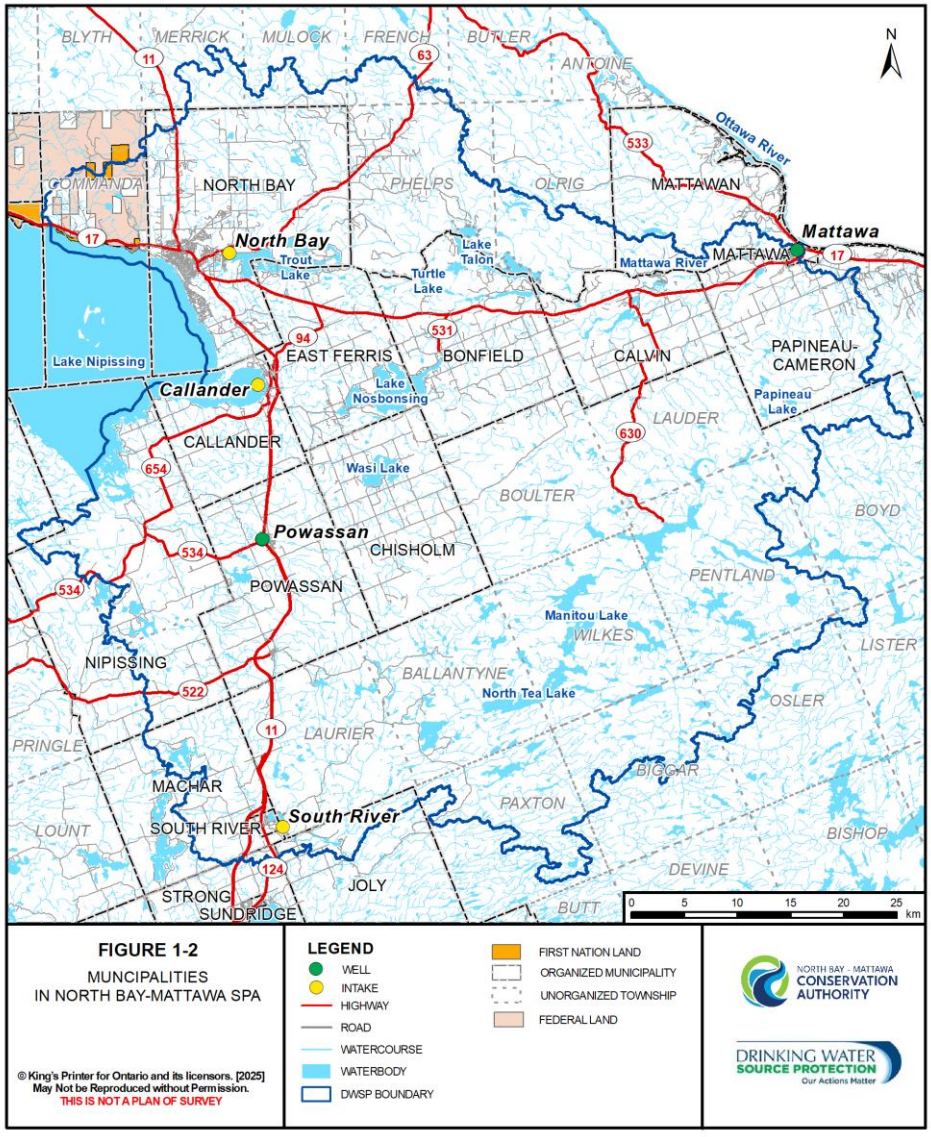
Figure 1-2. North Bay-Mattawa Source Protection Area



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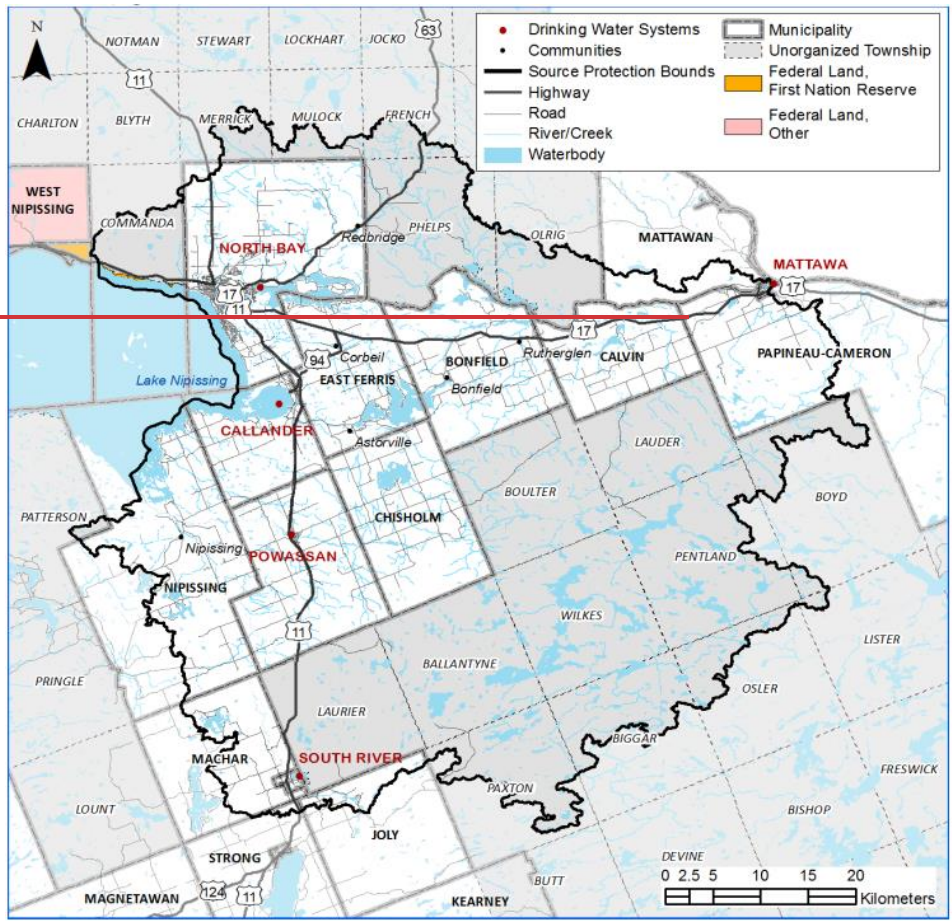

1.3 Prescribed Activities of the *Clean Water Act*

SP Plans must address specific activities that could pose a threat to drinking water sources. There are 22 activities prescribed in s. 1.1 (1) O. Reg. 287/07 of the *Clean Water Act*. The Assessment Report identifies which of these are existing or potential significant threat activities for each municipal drinking water source. Twenty of the activities relate to water quality and two (#19 and #20) relate to water quantity.

1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act*.
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.

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3. The application of agricultural source material to land.
4. The storage of agricultural source material.
5. The management of agricultural source material.
6. The application of non-agricultural source material to land.
7. The handling and storage of non-agricultural source material.
8. The application of commercial fertilizer to land.
9. The handling and storage of commercial fertilizer.
10. The application of pesticide to land.
11. The handling and storage of pesticide.
12. The application of road salt.
13. The handling and storage of road salt.
14. The storage of snow.
15. The handling and storage of fuel.
16. The handling and storage of a dense non-aqueous phase liquid.
17. The handling and storage of an organic solvent.
18. The management of runoff that contains chemicals used in the de-icing of aircraft.
19. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.
20. An activity that reduces the recharge of an aquifer.
21. The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard.
22. The establishment and operation of a liquid hydrocarbon pipeline.

Water budget studies compared current usage to the quantity available and found that overuse was not a concern. Prescribed threat activities 19 and 20 listed above do not occur under current conditions. Accordingly, the Source Protection Committee has decided that the SP Plan does not require policies to address these activities.

In addition to the list of standard prescribed threat activities, the Transportation of Hazardous Substances has been added as a Local Threat. Early in the initial consultation process it became evident that there was concern among residents of North Bay that hazardous substances transported along the highway or rail line adjacent to Trout Lake pose a risk to the source water for North Bay. The SPC made a formal request to add the Transportation of Hazardous Substances as a Local Threat. The MECP Director provided approval in 2011 and identified the relevant circumstances. As a Local Threat, it has been added to North Bay-Mattawa's prescribed activities that need to be addressed. This Local Threat was considered across the whole Source Protection Area, not just in North Bay where the concern was initiated. The Director's Approval letter is contained in Appendix G of the Assessment Report.

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1.4 Components of the Source Protection Plan

The Source Protection Plan consists of four key documents:

- Terms of Reference
- Assessment Report
- Source Protection Plan (Policy Document)
- Explanatory Document

1.4.1 Terms of Reference

The Terms of Reference identifies which drinking water systems are to be included in the development of this SP Plan. The original Terms of Reference was approved by the Minister on May 1, 2009, and then subsequently amended in 2014 to remove the cluster of private wells in Trout Creek in the Municipality of Powassan. The revised Terms of Reference was approved on March 5, 2015.

The drinking water systems included in the Terms of Reference are listed in Table 1-3 and their locations are shown in Figure 1-2. The Terms of Reference is available for viewing at the North Bay-Mattawa Conservation Authority office.

Table 1-3. Source Protection Area Terms of Reference Drinking Water Systems

Municipality	Drinking Water System	Source ~~Water~~Type	Source
Callander, Municipality of	Callander Water Treatment Plant	Surface Water ~~– Callander Bay~~	Callander Bay, Lake Nipissing
Mattawa, Town of	Mattawa Well Supply	Groundwater ~~– municipal wells~~	Municipal Wells
North Bay, City of	North Bay Water Treatment Plant	Surface Water ~~– Trout Lake~~	Trout Lake
Powassan, Municipality of	Powassan Well Supply	Groundwater ~~– municipal wells~~	Municipal Wells
South River, Village of	South River Water Treatment Plant	Surface Water ~~– South River~~	South River

1.4.2 Assessment Report

The Assessment Report provides the scientific understanding that informs policy development. It includes a summary of the physical and human geography of the Source Protection Area (SP Area) and the detailed technical studies that analysed and mapped the vulnerable areas for each

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municipal supply. Wellhead Protection Areas (WHPAs) were established around groundwater systems and Intake Protection Zones (IPZs) around surface water intakes. All prescribed activities were considered to determine whether they could pose a significant threat in any vulnerable area. The SP Plan was then developed with policies to address each of those activities and achieve the objectives of source protection planning.

Each drinking water source was also assessed using a tiered water budget approach to determine its vulnerability to overuse. The water budget analysis concluded that there are currently no water quantity threats in the SP Area.

The first version of the Assessment Report for the North Bay-Mattawa Source Protection Area was approved by the Minister on May 30, 2011. It was subsequently updated to include the local threat of Transportation of Hazardous Substances (see section 1.6), and that version was approved on September 21, 2011 (posted on the Environmental Registry in January of 2012). It was again updated in early 2014 to remove references to the cluster of private wells in Trout Creek, and to revise the number of incidents of significant threat activities following field verification. It was submitted to the Director (Source Protection Programs Branch, MOECC) for review on March 3, 2014. The Director approved the Assessment Report on February 10, 2015 and the report is available for download at ~~http://actforcleanwater.ca/index.php?page=UpdatedAR or in hardcopy at the North Bay- Mattawa Conservation Authority office at 15 Janey Ave, North Bay, ON P1C 1N1.~~ actforcleanwater.ca. Updates have been made to the Assessment Report as part of the review required by the Minister's section 36 order.

1.4.3 Source Protection Plan (Policy Document)

Although the Terms of Reference and Assessment Report are part of the SP Plan, this document which contains the policies to address activities that could threaten drinking water is generally referred to as the Source Protection Plan (SP Plan).

The SP Plan policies were developed by the Source Protection Committee (SPC) in collaboration with area stakeholders to protect drinking water sources from contamination. A Policy Working Group (PWG) was formed in December 2010 to recommend appropriate policy approaches for initial plan development. Every affected Municipality had representation on the PWG either by a council member or staff (several of whom had planning expertise). Also included were the SPC Chair, representation from the Trout Lake Conservation Association (as a local group of stakeholders with a mandate to protect the major source of drinking water), and several NBMCA staff. A consulting planner was contracted to assist Source Protection staff in the initial development of the local policies. Concurrently, a series of roundtables were held to solicit input on policy direction from stakeholders and findings were shared with both the PWG and the SPC as they deliberated on ways to address each threat category.

The PWG solicited input related to policy development from various industries, reviewed technical research and background documents for each threat, and developed preliminary policy recommendations for the SPC's consideration. The PWG discussed and analyzed each policy option in terms of the suitability of its approach and its merits. The group then weighed various policy

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alternatives, considering financial implications and the availability of regulatory and non-regulatory tools and instruments. The following principles guided the evaluation of alternatives:

- Effectiveness (would the policy effectively protect sources of drinking water)
- Cost / Impact (would the policy be cost-effective and reasonable)
- Practicality (would the policy be practical and avoid regulatory duplication)

1.4.4 Explanatory Document

The Explanatory Document is a companion document to the SP Plan, which provides the Committee's rationale for each policy and has been arranged to reflect the SPC's decision process. When considering how to protect against various threats, the Committee could choose to either prohibit activities or allow them to be undertaken with mechanisms in place to manage the risks. Various strategies were available to manage the risks including such measures as Risk Management Plans, Education and Outreach, or Specified Actions. There was substantial input from stakeholders regarding ways to address sources of phosphorus in the Callander Issue Contributing Area (~~IPZ~~ ICA), so the ~~IPZ~~ ICA policies are discussed as a set. Financial considerations are summarized, as well as the feedback received from roundtable discussions, pre-consultation with implementing bodies and other public meetings and consultations.

1.5 Consultation

The North Bay-Mattawa Source Protection Committee (SPC) and SP Authority have an ongoing commitment to public consultation. This commitment is supported by provincial legislation in the *Clean Water Act* (2006) and O. Reg. 287/07. From the beginning, the 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, and First Nations has ~~exceeded~~ met legislated requirements.

A full summary of consultation activities on the SP Plan, Assessment Report and Terms of Reference can be found in Appendix B: Record of Consultations & Notices.

1.6 Plan Implementation – Annual Report

The *Clean Water Act* requires that each Source Protection Authority prepare an annual progress report on the implementation of the SP Plan. Details are specified in s. 52 of O. Reg. 287/07. The Annual Report is a compilation of the information provided by implementing bodies regarding progress towards implementation of each policy. Monitoring Policies, referenced at the end of each policy in Chapter 5 and compiled at the end of that chapter, direct what information the implementing bodies need to report to the SP Authority. In most cases, implementing bodies are required to provide their progress reports to the SP Authority by February 1st of each year. The SP Authority compiles an Annual Report for the SP Area. The Annual Report is then provided to the SP Committee prior to submission to the Minister.

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The first annual report covers the period from the time of the SP Plan taking effect on July 1, 2015 through until the end of December 2016. It was submitted to the MECP Director on May 1, 2017. Subsequent annual reports are based on a calendar year and must be submitted by May 1st of the following year.

Additionally, the Minister may require that the SP Plan undergo a review to update information on municipal groundwater wells and drinking water intakes, incorporate necessary changes from revisions to the Technical Rules and Tables of Drinking Water Threats, address any policy implementation issues, and examine any emerging areas of concern~~. Copies of the Minister's initial order from March 2015 and amended order from November 2019 can be found in Appendix B.~~.

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Chapter 2: Policy Tables for Each Municipal System

The following sections of Chapter 2 provide separate tables for each municipal system, which summarizes the applicable Source Protection Plan (SP Plan) policies, the vulnerable area(s) affected and the implementing body(ies) responsible. The ~~Source Protection Plan (~~SP Plan~~)~~ policies are designed to achieve the objectives stated in O. Reg. 287/07, s. 22: "*where an activity is or would be ('could be') a significant threat to drinking water, it ceases to be or never becomes a significant threat."* The SP Plan policies apply only in the vulnerable areas that are listed in each policy. The vulnerable areas are identified in the Assessment Report.

An activity's threat level (significant, moderate or low) is determined by the vulnerability score of the area and the circumstances under which it is occurring. The Assessment Report summarizes where the activities are or would be significant threats based on the *Clean Water Act* and *Technical Rules: Assessment Report*. In the North Bay-Mattawa Source Protection Area, the significant threats are limited to the most vulnerable areas around drinking water sources. For groundwater sources, these vulnerable areas are known as Wellhead Protection Areas (WHPAs). For surface water sources, they are known as Intake Protection Zones (IPZs).

The SP Plan policies apply to specific WHPA zones (WHPA-A, WHPA-B, etc.) for the two municipal groundwater systems (Mattawa and Powassan), and specific IPZ zones (IPZ-1, IPZ-2, etc.) for the three municipal surface water systems (Callander, North Bay and South River). Maps of each system's vulnerable areas are provided in Figures 2-1 to 2-6. Schedule A: Additional Maps of Vulnerable Areas provides higher detail regarding the Callander IPZ-ICA and South River IPZ, as well as large-scale maps of the Callander IPZ, North Bay IPZ and South River IPZ. Mapping legends utilize a coloured scheme, so caution should be used if interpreting or reviewing black and white mapping images.

The most recently approved Assessment Report should be consulted to identify the official areas where policies apply. Detailed on-line maps can be viewed through the MECP's Source Protection Information Atlas or through a link on actforcleanwater.ca.

Policies apply to specific vulnerable areas specified on the map figures and impact only those activities and circumstances that are significant. A few moderate/low threat activity policies were included at the discretion of the Source Protection Committee. Policies will apply only for specific circumstances, such as a volume or area of storage, a type of chemical/contaminant or pathogen, the grade at which the activity occurs, or others. Background information about the threat activities and their circumstances can be found in Chapter 4.

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Vulnerable Area Policy Summaries – How to Read the SP Plan

Within this Chapter, readers can quickly reference mapping of the vulnerable areas and see which policy(ies) apply. Policies are organized in Chapter 5 according to individual activities or groups of similar activities.

An Implementing Body should reference Appendix A: Legal Effect of Policies on Existing Legislation in addition to the policy summary tables of Chapter 2 to determine which policies they are named to implement. An Implementing Body should also reference the monitoring policies that require reporting to the SP Authority by a certain time in order to complete the required Annual Report.

Individuals residing in or doing any activity in the vulnerable areas should reference the policy summary tables related to that specific vulnerable area to determine if a policy would affect their activity or land use. They should contact the Implementing Body if they believe they are or plan to be engaged in a significant threat activity.

2.1 Callander IPZ Policy Table

Callander's Intake Protection Zones 1 and 2 are located in Callander Bay and the adjacent land area, which includes both urban and rural development along the east shore of the bay. Policies for this area are generally restrictive in nature to prevent the establishment of significant threat activities.

Table 2-1 shows which policies apply to particular sections of the Intake Protection Zone. Policies for the Issue Contributing Area (IPZ-ICA), as listed in Table 2-2 Policy Summary – Callander Issue Contributing Area, also apply to the entire IPZ. Figure 2-1 shows the Callander Intake Protection Zones that were defined in the Assessment Report.

Table 2-1. Policy Summary – Callander Intake Protection Zone (IPZ)

Code	Policy Title	IPZ	Implementing Body
~~AIR1~~	~~Aircraft De-Icing Chemical Management Plans~~	~~IPZ-1~~	~~Airport Authority~~
FUL1	Land Use Prohibition: Handling and Storage of Fuel ~~Storage~~	IPZ-1	Municipality
FUL2	Management of Threat as a Condition of Other Approvals: Handling and Storage of Fuel ~~Conditions for Approvals of Fuel Storage~~	IPZ-1	MECP*
FUL3	Maintenance of Safety Information for Public by TSSA ~~Continue to Make Safety Information Available~~	IPZ-1	TSSA*
FUL4	Education: Handling and Storage of Fuel	IPZ-1	Municipality

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Code	Policy Title	IPZ	Implementing Body
HAZ1	Land Use Screening: DNAPLs	IPZ-1	Municipality
HAZ3~~1~~	Education: DNAPLs ~~& Organic Solvents~~	IPZ-1	Municipality
PIP1	Pipeline Planning to Consider Source Water	IPZ-1 (Significant) IPZ-2 (Moderate) IPZ-3 (Low)	Canada Energy Regulator Ontario Energy Board TSSA* Impact Assessment Agency
PIP2	Pipeline Design, Operation, and Maintenance	IPZ-1 (Significant) IPZ-2 (Moderate) IPZ-3 (Low)	Pipeline Owner
PIP3	Pipeline Notification	IPZ-1 (Significant) IPZ-2 (Moderate) IPZ-3 (Low)	Canada Energy Regulator Ontario Energy Board
PIP4	Pipeline Technical Work Costs	IPZ-1 (Significant) IPZ-2 (Moderate) IPZ-3 (Low)	Pipeline Owner
PIP5	Education: Liquid Hydrocarbon Pipeline	IPZ-1 (Significant) IPZ-2 (Moderate) IPZ-3 (Low)	Conservation Authority
PIP6	Mapping for Pipeline Emergency Planning	IPZ-1 (Significant) IPZ-2 (Moderate) IPZ-3 (Low)	MECP*
PST1	Pesticide Approvals to Consider Source Water ~~Pesticide Act Approvals to Contain Conditions~~	IPZ-1, IPZ-2	~~MOECC~~ MECP*
PST2	Land Use Prohibition: Pesticide Storage	IPZ-1	Municipality
PST3	Municipal Pesticide Management Plan	IPZ-1, IPZ-2	Municipality
PST4	Education:~~about~~ Application of Pesticides	IPZ-1, IPZ-2	Municipality
SAL1	~~Land Use Prohibition – Road Salt Storage~~Salt Management Plan	IPZ-1	MTO Municipality
SEW1	Prescribed Instruments: Prohibition of New Sewage Works and Review of Existing Sewage Works of Certain Types	IPZ-1, IPZ-2	MECP ~~MOECC~~*
SEW2	Prescribed Instruments: ~~for~~ Management of Sewage Works of Certain Types	IPZ-1, IPZ-2	MECP ~~MOECC~~*

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Code	Policy Title	IPZ	Implementing Body
SMF1	~~Municipal Action to Prohibit Application of Commercial Fertilizer to Land~~ Management of Threat Posed by Certain Nutrients as a Condition of Other Approvals	IPZ-1, IPZ-2	~~Municipality~~OMAFA
SMF2	Land Use Prohibition~~—~~: Nutrient Handling & Storage ~~&~~and Livestock Activity	IPZ-1, IPZ-2	Municipality
SMF3	Municipal Action: Prohibit Application of Commercial Fertilizer to Land	IPZ-1	Municipality
SMF4	Education: Management of ASM and Livestock Grazing Activity	IPZ-1, IPZ-2	Municipality
SNO1	Land Use Prohibition: ~~—~~ Consolidated Snow Storage Facilities	IPZ-1, IPZ-2	Municipality
SNO2	Education: Snow Storage	IPZ-1, IPZ-2	Municipality
SVA1	Signage for Vulnerable Areas	IPZ-1, IPZ-2	Municipality
THS1	Awareness of Vulnerable Areas and Response to Spills of Hazardous Substances~~Update Protocols for Spills Response~~	IPZ-1	Municipality MECP*
TPW1	Provide Notice of Transport Pathway	IPZ-1, IPZ-2, IPZ-3	Municipality
WDS1	Prohibition and Management of Waste Disposal Sites under Part V of the *Environmental Protection Act*~~EPA~~	IPZ-1, IPZ-2	MECP*
WDS2	Land Use Prohibition: Waste Disposal Sites	IPZ-1, IPZ-2	Municipality
~~WDS3~~	~~Education Hazardous Waste & PCBs~~	~~IPZ-1~~	~~Municipality~~

* ~~MOECC: Ministry of Environment and Climate Change~~ Note: MECP - Ministry of the Environment, Conservation and Parks, TSSA – Technical Standards and Safety Authority

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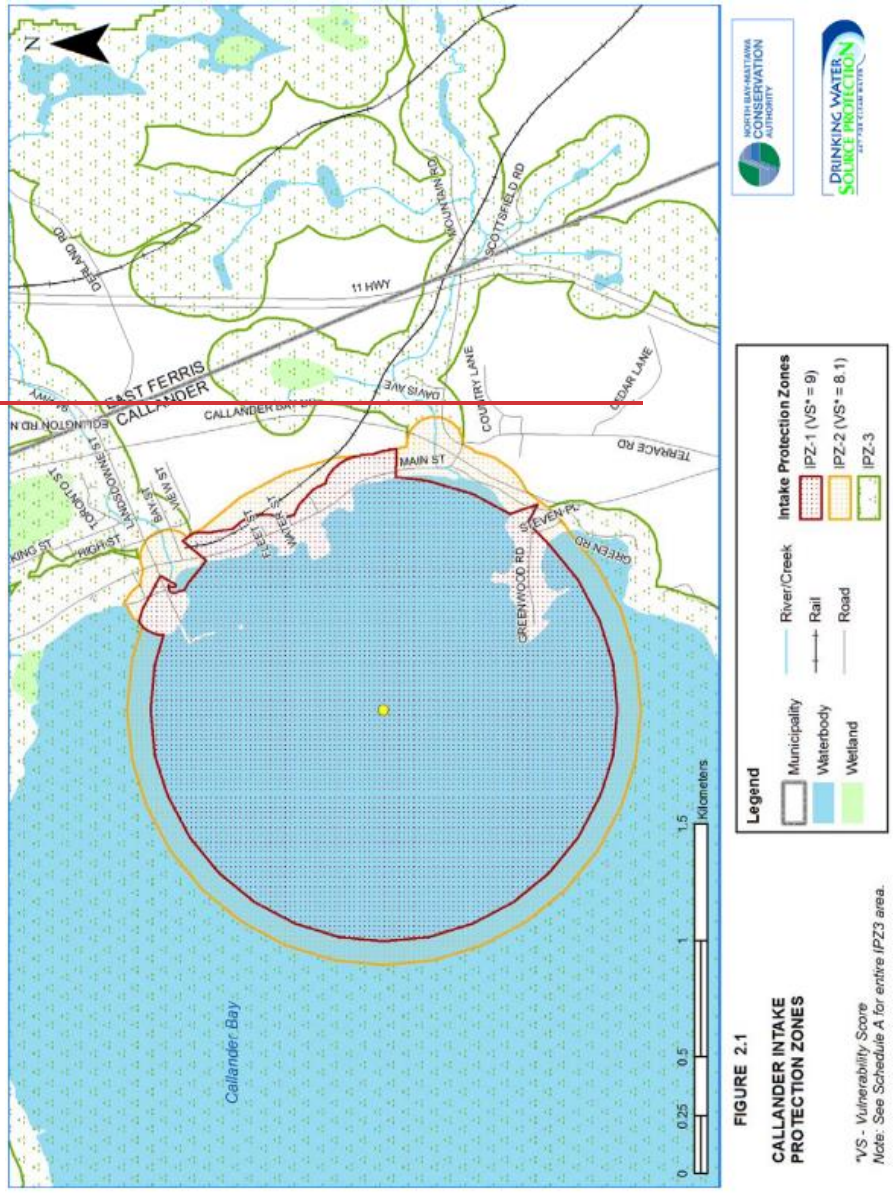
Figure 2-1. Callander Intake Protection Zones (IPZ-1 and IPZ-2)



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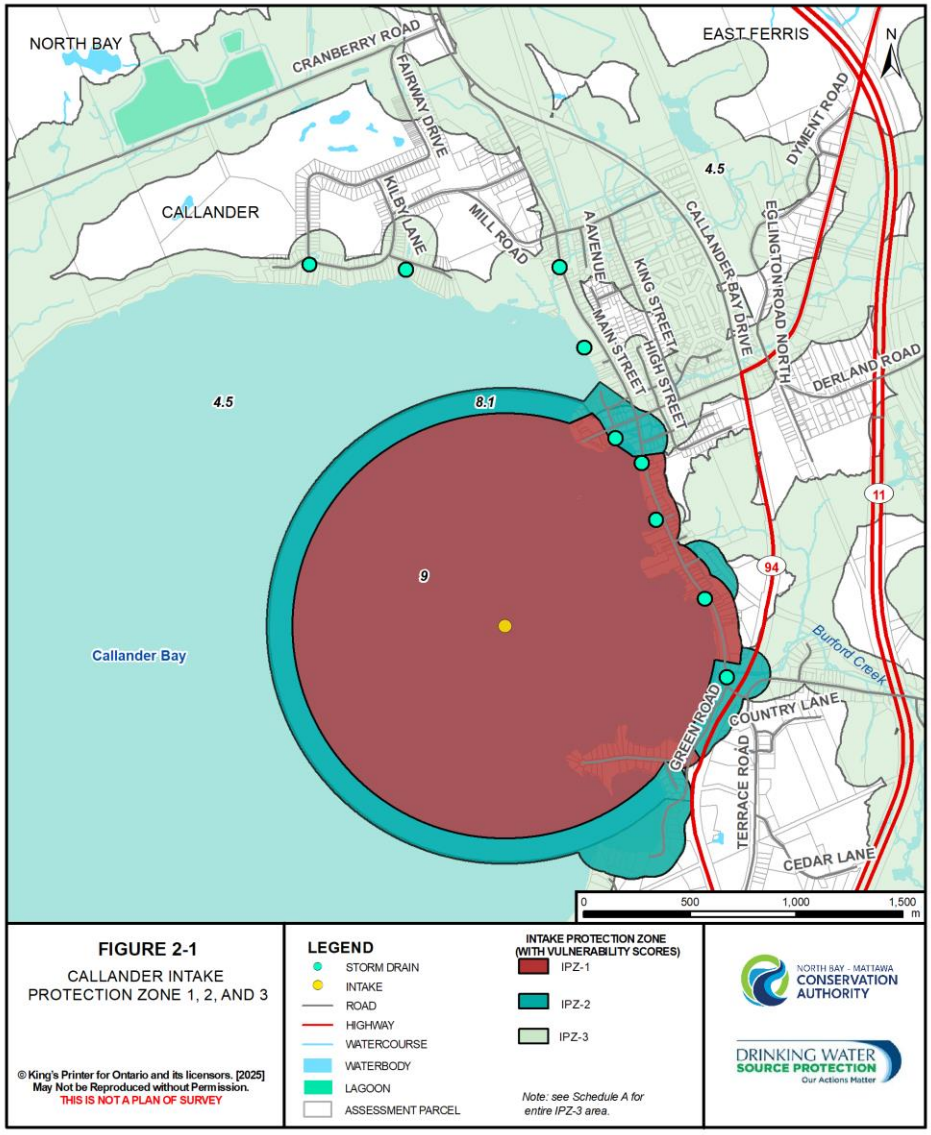

2.2 Callander Issue Contributing Area (IPZ-ICA) Policy Table

The Callander Issue Contributing Area (IPZ-ICA) includes the areas identified as Callander IPZ-1, IPZ-2 and IPZ-3. This area was delineated to address microcystin LR, a Drinking Water Issue related

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to phosphorus. All policies referenced in Table 2-2 address activities that have phosphorus as a circumstance. As well as policies specifically drafted for the IPZ-ICA, policies labelled SEW and WDS (sewage and waste disposal sites, respectively) are included because they address activities where phosphorus is a potential contaminant.

Table 2-2 shows which policies apply to the Callander Issue Contributing Area. See Table 2-1 for additional policies that apply to the Callander Intake Protection Zone. Figure 2-2 shows the entire IPZ-ICA. For larger mapping detail, see Schedule A: Additional Maps of Vulnerable Areas.

Table 2-2. Policy Summary – Callander Issue Contributing Area (IPZ-ICA)

Code	Policy Title	Implementing Body
ICA1	Education: Issue Contributing Area	Municipalities in ~~ICA~~ IPZ-ICA Conservation Authority
ICA2	Nutrient Management Act Tools to Implement Phosphorus Best Management in the Issue Contributing Area~~ICA~~	OMAF~~R~~A*
ICA3	Governing Research in the Issue Contributing Area	Municipality of Callander Conservation Authority
ICA4	Monitor Issue in Callander IPZ-ICA – Phosphorus Contribution Related to Microcystin LR	Municipality of Callander Conservation Authority
SEW1	Prescribed Instruments: Prohibition of New Sewage Works and Review of Existing Sewage Works of Certain Types	MECP ~~MOECC~~*
SEW2	Prescribed Instruments: Management of Sewage Works of Certain Types	MECP ~~MOECC~~*
SEW3	Recognize the ~~Implementation of the~~ *Ontario Building Code* Mandatory Maintenance Inspection Program	Conservation Authority
TPW1	Provide Notice of Transport Pathway	Municipality
WDS1	Prohibition and Management of Waste Disposal Sites under Part V of the *Environmental Protection Act*~~EPA~~	MECP ~~MOECC~~*
WDS2	Land Use Prohibition: Waste Disposal Sites	Municipality

*~~Acronyms for Implementing Bodies~~Note ~~MOECC~~MECP: Ministry of the Environment, Conservation and ~~Climate Change~~Parks, – OMAF~~R~~A: Ontario Ministry of Agriculture, Food and ~~Rural Affairs~~Agribusiness

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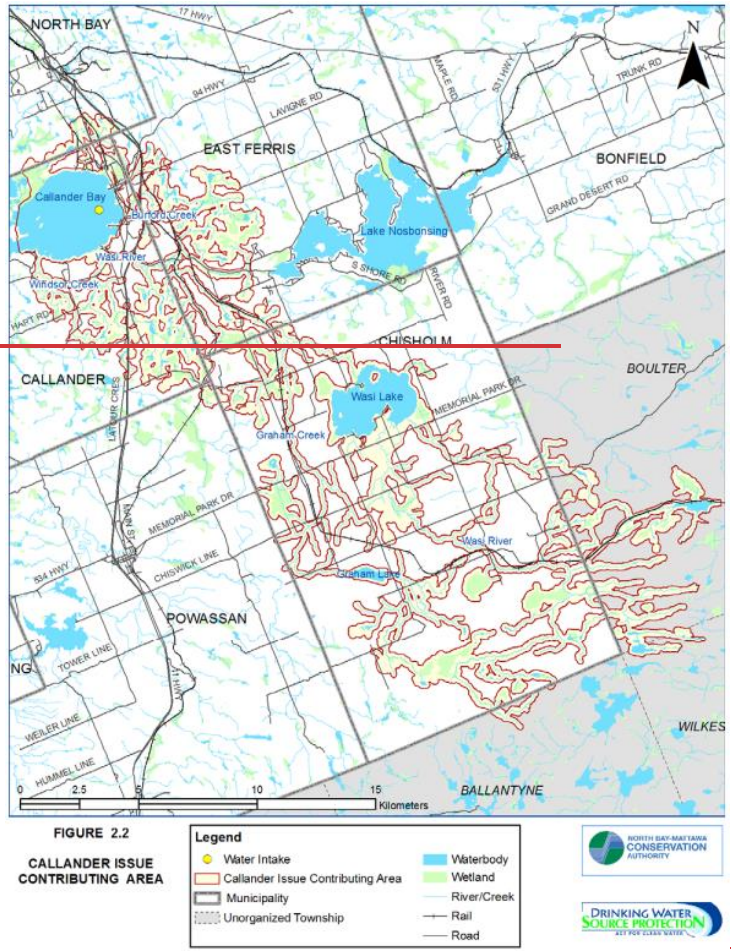
Figure 2-2. Callander Issue Contributing Area (IPZ-ICA)



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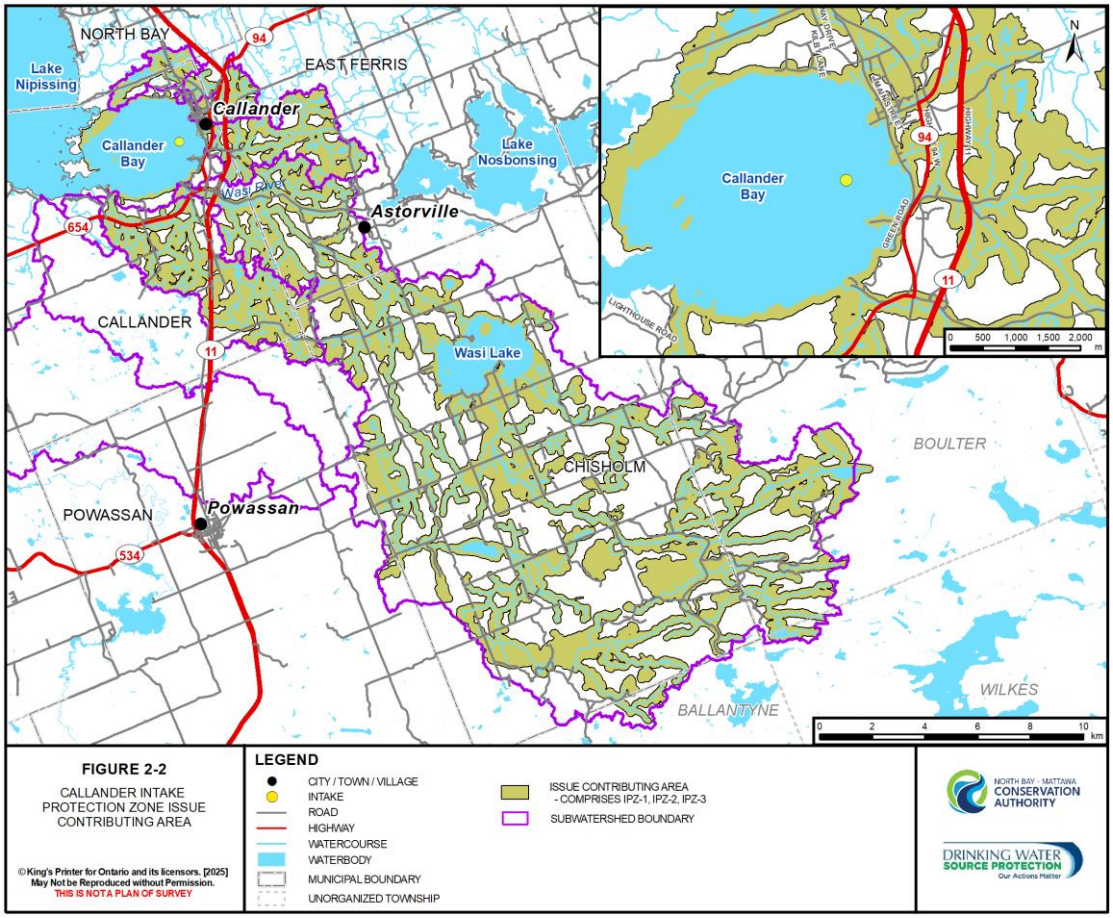

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2.3 Mattawa WHPA Policy Table

Mattawa's Wellhead Protection Area covers lands that are predominantly used for private residences. Most activities identified as potential significant threats are incompatible with the current zoning by-law~~,~~ and are thus largely prohibited from use.

Table 2-3 shows which policies apply to particular sections of the Wellhead Protection Area for the Town of Mattawa's wells. Figure 2-3 shows the Wellhead Protection Areas for Mattawa that were defined in the Assessment Report.

Table 2-3. Policy Summary – Mattawa Wellhead Protection Area (WHPA)

Code	Policy Title	WHPA	Implementing Body
~~AIR1~~	~~Aircraft De-Icing Chemical Management Plans~~	~~A, B~~	~~Airport Authority~~
FUL1	Land Use Prohibition: Handling and Storage of Fuel ~~Storage~~	WHPA-A, WHPA-B~~A, B~~	Municipality
FUL2	Management of Threat as a Condition of Other Approvals: Handling and Storage of Fuel~~Conditions for Approvals of Fuel Storage~~	WHPA-A, WHPA-B~~A, B~~	~~MOECC~~MECP* MNR~~F~~* MTO*
FUL3	Maintenance of Safety Information for Public by TSSA~~Continue to Make Safety Information Available~~	WHPA-A, WHPA-B~~A, B~~	TSSA*
FUL4	Education: Handling and Storage of Fuel	WHPA-A, WHPA-B~~A, B~~	Municipality
HAZ1	Land Use Screening: DNAPLs	WHPA-A, WHPA-B WHPA-C@	Municipality
HAZ2	Land Use Screening: Organic Solvents	WHPA-A, WHPA-B	Municipality
HAZ3~~1~~	Education: DNAPLs ~~& Organic Solvents~~	WHPA-A, WHPA-B ~~A, B,~~ WHPA-C@	Municipality
HAZ4	Education: Organic Solvents	WHPA-A, WHPA-B	Municipality
MAT1	Management of Threats in the Municipality of Mattawan ~~Township~~	WHPA-C (portion in Mattawan ~~Twp~~)	MNR~~F~~*

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Code	Policy Title	WHPA	Implementing Body
PIP1	Pipeline Planning to Consider Source Water	WHPA-A, WHPA-B (Significant) WHPA-C (Moderate) WHPA-D (Low)	Canada Energy Regulator Ontario Energy Board TSSA* Impact Assessment Agency
PIP2	Pipeline Design, Operation, and Maintenance	WHPA-A, WHPA-B (Significant) WHPA-C (Moderate) WHPA-D (Low)	Pipeline Owner
PIP3	Pipeline Notification	WHPA-A, WHPA-B (Significant) WHPA-C (Moderate) WHPA-D (Low)	Canada Energy Regulator Ontario Energy Board
PIP4	Pipeline Technical Work Costs	WHPA-A, WHPA-B (Significant) WHPA-C (Moderate) WHPA-D (Low)	Pipeline Owner
PIP5	Education: Liquid Hydrocarbon Pipeline	WHPA-A, WHPA-B (Significant) WHPA-C (Moderate) WHPA-D (Low)	Conservation Authority
PIP6	Mapping for Pipeline Emergency Planning	WHPA-A, WHPA-B (Significant) WHPA-C (Moderate) WHPA-D (Low)	MECP*
PST1	Pesticide Approvals to Consider Source Water~~Pesticide Act Approvals to Contain Conditions~~	~~A, B~~ WHPA-A, WHPA-B	~~MOECC~~MECP*
PST2	Land Use Prohibition: Pesticide Storage	WHPA-A, WHPA-B~~A, B~~	Municipality
PST3	Municipal Pesticide Management Plan	WHPA-A, WHPA-B~~A, B~~	Municipality
PST4	Education: Application of Pesticides	WHPA-A, WHPA-B~~A, B~~	Municipality
SAL1	~~Land Use Prohibition: Road Salt Storage~~Salt Management Plan	WHPA-A, WHPA-B~~A, B~~	MTO Municipality
SAL2	Education: Road Salt Application	WHPA-A, WHPA-B	Municipality

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Code	Policy Title	WHPA	Implementing Body
SAL3	Education: Road Salt Handling and Storage	WHPA-A, WHPA-B	Municipality
SEW1	Prescribed Instruments: Prohibition of New Sewage Works and Review of Existing Sewage Works of Certain Types	WHPA-A, WHPA-B~~A, B, C~~	~~MOECC~~MECP*
SEW2	Prescribed Instruments: Management of Sewage Works of Certain Types	WHPA-A, WHPA-B~~A, B~~	~~MECP~~MOECC*
SEW3	Recognize the *Ontario Building Code* Mandatory Maintenance Inspection Program	WHPA-A, WHPA-B~~A, B~~	Conservation Authority
SMF1	Management of Threat Posed by Land Application of Nutrients as a Condition of Other Approvals	WHPA-A, WHPA-B	OMAFA*
SMF2	Land Use Prohibition: Nutrient Handling & Storage and~~&~~ Livestock Activity	WHPA-A, WHPA-B ~~A, B~~	Municipality
SMF3~~1~~	Municipal Action: Prohibit ~~Land~~ Application of Commercial Fertilizer to Land~~Nutrients~~	WHPA-A, WHPA-B~~A, B~~	Municipality
SMF4	Education: Management of ASM and Livestock Grazing Activity	WHPA-A, WHPA-B	Municipality
SNO1	Land Use Prohibition: Consolidated Snow Storage Facilities	WHPA-A, WHPA-B~~A, B~~	Municipality
SNO2	Education: Snow Storage	WHPA-A, WHPA-B	Municipality
SVA1	Signage of Vulnerable Areas	WHPA-A, WHPA-B~~A, B~~	Municipality
THS1	Awareness of Vulnerable Areas and Response to Spills of Hazardous Substances~~Update Protocols for Spills Response~~	WHPA-A, WHPA-B~~A, B~~	Municipality ~~MOECC~~MECP*
TPW1	Provide Notice of Transport Pathway	WHPA-A, WHPA-B WHPA-C@, WHPA-D@	Municipality
WDS1	Prohibition and Management of Waste Disposal Sites under Part V of the *Environmental Protection Act*~~EPA~~	WHPA-A, WHPA-B~~A, B, C~~, WHPA-C	~~MOECC~~MECP*
WDS2	Land Use Prohibition: Waste Disposal Sites	WHPA-A, WHPA-B, WHPA-C~~A, B, C~~	Municipality
WDS3	Education: Hazardous Waste and PCBs	WHPA-A, WHPA-B~~A, B~~	Municipality

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@ Note: As noted, the policy does not apply in the portions of WHPA-C or WHPA-D that fall within the Municipality of Mattawan ~~Township~~.

* Note: MECP - Ministry of the Environment, Conservation and Parks; MNR~~F~~ - Ministry of Natural Resources ~~and Forestry~~; OMAF~~R~~A - Ontario Ministry of Agriculture, Food and ~~Rural Affairs~~Agribusiness; MTO - Ministry of Transportation; TSSA - Technical Standards and Safety Authority

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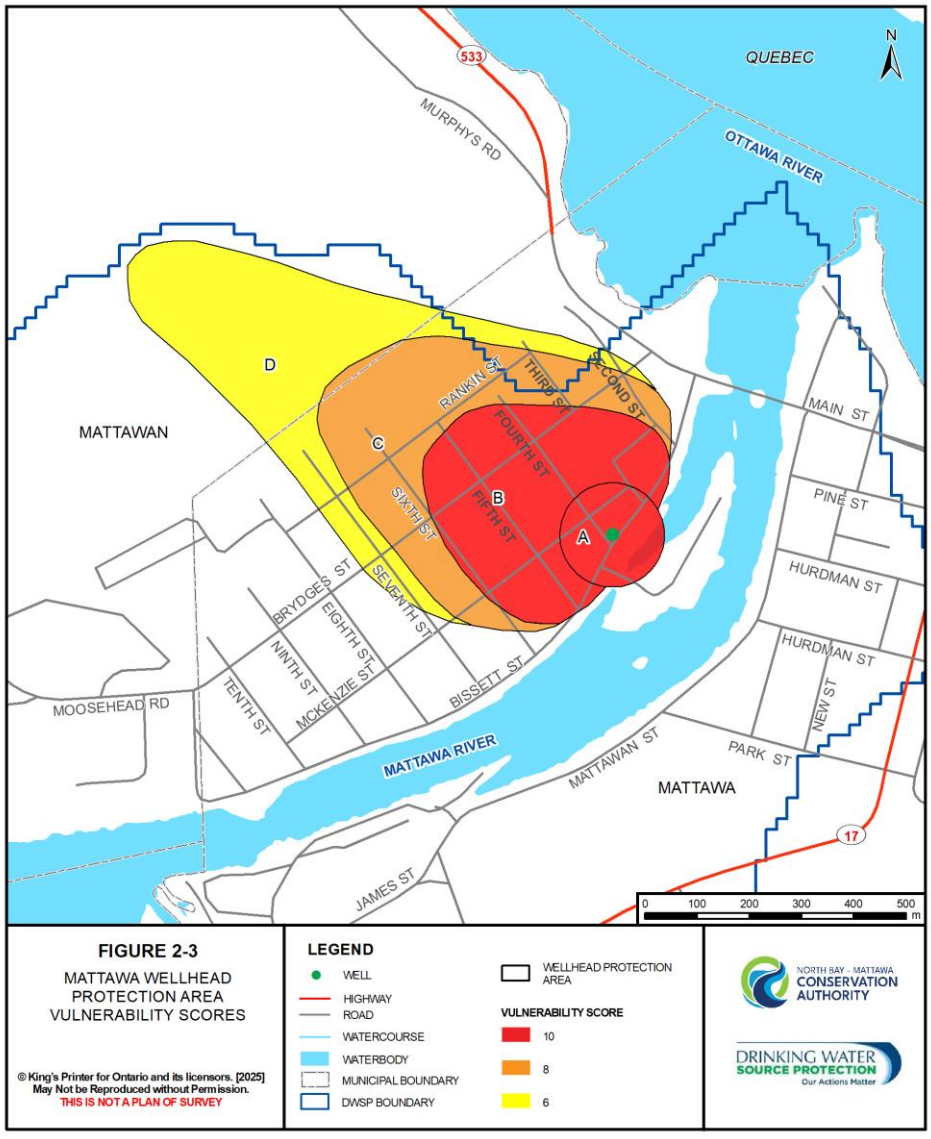
Figure 2-3. Mattawa Wellhead Protection Areas



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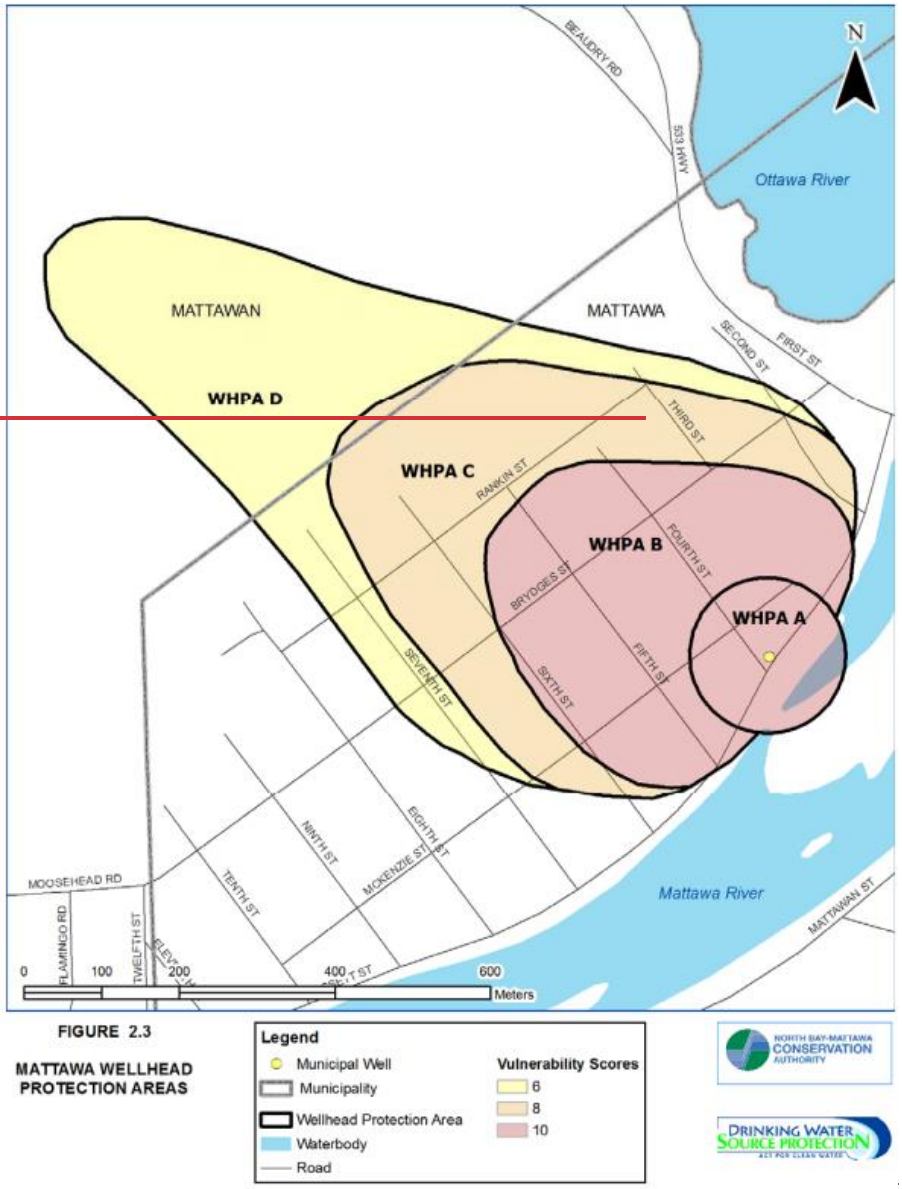

FIGURE 2.3

MATTAWA WELLHEAD PROTECTION AREAS

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2.4 North Bay IPZ Policy Table

North Bay's drinking water supply comes from Trout Lake, which allows for a deep intake. The technical studies determined that the vulnerability of the intake was low~~,~~ and was scored an "8". As a result, very few activities could be significant, which is why there are fewer policies for the North Bay Intake Protection Zone. A policy was written at the discretion of the Source Protection Committee for the moderate/low threats of Transportation of Hazardous Substances, as well as Hydrocarbon Pipelines.

Table 2-4 shows which policies apply to particular sections of the Intake Protection Zone. Figure 2-4 shows the Intake Protection Zones for North Bay that were defined in the Assessment Report. For larger mapping detail, see Schedule A: Additional Maps of Vulnerable Areas.

Table 2-4. Policy Summary – North Bay Intake Protection Zone (IPZ)

Code	Policy Title	IPZ	Implementing Body
PIP1	Pipeline Planning to Consider Source Water	IPZ-1 (Moderate) IPZ-2 (Moderate)	Canada Energy Regulator Ontario Energy Board TSSA* Impact Assessment Agency
PIP2	Pipeline Design, Operation, and Maintenance	IPZ-1 (Moderate) IPZ-2 (Moderate)	Pipeline Owner
PIP3	Pipeline Notification	IPZ-1 (Moderate) IPZ-2 (Moderate)	Canada Energy Regulator Ontario Energy Board
PIP4	Pipeline Technical Work Costs	IPZ-1 (Moderate) IPZ-2 (Moderate)	Pipeline Owner
PIP5	Education: Liquid Hydrocarbon Pipeline	IPZ-1 (Moderate) IPZ-2 (Moderate)	Conservation Authority
PIP6	Mapping for Pipeline Emergency Planning	IPZ-1 (Moderate) IPZ-2 (Moderate)	MECP*
SEW1	Prescribed Instruments: Prohibition of New Sewage Works and Review of Existing Sewage Works of Certain Types	IPZ-1	~~MOECC~~MECP*
SEW2	Prescribed Instruments: Management of Sewage Works of Certain Types	IPZ-1	~~MOECC~~MECP*
SMF1	Management of Threat Posed by Land Application of Nutrients as a Condition of Other Approvals	IPZ-1	OMAFA*
SMF2	Land Use Prohibition: Nutrient Handling & Storage and~~&~~ Livestock Activity	IPZ-1	Municipality

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Code	Policy Title	IPZ	Implementing Body
SMF4	Education: Application of ASM and Livestock Grazing Activity	IPZ-1	Municipality
SVA1	Signage of Vulnerable Areas	IPZ-1	Municipality MTO*
THS2	Awareness of Vulnerable Areas and Response to Spills of Hazardous Substances – MOD/LOW~~Update Protocols for Spills Response (Mod/Low)~~	IPZ-1, IPZ-2	Municipality MECP*
TPW1	Provide Notice of Transport Pathway	IPZ-1, IPZ-2, IPZ-3	Municipality
WDS1	Prohibition and Management of Waste Disposal Sites under Part V of the *Environmental Protection Act*	IPZ-1	MECP*
WDS2	Land Use Prohibition: Waste Disposal Sites	IPZ-1	Municipality

*Note: TSSA - Technical Standards and Safety Authority; MECP - Ministry of the Environment, Conservation and Parks; OMAFA - Ontario Ministry of Agriculture, Food and Agribusiness; MTO - Ministry of Transportation ~~MOECC: Ministry of Environment and Climate Change~~

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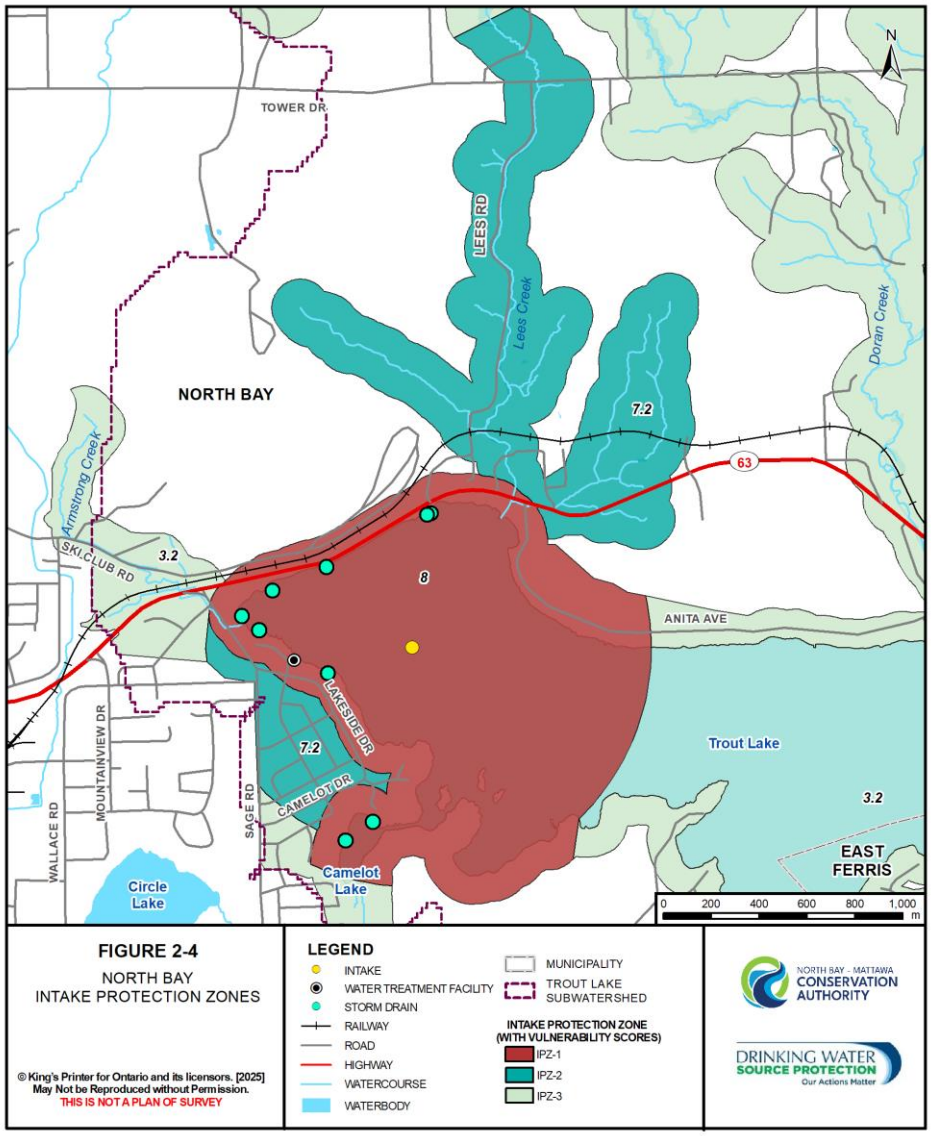
Figure 2-4. North Bay Intake Protection Zones IPZ-1 and IPZ-2



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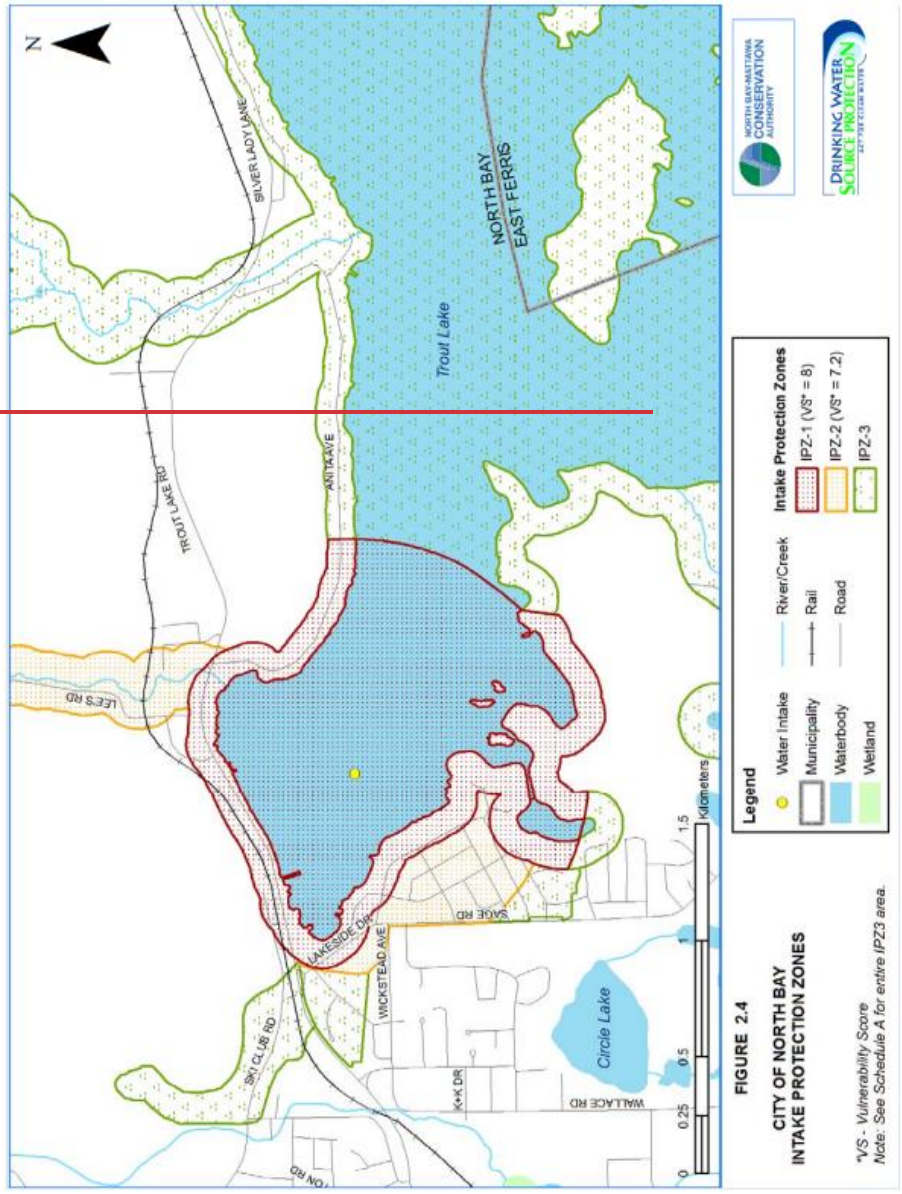

FIGURE 2.4
CITY OF NORTH BAY
INTAKE PROTECTION ZONES

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2.5 Powassan WHPA Policy Table

Powassan's Wellhead Protection Area (WHPA) covers mostly open space and a segment of Highway 11. There are two private residences within WHPA-A. The local zoning by-law would not currently permit many of the land uses associated with significant threat activities.

Table 2-5 shows which policies apply to particular sections of the Wellhead Protection Area. Figure 2-5 shows the Powassan Wellhead Protection Areas that were defined in the Assessment Report (AR).

Table 2-5. Policy Summary – Powassan Wellhead Protection Area (WHPA)

Code	Policy Title	WHPA	Implementing Body
~~AIR1~~	~~Aircraft De-icing Chemical Management Plans~~	~~A, B1~~	~~Airport Authority~~
FUL1	Land Use Prohibition: Handling and Storage of Fuel ~~Storage~~	WHPA-A, WHPA-B~~1~~	Municipality
FUL2	Management of Threat as a Condition of Other Approvals: Handling and Storage of Fuel~~Conditions for Approvals of Fuel Storage~~	WHPA-A, WHPA-B ~~A, B1~~	MECP* MNR~~F~~* MTO*
FUL3	~~Continue to Make Safety Information Available~~Maintenance of Safety Information for Public by TSSA	WHPA-A, WHPA-B ~~A, B1~~	TSSA*
FUL4	Education: Handling and Storage of Fuel	WHPA-A, WHPA-B ~~A, B1~~	Municipality
HAZ1	Land Use Screening: DNAPLs	WHPA-A, WHPA-B, WHPA-C	Municipality
HAZ2	Land Use Screening: Organic Solvents	WHPA-A, WHPA-B	Municipality
HAZ3~~1~~	Education: DNAPLs ~~& Organic Solvents~~	WHPA-A, WHPA-B, ~~A, B, C~~ WHPA-C	Municipality
HAZ4	Education: Organic Solvents	WHPA-A, WHPA-B	Municipality
PIP1	Pipeline Planning to Consider Source Water	WHPA-A, WHPA-B (Significant) WHPA-B, WHPA-C (Moderate) WHPA-B, WHPA-C, WHPA-D (Low)	Canada Energy Regulator Ontario Energy Board TSSA* Impact Assessment Agency

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Code	Policy Title	WHPA	Implementing Body
PIP2	Pipeline Design, Operation, and Maintenance	WHPA-A, WHPA-B (Significant) WHPA-B, WHPA-C (Moderate) WHPA-B, WHPA-C, WHPA-D (Low)	Pipeline Owner
PIP3	Pipeline Notification	WHPA-A, WHPA-B (Significant) WHPA-B, WHPA-C (Moderate) WHPA-B, WHPA-C, WHPA-D (Low)	Canada Energy Regulator Ontario Energy Board
PIP4	Pipeline Technical Work Costs	WHPA-A, WHPA-B (Significant) WHPA-B, WHPA-C (Moderate) WHPA-B, WHPA-C, WHPA-D (Low)	Pipeline Owner
PIP5	Education: Liquid Hydrocarbon Pipeline	WHPA-A, WHPA-B (Significant) WHPA-B, WHPA-C (Moderate) WHPA-B, WHPA-C, WHPA-D (Low)	Conservation Authority
PIP6	Mapping for Pipeline Emergency Planning	WHPA-A, WHPA-B (Significant) WHPA-B, WHPA-C (Moderate) WHPA-B, WHPA-C, WHPA-D (Low)	MECP*
PST1	Pesticide Approvals to Consider Source Water~~Pesticide Act Approvals to Contain Conditions~~	WHPA-A, WHPA-B ~~A, B1~~	~~MOECC~~MECP*
PST2	Land Use Prohibition: Pesticide Storage	WHPA-A, WHPA-B ~~A, B1~~	Municipality
PST3	Municipal Pesticide Management Plan	WHPA-A, WHPA-B ~~A, B1~~	Municipality
PST4	Education: Application of Pesticides	WHPA-A, WHPA-B ~~A, B1~~	Municipality

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Code	Policy Title	WHPA	Implementing Body
SAL1	~~Land Use Prohibition: Road Salt Storage~~Salt Management Plan	WHPA-A, WHPA-B ~~A, B1~~	MTO Municipality
SAL2	Education: Road Salt Application	WHPA-A, WHPA-B	Municipality
SAL3	Education: Road Salt Handling and Storage	WHPA-A, WHPA-B	Municipality
SEW1	Prescribed Instruments: Prohibition of New Sewage Works and Review of Existing Sewage Works of Certain Types	WHPA-A, WHPA-B ~~A, B1, B2, B4, C1~~	~~MOECC~~MECP*
SEW2	Prescribed Instruments: Management of Sewage Works of Certain Types	WHPA-A, WHPA-B ~~A, B1~~	~~MOECC~~MECP*
SEW3	Recognize the *Ontario Building Code* Mandatory Maintenance Inspection Program	WHPA-A, WHPA-B ~~A, B1~~	Conservation Authority
SMF1	Management of Threat Posed by Land Application of Nutrients as a Condition of Other Approvals	WHPA-A, WHPA-B	OMAFA*
SMF2	Land Use Prohibition: Nutrient Handling & Storage and Livestock Activity	WHPA-A, WHPA-B ~~A, B1~~	Municipality
SMF3~~1~~	Municipal Action: Prohibit ~~Land~~ Application of ~~Nutrients~~ Commercial Fertilizer to Land	WHPA-A, WHPA-B~~A, B~~	Municipality
SMF4	Education: Management of ASM and Livestock Grazing Activity	WHPA-A, WHPA-B	Municipality
SNO1	Land Use Prohibition: Consolidated Snow Storage Facilities	WHPA-A, WHPA-B ~~A, B1~~	Municipality
SNO2	Education: Snow Storage	WHPA-A, WHPA-B	Municipality
SVA1	Signage of Vulnerable Areas	WHPA-A, WHPA-B ~~A, B1~~	MTO* Municipality
THS1	Awareness of Vulnerable Areas and Response to Spills of Hazardous Substances~~Update Protocols for Spills Response~~	WHPA-A, WHPA-B ~~A, B1~~	Municipality MECP*
TPW1	Provide Notice of Transport Pathway	WHPA-A, WHPA-B, WHPA-C, WHPA-D	Municipality

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Code	Policy Title	WHPA	Implementing Body
WDS1	Prohibition and Management of Waste Disposal Sites under Part V of the *Environmental Protection Act*~~EPA~~	WHPA-A, WHPA-B, WHPA-C ~~A, B1, B2, B4, C1~~	MECP*
WDS2	Land Use Prohibition: Waste Disposal Sites	WHPA-A, WHPA-B, WHPA-C ~~A, B1, B2, B4, C1~~	Municipality
WDS3	Education: Hazardous Waste & PCBs	WHPA-A, WHPA-B ~~A, B1~~	Municipality

* Note: MECP - Ministry of the Environment, Conservation and Parks; MNR - Ministry of Natural Resources; MTO - Ministry of Transportation; OMAFA - Ontario Ministry of Agriculture, Food and Agribusiness; TSSA - Technical Standards and Safety Authority~~*Acronyms for Implementing Bodies MNRF: Ministry of Natural Resources and Forestry MTO: Ministry of Transportation MOECC: Ministry of Environment and Climate Change TSSA: Technical Standards and Safety Authority~~

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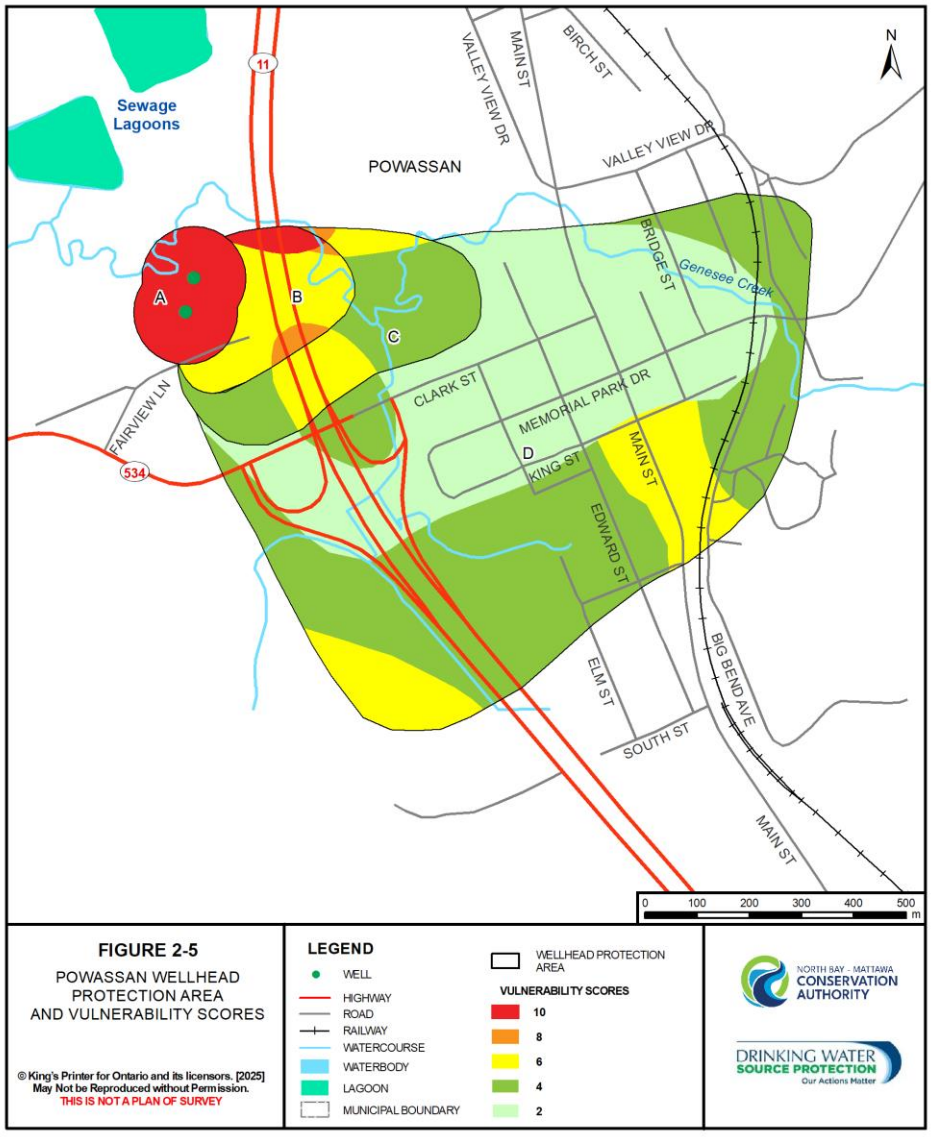
Figure 2-5. Powassan Wellhead Protection Areas



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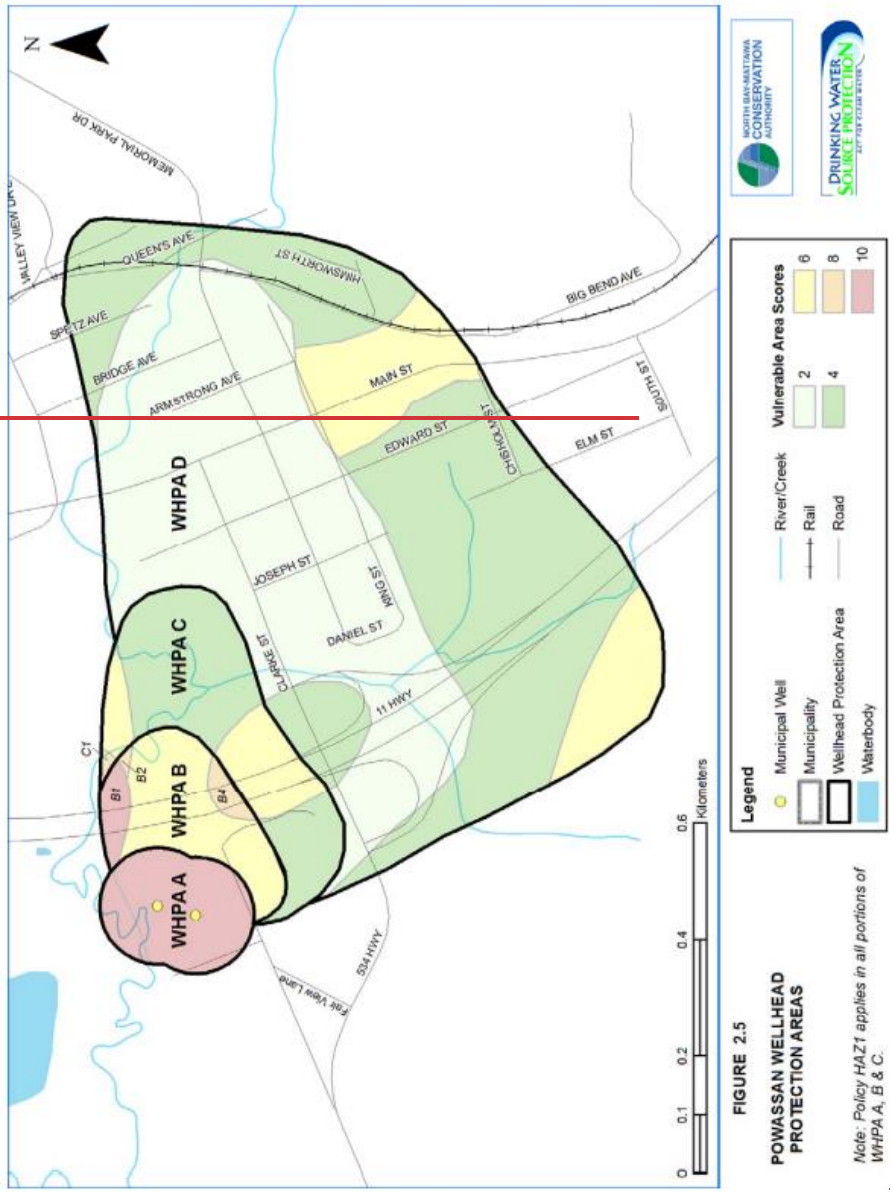

FIGURE 2.5
POWASSAN WELLHEAD PROTECTION AREAS

Note: Policy HAZ1 applies in all portions of WHPA A, B & C.

2.6 South River IPZ Policy Table

South River's Intake Protection Zone 1 includes areas within the Village of South River, Machar Township and Laurier Township. The latter lacks municipal organization. Table 2-6 should be

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referenced to determine which policies apply to particular sections of the Intake Protection Zone. The implementing body and the specific IPZ are also identified. A map of the vulnerable areas is provided as Figure 2-6 for reference. For larger mapping detail, see Schedule A: Additional Maps of Vulnerable Areas.

Table 2-6. Policy Summary – South River Intake Protection Zone (IPZ)

Code	Policy Title	IPZ	Implementing Body
~~AIR1~~	~~Aircraft De-icing Chemical Management Plans~~	~~IPZ-1~~	~~Airport Authority~~
FUL1	Land Use Prohibition: Handling and Storage of Fuel	IPZ-1@	Municipality
FUL2	Management of Threat as a Condition of Other Approvals: Handling and Storage of Fuel	IPZ-1	MECP*
FUL3	Maintenance of Safety Information for Public by TSSA	IPZ-1	TSSA*
FUL4	Education: Handling and Storage of Fuel	IPZ-1@	Municipality
HAZ1	Land Use Screening: DNAPLs	IPZ-1@	Municipality
HAZ3	Education: DNAPLs	IPZ-1@	Municipality
LAU1	Education: Threat Activities in Laurier Township	IPZ-1 (portion in Laurier Twp)	~~Village of South River~~Conservation Authority
PIP1	Pipeline Planning to Consider Source Water	IPZ-1 (Significant) IPZ-3 (Low)	Canada Energy Regulator Ontario Energy Board TSSA* Impact Assessment Agency
PIP2	Pipeline Design, Operation, and Maintenance	IPZ-1 (Significant) IPZ-3 (Low)	Pipeline Owner
PIP3	Pipeline Notification	IPZ-1 (Significant) IPZ-3 (Low)	Canada Energy Regulator Ontario Energy Board
PIP4	Pipeline Technical Work Costs	IPZ-1 (Significant) IPZ-3 (Low)	Pipeline Owner
PIP5	Education: Liquid Hydrocarbon Pipeline	IPZ-1 (Significant) IPZ-3 (Low)	Conservation Authority

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Code	Policy Title	IPZ	Implementing Body
PIP6	Mapping for Pipeline Emergency Planning	IPZ-1 (Significant) IPZ-3 (Low)	MECP*
PST1	Pesticide Approvals to Consider Source Water~~Pesticide Act Approvals to Contain Conditions~~	IPZ-1	MECP ~~MOECC~~*
PST2	Land Use Prohibition: Pesticide Storage	IPZ-1@	Municipality
PST3	Municipal Pesticide Management Plan	IPZ-1@	Municipality
PST4	Education: Application of Pesticides	IPZ-1@	Municipality
SAL1	~~Land Use Prohibition: Road Salt Storage~~Salt Management Plan	IPZ-1@	MTO Municipality
SAL2	Education: Road Salt Application	IPZ-1@	Municipality
SAL3	Education: Road Salt Handling and Storage	IPZ-1@	Municipality
SEW1	Prescribed Instruments: Prohibition of New Sewage Works and Review of Existing Sewage Works of Certain Types	IPZ-1	MECP~~MOECC~~*
SEW2	Prescribed Instruments: Management of Sewage Works of Certain Types	IPZ-1	~~MOECC~~MECP*
SMF1	Management of Threat Posed by Land Application of Nutrients as a Condition of Other Approvals	IPZ-1	OMAFA*
SMF2	Land Use Prohibition: Nutrient Handling & Storage ~~&~~and Livestock Activity	IPZ-1@	Municipality
SMF3~~1~~	Municipal Action: Prohibit ~~Land~~ Application of Commercial Fertilizer to Land~~Nutrients~~	IPZ-1@	Municipality
SMF4	Education: Management of ASM and Livestock Grazing Activity	IPZ-1@	Municipality
SNO1	Land Use Prohibition: Consolidated Snow Storage Facilities	IPZ-1@	Municipality
SNO2	Education: Snow Storage	IPZ-1@	Municipality
SVA1	Signage of Vulnerable Areas	IPZ-1@	~~MTO*~~ Municipality

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Code	Policy Title	IPZ	Implementing Body
THS1	Awareness of Vulnerable Areas and Response to Spills of Hazardous Substances~~Update Protocols for Spills Response~~	IPZ-1~	Municipality ~~MOECC~~MECP*
TPW1	Provide Notice of Transport Pathway	IPZ-1@, IPZ-3@	Municipality
WDS1	Prohibition and Management of Waste Disposal Sites under Part V of the *Environmental Protection Act*	IPZ-1	MECP*
WDS2	Land Use Prohibition: Waste Disposal Sites	IPZ-1@	Municipality
~~WDS3~~	~~Education Hazardous Waste & PCBs~~	~~1~~	~~Municipality~~

@ Note: ~~*~~As noted in each policy, these policies do not apply in the portions of IPZ-1 that fall within Laurier Township.

~ Note: ~~**~~Portions of the policy that specify responsibilities of a Municipality are not applicable in Laurier Township.

*~~**~~ Note: ~~MOECC: Ministry of Environment and Climate Change~~ MECP - Ministry of the Environment, Conservation and Parks; MTO – Ministry of Transportation; OMAFA - Ontario Ministry of Agriculture, Food and Agribusiness; TSSA – Technical Standards and Safety Authority.

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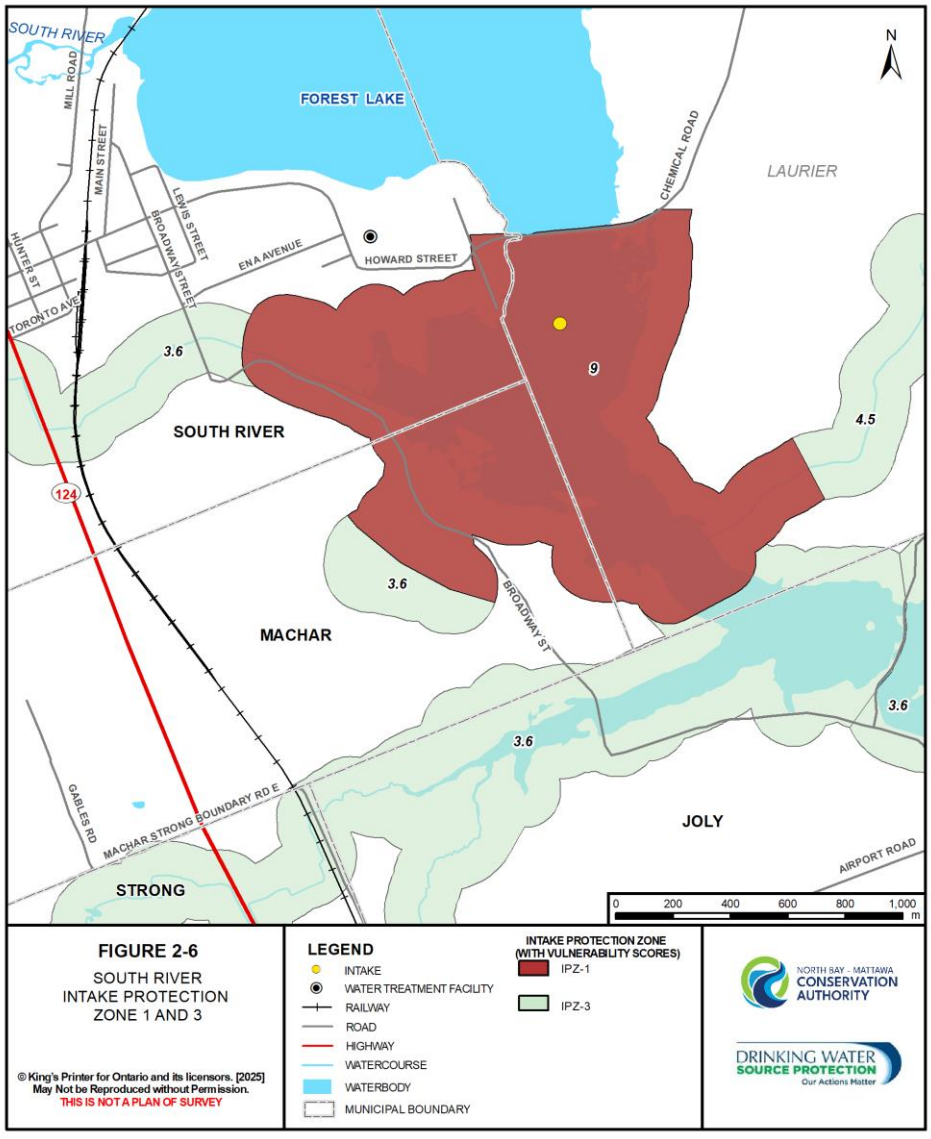
Figure 2-6. South River Intake Protection Zones



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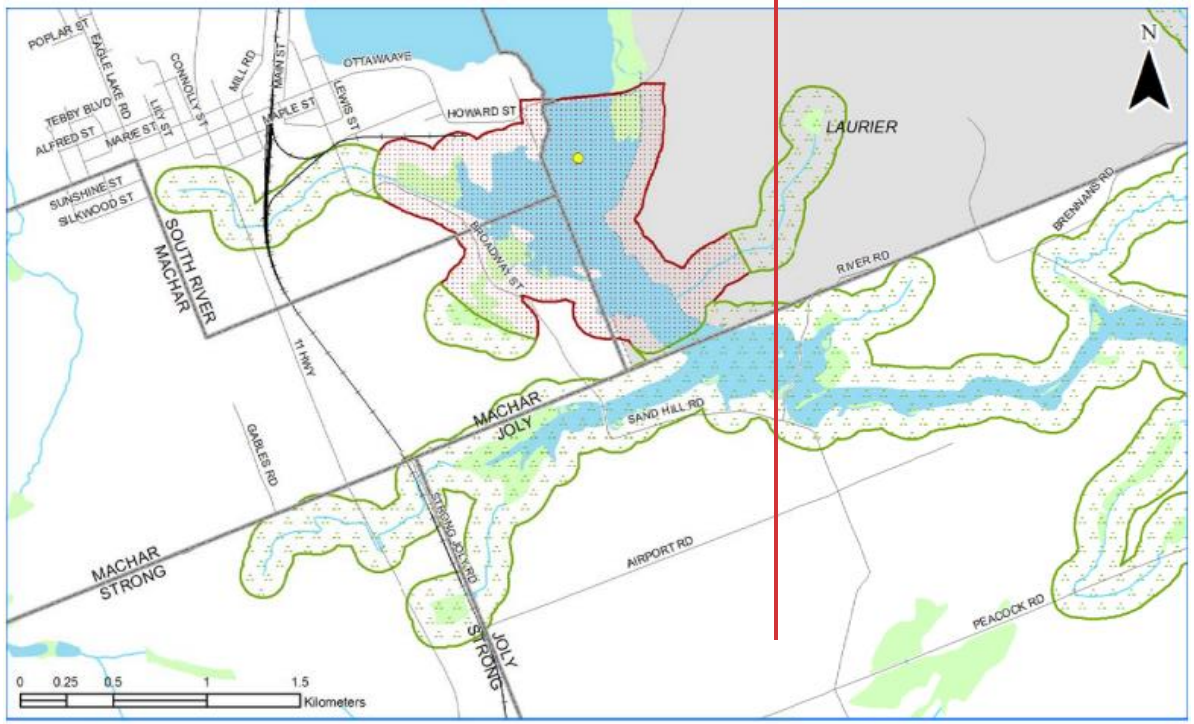

FIGURE 2.6

SOUTH RIVER INTAKE PROTECTION ZONES

**VS - Vulnerability Score*
Note: See Schedule A for entire IPZ3 area.

Legend

- Municipality
- Unorganized Township
- Waterbody
- Wetland
- River/Creek
- Rail
- Road

Intake Protection Zones

- IPZ-1 (VS* = 9)
- IPZ-3

NORTH BAY-MATTAWA CONSERVATION AUTHORITY

DRINKING WATER SOURCE PROTECTION

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2.7 Highly Vulnerable Aquifer Policy Table

In addition to the vulnerable areas surrounding the municipal wellheads and intakes, the geological features of the watershed also mean that much of the area is also classified as a Highly Vulnerable Aquifer (HVA). The vulnerability of any threat in a HVA is low, however several policies include where a threat is low risk.

Table 2-7. Policy Summary – Highly Vulnerable Area (HVA)

Code	Policy Title	Vulnerable Area	Implementing Body
PIP1	Pipeline Planning to Consider Source Water	HVA (Low)	Canada Energy Regulator Ontario Energy Board TSSA* Impact Assessment Agency
PIP2	Pipeline Design, Operation, and Maintenance	HVA (Low)	Pipeline Owner
PIP3	Pipeline Notification	HVA (Low)	Canada Energy Regulator Ontario Energy Board
PIP4	Pipeline Technical Work Costs	HVA (Low)	Pipeline Owner
PIP5	Education: Liquid Hydrocarbon Pipeline	HVA (Low)	Conservation Authority
PIP6	Mapping for Pipeline Emergency Planning	HVA (Low)	MECP*
SAL1	Salt Management Plan	HVA (Low)	MTO Municipalities

* Note: MECP - Ministry of the Environment, Conservation and Parks; MTO – Ministry of Transportation; OMAFA - Ontario Ministry of Agriculture, Food and Agribusiness; TSSA – Technical Standards and Safety Authority.

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Chapter 3: Policy Tools

The goal of a Source Protection Plan (SP Plan) is to manage or eliminate existing and future activities that could be significant drinking water threats. In most cases, property owners are able to manage significant threats to reduce the risk, which safely allows the activity to continue. The *Clean Water Act* 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
- Specified Actions
- Incentives
- Education and Outreach
- Other Approaches

3.1 Land Use Planning

Municipalities can use zoning by-laws and official plans to direct new development that could pose a threat to drinking water away from vulnerable areas and into more appropriate locations. For example, the Municipality could use land use planning to ban waste disposal sites or chemical storage facilities from areas near municipal wells, or upstream of a river intake. Land use planning policies can be general or specific (e.g., prohibit all commercial uses in a specified area or only specific commercial uses). Since land use planning is part of the normal operations of a Municipality, this tool is used frequently within this SP Plan and the Municipality is required to comply.

Policies in this SP Plan that use Land Use Planning ~~all~~ screen or prohibit particular land uses associated with the activities identified in the respective policies. ~~Since t~~The policies in this plan come into effect on the Effective Date of the SP Plan~~, any prohibition must start being enforced immediately by the municipality~~. The Municipality should pass appropriate by-laws as per section 34(1) of the *Planning Act* to enforce policies that use land use planning. Required updates to official plans as per section 26 of the *Planning Act* to recognize these changes may be made either at the next scheduled official plan update or sooner if the Municipality so chooses. Because the prohibited activities are limited and none were occurring at the time of preparation of the SP Plan, no provisions are included for grandfathered uses or applications in process.

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3.2 Prescribed Instruments

A "Prescribed Instrument" refers to a permit or other legal document issued by the provincial government that specifies the conditions under which an activity may take place. General Regulation (O. Reg. 287/07, s. 1.0.1) lists specific prescribed instruments relevant to source protection planning.

Those instruments are enabled under the following Ontario Legislation:

Aggregate Resources Act

- Site plans included in applications for licenses
- Licenses to remove aggregate from pits or quarries
- Site plans accompanying applications for wayside permits
- Wayside permits to operate pits or quarries
- Site plans included in applications for aggregate permits
- Aggregate permits to excavate aggregate or topsoil

Environmental Protection Act

- Approvals for the use, operation, establishment, alteration, enlargement or extension of waste disposal sites or waste management systems
- Approvals issued for

i. the use, operation, establishment, alteration, enlargement or extension of waste disposal sites or waste management systems, or

ii. the establishment, alteration, extension or replacement of new or existing sewage works

- Renewable energy approvals

Nutrient Management Act

- Nutrient Management Strategies or Nutrient Management Plans
- Non-Agricultural Source Material (NASM) Plans

Ontario Water Resources Act

- Permits to take water
- Approvals to establish, alter, extend or replace new or existing sewage works

Pesticides Act

- Pesticide permits for land exterminations, structural exterminations and water exterminations

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Safe Drinking Water Act

- Drinking water works permits
- Municipal drinking water licences

These instruments contain provisions to protect human health and/or the environment, which can be amended to protect source water. For example, the *Nutrient Management Act* requires farms (under certain circumstances) to prepare a Nutrient Management Plan (NMP) or Nutrient Management Strategy (NMS). A policy could specify that the Ontario Ministry of Agriculture, Food and ~~Rural Affairs~~Agribusiness (OMAFA) should review the NMP/NMS to ensure that it is sufficient to protect sources of drinking water.

Regulatory duplication is avoided by designating that a threat can be managed using an existing instrument, which allows threat activities to be managed within a familiar framework. The Source Protection Committee identified some situations where other policy tools were required to address significant drinking water threats in order to fill identified gaps in the existing regulations or to intervene earlier in the process to protect the source water from existing activities.

3.3 Part IV Powers (Sections 57, 58 and 59 of Clean Water Act)

Part IV of the *Clean Water Act* provides new tools to regulate drinking water threats through either prohibition or management of activities as described in sections 57, 58 and 59. Policies using these tools must be enforced by a Risk Management Official.

This SP Plan does not use Part IV Powers.

Prohibition (s.57)

Prohibition under Part IV of the *Clean Water Act* is a tool to prevent significant threat activities from occurring in vulnerable areas. Although this tool is not used in this SP Plan, this Plan does prohibit some activities using other approaches such as land use planning or specified actions.

Risk Management Plans (s.58)

A Risk Management Plan is a site-specific agreement between the local Risk Management Official (RMO) and a person engaged in an activity(ies). A Risk Management Plan can be written to address all designated threats on a property and only applies to the portion of the property where the threat is significant. In addition to imposing new conditions, a Risk Management Plan may recognize existing practices that decrease the risk of contamination.

Restricted Land Uses (s.59)

Restricted Land Uses is a policy tool that complements either a s.57 prohibition or a s.58 requirement for Risk Management Plans. By specifying a land use in the vulnerable area for the purpose of s. 59 (restricted land uses), municipal staff are alerted to refer applications for certain types of development to the Risk Management Official for review. The intention is to alert applicants of potential requirements or restrictions early in the development process.

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Note that the use of the term “Restricted Land Uses” is different in the *Clean Water Act* than the usage in the *Planning Act*.

3.4 Specified Actions

“Specified Actions” is a policy tool that directs a public body or organization to take certain steps to achieve the objectives of a SP Plan. Such policies must identify the body or organization that will be undertaking the action, the restrictions or actions that are necessary, and may provide some details on how this action may be undertaken. Examples include establishment of stewardship programs, promotion of best management practices, pilot programs to investigate new approaches to protect source water, and research initiatives. Municipalities can be directed to enact by-laws using their powers under the *Municipal Act*. For example, municipalities have the authority to enact by-laws for specific matters within their jurisdiction.

3.5 Incentive Programs

Source Protection Committees may request that financial incentives be offered to persons engaged in an activity in order to achieve the objectives of the SP Plan. Such programs can be used as a complementary policy for all threats or a specific threat.

No policies in this SP Plan request incentive programs.

3.6 Education and Outreach

Education and outreach is an important component of source water protection to inform either the general public or a specific group regarding some aspects of protecting source water. Information should be provided in such a way that individuals are both more aware of the threats to source water and are equipped to take action. Education and outreach may help the public understand why certain policies apply within their area. A well-planned education and outreach campaign can increase the effectiveness of other policy tools. Education and outreach policies can be required to be implemented by any public body, or can be delegated or shared between organizations.

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Chapter 4 – Policy Background Information

Commented [AM1]: This is a new chapter to the SP Plan. Background information was previously part of the Policy chapter (now Chapter 5).

Information about the circumstances under which an activity may be subject to a particular policy is summarized briefly below. Reference should be made to the MECP's Tables of Drinking Water Threats (MECP, 2021) for the complete and regulatory requirements. Further information about local vulnerable areas and activities can be found in the Assessment Report. A rationale for each SP Plan policy is provided in the Explanatory Document.

The suite of SP Plan policies can be found in Chapter 5. Each policy is identified by a unique code as described below. All policies are prefaced by an intent statement that summarizes the goals of the policy. The intent statements are provided for interpretive purposes and are not legally binding. Monitoring policies are identified to assist in reporting of implementation progress on an annual basis.

The section marked "Policy" in each policy in Chapter 5 of the SP Plan, along with the Legal Effect statements in Appendix A, are the legally binding portions of this SP Plan.

4.1 Policy Coding

~~Policy codes and titles refer to the list of Prescribed Activities (Section 1.3):~~
Policy codes have been assigned to each group of drinking water threat activities and are described in Table 4-1 below. One or more policies may apply to a group of activities. These activities include prescribed threats under O. Reg. 287/07, local threats as approved by the MECP Director and drinking water issues as identified in the Assessment Report.

~~Policy Code Example SAL1: SAL is the policy code for the Road Salt policy group. 1 refers to the first policy in this policy group.~~

SAL1 is an example of a policy code reference used in this SP Plan, where:

- ***SAL*** is the Policy Code of the road salt policy grouping; and
- ***1*** refers to the first policy in this policy grouping

Table 4-1. Policy Coding

Code	Activity or Concept Addressed in Policy Group
AIR	Management of Aircraft De-Icing Chemicals (Activity 18)
FUL	Fuel (Activity 15)
HAZ	DNAPLs (Activity 16) and Organic Solvents (Activity~~ies 16 &~~ 17)

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Code	Activity or Concept Addressed in Policy Group
ICA	Issue Contributing Area Policies (Activities with Phosphorus Contribution as a circumstance)
LAU	Laurier Township (Unorganized Territory) (Activities 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, & and 21)
MAT	Policy Respecting Lands in the Municipality of Mattawan ~~Township~~ (Activities 1, 2, and 16)
PIP	Liquid Hydrocarbon Pipeline (Activity 22)
PST	Pesticides (Activities 10 and 11)
SAL	Road Salt (Activity 12 and 13)
SEW	Sewage (Activity 2)
SMF	Agricultural Source Materials (Activities 3, 4, 5, 12 and 21), Non-Agricultural Source Materials (Activities 6 and 7) and Fertilizers (Activities 8 and 9) ~~(Activities 3, 4, 6, 7, 8, 9, & 21)~~
SNO	Snow (Activity 14)
SVA	Signage of Vulnerable Areas
THS	Transportation of Hazardous Substances (Local Threat)
TPW	Transport Pathways
WDS	Waste Disposal Sites (Activity 1)

~~Policies Most policy sections include background information to provide some rationale and to indicate the type of circumstances under which an activity could pose a significant threat. Additional information is provided in the Assessment Report and specific circumstances are listed in MOECC's Tables of Drinking Water Threats.~~
~~All policies are prefaced by an intent statement that summarizes the goals of the policy. The intent statements are provided for interpretive purposes and are not legally binding.~~

~~The policies of the Source Protection Plan (SP Plan), along with the Legal Effect statements in Appendix A, are the legally binding portions of this SP Plan. The policy portion of the SP Plan is found under the italicized "Policy" heading.~~

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4.2 Monitoring Policies

The ~~SP Plan~~ *Clean Water* Act carries a requirement for the SP Authority to report annually on the progress of implementing the SP Plan. Monitoring Policies in the SP Plan set out requirements for the various implementing bodies to provide annual or event-based reports to the SP Authority that will assist in the creation of the Annual Report. Each SP Plan policy has at least one applicable monitoring policy. ~~Monitoring Policies are summarised in a table at the end of each policy code section.~~ Monitoring Policies are summarised in a table at the end of each policy code section.

~~Monitoring Policy Code Example M01 – PA: M01 is the first monitoring policy in the SP Plan. PA stands for Planning Act.~~

M01 - PA is an example of a monitoring policy code reference used in this SP Plan, where:

M identifies this as a monitoring policy; and

01 refers to the number of the policy within the monitoring policies; and

PA indicates the type of policy tool used or the implementing body responsible for reporting, as described by the 'Focus' column in Table 5-1 (e.g., PA indicates use of *Planning Act* tools)

4.3 Legal Effect of Source Protection Plan Policies

The SP Plan policies have one of three types of legal effect:

- "Must conform/comply with" policies;
- "Have regard to" policies; and
- "Non-legally binding" policies.

The following explains which policies fall under each legal effect provision.

~~Appendix A:~~ Appendix A in the back of this SP Plan contains lists of the different legal effects by tool. For example, a prescribed instrument decision that must conform with a SP Plan policy would be found on List C. The legal effect lists are summarized below.

4.3.1 Must Conform/Comply

- The *Clean Water Act* requires municipalities, local boards or source protection authorities to comply with any obligations imposed on them to address a significant drinking water threat/condition, regardless of the particular tool or approach used in the policy (see List E).
- The *Clean Water Act* requires decisions under the *Planning Act* and *Condominium Act* to conform with significant threat/condition policies (see List A).

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- The *Clean Water Act* requires decisions related to Prescribed Instruments to conform with significant threat/condition policies (see List C).
- The *Clean Water Act* requires municipalities to ensure persons carrying out significant threat activities conform with Part IV policies (see Lists G, H and I).
- The SP Plan must designate a public body to carry out monitoring required by the *Clean Water Act* and these public bodies must conform to the obligations set out in the monitoring policies (see List F).

4.3.2 Have Regard To

- The *Clean Water Act* requires decisions under the *Planning Act* and *Condominium Act, 1998* to have regard to moderate and low threat/condition policies (see List B).
- The *Clean Water Act* requires decisions related to prescribed instruments to have regard to moderate and low threat/condition policies (see List D).

4.3.3 Non-legally Binding

Some policies, while important to achieving the SP Plan's objectives, are not given legal effect by the *Clean Water Act*. These include:

- Significant, moderate and low threat/condition policies to be implemented by bodies other than municipalities, local boards or source protection authorities and which do not rely on Part IV, prescribed instrument or *Planning Act* tools.
- Other permitted policies governing:
    i. Incentive programs and education & outreach programs, including for systems not in the Terms of Reference.
    ii. The update of spills prevention, contingency or response plans along highways, railways or shipping lanes.
    iii. Climate conditions data collection.
    iv. Transport pathways in WHPA or IPZ.
- Optional monitoring policies governing:
    i. Moderate/low threats in areas where the threat could never become significant (see List J)
    ii. Monitoring of other permissible plan policies (e.g., updates to spills prevention plans) (see List J)

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4.4 Background Details for Drinking Water Threats

SP Plan policies may apply to certain activities under specific circumstances and within vulnerable areas with a high enough vulnerability score. The following sections provide background information about the types of activities and associated contaminants of concern which are the subject of SP Plan policies in Chapter 5. The list of activities includes:

- prescribed drinking water threats, as defined in O. Reg. 287/07;
- issue contributing area activities;
- local transportation of hazardous substances activities; and
- transport pathways.

Also included below are tables indicating the vulnerable area and vulnerability score required for a particular activity to be considered a significant drinking water threat. In order to determine whether a prescribed threat activity is subject to a policy, you must refer to the Ministry of the Environment, Conservation and Parks' **Tables of Drinking Water Threats (MECP, 2021)**. A copy of the Tables may be accessed from https://www.ontario.ca/page/2021-technical-rules-under-clean-water-act. Maps showing the location of vulnerable areas and the vulnerability scores can be found in the Appendix of this SP Plan, in the Assessment Report sections for each vulnerable area, and on-line through actforcleanwater.ca.

4.4.1 Background: Aircraft De-icing Chemicals

Under certain circumstances, the de-icing of aircraft is required for the safety of flight. ~~Two chemicals used are considered threats to drinking water: Dioxane-1,4 and Ethylene Glycol.~~ However, these facilities are generally only available at national or regional airports. Airports with de-icing facilities must have adequate containment to capture runoff of waste-water and chemicals. ~~, and c~~Compliance with this and other requirements is to be documented in a ~~glycol~~ chemical management plan. ~~Only the largest class of airport (National) would be equipped for de-icing operations.~~

~~North Bay's Jack Garland Airport has de-icing facilities and runways within an IPZ-3, but the threat is not identified as significant. This policy addresses the possibility of the establishment of airports with de-icing facilities in vulnerable areas where the threat would be significant.~~

Table 4-2. Aircraft De-icing Chemicals: Significant threat in vulnerable areas

Prescribed Activity	Significant threat in vulnerable areas (under certain circumstances)
Runoff containing de-icing materials that originates at a national airport	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 10

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Prescribed Activity	Significant threat in vulnerable areas (under certain circumstances)
Runoff containing de-icing materials that originates at a regional airport	*CHEMICAL:* • IPZ with a vulnerability score of 10

Note: The circumstances that can determine whether an activity is a significant threat, moderate threat, low threat, or no threat may include:

- category of the airport; and
- vulnerable area and vulnerability score.

For the full circumstances to determine threat level, refer to the most current version of the Technical Rules.

North Bay's Jack Garland Airport has de-icing facilities and runways within the IPZ-3 for the North Bay supply. Since the North Bay airport is considered a regional airport and the vulnerability score in the IPZ-3 is low, but the threat is not identified as significant. The areas where the activities related to aircraft de-icing chemicals could be significant, based on vulnerability score are:

- Callander IPZ-1, which is mostly open water with some areas with 120 m setbacks in the urban area of Callander,
- Mattawa WHPA-A and WHPA-B, which encompasses the urban residential area of the Town of Mattawa,
- Powassan WHPA-A and WHPA-B, which are in very close proximity to and cross Highway 11, and
- South River IPZ-1, which is mostly open water with 120 m setbacks surrounding Forest Lake.

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O.Reg. 287/07 section 31.(2) states:

> a Source Protection Plan is not required to include a significant threat policy under subsection 22(2) of the Act in respect of an activity that would be a significant threat in an area identified in the assessment report if,
>
> - the activity has not been engaged in in that area and there is no reasonable prospect that the activity will ever be engaged in in that area.

Given the proximity to the existing national airport in North Bay and the existing land uses in the vulnerable areas where the runoff containing de-icing materials that originates from a regional or national airport would be a significant drinking water threat, there is no reasonable prospect that a national or regional airport would ever be built in these vulnerable areas. There is therefore no policy in this SP Plan that addresses the prescribed threat of aircraft de-icing chemicals.

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4.4.2 Background: Fuel

~~The main consideration relating to the handling and storage of fuel is to prevent spills. Fuel threats include the handling of liquid fuel in relation to its storage and the storage of liquid fuel. The types of storage facilities affected are defined in Ontario Regulation 213/01 (Fuel Oil) and Ontario Regulation 217/01 (Liquid Fuels). Both regulations are made under the Technical Standards and Safety Act, 2000. Although not covered under the Technical Standards and Safety Act (TSSA), these policies include facilities where fuel is manufactured or refined. The types of fuel storage facilities include: • bulk plants or facilities where it is manufactured or refined; • permanent or mobile retail outlets; • marinas; • cardlocks/keylocks; • private outlets (e.g. public works yard, contractor yard); • farms; and • fuel oil tanks for heating purposes. The types of fuels include diesel, used oil when used as a fuel, kerosene and hydrocarbon fuels (e.g. gasoline). A significant threat occurs in the vulnerable areas where fuel is stored • in a facility below grade or partially below grade in quantities of 250 L or more, or • in a facility above grade in quantities of 2500 L or more.~~

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~~Fuel handling and storage can be a component of other land uses that would not be regulated by municipalities in a zoning by-law. Prescribed instruments may permit fuel storage for equipment, generators or other systems on specific sites. For example: municipal drinking water systems are required to have backup power generation which frequently involves the storage of fuel. Such facilities operate under conditions specified within their required approvals. Significant threats include: • the handling of liquid fuels and fuel oil in a quantity exceeding 2500 Litres (L); • the storage of liquid fuels and fuel oil in a quantity of 250 L or more for any facility partially or completely below grade; and • the storage of liquid fuels and fuel oil in a quantity of 2500 L or more for any facility located above grade.~~

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~~This policy applies to the handling and storage of liquid fuel and fuel oil tanks. The amounts and circumstances are the same as listed in FUL1 and FUL2 (and repeated in the policy wording below). This policy is primarily directed toward the use of fuel oil for heat, but also includes other handling and storage of fuel. It is important to note that "below grade", as defined in the Clean Water Act, includes tanks stored within basements of a structure.~~

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The handling and storage of fuel can pose a drinking water threat if there is a spill or leak of fuel from a storage facility. Chemicals in fuels are highly water soluble and can travel long distances in groundwater and surface water. Exposure to these chemicals can cause a range of negative health effects to the reproductive, respiratory, immune, and nervous systems, including being carcinogenic and causing birth defects.

The types of storage facilities include:

- Facility as defined in O. Reg. 213/01 (Fuel Oil) under *Technical Standards and Safety Act*
  - installation (including homes) where fuel oil is handled;
  - fuel oil storage for furnaces, boilers, water heaters, and standby generators
- Facility as defined in O. Reg. 217/01 (Liquid Fuels) under *Technical Standards and Safety Act*

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- permanent or mobile retail outlets;
- bulk plants;
- marinas;
- cardlock/keylock; and
- private outlets (such as fire stations, RV parks, public works yard, contractor yard, farms)

- Refineries (facilities where fuel is manufactured or refined).

Note: Excludes fuel in vehicles, outdoor equipment, and portable storage like jerry cans.

The types of fuels include diesel, fuel oil, used oil when used as a fuel, kerosene, and hydrocarbon fuels (e.g., gasoline). Fuel oil is any fuel regulated under the *Technical Standards and Safety Act*, O.Reg. 213/01 and the Ontario Installation Code for Oil Burning Equipment. In general, this is fuel that is handled or stored for the purpose of heating buildings or powering standby generators. Home heating oil used to fuel furnaces is included in this category. Liquid fuel is gasoline or an associated product used as fuel in motor vehicles and other equipment. Liquid fuel is primarily regulated under the *Technical Standards and Safety Act*, O. Reg. 217/01 and the Liquid Fuels Handling Code, 2007. The Technical Standards and Safety Authority (TSSA) enforces Ontario's *Technical Standards and Safety Act* under the Ministry of Consumer Services.

Fuel handling and storage could be a component of other land uses that would not be regulated by municipalities in a zoning by-law. Prescribed instruments may permit fuel storage for equipment, generators or other systems on specific sites. For example, municipal drinking water systems are required to have backup power generation which frequently involves the storage of fuel. Such facilities operate under conditions specified within their required approvals.

Table 4-3. Fuel: Significant threat in vulnerable areas

Prescribed Activity	Significant threat in vulnerable areas (under certain circumstances)
The handling and storage of liquid fuel at a facility as defined in O. Reg. 217, or a facility as defined in O. Reg. 213, or a facility that manufactures or refines fuel	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 10

Note: The circumstances that can determine whether an activity is a significant threat, moderate threat, low threat, or no threat may include:

- position of storage;
- proximity to sensitive receptors (e.g., residential areas, schools/hospitals);
- quantity (volume) of product;

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- type of facility; and
- vulnerable area and vulnerability score.

For the full circumstances to determine threat level, refer to the most current version of the Technical Rules. It is important to note that "below grade", as defined in the *Clean Water Act*, includes storage tanks located within the basement of a structure.

4.4.3 Background: Dense Non-aqueous Phase Liquids (DNAPLs) and Organic Solvents

Dense non-aqueous phase liquids (DNAPLs) are a class of chemical compounds that are more dense than water and do not dissolve readily in water. Organic solvents are carbon-based substances that are capable of dissolving or dispersing other substances. Many organic solvents are recognized as carcinogens, reproductive hazards and neurotoxins. 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.

DNAPLs are particularly dangerous near sources of drinking water because:

- A small amount can cause toxic levels of contamination for human health;
- DNAPLs defy conventional cleanup methods because they sink in water (spilled DNAPLs travel quickly and deeply through rock and soil making them nearly impossible to find or remove from groundwater);
- DNAPLs do not dissolve readily in water creating toxic pools that can remain for decades or centuries; and
- If DNAPLs contaminate a source of municipal drinking water, then the establishment of a new municipal well or drinking water source may be required.

Both DNAPLs and organic solvents are: used in a variety of commercial and industrial settings; found in such products as paints, adhesives, degreasing and cleaning agents; and used and in the production of dyes, plastics, textiles, printing inks, and pharmaceuticals.

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Table 4-4. DNAPLs and Organic Solvents: Significant threat in vulnerable areas

Prescribed Activity	Significant threat in vulnerable areas (under certain circumstances)
The handling and storage of a dense non-aqueous phase liquid (DNAPL)	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA-A, WHPA-B, WHPA-C with any vulnerability score
The handling and storage of an organic solvent	*CHEMICAL:* • IPZ with a vulnerability score of 10 • WHPA with a vulnerability score of 10

Note: The circumstances that can determine whether an activity is a significant threat, moderate threat, low threat, or no threat may include:

- position of storage;
- quantity (volume) of product; and
- vulnerable area and vulnerability score.

For the full circumstances to determine threat level, refer to the most current version of the Technical Rules.

4.4.4 Background: Liquid Hydrocarbon Pipeline

The establishment and operation of a liquid hydrocarbon pipeline can pose a risk to drinking water sources. Hydrocarbon pipelines consist of the pipeline as well as the associated equipment including compressors and pumps. Liquid hydrocarbons, as defined in O. Reg. 210/01, include crude oil, condensate, liquid petroleum products, natural gas liquids, and liquefied petroleum gas. Natural gas in a gaseous form is not considered a drinking water threat. There is no volume listed as a circumstance for this activity.

The main consideration for reducing or eliminating drinking water threats related to pipelines is to prevent spills as a result of pipeline ruptures. In the event of a spill, it is imperative to have an appropriate spill response plan.

The Canada Energy Regulator regulates pipeline systems that cross provincial or international boundaries. The Ontario Energy Board and the Technical Standards and Safety Authority (TSSA) regulate pipeline systems contained within the province of Ontario.

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Table 4-5. Liquid Hydrocarbon Pipeline: Threat level in vulnerable areas

Prescribed Activity	Threat level in vulnerable areas (under certain circumstances)
The establishment and operation of a liquid hydrocarbon pipeline	*CHEMICAL:* Significant threat: • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 10 Moderate threat: • IPZ with a vulnerability score of 6.4 or higher • WHPA with a vulnerability score of 8 Low threat: • IPZ with a vulnerability score of 4.5 to 8.1 • WHPA with a vulnerability score of 6

Note: The circumstances that can determine whether an activity is a significant threat, moderate threat, low threat, or no threat may include:

- position of pipeline; and
- vulnerable area and vulnerability score.

For the full circumstances to determine threat level, refer to the most current version of the Technical Rules.

There are no liquid hydrocarbon pipeline threats identified in the Assessment Report; however, policies have been included in the North Bay-Mattawa SP Plan to address any future threats.

4.4.5 Background: Pesticides

Pesticides are typically chemicals, or in some cases organisms, that are used to control pests, such as weeds, insects and fungi. All pesticides considered through the drinking water source protection initiative are chemicals. The application of pesticides to land, as well as the handling and storage of pesticides, is most commonly associated with agricultural, recreational, public works, and retail land uses. The application of pesticides to land in Ontario is significantly restricted by the *Cosmetic Pesticides Ban Act* (2008), which amended the *Pesticides Act* to prohibit the use and sale of pesticides that may be used for ~~cosmetic~~ typical residential purposes. 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.

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Pesticides include herbicides, insecticides and fungicides. These types of compounds can contain a number of harmful chemicals which can enter sources of drinking water as a result of the application of pesticide to land or due to spills during handling and storage.

~~The following table demonstrates the circumstances under which various pesticides could be significant threats to drinking water. The vulnerability score of the wellhead or intake would also be a factor. Table 4-8: Circumstances Whereby Pesticide Application Could Be Significant~~

~~Depending on the vulnerability score of the intake or wellhead, the following circumstances for the storage of pesticides could be significant threats to source waters: 1. The storage of pesticides in quantities of 250 kg to 2,500 kg for Mecoprop and for MCPA (2-methyl-4-chlorophenoxyacetic acid). 2. The storage of pesticides in quantities exceeding 2,500 kg for: • Atrazine • MCPB (4-(4-chloro-2-methylphenox) butanoic acid) • Dicamba • MCPA (2-methyl-4-chlorophenoxyacetic acid) • Metalaxyl • Dichlorophenoxy Acetic Acid (2, 4-D) • Dichloro-propene 1,3 • Metolachlor or s-Metolachlor • Mecoprop • Pendimethalin~~

Table 4-6. Pesticides: Significant threat in vulnerable areas

Prescribed Activity	Significant threat in vulnerable areas (under certain circumstances)
The handling and storage of a pesticide	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 10
The application of a pesticide to land	*CHEMICAL:* • IPZ with a vulnerability score of 8.1 or higher • WHPA with a vulnerability score of 10

Note: The circumstances that can determine whether an activity is a significant threat, moderate threat, low threat, or no threat may include:

- amount (mass in kg) of product;
- type of activity; and
- vulnerable area and vulnerability score.

For the full circumstances to determine threat level, refer to the most current version of the Technical Rules.

4.4.6 Background: Road Salt

~~Road salt may pose a drinking water threat when the product contains sodium and/or chloride. The most commonly used products to maintain roads and pedestrian areas are sodium chloride and~~

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

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~~calcium chloride because they are effective and inexpensive. The handling and storage of road salt could be a significant threat where greater than 5,000 tonnes are stored uncovered and/or exposed to runoff. Because of the limited proportion of paved surfaces when this Source Protection Plan was prepared, there was no vulnerable area where the application of road salt would pose a significant threat. Therefore, policies developed address only the threats that could be posed by handling and storage.~~

The most commonly used products to maintain roads and pedestrian areas are sodium chloride and calcium chloride because they are effective and inexpensive. Road salts enter the environment through losses at salt storage and snow disposal sites and through runoff and splash from roadways. High levels of road salts can have an adverse effect on freshwater ecosystems, soil, vegetation and wildlife. The storage of road salt where it is uncovered and/or exposed to runoff can release the salt to groundwater or surface water. In contrast, salt stored in engineered domes and similar structures minimizes loss of product and any releases to the environment.

The application of road salt to roads, parking lots and other surfaces aids in reducing the hazards of accidents and slips and falls. However, the resulting runoff can also cause releases to surface water and groundwater of not just road salt but oil, grease, heavy metals, litter, and airborne pollution. The sodium and chloride levels in drinking water sources have risen in some parts of Ontario and other jurisdictions with similar weather patterns. This has proven problematic for municipalities since these contaminants are difficult to remove, particularly from groundwater sources.

The amount of impervious surfaces, such as paved roads, parking lots, sidewalks, and driveways, provides a surrogate measure of the levels of road salt applied in an area. Higher percentages of impervious surfaces would tend to have the greater risk of contaminants from road salt application. Areas within the North Bay-Mattawa Source Protection Area have low to moderate risks where the application of road salt could pose a threat, however, increased development and impermeable surface area in vulnerable areas could lead to future significant drinking water threats.

A Road Salt Management Plan can serve to document a municipality's current winter maintenance practices and goals for improving future management. Environment Canada underwent a comprehensive scientific assessment under the *Canadian Environmental Protection Act*, 1999. This resulted in a *Code of Practice for the Environmental Management of Road Salts*. The main objective is to ensure environmental protection while maintaining roadway safety. This includes the development of salt management plans, based on a review of existing road maintenance operations, identification of means and goal-setting to achieve reductions of the negative impacts of salt releases and the implementation of best management practices in the areas of salt application, salt storage and snow disposal, as outlined in the Transportation Association of Canada's Syntheses of Best Practices. Monitoring and reporting aspects are also included in the Code.

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Table 4-7. Road Salt: Significant threat in vulnerable areas

Prescribed Activity	Significant threat in vulnerable areas (under certain circumstances)
The handling and storage of road salt	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 10
The application of road salt	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 10

Note: The circumstances that can determine whether an activity is a significant threat, moderate threat, low threat, or no threat may include:

- amount (mass in kg) of product stored;
- type of storage activity;
- percent impervious surface for the grid square within which salt is applied; and,
- vulnerable area and vulnerability score.

For the full circumstances to determine threat level, refer to the most current version of the Technical Rules.

4.4.7 Background: Sewage Systems

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

•

The establishment, operation or maintenance of a sewage system that collects, stores, transmits, treats or disposes of sewage is a prescribed drinking water threat. ~~Sewage systems are categorized as either large or small based on a design flow relative to 10,000 L/day. Threat circumstances for large systems include the following activities:~~ Several categories of sewage works can contribute contaminants to local groundwater and surface water:

- ~~Combined sewer discharge from a storm water outlet to surface water,~~
- ~~Sewage treatment plant bypass discharge to surface water,~~
- ~~Discharge of storm water from a storm water retention pond,~~
- ~~Industrial effluent discharges,~~
- ~~Sanitary sewers and related pipes,~~

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~~• Sewage treatment plant effluent discharges (includes lagoons), and~~
~~• Storage of sewage (e.g. treatment plant tanks).~~

- Industrial effluent discharges;
- On-site sewage works;
- Outfall from a storm water management facility or storm water drainage system, including one that serves a Snow Disposal Facility;
- Stormwater infiltration facility;
- Sanitary sewers and associated parts;
- Outfall from a combined sewer overflow or sanitary sewer overflow from a manhole or wet well;
- Sewage pumping station or lift station; including wet wells, storage tanks and storage tunnels;
- Wastewater treatment facility and associated parts (including outfall, tank and lagoon).

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~~Large systems (with a design flow greater than 10,000 L/day), are required by the Ontario Water Resources Act to have and operate in accordance with an environmental compliance approval issued under the Environmental Protection Act. Schools, campgrounds, larger businesses and municipal systems are common examples. Approvals for small systems (with a design flow less than or equal to 10,000 L/day) are issued under the Ontario Building Code and administered, in this Source Protection Area, by the North Bay-Mattawa Conservation Authority. These systems come in a variety of forms including earth pit privies, privy vaults, greywater systems, cesspools, leaching bed systems and associated treatment units, and holding tanks. Leaching bed systems with septic tanks or holding tanks are the systems most commonly used.~~

~~Certain existing sewage works were identified in the completion of the Assessment Report that are part of the normal function of communities in the Source Protection Area. Examples include sewer systems in Mattawa and Callander, large sewage systems (frequently for commercial, institutional and residential uses), and the municipal sewage lagoons for Callander.~~

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Industrial effluent discharges:
For industrial effluent discharge, an environmental compliance approval will state the criteria for the quality of the effluent. Discharge of the effluent will be to waterbodies that have sufficient assimilative capacity to receive the effluent without adverse impacts. Nevertheless, pathogens and numerous chemicals can still pose a contamination threat if effluent is discharged near sources of drinking water.

On-site sewage works:
On-site sewage systems are categorized as either large or small based on a design flow relative to 10,000 L/day. The *Building Code Act* regulates sewage systems that are situated on one lot and have a design capacity of 10,000 L/day or less (most residential systems). All other on-site sewage systems are regulated by the *Ontario Water Resources Act*.

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Large systems (with a design flow greater than 10,000 L/day), are required by the Ontario Water Resources Act to have and operate in accordance with an environmental compliance approval issued under the Environmental Protection Act. Schools, campgrounds, larger businesses and municipal systems are common examples. As part of the application process, information must be provided about the impact of the system, such as: background levels of contaminants in the groundwater; expected rate of contaminants discharged to the groundwater; proposed measures to reduce or prevent groundwater contamination; and a monitoring program to assess the effectiveness of these measures.

Approvals for small systems (with a design flow less than or equal to 10,000 L/day) are issued under the Ontario Building Code and administered, in this Source Protection Area, by the North Bay-Mattawa Conservation Authority. These systems come in a variety of forms including earth pit privies, privy vaults, greywater systems, cesspools, leaching bed systems and associated treatment units, and holding tanks.

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Leaching bed systems with septic tanks or holding tanks are the systems most commonly used. A holding tank retains sewage produced at the site, which will then be collected by a sewage hauler and disposed of elsewhere. A properly functioning septic system also has a tank that stores sewage, but it has an additional component that removes wastewater from the sewage and treats it on-site to a safe level before returning it to the groundwater system. Occasional pumping of the tank is part of the normal maintenance for a leaching bed system.

~~A septic system or holding tank subject to the Ontario Building Code could be a significant threat to drinking water: 1. In Wellhead Protection Areas with a vulnerability score of 10, due to the potential of pathogens to contaminate source water. 2. In the Callander Issue Contributing Area due to the potential release of phosphorus from the septic systems or holding tank.~~

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Mandatory maintenance inspections of on-site systems are required in some areas. Septic systems and holding tanks that are leaking, inadequate or not functioning properly can contaminate surface water or groundwater. The Ontario Building Code requires regular inspections of on-site sewage systems in locations where they are considered a significant drinking water threat. Systems are inspected on a five-year cycle. If an inspection indicates that a system is not functioning as designed, inspectors can issue an order for maintenance, replacement or upgrading to ensure the system functions effectively. In this Source Protection Area, maintenance inspections are required in the Callander Issue Contributing Area and for a small number of properties in the Mattawa and Powassan Wellhead Protection Areas.

Outfall from a storm water management facility or storm water drainage system, including one that serves a Snow Disposal Facility:
A stormwater management facility is a facility for the treatment, retention, infiltration, or control of stormwater. Stormwater is made up of rainwater runoff, water runoff from roofs, snowmelt, and surface runoff. The stormwater can contain contaminants such as pathogens, heavy metals, pesticide, and hydrocarbons. Stormwater management ponds, which capture excess runoff and allow time for suspended pollutants to settle, are the most common end of pipe treatment system.

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Storm water infiltration facility:
A storm water infiltration facility can reduce the volume of runoff to surface water by allowing water the infiltrate to groundwater instead. However, infiltration of contaminated water can lead to the impairment of groundwater. The type of land use is a factor is the potential risk for contaminants to be present in stormwater, with commercial and industrial uses of greater concern. Some risk may be managed through the design and operation of storm water infiltration facilities. Examples of a stormwater infiltration facility include: Low Impact Development (LID), soak-away pit, infiltration trench, basin or chamber; permeable pavements with an infiltration substructure; bioretention areas; pervious pipes; or other LID approaches that include infiltration.

Sanitary sewers and associated parts:
A sanitary sewer system is a network of pipes that collects sewage within a community and conveys it to a treatment plant where the sewage can be treated before it is discharged to a surface water body. Sanitary sewer systems have the potential to contaminate surface water or groundwater as raw sewage can leak from degraded pipes or pipe joints.

Outfall of a combined sewer overflow or a sanitary sewer overflow from a manhole or wet well:
Combined sewers collect sanitary sewage and stormwater in the same pipe. Combined sewers pose a risk because they may discharge sanitary sewage containing human waste directly to surface water. Under normal conditions, all flow in a combined sewer goes through the sewage treatment plant and gets treated before being discharged. However, during extreme wet weather events the system can become overwhelmed with too much water causing overflows. This is the discharge of untreated sewage that has bypassed the sewage treatment plant. Combined sewers are no longer permitted to be installed; sanitary sewage and stormwater must be collected in separate pipes. Sewage overflows may be discharged from a sewer outfall, manhole or wet well outfall and could include other parts if discharging to the natural environment.

Sewage pumping station or lift station:
Types of storage systems can include wet wells, storage tanks and tunnels that are part of the sewage collection system. The storage of sewage within the sewage collection system at facilities like sewage pumping stations and lift stations is regulated through Environmental Compliance Approval (ECA) requirements under the Ontario Water Resources Act and Environmental Protection Act.

Wastewater treatment facilities and associated parts:
The Ontario Water Resources Act requires wastewater treatment facilities (such as sewage treatment plants and sewage lagoons) to obtain and Environmental Compliance Approval that sets out requirements for construction and operation for the sewage works. The approval includes site-specific criteria for the quality of the effluent discharged from the facility that were established following evaluation of the receiving water body's assimilative capacity. Nevertheless, pathogens and numerous chemicals remaining in the effluent can still pose a contamination threat if effluent is discharged near sources of drinking water. Discharges may occur via a final effluent outfall, a sewage lagoon, or a sewage treatment plant process or holding tank. A bypass or overflow discharge is partially treated or untreated sanitary waste that is released directly into the receiving waterbody. When the capacity at a sewage treatment plant is overwhelmed, bypass discharges can

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occur. This may be necessary to prevent damage to the equipment at the sewage treatment plant or sewer pipes or to prevent property damage.

Table 4-8. Sewage System: Significant threat in vulnerable areas

Prescribed Activity	Significant threat in vulnerable areas (under certain circumstances)
Industrial effluent discharges	*CHEMICAL:* • IPZ with a vulnerability score of 8 or higher • WHPA with a vulnerability score of 10 *PATHOGEN:* • IPZ with a vulnerability score of 8 or higher • WHPA with a vulnerability score of 10
On-site sewage works	*CHEMICAL:* • WHPA with a vulnerability score of 10 *PATHOGEN:* • IPZ with a vulnerability score of 10 • WHPA with a vulnerability score of 10
Outfall from a storm water management facility or storm water drainage system, including one that serves a Snow Disposal Facility	*CHEMICAL:* • IPZ with a vulnerability score of 8 or higher • WHPA with a vulnerability score of 10
Storm water infiltration facility	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 10
Sanitary sewers and associated parts	*CHEMICAL:* • WHPA with a vulnerability score of 10 *PATHOGEN:* • IPZ with a vulnerability score of 10 • WHPA with a vulnerability score of 10

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Prescribed Activity	Significant threat in vulnerable areas (under certain circumstances)
Outfall of a combined sewer overflow or a sanitary sewer overflow	*CHEMICAL:* • IPZ with a vulnerability score of 8 or higher *PATHOGEN:* • IPZ with a vulnerability score of 8 or higher • WHPA with a vulnerability score of 10
Sewage pumping station or lift station	*CHEMICAL:* • WHPA with a vulnerability score of 10 *PATHOGEN:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 10
Wastewater treatment facilities and associated parts	*CHEMICAL:* • IPZ with a vulnerability score of 8 or higher • WHPA with a vulnerability score of 10 *PATHOGEN:* • IPZ with a vulnerability score of 8 or higher • WHPA with a vulnerability score of 10

Note: The circumstances that can determine whether an activity is a significant threat, moderate threat, low threat, or no threat may include:

- type of sewage system or facility;
- position of sewage system;
- daily sewage capacity;
- area of stormwater drainage (hectares) and associated land use type(s); and
- vulnerable area and vulnerability score.

For the full circumstances to determine threat level, refer to the most current version of the Technical Rules.

4.4.8 Background: Nutrient Source Materials and Fertilizers

Nutrient use can be a great benefit to agricultural production and landscaped areas, such as golf courses and playfields. However, the handling, storage and application of nutrients have the

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potential to result in contaminants like nitrogen, phosphorus and pathogens being introduced into drinking water sources. Several prescribed drinking water threat activities relate to nutrients:

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

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Pathogens are microscopic organisms capable of producing infections or infectious disease in humans. Examples of pathogens include Salmonella, Campylobacter and pathogenic *Escherichia coli* (*E. coli O157:H7* was the pathogen in the Walkerton water tragedy in 2000). Pathogens can be excreted from a range of livestock including cattle (dairy and beef), sheep, swine, and poultry. Infected animals can excrete tens to thousands of these pathogens per gram of fecal matter. It only takes one animal potentially to contaminate a drinking water source with pathogens. Surface water is especially vulnerable to contamination from pathogens.

The application of commercial fertilizer to land:

Nitrogen and phosphorus are macronutrients required by plants and are common components of commercial fertilizers (nitrogen usually as nitrate). Nitrate applied to land, under certain circumstances, has been known to contaminate groundwater making it unsuitable for consumption. As well, both phosphorus and nitrate can contribute to excessive growth of algae in surface waters. Accordingly, ~~Therefore~~ care needs to be taken with the application to land of commercial fertilizers.

The handling and storage of commercial fertilizer:

Commercial fertilizer is a substance containing nitrogen, phosphorus and potassium (or other plant food intended for use as a plant nutrient) and can improve the growth of crops. Commercial fertilizer can be a source of chemical contaminants if it is spilled during handling and storage.

~~**Agricultural Source Material (ASM)**: According to Ontario Regulation 267/03 (General) under the Nutrient Management Act, ASMs include the following materials that may be produced on a farm:~~

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The application of agricultural source material (ASM) to land:

Agricultural Source Material (ASM) is material, other than commercial fertilizer or certain composts, which may be applied to land as nutrients. The application of ASM to land is intended to improve the growth of crops and for soil conditioning. According to O. Reg. 267/03 (General) under the *Nutrient Management Act*, ASM includes the following materials:

- Manure~~produced by farm animals~~, including associated bedding materials, whether or not located on an agricultural operation;

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- runoff from farm-animal yards, outdoor confinement areas and permanent nutrient storage facilities that contain only manure and associated bedding materials;
- wash water from agricultural operations that has not been mixed with human body waste (e.g., from the milking centre);
- organic materials produced by intermediate operations that process the above materials;
- anaerobic digestion output ~~that does not include sewage biosolids or human body waste (anaerobic digestion is a process used to decompose organic matter by bacteria in an oxygen limited environment)~~ other than restricted anaerobic digestion output, if:
  - i) the anaerobic digestion materials were treated in a mixed anaerobic digestion facility;
  - ii) at least 50 per cent, by volume, of the total amount of anaerobic digestion materials were on-farm anaerobic digestion materials; and
  - iii) the anaerobic digestion materials did not contain sewage biosolids or human body waste; or
- regulated compost (which contains dead farm animals).

A nutrient unit (NU) is a standard unit of measurement of the nutrients generated by different sizes and types of livestock. One nutrient unit represents the number of animals required to produce 43 kg of nitrogen or 55 kg of phosphorus annually. For example, 5 NU equals 40 dairy goats, 3.5 large frame dairy cows or 5 medium frame horses.

The storage of agricultural source material (ASM):

ASM can be stored in a permanent nutrient storage facility (open pile, steel or concrete manure storage facility, or lagoon) or on a temporary field nutrient storage site (only used for solid ASM). The primary consideration for reducing or eliminating the threat to drinking water in the storage of ASM is to ensure nitrogen, phosphorus and pathogens do not enter the drinking water supply by controlling runoff water and preventing spills or leaks from storage facilities.

The management of agricultural source material (ASM):

The management of ASM is only a prescribed threat as it pertains to aquaculture activities in the 2021 Technical Rules, where it is classified as either a Low or Moderate threat. Since this could be a phosphorus activity, it would be of concern in the Callander Issue Contributing Area.

The application of non-agricultural source material (NASM) to land:

Non-agricultural source material (NASM) is also intended to be applied to land as nutrients. NASM are generally produced in a non-farm location. Commercial fertilizers and certain compost materials are not classed as NASM.

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According to O. Reg. 267/03 (General) under the *Nutrient Management Act*, NASMs include the following materials ~~that are intended to be applied to land as nutrients but that are not produced on a farm~~:

- pulp and paper biosolids;
- sewage biosolids;
- anaerobic digestion output (if less than 50~~%~~ per cent, by volume, of the total ~~material~~ amount~~is on-farm anaerobic digestion materials (anaerobic digestion is a process used to decompose organic matter by bacteria in an oxygen-limited environment)~~ of anaerobic digestion materials that were treated in the mixed anaerobic digestion facility were on-farm anaerobic digestion materials);
- restricted anaerobic digestion output; and
- any other material that is not from an agricultural source and that is capable of being applied to land as a nutrient (such as materials from dairy product or animal food manufacturing).

The improper application of NASM can contaminate surface water or groundwater with nutrients (such as nitrogen and phosphorus) or pathogens.

The handling and storage of non-agricultural source material (NASM):

~~NASM that will be applied to fields on a farm can be stored in a permanent nutrient storage facility, or on a temporary field nutrient storage site~~

The storage of NASM is considered a significant drinking water threat depending on the location of storage, the type of storage and the mass of nitrogen in the stored material. NASM that will be applied to fields on a farm can be stored in a permanent nutrient storage facility or on a temporary field nutrient storage site. NASM has the potential to release nitrogen, phosphorus and pathogens. The primary concern with NASM storage is controlling runoff water and preventing spills or leaks from storage facilities.

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

Livestock grazing and pasturing land: Refers to forage crop production where animals do the harvesting.~~ ~~Ontario grazing systems involve a concentration of up to two to three animals per acre during the grazing season~~, often~~. Fields may be used on a rotational basis. The waste deposited by the animals can release nutrients and pathogens.

Outdoor confinement area: Enclosures with a very high animal concentration (typically greater than 15 animals per acre).~~Ontario Regulation 267/03 made pursuant to the Nutrient Management Act defines outdoor confinement areas as follow~~. Outdoor confinement area is defined by O. Reg. 267/03 under the *Nutrient Management Act* as:

- composed of fences, pens, corrals or similar structures;
- may contain a shelter to protect the animals from the wind or another shelter with a roof of an area of less than 20 square metres;

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- has permanent or portable feeding or watering equipment;
- animals are fed or watered at the enclosure;
- animals may or may not have access to other buildings or structures for shelter, feeding or watering; and
- grazing and foraging provides less than 50 per cent of dry matter intake.

It is not intended to capture domestic animals (i.e., pets) on residential properties, including backyard chicken coops within an outdoor confinement area. Nitrogen, total phosphorus and pathogens (such as *E. coli*) are contaminants that could make their way into surface water and groundwater from outdoor livestock areas.

Farm animal yards: Described as outdoor livestock areas lined with concrete other than those meeting the definition of an outdoor confinement area. Food and water are not provided in farm-animal yards. They are generally used as outdoor exercise areas or holding areas for when barns are being cleaned out, usually in association with a barn/covered structure.

Table 4-9. Nutrient Source Materials and Fertilizers: Significant threat in vulnerable areas

Prescribed Activity	Significant threat in vulnerable areas (under certain circumstances)
Handling and storage of commercial fertilizer	*CHEMICAL:* • IPZ with a vulnerability score of 10 • WHPA with a score of 10
Application of commercial fertilizer to land	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a score of 10
Application, management or storage of agricultural source material (ASM)	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 10 *PATHOGEN:* • IPZ with a vulnerability score of 8 or higher • WHPA with a vulnerability score of 10

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Prescribed Activity	Significant threat in vulnerable areas (under certain circumstances)
Application or handling or storage of non-agricultural source material	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 10 *PATHOGEN:* • IPZ with a vulnerability score of 8 or higher • WHPA with a vulnerability score of 10
Livestock grazing, pasturing, outdoor confinement area, or farm animal yard	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 10 *PATHOGEN:* • IPZ with a vulnerability score of 8 or higher • WHPA with a vulnerability score of 10

Note: Some of the circumstances that can determine whether an activity is a significant threat, moderate threat, low threat, or no threat may include:

- type of storage facility;
- position of storage facility;
- quantity stored;
- percentage of managed land;
- livestock density (nutrient units (NU) per area of land);
- nitrogen content of non-agricultural source material;
- contaminants of concern; and
- vulnerable area and vulnerability score.

For the full circumstances to determine threat level, refer to the most current version of the Technical Rules.

4.4.9 Background: Storage of Snow

~~The storage of snow could be a significant threat where the vulnerability score of the listed areas and~~
~~the following circumstances are combined:~~
~~- above grade where the snow storage area will exceed 1 hectare [2.47 acres]~~
~~- below grade where the snow storage area will exceed 100 m2 [1,076 ft2~~

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~~]~~
~~The circumstances related to the storage of snow relate to chemicals or contaminants which may be~~
~~contained in the snow and released as it melts.~~
~~The associated risk is greater as the volume of snow increases with a wider catchment area, or where~~
~~the snow is trucked in from other locations.~~
The risk from the storage of snow relates to chemicals or contaminants which may be contained in the snow and released as it melts. The melting snow piles may release chemicals from paved surfaces including oil, grease, heavy metals, and cyanide. Large commercial, industrial, and municipal parking lots are examples of locations where snow may be pushed into piles during the winter and allowed to melt on-site during the spring. Another example would be Snow Disposal Facilities where contractors or municipal roads departments may remove snow by truck to a central location. The associated risk is greater as the total storage area of the snow increases.

Table 4-10. Snow Storage: Significant threat in vulnerable areas

Prescribed Activity	Significant threat in vulnerable areas (under certain circumstances)
The storage of snow	*CHEMICAL:* • IPZ with a vulnerability score of 8 or higher • WHPA with a vulnerability score of 10

Note: The circumstances that can determine whether an activity is a significant threat, moderate threat, low threat, or no threat may include:

- type of storage site;
- predominant land use type;
- infiltration or discharge control;
- total area used to store snow;
- vulnerable area and vulnerability score.

For the full circumstances to determine threat level, refer to the most current version of the Technical Rules.

4.4.10 Background: Waste Disposal

Certain waste disposal sites (depending on their type, size and other characteristics) are considered a drinking water threat. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act* includes the following ~~threats~~ activities:

- ~~The application of untreated septage~~ Disposal of hauled sewage to land;
- ~~Storage treatment and discharge of tailings from mines;~~

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- Application of processed organic waste to land;
- Landfarming of petroleum refining waste;
- Landfilling (hazardous waste or liquid industrial waste);
- Landfilling (municipal waste);
- ~~Landfilling (solid non-hazardous industrial or commercial waste);~~
- Liquid industrial waste Injection into a well;
- PCB waste storage;
- ~~Storage of hazardous waste or liquid industrial waste at disposal sites; and~~
- ~~Storage of hazardous wastes described in clauses (p), (q), (r), (s), (t), or (u) of the definition of hazardous waste.~~
- Storage of hauled sewage
- Storage of processed organic waste or waste biomass
- Transfer/processing sites approved to receive hazardous waste or liquid industrial waste
- Transfer/processing site approved to receive only municipal waste under Part V of the *Environmental Protection Act*
- Storage of subject waste at a waste generation facility: site requires generator registration under O. Reg. 347
- Storage of waste at a waste generation facility: site that is exempt or excluded from generator registration requirements
- Storage, treatment, and discharge of tailings from mines.~~;~~
- ~~—~~

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The *Environmental Protection Act* (EPA) in Part V generally defines a "waste disposal site" ~~(R.S.O. 1990, c. E.19, Part V). In general terms, a waste disposal site is~~ as any land, building or structure in connection with the depositing, disposal, handling, storage, transfer, treatment, or processing of waste. Operational activities, machinery and equipment associated with these sites are also included in the definition~~;~~, for example a generator of waste is included in the definition of a waste disposal site. These waste generators can include small quantities of hazardous waste, empty hazardous waste containers, and cleanup materials from small spills. For complete definitions of the clauses please see Hazardous Waste Clauses under Key Definitions and Acronyms

The storage or land disposal of waste has the potential to spill or leach numerous contaminants into surface water and groundwater. These include petroleum hydrocarbons, heavy metals, nutrients like phosphorus or nitrogen, and DNAPLs. Pathogen contaminants from waste disposal are associated with the application of hauled sewage to land.

Waste sites undergo thorough reviews to ensure they are located in the most appropriate, and least vulnerable, areas. Prescribed instruments, such as environmental compliance approvals, may

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contain clauses to ensure that waste disposal sites will operate in a manner that protects drinking water sources. Some waste disposal sites (e.g., Polychlorinated Biphenyl (PCB) storage) are not regulated through a prescribed instrument but may be subject to Director's Instructions.

Table 4-11. Waste Disposal Sites: Significant threat in vulnerable areas

Prescribed Activity	Significant threat in vulnerable areas (under certain circumstances)
Disposal of hauled sewage to land	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 10 *PATHOGEN:* • IPZ with a vulnerability score of 8 or higher • WHPA with a vulnerability score of 10
Application of processed organic waste to land	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 10 *PATHOGEN:* • IPZ with a vulnerability score of 8 or higher • WHPA with a vulnerability score of 10
Landfarming of petroleum refining waste	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 10
Landfilling (hazardous waste or liquid industrial waste)	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 8 or higher
Landfilling (municipal waste)	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 8 or higher

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Prescribed Activity	Significant threat in vulnerable areas (under certain circumstances)
Liquid industrial waste injection into a well	*CHEMICAL:* • WHPA with a vulnerability score of 8 or higher
PCB waste storage	*CHEMICAL:* • IPZ with a vulnerability score of 10 • WHPA with a vulnerability score of 10
Storage of hauled sewage	*CHEMICAL:* • IPZ with a vulnerability score of 8 • WHPA with a vulnerability score of 10
Storage of processed organic waste or waste biomass	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 10 *PATHOGEN:* • IPZ with a vulnerability score of 8 or higher • WHPA with a vulnerability score of 10
Transfer/processing sites approved to receive hazardous waste or liquid industrial waste	*CHEMICAL:* • IPZ with a vulnerability score of 8 or higher • WHPA with a vulnerability score of 8 or higher
Transfer/processing site approved to receive only municipal waste under Part V of the *Environmental Protection Act*	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 8 or higher
Storage of subject waste at a waste generation facility: site requires generator registration under O. Reg. 347	*CHEMICAL:* • IPZ with a vulnerability score of 10 • WHPA with a vulnerability score of 10
Storage of waste at a waste generation facility: site that is exempt or excluded from generator registration requirements	*CHEMICAL:* • WHPA with a vulnerability score of 10

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Prescribed Activity	Significant threat in vulnerable areas (under certain circumstances)
Storage, treatment and discharge of tailings from mines	*CHEMICAL:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 10

Note: The circumstances that can determine whether an activity is a significant threat, moderate threat, low threat or no threat may include:

- position of storage;
- surface area of application or storage, if applicable;
- type of activity;
- type of waste;
- approval or registration of facility requirement, if applicable;
- volume of material; and
- vulnerable area and vulnerability score.

For the full circumstances to determine threat level, refer to the most current version of the Technical Rules.

4.4.11 Background: Issue Contributing Area for Callander Intake

High levels of phosphorus can contribute to the development of cyanobacteria blooms. Some cyanobacteria (also known as blue-green algae) can produce the toxin microcystin LR, which can contaminate drinking water sources.

The drinking water system intake in Callander Bay has been identified as being in an area where microcystin LR could occur. Cyanobacteria occurrences are related to phosphorus contributions. Within the Callander Issue Contributing Area (ICA), activities that have any circumstance with phosphorus listed as a contaminant are considered significant threats.

~~These activities include: • The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act. • The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage. • The application of agricultural source material (ASM) to land. • The storage of agricultural source material (ASM). • The application of non-agricultural source material (NASM). • The handling and storage of non-agricultural source material. • The application of commercial fertilizer to land. • The handling and storage of commercial fertilizer. • The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm- animal yard.~~

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~~High levels of phosphorus can contribute to the development of cyanobacteria blooms. Some cyanobacteria (also known as blue-green algae) can produce the toxin microcystin LR, which can contaminate drinking water sources.~~

Note that several of these activities are addressed by policies in other sections (see Table 2-2).

Table 4-12. Issue Contributing Area for Callander Intake: Significant threat in vulnerable areas

Activity Can Contribute Phosphorus	Significant threat in vulnerable areas (under certain circumstances)
The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act* (disposal of hauled sewage to land; application of processed organic waste to land; storage of hauled sewage; storage of processed organic waste or waste biomass	• All parts of Callander Issue Contributing Area
The establishment, operation or maintenance of a system that collects, stores, transmits, treats, or disposes of sewage	• All parts of Callander Issue Contributing Area
The application of agricultural source material (ASM) to land	• All parts of Callander Issue Contributing Area
The management or storage of agricultural source material (ASM)	• All parts of Callander Issue Contributing Area
The application of non-agricultural source material (NASM)	• All parts of Callander Issue Contributing Area
The handling and storage of non-agricultural source material (NASM)	• All parts of Callander Issue Contributing Area
The application of commercial fertilizer to land	• All parts of Callander Issue Contributing Area
The handling and storage of commercial fertilizer	• All parts of Callander Issue Contributing Area
The storage of snow on a site	• All parts of Callander Issue Contributing Area
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard	• All parts of Callander Issue Contributing Area

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For the full circumstances to determine threat level, refer to the most current version of the Technical Rules.

4.4.12 Background: Local Threat – Transportation of Hazardous Substances

The threat posed by the transportation of hazardous substances has been identified as a local threat to drinking water. It is not a prescribed activity.

Transportation corridors refer to roads, railways and waterways. The transportation of certain hazardous substances along these corridors is a concern because a spill could contaminate surface water or groundwater that is used as a drinking water source. Prevention of spills can be aided by implementing safety measures and raising awareness of the risk. In the event of a spill or accident, it is important to have contingency plans or Emergency Response Plans to ensure a timely response to a spill and appropriate actions by responders.

Table 4-13. Transportation of Hazardous Substances: Significant threat in vulnerable areas

Transportation Activity and Contaminant of Concern	Significant threat in vulnerable areas (under certain circumstances)
Transportation of sodium hydroxide	*CHEMICAL:* • IPZ with a vulnerability score of 10 • WHPA with a vulnerability score of 10
Transportation of sulphuric acid	*CHEMICAL:* • IPZ with a vulnerability score of 10 • WHPA with a vulnerability score of 10
Transportation of septage	*PATHOGEN:* • IPZ with a vulnerability score of 9 or higher • WHPA with a vulnerability score of 10

For the full circumstances to determine threat level, refer Appendix F of the Assessment Report for details on this local threat activity.

4.4.13 Background: Lands in the Municipality of Mattawan ~~Township~~ and Laurier Township

A small portion of the wellhead protection area for the Town of Mattawa's drinking water system is within the ~~Township~~ Municipality of Mattawan. As Crown Land, it is administered by the Ministry of Natural Resources ~~and Forestry~~ (MNR~~F~~). The only prescribed activity that could pose a significant

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threat in this area is the handling and storage of dense non-aqueous phase liquids (DNAPLs). Such threats are to be managed by MNR~~F~~ exercising discretion in permitting activities on said lands. Note that the policy wording flags other activities which could threaten drinking water, but those are addressed by Prescribed Instrument policies SEW1 and WDS1.

Similarly, a portion of the intake protection zone for the Village of South River's drinking water system extends into Laurier Township. As Laurier Township is an unorganized township without municipal government, certain SP Plan policies would not have a local implementing body to carry out the required actions. Responsibility for carrying out the education and outreach activities is assigned back to the North Bay-Mattawa Conservation Authority, by request of the Village of South River, the owner of the drinking water system in question.

4.4.14 Background: Transport Pathways

The *Clean Water Act* regulations define transport pathways as "a condition of land resulting from human activity that increases the vulnerability of a raw water supply of a drinking water system." Transport pathways may facilitate the movement of contaminants vertically in the ground or laterally either on the surface or below ground. The result can be faster or more widespread distribution of contaminants.

In the case of groundwater, transport pathways can be thought of as a constructed channel to an aquifer that bypasses the natural protection of the overburden layer. Examples include subsurface utility corridors (e.g., sewer lines), abandoned boreholes, deteriorating water wells (which do not meet applicable legal requirements), pits and quarries, geothermal systems, underground parking lots, and excavations. Geothermal (earth energy) systems utilize the relatively constant temperatures below ground to either cool or heat buildings. Both vertical and horizontal types of geothermal systems involve drilling and or excavating that may impact water quality by creating a pathway through which contaminants can reach groundwater (a transport pathway).

For surface water, a transport pathway can provide a channel that speeds the movement of water or increases the drainage area, resulting in greater potential risk of contamination from nearby threats. Examples include storm sewers, drainage ditches and agricultural tile drains.

Transport pathways are given consideration as part of the vulnerability assessment for wellhead protection areas and intake protection zones during the preparation of the Assessment Report. If a transport pathway(s) was identified in a wellhead protection area, the vulnerability scoring may have been increased. Nearby activities (i.e., one of the prescribed drinking water threats) may then have become significant threats due to the vulnerability scoring change. In surface water intakes, transport pathways can extend the area included within IPZ-2 and IPZ-3, as well as an issue contributing area derived from these zones.

Although transport pathways are not listed as a prescribed drinking water threat under O. Reg. 287/07, another provision under O. Reg. 287/07 allows the Source Protection Committee to include policies regarding transport pathways. Furthermore, O. Reg. 287/07, s.27 obliges a municipality to provide a notice to the Source Protection Committee and Source Protection Authority if the municipality receives an application for an activity in a WHPA or IPZ that would result in the creation of a new transport pathway or the modification of an existing transport pathway.

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Chapter 5. Source Protection Plan Policies

Commented [AM9]: This section previously included background information on the various threat activities. That information is now separately located in the previous chapter.

~~AIR: Management of Aircraft De-Icing Chemicals~~

~~AIR1. Aircraft De-Icing Chemical Management Plans~~

~~Intent~~

~~To ensure that an aircraft de-icing chemical management plan is in place to manage runoff from de-icing operations or a spill.~~

~~Policy~~

~~Prior to the installation or operation of any de-icing facility to be located where the threat could be significant, the airport authority/operator should have in place an appropriate aircraft de-icing chemical management plan. Said plan should manage the risk posed by runoff from de-icing operations or a spill. The authority/operator should also have in place an emergency response plan to ensure continued protection of the environment in the event of an emergency.~~

~~Where the operator/authority is a Municipality, the Municipality shall comply with this policy.~~

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~~The airport authority/operator should provide notice to the Source Protection Authority when an aircraft de-icing chemical management plan has been prepared in the areas where this policy applies.~~

~~This policy shall apply in the following vulnerable areas:~~

- ~~Callander IPZ-1, where the vulnerability score is 9 or greater;~~
- ~~Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;~~
- ~~Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;~~
- ~~South River IPZ-1, where the vulnerability score is 9 or greater.~~

~~Monitoring policy M12-SPA applies to policy AIR1.~~

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FUL: Handling and Storage of Fuel

FUL1. Land Use Prohibition: Handling and Storage of Fuel

Intent

To prohibit land uses which involve the handling or storage of fuel in relation to its manufacturing, refining, or storage for retail sale where the threat could be significant~~, including:~~

- ~~the handling of liquid fuels and fuel oil in a quantity exceeding 2500 Litres (L).~~
- ~~the storage of liquid fuels and fuel oil in a quantity of 250 L or more for any facility partially or completely below grade; and~~
- ~~the storage of liquid fuels and fuel oil in a quantity of 2500 L or more for any facility located above grade.~~

~~The Municipality shall comply with the required prohibition.~~ Note that the threat posed by the handling
or storage of fuel oil intended for heating is addressed by FUL4.

Policy

~~When the Source Protection Plan takes effect,~~ The Municipality shall prohibit the use of land for a gas bar, marina, automobile service station, cardlock/keylock facility, private outlet, farm, refinery, bulk plant, and any commercial or industrial land use involving the handling and storage of fuel, other than for heating, at the location where the threat would be significant.

A Municipality's official plan and zoning by-law in effect for the vulnerable areas shall be reviewed and amended, as necessary, as required under the *Planning Act* to conform to this prohibition within two years of the date the SP Plan takes effect.

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B~~1~~, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 9 or greater, except for lands in Laurier Township (which are subject to LAU1).

Monitoring policy M01-PA applies to policy FUL1.

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■ FUL2. Management of Threat as a Condition of Other Approvals: Handling and Storage of Fuel

Intent

To require conditions on prescribed instruments to manage significant threats posed to sources of drinking water by the handling and storage of fuel.

Policy

Where the handling and storage of fuel could be a significant threat, a~~A~~ prescribed instrument that is of a type listed below~~, issued where the threat from the handling and storage of fuel could be significant,~~ shall contain conditions to manage the threat. A review of existing instruments and their conditions to manage these threats shall be completed within three years of the date the ~~Source Protection~~SP Plan takes effect, or by a time determined by a Director as defined in the associated Act or Regulation, based on a prioritized review of prescribed instruments that govern the handling and storage of fuel in association with the named instruments.

~~This policy shall apply in the following vulnerable areas:~~

~~• Mattawa WHPA-A and B;~~

~~• Powassan WHPA-A and B1.~~

The prescribed instruments for this policy include:

1. *Aggregate Resources Act*: Section 8 site plans included in applications for licenses.
2. *Aggregate Resources Act*: Sections 11 and 13 licenses to remove aggregate from pits or quarries.
3. *Aggregate Resources Act*: Section 25 site plans accompanying applications for wayside permits.
4. *Aggregate Resources Act*: Section 30 wayside permits to operate pits or quarries.
5. *Aggregate Resources Act*: Section 36 site plans included in applications for aggregate permits.
6. *Aggregate Resources Act*: Section 34 aggregate permits to excavate aggregate or topsoil.
7. *Environmental Protection Act*: Section 39 for the use, operation, establishment, alteration, enlargement or extension of a waste disposal site.
8. *Safe Drinking Water Act:* Section 40 with respect to drinking water works permits issued by the Director.
9. *Safe Drinking Water Act*: Section 44 with respect to the municipal drinking water licences issued by the Director.

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This policy shall apply in the following vulnerable areas:

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;~~1;~~
- South River IPZ-1, where the vulnerability score is 9 or greater.

Monitoring policy M08-ECA applies to policy FUL2.

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FUL3. Maintenance of Safety Information for Public by TSSA

Intent

To encourage the Technical Standards and Safety Authority (TSSA) to maintain information on its website that could be used for an education and outreach program relating to the handling and storage of fuel.

Policy

The Technical Standards and Safety Authority should continue to maintain information on its website related to safe handling and storage of fuels, to support the education and outreach required by Policy FUL4 for the following vulnerable areas: ~~in Mattawa WHPA-A & B, and Powassan WHPA-A & B1.~~.

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 9 or greater.

Monitoring policy M12-TSF applies to policy FUL3.

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FUL4. Education: Handing and Storage of Fuel

Intent

To provide information on the safe handling and storage of fuel, proper installation and maintenance of equipment, and how to recognize and respond to a spill.

Policy

Where the handling and storage of fuel could be a significant threat, ~~Where there could be a significant threat from the handling of liquid fuels and fuel oil in a quantity exceeding 2500 L, the storage of liquid fuel in tanks of 250 L or greater that are located partially, or completely below grade, and tanks greater than 2500 L for any facility located above grade,~~ the Municipality, in association with appropriate partners, shall plan and deliver an education and outreach program within one year of the date the ~~Source Protection~~SP Plan takes effect.

The program shall be designed to ensure those involved in the handling and storage of fuel, including but not limited to the owner/operator of the facility, are aware of the risks posed to source water, how to reduce those risks, and how to recognize and respond to a spill.

The program shall be made available and updated as necessary on an on-going basis as is deemed appropriate by the Municipality. ~~Further, the program may be delivered more broadly at the discretion of a municipal council.~~

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10~~1~~;
- South River IPZ-1, where the vulnerability score is 9 or greater, except for lands in Laurier Township (which are subject to LAU1).

The program developed through this policy may be more broadly delivered to a whole Municipality, or any part of the Source Protection Area, at the discretion of a municipal council.

Monitoring policy M03-EO applies to policy FUL4.

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HAZ: Threats from the Handling and Storage of Dense Non-Aqueous Phase Liquids (DNAPLs) and Organic Solvents

HAZ1. Land Use Screening: DNAPLs

Intent

To reduce the threat posed by DNAPLs by managing land use activities at the planning and development stage which may include the handling and storage of DNAPLs.

Policy

Where the handling or storage of DNAPLs could be a significant drinking water threat, the Municipality shall use its powers under the *Planning Act* to establish a screening process to identify applications made under the *Planning Act, Condominium Act* or Building Code for buildings, structures, and land uses that may include the handling and storage of DNAPLs.

The Municipality shall use their powers under the *Planning Act* to identify the areas where this policy applies in their municipal planning documents, including their zoning by-laws.

The Municipality shall use its powers under the *Municipal Act* or *Planning Act* to require development applications to include information or reports to demonstrate that either:

(a) the proposed building or development would not include the handling and storage of DNAPLs; or

(b) the handling and storage of DNAPLs would be adequately managed by relevant measures so as not to pose a significant threat to drinking water.

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A, WHPA-B and WHPA-C, where the vulnerability score is 2 or greater, except for lands in the Municipality of Mattawan (which are subject to MAT1);
- Powassan WHPA-A, WHPA-B and WHPA-C, where the vulnerability score is 2 or greater;
- South River IPZ-1, where the vulnerability score is 9 or greater, except for lands in Laurier Township (which are subject to LAU1).

Monitoring policy M01-PA applies to policy HAZ1.

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HAZ2. Land Use Screening: Organic Solvents

Intent

To reduce the threat posed by organic solvents by managing land use activities at the planning and development stage which may include the handling and storage of organic solvents.

Policy

Where the handling or storage of organic solvents could be a significant drinking water threat, the Municipality shall use its powers under the *Planning Act* to establish a screening process to identify applications made under the *Planning Act, Condominium Act* or Building Code for buildings, structures, and land uses that may include the handling and storage of organic solvents.

The Municipality shall use their powers under the *Municipal Act* or *Planning Act*, as applicable, to identify the areas where this policy applies in their municipal planning documents, including their zoning by-laws.

The Municipality shall use its powers under the *Planning Act* to require development applications to include information or reports to demonstrate that either:

(a) the proposed building or development would not include the handling and storage of organic solvents; or

(b) the handling and storage of organic solvents would be adequately managed by relevant measures so as not to pose a significant threat to drinking water.

This policy shall apply in the following vulnerable areas:

- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10.

Monitoring policy M01-PA applies to policy HAZ2.

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■ HAZ31. Education: DNAPLs ~~and Organic Solvents~~

Intent

To reduce the threat posed by DNAPLs ~~and organic solvents~~ by informing users of proper handling and ~~disposal~~ storage of such chemicals including manufactured products containing them. ~~Municipalities may choose to implement the policy as part of a broader program to encourage proper handling and disposal of hazardous goods~~ (See also WDS3. Education: Hazardous Waste and PCBs).

Policy

Where there could be a significant threat from the existing or future handling or storage of DNAPLs~~, or organic solvents,~~ the Municipality, in association with appropriate partners, shall plan and deliver an education and outreach program designed to ensure those involved in such activities are aware of the risks posed to source water, how to reduce those risks, and how to recognize and respond to a spill.

The program shall be designed within two years of the date the ~~Source Protection~~SP Plan takes effect and delivered ~~if the activity is occurring~~ where the threat would be significant. Further, the program shall be made available on an on-going basis and updated as deemed appropriate by the Municipality. The program shall be delivered to all persons that could be engaged in the activity of handling and storage of DNAPLs where the threat could be significant ~~in the following vulnerable areas :~~.

- ~~Mattawa WHPA-A, B and C (except for areas in Mattawan Township);~~
- ~~Powassan WHPA-A, B and C;~~

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A, WHPA-B and WHPA-C, where the vulnerability score is 2 or greater, except for lands in the Municipality of Mattawan (which are subject to MAT1);
- Powassan WHPA-A, WHPA-B and WHPA-C, where the vulnerability score is 2 or greater;
- South River IPZ-1, where the vulnerability score is 9 or greater, except for lands in Laurier Township (which are subject to LAU1).

~~Additionally, T~~the program developed through this policy may be more broadly delivered to a whole Municipality, or any part of the Source Protection Area, at the discretion of a municipal council.

Monitoring policy M03-EO applies to policy HAZ3.

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HAZ4. Education: Organic Solvents

Intent

To reduce the threat posed by organic solvents by informing users of proper handling and disposal of such chemicals including manufactured products containing them. (See also WDS3. Education: Hazardous Waste and PCBs).

Policy

Where there could be a significant threat from the existing or future handling or storage of organic solvents, the Municipality, in association with appropriate partners, shall plan and deliver an education and outreach program designed to ensure those involved in such activities are aware of the risks posed to source water, how to reduce those risks, and how to recognize and respond to a spill.

The program shall be designed and delivered where the threat would be significant. Further, the program shall be made available on an on-going basis and updated as deemed appropriate by the Municipality. The program shall be delivered to all persons that could be engaged in the activity of handling and storage of organic solvents where the threat could be significant.

Additionally, the policy may be more broadly delivered to a whole Municipality, or any part of the Source Protection Area, at the discretion of a municipal council.

This policy shall apply in the following vulnerable areas:

- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10.

The program developed through this policy may be more broadly delivered to a whole Municipality, or any part of the Source Protection Area, at the discretion of a municipal council.

Monitoring policy M03-EO applies to policy HAZ4.

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ICA: Phosphorus Activities in Callander Issue Contributing Area (IPZ-ICA)

■ ICA1. Education: Issue Contributing Area

Intent

To reduce phosphorus loadings to waterways and to increase the amount of phosphorus which is bound in plant material and soil by educating people on appropriate strategies or best management practices and encouraging change in behaviours toward implementation of those strategies.

Policy

Where the threat from the following activities could be significant in the areas delineated as the Callander Issue Contributing Area, an education and outreach program shall be implemented to address:

- The application of agricultural source material;
- The storage of agricultural source material;
- The management of agricultural source material – discharge from aquaculture;
- The application of non-agricultural source material;
- The handling and storage of non-agricultural source material;
- The application of commercial fertilizer;
- The handling and storage of commercial fertilizer;
- The storage of snow on a site;
- ~~The use of land as livestock grazing or pasturing land, an outdoor confinement area or farm animal yard. O. Reg. 385/08, s. 3; and~~
- Agricultural source material generation – livestock grazing or pasturing;
- Agricultural source material generation – outdoor confinement area or farm animal yard;
- ~~The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.~~Industrial effluent discharges;
- Onsite sewage works;
- Storm water management facilities and drainage systems: Outfall from a storm water management facility of storm water drainage system;
- Stormwater management facilities and drainage systems: Storm water infiltration facility;

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- Wastewater collection facilities and associated parts: Sanitary sewers;
- Wastewater collection facilities and associated parts: Outfall of a combined sewer overflow or a sanitary sewer overflow from a manhole or wet well;
- Wastewater collection facilities and associated parts: Sewage pumping station or lift station wet well, a holding tank or a tunnel;
- Wastewater treatment facilities and associated parts

The Municipalities shall plan and deliver an education and outreach program designed to result in persons engaged in the above activities and other residents and/or property owners taking the necessary actions to prevent and reduce phosphorus contributions to waterways in the following ways:

1. Identifying sources of phosphorus on the property, including snow storage;
2. Engaging in best management practices for reducing the erosion of streambanks, which should include consideration of vegetated buffers or naturalized shoreline areas which may be implemented independent of local Site Plan Control by-laws;
3. Engaging in best management practices for sediment removal, removal of soil-bound nutrients and soluble nutrients from overland and shallow subsurface flow;
4. Engaging in best management practices for the application of agricultural source material, commercial fertilizer and non-agricultural source material;
5. Engaging in best management practices for management or handling of agricultural source material generated by the use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm animal yard;
6. Engaging in best management practices for the management or storage of agricultural and non-agricultural source material and commercial fertilizer;
7. Engaging in best management practices for the storage of snow;
8. Engaging in best practices for caring for and maintaining on site sewage works;
9. Engaging in best practices for municipal wastewater and stormwater systems
10. Establishing a vegetated buffer strip on the property; and
11. Fostering the improvement of aquatic habitats.

The education and outreach program should be delivered consistently throughout the five municipalities within the Issue Contributing Area within two years of the date the ~~Source Protection~~SP Plan takes effect and shall be updated as necessary and made available on an on-going basis.

The education and outreach program shall identify the desired actions and/or behaviours, as well as the benefits of engaging in the desired behaviours. The program plan shall: outline the goals, timeline, deliverables, and desired outcomes of the program. It shall also ~~; and~~ include a process for measuring the outcomes~~. The program plan shall,~~ identify the benefits of engaging in the desired

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behaviors, as well as the barriers, and incorporate a variety of strategies and tools to overcome the barriers. The program shall take into consideration the principles of social marketing as a strategy for fostering the desired behaviours and actions.

In the Townships of Ballantyne, Bolter and Wilkes (which lack municipal organization), the Conservation Authority shall collaborate with IPZ-ICA municipalities to implement this policy.

This policy shall apply in the following vulnerable area:

- Callander IPZ-ICA.

The program developed through this ~~Additionally, the~~ policy may be more broadly delivered to a whole Municipality, or any part of the Source Protection Area, at the discretion of a municipal council.

Monitoring policy M04-EO applies to policy ICA1.

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■ ICA2. *Nutrient Management Act* Tools to Implement Phosphorus Best Management in the Issue Contributing Area~~ICA~~

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Intent

To recognize that agricultural operations of a certain size or production, or ones completing a physical expansion of buildings, must prepare and implement specific *Nutrient Management Act* instruments. As a part of those instruments, significant threat activities will be addressed by considering how phosphorus is managed on the property and the plan or strategy should address ways to reduce contributions of phosphorus to drinking water sources.

Policy

In the Callander Issue Contributing Area, where the threat could be significant, the following existing and future activities are designated for the purpose of specifying certain conditions to be placed on a *Nutrient Management Act* instrument:

- The application of agricultural source material;
- The storage of agricultural source material;
- The management of agricultural source material – discharge from aquaculture;
- The application of non-agricultural source material;
- The handling and storage of non-agricultural source material;
- The application of commercial fertilizer;
- The use of land as an outdoor confinement area or farm ~~-~~animal yard.

Where the threat from any of the activities listed above would be significant and a Nutrient Management Plan, Nutrient Management Strategy, and/or Non-Agricultural Source Material Plan is required, the instrument should include appropriate terms and conditions that demonstrate that best management practices related to limiting and/or attenuating phosphorus have been implemented in the plan or strategy to meet the objectives of the ~~Source Protection~~SP Plan ~~(SP Plan)~~. All existing and future instruments shall be updated within two years of the date the SP Plan takes effect to demonstrate that best management practices related to limiting and/or attenuating phosphorus have been implemented in the plan or strategy to meet the objectives of the SP Plan.

This policy shall apply in the following vulnerable area:

- Callander IPZ-ICA.

Monitoring policy M08-ECA applies to policy ICA2.

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■ ICA3. Governing Research in the Issue Contributing Area

Intent

To improve knowledge and understanding of the pertinent factors related to phosphorus loading, phosphorus attenuation and water quality in the Issue Contributing Area.

Policy

The North Bay-Mattawa Conservation Authority, in partnership with the Municipality of Callander and in consultation with the other named municipalities, shall maintain a working committee. This working committee will prioritize research regarding threat activities in the Callander Issue Contributing Area to accomplish research outcomes, such as:

~~1.~~• verify relative contributions of phosphorus from specific activities and in relation to subzones within the Issue Contributing Area;

~~2.~~• improve understanding of attenuation mechanisms and their relative significance;

• look for partnership opportunities with post-secondary and other institutions;

~~3.~~• target areas of concern for future work using data gathered in the monitoring of the issue and other available watershed research; ~~and~~

~~4.~~• identify best management practices that could be implemented to meet the objectives of the ~~Source Protection~~SP Plan; and

• communicate results with interested parties.

~~• The following activities shall be researched to improve knowledge and understanding of the pertinent factors related to phosphorus loading, attenuation and water quality as they were identified in the North Bay-Mattawa Source Protection Area Assessment Report: The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act. The application of agricultural source material. The storage of agricultural source material. The application of non-agricultural source material. The handling and storage of non-agricultural source material. The application of commercial fertilizer to land. The handling and storage of commercial fertilizer. The use of land as livestock grazing or pasturing land, an outdoor confinement area or farm animal yard. O.Reg. 385/08, s. 3. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.~~

In addition to the Municipality of Callander, the following municipalities having jurisdiction over lands in the Issue Contributing Area shall be included in the working committee in an advisory capacity: Chisholm Township, Municipality of East Ferris, City of North Bay, and the Municipality of Powassan. Responsibility for implementation of this policy shall rest with the Municipality of Callander.

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This policy shall apply in the following vulnerable area:

- Callander IPZ-ICA.

Monitoring policy M10-CAI applies to policy ICA3.

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■ ICA4. Monitor Issue in Callander IPZ-ICA – Phosphorus Contribution Related to Microcystin LR

Intent

Require ongoing data collection to inform the design and implementation of programs required by other policies.

Policy

The North Bay-Mattawa Conservation Authority, with the support of the Municipality of Callander, shall continue to undertake an ongoing program of water quality monitoring in the Callander Issue Contributing Area. At a minimum, the program should monitor phosphorus or a surrogate, and may also monitor conditions that can either contribute to the development of cyanobacteria or to the attenuation of phosphorus. Annual reporting shall focus on trends in the subwatersheds and shall give consideration to the potential relationships between phosphorus loading and the policies that have been implemented under the ~~SP~~ Source Protection- Plan.

This policy shall apply in the following vulnerable area:

- Callander IPZ-ICA.

Monitoring policy M10-CAI applies to policy ICA4.

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LAU: Township of Laurier (Unorganized Territory)

LAU1. Education: Threat Activities in Laurier Township

Intent

To use an education and outreach approach to manage significant threat activities in the Township of Laurier that would be addressed with land use planning tools if there were municipal organizations.

Policy

An education and outreach program shall be delivered by the ~~Village of South River~~North Bay-Mattawa Conservation Authority to property owners in the Laurier Township portion of the South River IPZ-1 to create awareness of the threat that may be posed and encourage responsible action if engaging in any of the following activities:

- The disposal of hauled sewage to land;
- The application of processed organic waste to land;
- The landfarming of petroleum refining waste;
- Landfilling (hazardous waste or liquid industrial waste);
- Landfilling (municipal waste);
- The storage of hauled sewage;
- The storage of processes organic waste or waste biomass;
- Transfer/processing sites approved to receive hazardous waste or liquid industrial waste;
- Transfer/processing sites approved to receive only municipal waste under Part V of the *Environmental Protection Act*;
- The storage, treatment, and discharge of tailings from mines;
- The application of agricultural source material to land;
- The ~~management~~ storage of agricultural source material;
- The management~~storage~~ of agricultural source material – discharge from aquaculture;
- The application of non-agricultural source material to land;
- The handling and storage of non-agricultural source material;
- The application of commercial fertilizer to land;
- The handling and storage of commercial fertilizer;

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- ~~The handling and storage of fuel;~~
- ~~The handing and storage of dense non-aqueous phase liquids (DNAPLs);~~
- ~~Land use screenings to reduce the threat of DNAPLs;~~
- ~~Land use prohibition for waste disposal sites;~~
- The application of pesticide to land;
- The handling and storage of pesticide;
- The application ~~and storage~~ of road salt;
- ~~The handling and storage of road salt – exposed to precipitation or runoff;~~
- The storage of snow on a site;
- The handling and storage of fuel;
- The handing and storage of dense non-aqueous phase liquids (DNAPLs);
- Agricultural source material generation (ASM) – livestock grazing or pasturing;
- Agricultural source material generation (ASM) – outdoor confinement area (OCA) or farm animal yard;
- The transportation of hazardous substances.

- ~~The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm animal yard. O. Reg. 385/08, s.3;~~
- ~~The storage of hazardous waste or liquid industrial waste.~~ ~~The handling and storage of fuel;~~
- ~~The handing and storage of dense non-aqueous phase liquids (DNAPLs);~~
-

The program shall be delivered within one year of the effective date of the plan and continue to be available. Should the area in question come under the jurisdiction of an organized Municipality, the responsibilities for implementation of this policy shall be transferred to that Municipality.

This policy shall apply in the following vulnerable area:

- South River IPZ-1, where the vulnerability score is 9 (portion in Laurier Township).

Monitoring policy M05-EO applies to policy LAU1.

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MAT: Policy Respecting Lands in ~~Mattawan Township~~the Municipality of Mattawan

■ MAT1. Management of Threats in the Municipality of Mattawan ~~Township~~

Intent

To manage significant threats related to the handling or storage of dense non-aqueous phase liquids (DNAPLs) that could occur in the WHPA-C for Mattawa's drinking water source in lands that are part of the Municipality of Mattawan ~~Township~~ and currently designated as Crown Land, and to ensure awareness of the ~~MNRF~~ responsible Ministry to the vulnerability of the area to other named activities.

Policy

When the ~~Source Protection~~SP Plan takes effect, the Ministry ~~of Natural Resources and Forestry (MNRF)~~ with responsibility for administering activities on Crown land shall consider the vulnerability of lands in Mattawa WHPA-C to threats posed from the following activities:

- The handling or storage of a dense non-aqueous phase liquid;
- Landfilling (municipal waste);
- ~~AND l~~Landfilling (hazardous waste or liquid industrial waste~~solid non-hazardous industrial or commercial~~);~~,~~
- Liquid industrial waste injection into a well; and
- Transfer/processing site (hazardous waste, municipal waste or liquid industrial waste).
- ~~Storage of sewage (e.g. treatment plant tanks).~~

Further, ~~MNRF~~ the Ministry shall consult with the Source Protection Authority when making decisions regarding activities or uses permitted on said lands when the potential for use of DNAPLs or products containing them could reasonably be expected to occur.

This policy shall apply in the following vulnerable area:

- Mattawa WHPA-C (portion in the Municipality of Mattawan), where the vulnerability score is 8.

Note that the section of Mattawa WHPA that extends into the Municipality of Mattawan only has WHPA-C and WHPA-D.

Monitoring policy M09-MNR applies to policy MAT1.

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PIP: Liquid Hydrocarbon Pipelines

PIP1. Pipeline Planning to Consider Source Water

Intent

To ensure that drinking water source protection is considered in the decision-making framework for future proposed development and management of liquid hydrocarbon pipelines.

Policy

To ensure the establishment and operation of a liquid hydrocarbon pipeline within the meaning of O. Reg. 210/01 under the Technical Safety and Standards Act or that is subject to the Canadian Energy Regulator Act never becomes a significant, moderate or low drinking water threat, where the activity would be a significant, moderate or low drinking water threat, the Canada Energy Regulator, Ontario Energy Board, Technical Standards and Safety Authority (TSSA), and Impact Assessment Agency should ensure that drinking water source protection is considered as a risk factor in their decision making framework.

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 4.5 or greater;
- Mattawa WHPA-A, WHPA-B, WHPA-C, and WHPA-D, where the vulnerability score is 6 or greater;
- North Bay IPZ-1 and IPZ-2 where the vulnerability score is 4.5 or greater;
- Powassan WHPA-A, WHPA-B, WHPA-C, and WHPA-D, where the vulnerability score is 6 or greater;
- South River IPZ-1 and IPZ-3, where the vulnerability score is 4.5 or greater;
- Highly Vulnerable Aquifer (HVA) where the vulnerability score is 6.

Monitoring policy M15-SPA applies to policy PIP1.

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PIP2. Pipeline Design, Operation, and Maintenance

Intent

To ensure that best available source protection information is used in developing and managing future liquid hydrocarbon pipelines.

Policy

To ensure the establishment and operation of a liquid hydrocarbon pipeline within the meaning of O. Reg. 210/01 under the Technical Safety and Standards Act or that is subject to the Canadian Energy Regulator Act never becomes a significant, moderate or low drinking water threat, where the activity would be a significant, moderate or low drinking water threat, pipeline owners should ensure that best available source protection information is used such as up to date vulnerable areas in assessment reports when developing, operating and maintaining liquid hydrocarbon pipelines, including developing and updating emergency planning zones (EPZs).

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1, IPZ-2, and IPZ-3, where the vulnerability score is 4.5 or greater;
- Mattawa WHPA-A, WHPA-B, WHPA-C, and WHPA-D, where the vulnerability score is 6 or greater;
- North Bay IPZ-1 and IPZ-2, where the vulnerability score is 4.5 or greater;
- Powassan WHPA-A, WHPA-B, and WHPA-D, where the vulnerability score is 6 or greater;
- South River IPZ-1 and IPZ-3, where the vulnerability score is 4.5 or greater;
- Highly Vulnerable Aquifer (HVA) where the vulnerability score is 6.

Monitoring policy M15-SPA applies to policy PIP2.

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PIP3. Pipeline Notification

Intent

To ensure that the Source Protection Authority and local municipalities are informed of future proposed liquid hydrocarbon pipelines.

Policy

To ensure the establishment and operation of a liquid hydrocarbon pipeline within the meaning of O. Reg. 210/01 under the Technical Safety and Standards Act or that is subject to the Canadian Energy Regulator Act never becomes a significant, moderate or low drinking water threat, where the activity would be a significant, moderate or low drinking water threat, the Canada Energy Regulator or the Ontario Energy Board, should ensure that the Source Protection Authority and the Municipalities are provided the location of any new proposed pipeline.

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1, IPZ-2, and IPZ-3, where the vulnerability score is 4.5 or greater;
- Mattawa WHPA-A, WHPA-B, WHPA-C, and WHPA-D, where the vulnerability score is 6 or greater;
- North Bay IPZ-1 and IPZ-2, where the vulnerability score is 4.5 or greater;
- Powassan WHPA-A, WHPA-B, WHPA-C, and WHPA-D, where the vulnerability score is 6 or greater;
- South River IPZ-1 and IPZ-3, where the vulnerability score is 4.5 or greater;
- Highly Vulnerable Aquifer (HVA) where the vulnerability score is 6

Monitoring policy M15-SPA applies to policy PIP3.

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PIP4. Pipeline Technical Work Costs

Intent

To ensure that municipalities or the Source Protection Authority are reimbursed for direct costs as a result from future liquid hydrocarbon pipeline development.

Policy

To ensure the establishment and operation of a liquid hydrocarbon pipeline within the meaning of O. Reg. 210/01 under the Technical Safety and Standards Act or that is subject to the Canadian Energy Regulator Act never becomes a significant, moderate or low drinking water threat, where the activity would be a significant, moderate or low drinking water threat, pipeline owners should, upon request by the Municipalities or Source Protection Authority, reimburse costs borne by the Municipalities or Source Protection Authority where work in relation to this activity is required by a regulator with regards to protecting drinking water sources or where the work identified by the drinking water system owner is supported based on due diligence and best practices as it relates to source protection and the protection of public health. Examples may include but are not limited to spill clean-up and rehabilitation activities, events-based modelling or other technical work required to support current vulnerability scoring.

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1, IPZ-2, and IPZ-3, where the vulnerability score is 4.5 or greater;
- Mattawa WHPA-A, WHPA-B, WHPA-C, and WHPA-D, where the vulnerability score is 6 or greater;
- North Bay IPZ-1 and IPZ-2, where the vulnerability score is 4.5 or greater;
- Powassan WHPA-A, WHPA-B, WHPA-C1, WHPA-C2, WHPA-C4, WHPA-D3, and WHPA-D5, where the vulnerability score is 6 or greater;
- South River IPZ-1, and IPZ-3, where the vulnerability score is 4.5 or greater;
- Highly Vulnerable Aquifer (HVA) where the vulnerability score is 6.

Monitoring policy M15-SPA applies to policy PIP4.

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PIP5. Education: Liquid Hydrocarbon Pipeline

Intent

To enhance awareness of drinking water source protection for liquid hydrocarbon pipeline companies.

Policy

To ensure the establishment and operation of a liquid hydrocarbon pipeline within the meaning of O. Reg. 210/01 under the Technical Safety and Standards Act or that is subject to the Canadian Energy Regulator Act never becomes a significant, moderate or low drinking water threat, where the activity would be a significant, moderate or low drinking water threat, the Conservation Authority shall:

- provide educational awareness sessions on drinking water source protection to interested liquid hydrocarbon pipeline companies;
- request information updates including new pipelines or changes to pipelines;
- provide website addresses to approved assessment report and SP plan;
- request an invitation from liquid hydrocarbon pipeline owners to observe emergency preparedness exercises relevant to the Source Protection Area; and
- request a copy of the emergency preparedness plans when amended.

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1, IPZ-2, IPZ-3, where the vulnerability score is 4.5 or greater;
- Mattawa WHPA-A, WHPA-B, WHPA-C, and WHPA-D, where the vulnerability score is 6 or greater;
- North Bay IPZ-1 and IPZ-2, where the vulnerability score is 4.5 or greater;
- Powassan WHPA-A, WHPA-B, WHPA-C, and WHPA-D, where the vulnerability score is 6 or greater;
- South River IPZ-1 and IPZ-3, where the vulnerability score is 4.5 or greater;
- Highly Vulnerable Aquifer (HVA) where the vulnerability score is 6.

Monitoring policy M15-SPA applies to policy PIP5.

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PIP6. Mapping for Pipeline Emergency Planning

Intent

To ensure that threats risk assessment information is considered in emergency planning for liquid hydrocarbon pipelines.

Policy

To ensure the establishment and operation of a liquid hydrocarbon pipeline within the meaning of O. Reg. 210/01 under the Technical Safety and Standards Act or that is subject to the Canadian Energy Regulator Act never becomes a significant, moderate or low drinking water threat, where the activity would be a significant, moderate or low drinking water threat, the Ministry of the Environment, Conservation and Parks should continue to use the most up to date mapping of intake protection zones, wellhead protection areas and the locations of known significant threats, and if necessary, modify procedures to ensure that the operators of all water treatment plants that could be affected by a spill are notified.

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1, IPZ-2, IPZ-3, where the vulnerability score is 4.5 or greater;
- Mattawa WHPA-A, WHPA-B, WHPA-C, and WHPA-D, where the vulnerability score is 6 or greater;
- North Bay IPZ-1 and IPZ-2, where the vulnerability score is 4.5 or greater;
- Powassan WHPA-A, WHPA-B, WHPA-C, and WHPA-D, where the vulnerability score is 6 or greater;
- South River IPZ-1 and IPZ-3, where the vulnerability score is 4.5 or greater;
- Highly Vulnerable Aquifer (HVA) where the vulnerability score is 6.

Monitoring policy M07-SAC applies to policy PIP6.

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PST: Pesticides

PST1. Pesticide Approvals to Consider Source Water

Intent

To require conditions on permits issued for the application of pesticides, such as aerial spraying, that would ensure the activity does not pose a significant threat to drinking water sources.

Policy

Where the application of pesticide to land could be a significant threat, the Ministry with responsibility for issuing permits ~~of the Environment and Climate Change~~ shall not issue any permits under the Pesticide Act and O. Reg. 63/09 unless said permit contains conditions that ensure that pesticide application is not, or does not become, a significant drinking water threat. Instruments that exist when the ~~Source Protection Plan (~~SP Plan~~)~~ takes effect shall be reviewed within three years of the date the SP Plan takes effect and amended as necessary. -

The Director, as defined in the Pesticides Act or its Regulations, may determine another implementation date based on a prioritized review of permits that govern significant drinking water threat activities.

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8.1 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10~~1~~;
- South River IPZ-1, where the vulnerability score is 8.1 or greater.

Monitoring policy M08-ECA applies to policy PST1.

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■ PST2. Land Use Prohibition: Pesticide Handling and Storage

Intent

To prohibit the storage of pesticides by excluding ~~it~~ the storage of pesticides from lists of permitted uses in the vulnerable areas.

Policy

When the ~~Source Protection~~SP Plan takes effect, the Municipality shall prohibit the establishment of any land use involving the handling and storage of pesticides that would pose a significant threat including retail sale, manufacturing, processing, and wholesaling.

The Municipality's official plan and zoning by-law in effect for the vulnerable areas shall be reviewed and amended, as necessary, as required under the *Planning Act*, to implement this policy.

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B~~1~~, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 9 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

Monitoring policy M01-PA applies to policy PST2.

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■ PST3. Municipal Pesticide Management Plan

Intent

To require the Municipality to prepare a plan for its own use of pesticides where threats could be significant. ~~If the Municipality chooses to avoid such activities, the plan could be that pesticides shall not be applied or stored under circumstances where the threat could be significant.~~

Policy

Within three years of the date the ~~Source Protection~~SP Plan takes effect, the Municipality shall develop a pesticide management plan for municipal properties to ensure that the application, handling, or storage of pesticides does not pose a significant drinking water threat. This plan may provide direction to minimize the use (volume, area of application, application rate, and frequency) of pesticides, target reductions and suggest alternatives to their use where possible. The Municipality may choose to avoid such activities by establishing a local policy to exclude the application, handling and storage of pesticides in the areas and under circumstances where the threat could be significant.

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8.1 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10~~1~~;
- South River IPZ-1, where the vulnerability score is 8.1 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

Monitoring policy M02-MUN applies to policy PST3.

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PST4. Education: Application of Pesticides

Intent

To reduce the threat posed by the application of pesticides, information will be provided on the safe application of pesticides that are not covered by the prescribed instrument policy PST1, or the Municipal Management Plan covered by PST3. ~~Municipalities may choose to implement the policy as part of a broader program to encourage safe application of pesticides.~~

Policy

Where there could be a significant threat from the application of pesticides, the Municipality, in association with appropriate partners, shall plan and deliver an education and outreach program within one year of the date the ~~Source Protection~~SP Plan takes effect.~~.~~

The program shall be designed to ensure those involved in the application of pesticides are aware of the risks posed to source water and how to reduce those risks.

The program shall be made available and updated as necessary on an on-going basis as is deemed appropriate by the Municipality. ~~Further, the program may be delivered more broadly at the discretion of a municipal council~~

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8.1 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B~~1~~, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 8.1 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

The program developed through this policy may be more broadly delivered to a whole Municipality, or any part of the Source Protection Area, at the discretion of a municipal council.

Monitoring policy M03-EO applies to policy PST4.

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SAL: Road Salt Application & Storage

SAL1. Salt Management Plan ~~Land Use Prohibition – Road Salt Storage~~

Intent

~~To prevent private operations from establishing road salt storage facilities within the vulnerable areas where the threat could be significant.~~
To require the Municipality to prepare a plan for its own use of road salt where threats could be significant. This policy would apply should the application of road salt become significant in the future.

Policy

~~When the Source Protection Plan takes effect, the Municipality shall prohibit the future establishment of a salt storage facility in vulnerable areas listed below where the threat from the storage of road salt could be significant. A municipal official plan and zoning by-law in effect for the vulnerable areas shall be reviewed and amended, as necessary, as required under Section 26 of the Planning Act to implement this prohibition. The areas where the establishment of a facility providing the storage of salt in amounts greater than 5,000 tonnes that is either uncovered or exposed to runoff could pose a significant threat are: • Callander IPZ-1; • Mattawa WHPA-A and B; • Powassan WHPA-A and B1; and • South River IPZ-1 with the exception of lands in Laurier Township (which are subject to LAU1).~~

Where there could be a future significant threat from the application of road salt on provincial highways, the Ministry of Transportation and their contractors should continue to prepare and review their salt management plans to ensure compliance with the most up-to-date Environment Canada's Code of Practice for the Environmental Management of Road Salts and Transportation Association of Canada documents.

Where there could be a future significant threat from application of road salt, the Municipality, in association with appropriate partners, shall prepare or review their salt management plan within two years of the date the SP Plan takes effect to ensure compliance with the most up-to-date Environment Canada's Code of Practice for the Environmental Management of Road Salts and Transportation Association of Canada documents. The salt management plan shall address road salt application on roads, pedestrian paths, sidewalks and or parking lots owned or maintained by the Municipality. Where the application of road salt is an existing moderate or low threat the municipality should follow the same procedure.

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This policy shall apply in the following vulnerable areas:

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 9 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

Monitoring policy M02-MUN and M13-MTO apply to policy SAL1.

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SAL2. Education: Road Salt Application

Intent

To reduce the future threat posed by the application of road salt within the vulnerable areas where the threat to drinking water could be significant.

Policy

Where there could be a future significant threat from the application of road salt, the Municipality, in association with appropriate partners, shall plan and deliver an education and outreach program within one year of the date the SP Plan takes effect. The program shall be designed to ensure those involved in the application of road salt are aware of the risks posed to source water and how to reduce those risks, including best management practices. The program shall be made available and updated as necessary on an on-going basis as is deemed appropriate by the Municipality and may be combined with SAL3 and SNO2.

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 9 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

The program developed through this policy may be more broadly delivered to a whole Municipality, or any part of the Source Protection Area, at the discretion of a municipal council.

Monitoring policy M03-EO applies to policy SAL2.

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SAL3. Education: Road Salt Handling and Storage

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Intent

To reduce the threat posed by the storage and handling of road salt within the vulnerable areas where the threat to drinking water could be significant.

Policy

Where there could be a significant threat from the handling and storage of road salt, the Municipality, in association with appropriate partners, shall plan and deliver an education and outreach program within one year of the date the SP Plan takes effect. The program shall be designed to ensure those involved in the handling and storage of road salt are aware of the risks posed to source water and how to reduce those risks, including best management practices. The program shall be made available and updated as necessary on an on-going basis as is deemed appropriate by the Municipality and may be combined with SAL2 and SNO2.

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 9 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

The program developed through this policy may be more broadly delivered to a whole Municipality, or any part of the Source Protection Area, at the discretion of a municipal council.

Monitoring policy M03-EO applies to policy SAL3.

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SEW: Establishment, Operation or Maintenance of a System that Collects, Stores, Transmits, Treats or Disposes of Sewage

SEW1. Prescribed Instruments: ~~for~~ Prohibition of New Sewage Works and Review of Existing Sewage Works of Certain Types

Intent

To prevent the establishment of certain sewage works which pose an elevated risk of contamination to the source waters based on their design or likelihood to contribute raw, untreated sewage to source water by prohibiting their approval. ~~Existing approvals shall be reviewed to ensure that the threat is appropriately managed.~~

Policy

The Ministry ~~of Environment and Climate Change~~ with responsibility for issuing a prescribed instrument shall not issue an Environmental Compliance Approval for future activities where the threat from the establishment, operation or maintenance of a sewage works issued under the *Environmental Protection Act* would be significant.

For Environmental Compliance Approvals that exist in areas where the threats are significant for sewage works, the Ministry ~~of Environment and Climate Change~~ shall review their terms within three years of the date the ~~Source Protection~~SP Plan takes effect and amend as necessary to ensure that the terms of each approval adequately addresses the threats to source water.

The Director as defined in the Environmental Protection Act or its Regulations may determine another implementation date based on a prioritized review Environmental Compliance Approvals that govern significant drinking water threat activities.

This policy shall apply for the named activities and threat subcategories in the following vulnerable areas:

~~Combined sewer discharge from a stormwater outlet to surface water AND sewage treatment plant bypass discharge to surface water: • Callander IPZ-1 and 2; • North Bay IPZ-1; and • South River IPZ-1.~~

Industrial effluent discharges:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater; ~~and~~
- Callander ~~Issue Contributing Area (~~IPZ-ICA (only if related to a circumstance containing phosphorus);

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- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 8 or greater.

~~• Sewage treatment plant effluent discharges (includes lagoons): • Callander IPZ-1 and 2; • Mattawa WHPA-A and B; • North Bay IPZ-1; • Powassan WHPA-A and B1; and • South River IPZ-1.~~

~~• Storage of sewage (e.g. treatment plant tanks): • Callander IPZ-1; • Mattawa WHPA-A, B and C; • Powassan WHPA-A, B1/B2/B4 and C1; and • South River IPZ-1.~~

Outfall of a combined sewer overflow or a sanitary sewer overflow:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater;
- Callander IPZ-ICA (only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 8 or greater.

Wastewater treatment facilities and associated parts:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater;
- Callander IPZ-ICA (only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 8 or greater.

Monitoring policy M08-ECA applies to policy SEW1.

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■ SEW2. Prescribed Instruments: Management of Sewage Works of Certain Types

Intent

Existing procedures regarding issuance of approvals should be revised as warranted to be consistent with the objectives of source protection planning. It is expected that the Ministry ~~of Environment and Climate Change (MOECC)~~ procedures will include provisions to ensure adequate monitoring for compliance with the terms of the prescribed instruments issued.

Policy

The Ministry ~~of the Environment and Climate Change~~ with responsibility for issuing a prescribed instrument shall ensure that for future Environmental Compliance Approvals for the establishment of sewage works issued under the *Environmental Protection Act*, that the design of such facilities appropriately manages the threats to source waters and may consider the Ministry of Environment (MOE) Design Guidelines for Sewage Works, published in 2016 and updated in November 2023 and as amended. Note that MOE is a previous name of the Ministry of Environment, Conservation and Parks (MECP).

For Environmental Compliance Approvals that exist where the threats could be significant for sewage works, the Ministry shall review their terms within three years of the date the ~~Source Protection~~SP Plan takes effect and amend as necessary to ensure that the terms of each approval adequately addresses the threats to source water.

This policy shall apply for the named activities and threat subcategories in the following vulnerable areas:

~~Discharge of Stormwater from a Stormwater Retention Pond: • Callander IPZ-1 and 2; • Mattawa WHPA-A and B; • North Bay IPZ-1; • Powassan WHPA-A and B1; and • South River IPZ-1. Sanitary Sewers and Related Pipes: • Callander Issue Contributing Area (ICA only if related to a circumstance containing phosphorus); • Mattawa WHPA-A and B (has existing); and • Powassan WHPA-A and B1; Large Septic Systems and Septic System Holding Tanks: • Callander Issue Contributing Area (ICA only if related to a circumstance containing phosphorus); • Mattawa WHPA-A and B; and • Powassan WHPA-A and B1; Sewage Treatment Plant Effluent Discharges (includes lagoons): • Callander Issue Contributing Area (ICA only if related to a circumstance containing phosphorus)~~

On-site sewage works (under *Ontario Water Resources Act*):

- Callander IPZ-ICA (only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10.

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Outfall from a storm water management facility or storm water drainage system:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater;
- Callander IPZ-ICA (only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;
- Powassan WHPA-A and WHPA-B;
- South River IPZ-1, where the vulnerability score is where the vulnerability score is 8 or greater.

Sanitary sewers and associated parts:

- Callander IPZ-ICA (only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10.

Sewage pumping station or lift station (storage of sewage):

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B1, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 9 or greater.

Storm water infiltration facility:

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B1, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 9 or greater.

Monitoring policy M08-ECA applies to policy SEW2.

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SEW3. Recognize the Ontario Building Code Mandatory Maintenance Inspection Program

Intent

To recognize the Ontario Building Code requirements for mandatory maintenance inspections as a tool to meet the objectives of the ~~Source Protection~~SP Plan.

Policy

For all future and existing septic systems that could be significant threats and that are subject to the requirements of the Ontario Building Code, a mandatory maintenance inspection program shall be implemented by the principal authority as defined by the Ontario Building Code.

This policy shall apply in the following vulnerable areas:

- Callander ~~Issue Contributing Area~~IPZ-ICA;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10~~1~~.

Monitoring policy M11-CAS applies to policy SEW3.

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SMF: Source Materials and Fertilizers

SMF1. Management of Threat Posed by Certain Nutrients as a Condition of Other Approvals

Intent

To require conditions on prescribed instruments to manage significant threats posed to sources of drinking water by the handling, storage or land application of certain nutrients.

Policy

This policy applies where there could be a significant threat from the existing or future handling or storage of non-agricultural source material or the application of non-agricultural source material to land.

The policy applies to the following provincial instruments:

- nutrient management strategies;
- non-agricultural source material plans

Where a property is required to have a non-agricultural source material plan as per the *Nutrient Management Act*, the Ministry with responsibility for the issuing of a prescribed instrument shall ensure that the instrument prohibits the handling and storage of non-agricultural source material, as well as the application of non-agricultural source material, for all parts of the property within the vulnerable area where the handling and storage of non-agricultural source material or the application of non-agricultural source material would be a significant drinking water threat. The Ministry shall cause an amendment to be made to any non-agricultural source material plans that do not contain a provision as noted above (existing activity).

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 8 or greater.

Monitoring policy M08-ECA applies to policy SMF1.

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■ SMF2. Land Use Prohibition:~~–~~ Nutrient Handling & Storage and Livestock Activity

Intent

To use municipal planning tools to prevent the establishment of a storage facility or livestock grazing area in the vulnerable areas since these activities are also considered land uses. ~~The Municipality shall comply with the required prohibition.~~

Policy

When the ~~Source Protection~~SP Plan takes effect, the Municipality shall prohibit the future uses of land as listed below where the threat from such uses would be significant in the areas where this policy applies. A Municipality's official plan and zoning by-law in effect for the vulnerable areas shall be reviewed and amended within two years, as necessary, as required under ~~Section 26 of~~ the *Planning Act*, to implement this prohibition.

The uses to be prohibited include:

- The storage of agricultural source material.
- The handling and storage of non-agricultural source material.
- The handling and storage of commercial fertilizer.
- The use of land as livestock grazing or pasturing land, an outdoor confinement area or farm-animal yard.

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10~~1~~;
- South River IPZ-1, where the vulnerability score is 8 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

Monitoring policy M01-PA applies to policy SMF2.

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■ SMF3~~1~~. Municipal Action: Prohibit ~~Land~~ Application of Commercial Fertilizer to Land~~Nutrients~~

Intent

The application of ~~source materials and~~ commercial fertilizers ~~in the vulnerable areas are not considered land uses and therefore cannot be prohibited using land use planning tools. Application to land~~ under circumstances that would constitute a significant threat is to be prohibited through local tools. ~~The Municipality shall comply with the required prohibition.~~

Policy

The application of ~~agricultural source material, non-agricultural source material, or~~ commercial fertilizer to land shall be prohibited by the Municipality where the threat from such activities could be significant. The prohibition, using a regulatory tool deemed appropriate and enforceable by the Municipality, shall take effect no later than one year from the date the ~~Source Protection~~SP Plan takes effect and shall apply to all existing and future activities.

Thi~~s~~e policy shall apply ~~for the named activities~~ in the following vulnerable areas:

~~The application of agricultural source material to land AND the application of non-agricultural source material to land:~~
~~• Callander IPZ-1 and 2;~~
~~• Mattawa WHPA-A and B;~~
~~• North Bay IPZ-1;~~
~~• Powassan WHPA-A and B1; and~~
~~• South River IPZ-1 with the exception of lands in Laurier Township (which are subject to LAU1).~~

~~The application of commercial fertilizer to land:~~

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 9 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

Monitoring policy M02-MUN applies to policy SMF3.

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SMF4. Education: Management of ASM and Livestock Grazing Activity

Intent

The policy is intended to ensure that the management and application of agricultural source material (ASM) along with the grazing of livestock is undertaken in a way that provides effective protection of municipal drinking water sources in certain vulnerable areas.

Policy

Where the management and application of agricultural source material or the grazing of livestock could be a significant threat, the Municipality, in association with appropriate partners, shall plan and deliver an education and outreach program. The policy recognizes that some ASM activities are already regulated by the Ontario Ministry of Agriculture, Food and Agribusiness under the *Nutrient Management Act,* 2002, O. Reg. 267/03.

The program shall be designed to ensure those involved in the management and application of agricultural source material or the grazing of livestock are aware of the risks posed to source water and how to reduce those risks through best management practices. The program shall be made available and updated as necessary on an on-going basis as is deemed appropriate by the Municipality.

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater;
- Callander IPZ-ICA;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River, IPZ-1, where the vulnerability score is 8 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

Monitoring policy M03-EO applies to policy SMF4.

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SNO: Storage of Snow

SNO1. Land Use Prohibition: Consolidated Snow Storage Facilities

Intent

To prevent the establishment of snow storage facilities within the vulnerable areas where the threat would be significant. This is not intended to restrict piling of snow accumulated from snowfalls on a property or along a roadway.

Policy

When the ~~Source Protection~~SP Plan takes effect, the Municipality shall prohibit the future use of land as a ~~snow storage facility~~Snow Disposal Facility ~~or snow dump~~ (areas where snow is likely to be transported from offsite) in vulnerable areas where the threat from their establishment could be significant.

An official plan and zoning by-law in effect for the vulnerable areas shall be reviewed and amended within two years of the date the SP Plan takes effect, as necessary, as required under ~~Section 26 of~~ the *Planning Act* to implement this prohibition.

~~The policy applies~~ This policy shall apply in the following vulnerable areas:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10~~1~~;
- South River IPZ-1, where the vulnerability score is 8 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

Monitoring policy M01-PA applies to policy SNO1.

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SNO2. Education: Storage of Snow

Intent

To reduce the threat posed by the storage of snow on a site within the vulnerable areas where the threat to drinking water could be significant.

Policy

Where there could be a significant threat from the storage snow on a site, the Municipality, in association with appropriate partners, shall plan and deliver an education and outreach program within one year of the date the SP Plan takes effect. The program shall be designed to ensure those involved in the storage of snow on a site, including commercial and industrial land uses, are aware of the risks posed to source water and how to reduce those risks, including best management practices and advocating for snow management plans. The program shall be made available and updated as necessary on an on-going basis as is deemed appropriate by the Municipality and may be combined with SAL2 and SAL3.

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 8 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

The program developed through this policy may be more broadly delivered to a whole Municipality, or any part of the Source Protection Area, at the discretion of a municipal council.

Monitoring policy M03-EO applies to policy SNO2.

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SVA: Signage of Vulnerable Areas

SVA1. Signage of Vulnerable Areas

Intent

To install signs at the boundaries of vulnerable areas to increase public awareness of the potential risks to source water and encourage timely and appropriate response to a spill.

Policy

In accordance with Section 22 (7) of the *Clean Water Act*, the Ministry of Transportation ~~in collaboration with the Ministry of the Environment and Climate Change as well as in consultation with Source Protection Authorities (SP Authorities),~~ should design a sign to the appropriate provincial standards to identify the locations of Wellhead Protection Areas and Intake Protection Zones. The Ministry of Transportation should continue to manufacture, install and maintain the signs along Provincial Highways within a Wellhead Protection Area with a vulnerability score of 10, and/or within an Intake Protection Zone with a vulnerability score of 8 or higher.

Municipalities, or the Conservation Authority where there is no jurisdiction of an organized Municipality, may install additional signs at locations of their choice and will be responsible for the purchase, installation and maintenance of the~~m~~ signs. The signs should be consistent with those designed by the Ministry of Transportation and should be placed, at a minimum, where municipal arterial roads are located within a Wellhead Protection Area with a vulnerability score of 10, and/or an Intake Protection Zone with a vulnerability score of 8 or higher.

The above policies should be implemented as part of an overall Education and Outreach plan within the Source Protection Area. This policy, in conjunction with additional Education and Outreach policies, should be implemented within one year of the date the SP Plan takes effect~~two years after the effective date of the Plan~~.

This policy applies in the following vulnerable areas:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 9 or greater.

Monitoring policies M13-MTO and M14-MUN apply to policy SVA1.

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THS: Local Threat – Transportation of Hazardous Substances

THS1. Awareness of Vulnerable Areas and Response to Spills of Hazardous Substances

Intent

To ensure emergency spill responders are aware of the locations of vulnerable areas. To improve emergency response times in the event of a spill. To include the Source Protection Authority in the response plan.

Policy

The following existing and future circumstances are designated for the implementation of a local significant threat activity policy:

- The transportation of 2500 L or greater of sulphuric acid.
- The transportation of 2500 L or greater of sodium hydroxide.
- The transportation of any quantity of septage.

Within one year of the date the ~~Source Protection Plan (~~SP Plan~~)~~ takes effect, the Municipality shall recognize a spill as an emergency situation in the emergency response plan for the Municipality that could occur as a result of the circumstances listed above. Further, the vulnerable areas to which this policy applies shall be included as a schedule(s) to the emergency response plan. When the emergency response team of the Municipality identifies that a spill has occurred in the vulnerable area, the Source Protection Authority via the Conservation Authority shall be notified in the same way that other emergency response partners are contacted.

Within one year of the date the SP Plan takes effect, the Ministry of the Environment ~~and Climate Change~~Conservation and Parks' Spills Action Centre should continue to review and update contact information, Procedure Cards and other information based on the areas to which this policy applies to ensure that drinking water sources will be protected in the event of a spill as a result of the circumstances listed above.

This policy shall apply in the following vulnerable areas:

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10~~1~~;
- South River IPZ-1, where the vulnerability score is 9 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

Monitoring policies M06-ERP and M07-SAC apply to policy THS1.

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■ THS2. Awareness of Vulnerable Areas and Response to Spills of Hazardous Substances – MOD/LOW

Intent

To implement a policy in the North Bay IPZ-1, similar to THS1, where the threat is moderate or low.

Policy

The following existing and future circumstances ~~occur in~~ are designated for the North Bay Intake Protection Zone 1 (IPZ-1):

A. Moderate Threat Activities

- The transportation of 2,500 L or greater of ammonium nitrate.
- The transportation of 2,500 L or greater of sodium hydroxide.
- The transportation of 2,500 L or greater of sulphuric acid.
- The transportation of 2,500 L or greater of copper.
- The transportation of 2,500 L or greater of liquid fuel.
- The transportation of septage in any quantity.

B. Low Threat Activities

- The transportation of 2,500 L or greater of formaldehyde.
- The transportation of 2,500 L or greater of methanol.
- The transportation of greater than 250 L but less than 2,500 L of liquid fuel.

Within one year of the date the ~~Source Protection Plan (~~SP Plan~~)~~ takes effect, the City of North Bay should recognize a spill as an emergency situation in an emergency response plan for the City, which could occur as a result of the circumstances named above. Further, the North Bay IPZ-1 should be included as a schedule to the emergency response plan. When the City emergency response team identifies that a spill has occurred in the vulnerable area, the Source Protection Authority via the Conservation Authority should be notified in the same way that other emergency response partners are contacted.

Within one year of the date the SP Plan takes effect, the Ministry of the Environment and ~~Climate Change~~Conservation and Parks' Spills Action Centre should continue to review and update contact information and Procedure Cards based on the North Bay IPZ-1 to ensure that drinking water sources will be protected in the event of a spill as a result of a circumstance named above.

This policy shall apply in the following vulnerable area:

- North Bay IPZ-1, where the vulnerability score is 8.

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Monitoring policies M06-ERP and M07-SAC apply to policy THS2.

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TPW: Transport Pathways

TPW1. Provide Notice of Transport Pathway

Intent

To recognize the requirement under O. Reg. 287/07, s. 27 whereby municipalities are to provide a notice should the municipality become aware of a proposal to establish or modify a transport pathway.

Policy

To ensure that: (a) any drinking water threat in the vicinity of a transport pathway ceases to be or will not become a significant drinking water threat, or (b) that a transport pathway ceases to endanger the raw water supply of a drinking water system, municipalities have the following obligation under O. Reg. 287/07 s. 27:

> If a person applies to a municipality for approval of a proposal to engage in an activity in a wellhead protection area or a surface water intake protection zone that may result in the creation of a new transport pathway or the modification of an existing transport pathway, the municipality shall give the source protection authority and the source protection committee notice of the proposal and shall include a description of the proposal, the identity of the person responsible for the proposal and a description of the approvals the person requires to engage in the proposed activity.

Municipalities shall ensure that information on any proposals involving transport pathways are provided to the parties noted in the regulation (future activity).

This policy shall apply in the following vulnerable area:

- Callander IPZ-1, IPZ-2 and IPZ-3;
- Callander IPZ-ICA;
- Mattawa WHPA-A, WHPA-B, WHPA-C and WHPA-D;
- North Bay IPZ-1, IPZ-2, and IPZ-3;
- Powassan WHPA-A, WHPA-B, WHPA-C and WHPA-D;
- South River IPZ-1 and IPZ-3, with the exception of lands where there is no municipal government.

Monitoring policy M16-MUN applies to policy TPW1.

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WDS: Establishment, Operation or Maintenance of a Waste Disposal Site within the Meaning of Part V of the *Environmental Protection Act*

■ WDS1. Prohibition and Management of Waste Disposal Sites under Part V of the EPA

Intent

To prohibit the establishment of waste disposal sites using regulations and procedures under the *Environmental Protection Act*. To manage Environmental Compliance Approvals for existing sites by reviewing the Approvals to ensure effective best management.

Policy

The Ministry ~~of the Environment and Climate Change~~ with responsibility for issuing permits shall not issue any Environmental Compliance Approvals for a future waste disposal site within the meaning of Part V of the *Environmental Protection Act* where the threat from the establishment, operation, or maintenance of such a site could be significant.

For Environmental Compliance Approvals that exist in areas where the threat could be significant for waste disposal sites within the meaning of Part V of the *Environmental Protection Act*, the Ministry ~~of Environment and Climate Change~~ with responsibility for issuing permits shall review their terms within three years of the date the ~~Source Protection~~SP Plan takes effect and amend the Approval as necessary to ensure that the terms of each Approval adequately addresses the threats to source water. The Director, as defined in the Environmental Protection Act or its Regulations, may determine another implementation date based on a prioritized review of Environmental Compliance Approvals that govern significant drinking water threat activities

This policy applies for the named activities and threat subcategories in the following vulnerable areas:

~~Application~~ Disposal of hauled sewage to land:

- ~~Callander IPZ-1 and IPZ-2~~, where the vulnerability score is 8 or greater;
-
- Callander ~~Issue Contributing Area (~~IPZ-ICA, (~~only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;

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- Powassan WHPA-A and WHPA-B, where the vulnerability score is 8 or greater~~1~~;
- South River IPZ-1, where the vulnerability score is 8 or greater.

~~• Discharges from the storage and treatment of tailings from mines: • Callander IPZ-1 and Issue Contributing Area (ICA only if related to a circumstance containing phosphorus); • Mattawa WHPA-A and B; • Powassan WHPA-A and B1; and • South River IPZ-1.~~

Application of processed organic waste to land

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater;
- Callander IPZ-ICA, (only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 8 or greater.

Landfarming of petroleum refining waste ~~AND landfilling (hazardous waste) AND storage of hazardous waste or liquid industrial waste~~:

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10~~1~~;
- South River IPZ-1, where the vulnerability score is 9 or greater.

Landfilling (hazardous waste or liquid industrial waste):

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A, WHPA-B and WHPA-C, where the vulnerability score is 8 or greater;
- Powassan WHPA-A, WHPA-B, and WHPA-C, where the vulnerability score is 8 or greater;
- South River IPZ-1, where the vulnerability score is 9 or greater.

Landfilling (municipal waste) ~~AND landfilling (solid non-hazardous industrial or commercial)~~:

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A, WHPA-B and WHPA-C, where the vulnerability score is 8 or greater;
- Powassan WHPA-A, ~~B1/B2/B4 and C1~~ WHPA-B, and WHPA-C, where the vulnerability score is 8 or greater;
- South River IPZ-1, where the vulnerability score is 9 or greater.

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Liquid industrial waste injection into a well:

- Mattawa WHPA-A, WHPA-B and WHPA-C, where the vulnerability score is 8 or greater;
- Powassan WHPA-A, ~~B1/B2/B4 and C1~~ WHPA-B, and WHPA-C, where the vulnerability score is 8 or greater.

Storage of hauled sewage

- Callander IPZ-1 and IPZ-2 where the vulnerability score is 8 or greater;
- Callander IPZ-ICA, (only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 8 or greater.

Storage of processed organic waste or waste biomass

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater;
- Callander IPZ-ICA (only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 8 or greater.

Transfer/processing sites approved to receive hazardous waste or liquid industrial waste

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater;
- Callander IPZ-ICA (only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A, WHPA-B and WHPA-C, where the vulnerability score is 8 or greater;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;
- Powassan WHPA-A, WHPA-B, and WHPA-C1, where the vulnerability score is 8 or greater.
- South River IPZ-1, where the vulnerability score is 8 or greater.

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Transfer/processing site approved to receive only municipal waste under Part V of the Environmental Protection Act

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Callander IPZ-ICA, (only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A, WHPA-B and WHPA-C, where the vulnerability score is 8 or greater;
- Powassan WHPA-A, WHPA-B, and WHPA-C, where the vulnerability score is 8 or greater;
- South River IPZ-1, where the vulnerability score is 9 or greater.

Storage, treatment and discharge of tailings from mines:

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Callander IPZ-ICA, (only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 9 or greater.

Monitoring policy M08-ECA applies to policy WDS1.

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■ WDS2. Land Use Prohibition: Waste Disposal Sites

Intent

Require municipalities to use available tools to mirror the policy WDS1 prohibiting the establishment of waste disposal sites. The purpose is to bring attention to the prohibition early in an application process.

Policy

When the ~~Source Protection~~SP Plan takes effect, the Municipality shall prohibit the future use of land as a landfill, mine tailings pond, an area designated to be injected with liquid industrial waste, or an area for landfarming of petroleum refining waste where the threat from the activity would be significant.

An official plan and zoning by-law in effect for the vulnerable areas shall be reviewed and amended, as necessary, as required under ~~Section 26 of~~ the *Planning Act* to implement this policy.

This policy applies to the named activities and threat subcategories in the following vulnerable areas:

Disposal of hauled sewage to land:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater;
- Callander IPZ-ICA, (only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 8 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

Application of processed organic waste to land:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater;
- Callander IPZ-ICA (only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 8 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

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Landfarming of petroleum refining waste ~~AND landfilling (hazardous waste)~~ :

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10~~1~~;
- South River IPZ-1, where the vulnerability score is 9 or greater, with the exception of lands in Laurier Township (which are subject to LAU1),.

Landfilling (hazardous waste or liquid industrial waste):

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A, WHPA-B and WHPA-C, where the vulnerability score is 8 or greater;
- Powassan WHPA-A, WHPA-B, and WHPA-C, where the vulnerability score is 8 or greater;
- South River IPZ-1, where the vulnerability score is 9 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

Landfilling (municipal waste) ~~AND landfilling (solid non-hazardous industrial or commercial)~~:

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Mattawa WHPA-A, WHPA-B, and WHPA-C, where the vulnerability score is 8 or greater;
- Powassan WHPA-A, ~~B1/B2/B4 and C1~~ WHPA-B, and WHPA-C, where the vulnerability score is 8 or greater;
- South River IPZ-1, where the vulnerability score is 9 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

~~An area where l~~Liquid industrial waste ~~is~~ injection~~ed~~ into a well:

- Mattawa WHPA-A, WHPA-B and WHPA-C, where the vulnerability score is 8 or greater;
- Powassan WHPA-A, ~~B1/B2/B4 and C1~~ WHPA-B, and WHPA-C, where the vulnerability score is 8 or greater.

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Storage of hauled sewage:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater;
- Callander IPZ-ICA (only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 8 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

Storage of processed organic waste or waste biomass:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater;
- Callander IPZ-ICA (only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 8 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

Transfer/processing sites approved to receive hazardous waste or liquid industrial waste:

- Callander IPZ-1 and IPZ-2, where the vulnerability score is 8 or greater;
- Callander IPZ-ICA (only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A, WHPA-B and WHPA-C, where the vulnerability score is 8 or greater;
- North Bay IPZ-1, where the vulnerability score is 8 or greater;
- Powassan WHPA-A, WHPA-B, and WHPA-C1, where the vulnerability score is 8 or greater;
- South River IPZ-1, where the vulnerability score is 8 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

Transfer/processing site approved to receive only municipal waste under Part V of the *Environmental Protection Act*:

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Callander IPZ-ICA (only if related to a circumstance containing phosphorus);

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- Mattawa WHPA-A, WHPA-B and WHPA-C, where the vulnerability score is 8 or greater;
- Powassan WHPA-A, WHPA-B, and WHPA-C, where the vulnerability score is 8 or greater.
- South River IPZ-1, where the vulnerability score is 9 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

Storage, treatment and discharge of tailings from mines:

- Callander IPZ-1, where the vulnerability score is 9 or greater;
- Callander IPZ-ICA (only if related to a circumstance containing phosphorus);
- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;
- South River IPZ-1, where the vulnerability score is 9 or greater, with the exception of lands in Laurier Township (which are subject to LAU1).

Monitoring policy M01-PA applies to policy WDS2.

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■ WDS3. Education: Hazardous Waste and PCBs

Intent

To raise awareness of the threat posed to source water from hazardous or liquid industrial waste and polychlorinated biphenyls (PCBs). ~~Municipalities may choose to implement the policy as part of a broader program to encourage proper storage and disposal of hazardous goods (see also HAZ1: Education DNAPLs and Organic Solvents).~~ (See also HAZ1. Education: DNAPLs and HAZ2. Education: Organic Solvents.)

Policy

Where there could be a significant threat from the existing or future storage of hazardous or liquid industrial waste, hazardous waste at a waste generation facility as ~~defined in (p), (q), (r), (s), (t), or (u) of regulation 374~~described under the provisions of O. Reg. 347 of the *Environmental Protection Act* (EPA), or polychlorinated biphenyls (PCBs), the Municipality shall plan and deliver an Education and Outreach program designed to ensure those involved in such activities are aware of the risks posed to source water, how to reduce those risks, and how to recognize and respond to a spill.

The program shall be delivered within two years of the date the ~~Source Protection~~SP Plan takes effect and shall be made available and updated as necessary on an on-going basis as is deemed appropriate by the Municipality. The program shall be delivered to all persons that could be engaged in the activity of storage of hazardous or liquid industrial waste, waste as defined in ~~(p), (q), (r), (s), (t), or (u) of regulation 374 of~~ the *Environmental Protection Act* (EPA) and PCBs where the threats could be significant.

This policy applies to the named activities and threat subcategories in the following vulnerable areas:

~~Storage of PCBs~~PCB waste storage:

- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10~~1~~.

~~Storage of hazardous waste or liquid industrial waste: • Callander IPZ-1 • Mattawa WHPA-A and B; • Powassan WHPA-A and B1; and • South River IPZ-1.~~

~~Storage of wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste (in Part V of the Environmental Protection Act): • Mattawa WHPA-A and B; and • Powassan WHPA-A and B1.~~

Storage of subject waste at a waste generation facility: site requires generator registration under O. Reg. 347

- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10;

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Storage of waste at a waste generation facility: site that is exempt or excluded from generator registration requirements

- Mattawa WHPA-A and WHPA-B, where the vulnerability score is 10;
- Powassan WHPA-A and WHPA-B, where the vulnerability score is 10.

~~Additionally, t~~The program developed through this policy may be more broadly ~~released~~ delivered to a whole Municipality, or any part of the Source Protection Area, at the discretion of a municipal council.

Monitoring policy M03-EO applies to policy WDS3.

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5.1 Monitoring Policies Summary

Monitoring Policies and their reference codes within the ~~Source Protection~~SP Plan.

Table 5-1. Monitoring Policies Summary

Policy Code	Focus	Policy(ies) Addressed	Policy Wording
M01-PA	*Planning Act* Tools	FUL1 HAZ1 HAZ2 PST2 ~~SAL1~~ SMF2 SNO1 WDS2	By February 1st of the year after an amendment has come into effect for an official plan or zoning by-law, the Municipality shall provide written notice to the ~~SP~~ Source Protection Authority, including a copy of the amended planning documents.
M02-MUN	Specified Actions for Municipalities	PST3 SAL1 SMF3~~1~~	By February 1st of each year, the Municipality shall provide a report to the ~~SP~~Source Protection Authority that details the annual progress on implementation of all specified action policies for which it is responsible ~~that have not previously been reported as fully implemented~~.
M03-EO	Education & Outreach for: Handling and Storage of Fuel; DNAPL~~s~~S and Organic Solvents; Application of Pesticides; Application of Road Salt; Handling and Storage of road salt; Management of ASM, agricultural source material Application and Livestock Grazing; Storage of Snow; and Hazardous Waste and PCBs	FUL4 HAZ3~~1~~ HAZ4 PST4 SAL2 SAL3 SMF4 SNO2 WDS3	By February 1st ~~of the year after the Municipality is required to prepare and deliver an education and outreach program in accordance with FUL4, HAZ1, WDS3, PST4 and every fifth anniversary thereafter, the~~ of each year, the Municipality shall provide a report to the Source Protection Authority that indicates how the education and outreach program(s) in accordance with the listed policies continue~~s~~ to be available.

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Policy Code	Focus	Policy(ies) Addressed	Policy Wording
M04-EO	Education and Outreach for Callander ~~ICA~~ IPZ-ICA	ICA1	By February 1st ~~of the year after the Municipalities are required to begin delivering an education and outreach program in accordance with ICA1 and each year thereafter, the Municipalities shall provide a report to the Source Protection Authority indicating actions taken to implement the policy. The report shall address the goal(s) of the education program, the strategies used to achieve the goal(s), timeline, deliverables, outcome and an evaluation of the effectiveness of the program. The report shall also highlight any known changes in behaviours as a result of the education program that have contributed to the protection of the drinking water source. The education program and annual reporting shall continue until monitoring and research, in accordance with ICA3 and ICA4, indicates that no further improvement to water quality is likely to be achieved by additional adoption of best management practices within the ICA~~ IPZ-ICA ~~-~~of each year, the Municipality shall provide a report to the Source Protection Authority that indicates how the education and outreach program continues to be available.
M05-EO	Education and Outreach for IPZ-1 in Laurier Twp.	LAU1	By February 1st of each year, ~~the year after the Municipality is required to deliver an education and outreach program as per LAU1,,~~ the ~~Village of South River~~North Bay-Mattawa Conservation Authority (or the organized Municipality that has jurisdiction) shall provide a report to the Source Protection Authority that indicates how the education and outreach program continues to be available.
M06-ERP	Municipal Emergency Response Plans	THS1 THS2	By February 1st of the year after the Municipality ~~is required to~~ updates its emergency response plan in accordance with ~~THS1~~ the policy, the Municipality shall notify the Source Protection Authority that it has fulfilled its responsibilities.
M07-SAC	Spills Action Centre Response Procedures	PIP6 THS1 THS2	By February 1st of the year after the Ministry of Environment, Conservation and Parks ~~and Climate Change~~ Spills Action Centre (SAC) ~~is required to comply with THS1~~ modifies its procedures in accordance with the policy, SAC shall provide a report to the Source Protection Authority confirming that the required changes have been made and may include details on the changes.

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Policy Code	Focus	Policy(ies) Addressed	Policy Wording
M08-ECA	Environmental Compliance Approvals	FUL2 ICA2 PST1 SEW1 SEW2 SMF1 WDS1	By February 1st ~~of the year following the year in which the Ontario Ministry named as the implementing body is required to comply with the associated threat policy, that Ministry~~ of each year, the Ministry(ies) with responsibility for issuing prescribed instruments shall report to the Source Protection Authority confirming implementation of the policy and how that has been accomplished.
M09-MNR~~F~~	Hazardous Materials Use on Crown Land in Mattawan (MNR~~F~~)	MAT1	By February 1st of each year, the Ministry of Natural Resources ~~and Forestry~~ shall, if activities involving or reasonably expected to involve the handling or storage of dense non-aqueous phase liquids has been undertaken on the lands identified in Policy MAT1, report to the Source Protection Authority describing what consideration was given to the vulnerability of the area in relation to the significant threat.
M10-CAI	Research and Monitoring of Water Quality Issue	ICA3 ICA4	By February 1st of each year, the North Bay-Mattawa Conservation Authority in collaboration with the ~~Municipality of Callander~~ named Municipality(ies) shall provide a report to the Source Protection Authority on the activities and findings regarding the research and/or monitoring undertaken with respect to the drinking water issue. Expectations for the upcoming period may also be included.
M11-CAS	Septic Maintenance Inspections by Principal Authority	SEW3	By February 1st of each year, the principal authority defined by the *Ontario Building Code* shall prepare a progress report for the SP Authority to, at minimum, confirm that the program is being implemented and report the number of any outstanding orders. The report may also include the numbers of inspections completed, failed systems identified, and new systems constructed either as a result of new construction or replaced as a result of a failed septic system in the subject areas.
~~**M12-SPA**~~	~~Glycol Management Plans~~	~~AIR1~~	~~If and when the Source Protection Authority (SP Authority) becomes aware of a facility which can provide chemical de-icing of aircraft where the threat would be significant, the SP Authority shall request that the airport authority/operator provide a copy of the required glycol management plan. The SP Authority may request that, prior to its submission, said plan be reviewed by an independent third party for compliance with this policy.~~

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Policy Code	Focus	Policy(ies) Addressed	Policy Wording
M123-TSF	SP Authority Verifying TSSA Makes Safety Info Available	FUL3	By ~~March~~ February 1st of each year, the SP Authority shall review the TSSA website for compliance with policy FUL3 and may request that the TSSA provide additional information that is needed to implement FUL4.
M134-MTO	Highway Signage (MTO)	SVA1	By February 1st of each year ~~following the required date for implementation of SVA1~~, the Ministry of Transportation shall provide to the Source Protection Authority a summary report for the preceding calendar year regarding the number and location of signs installed along provincial highways within vulnerable areas (i.e., Wellhead Protection Areas and Intake Protection Zones) within the Source Protection Area.
M145-MUN	Municipal Road Signage and Awareness of Vulnerable Areas	SVA1	By February 1st of each ~~the~~ year ~~following the date for implementation of SVA1,~~, the Municipality shall provide a report to the ~~SP~~ Source Protection Authority ~~specifying details of progress for installation of signage until all intended signs are installed; and every fifth year thereafter, the Municipality shall report by February 1, on the state of the signage and any maintenance undertaken. Municipalities that decide not to install signage shall, by February 1st of the year following the date for implementation of SVA1, report that decision to the SP Authority and may provide details of any other efforts made to raise awareness of vulnerable areas~~. indicating the status of signage installed in prior years and any new signage locations installed in the previous year.
M15-SPA	Liquid Hydrocarbon Pipelines	PIP1 PIP2 PIP3 PIP4 PIP5	By February 1st of the year after the Source Protection Authority (SP Authority) becomes aware of a liquid hydrocarbon pipeline where the threat would be significant, the SP Authority shall provide a report summarizing the location of the pipeline and safety measures established by the operator.
M16-MUN	Transport Pathways Notice	TPW1	By February 1st of the year after the Municipality becomes aware of a transport pathway proposal, the Municipality shall provide a report summarizing the transport pathway proposal.

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Key Definitions ~~and Acronyms~~

Activity: an action that has the potential to contaminate or deplete a source of drinking water. Activities are prescribed in the Table of Drinking Water Threats, ~~November 16, 2009~~ December 3, 2021, and as amended from time to time and in the Technical Rules: Assessment Report.

Agricultural Managed Land: managed land that is used for agricultural production purposes including areas of cropland, fallow land and improved pasture where agricultural source material (ASM), commercial fertilizer or non-agricultural source material (NASM) is applied or may be applied.

Agricultural Source Material: material used for land application of nutrients that originate from agricultural activities such as livestock operations. May include manure, livestock bedding, runoff water from animal yards or manure storage, and compost (see *Nutrient Management Act*, 2002 for legal description).

Assessment Report: within the context of the North Bay-Mattawa Source Protection Plan (SP Plan) refers to the North Bay-Mattawa Assessment Report, as amended from time to time. The Assessment Report is a science-based report generated locally for each Source Protection Area to comply with the *Clean Water Act*. The Report identifies the watersheds and the vulnerable areas within the Source Protection Area. Threats to the vulnerable areas were assessed and determined whether they pose a threat to designated systems.

Automobile Service Station: means a building or a clearly defined space on a lot where gasoline, oil, grease, anti-freeze, tires, tubes, tire accessories, electric light bulbs, spark plugs, and batteries for motor vehicles are stored or kept for sale, or where motor vehicles may be oiled, greased or washed, or have their ignition adjusted, tires inflated or batteries charged or where only minor or running repairs essential to the actual operation of motor vehicles are executed or performed. For the purpose of this ~~Source Protection~~SP Plan, an automobile service station may include a gas bar.

Bulk Plant: means a gasoline distribution facility equipped with one or more storage tanks but no floating roof storage tank, where gasoline is received and stored in bulk for subsequent shipment.

Cardlock/Keylock Facility: means an outlet not used by the general public where gasoline or diesel fuel is dispensed unsupervised.

Chemical Contaminant: a substance used in conjunction with, or associated with, a land use activity or a particular entity, and with the potential to adversely affect water quality.

Circumstance: parameters under which a chemical contaminant or pathogen can become a drinking water threat, as assessed by the Ministry of the Environment, Conservation and Parks in the *Tables of Drinking Water Threats,* ~~November 16, 2009~~ December 3, 2021, and as amended from time to time. Circumstances are based on the Prescribed Activities of the *Clean Water Act* and the normal practices that relate to storage, handling, application, disposal, and management of contaminants of concern.

***Clean Water Act*:** the *Clean Water Act, 2006* was passed to protect drinking water at the source. The *Act* requires the development of a watershed-based ~~Source Protection~~SP Plan.

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Condition: a site where past activities have resulted in drinking water threats (historically contaminated sites).

Contaminant (pollutant): an undesirable substance that makes water unfit for a given use when found in sufficient concentration.

Contaminant of Concern: chemical or pathogen that is or may become a Drinking Water Threat as identified by the Ontario Ministry of the Environment, Conservation and Parks.

Dense Non-aqueous Phase Liquid (DNAPL): an organic chemical in concentrations greater than its aqueous solubility and more dense than water. Such a chemical will sink in groundwater and accumulate in aquifer depressions.

Designated System: a drinking water system that is included in a Terms of Reference, pursuant to resolution passed by a municipal council under subsection 8(3) of the *Clean Water Act*.

Drinking Water: 1. Water intended for human consumption. 2. Water that is required by an Act, regulation, order, municipal by-law, or other document issued under the authority of an Act, (a) to be potable, or (b) to meet or exceed the requirements of the prescribed drinking water quality standards.

Drinking Water Issue ('Issue'): a substantiated condition relating to the quality or quantity of water that interferes or is anticipated to soon interfere with the use of a drinking water source by a Municipality. As defined in Technical Rule 114 (Technical Rules, MECP 2021 and as amended), regarding the quality of water in a vulnerable area: 1) The presence of a parameter in water at a surface water intake or well, at a concentration that may result in deterioration of the water quality or where there is a trend of increasing concentrations of a parameter. 2) The presence of a pathogen at a concentration that may result in deterioration of the water quality or there is a trend of increasing concentrations of the pathogen.

Drinking Water System: a system of works, excluding plumbing, that is established for the purpose of providing users of the system with drinking water and that includes, (a) anything used for the collection, production, treatment, storage, supply or distribution of water, (b) anything related to the management of residue from the treatment process or the management of the discharge of a substance into the natural environment from the treatment system, and (c) a well or intake that serves as the source or entry point of raw water supply for the system.

Drinking Water Threat ('Threat'): has the same meaning as in the *Clean Water Act.* An existing activity, possible future activity or existing condition that results from a past activity, (a) that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source of drinking water, or (b) that results in or has the potential to result in the raw water supply of an existing or planned drinking-water system failing to meet any standards prescribed by the regulations respecting the quality or quantity of water, and includes an activity or condition that is prescribed by the regulations as a drinking water threat.

Existing (threat): for the purposes of this ~~Source Protection~~SP Plan, an existing threat is an activity that commences or has been engaged in at some time since January 1, 2003 in a vulnerable area before the plan takes effect, whether or not the activity was enumerated in the Assessment Report.

Farm: for the purposes of policy FUL 1 in this ~~Source Protection~~SP Plan means a private outlet that consists of a tract of land, including all buildings, structures and appurtenances to the land,

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devoted to the production of crops or the raising of animals, and includes fish hatcheries, ranges and nurseries with growing operations.

Future (threat): for the purposes of this ~~Source Protection~~SP Plan, a future threat is an activity that commences at a location in a vulnerable area on the day or on a day after the ~~Source Protection~~SP Plan takes effect and does not meet the definition of "existing" as above.

Gas Bar: means the use of land, or building, or structure where vehicle fuel or lubricants are offered for sale, and an attendant is on duty during operating hours but where no provision is made for the repair or maintenance of vehicles. For the purpose of this definition, a gas bar may include a convenience store or restaurant as an accessory use, as defined by a zoning by-law of the Municipality.

Grade: means the average level of the soil surface in the area surrounding a facility or structure (as defined by the Ministry of the Environment, Conservation and Parks in the Tables of Drinking Water Threats, ~~November 16, 2009~~ December 3, 2021, and as amended from time to time).

Groundwater: the water below the water table contained in void spaces (pore spaces between rock and soil particles, or bedrock fractures); water occurring in the zone of saturation in an aquifer or soil.

Hazardous Waste Exclusion Clauses: below are the clauses p, q, r, s, t, and u of the definition of hazardous waste in O. Reg. 347:

(p) waste that is a hazardous industrial waste, hazardous waste chemical, ignitable waste, corrosive waste, leachate toxic waste or reactive waste and that is produced in any month in an amount less than five kilograms or otherwise accumulated in an amount less than five kilograms,

(q) waste that is an acute hazardous waste chemical and that is produced in any month in an amount less than one kilogram or otherwise accumulated in an amount less than one kilogram,

(r) an empty container or the liner from an empty container that contained hazardous industrial waste, hazardous waste chemical, ignitable waste, corrosive waste, leachate toxic waste or reactive waste,

(s) an empty container of less than twenty litres capacity or one or more liners weighing, in total, less than ten kilograms from empty containers, that contained acute hazardous waste chemical,

(t) the residues or contaminated materials from the clean-up of a spill of less than five kilograms of waste that is a hazardous industrial waste, hazardous waste chemical, ignitable waste, corrosive waste, leachate toxic waste or reactive waste, or

(u) the residues or contaminated materials from the clean-up of a spill of less than one kilogram of waste that is an acute hazardous waste chemical;

Highly Vulnerable Aquifer: an aquifer that can be easily changed or affected by contamination from both human activities and natural process as a result of: a) its intrinsic susceptibility, as a function of the thickness and permeability of overlaying layers, or; b) by preferential pathways to the aquifer.

Implementing Body: can be a public body (a) a Municipality, local board or conservation authority, (b) a ministry, board, commission, agency or official of the Government of Ontario, or (c) a body

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prescribed by the regulations or an official of a body prescribed by the regulations or another person or group.

Intake Protection Zone (IPZ): an area that is related to a surface water intake and within which it is desirable to regulate or monitor drinking water threats. (O. Reg. 287/07)

Intrinsic Susceptibility: a measure of the natural protection of an aquifer from overlying layers with low permeability.

Intrinsic Susceptibility Index (ISI): a numerical indicator of an aquifer's intrinsic susceptibility to contamination expressed as a function of the thickness and permeability of overlying layers.

Issue Contributing Area (IPZ-ICA): The area within a vulnerable area where activities, conditions that result from past activities, and naturally occurring conditions may contribute to the parameter or pathogen identified as a drinking water issue.

Land Use: a particular use of space at or near the earth's surface with associated activities, substances and events related to the particular land use designation.

Marina: means any premises at which gasoline or an associated product is dispensed for use as fuel for floating motorized watercraft. For the purpose of this ~~Source Protection~~SP Plan, a marina may include a gas bar, as defined.

Municipal Residential System: all municipal drinking-water systems that serve or are planned to serve a major residential development (i.e., six or more private residences).

Municipal Well (Public or Community Well): a pumping well that serves five or more residences.

Naturalized Shoreline Area: means an area along a shoreline, stream, or other watercourse that remains in a natural, undeveloped state. These areas feature natural soil and bedrock conditions that may not be suitable for development of a vegetated buffer.

Non-Agricultural Source Materials: used to apply to land as nutrients that do not originate from agricultural activities. Includes pulp and paper biosolids, sewage biosolids, non-agricultural compost and any other material capable of being applied to land as a nutrient that is not from an agricultural source (see *Nutrient Management Act*, 2002 for legal description).

Nutrients: chemicals (particularly phosphorus) which stimulate the growth of aquatic plants; the nutrients act as fertilizers and contribute to heavy weed growth and algae blooms.

Official Plan: a land use policy document adopted by a Municipality to guide the wise and logical development of its area for the benefit of its citizens, implemented under s. 17 of the *Planning Act*.

Outdoor Confinement Area is defined by O. Reg. 267/03 under the *Nutrient Management Act* as an area composed of fences, pens, corrals or similar structures that may contain a shelter to protect the animals from the wind or another shelter with a roof of an area of less than 20 square metres, has permanent or portable feeding or watering equipment where animals are fed or watered at the enclosure, animals may or may not have access to other buildings or structures for shelter, feeding or watering; and where grazing and foraging provides less than 50 per cent of dry matter intake.

Pathogen: an organism capable of producing disease.

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Policy: a policy designed to guide current and future actions and decisions, and to achieve a desired goal or outcome. A policy may refer to the policy approaches or the measures that will be used to achieve it.

Policy Approach/Tool: the approach a threat policy uses to reduce the risk posed by a drinking water threat. The policy approaches provided in the *Clean Water Act* include: education and outreach activities; incentive programs; land use planning approaches (e.g., official plans, zoning by-laws, site plan controls); new or amended provincial instruments (e.g., Environmental Compliance Approval); Risk Management Plans; prohibition; and restricted land uses.

Private Outlet: means any premises, other than a retail outlet, where gasoline or an associated product is put into the fuel tanks of motor vehicles or floating motorized watercraft or into portable containers.

Public Body: means "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" (*Clean Water Act*, s. 2*)*.

Raw Water Supply: is defined in the *Safe Drinking Water Act, 2002* to mean water outside a drinking water system that is a source of water for the system.

Refinery: has the same meaning as under the Technical Standards and Safety Authority's Liquid Fuels Handling Code.

Significant Groundwater Recharge Area (SGRA): an area in which (a) there is a high volume of water moving from the surface into the ground and (b) groundwater serves either as source water or the water that supplies a cold water ecosystem such as a brook trout stream.

Significant Threat Policy (in some cases 'policy'): defined in the *Clean Water Act* to mean: (a) a policy set out in a ~~Source Protection~~SP Plan that, for an area identified in the assessment report as an area where an activity is or would be a significant drinking water threat, is intended to achieve an objective referred to in paragraph 2 of subsection 22 (2), or (b) a policy set out in a ~~Source Protection~~SP Plan that, for an area identified in the assessment report as an area where a condition that results from a past activity is a significant drinking water threat, is intended to achieve the objective of ensuring that the condition ceases to be a significant drinking water threat.

Social Marketing: a systematic application of marketing, communications, education, and other techniques designed to achieve and sustain specific behaviours in individuals or target groups for the social good. This approach is incorporated in the ~~Source Protection~~SP Plan Education and Outreach policies.

Source Protection Area: those lands and waters that have been defined under O. Reg. 284/07 as the "study area" for an Assessment Report and a ~~Source Protection~~SP Plan under the *Clean Water Act*. Also SP Area.

Source Protection Authority: A Conservation Authority or other person or body that is required to exercise powers and duties under the *Clean Water Act*. Also SP Authority.

Source Protection Committee: a group of individuals who have been appointed under the *Clean Water Act* by a Source Protection Authority to coordinate Source Protection Planning activities for a Source Protection Area. The North Bay-Mattawa Source Protection Committee is composed of a provincially appointed Chair plus nine other members who were appointed from within the

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watershed by the North Bay-Mattawa Source Protection Authority. In addition, a seat is available for a representative of Nipissing First Nation. Also SP Committee

Source Protection Plan: a document that is prepared by a Source Protection Committee under Section 22 of the "*Clean Water Act, 2006"* and O. Reg. 287/07 to direct Source Protection activities in a Source Protection Area. Each Source Protection Plan is approved by the Minister of the Environment, Conservation and Parks. Also SP Plan.

Source Water: untreated water in streams, rivers, lakes, or underground aquifers which is used for the supply of raw water for drinking water systems (see raw water supply).

Source Water Protection: action taken to prevent the pollution and overuse of municipal drinking water sources, including groundwater, lakes, rivers, and streams. Source water protection involves developing and implementing a plan to manage land uses and potential contaminants.

Surface Water: all water above the surface of the ground including, but not limited to, lakes, ponds, reservoirs, artificial impoundments, streams, rivers, springs, seeps, and wetlands.

Terms of Reference: the work plan and budget, as approved by the Minister, for the preparation of an Assessment Report and Source Protection, as defined by the *Clean Water Act*. The Terms of Reference outlines the responsibilities assigned to the Source Protection Committee, Source Protection Authority, Conservation Authority, and Member Municipalities in each Source Protection Area, in order to produce the Assessment Report and ~~Source Protection~~SP Plan.

Threat Subcategory: a refinement of some Prescribed Activities, used to differentiate between activities such as waste disposal sites, and as they are listed in the Tables of Drinking Water Threats.

Vegetated Buffer: areas of planted or naturally occurring permanent vegetation, in the form of grass, herbaceous shrubs, trees or a workable combination of any of these, and extending alongside watercourses, ponds, lakes, or wetlands.

Vulnerable Area: areas related to a water supply source that are susceptible to contamination and for which it is desirable to regulate or monitor activities that may affect the water supply source. Vulnerable areas are (a) a significant groundwater recharge area, (b) a highly vulnerable aquifer, (c) a surface water intake protection zone, or (d) a wellhead protection area.

Vulnerability Score: a score representing the susceptibility of an area to contamination. These scores are based on Technical Rules: *Clean Water Act*, 2006, where 10 is the most vulnerable and 2 is the least vulnerable. In a wellhead protection area, significant threats are possible where the score is greater than 8 (dense non-aqueous phase liquids can be significant elsewhere).

Wellhead Protection Area (WHPA): the surface and subsurface area surrounding a water well or well field that supplies a municipal residential system or other designated system through which contaminants are reasonably likely to move so as to eventually reach the well(s).

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~~*Acronyms*~~

~~**CWA:** *Clean Water Act*, 2006.~~

~~**MECP:** Ministry of the Environment, Conservation and Parks. Formerly known as the Ministry of the Environment and Climate Change (MOECC), as well as Ministry of Environment (MOE).~~

~~**MNRF:** Ministry of Natural Resources and Forestry. Formerly known as the Ministry of Natural Resources (MNR).~~

~~**MTO:** Ministry of Transportation~~

~~**O. Reg.:** Ontario Regulation (common short reference).~~

~~**SP:** A continuous shorthand reference for "Source Protection," used because of the frequency of the terminology throughout the program and documentation. (Area, Authority, Committee, Plan, etc. are all terms that frequently are prefixed with SP).~~

~~**SPC:** The Source Protection Committee (also SP Committee).~~

~~**SP Plan:** The North Bay-Mattawa Source Protection Plan, this document.~~

~~**TSSA:** The Technical Standards and Safety Authority.~~

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Appendix A: Legal Effect of Policies on Existing Legislation

The following lists classify policies by presiding legislation and by policy approach.

List A. Significant threat policies that affect decisions under the *Planning Act* and *Condominium Act*, 1998

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

- FUL1
- HAZ1
- HAZ2
- PST2
- ~~SAL1~~
- SMF3~~2~~
- SNO1
- WDS2

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

Subsection 39 (1) (b) of the *Clean Water Act*, 2006 applies to the following policies:

- No such policies are included in this Source Protection Plan.

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:

- FUL2
- ICA2
- PST1
- SEW1
- SEW2
- SMF1
- WDS1

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List D. Moderate and low threat policies that affect prescribed instrument decisions

Clause 39 (7) (b) of the *Clean Water Act, 2006* applies to the following policies:

- No such policies are included in this Source Protection Plan.

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:

- ~~AIR1~~
- FUL1
- FUL4
- HAZ1
- HAZ2
- HAZ3
- HAZ4
- ICA1
- ICA3
- ICA4
- LAU1
- PIP5
- PST2
- PST3
- PST4
- SAL1
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- SEW3
- SMF2~~1~~
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- SMF4
- SNO1
- SNO2

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- THS1
- WDS2
- WDS3

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:

- ICA4
- M01-PA
- M02-MUN
- M03-EO
- M04-EO
- M05-EO
- M06-ERP
- M07-SAC
- M08-ECA
- M09-MNR
- M10-CAI
- M11-CAS
- ~~M12-SPA~~
- M123-TSF
- M134-MTO
- M145-MUN
- M15-SPA
- M16-MUN

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:

- No such policies are included in this Source Protection Plan.

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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:

- No such policies are included in this Source Protection Plan.

List I. Policies related to section 59 of the *Clean Water Act, 2006*

The following policies relate to section 59 (restricted land use) of the *Clean Water Act*, 2006

- No such policies are included in this Source Protection Plan.

List J. Strategic Action policies

For the purposes of section 33 of O. Reg. 287/07, the following policies are identified as strategic action policies:

- FUL3
- PIP1
- PIP2
- PIP3
- PIP4
- PIP6
- SAL1
- SVA1
- THS2
- TPW1

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List K. Significant threat policies that do not impose obligations on municipalities, source protection authorities and local boards

The following policies relate to non-legally binding commitments and address areas where threats could be significant under the *Clean Water Act*, 2006:

- ~~AIR1~~
- ~~FUL2~~
- FUL3
- ~~—~~
- MAT1
- PIP1
- PIP2
- PIP3
- PIP4
- PIP6
- SAL1
- ~~—~~
- THS1

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Table A~~1~~-1. Prescribed Instruments which Apply to Source Protection Plan Policies in Lists C and D above (ss. 34(4) of O. Reg. 287/07)

Policy ID #	Legal Effect (conform with, have regard to)	Aggregate Resources Act - -licenses, wayside permits, aggregate permits, and site plan	Environmental Protection Act - -waste sites and systems	Environmental Protection Act – renewable energy approvals	Nutrient Management Act – nutrient management strategies	Nutrient Management Act – Nutrient management plans	Nutrient Management Act – NASM plans	Ontario Water Resources Act – permits to take water	Ontario Water Resources Act – sewage works	Pesticides Act - permits	Safe Drinking Water Act – permits, licences
FUL2	Conform with	X	X	X				X	X		X
ICA2	Conform with				X	X	X				
PST1	Conform with									X	
SEW1	Conform with		X[1]						X		
SEW2	Conform with		X[1]						X		
SMF1	Conform with				X		X				
WDS1	Conform with		X[1]						X		

[1]~~Due to changes to the Environmental Protection Act that took effect during the preparation of the SP Plan, Environmental Compliance Approvals required under the Ontario Water Resources Act are now issued under the Environmental Protection Act.~~

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Table A~~1~~-2. Policy Summary Matrix

The legal effect of policies is summarized herein and references Director's Lists A-K.

Policy ID #	Legal Effect (conform with, comply to, have regard to, non- binding)	Policy affects decisions under the *Planning Act* and *Condominium Act, 1998* (Lists A and B)	Policy affects Prescribed Instrument decisions (Lists C and D)	Significant threat policies that impose obligations on municipalities, source protection authorities and local boards (List E)	Monitoring policies referred to in subsection 22 (2) of the Clean Water Act, 2006 (List F)	Significant threat policies related to s.57 (prohibition), s.58 (risk management plan), or s.59 (restricted land use) under Part IV of Clean Water Act, 2006 (Lists G, H, and I)	Strategic Action Policies (List J)	Significant threat policies which designate a body other than a Municipality, source protection authority or local board as responsible for policy implementation (List K)
~~AIR1~~	~~Non-legally binding (Airport Authority~~							~~X~~
~~AIR1~~	~~Comply with (Municipality)~~			~~X~~				
FUL1	Conform with	X		X				
FUL2	Conform with		X					X
FUL3	Non-legally binding						X	X
FUL4	Comply with			X				
HAZ1	Conform with	X		X				
HAZ2	Conform with	X		X				
HAZ3	Comply with			X				
HAZ4	Comply with			X				
ICA1	Comply with			X				
ICA2	Conform with		X					
ICA3	Comply with			X				

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Policy ID #	Legal Effect (conform with, comply to, have regard to, non- binding)	Policy affects decisions under the *Planning Act* and *Condominium Act, 1998* (Lists A and B)	Policy affects Prescribed Instrument decisions (Lists C and D)	Significant threat policies that impose obligations on municipalities, source protection authorities and local boards (List E)	Monitoring policies referred to in subsection 22 (2) of the Clean Water Act, 2006 (List F)	Significant threat policies related to s.57 (prohibition), s.58 (risk management plan), or s.59 (restricted land use) under Part IV of Clean Water Act, 2006 (Lists G, H, and I)	Strategic Action Policies (List J)	Significant threat policies which designate a body other than a Municipality, source protection authority or local board as responsible for policy implementation (List K)
ICA4	Comply with			X				
ICA4	Comply with				X			
LAU1	Comply with			X				
MAT1	Non-legally binding							X
PIP1	Non-legally binding						X	X
PIP2	Non-legally binding						X	X
PIP3	Non-legally binding						X	X
PIP4	Non-legally binding						X	X
PIP5	Comply with			X				
PIP6	Non-legally binding						X	X
PST1	Conform with		X					
PST2	Conform with	X		X				
PST3	Comply with			X				
PST4	Comply with			X				
SAL1	~~Conform~~ Comply with			X			X	
SAL1	Non-legally binding						X	X

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Policy ID #	Legal Effect (conform with, comply to, have regard to, non- binding)	Policy affects decisions under the *Planning Act* and *Condominium Act, 1998* (Lists A and B)	Policy affects Prescribed Instrument decisions (Lists C and D)	Significant threat policies that impose obligations on municipalities, source protection authorities and local boards (List E)	Monitoring policies referred to in subsection 22 (2) of the Clean Water Act, 2006 (List F)	Significant threat policies related to s.57 (prohibition), s.58 (risk management plan), or s.59 (restricted land use) under Part IV of Clean Water Act, 2006 (Lists G, H, and I)	Strategic Action Policies (List J)	Significant threat policies which designate a body other than a Municipality, source protection authority or local board as responsible for policy implementation (List K)
SAL2	Comply with			X				
SAL3	Comply with			X				
SEW1	Conform with		X					
SEW2	Conform with		X					
SEW3	Comply with			X				
SMF1	~~Comply~~ Conform with		X	~~X~~				
SMF2	Conform with	X		X				
SMF3	Conform with			X			X	
SMF4	Comply with			X				
SNO1	Conform with	X		X				
SNO2	Comply with			X				
SVA1	Non-legally binding						X	
THS1	Comply with			X				
THS1	Non-legally binding							X
THS2	Non-legally binding						X	
TPW1	Non-legally binding						X	

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Policy ID #	Legal Effect (conform with, comply to, have regard to, non- binding)	Policy affects decisions under the *Planning Act* and *Condominium Act, 1998* (Lists A and B)	Policy affects Prescribed Instrument decisions (Lists C and D)	Significant threat policies that impose obligations on municipalities, source protection authorities and local boards (List E)	Monitoring policies referred to in subsection 22 (2) of the Clean Water Act, 2006 (List F)	Significant threat policies related to s.57 (prohibition), s.58 (risk management plan), or s.59 (restricted land use) under Part IV of Clean Water Act, 2006 (Lists G, H, and I)	Strategic Action Policies (List J)	Significant threat policies which designate a body other than a Municipality, source protection authority or local board as responsible for policy implementation (List K)
WDS1	Conform with		X					X
WDS2	Conform with	X		X				
WDS3	Comply with			X				
M01-PA	Comply with				X			
M02-MUN	Comply with				X			
M03-EO	Comply with				X			
M04-EO	Comply with				X			
M05-EO	Comply with				X			
M06-ERP	Comply with				X			
M07-SAC	Comply with				X			
M08-ECA	Comply with				X			
M09-MNR	Non-legally binding				X			
M10-CAI	Comply with				X			
M11-CAS	Comply with				X			
~~**M12-SPA**~~	~~Comply with~~				~~X~~			
M123-TSF	Comply with				X			

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Policy ID #	Legal Effect (conform with, comply to, have regard to, non- binding)	Policy affects decisions under the *Planning Act* and *Condominium Act, 1998* (Lists A and B)	Policy affects Prescribed Instrument decisions (Lists C and D)	Significant threat policies that impose obligations on municipalities, source protection authorities and local boards (List E)	Monitoring policies referred to in subsection 22 (2) of the Clean Water Act, 2006 (List F)	Significant threat policies related to s.57 (prohibition), s.58 (risk management plan), or s.59 (restricted land use) under Part IV of Clean Water Act, 2006 (Lists G, H, and I)	Strategic Action Policies (List J)	Significant threat policies which designate a body other than a Municipality, source protection authority or local board as responsible for policy implementation (List K)
M134-MTO	Non-legally binding				X			
M145-MUN	Non-legally binding				X			
M15-SPA	Comply with				X			
M17-MUN	Non-legally binding				X			

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Appendix B: Record of Consultations & Notices

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SUMMARY OF TERMS OF REFERENCE CONSULTATIONS

Section 2 of O. Reg 287/07, specifies the requirements for consultation with respect to the Terms of Reference (TOR) which received final approval from the Ministry of the Environment and Climate Change (MOECC) on May 11, 2009. It was subsequently amended in late 2013 and underwent additional consultation.

All municipal drinking water supplies were required to be included in the Terms of Reference, and municipalities had the opportunity to add systems that consisted of clusters of either private wells or intakes. Powassan Council passed a motion requesting the inclusion of the Trout Creek well cluster but later rescinded the motion and asked the Minister of Environment and Climate Change to allow Trout Creek to be withdrawn from the Source Protection Program. Following this request, the Minister of Environment and Climate Change ordered the removal of the Trout Creek well cluster from the Source Protection Plan (SP Plan). This required that the TOR be revised and that the public be provided the opportunity to review and comment. All property owners affected by the change were notified by mail and the amendment was posted on the internet on November 18, 2013, for public consultation. The Revised TOR was submitted to MOECC on January 9, 2014.

Consultation on the original Terms of Reference in 2008 is summarized below.

Notice of Commencement

Notice sent to Municipal Clerks/CAOs and	February 27, 2008
Notice sent to Chief of Nipissing First Nation	February 27, 2008
Municipal information sessions	April 17, 2008

Draft Terms of Reference

Notice and copy of Draft sent to Municipal Clerks	May 9, 2008
Notice sent to Chief of Nipissing First Nation	May 28, 2008
Posted on www.nbmca.on.ca (news and DWSP)	May 2, 2008
Public Notice with invitation to comment:	
• Advertisement in the North Bay Nugget	May 2, 2008
• Advertisement in Almaguin News	May 7, 2008
Two Public Presentations and Consultations	May 22, 2008

Proposed Terms of Reference

Posted on www.nbmca.on.ca	July 4, 2008
Notice to Municipalities	July 17, 2008
Invitation for Public Comment	July 18, 2008 – August 16, 2008

Note: MOECC and MOE are previous names of the MECP.

Revised Proposed Terms of Reference (Approved May 2009)

Notice sent to Municipal Clerks/CAOs	November 17, 2008
Notice sent to Chief of Nipissing First Nation	November 17, 2008
Revised Submission to MOECC	March 31, 2009
Approval of Terms of Reference	May 11, 2009

Revised Terms of Reference

Notice to Municipality of Powassan and Trout Creek Residents	November 18, 2013
Notice to Municipal Clerks/CAOs	November 19, 2013

- City of North Bay, Municipality of Callander, Municipality of Powassan, Village of South River, Town of Mattawa, Chisholm and East Ferris.

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Posted on www.actforcleanwater.ca	November 18, 2013 (30 days)
Submission to MOECC	January 9, 2014

Note: MOECC and MOE are previous names of the MECP.

SUMMARY OF ASSESSMENT REPORT CONSULTATIONS

Sections 15-17 of O. Reg 287/07 specify requirements for consultation for the Draft and Proposed versions of the Assessment Report. These include required notices, contents, stakeholders, and timelines for overall consultation periods and dates of acceptable public meetings. Full details and copies of notices are contained in the North Bay-Mattawa Assessment Report, which forms a part of this Source Protection Plan.

In addition to the required consultations for the Assessment Report which are outlined below, the Source Protection Committee engaged in a number of public meetings and consultations with community groups and municipalities from each of the study areas to gather local knowledge as well as report on findings of technical studies which formed the scientific basis of the Assessment Report.

A copy of the Draft, Proposed and Updated Assessment Report were made available at the North Bay-Mattawa Conservation Authority offices immediately after the posting online at www.actforcleanwater.ca.

Draft Assessment Report (2010)

Letters of Notice to the following groups:	July 26, 2010

- Nipissing First Nation
- City of North Bay, Municipality of Callander, Municipality of Powassan, Village of South River, Town of Mattawa, and the Townships of Papineau-Cameron, Bonfield, Calvin, Machar, Strong, Joly, Nipissing, Mattawan, Chisholm and East Ferris.

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- A notice was distributed to:
  - 1700 addresses in the Callander Bay Issue Contributing Area
  - 300 addresses served by the Trout Creek post office which includes the Wellhead Protection Area A & B
  - two addresses within the Powassan WHPA-A

Public Notice

- North Bay Nugget August 3, 2010
- Almaguin News August 5, 2010
- Mattawa Recorder August 8, 2010

Public Meetings

- Callander Legion, Callander ON August 19, 2010 5pm – 8:30pm
- South River Friendly Circle, South River ON August 24, 2010 5pm – 8:30pm

Proposed Assessment Report (2011)

Posted on www.actforcleanwater.ca September 16, 2011 (30 days)

Notices were sent to the following groups: September 16, 2011

- Municipal Clerks/CAOs: City of North Bay, Municipality of Callander, Municipality of Powassan, Village of South River, Town of Mattawa, and the Townships of Papineau-Cameron, Bonfield, Calvin, Machar, Strong, Joly, Nipissing, Mattawan, Chisholm and East Ferris.
- Nipissing First Nations

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Draft Updated Assessment Report (2011)

Posted on www.actforcleanwater.ca May 13, 2011 (30 days)

Notices were sent to the following groups: May 13, 2011

- Municipal Clerks/CAOs: City of North Bay, Municipality of Callander, Municipality of Powassan, Village of South River, Town of Mattawa, and the Townships of Papineau-Cameron, Bonfield, Calvin, Machar, Strong, Joly, Nipissing, Mattawan, Chisholm and East Ferris.
- Canadian National Railway
- Ministry of Transportation

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Public Notice

- North Bay Nugget May 18, 2011
- Almaguin News May 19, 2011
- Mattawa Recorder May 22, 2011

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Submission to MOECC June 17, 2011

Note: MOECC and MOE are previous names of the MECP.

Draft Updated Assessment Report (2014)

Notice to Trout Creek Residents	November 18, 2013
Notice to Municipal Clerks/CAOs	November 19, 2013

- City of North Bay, Municipality of Callander, Municipality of Powassan, Village of South River, Town of Mattawa, Chisholm and East Ferris.

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Posted on www.actforcleanwater.ca	January 17, 2014 (30 days)
Submission to the MOECC	March 3, 2014

Note: MOECC and MOE are previous names of the MECP.

Section 36 Updates to Assessment Report (2024)

The proposed updates are prepared as per the Minister's amended Order under section 36 of the Clean Water Act, 2006 and per the 2021 Technical Rules.

Pre-consultation:

Two rounds of pre-consultation were carried out: May 30, 2023 to July 26, 2023 and February 2, 2024 to March 8, 2024.

Notices for pre-consultation with implementing bodies were sent to the following groups:

- Municipal Clerks/CAOs: City of North Bay, Municipality of Callander, Municipality of East Ferris, Municipality of Powassan, Village of South River, Town of Mattawa, and the Townships of Bonfield, Calvin, Chisholm, Joly, Machar, Mattawan, Nipissing, Papineau-Cameron and Strong
- Provincial Ministries (through MECP): MTO, MMAH, MNR, OMAFA
- Canada Energy Regulator
- Ontario Energy Board
- Technical Standards and Safety Association.

Public Consultation:

The Notice, Source Protection Plan, its Explanatory Document and the Assessment Report were posted on actforcleanwater.ca for public consultation period of May 8, 2024 to June 13, 2024.

The Notice with invitation to comment was circulated to relevant property owners (potentially carrying out significant threat activities), municipalities, ministries and other implementing bodies as required under the Clean Water Act, 2006. Advertisements were placed in the North Bay Nugget and the Almaguin News. Public open houses were held for May 22, 2024 from 5:00 pm to 6:30 pm and on May 29, 2024 from 10:30 am to 12:00 pm at the North Bay-Mattawa Conservation Authority main office at 15 Janey Avenue, North Bay, Ontario, P1C 1N1.

Additional revisions have been made to the Source Protection Plan and Public Consultation is being held again in Winter 2026.

SUMMARY OF SOURCE PROTECTION PLAN CONSULTATION & NOTICES

Sections 19 and 41 of O. Reg. 287/07 specify requirements for consultation for the Draft and Proposed versions of the Source Protection Plan. These include required notices, contents, stakeholders, and timelines for overall consultation periods and public meetings.

Early Engagement

Although not a requirement of O. Reg. 287/07, the North Bay-Mattawa Source Protection Committee engaged the community at a number of public meetings, met with stakeholder groups, and made presentations to municipal councils in the Source Protection Area where significant threats had been identified. In addition to the engagement of the general public, three meetings were held with the agricultural community to inform and engage them in the process. The purpose of these discussions was to review the Source Protection Plan development process, review identified threats and seek input on policy development.

A Policy Working Group was also formed and met eight times between December 2010 to June 2011 to review threat summaries, provide input to policy concepts, review draft policies and make recommendations to the Source Protection Committee.

Policy Working Group members included: Barbara Groves (then SPC Chair), Nancy Barner (Powassan), Cecil Reid (Chisholm), Peter Bullock (Trout Lake Conservation Association), Beverley Hillier (North Bay), Sue Miller (NBMCA), Melissa Mohr (East Ferris), Paula Scott (NBMCA), Kristen Green (NBMCA), Glenn Tunnock (Consulting Planner), Micheline Mamone (Chisholm), Rob Pringle (NBMCA), Jeffrey Dickerson (South River), Wayne Belter (Mattawa), Robb Noon (Callander), Neil Gervais (MOECC Liaison Officer). Note: MOECC and MOE are previous names of the MECP.

Notice of Commencement

When the Source Protection Committee began preparation of the Source Protection Plan the Committee gave notice to:

- the Clerk of each Municipality in the North Bay-Mattawa Source Protection Area;
- Chief of Nipissing First Nation 10;
- North Almaguin Planning Board, Central Almaguin Planning Board, East Nipissing Planning Board;
- Residents of the Callander Issue Contributing Area, Powassan Wellhead Protection Area A, Mattawa Wellhead Protection Area A, B and C, as well as the Municipality of Mattawa who the Source Protection Committee believes could be engaging in one or more activities that are or would be significant drinking water threats according to the approved Assessment Report;

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- Ministry of Transportation, Ontario Northland Railway, Canadian National Railway with respect to the inclusion of "transportation of hazardous substances" as a Local Threat in the Assessment Report.

Pre-Consultation

In accordance with Sections 35 to 39 of O. Reg. 287/07, notices of proposed policies were provided to persons/bodies which would be responsible for:

- Implementing a significant threat policy or monitoring policy;
- Issuing a prescribed instrument which would be affected by a policy;
- Making a decision under the *Planning Act* or the *Condominium Act, 1998*;
- Complying with an obligation under a significant threat policy (specifically a Municipality, local board or source protection authority); or
- Enforcing Part IV of the *Clean Water Act* where any land use is designated

Each notice contained draft wording of the proposed policy, gave a summary of the reasons for the proposed policy, made a request for written comments, and indicated that any comments would be considered in the development of the policy.

Notices were provided to: November 7, 2011

- Ministry of Agriculture and Rural Affairs
- Ministry of Community Safety and Correction Services
- Ministry of Consumer Services
- Ministry of Municipal Affairs and Housing
- Ministry of Natural Resources and Forestry
- Ministry of the Environment and Climate Change
- Ministry of Transportation
- Canadian National Railway
- Ontario Northland Railway
- North Bay-Mattawa Conservation Authority
- Technical Standards and Safety Association
- Municipality of Callander
- Township of Chisholm
- Municipality of East Ferris
- Township of Machar
- Town of Mattawa
- City of North Bay
- Municipality of Powassan
- Municipality of South River

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- Central Almaguin Planning Board
- North Almaguin Planning Board

Draft Source Protection Plan

Section 41 of O. Reg. 287/07 specifies the timing, format and content of notices and consultations related to the Draft SP Plan. Consultation on the Draft SP Plan included the following:

Posting of the Draft SP Plan on www.actforcleanwater.ca — April 30, 2012 (30 days)

Copies of the Draft SP Plan were available for inspection at the following locations: — April 30 to May 31, 2012

- North Bay-Mattawa Conservation Authority, 15 Janey Ave., North Bay;
- Municipal offices of Callander, Mattawa, North Bay, Powassan, and South River;

Publication of Notice of Posting:

- The North Bay Nugget — April 24, 2012
- Almaguin News — April 26, 2012
- Mattawa Recorder — April 29, 2012

Notices were provided to: — April 27, 2012

- Clerks of the municipalities in the North Bay-Mattawa Source Protection Area:
  - Township of Bonfield
  - Municipality of Callander
  - Township of Chisholm
  - Township of East Ferris
  - Town of Mattawa
  - City of North Bay
  - Township of Papineau-Cameron
  - Municipality of Powassan
  - Village of South River
  - Township of Joly
  - Township of Machar
  - Township of Mattawan
  - Township of Nipissing
  - Township of Strong

- Chief of Nipissing First Nation #10
- North Almaguin Planning Board, Central Almaguin Planning Board, East Nipissing Planning Board

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- Individuals/bodies which the Source Protection Committee believes could be engaging in one or more activities that are or would be significant drinking water threats according to the approved Assessment Report. This includes the Municipality of Mattawa, residents of the Callander Issue Contributing Area (1,659), Powassan Wellhead Protection Area A (2), and Mattawa Wellhead Protection Area A, B & C (116).
- All agencies/bodies which received a Notice of Proposed Policy during the Pre-Consultation phase of the SP Plan including:

  - Ministry of Agriculture and Rural Affairs
  - Ministry of Community Safety and Correction Services
  - Ministry of Consumer Services
  - Ministry of Municipal Affairs and Housing
  - Ministry of Natural Resources and Forestry
  - Ministry of the Environment and Climate Change
  - Ministry of Transportation
  - Canadian National Railway
  - Ontario Northland Railway
  - North Bay-Mattawa Conservation Authority
  - Technical Standards and Safety Association
  - Municipality of Callander
  - Township of Chisholm
  - Municipality of East Ferris
  - Township of Machar
  - Town of Mattawa
  - City of North Bay
  - Municipality of Powassan
  - Municipality of South River
  - Central Almaguin Planning Board
  - North Almaguin Planning Board

Public Meetings

Wednesday, May 9, 2012	**Thursday, May 17, 2012**
Callander Legion Branch 445	North Bay-Mattawa Conservation Authority
345 Lansdowne St. Callander	15 Janey Ave, North Bay

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The consultation period for the Draft Source Protection Plan closed May 31, 2012. The Source Protection Committee considered all comments submitted and made any revisions it deemed appropriate to the Source Protection Plan.

Proposed Source Protection Plan (2012)

The SPC posted the Proposed Source Protection Plan for consultation from July 20, 2012, until August 19, 2012. Consultation on the Proposed SP Plan included the following:

July 20, 2012 Published the Proposed SP Plan on www.actforcleanwater.ca

July 20, 2012 Posted a public notice on the internet of the posting of the Proposed -SP Plan inviting the public to submit written comments on the plan within 30 days of the publication of the notice

July 20, 2012 Provided notice to:

- Clerks of the municipalities in the North Bay-Mattawa Source Protection Area:
  - Township of Bonfield
  - Municipality of Callander
  - Township of Chisholm
  - Township of East Ferris
  - Town of Mattawa
  - City of North Bay
  - Township of Papineau-Cameron
  - Municipality of Powassan
  - Village of South River
  - Township of Joly
  - Township of Machar
  - Township of Mattawan
  - Township of Nipissing
  - Township of Strong
- Chief of Nipissing First Nation #10
- Every person who submitted written comments on the Draft Source Protection Plan

Following the consultation period for the Proposed Source Protection Plan, the SPC submitted to the Source Protection Authority:

- the Proposed SP Plan; and
- the summary of any concerns that were raised by bands/municipalities during the preparation of the Proposed SP Plan and that were not resolved to the satisfaction of the bands and/or the municipalities any comments made with respect to the Proposed SP Plan to the Source Protection Authority.

The Proposed SP Plan was submitted to the Ministry of the Environment and Climate Change, together with any comments received on the Proposed SP Plan, on August 20, 2012.

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Revised Source Protection Plan (2014)

The Revised Proposed Source Protection Plan was posted and available for public review and comment from June 27 until July 28, 2014. Consultation on the Revised SP Plan included the following:

Published the Revised SP Plan on www.actforcleanwater.ca June 27, 2014

Posted a public notice on the internet of the posting of the Proposed SP Plan inviting the public to submit written comments on the plan within 30 days of the publication of the notice June 27, 2014

Provided notice to:

- Ministry of Transportation June 25, 2014
- Clerks of the municipalities listed as implementing bodies in SP Plan policies; June 27, 2014
  - Municipality of Callander
  - Township of Chisholm
  - Township of East Ferris
  - Town of Mattawa
  - City of North Bay
  - Municipality of Powassan
  - Village of South River
  - Township of Machar
- Individuals who previously commented on Source Protection documents July 7, 2014

Following the public consultation, the SPC submitted the Revised Source Protection Plan to the Source Protection Authority (SPA). The SPA submitted the Revised SP Plan to the Ministry of Environment and Climate Change on August 21, 2014. Subsequent revisions recommended by MOECC were approved by the Source Protection Committee on November 12, 2014, by Resolution 51-03, posted online on November 19, 2014, and all municipalities notified. Note: MOECC and MOE are previous names of the MECP.

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Updated Source Protection Plan (2026)

The Source Protection Authority submitted a work plan for section 36 updates to the Source Protection plan on November 30, 2018. The Minister subsequently issued an amended section 36 Minister's Order on May 4, 2019. The MECP was provided preliminary draft copies of the Updated SP Plan as part of early engagement and prior to consultation with other agencies.

The proposed updates to the Source Protection Plan and Assessment Report are prepared as per the Minister's amended Order under section 36 of the Clean Water Act, 2006 and per the 2021 technical rules.

Pre-consultation:

Two rounds of pre-consultation were carried out: May 30, 2023 to July 26, 2023 and February 2, 2024 to March 8, 2024.

Notices for pre-consultation with implementing bodies were sent to the following groups:

- Municipal Clerks/CAOs: City of North Bay, Municipality of Callander, Municipality of East Ferris, Municipality of Powassan, Village of South River, Town of Mattawa, and the Townships of Bonfield, Calvin, Chisholm, Joly, Machar, Mattawan, Nipissing, Papineau-Cameron and Strong
- Provincial Ministries (through MECP): MTO, MMAH, MNR, OMAFA
- Canada Energy Regulator
- Ontario Energy Board
- Technical Standards and Safety Association.

Public Consultation:

The Notice, Source Protection Plan, its Explanatory Document and the Assessment Report were posted on actforcleanwater.ca for public consultation period of May 8, 2024 to June 13, 2024.

The Notice with invitation to comment was circulated to relevant property owners (potentially carrying out significant threat activities), municipalities, ministries and other implementing bodies as required under the Clean Water Act, 2006. Advertisements were placed in the North Bay Nugget and the Almaguin News. Public open houses are scheduled for May 22, 2024 from 5:00 p.m. to 6:30 p.m. and on May 29, 2024 from 10:30 a.m. to 12:00 p.m. at the North Bay-Mattawa Conservation Authority main office at 15 Janey Avenue, North Bay, Ontario, P1C 1N1.

After further modifications were completed with the Source Protection Plan and Assessment report, the documents are out for Consultation again January 26 to March 1, 2026.

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Appendix C: MECP -Public Consultation Comments

2011 Pre-consultation

The policies in the Draft Proposed Source Protection Plan were modified from their original drafting based on the comments received during pre-consultation with the implementing bodies.

Comments received were generally supportive of the intent behind the draft policies, though some comments or directives contravened the local development of policy and were discussed at the Committee level through the Draft Proposed consultation period.

Details about the comments received can be found in the Explanatory Document. Additionally, implementing bodies will note that considerable revisions have been made in terms of form, coding and layout of policies, though there is not a major difference in the intent of the policies as they were proposed.

2023 Pre-consultation

Proposed revisions to the Source Protection Plan were sent to implementing bodies for pre-consultation during the section 36 update process. As a result of comments received, the Source Protection plan and Assessment report were modified to use the 2021 version of the Technical Rules.

2024 Pre-consultation

Since numerous changes were required to align the Source Protection Plan and its policies with the 2021 Technical Rules, a second round of pre-consultation was conducted with implementing bodies. The Source Protection committee reviewed MECP comments (shown below) and incorporated the recommended revisions into the draft section 36 updates.

Table C-1. Summary of SOURCE PROTECTION PLAN (SP Plan) document changes

SP Plan section	Description of Update
Throughout	Updated the term “technical rules” to remove “Director’s” where relevant
Throughout	Used new acronym IPZ-ICA for Issue Contributing Area; Updated Ministry names and acronyms.
Throughout	Nomenclature of sub-vulnerable areas (e.g., WHPA-B1 and IPZ-3a) has been removed and those areas are now referred to by the Vulnerable Area designation. Policies are now written to apply to a vulnerable area where the vulnerablility score exceeds a value as specified in the 2021 Technical Rules.
1.1	Table 1-1: updated the list of Source Protection Authority Board Members. Updated list of past representatives. Township of Calvin updated to Municipality of Calvin and Township of Mattawan updated to Municipality of Mattawan
1.4.2	Noted that updates have been made to the Assessment Report as required by the Minister’s section 36 order.

SP Plan section	Description of Update
1.6	Updated the term “revised” to “amended” in reference to the Minister’s order from November 2019
2.1	Table 2-1: updated to match with Chapter 5 policy revisions
2.2	Table 2-2: updated to match with Chapter 5 policy revisions
2.3	Table 2-3: updated to match with Chapter 5 policy revisions
2.4	Table 2-4: updated to match with Chapter 5 policy revisions
2.5	Table 2-5: updated to match with Chapter 5 policy revisions
2.6	Table 2-6: updated to match with Chapter 5 policy revisions; NBMCA now listed as implementing body for LAU1, by request of Village of South River.
2.7	New section added to reflect policies that apply to the HVA
4.0	Policies have been removed from Chapter 4 and are now included in a new Chapter 5. The background information about each threat was formerly incorporated as a preamble to each Policy Code section. Existing background information as been enhanced with reference to the of 2021 Tables of Drinking Water Quality Threats and the revised threat subcategories.
4.4	Updated “Background Details for Drinking Water Threats” section for each threat category throughout to match 2021 Tables of Drinking Water Quality Threats. Pesticide chemicals are no longer specified. Hydrocarbon Pipelines are a new prescribed threat. Transport Pathways are also new. Circumstances that would be a significant threat and the associated required vulnerability score are included in this section, with referral back to the most current Technical Rules for full list of circumstances. Added clarification that Outdoor Confinement Areas are not intended to capture backyard chicken coops on residential properties.
5.0	New Chapter focusing on Source Protection Plan Policies; circumstances that would indicate when a threat is significant have been removed from policy text.
5.0 AIR1	This policy has been removed. There is no reasonable prospect that a future national or regional airport would ever be built in the vulnerable areas where the vulnerability score is high enough for this threat to be significant.
5.0 FUL1	Added application to Callander IPZ-1 and South River IPZ-1 vulnerable areas. Clarified that policies applying to South River IPZ-1 exclude lands in Laurier Township as the latter are subject to policy LAU1.
5.0 FUL2	Added application to Callander IPZ-1 and South River IPZ-1 vulnerable areas.
5.0 FUL3	Added application to Callander IPZ-1 and South River IPZ-1 vulnerable areas.

SP Plan section	Description of Update
5.0 FUL4	Added application to Callander IPZ-1 and South River IPZ-1 vulnerable areas. Clarified that policies applying to South River IPZ-1 exclude lands in Laurier Township as the latter are subject to policy LAU1.
5.0 HAZ1	New Policy
5.0 HAZ2	New Policy
5.0 HAZ3	Formerly HAZ1. Separated out the education policy for DNAPLs (HAZ3) from organic solvents, due to different applicable vulnerable areas for DNAPLs and organic solvents.
5.0 HAZ4	Formerly part of HAZ1; Separated organic solvents into a new policy HAZ4 due to different applicable vulnerable areas than DNAPLs (see note in 5.0 HAZ3 above)
5.0 ICA1	Revised nutrient-related threat subcategories and added "storage of snow" as an applicable threat category and revised the list of actions accordingly.
5.0 ICA2	Revised nutrient threat subcategories
5.0 ICA3	Revised research activities
5.0 LAU1	Added threat sub-categories where other policies referenced exceptions where LAU1 applied that were not listed, including with reference to DNAPLs and Fuel.
5.0 MAT1	Added "transfer/processing site" and removed "Storage of Sewage" Township of Mattawan updated to Municipality of Mattawan. A note is added to indicate that the section of Mattawa WHPA that extends into the Municipality of Mattawan only has WHPA-C and WHPA-D.
5.0 PIP1	New policies to address new Prescribed Threat of "The establishment and operation of a liquid hydrocarbon pipeline".
5.0 PIP2	New policies to address new Prescribed Threat of "The establishment and operation of a liquid hydrocarbon pipeline"
5.0 PIP3	New policies to address new Prescribed Threat of "The establishment and operation of a liquid hydrocarbon pipeline"
5.0 PIP4	New policies to address new Prescribed Threat of "The establishment and operation of a liquid hydrocarbon pipeline"
5.0 PIP5	New policies to address new Prescribed Threat of "The establishment and operation of a liquid hydrocarbon pipeline"
5.0 PIP6	New policies to address new Prescribed Threat of "The establishment and operation of a liquid hydrocarbon pipeline"
5.0 PST2	Pesticide chemicals no longer specified.

SP Plan section	Description of Update
5.0 SAL1	Former SAL1 (Land Use Prohibition for Road Salt Storage) has been removed. The volume of salt stored that could be a significant threat decreased significantly with the 2021 Technical Rules, and a land use prohibition is no longer suitable. This policy is now requiring a Salt Management Plan for Road Salt Application.
5.0 SAL2	New Education and Outreach policy to address potential future significant threat for application of road salt.
5.0 SAL3	New Education and Outreach policy to address smaller scale road salt handling and storage
5.0 SEW1	Updated list of applicable threat subcategories and vulnerable areas.
5.0 SEW2	Updated list of applicable threat subcategories and vulnerable areas.
5.0 SMF1	New policy added to address the management and application of agricultural source material (ASM) and non-agricultural source material (NASM) removed from former SMF1 policy and reflect the ongoing education and outreach program to address these threats.
5.0 SMF3	Formerly SMF1. Application of agricultural source material and non-agricultural source material has been removed, applies only to application of commercial fertilizer.
5.0 SMF4	New Education and Outreach policy
5.0 SNO1	Terms snow storage facility and snow dump have been replaced with Snow Disposal Facility.
5.0 SNO2	New Education and Outreach policy to encompass on-site storage of snow, particularly on commercial and industrial lands.
5.0 SVA1	Added Conservation Authority as potential implementing body for unincorporated townships.
5.0 TPW1	New Policy for notice of Transport Pathways
5.0 WDS1	Updated list of applicable threat subcategories and vulnerable areas
5.0 WDS2	Updated list of applicable threat subcategories and vulnerable areas
5.0 WDS3	Updated list of applicable threat subcategories and vulnerable areas
5.1	Table 5-1: updated lists of policies to which the various monitoring policies apply; M12-SPA removed (reference to AIR1 only); renumbered M12-TSF revised to February 1 annual deadline
Key Definitions and Acronyms	Updated references to 2021 Technical Rules; supplemented list of key terms and acronyms.

SP Plan section	Description of Update
Appendix A	Updated List A, List C, List E, List F, List J, and List K with applicable policy codes
Appendix A	Table A-1 and A-2: updated list with applicable policy codes
Appendix B	Updated the Record of Consultations and Notices
Appendix C	Updated record of MECP-Public Consultation Comments and tables with changes made since the 2015 approved Source Protection Plan.
Schedule A	Revised maps with revised Intake Protection Zone boundaries and vulnerable area nomenclature
Schedule B	New schedule to provide a legend of all vulnerability scores

Table C-3. Summary of ASSESSMENT REPORT (AR) document proposed changes

AR section	Description of Update
Throughout	Updated the term "technical rules" to remove "Director's" where relevant Explained the previous names of the Ministry of Environment, Conservation and Parks
Executive Summary	Updated notes about 2021 version of Technical Rules and Threats Tables used in preparation of AR Updated count of significant threats related to fuel storage
1.1	Figure 1-2: updated timeline graphic
1.7.1	Updated summary of vulnerable areas
1.7.2	Updated title of Threats Tables
1.8	Changed link to Tables of Drinking Water Threats
2.1.6	Table 2-7: Corrected station IDs
2.1.6	Table 2-8: Updated the monitoring years and data
2.1.6	Table 2-9: Updated the monitoring years and data
2.1.6	Updated the sampling frequency description for Trout Lake
2.1.6	Table 2-10 and related description: Updated the monitoring years and data
2.1.6	Table 2-11: Updated the monitoring years and data
2.2.2	Modified description of how to use 2021 Threat Tables to determine if activity in HVA is a threat Table 2-13: changed summary of circumstances to match 2021 Threats Tables

AR section	Description of Update
2.3	Preamble to Table 2-14 updated to refer to the table Table 2-14: matched % impervious surface to 2021 Threats Tables Reworded description of impervious surfaces in vulnerable areas under sub-sections and updated Figures 2-14, 2-15, 2-16, 2-17, 2-18, 2-19. Renamed sub-section titles to match WHPA names
2.3.6	Reworded description of Highly Vulnerable Aquifers
2.4	Noted use of 2021 Director's Rules and 2021 Threat Tables Updated Table 2-16 accordingly
3.1.5	Noted use of 2021 Director's Rules and 2021 Threat Tables Modified description of how the Tables of Drinking Water Threats (chemical) are structured; example given in Table 3-2
3.2.5	Noted use of 2021 Director's Rules and 2021 Threat Tables Modified description of how the Tables of Drinking Water Threats (chemical) are structured; example given in Table 3-4
4	Noted use of 2021 Director's Rules and 2021 Threat Tables
4.5	Used new acronym ~~ICA~~ IPZ-ICA for Issue Contributing Area
4.6.1	Updated on-line links and method to search 2021 Threats Tables Modified number of circumstances in vulnerable areas for Table 4-9, Table 4-10 and Table 4-11 using 2021 Threats Tables
4.6.2	Modified number of circumstances in vulnerable areas for Table 4-12 Modified number of threat occurrences in Callander ~~ICA~~ IPZ-ICA for Table 4-13 and Table 4-14 using 2021 Threats Tables
5.6.1	Noted use of 2021 Director's Rules and 2021 Threat Tables Updated on-line links and method to search 2021 Threats Tables Table 5-9: updated circumstances related to drinking water threats (2021 version) relevant for Mattawa WHPA Table 5-10: updated significant threat circumstances list (2021 version) for Mattawa WHPA Table 5-11: updated existing threats counts and circumstances list (2021 version) for Mattawa WHPA
6.6.1	Noted use of 2021 Director's Rules and 2021 Threat Tables Updated on-line links and method to search 2021 Threats Tables Table 6-14: updated circumstances related to drinking water threats (2021 version) relevant for North Bay IPZ Table 6-15: updated significant threat circumstances list (2021 version) for North Bay IPZ

AR section	Description of Update
7.6.1	Noted use of 2021 Director's Rules and 2021 Threat Tables Updated on-line links and method to search 2021 Threats Tables Table 7-11: updated circumstances related to drinking water threats (2021 version) relevant for Powassan WHPA Table 7-12: updated significant threat circumstances list (2021 version) for Powassan WHPA Table 7-13: updated list of existing threat circumstances (2021 version) for Powassan WHPA
8.6.1	Noted use of 2021 Director's Rules and 2021 Threat Tables Updated on-line links and method to search 2021 Threats Tables Table 8-14: updated circumstances related to drinking water threats (2021 version) relevant for South River IPZ Table 8-15: updated significant threat circumstances list (2021 version) for South River IPZ
Appendix B	Description modified Links to threats tables updated (2021 version)
IPZ maps	A 2022 update to the background map layers, such as wetlands, resulted in changes to the mapped extent of the IPZ boundaries. This was particularly notable in the Callander IPZ-ICA where the area changed from a total of 149.13 km^2 in 2015 to a total of 172.77 km^2 in 2022.

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Schedule A: Additional Maps of Vulnerable Areas

A-1 Callander Issue Contributing Area within Municipality of Callander

A-2 Callander Issue Contributing Area within City of North Bay and Municipality of Powassan

A-3 Callander Issue Contributing Area within Chisholm Township and unorganized townships

A-4 Callander Issue Contributing Area within Municipality of East Ferris

A-5 South River Intake Protection Zone within Village of South River, Township of Machar and Laurier Township

A-6 Callander Intake Protection Zones showing subzones of IPZ-3

A-7 City of North Bay Intake Protection Zone showing subzones of IPZ-3

A-8 South River Intake Protection Zone showing subzones of IPZ-3

A-9 Mattawa Wellhead Protection Area

A-10 Powassan Wellhead Protection Area

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Schedule A-1. Callander Issue Contributing Area within Municipality of Callander

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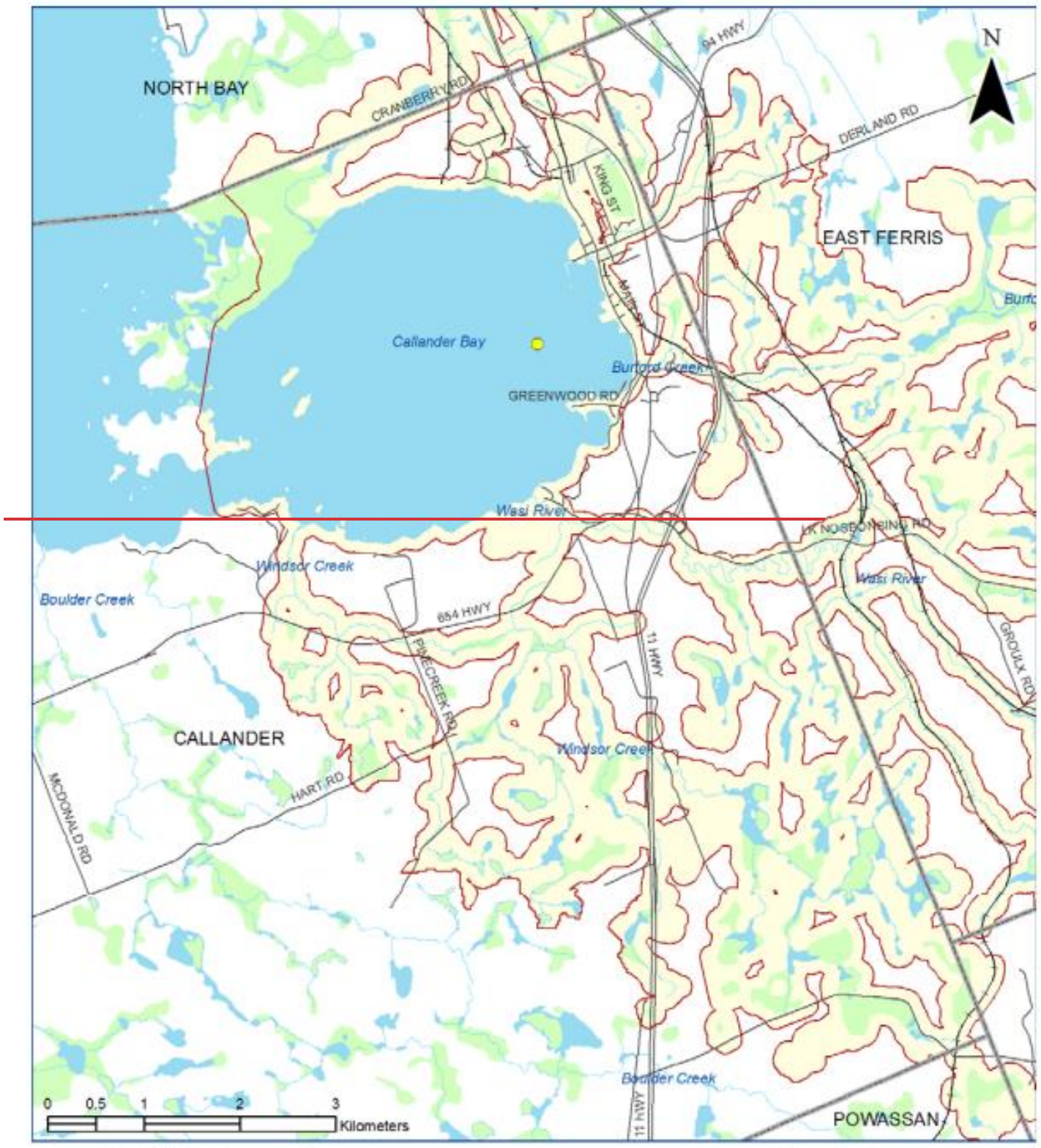


SCHEDULE A-1

Callander Issue Contributing Area within the MUNICIPALITY OF CALLANDER

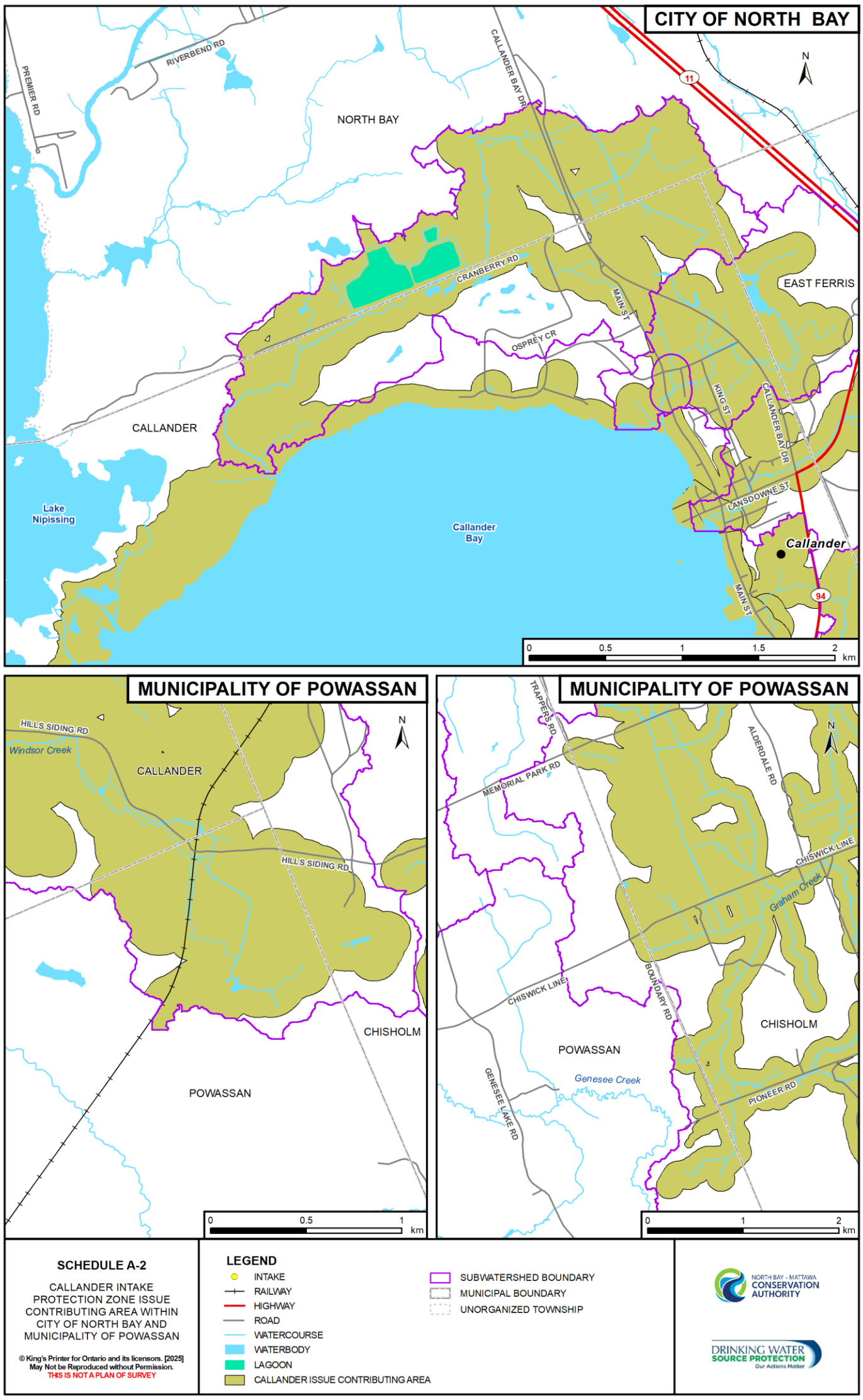
Legend

- Water Intake
- Callander Issue Contributing Area
- Municipality
- Waterbody
- Wetland
- River/Creek
- Rail
- Road

NORTH BAY-MATTAWA CONSERVATION AUTHORITY

DRINKING WATER SOURCE PROTECTION

Schedule A-2. Callander Issue Contributing Area within City of North Bay and Municipality of Powassan



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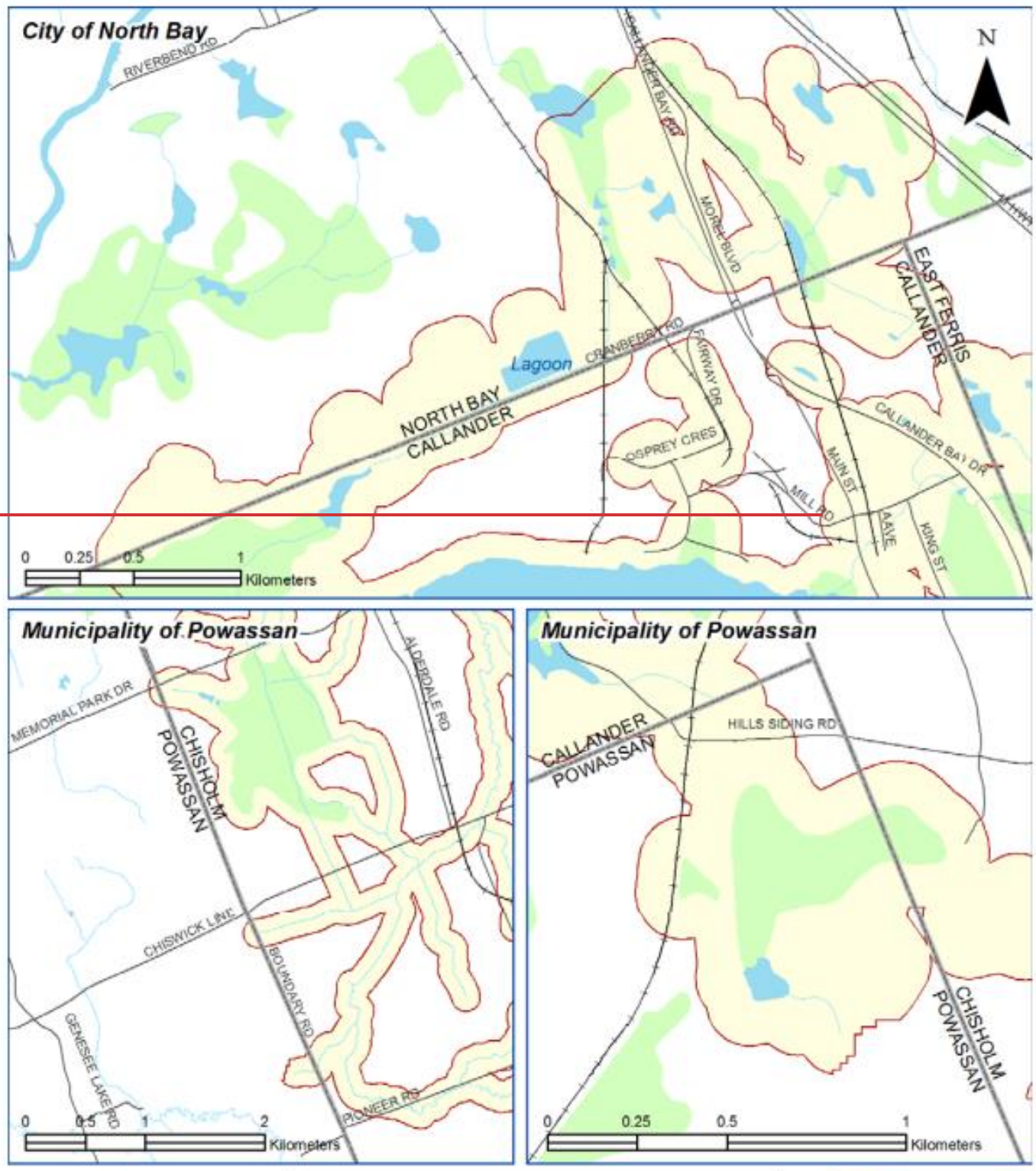


SCHEDULE A-2

Callander Issue Contributing Area within the CITY OF NORTH BAY/ MUNICIPALITY OF POWASSAN

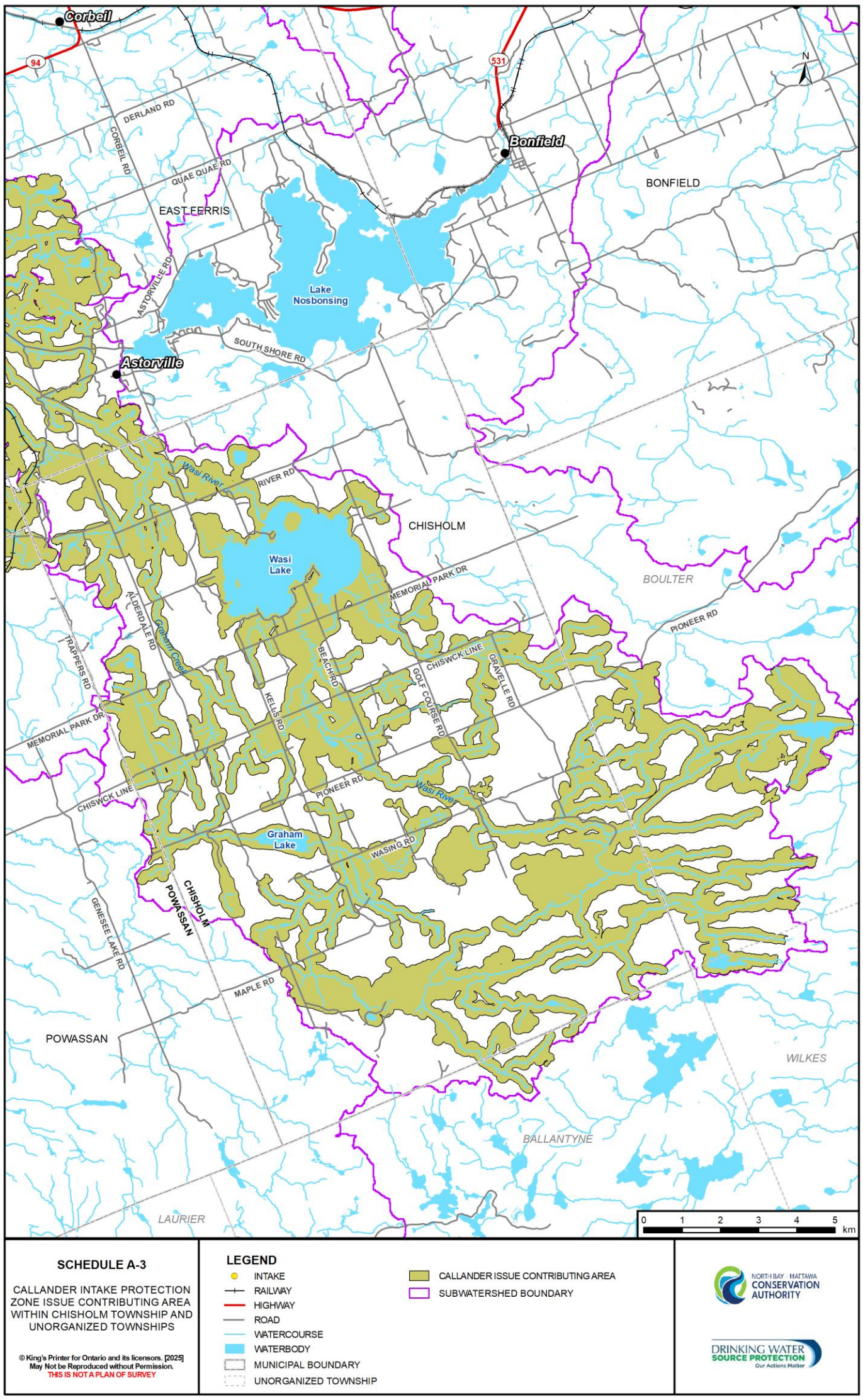
Legend

- Callander Issue Contributing Area
- Municipality
- Waterbody
- Wetland
- River/Creek
- Rail
- Road

NORTH BAY-MATTAWA CONSERVATION AUTHORITY

DRINKING WATER SOURCE PROTECTION

Schedule A-3. Callander Issue Contributing Area within Chisholm Township and unorganized townships



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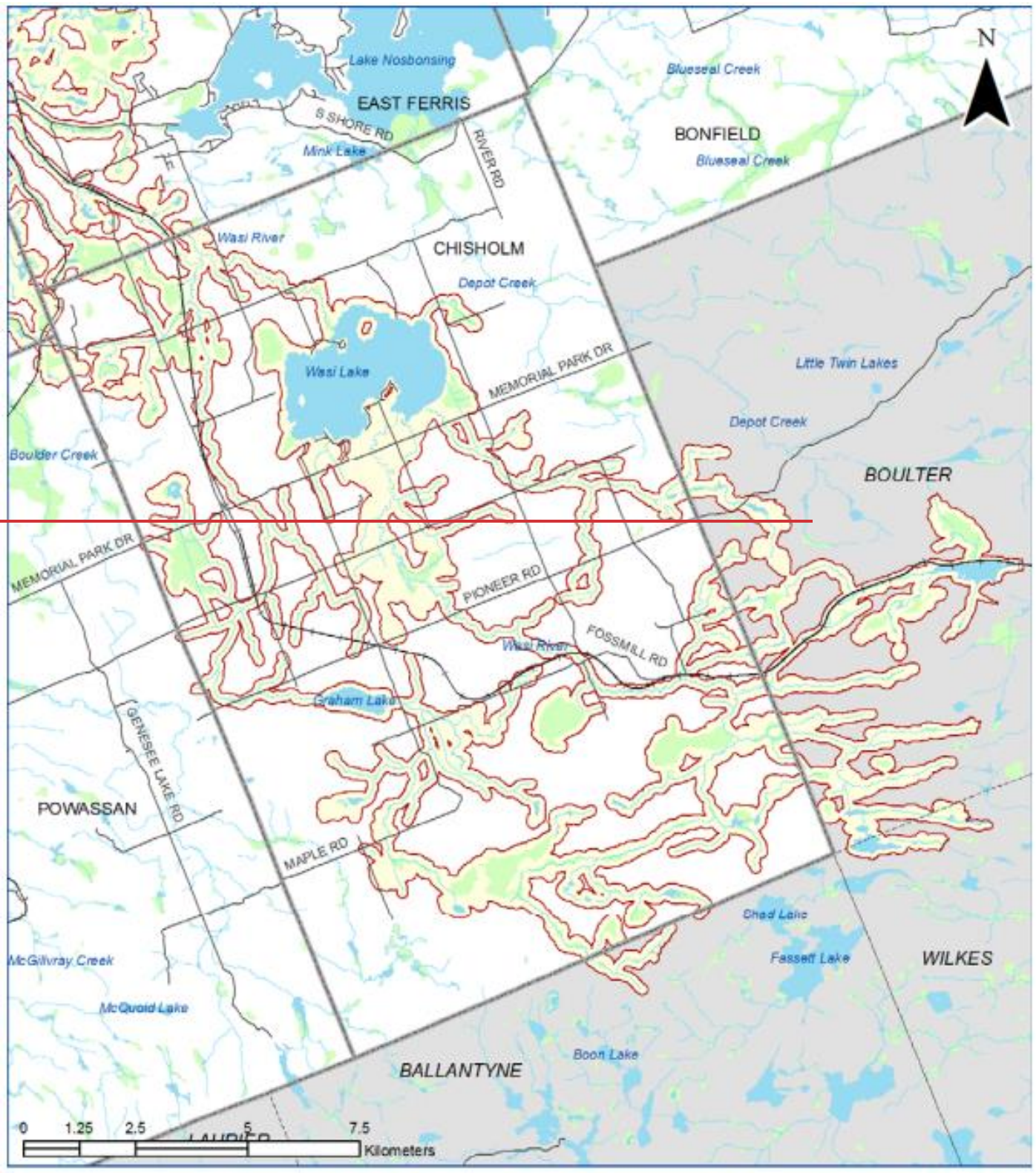


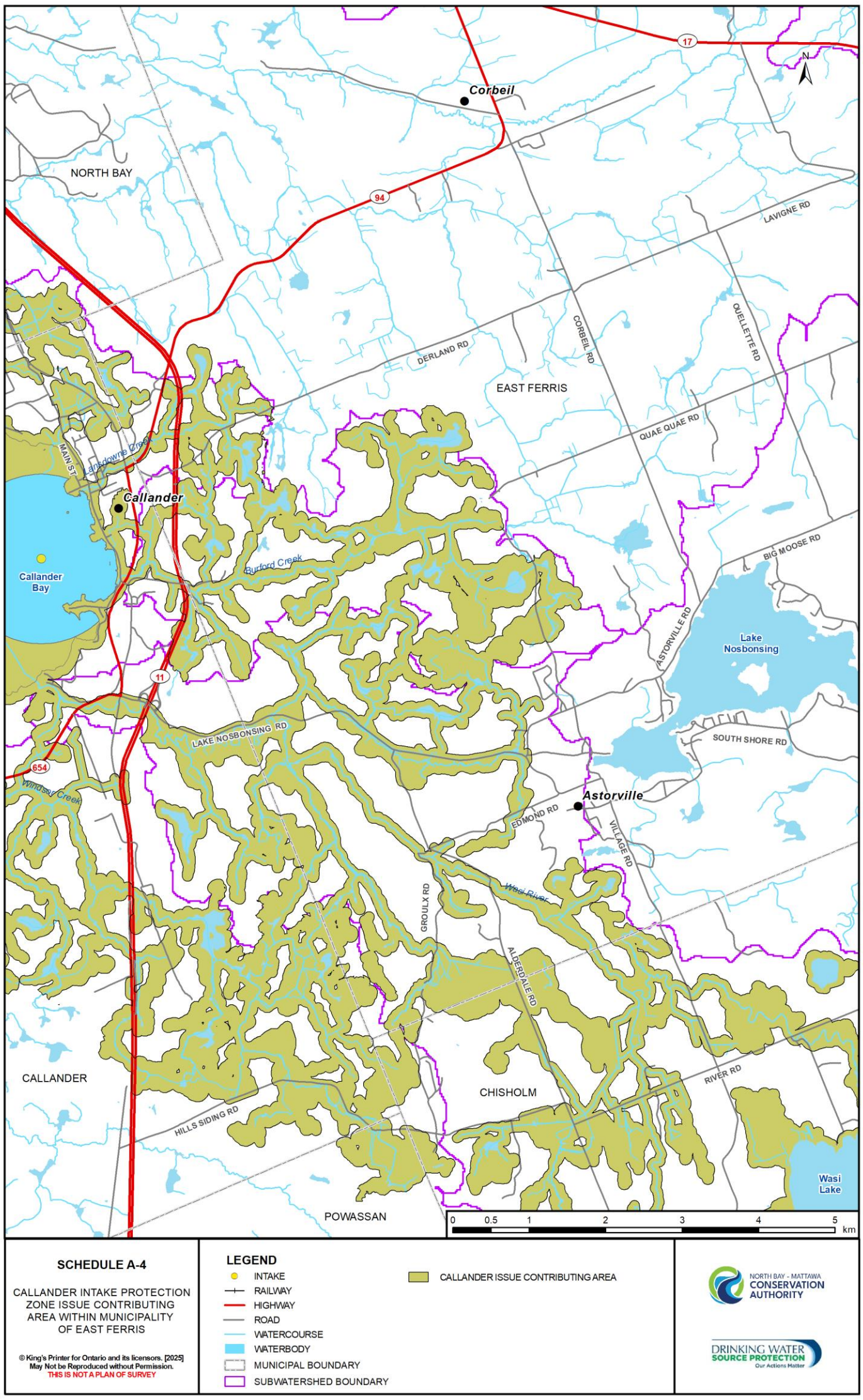
SCHEDULE A-3

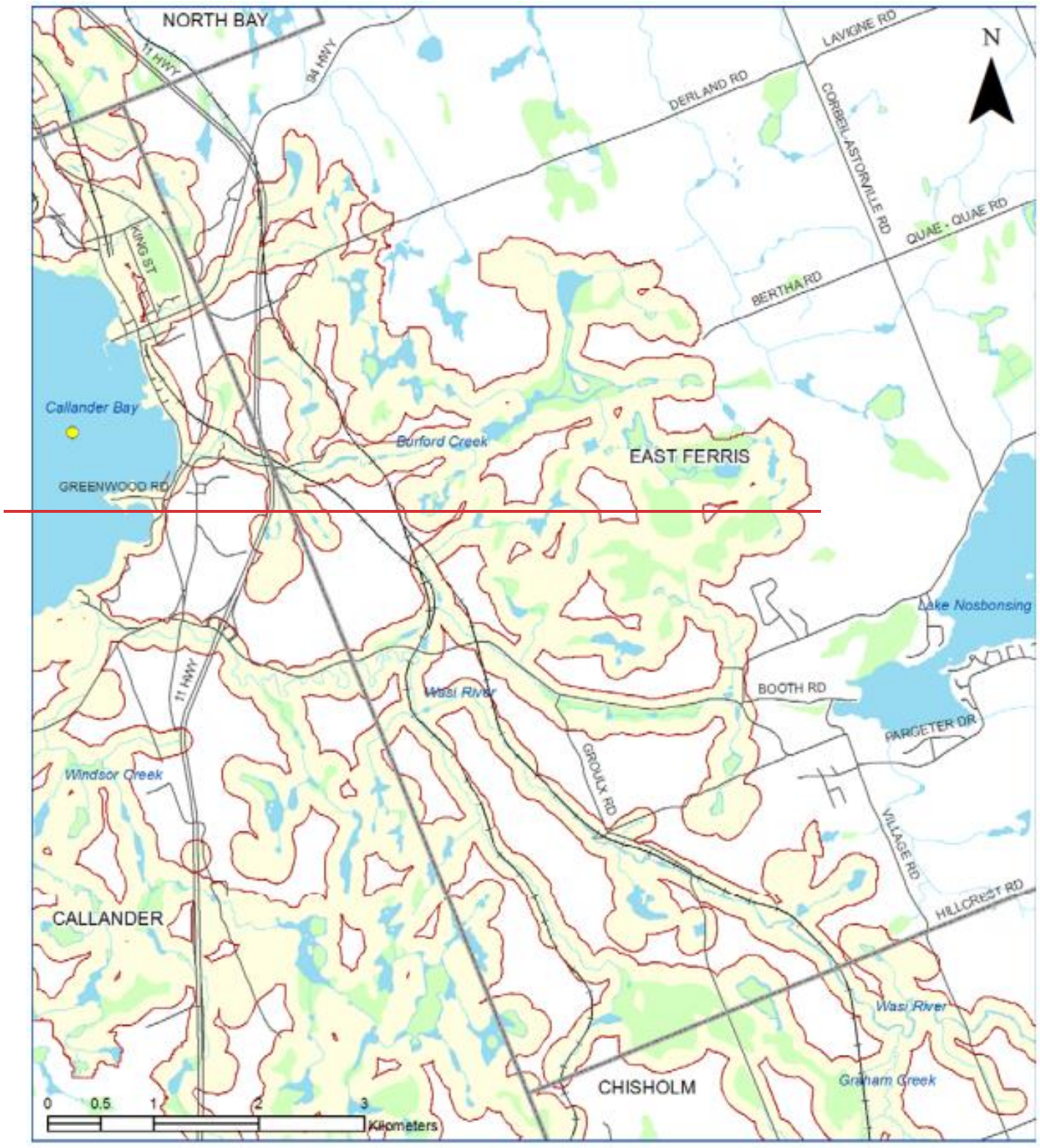
Callander Issue
Contributing Area within
CHISHOLM AND
UNORGANIZED TOWNSHIPS

Legend

- Callander Issue Contributing Area
- Municipality
- Unorganized Township
- Waterbody
- Wetland
- River/Creek
- Rail
- Road

Schedule A-4. Callander Issue Contributing Area within Municipality of East Ferris





SCHEDULE A-4

Callander Issue Contributing Area within the MUNCIPALITY OF EAST FERRIS

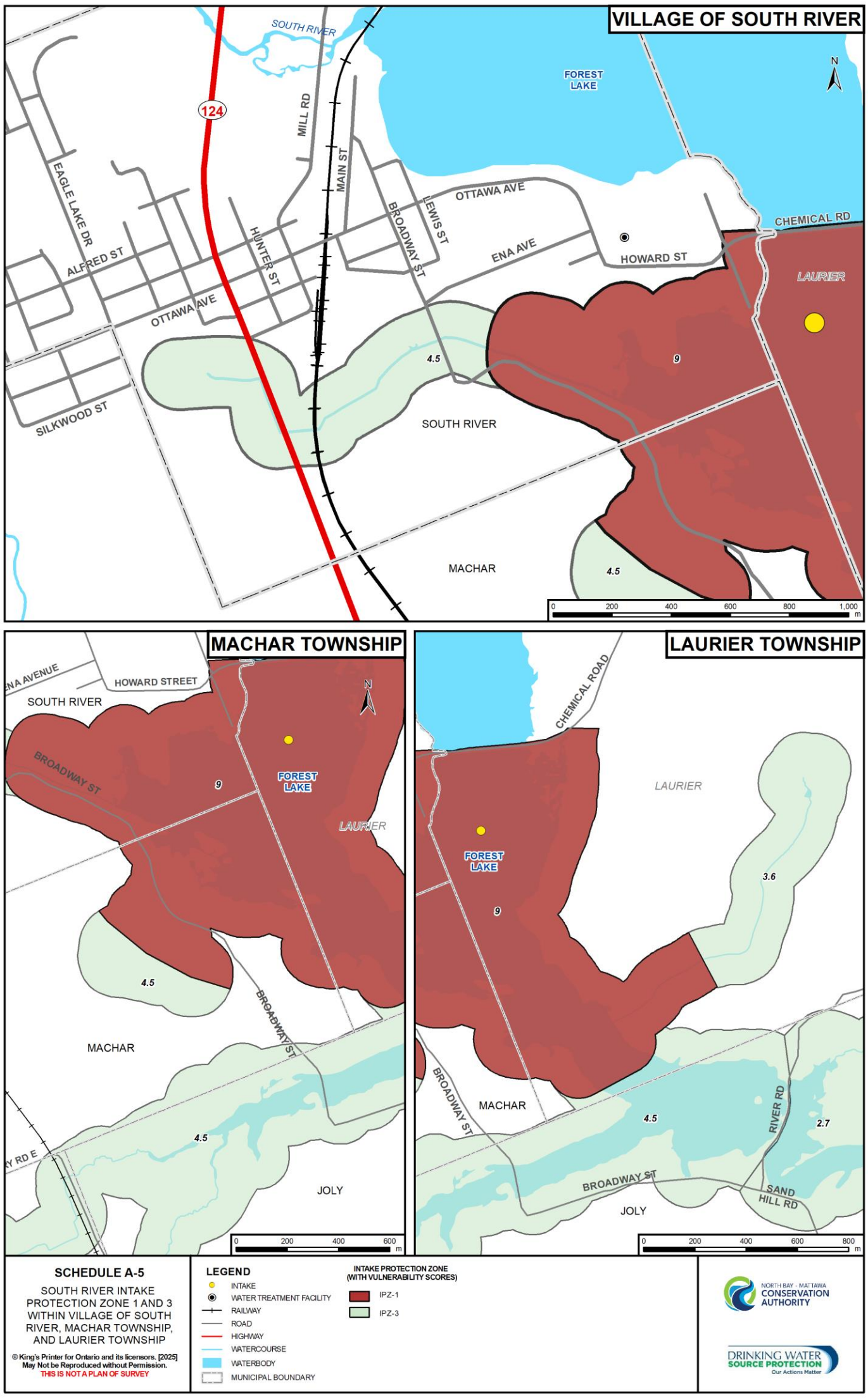
Legend

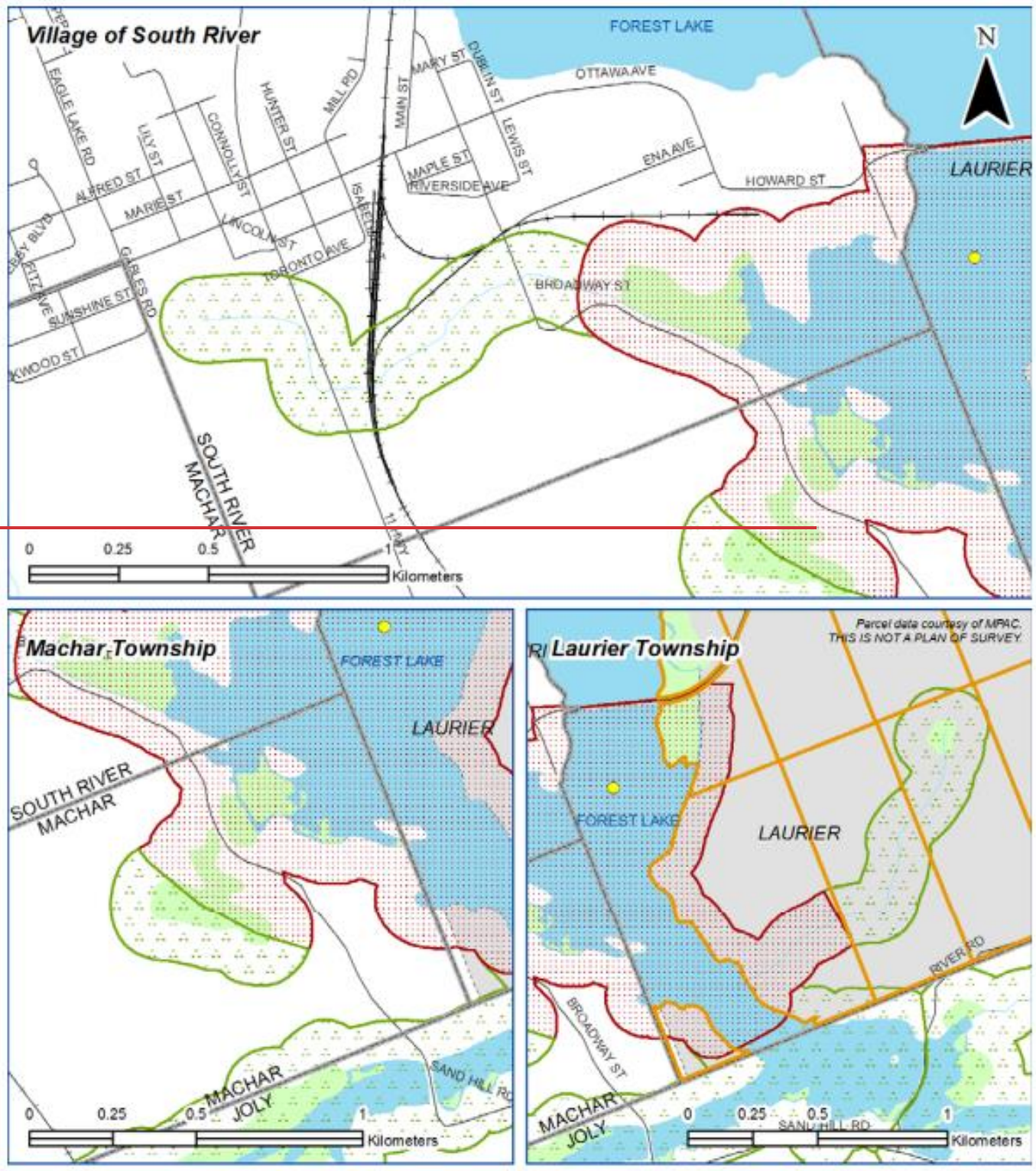
- Water Intake
- Callander Issue Contributing Area
- Municipality
- Waterbody
- Wetland
- River/Creek
- Rail
- Road

NORTH BAY-MATTAWA CONSERVATION AUTHORITY

DRINKING WATER SOURCE PROTECTION

Schedule A-5. South River Intake Protection Zone within Village of South River, Machar Township and Laurier Township





SCHEDULE A-5

South River Intake Protection Zones within the MUNICIPALITIES OF SOUTH RIVER & MACHAR/ UNORGANIZED TOWNSHIP OF LAURIER

Legend

- South River Intake
- Assessment Parcel within Laurier Township
- Municipality
- Unorganized Township
- Waterbody
- Wetland
- River/Creek
- Road
- Rail

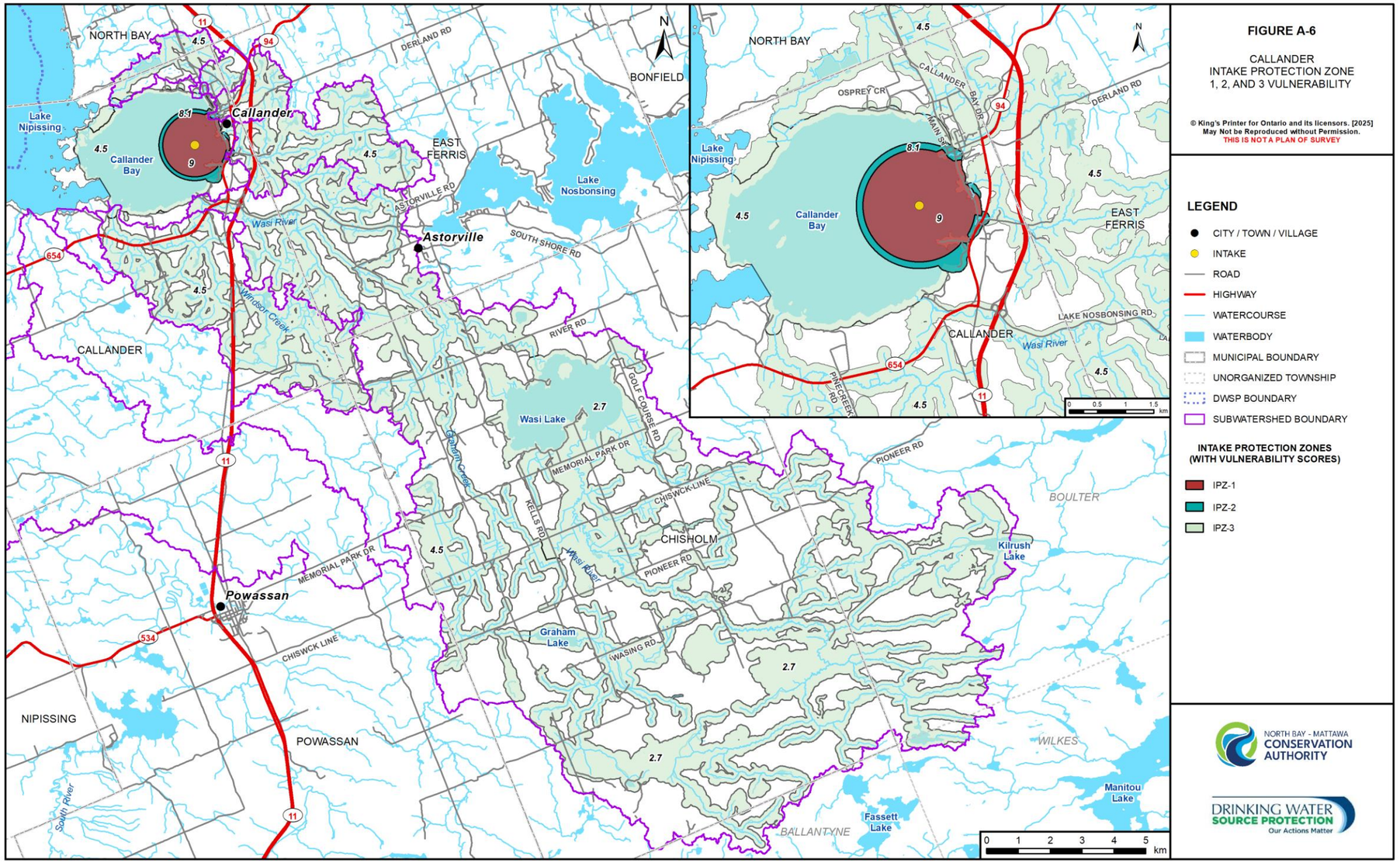
Intake Protection Zone

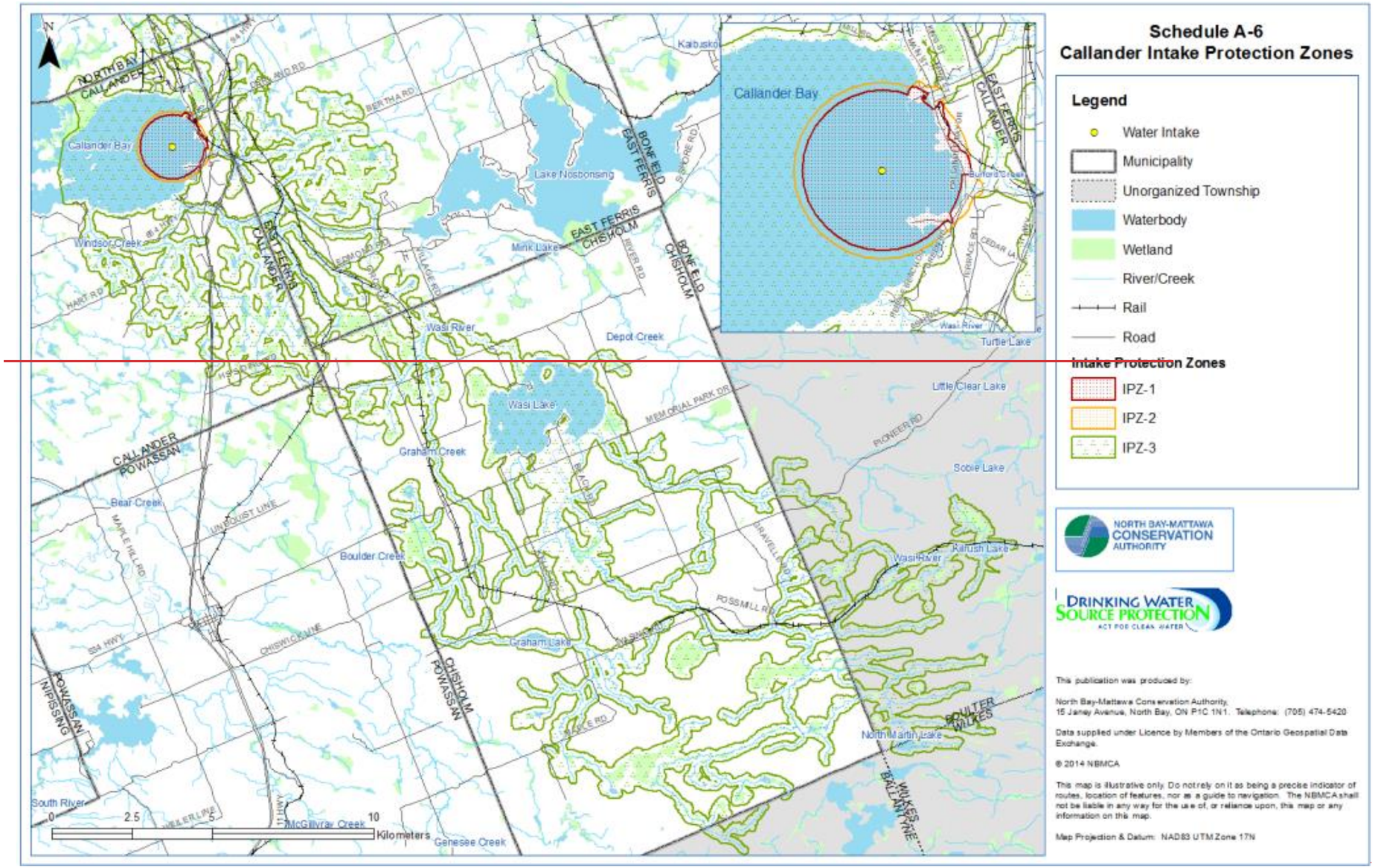
- IPZ 1
- IPZ 3

NORTH BAY-MATTAWA CONSERVATION AUTHORITY

DRINKING WATER SOURCE PROTECTION

Schedule A-6. Callander Intake Protection Zone showing subzones of IPZ-3




Schedule A-6
Callander Intake Protection Zones
Legend
Water Intake
Municipality
Unorganized Township
Waterbody
Wetland
River/Creek
Rail
Road
Intake Protection Zones
IPZ-1
IPZ-2
IPZ-3
Callander Bay
Lake Nosbonsing
Mink Lake
Wasi River
Wasi Lake
Depot Creek
Graham Creek
Bear Creek
Boulder Creek
Graham Lake
Windsor Creek
Kalbusko
Turtle Lake
Little Clear Lake
Sobie Lake
Ralfush Lake
North Martin Lake
McGillivray Creek
Genesee Creek
South River
NORTH BAY CALLANDER
CALLANDER POWASSAN
CHISHOLM POWASSAN
POWASSAN NIPISSING
BONFIELD EAST FERRIS
EAST FERRIS CHISHOLM
EAST FERRIS CALLANDER
BERTHA RD
HART RD
VILLAGE RD
RIVER RD
MEMORIAL PARK DR
PIONEER RD
MAPLE HILL RD
LIMOUSIST LINE
CHISWICK LINE
ROSS MILL RD
MAPLE RD
WILKES BALLANTYNE
11TH HWY
534 HWY
0
2.5
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Kilometers
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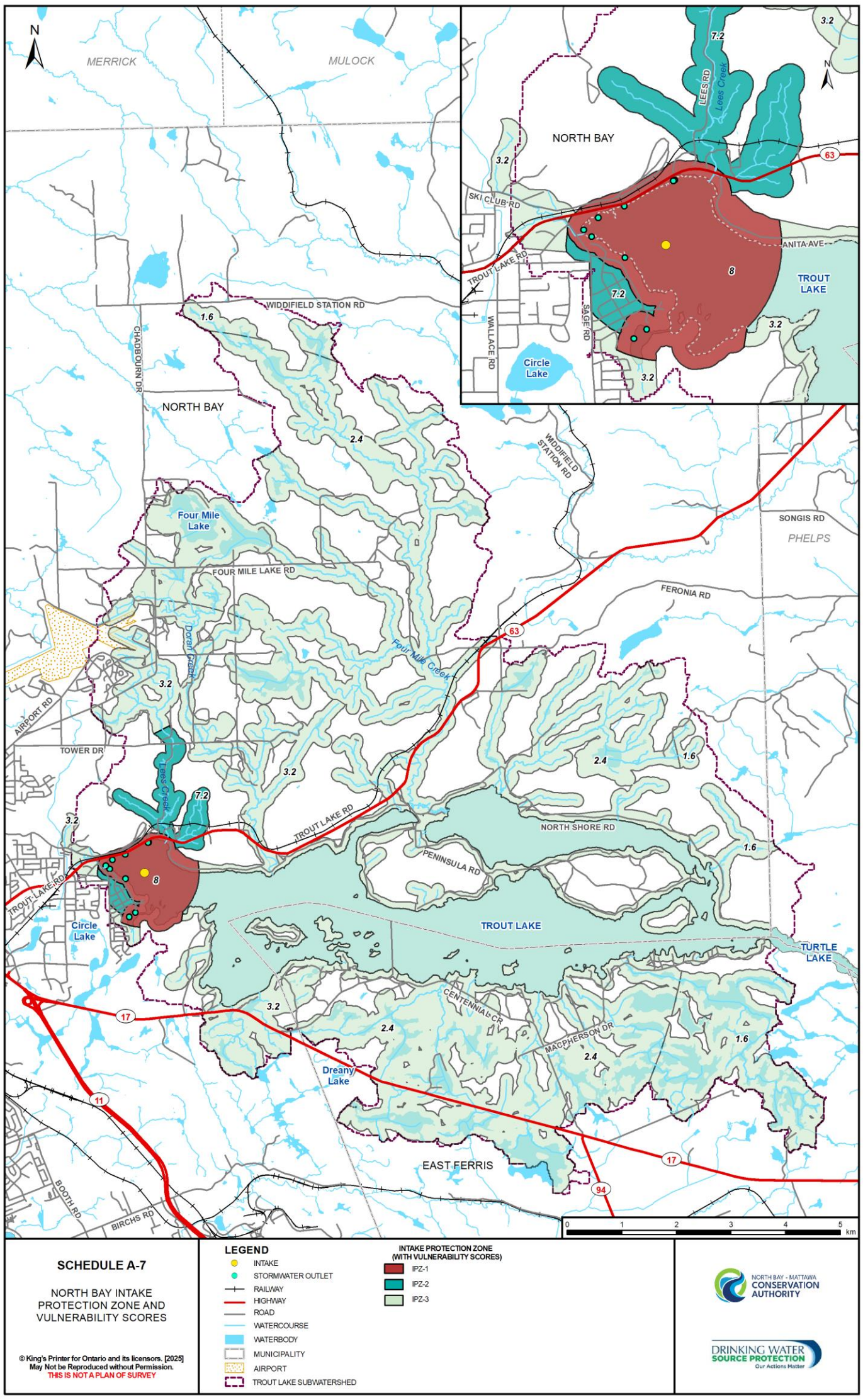
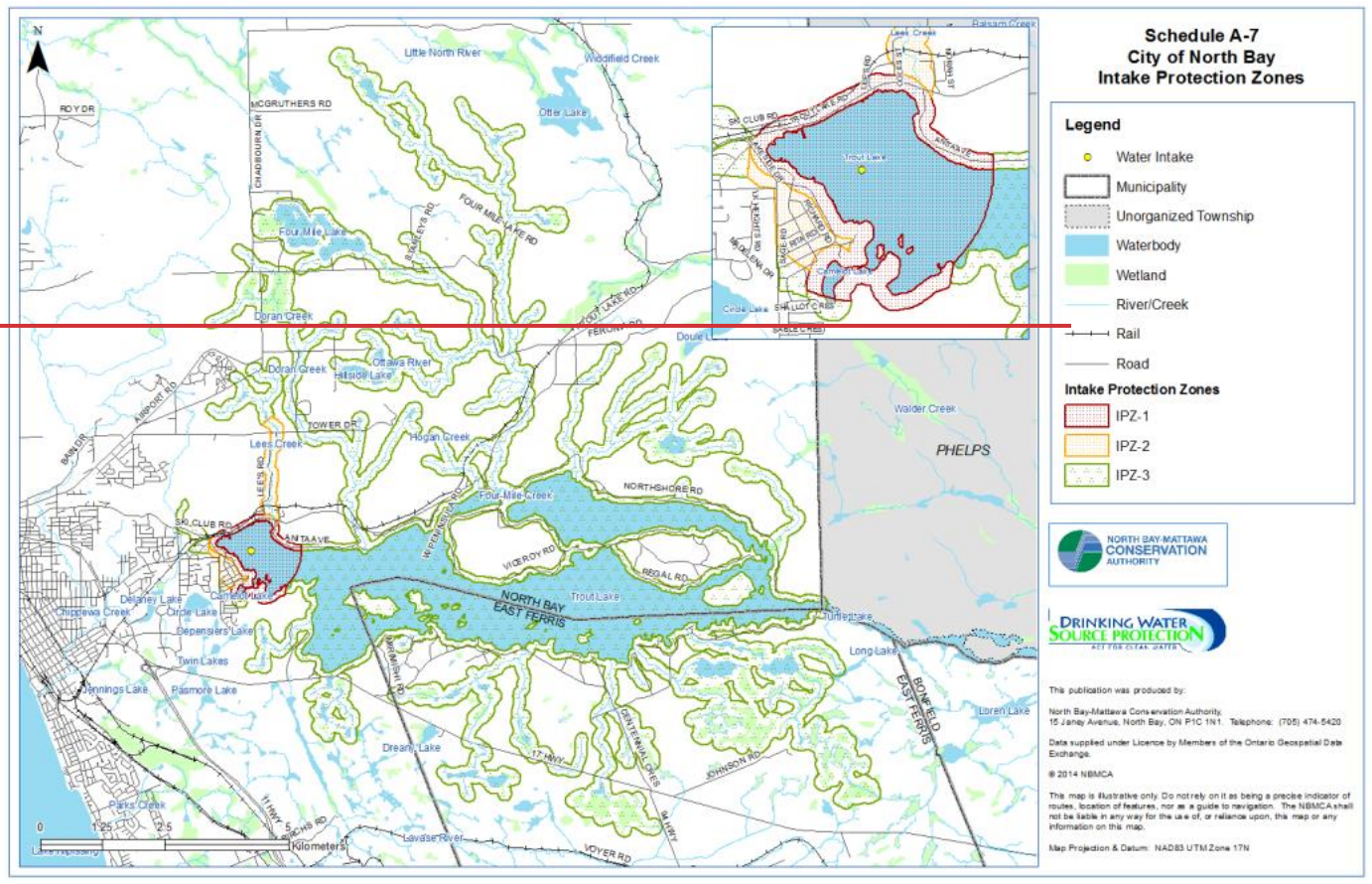
Schedule A-7. North Bay (Trout Lake) Intake Protection Zone showing subzones of IPZ-3




Schedule A-7
City of North Bay
Intake Protection Zones
Legend
Water Intake
Municipality
Unorganized Township
Waterbody
Wetland
River/Creek
Rail
Road
Intake Protection Zones
IPZ-1
IPZ-2
IPZ-3
NORTH BAY-MATTAWA CONSERVATION AUTHORITY
DRINKING WATER SOURCE PROTECTION
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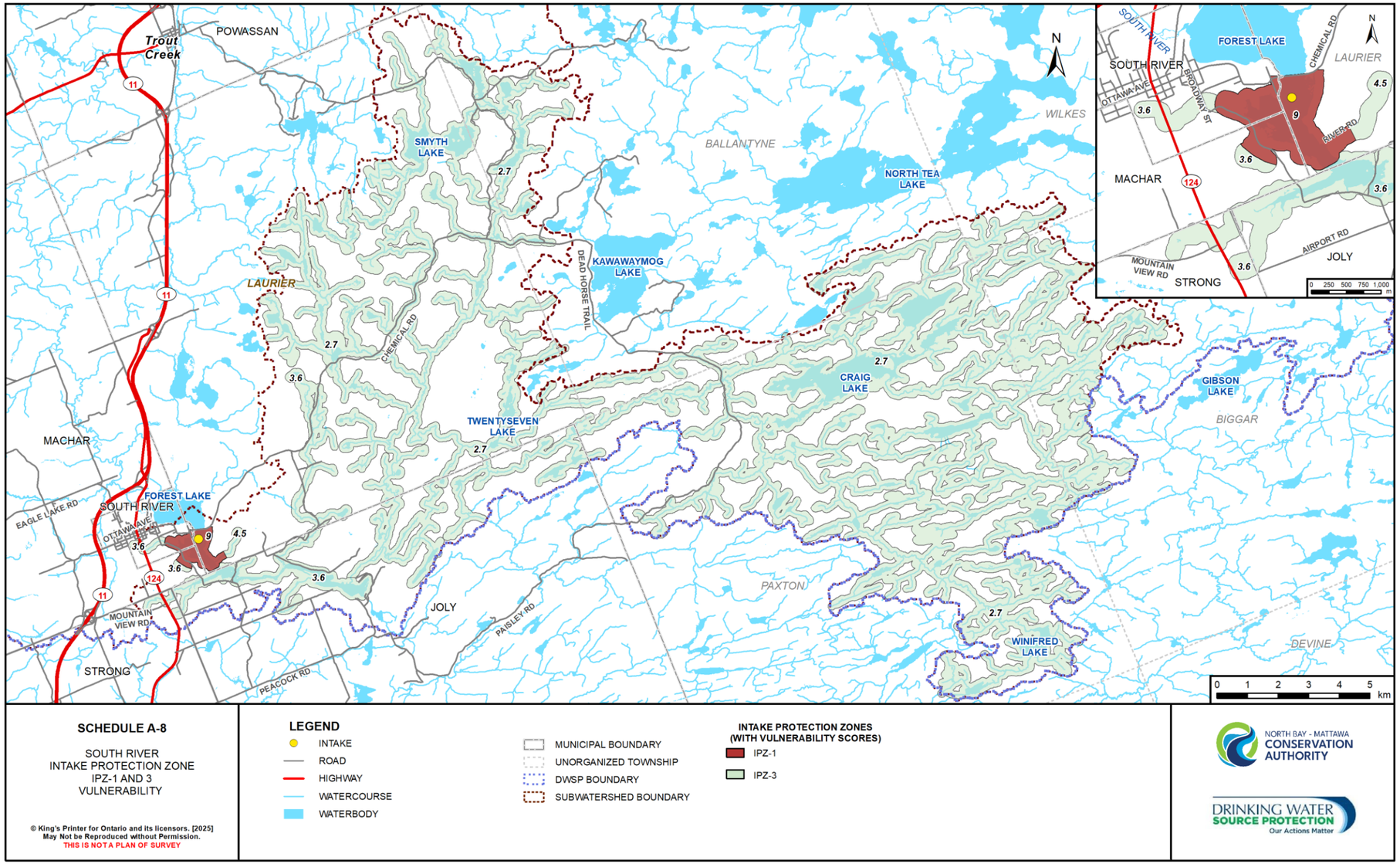
Map Projection & Datum: NAD83 UTM Zone 17N
N
Little North River
Widdifield Creek
Otter Lake
McGRUTHERS RD
ROY DR
CHABOURN DR
Four Mile Lake
FOUR MILE LAKE RD
BAILEY'S RD
Doran Creek
FOOT LAKE RD
FERRIS RD
Ottawa River
Hillside Lake
AIRPORT RD
TOWER DR
Lees Creek
Hogan Creek
Four-Mile Creek
NORTHSHORE RD
SKI CLUB RD
LEES RD
SANTA AVE
W POWASSAN TR
VICEROY RD
REGAL RD
Delaney Lake
Chippewa Creek
Circle Lake
Carmen Marie
Dispensers Lake
Twin Lakes
Jennings Lake
Pasmore Lake
Parks Creek
Trout Lake
NORTH BAY
EAST FERRIS
MARMION RD
Turtle Lake
Long Lake
BONFIELD
EAST FERRIS
Loren Lake
Dream Lake
17 HWY
CENTENNIAL CRES
JOHNSON RD
94 HWY
11 HWY
LEES RD
Lavase River
VOYER RD
Walder Creek
PHELPS
Balsam Creek
Lees Creek
SKI CLUB RD
TROUT LAKE RD
BAILEY'S RD
EAGLE RD
RICHARD RD
MAGDALENA DR
Cedar Lake
SHALLOT CRES
EAGLE CRES
Double
0
1.25
2.5
5
Kilometers

Schedule A-8. South River Intake Protection Zone showing subzones of IPZ-3



SCHEDULE A-8

SOUTH RIVER
INTAKE PROTECTION ZONE
IPZ-1 AND 3
VULNERABILITY

LEGEND

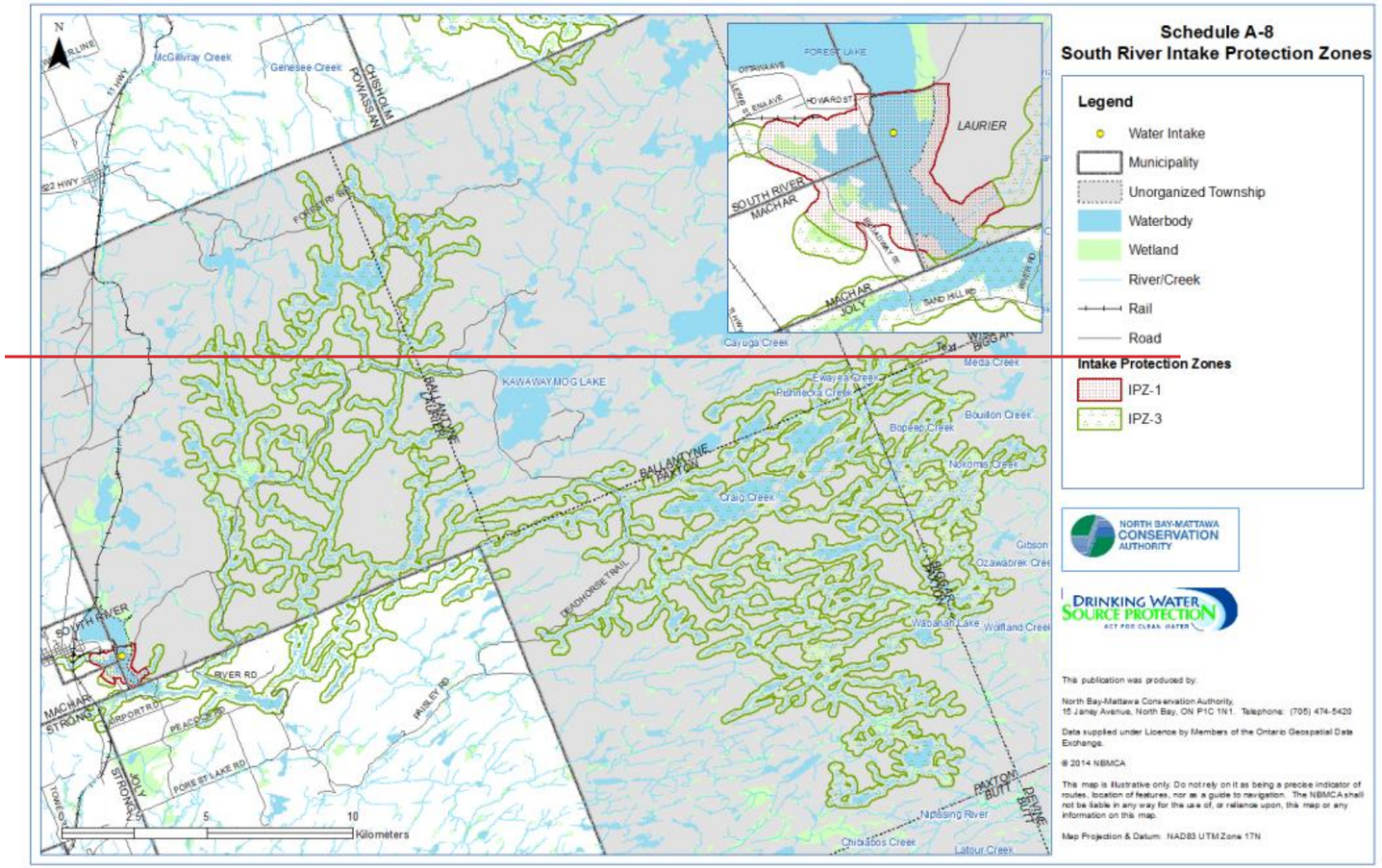
- INTAKE
- ROAD
- HIGHWAY
- WATERCOURSE
- WATERBODY
- MUNICIPAL BOUNDARY
- UNORGANIZED TOWNSHIP
- DWSP BOUNDARY
- SUBWATERSHED BOUNDARY

INTAKE PROTECTION ZONES (WITH VULNERABILITY SCORES)

- IPZ-1
- IPZ-3

NORTH BAY - MATTAWA CONSERVATION AUTHORITY

DRINKING WATER SOURCE PROTECTION
Our Actions Matter


Schedule A-8
South River Intake Protection Zones
Legend
Water Intake
Municipality
Unorganized Township
Waterbody
Wetland
River/Creek
Rail
Road
Intake Protection Zones
IPZ-1
IPZ-3
NORTH BAY-MATTAWA CONSERVATION AUTHORITY
DRINKING WATER SOURCE PROTECTION
This publication was produced by:
North Bay-Mattawa Conservation Authority,
15 Janey Avenue, North Bay, ON P1C 1N1. Telephone: (705) 474-5420
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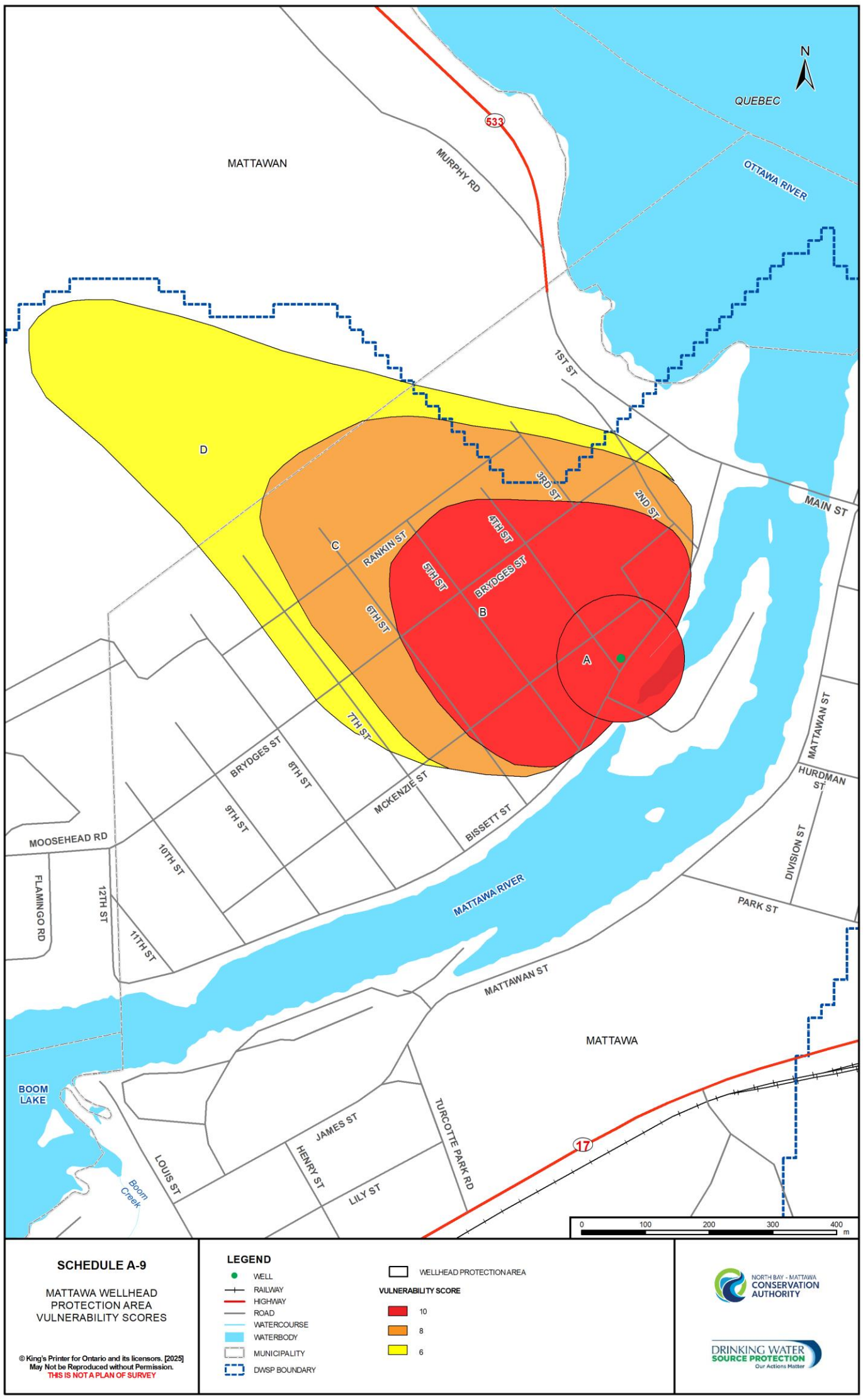
Map Projection & Datum: NAD83 UTM Zone 17N
N
McGalvray Creek
Genesee Creek
CHISHOLM
POWASSAN
FOREST LAKE
OTTAWA AVE
LESLIE
E ENA AVE
HOWARD ST
LAURIER
SOUTH RIVER
MACHAR
SAND HILL RD
RIVER RD
Cayuga Creek
KAWAWAY MOG LAKE
BALLANTYNE
Eyaya Creek
Pishmeeka Creek
Media Creek
Boulton Creek
Bopeep Creek
Nokomis Creek
BALLANTYNE
PAXTON
Craig Creek
Gibson
Ozawabrek Creek
DEADHORSE TRAIL
Wabanan Lake
Wolfland Creek
SOUTH RIVER
RIVER RD
MACHAR
STRONG
AIRPORT RD
PEACOCK RD
HAISLEY RD
JOLY
STRONG
FORE RT LAKE RD
TOWER RD
5
10
Kilometers
PAXTON
BUTT
DRIVE
BUTT
Nipissing River
Chabassos Creek
Latour Creek

Schedule A-9. Mattawa Wellhead Protection Area



Schedule A10. Powassan Wellhead Protection Area

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SCHEDULE A-10
POWASSAN WELLHEAD PROTECTION AREA WITH VULNERABILITY SCORES
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THIS IS NOT A PLAN OF SURVEY
LEGEND
WELL
ROAD
HIGHWAY
RAILWAY
WATERCOURSE
WATERBODY
MUNICIPAL BOUNDARY
WELLHEAD PROTECTION AREA
VULNERABILITY SCORE
10
8
6
4
2
POWASSAN
VALLEY VIEW DR
MEMORIAL PARK DR
SPETZ AVE
BRIDGE AVE
QUENNS AVE
BIG BEND AVE
MAIN ST
EDWARD ST
ARMSTRONG AVE
CLARKE ST
JOSEPH ST
FAIRVIEW LN
KING ST
CATHERINE ST
CHISHOLM ST
ELM ST
SOUTH ST
Genesee Creek
A
B
C
D
11
534
N
0 50 100 200 300 400 500 m
NORTH BAY - MATTAWA CONSERVATION AUTHORITY
DRINKING WATER SOURCE PROTECTION
Our Actions Matter

Schedule B: Vulnerability Scores Legend

Callander Bay:

- IPZ-1: Vulnerability Score 9
- IPZ-2: Vulnerability Score 8.1
- IPZ-3: Vulnerability Score 4.5 and 2.7

Powassan:

- WHPA-A: Vulnerability Score 10
- WHPA-B: Vulnerability Score 10, 8, and 6
- WHPA-C: Vulnerability Score 8, 6, and 4
- WHPA-D: Vulnerability Score 6, 4, and 2

South River

- IPZ-1: Vulnerability Score 9. Note that the IPZ-1 encompasses all areas that contribute water to the intake within a two-hour time-of-travel including drainage to stormwater management works, such that there is no IPZ-2 for the South River drinking water intake.
- IPZ-3: Vulnerability Score 4.5, 3.6, and 2.7

City of North Bay

- IPZ-1: Vulnerability Score 8
- IPZ-2: Vulnerability Score 7.2
- IPZ-3: Vulnerability Score 3.2, 2.4, and 1.6

Mattawa:

- WHPA-A: Vulnerability Score 10
- WHPA-B: Vulnerability Score 10
- WHPA-C: Vulnerability Score 8
- WHPA-D: Vulnerability Score 6

Highly Vulnerable Aquifer (HVA):

- Vulnerability Score 6

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