



# Approved Updated Source Protection Plan

## Sault Ste. Marie Region Source Protection Authority



With Support Provided By



## Sault Ste. Marie Region Source Protection Committee

Approved April 12, 2021

Updated January 2017

Approved March 10, 2015

*Prepared as per Ontario Regulation 287/07, Clean Water Act, 2006*

## **EXECUTIVE SUMMARY**

The Ontario Government passed the *Clean Water Act, 2006*, in order to protect municipal drinking water at its source as part of an overall commitment to human health and the environment and to ensure safe, clean drinking water for all Ontarians. This legislation resulted from the contamination of the drinking water system of the Town of Walkerton, Ontario. Seven people died and thousands of others had become ill from drinking contaminated water. Protecting “Source Water” is the first step in a multi-barrier approach to ensure the quality and sustainability of our Municipal Residential Drinking Water Supplies. A key focus of Ontario’s *Clean Water Act, 2006* is the production of locally developed, science-based Assessment Reports and Source Protection Plans.

The Source Protection Committee (SPC) for the Sault Ste. Marie Region Source Protection Area was established in 2007. The committee was established as designated through the *Clean Water Act, 2006* and is comprised of representatives from the watershed community. The committee is responsible for the generation of the Assessment Report, the Source Protection Plan and Explanatory Document.

The assessment report was originally developed under the 2008, 2009 and 2013 versions of the Technical Rules and where updates were made, they were carried out under amendments to the 2017 Rules and 2018 addition of pipelines circumstances to the Table of Drinking Water Threats.

The Sault Ste. Marie Region Source Protection Area (SSMR Source Protection Area) is situated within the District of Algoma, along the north shore of the St. Marys River and the eastern shore of Lake Superior. The planning area takes in the municipality of Sault Ste. Marie, the Township of Prince and includes a portion of the unorganized townships of Dennis, Pennefather, Aweres, Jarvis and Duncan as well as areas of the Garden River and Batchewana First Nations. Both Lake Superior and the St. Marys River are shared resources of Canada and the United States of America. The boundary of the Source Protection Area extends out to the international border along its entire width. There are 38 Source Protection Areas in 19 Source Protection Regions in the province.

The City of Sault Ste. Marie depends on surface water from Lake Superior at Gros Cap and groundwater from six (6) wells within the St. Marys River watershed. The Source Protection Committee’s Source Protection Plan (SPP) has been developed for the municipal drinking water sources for the Sault Ste. Marie Region Source Protection Area

(SSMR SPA). It specifically applies to the six (6) municipal wells and the surface water intake (Gros Cap). This plan excludes private wells.

Four Significant Drinking Water Threats, as defined by the *Clean Water Act*, have been identified in the Sault Ste. Marie Region Source Protection Area. Three of these threats are located in the Wellhead Protection Area for the Lorna and Goulais Well sites and consist of a sanitary force main, municipal snow dump site and the commercial handling and storage of fuel. One local significant threat (Event Based Point Spill Event) was identified in the Intake Protection Zone of the Gros Cap Drinking Water intake in Lake Superior. As these threats were identified as significant, policies have been developed with the objective of decreasing the potential risk associated with each.

The Source Protection Plan is the culmination of the Sault Ste. Marie Region SPC's efforts to draft policies to ensure that significant threats to the Sault Ste. Marie municipal drinking water sources cease to be or never become significant threats.

Sault Ste. Marie Region Updates under Section 36 of the *Clean Water Act* includes the following mandatory updates to the Assessment Report and Source Protection Plan. Compliance with the amendments made to the Director's Technical Rules, published on the Environmental Registry in March 2017 under posting number 012-8507 and the 2018 amendments to the Rules and General Regulation (O. Reg. 287/07). Within this Source Protection Area this includes assessing locations where the above-grade handling and storage of fuel, as well as liquid hydrocarbon pipelines, pose a significant, moderate and low risk, and ensuring policies apply to all relevant protection zones; and updating the significant groundwater recharge areas and any associated policies in the plan to align with the amended Rules. Further review and revision of policies as necessary to address policy effectiveness where the committee, authority and affected municipality determine it is necessary, such as for agricultural and non-agricultural source material (policy SSM-ASM-NASM-F-1.1). All other updates were completed to be in compliance with the *Clean Water Act* and its regulations.

This update of the Source Protection Plan is a result of the development of the Director's Technical Rules. Changes to these rules has resulted in changes in the policies that include the removal or addition of policies and changes to wording of policies as threats are redefined. Existing policies are in effect and implemented at this time while the implementation date of the new policies will be 2 years after updated Source Protection Plan takes effect.

## ACKNOWLEDGEMENTS

The Source Protection Committee (SPC) acknowledges and thanks the Sault Ste. Marie Region Source Protection Authority (SPA) and Ministry of the Environment, Conservation and Parks staff for their support during the planning process and all former and current Drinking Water Source Protection employees and staff.

The SPC would also like to thank the following people for their dedication in the preparation of this updated Source Protection Plan for the Sault Ste. Marie Region Source Protection Area:

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And former staff Rhonda Bateman, Linda Whalen, Frank Tesolin, Lorelei Premo and Trisha Westman.

The Sault Ste. Marie Region SPC consisted of the following representation at the time of the Source Protection Plan update:

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<b>Other</b> (Two Members)	Vacant, Environmental Larry Woolley, Sault Ste. Marie Resident
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Thank you to the SPC past members Andrew Hallett, Peter McLarty, Peter Tonazzo, Ralph Yanni, Subhash Verma, Susan Hamilton-Beach, Roy Bertolo, Jordache Boudreau Mark Howson and Tracey Cooke for their efforts to prepare the Source Protection Plan.

This project has received funding support from the Government of Ontario.

**SSMR SPA Approved Updated Source Protection Plan, April 2021**

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# **CHAPTER 1 INTRODUCTION**

## CHAPTER 1 - INTRODUCTION

The *Clean Water Act, 2006* requires that every Source Protection Committee develop a Source Protection Plan to address areas where threats to drinking water could be significant. Activities that pose a significant threat to sources of municipal drinking water have been identified in their respective Assessment Reports.

The Sault Ste. Marie Region Source Protection Committee has developed threat policies for the St. Marys River watershed to address areas where significant threats exist and policies to prevent future threats from becoming significant.

The threats were identified through the evaluation of the vulnerabilities of the wellhead protection areas and intake protection zones and the inherent risks of activities within these areas as identified through the Ministry of the Environment, Conservation and Parks Table of Drinking Water Threats<sup>1</sup>. This table identifies activities and their inherent threats and the subsequent level of relative significance based on the vulnerability scores for the areas under which an activity occurs.

This Source Protection Plan has been prepared under the *Clean Water Act, 2006* and its associated Regulations and Technical Rules. The physical dimensions of the Source Protection Area include the municipality of Sault Ste. Marie and the Township of Prince and portions of the unorganized townships of Dennis, Pennefather, Aweres, Jarvis and Duncan as well as areas of the Garden River and Batchewana First Nations as shown in **Figure 1**.

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<sup>1</sup> Table of Drinking Water Threats are accessible via the source protection homepage of Ontario.ca. The information that appears in the Table of Drinking Water Threats (i.e., drinking water threats that are significant in a given vulnerable zone and score) can also be generated by searching the Source Water Protection Threats Tool, accessible via <http://swpip.ca/>.

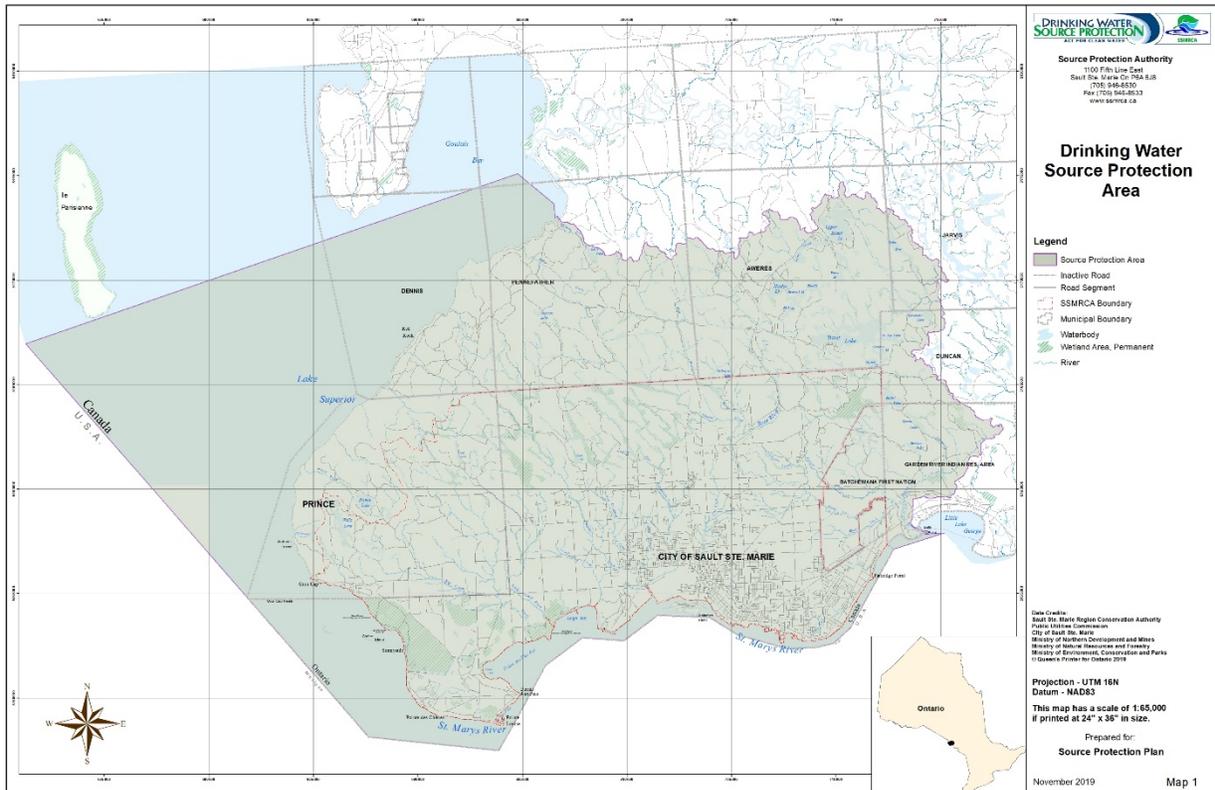


Figure 1: Drinking Water Source Protection Plan Map 1: Drinking Water Source Protection Area.

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

The Ministry of the Environment, Conservation and Parks (MECP) *Clean Water Act, 2006* (CWA) formally established the Drinking Water Source Protection (DWSP) Program in the Province of Ontario. The *Act* and associated Regulations created Source Protection Areas that are watershed based as recommended in the O'Connor Inquiry. The MECP has implemented this watershed based Source Protection through existing Conservation Authorities, as they were also established on a watershed basis.

The CWA and its associated Regulations initiated the formation of 19 Source Protection Committees covering municipal drinking water sources for approximately 90 percent of Ontario's population. These Source Protection Committees have been charged with preparing 38 Source Protection Plans for their municipal residential drinking water sources.

## **1.2 - Objectives of the Source Protection Plan**

This Source Protection Plan was developed for the Sault Ste. Marie Region Source Protection Area. It specifically applies to municipal residential drinking water sources (Well Head Protection Areas and Intake Protection Zones).

Section 22. (1) of the Ontario Regulation 287/07 lists the following as objectives of the Source Protection 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. O. Reg. 246/10, s. 12.

Specific objectives have been identified for individual policies in Chapter 4 of the SSMR Source Protection Plan.

# **CHAPTER 2**

## **SAULT STE. MARIE REGION**

### **SOURCE PROTECTION AREA**

## **CHAPTER 2 - SOURCE PROTECTION AREA**

### **2.1 - Sault Ste. Marie Region Source Protection Area**

#### **2.1.1 - Description**

The SSMR watershed encompasses a land area of 522 km<sup>2</sup> and a total land and water area of 775 km<sup>2</sup>. There is one large municipal drinking water system within the watershed that serves the municipality of Sault Ste. Marie. The system draws water from both surface and groundwater. There is one surface water intake in Lake Superior and six groundwater wells in four locations within the watershed. Details of the Source Protection Area physical properties can be found in the Assessment Report.

The City of Sault Ste. Marie municipal water supply is a large municipal residential system under O. Reg. 170/03, servicing over 25 000 customers and drawing approximately equal quantities of groundwater from its municipal wells and surface water intake.

Six municipal drinking water wells are operated within the City, with three in the East Basin and three in the Central Basin. Currently, groundwater is pumped into the City distribution system from four well fields: the Lorna and Shannon wells supplying water from the East Basin and the Steelton and Goulais wells supplying water from the Central Basin. The only treatment of the groundwater is the addition of chlorine (for disinfection) prior to it entering the distribution system. Analyses of the water indicated that the water supply is of good quality throughout the distribution system (PUC, 2008).

There is one surface water Intake to supply the City's drinking water demands. The water is drawn from Lake Superior at Gros Cap. After primary screening, raw water from the intake at Gros Cap is pumped to the water treatment plant.

#### **2.1.2 - Source Protection Plan**

The *Clean Water Act* is part of Ontario's commitment to ensure that every Ontarian has access to safe drinking water. Introduced by the Ontario Government in 2006, the Act along with the first five associated regulations came into effect in 2007. The intent of the legislation is to ensure communities are able to protect their municipal drinking water supplies, now and in the future, from overuse and contamination.

Protecting water at its source is the first step in ensuring that this commitment is achieved. By stopping contaminants from getting into sources of drinking water – lakes, rivers and aquifers – efforts can be made to create a first line of defense in the protection of the environment and human health.

The Source Protection Plan sets out how risks to municipal drinking water supplies will be addressed and includes a number of strategies such as land use planning polices and risk management plans.

## **2.2 - Assessment Report (AR) Summary**

The Assessment Report summarizes the technical studies undertaken in the Sault Ste. Marie Source Protection watershed to delineate areas around municipal drinking water sources that are most vulnerable to contamination and overuse. Within these vulnerable areas, historical, existing and possible future land use activities were identified that could pose a threat to municipal water sources. Chapter 1 of the Assessment Report provides a summary of the human and physical geography of the Sault Ste. Marie Area watershed, while Chapter 2 summarizes the water budget and stress assessment findings. Groundwater vulnerability, including Highly Vulnerable Aquifers, Significant Recharge Areas and Wellhead Protection Areas are described in Chapter 3 and Surface Water vulnerability including Intake Protection Areas in Chapter 4. Chapter 5 provides a summary of the threats assessment undertaken in each vulnerable area. Chapter 5 and Chapter 6 provide information on climate change and its potential effect on future climatic conditions and Great Lakes agreements considerations.

The AR is based on standardized science under the Ministry of the Environment, Conservation and Parks Director's Technical Rules<sup>2</sup>. A link to the Assessment Report is found in Appendix B.

### **2.2.1 - Wellhead Protection Areas (WHPA)**

The Wellhead Protection Area (WHPA) is the primary vulnerable area to be delineated to ensure the protection of each of the municipal water supply wells. Each WHPA is subdivided into four time-of-travel zones that estimate the amount of time it would take a contaminant to reach the municipal well. The following time-of-travel zones were identified:

- Zone A: 100 m radius.
- Zone B: 2 year time-of-travel (TOT) capture zone.
- Zone C: 5 year TOT capture zone.
- Zone D: 25 year TOT capture zone.

Refer to **Figures 2 – 5**

Groundwater vulnerability analysis provided an indication of activities within the WHPAs that presented the greatest risk to contaminate the water supply. The Vulnerability Analysis considered the WHPAs and the intrinsic susceptibility, as well as the potential for the Vulnerability to be increased by anthropogenic activities, through Transport

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<sup>2</sup> The assessment report was originally developed under the 2008, 2009 and 2013 versions of the Technical Rules and where updates were made they were carried out under amendments to the 2017 Technical Rules and 2018 addition of pipelines circumstances to the Table of Drinking Water Threats.

Pathways. These analyses were carried out to develop “Vulnerability Scores” within the WHPAs.

The WHPAs within the SSMR Source Protection Area were delineated by using a three dimensional groundwater flow model. Specific details on the model(s) used can be found in the Chapter 3 of the Assessment Report. The Technical Rules<sup>2</sup> under the CWA and the vulnerability analysis indicate that the 100 m radius area around the WHPAs is highly vulnerable to contamination from surface sources. Most of the area within 2-year time of travel has a moderate to high vulnerability.

### **2.2.2 - Intake Protection Zones (IPZ)**

The sole surface water intake is located at Gros Cap in Lake Superior. The surface water vulnerability analysis examines the potential for surface water contamination in the areas near the drinking water intake. Vulnerable areas around the intake, known as Intake Protection Zones (IPZs), are identified and mapped, and vulnerability scores are calculated based on the Technical Rules<sup>2</sup>.

The Intake Protection Zone (IPZ) is the primary vulnerable area to be delineated to ensure the protection of the municipal surface water supply. For the Sault Ste. Marie drinking water system, an IPZ-1 and IPZ-2 have been delineated and are illustrated in **Figure 6**.

The IPZ-1 was delineated based on a one (1) kilometre radius from the intake crib. IPZ-2 was delineated using hydrodynamic models to estimate the distance that a contaminant could travel in three hours. The models include such factors as wind direction and speed, stream loadings, and lake currents.

The vulnerability scores for IPZ-1 and IPZ-2 were determined based on factors set out in the Technical Rules (2009)<sup>2</sup>. The IPZ-1 scored a vulnerability of 5 (low). The vulnerability score for IPZ-2 was 4 (low).

A local threat, Event Based Point Spill Event, was identified through event-based scenarios within the international shipping lane located on the IPZ-2 boundary as illustrated in **Figure 6**. The event-based scenarios have been modelled to determine if a contaminant released from a spill in the shipping channel could be transported to the intake and result in the deterioration of the water for use as a source of drinking water. The results showed that a large volume spill of either Potassic Fertilizer or Fuel Oil from a commercial ship in the shipping lanes would exceed the Ontario Drinking Water Standards at the intake (Chapter 4, Assessment Report). These materials were identified as most frequently present on the cargo listings for passing marine traffic.

### **2.2.3 - Significant Groundwater Recharge Area (SGRA)**

An area where precipitation seeps into the ground and flows into an aquifer is defined as a recharge area. Recharge areas tend to be areas that are usually characterized by permeable soils, such as sand or gravel which allow the water to infiltrate easily into the ground. A recharge area is considered significant when it helps maintain the water quantity in an aquifer that supplies a community with drinking water or supplies groundwater recharge to a coldwater ecosystem that is dependent on this recharge to maintain its ecological function.

The Sault Ste. Marie Region Source Protection Area has a large significant groundwater recharge area (SGRA) (**Figure 11**) and current research suggests that it is the sole recharge for the municipal drinking water aquifers.

#### **2.2.4 - Highly Vulnerable Aquifers (HVA)**

The potential vulnerability of an aquifer to groundwater contamination is a function of the susceptibility of the recharge area to contamination. A vulnerable aquifer can be defined by the tendency or likelihood of contamination reaching a specified position in the groundwater system and accessing the aquifer. Aquifer vulnerability is not an absolute property but a relative indication of areas where contamination is likely to occur. The Assessment Report identified areas of susceptibility to contamination using the Intrinsic Susceptibility Index (ISI) method to assess groundwater vulnerability. This method uses a combination of soil depth and permeability to determine an intrinsic susceptibility to contamination.

Groundwater vulnerability analysis completed for the Assessment report identified some portions of the watershed as highly vulnerable based on a computed intrinsic susceptibility index (ISI) rating as shown in **Figure 12**.

### **2.3 - Summary**

The Assessment Report is the technical, science-based report generated by the SPC to identify risks and threats to the sources of municipal residential drinking water in the SSMR Source Protection Area.

Four (4) activities as prescribed by MECP were confirmed as significant drinking water threats. Three significant threats are within the SSMR Wellhead Protection Areas. These are chemical or biological threats of fuel storage and handling, snow storage and the establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage. The fourth threat is a local threat, Event Based Point Spill Event, which was identified and the hazard rating approved by the Director, Source Protection Programs Branch, MECP. The local threat is the transportation of fuels and fertilizers. The local threat is confirmed for the IPZ-2 of the Gros Cap intake only. The threat is based on the event based modelling of the potential of a spill of oil or fertilizer in the IPZ-2 for the Gros Cap intake.



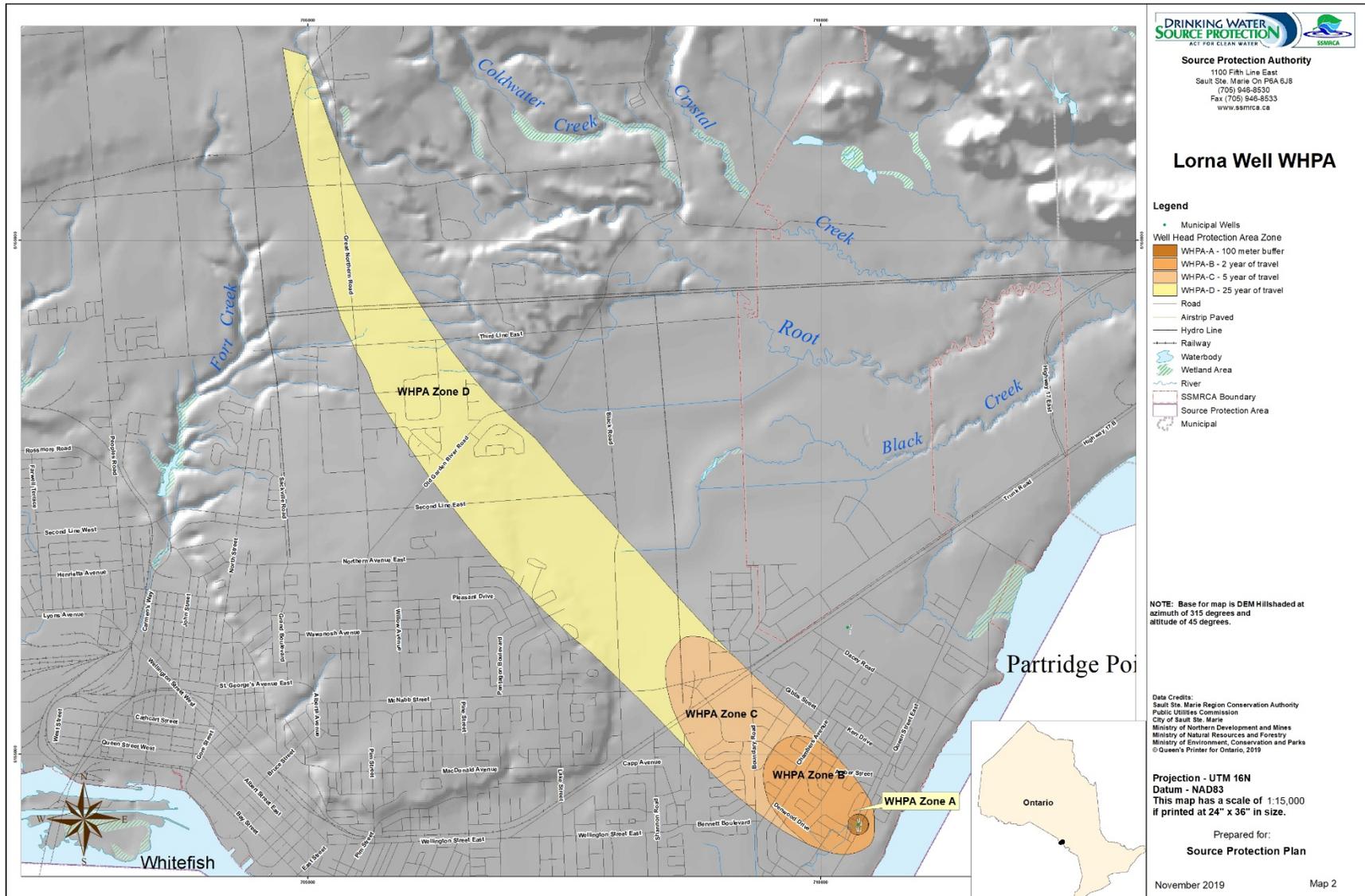


Figure 2: Drinking Water Source Protection Plan Map 2: Lorna Well WHPA

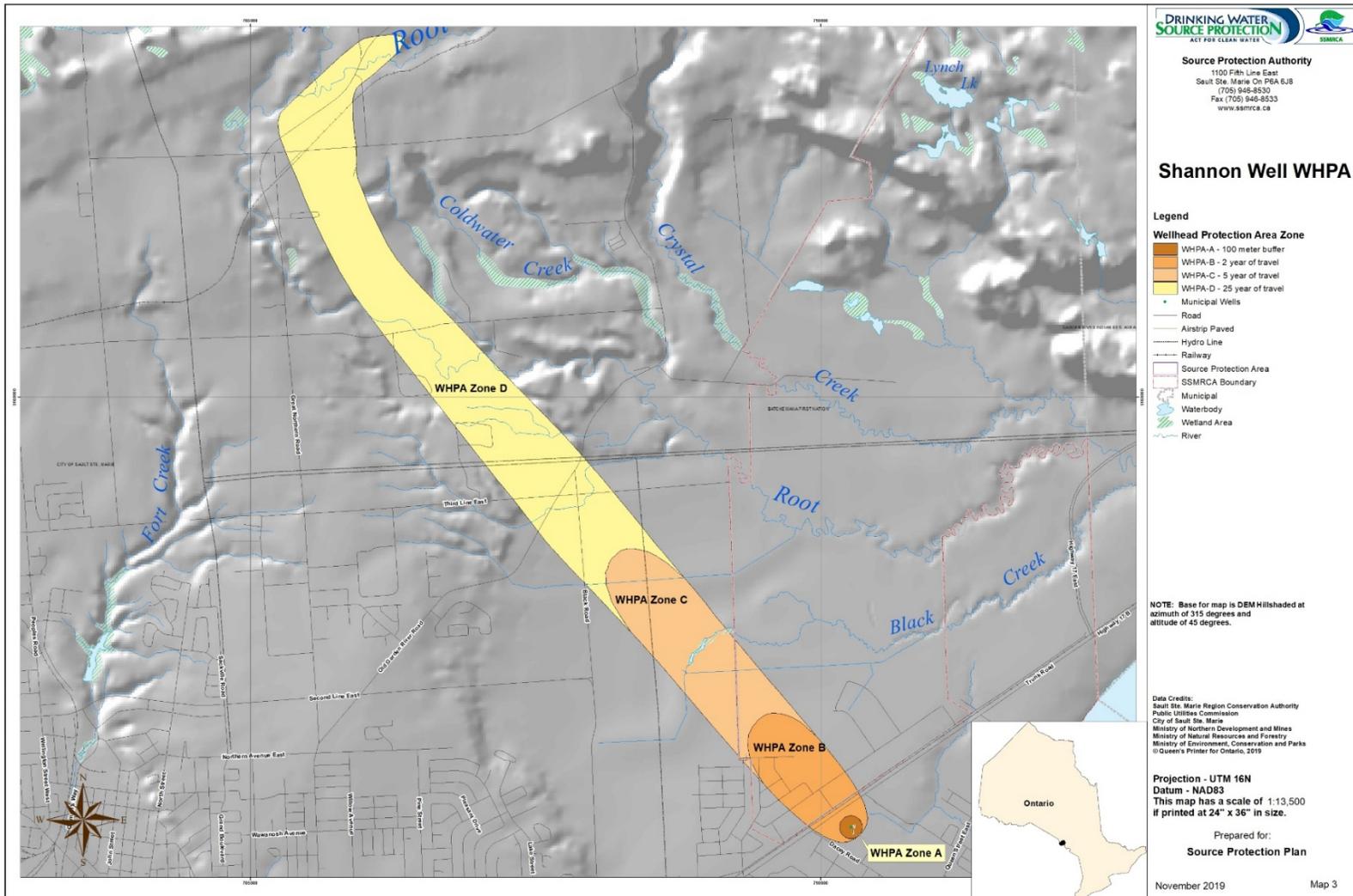


Figure 3: Drinking Water Source Protection Plan Map 3: Shannon Well WHPA

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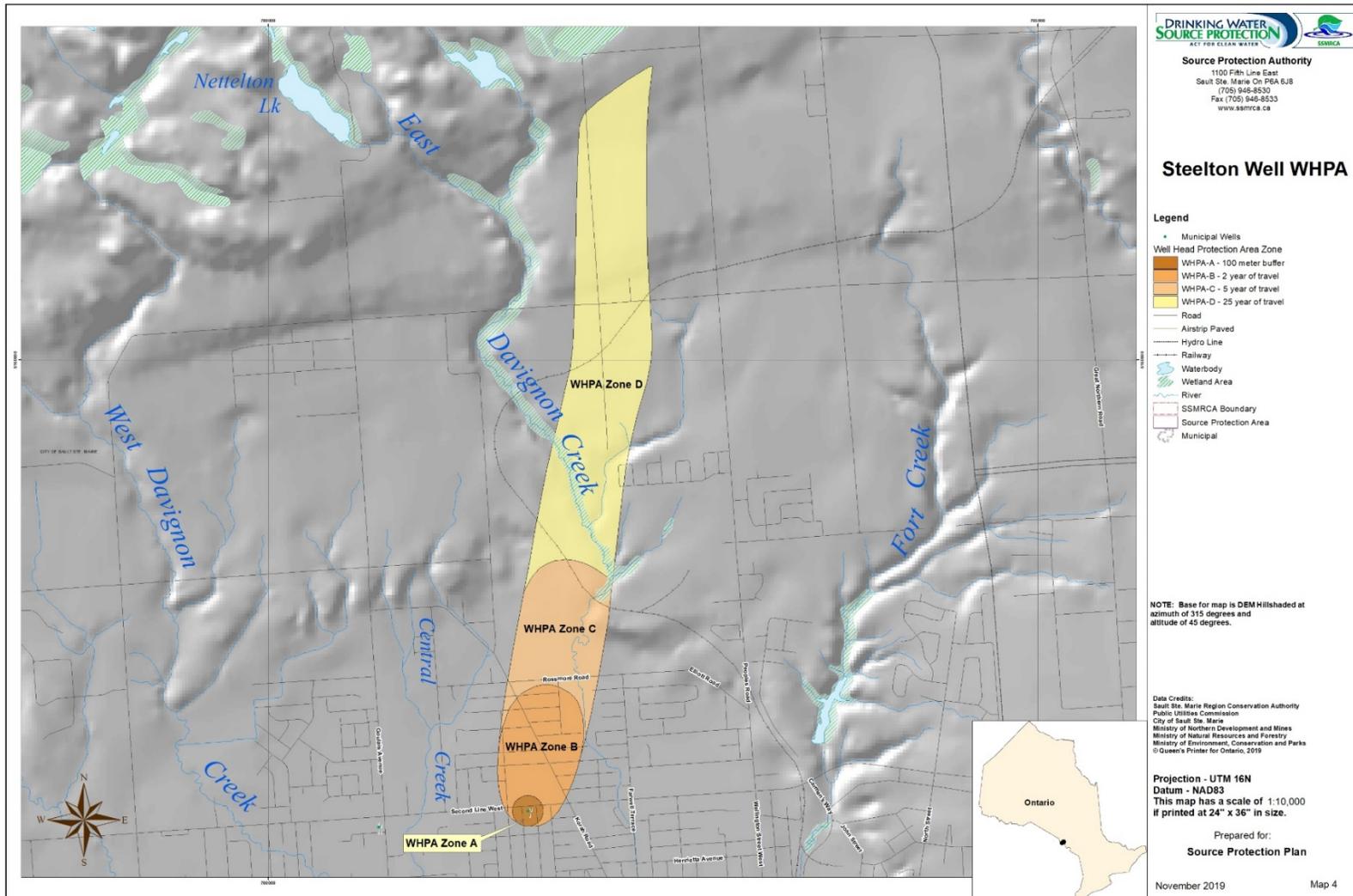


Figure 4: Drinking Water Source Protection Plan Map 4: Steelton Well WHPA

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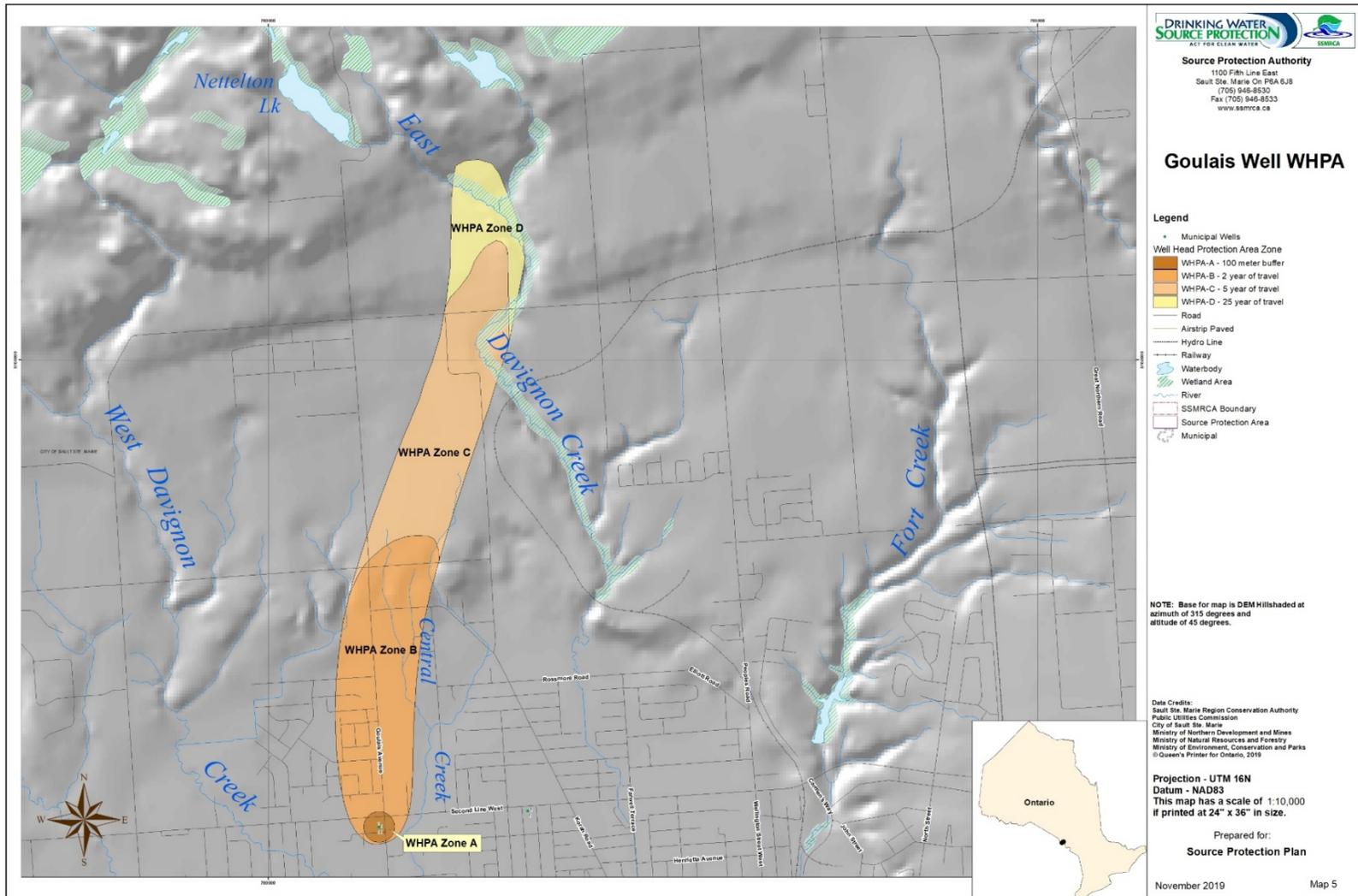


Figure 5: Drinking Water Source Protection Plan Map 5: Goulais Well WHPA

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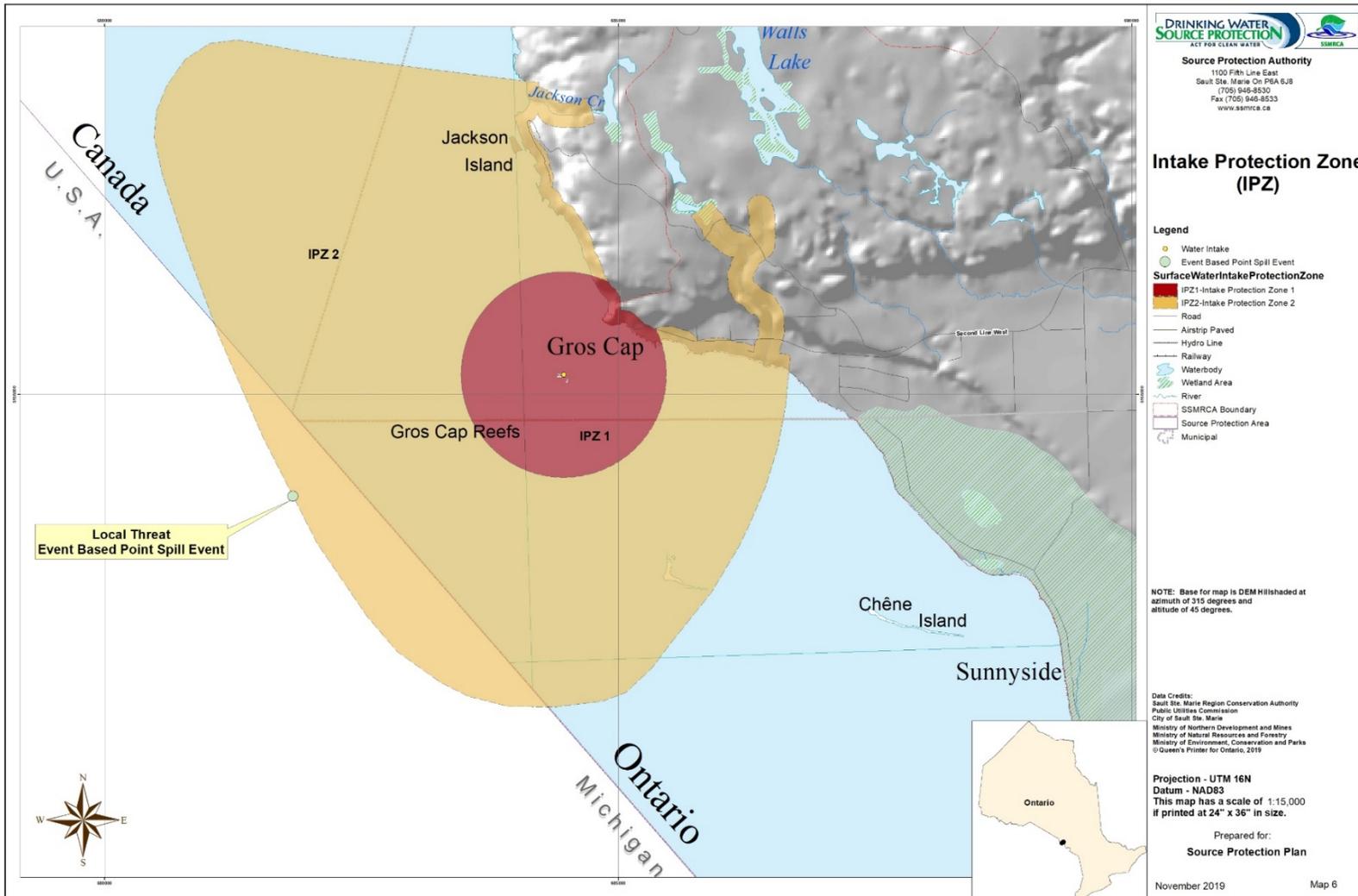


Figure 6: Drinking Water Source Protection Plan Map 6: Intake Protection Zones

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# **CHAPTER 3**

## **SOURCE PROTECTION PLANNING**

## CHAPTER 3 - SOURCE PROTECTION PLANNING

### 3.1 - Summary of Consultation Activities

The chart below outlines the consultation activities that have been undertaken by Source Protection Committee members and Source Protection Authority staff beginning with the Terms of Reference development through to the Source Protection Plan.

<b>Date</b>	<b>Consultation Activity Terms of Reference (ToR)</b>	<b>Details</b>
January 21, 2008	Notice of Commencement letter Preparation of Terms of Reference	City of Sault Ste. Marie, Sault North Planning Board, Prince Township
February 5, 2008	Notice of Commencement letter Preparation of Terms of Reference	Garden River First Nation Batchewana First Nation
May 20, 2008	Release of the Draft Proposed ToR (DPToR)	Copies to SPA, City of SSM, Prince Township, Sault North Planning Board, Garden River First Nation, Batchewana First Nation
May 20, 2008	Release of the DPToR	Posted on internet and news release
May 20, 2008	Hard copies of the DPToR available for review	Clerks' office SSM, Prince Township and SSMRCA office
May 20, 2008	Presentation of DPToR	St. Marys River RAP coordinator
May 20, 2008	Release of DPToR	LaMP Coordinator
June 10, 2008	Public Consultation Session	SSM Civic Centre
June 11, 2008	Public Consultation Session	SSMRCA Office
June 12, 2008	Public Consultation Session	Prince Township Municipal Office
August 20, 2008	Release of the Proposed Terms of Reference (PTor)	Internet posting - 30 day comment period
August 20, 2008	Release of the Proposed Terms of Reference (PTor)	Copies to SPA, City of SSM, Prince Township, Sault North Planning Board, Garden River First

		Nation, Batchewana First Nation
October 20, 2008	Proposed Terms of Reference and all additional documentation required	Delivery of the PToR to the Ministry of Environment
	<b>Assessment Report</b>	
March 15, 2010	Notice to persons engaging in significant threat activities	
March 15, 2010	Letters and copies of Draft Proposed Assessment Report (DPAR)	City of SSM, Township of Prince, Sault North Planning Board
March 15, 2010	Letters and copies of Draft Proposed Assessment Report	Garden River First Nation, Batchewana First Nation
March 15, 2010	Hard copies of the DPAR available for review	Clerks' office SSM, Prince Township and SSMRCA office
March 16, 2010	Post DPAR to internet	SSMRCA
March 17, 2010	Posted revised DPAR to internet and revised hard copies for public review	Clerks' office SSM, Prince Township and SSMRCA office
March 17, 2010	Notice of release and public consultation sessions to newspaper	
March 29, 2010	Notice to residents within WHPA-A and B	All residences and businesses within WHPA – A and B of all wellheads
April 6, 2010	Public Consultation Session	Township of Prince
April 7, 2010	Public Consultation Session	City of SSM
April 8, 2010	Public Consultation Session	Aweres Township (Sault North Planning Board)
April 27, 2010	Proposed AR Consultation	30 day consultation period Posting on SSMRCA website
June 5, 2010	Submission Proposed AR	MOE
April 12, 2011	Consultation for Amended Proposed AR	Presentation to Prince Township Council
April 18, 2011	Amended Proposed AR	30 day consultation - Posted to SSMRCA website

April 18, 2011	Notice of Amended Proposed AR to those affected	City of SSM and Township of Prince
May 31, 2011	Submission of the Amended Proposed AR	MOE
Nov. 25, 2011	Approval of the Assessment Report	Approval received from MOE
February 5, 2015	Approval of updated Assessment Report	Approval received from MOE
May 21, 2019	Receipt of Section 36 Update Order	Order received from MECP
December 9, 2019	Early Engagement updated AR	MECP
January 22, 2020	Comments from Early Engagement AR	MECP to SSMRCA
May 13, 2020	Preconsultation of Updated AR	Implementing Bodies
June 17, 2020	Comments from preconsultation	MECP to SSMRCA
October 20, 2020	Public Consultation of 35 days	Virtual Consultation due to COVID19 restrictions
April 12, 2021	Approval of Updated Assessment Report	Approval received from MECP
	<b>Source Protection Plan</b>	
February 22, 2011	Early Engagement	City of Sault Ste. Marie
March 10, 2011	Early Engagement	City of Sault Ste. Marie
March 21, 2011	Early Engagement	City of Sault Ste. Marie
April 12, 2011	Presentation to Council	Township of Prince
April 21, 2011	Early Engagement	City of Sault Ste. Marie
May 31, 2011	Early Engagement	City of Sault Ste. Marie
June 29, 2011	Early Engagement	City of Sault Ste. Marie
July 7, 2011	Notice to Municipalities on the commencement of the Source Protection Plan	City of Sault Ste. Marie Township of Prince Sault North Planning Board
July 7, 2011	Notice to First Nations on the commencement of the Source Protection Plan	Batchewana First Nation Garden River First Nation
August 3, 2011	Notice to Property Owners on the Commencement of the Source Protection Plan	Residents in vulnerable areas with vulnerability scores greater than 8

August 3, 2011	Notice to Business Owner on the Commencement of the Source Protection Plan	Identified significant threat, not required
Nov. 9, 2011	Pre-Consultation Draft Policy Notice	Ministry of the Environment
Nov. 9, 2011	Pre-Consultation Draft Policy Notice	OMAFRA
Nov. 18, 2011	Pre-Consultation Draft Policy Notice	City of Sault Ste. Marie
Nov. 18, 2011	Pre-Consultation Draft Policy Notice	Township of Prince
Nov. 18, 2011	Pre-Consultation Draft Policy Notice	MMAH
Nov. 25, 2011	Pre-Consultation Draft Policy Notice	TSSA
Nov. 25, 2001	Pre-Consultation Draft Policy Notice	Consumer Services
Dec.13, 2011	Presentation to Council	Township of Prince
January 9, 2012	Presentation to Council	City of Sault Ste. Marie
March 23, 2012	Public Consultation begins for the Draft Proposed Source Protection Plan	Internet posting
March 24, 2012	Public Consultation begins for the Draft Proposed Source Protection Plan	Newspaper posting
April 18, 2012	Public Consultation Session for Draft Proposed Source Protection Plan	Township of Prince Prince Township Hall
April 23, 2012	Public Consultation Session for Draft Proposed Source Protection Plan	City of Sault Ste. Marie Civic Centre
June 15, 2012	Public Consultation for Proposed Source Protection Plan	Internet posting for 30 days
July 18, 2014	Public Consultation for Proposed Revised Source Protection Plan	Internet posting for 30 days
March 15, 2015	Approval of SPP and ED	Approval received from MOE
May 21, 2019	Receipt of Section 36 Update Order	Order received from MECP
December 9, 2019	Early Engagement Updated SPP and ED	MECP
January 22, 2020	Comments to Updated SPP and ED	MECP to SSMRCA
May 13, 2020	Preconsultation for updated SPP and ED	Implementing bodies (extended due to COVID 19)
June 17, 2020	Comments to updated SPP and ED	MECP to SSMRCA

**SSMR SPA Approved Updated Source Protection Plan, April 2021**

October 23, 2020	Public Consultation for 35 days	Virtual Consultation due to COVID19 restrictions
April 12, 2021	Approval of SPP and ED	Approval received from MECP

Early engagement included consultation with stakeholders that would be directly affected by significant threat policies to evaluate possible policy approaches.

The Draft Proposed Source Protection Plan was posted for Public Consultation in March 2012 and public consultation sessions were held in April 2012. The comments from the consultation process were considered by the SPC in the development of the Proposed Source Protection Plan. The Proposed Source Protection Plan was submitted to the Source Protection Authority.

A second Public Consultation period was June 15 – July 15, 2012 for the Proposed Source Protection Plan for the Sault Ste. Marie Region Source Protection Area. The Proposed Source Protection Plan and comments received during the second consultation period were submitted to the Source Protection Authority for acceptance. The Source Protection Authority submitted the Proposed Source Protection Plan and outstanding comments to the Ministry of the Environment for approval in August 2012.

After the receipt of comments from the following Ontario government Ministries: Environment, Agriculture and Food and Municipal Affairs and Housing as well as the City of Sault Ste. Marie the Source Protection Committee made revisions to the Source Protection Plan. Most of the revisions were legislative in nature and did not affect the intent of the policies within the SPP. Public consultation on the Proposed Revised Source Protection Plan was a 30 day internet posting. Final submission of the SPP and the Explanatory document to the Ministry of the Environment is scheduled for August 22, 2014.

Early engagement with the relevant ministries began in 2019 and continued throughout the year on content and wording.

The Pre-Consultation for the Section 36 Update was conducted with the municipal staff in May of 2020 and continued with the ministry staff into December 2020.

Public Consultation was for 35 days beginning October 23, 2020 in the virtual format due to COVID19 restrictions on public gatherings. In addition to Ministry comments the SPC received a comment from municipal staff and a comment from a resident.

Final submission of the Updated SPP, ED and AR to the Ministry of Environment is scheduled for January 22, 2021.

**SSMR SPA Approved Updated Source Protection Plan, April 2021**

### 3.2 - Participants

The main participants in the Source Protection Planning process are the Source Protection Committee and the Sault Ste. Marie Region Source Protection Authority. The SPC is made up of representatives from municipalities, industrial sectors and others including environmental interests and residents.

The Source Protection Committee has also been supported by liaisons representing the Ministry of the Environment, Conservation and Parks (MECP), Algoma Public Health and the Sault Ste. Marie Region Source Protection Authority (SSMR SPA).

The Sault Ste. Marie Region Source Protection Authority consisted of the following representation at the time of the Source Protection Plan submission of August 2014.

**City of Sault Ste. Marie** Brian Watkins, Chair, Councillor City of Sault Ste. Marie  
Marchy Bruni, Councillor City of Sault Ste. Marie  
Frank Manzo, Jr., Councillor City of Sault Ste. Marie  
Joe Krmpotich, Councillor City of Sault Ste. Marie

**Township of Prince** Ken Lamming, Township of Prince Reeve

The Sault Ste. Marie Region Source Protection Authority consisted of the following representation at the time of the Updated Source Protection Plan 2020.

**City of Sault Ste. Marie** Marchy Bruni, Councillor City of Sault Ste. Marie  
Rick Niro, Councillor City of Sault Ste. Marie  
Cory Gardi, Vice-Chair, Councillor City of Sault Ste. Marie  
Sandra Hollingsworth, Councillor City of Sault Ste. Marie

**Township of Prince** Enzo Palumbo, Chair, Prince Township Councillor

### **3.3 - Drinking Water Threats**

#### **3.3.1 - Prescribed Drinking Water Threats**

An activity is prescribed through regulation as a drinking water threat. Activities identified through regulation under the CWA are considered in conjunction with the vulnerability scores of a particular WHPA or IPZ. Significant threats can occur in a WHPA with a vulnerability score of eight or higher with the exception of the handling and storage of dense non-aqueous phase liquids (DNAPLs) which can be significant in many of the vulnerable areas of the watershed.

The Source Protection Plan must include policies to address significant drinking water threats. The significant threat policies must address existing activities and those that “would be” significant if they were to occur in the future.

#### **3.3.2 - Prescribed Drinking Water Threats**

The following is a list of the 21 activities that are prescribed drinking water threats in subsection 1.1(1) of O. Reg. 287/07 under the *Clean Water Act, 2006*.

1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act*.
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.
3. The application of agricultural source material to land.
4. The storage of agricultural source material.
5. The management of agricultural source material.
6. The application of non-agricultural source material to land.
7. The handling and storage of non-agricultural source material.
8. The application of commercial fertilizer to land.
9. The handling and storage of commercial fertilizer.
10. The application of pesticide to land.
11. The handling and storage of pesticide.
12. The application of road salt.
13. The handling and storage of road salt.
14. The storage of snow.
15. The handling and storage of fuel.
16. The handling and storage of a dense non-aqueous phase liquid.
17. The handling and storage of an organic solvent.
18. The management of runoff that contains chemicals used in the de-icing of aircraft.

19. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.
20. An activity that reduces the recharge of an aquifer.
21. The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard.
22. The establishment and operation of a liquid hydrocarbon pipeline. O. Reg. 385/08, s. 3; O. Reg. 206/18, s. 1.

Additional Local Threat - Transportation of Fuels and Fertilizers in the Intake Protection Zone.

Twenty (20) of these activities are relevant to water quality threats, while two are related to water quantity threats.

### **3.4 – Explanation of Threats**

#### **3.4.1 - Waste Disposal Sites**

The following types of waste disposal sites are indicated in the MECP Tables of Drinking Water Threats and are considered quality threats to sources of drinking water:

- the application of:
  - hauled sewage
- the land disposal of:
  - petroleum refinement waste,
  - hazardous waste, liquid industrial waste, or processed liquid industrial waste,
  - municipal waste (e.g. landfill, incinerator, and waste transfer and processing facilities where material is accepted from other municipalities)
  - industrial waste or commercial waste,
  - liquid industrial waste (discharged into a geological formation by means of a well),
- the storage of:
  - PCB waste,
  - hazardous waste or liquid industrial waste.
- storage, treatment and discharge or tailings from mines.

#### **3.4.2 - The Establishment, Operation or Maintenance of a System that Collects, Stores, Transmits, Treats or Disposes of Sewage**

This drinking water threat includes systems that store and/or treat human waste on-site including sewage treatment plants. These systems come in a variety of forms including earth pit privies, privy vaults, grey-water systems, cesspools, leaching bed systems and associated treatment units and holding tanks.

### **3.4.3 - The Application, Storage and Management of Agricultural Source Material**

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

- manure produced by farm animals, including bedding materials,
- runoff from farm-animal yards and manure storages,
- wash water that has not been mixed with human body waste (e.g. from the milking centre),
- organic materials produced by intermediate operations that process the above materials (e.g. mushroom compost),
- 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),
- regulated compost (which contains dead farm animals).

ASM can be stored in a permanent nutrient storage facility or on a temporary field nutrient storage site.

### **3.4.4 - The Application, Handling and Storage of Non-Agricultural Source Material**

Nutrients are materials that can be applied to land for the purpose of improving the growth of agricultural crops and for soil conditioning. They are essential components of plant growth.

According to Ontario Regulation 267/03 (General) under the *Nutrient Management Act*, non-agricultural source materials (NASM) 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 where less than 50% of the total material is on-farm anaerobic digestion materials (anaerobic digestion is a process used to decompose organic matter by bacteria in an oxygen-limited environment),
- 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).

### **3.4.5 - The Application, Handling and Storage of Commercial Fertilizer**

Drinking water threats related to the storage and land application of commercial fertilizer are nitrogen and total phosphorus. Nitrogen and total phosphorus are substances that could make their way into drinking water sources as a result of the application of commercial fertilizer to land. These nutrients could threaten the safety of drinking water sources in certain situations due to runoff or spills.

### **3.4.6 - The Application, Handling, and Storage of Pesticides**

In Ontario, the *Pesticides Act* defines “pesticide” as any organism or substance that is manufactured, represented, sold or used as a means of directly or indirectly controlling, preventing, destroying, mitigating, attracting or repelling any pest or altering the growth, development or characteristics of any plant life that is not a pest. It also includes any organism, substance or thing registered under the federal *Pest Control Products Act*. Pesticides are typically chemicals but could be organisms that are used to control undesirable pests, such as weeds, insects and fungi.

Since 2009, there has been a cosmetic pesticide ban in effect in Ontario. This ban prohibits the application of pesticides for cosmetic purposes on lawns, vegetable and ornamental gardens, patios, driveways, cemeteries, and in parks and schoolyards in an effort to reduce the amount of pesticides that make its way into sources of drinking water. The application of pesticides to land, as well as the handling and storage of pesticides, is most commonly associated with agricultural and recreational land uses.

### **3.4.7 - The Application, Handling and Storage of Road Salt**

Road salt is a drinking water threat as it contains sodium and/or chloride. The most commonly used products are sodium chloride and calcium chloride because they are effective and inexpensive.

There has been an increase in chloride noted in the East Basin wells that may be attributed to the deposition of road salt in the Highly Vulnerable Aquifer (Figure 12). The concentrations currently do not exceed the Ontario Drinking Water Standards aesthetic

objective for sodium. The aesthetic objective for sodium in drinking water is 20 mg/L. The local Medical Officer of Health would be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.

Data for long term trend analysis is not currently available.

### **3.4.8 - The Storage of Snow**

Snow removed from roads and parking lots can be contaminated with salt, oil, grease and heavy metals from vehicles, litter and airborne pollutants. The disposal of snow in one location concentrates the potential contaminants.

This drinking water threat includes:

- snow that is pushed into large piles on a property (e.g. stored in parking lots),
- snow transported to a central site from other locations (e.g. snow disposal sites),
- large snowbanks along roads that are close to municipal wellheads or surface water intakes.

The snow storage drinking water threat is closely linked to the application of road salt.

### **3.4.9 - The Handling and Storage of Fuel**

This category of drinking water threats includes the handling of liquid fuel in relation to its storage and the storage of liquid fuel. The types of storage facilities to be considered are defined in Ontario Regulation 213/01 (Fuel Oil) or Ontario Regulation 217/01 (Liquid Fuels). Both regulations are made under the *Technical Standards and Safety Act, 2000*. Although not part of the oversight of the Technical Standards and Safety Authority programs, facilities where fuel is manufactured or refined are considered. 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,
- furnace oil tanks for home and business heating purposes,
- operation of an above/below ground liquid hydrocarbon pipeline.

The types of fuels considered include diesel, used oil when used as a fuel, kerosene and hydrocarbon fuel (e.g. gasoline).

### **3.4.10 - The Handling and Storage of Dense Non-Aqueous Phase Liquid (DNAPLs)**

A DNAPL is a liquid that is denser than water and tends to not be soluble in water. As a result, the DNAPL sinks to the bottom of groundwater aquifers and surface water bodies as a separate phase liquid. This contaminant source has the ability to last for decades or centuries before being depleted.

DNAPLs have been used in large quantities for decades in industrial and commercial applications such as dry cleaning, cleaning/degreasing solvents, electronics, aerosols, plastics, pesticides, pharmaceuticals, wood preservation, asphalt operations, varnishes and the repair of motor vehicles and equipment. These chemicals can also be found in small quantities in common household products (e.g. adhesives and cleaners).

### **3.4.11 - The Handling and Storage of Organic Solvents**

Organic solvents are a chemical class of compounds that are used routinely in commercial industries and industrial sites. Common uses for organic solvents are in dry cleaning (e.g., tetrachloroethylene), paint thinning (e.g., toluene, turpentine), nail polish removing and in glue solvents (acetone, methyl acetate, ethyl acetate), spot removers (e.g., hexane, petrol ether), detergents (citrus terpenes), perfumes (ethanol), nail polish and in chemical synthesis.

### **3.4.12 - The Management of Runoff that Contains Chemicals Used in the De-icing of Aircrafts**

Aircraft that have frost, ice or snow on any of its critical structures (e.g. wings) are not permitted to attempt take-off under the Canadian Aviation Regulations. During weather conditions that would result in frost, ice or snow, aircraft may be sprayed with de-icing and/or anti-icing fluids prior to take-off.

Ethylene glycol or propylene glycol is the active ingredient in aircraft de-icing fluids. The runoff of large volumes of de-icing fluids into surface water bodies over a short period of time can lead to oxygen depletion which results in poor water quality and toxicity to aquatic life and mammals. The toxicity associated with the de-icing chemical can originate from both the glycol formulations, as well as the additives mixed into these formulations.

### **3.4.13 - Water Quantity**

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 and an activity that reduces the

recharge of an aquifer are considered significant drinking water threats. In the Sault Ste. Marie Region Source Protection Area these threats have not been identified.

#### **3.4.14 - The Use of Land as Livestock Grazing or Pasturing Land, an Outdoor Confinement Area or a Farm Animal Yard**

An “outdoor confinement area” as defined in the Nutrient Management Act means an enclosure for livestock, deer, elk or game animals that has the following characteristics:

1. It has no roof, except as described in paragraph 3.
2. It is composed of fences, pens, corrals or similar structures.
3. It may contain a shelter to protect the animals from the wind or another shelter with a roof of an area of less than 20 square metres.
4. It has permanent or portable feeding or watering equipment.
5. The animals are fed or watered at the enclosure.
6. The animals may or may not have access to other buildings or structures for shelter, feeding or watering.
7. Grazing and foraging provides less than 50 per cent of dry matter intake; (“zone de confinement exterieure”).

Farm animal yards are outdoor livestock areas lined with concrete other than those meeting the definition of an outdoor confinement area.

Grazing is crop production where the animals do the harvesting. Ontario grazing systems involve a concentration of up to two - three animals per acre during the grazing season, often on a rotational basis. Although grazing/pasturing farm animal yards and outdoor confinement areas are different, this report applies to all.

#### **3.4.15 - Transportation of Fuels and Fertilizers in Gros Cap IPZ-2**

The transportation of fuels and fertilizers is a local threat that applies to the Sault Ste. Marie Gros Cap IPZ-2 only. Fuels and fertilizers are chemicals that are transported through the shipping channels and the potential exists for a spill to occur. The Source Protection Authority modeled a spills scenario based on the Director’s technical rules. The threat is based on this event-based modelling of the potential of spill of oil or fertilizer in the IPZ-2 for the Gros Cap intake. The threat is approved for the IPZ-2 of the Gros Cap intake only.

### **3.5 - Policy Tools**

The Source Protection Committee had numerous policy tool options available to address drinking water threats. Policy tools can be grouped into two different categories: those

that result in legal restrictions being placed on activities, and those that generally rely on non-regulatory policy tools.

### **3.5.1 - Regulatory Policy Tools**

#### **3.5.1.1 - Section 57 Prohibition**

Under the *Clean Water Act*, Section 57 Prohibition means that an activity is no longer allowed to occur in an area where it would be a significant threat. The prohibition of activities is the strongest policy approach.

#### **3.5.1.2 - Section 58 Risk Management Plans**

Under the *Clean Water Act, 2006* Section 58 Risk Management Plans are site-specific documents that are negotiated after the approval of the Source Protection Plan. A risk management plan will outline the actions required to address an identified significant drinking water threat and should include and account for risk management measures that are already in place. Risk Management Plans (RMP) are only applicable to significant drinking water threats within intake protection zones or wellhead protection areas.

#### **3.5.1.3 - Section 59 Restricted Land Uses**

Under the *Clean Water Act, 2006* Section 59 Restricted Land Uses are utilized as an implementation tool when s. 58 Risk Management Plans or s. 57 Prohibition are used. The restricted land use tool links activities that could be associated with specific land uses in the municipal official plan or zoning by-law where the activity would be a significant drinking water threat. Section 59 Restricted Land Uses will be employed as an early threat identification tool in the review of planning applications.

#### **3.5.1.4 - Land Use Planning**

Source Protection Plan policies may utilize existing Planning Act tools to implement source water protection policies. The Planning Act provides tools to regulate development, such as allocating land for agricultural, residential, commercial or mixed uses and specifying development standards such as setbacks from lot lines. However, land use planning does not always regulate the specific threat activities associated with a particular land use. Furthermore, the land use planning approach is not retroactive and can only apply to future development proposals.

#### **3.5.1.5 - Prescribed Instruments**

A Prescribed Instrument is a document of legal effect which includes a permit, licence, approval authorization, direction or order that is created under Ontario legislation. They

may be amended to address source water protection policies. Such instruments manage these site specific requirements by containing terms and conditions that direct specific ways in which certain activities may be undertaken at the site. The following is a list of Prescribed Instruments that could be used for the purposes of Source Protection Planning:

1. Section 8 of the *Aggregate Resources Act*, with respect to site plans included in applications for licenses.
2. Sections 11 and 13 of the *Aggregate Resources Act*, with respect to licenses to remove aggregate from pits or quarries.
3. Section 23 of the *Aggregate Resources Act*, with respect to site plans accompanying applications for wayside permits.
4. Section 30 of the *Aggregate Resources Act*, with respect to wayside permits to operate pits or quarries.
5. Section 36 of the *Aggregate Resources Act*, with respect to site plans included in applications for aggregate permits.
6. Section 37 of the *Aggregate Resources Act*, with respect to aggregate permits to excavate aggregate or topsoil.
7. Section 39 of the *Environmental Protection Act*, as it read on the day before subsection 2 (29) of Schedule 7 to the *Open for Business Act, 2010* came into force, with respect to certificates of approval or provisional certificates of approval issued for the use, operation, establishment, alteration, enlargement or extension of waste disposal sites or waste management systems.
- 7.1 Sections 20.3 and 20.5 of the *Environmental Protection Act*, with respect to environmental compliance 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.
8. Section 47.5 of the *Environmental Protection Act*, with respect to renewable energy approvals issued or renewed by the Director.
9. Section 10 of Ontario Regulation 267/03 (General) made under the *Nutrient Management Act, 2002*, with respect to nutrient management strategies.
10. Section 14 of Ontario Regulation 267/03, with respect to nutrient management plans.
11. Section 28 of Ontario Regulation 267/03, with respect to approvals of nutrient management strategies or nutrient management plans.
12. Section 34 of the *Ontario Water Resources Act*, with respect to permits to take water.

13. Section 53 of the *Ontario Water Resources Act*, as it read on the day before subsection 3 (9) of Schedule 7 to the *Open for Business Act, 2010* came into force, with respect to approvals to establish, alter, extend or replace new or existing sewage works.
14. Section 15.2 of Ontario Regulation 267/03, with respect to NASM plans.
15. Sections 7 and 11 of the *Pesticides Act*, with respect to permits for land exterminations, structural exterminations and water exterminations issued by the Director.
16. Section 40 of the *Safe Drinking Water Act, 2002*, with respect to drinking water works permits issued by the Director.
17. Section 44 of the *Safe Drinking Water Act, 2002*, with respect to municipal drinking water licences issued by the Director. O. Reg. 246/10, s. 2 (1, 2); O. Reg. 267/11, s.1.

### **3.5.2 - Non-Regulatory Policy Tools**

#### **3.5.2.1 - Specify Actions**

A policy may Specify Actions to be taken to implement a plan or achieve the plan's objectives. A policy may specify an action in relation to a drinking water threat when the Committee's desired outcome is not within the scope of authority provided by the spectrum of other policy tools.

This policy option must specify the public body or other organization that is responsible for implementing this policy.

#### **3.5.2.2 - Stewardship Programs**

Stewardship programs often include financial and hands on technical assistance to the community/landowners/businesses to complete a variety of environmental projects in relation to drinking water threats.

Stewardship programs can include:

- developing technical tools to monitor and assess the state of the watershed,
- providing advice and technical assistance in completing on-the-ground projects,
- promoting community involvement in projects,
- building partnerships with all levels of government, environmental groups, businesses, residents and landowners,
- creating educational resources.

This tool has not been used by the committee as no source of funding has been identified.

### **3.5.2.3 - Incentive Programs**

Incentive programs are intended to promote or encourage Specific Actions or behaviours. They often include financial incentives or cost share programs but could also include community recognition programs/awards. This tool has not been used by the committee as no source of funding has been identified.

### **3.5.2.4 - Education and Outreach**

Education and outreach programs are intended to increase awareness of the benefits of drinking water source protection, improve landowner acceptance of Source Protection Plan policies and encourage positive changes in behaviour.

An education and outreach program could include:

- written materials,
- community outreach,
- special activities,
- media releases,
- public open houses.

### **3.5.2.5 - Best Management Practices**

Best management practices are measures taken to mitigate or prevent negative impacts to water quality or quantity in relation to drinking water threats. There are some sector established best management practices that recognize source water protection.

## **3.6 - Legal Effect of Source Protection Plan Policies**

The policies in the Source Protection Plan have one of three types of legal effect – “must conform/comply with” policies, “have regard to” policies, and “non-legally binding” policies. The appendices of the Source Protection Plan also contain lists of policies ensuring Source Protection Plan policies are designated the appropriate legal effect provision as outlined in the *Clean Water Act*. Specific reference to these lists is included in the definitions below, where applicable.

The following is an explanation of which policies fall under each legal effect provision.

### ***Must Conform With***

- The *Clean Water Act* requires municipalities; local boards or source protection authorities to comply with any obligations imposed on it to address a significant drinking water threat/condition, regardless of the particular tool or approach used in the policy (see Appendix A: List E).
- The Act requires decisions under the *Planning Act* and *Condominium Act, 1998* to conform with significant threat/condition policies (see Appendix A: List A).
- The Act requires decisions related to Prescribed Instruments to conform with significant threat/condition policies (see Appendix A: List C).
- Persons carrying out significant threat activities must conform with policies that use Part IV powers (Sections 57 – 59) under the *Clean Water Act*.
- The source protection plan must designate a public body to carry out monitoring required by the *Clean Water Act* and these public bodies must conform with the obligations set out in the monitoring policies (see Appendix A: List F).

#### ***Have Regard To***

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

#### ***Non-legally Binding***

The source protection plan includes other types of policies that, while the committee may determine are important to achieving the Plan's objectives, are not given legal effect by the 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 (see Appendix A: List J) governing:
  - Incentive programs and education and outreach programs, including for systems not in terms of reference;
  - The update of spills prevention, contingency or response plans along highways, railways or shipping lanes;

- Climate conditions data collection;
  - Transport pathways in WHPA or IPZ.
- Optional monitoring policies (i.e. moderate/low threats in areas where the threat could never become significant and monitoring of other permissible plan policies) in relation to the other permitted policies listed above.

# **CHAPTER 4 THREAT POLICIES**

## **CHAPTER 4 - THREAT POLICIES**

### **4.1 - Objectives**

The over-riding objectives of the Source Protection Plan are to protect existing and future drinking water sources. In addition, activities identified as significant drinking water threats should never become or cease to be significant through either preventing the activity or managing it safely. The committee has developed each policy to meet these objectives.

For the purposes of this source protection plan, a future threat is an activity that commences at a location in a vulnerable area after the plan takes effect and is not an existing activity.

An existing threat is an activity that commences or has been engaged in the past in a vulnerable area prior to the plan taking effect.

### **4.2 - Education and Outreach Policy**

All education and outreach policies identified as being the responsibility of the municipality will be executed in the following manner:

The City of Sault Ste. Marie in partnership with the Sault Ste. Marie Region Conservation Authority (SSMRCA) will develop education and outreach materials for the persons or businesses identified within the policy text.

The SSMRCA will be responsible for the development of the educational materials and will bear the cost of the materials development. The City of Sault Ste. Marie will be responsible for input and acceptance of the materials and will bear the cost of printing the materials.

### **4.3 - Existing and Future Significant Threats Policies**

There are four policies that address specific significant threats as enumerated through the Assessment Report. These four threats include the storage and handling of fuel, snow storage, sewage system or sewage works, and transportation of fuel and potassic fertilizer. Threat categories that were not enumerated in the assessment report, including threats that may be established prior to the plan taking effect or may establish after the plan taking effect are also subject to the existing and future threat polices below.

Illustrations of the Wellhead Protection Areas A and B (WHPA-A and WHPA-B) are found in **Figures 7 – 10**.

#### **4.3.1 - Existing Threat - Sewage infrastructure in WHPA-A - Lorna Well**

##### **Policy Number: SSM-Sewage-E-1.4**

**Objective:** Management of existing sewage system or sewage works threat

##### **Policy:**

The municipality shall:

- a) Develop and implement a repair procedure and parts inventory checklist for the sanitary force main within the wellhead protection area (WHPA-A) of the Lorna well.
- b) Develop and implement a training plan for Public Works staff detailing vulnerable areas, and emergency response requirements in the event of a leak in the force main within WHPA-A of the Lorna well.
- c) Prepare an emergency response plan for the force main that shall include a procedure to notify the Municipal Drinking Water System Operator.

**Implementing Body:** City of Sault Ste. Marie

**Legal Effect:** Must comply with

**Implementation Date:** Two years after the source protection plan takes effect.

##### **Monitoring Policy: SSM-Sewage-MP-E-2.0**

City of Sault Ste. Marie shall report by February 1 after the plan takes effect on the steps it has taken in the previous calendar year to provide the status of the development and implementation of the repair procedure and parts inventory checklist. The report in subsequent years shall include yearly statistics on the number of staff participating in vulnerable area training and status and statistics associated with the emergency response plan.

##### **Reasons for the Monitoring Policy:**

The annual reporting on the status of the implementation of the repair procedure and checklist, the training initiative and response plan will assist the SPC to determine the effectiveness of the policy.

### **4.3.2 - Existing Threat - Snow Storage in WHPA-A - Lorna Well**

**Policy Number: SSM-Snow-E-1.1**

**Objective:** Management of existing snow storage facility

**Policy:**

The City of Sault Ste. Marie shall update the Road Salt Management Plan to ensure that municipal best management practices are used for the existing municipal snow storage site where it could be a significant threat, including:

Maximize snow storage in the portions of the existing snow storage site that are outside of the WHPA-A.

Ensure melt water drainage flows away from the Lorna WHPA-A

Education and training for municipal staff involved in snow storage

The municipality is encouraged to undertake a soil sampling and testing program on site utilizing available funding opportunities. Sampling results may indicate the need to revise snow storage practices.

**Implementing Body:** City of Sault Ste. Marie

**Legal Effect:** Must conform with

**Implementation Date:** Two years after the source protection plan takes effect.

**Monitoring Policy: SSM-Snow-MP-E-3.0**

City of Sault Ste. Marie shall report by February 1 of each year on the steps it has taken in the previous (snow season) calendar year on storage area and melt water drainage. Reporting of results on site-specific soil sampling and testing – if available

**Reasons for the Monitoring Policy:**

Yearly reporting will indicate the extent and number of times the storage area has encroached into the WHPA-A.

Melt water drainage is intended to result in less infiltration from the site.

### **4.3.3 - Existing Threat - Fuel storage and handling in WHPA-A - Goulais Well**

#### **Policy Number: SSM-Fuel-E-1.2**

**Objective:** Management of existing fuel storage and handling threat through risk management measures

#### **Policy:**

The handling and storage of fuel is designated for the purposes of Section 58 of the CWA, requiring a Risk Management Plan in the areas where the threat exists and is significant - Goulais well WHPA-A.

The RMP will include at a minimum:

- Adherence at a minimum to Technical Standards and Safety Association (TSSA) standards as regularly updated
- Best management practices
- Measures to ensure site drainage is away from the Goulais well
- Leakage alarm system
- Standard operating procedures for shut down
- Maintenance and monitoring protocol
- Spills response plan
- Enhanced tank safety requirements
- Abandonment plan

**Implementing Body:** City of Sault Ste. Marie/Risk Management Official

**Legal Effect:** Must conform with

**Implementation Date:** Two years after the source protection plan takes effect.

#### **Monitoring Policy: SSM-RMO-MP-1.0**

Monitoring Policies are listed in Section 4.5

#### **Reasons for the Monitoring Policy:**

Monitoring of the operations and maintenance for the existing threat will enable the municipality to determine if the risk management plan is adequate for the site.

#### **4.3.4 - Existing and Future Local Threat - Transportation of Fuels and Fertilizers in the Intake Protection Zone**

##### **Policy Number: SSM-Trans-E-2.1**

**Objective:** Management of existing local transportation threat through the establishment and maintenance of effective communications and protective measures.

##### **Policy:**

City of Sault Ste. Marie and the Township of Prince shall develop a coordinated response plan to ensure prompt and effective communication in the event of a spill of any fuel or potassic fertilizer within the area where these threats were identified as significant drinking water threats through the modelling approach.

The plan shall include procedures to notify the Municipal Drinking Water System Operator. The Plan shall include outreach to local and international emergency responders.

The municipal drinking water system operator shall participate in developing a coordinated response plan.

**Implementing Body:** City of Sault Ste. Marie and the Township of Prince

**Legal Effect:** Must conform with

**Implementation Date:** Two years after the source protection plan takes effect.

##### **Monitoring Policy: SSM-transp-MP-E-1.0**

City of Sault Ste. Marie and the Township of Prince in partnership shall report to the Source Protection Authority by February 1 of each year on any spill response within the area where these threats were identified as significant drinking water threats through the modelling approach. The report will include progress on the development and establishment of the coordinated response plan, outreach activities and emergency response exercises.

##### **Reasons for Monitoring Policy:**

The reporting of spills and related activities will determine the effectiveness of the coordinated response plan.

#### **4.3.5 - Future and Existing Threat - Waste Disposal Sites**

##### **Policy Number: SSM-Waste-F-2.3**

**Objective:** To prevent the operation or establishment of waste disposal sites within the wellhead protection areas where they could become a threat. Policy SSM-Waste-F-2.4 is a complementary land use planning policy to this prescribed instrument policy.

##### **Policy**

1) Prohibit the operation or establishment of waste disposal sites as defined in Part V of the *Environmental Protection Act* where the threat could be significant (WHPA-A and WHPA-B).

\*Within the meaning of Part V Environmental Protection Act waste disposal sites may include areas for the temporary storage, landfilling, application to land, and injection of waste into a well. The types of wastes include: domestic waste, hazardous waste, liquid industrial waste, PCBs, petroleum waste, and untreated septage. Sites may be operated by an individual, by a municipality or by a commercial entity.

**Implementing Body:** Ministry of Environment, Conservation and Parks

**Legal Effect:** Must conform with

**Implementation Date:** The date the Source Protection Plan takes effect.

**Monitoring Policy:** SSM-PIgeneral-MP-1.0

**Policy Number: SSM-Waste-F-2.4**

**Policy**

Through the Planning Act, the municipality shall prohibit the operation or establishment of the following future waste disposal sites in areas where the threat could be significant (WHPA-A and WHPA-B):

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

Sites that do not require an environmental compliance approval are exempt from this policy and are subject to Policy SSM-Waste-F-2.5.

**Implementing Body:** City of Sault Ste. Marie

**Legal Effect:** Must conform with

**Implementation Date:** The date the Source Protection Plan takes effect.

**Monitoring Policy:** SSM-Planning-MP-1.1

## **Policy Number: SSM-Waste-F-2.5**

### **Policy**

Existing and future waste disposal sites that do not require approval under the Environmental Protection Act or Environmental Compliance Approval are designated for the purposes of Section 58 of the CWA requiring Risk Management Plans in vulnerable areas where the threat could be significant (WHPA-A and WHPA-B). The policy addresses the following threat sub-categories:

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

All land uses in zoning by-law 2005-150 as amended, excluding residential, are designated for the purpose of Section 59 of the CWA Restricted Land Use, where a waste disposal site would be a significant threat.

**Implementing Body:** Risk Management Official – City of Sault Ste. Marie

**Legal Effect:** Must conform with

#### **Implementation Date:**

Existing Threat – Two years after the date the Source Protection Plan takes effect.

Future Threat - The date the Source Protection Plan takes effect.

Prohibition and Restricted Land Use - The date the Source Protection Plan takes effect.

**Monitoring Policy: SSM-RMO-MP-1.0**

#### **4.3.6 - Future and Existing Threat - Fuel Handling and Storage**

##### **Policy Number: SSM-Fuel-F-1.1**

**Objective:** Prevention of fuel storage and handling facilities within the vulnerable areas where it would be a significant threat

**Policy:**

Fuel storage and handling is designated for the purposes of Section 57 Prohibition of the CWA in the areas where the threat would be significant - all WHPA-As, excluding the existing threat activity in the Goulais well WHPA-A.

All land uses in zoning by-law 2005-150 as amended, excluding residential, are designated for the purpose of Section 59 of the CWA Restricted Land Use in all areas where the handling and storage of fuel would be significant - all WHPA-As.

**Implementing Body:** City of Sault Ste. Marie/Risk Management Official

**Legal Effect:** Must comply with

**Implementation Date:**

Existing Threat – 180 days after the date the Source Protection Plan takes effect.

Future Threat - The date the Source Protection Plan takes effect.

**Monitoring Policy: SSM-RMO-MP-1.0**

#### **4.3.7 - Future and Existing Threat - Road Salt Application**

##### **Policy Number: SSM-Salt-E/F-1.4**

**Objective:** The policy objective is to manage the application of road salt. Road salt application is determined to be a moderate threat based on the area percentage of impervious surface (such as paved surfaces) within the wellhead protection areas.

##### **Policy:**

The municipality shall update the Road Salt Management Plan to recognize the need for prevention of source water contamination in WHPA-A.

The municipality shall review the Road Salt Management Plan on an annual basis with respect to Best Management Practices as they pertain to source water protection.

Education and outreach program shall be directed toward high density residential, commercial, institutional and industrial landowners within the vulnerable areas.

**Implementing Body:** City of Sault Ste. Marie

**Legal Effect:** Strategic/Non-legally binding commitment.

**Implementation Date:** - Two years after the source protection plan takes effect.

##### **Monitoring Policy: SSM-salt-MP-F-1.0**

The municipality shall report by February 1 on the volume of road salt used through the previous winter season as reviewed with the Road Salt Management Plan when complete and to report updates as required with respect to Best Management Practices as they pertain to source water protection until such time as it is determined that the SPC no longer requires the report.

##### **Reasons for the Monitoring Policy:**

*Reporting on volume to SPC to perform change analysis of reported volumes e.g. 5% less or more and winter conditions that caused the change per year.*

#### **4.3.8 - Future and Existing Threat - Road Salt Storage and Handling**

##### **Policy Number: SSM-Salt-F-2.2**

**Objective:** Risk management of future potential and existing salt storage facilities within vulnerable areas where the threat could be significant.

##### **Policy:**

Storage and handling of road salt is designated for the purposes of Section 58 of the CWA requiring a Risk Management Plan for salt storage facilities within vulnerable areas where the activity would be a significant threat, all WHPA-As. Risk Management Plans will not apply to low density residential uses.

All land uses in zoning by-law 2005-150 as amended, are designated for the purpose of Section 59 of the CWA Restricted Land Use in vulnerable area where the activity would be a significant threat – all WHPA-A's, excluding low density residential.

**Implementing Body:** City of Sault Ste. Marie / Risk Management Official

**Legal Effect:** Must comply with

##### **Implementation Date:**

Risk Management Plan - the date the Source Protection Plan takes effect for future occurrences.

Existing occurrences – the date the Source Protection Plan takes effect.

Restricted Land Use - the date the Source Protection Plan takes effect.

**Monitoring Policy: SSM-RMO-MP-1.0**

#### **4.3.9 - Future and Existing Threat - Handling and Storage of Dense Non-Aqueous Phase Liquids (DNAPLs)**

##### **Policy Number: SSM-DNAPL-F-2.2**

**Objective:** Prohibit the storage and handling of DNAPLs within vulnerable areas where the threat could be significant and manage existing handling and storage of DNAPLs.

##### **Policy:**

The storage and handling of DNAPLs (future) are designated for the purposes of Section 57 of the CWA Prohibition in the vulnerable areas WHPA - A, WHPA - B. Residential uses and the storage and handling of DNAPLs at retail sales establishments are excluded from this prohibition.

The storage and handling of DNAPLs (future) are designated for the purposes of Section 58 of the CWA requiring Risk Management Plans in WHPA-C, excluding residential.

The storage and handling of DNAPLs (existing) are designated for the purposes of Section 58 of the CWA requiring Risk Management Plans in WHPA-A, WHPA-B and WHPA-C, excluding residential.

Retail sales storage and handling of DNAPLs (existing and future) is designated for the purposes of Section 58 Risk Management Plans under the CWA in the WHPA-A, B, C.

All land uses in zoning by-law 2005-150 as amended, excluding residential, are designated for the purpose of Section 59 of the CWA Restricted Land Use, in WHPA-A, B and C where the storage and handling of DNAPLs would be significant.

Education and outreach information outlining safe handling and storage practices for DNAPL's will be developed for distribution for all landowners within the WHPA-A, B, C.

**Implementing Body:** City of Sault Ste. Marie and Risk Management Official

**Legal Effect:** Must comply with

##### **Implementation Date:**

Prohibition and Restricted Land Use - the date the Source Protection Plan takes effect.

Risk Management Plan – date to be determined by the RMO.

Education and Outreach - Two years after the source protection plan takes effect.

**Monitoring Policy: SSM-RMO-MP-1.0**  
**SSM-EOgeneral-MP-1.0**

#### **4.3.10 - Future and Existing Threat - Handling and Storage of Organic Solvents**

##### **Policy Number: SSM-orgsolvents-F-1.1**

**Objective:** Prevent the storage and handling of organic solvents within vulnerable areas where the threat could be significant and manage existing handling and storage of organic solvents.

##### **Policy:**

The handling and storage of organic solvents (future) are designated for the purposes of Section 57 of the CWA Prohibition in vulnerable areas where the threat could be significant (all WHPA-As) except retail sales establishments.

The handling and storage of organic solvents (existing) are designated for the purposes of Section 58 of the CWA requiring Risk Management Plans in vulnerable areas where the threat could be significant (all WHPA-As). Risk Management Plans are required for retail sales (future and existing) located within the vulnerable areas where the activity would be significant.

All land uses in zoning by-law 2005-150 as amended, excluding residential, are designated for the purpose of Section 59 of the CWA Restricted Land Use, in all WHPA-A, where the storage and handling of organic solvents would be significant.

Information on safe handling and storage practices for organic solvents will be developed for distribution to all property owners within all WHPA-As.

**Implementing Body:** City of Sault Ste. Marie and Risk Management Official

**Legal Effect:** Must comply with

##### **Implementation Date:**

Prohibition and Restricted Land Use - the date the Source Protection Plan takes effect.

Risk Management Plan - date to be determined by the RMO.

Education and Outreach - Two years after the source protection plan takes effect.

**Monitoring Policy: SSM-RMO-MP-1.0**  
**SSM-EOgeneral-MP-1.0**

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

**Policy Number: SSM-lives-F-1.1**

**Objective:** Prevention of livestock grazing, pasturing or confinement in vulnerable areas where the threat could be significant

**Policy:**

Utilizing authorities under the Planning Act, the municipality shall not permit any use that include livestock grazing or pasturing land, an outdoor confinement area or farm animal yard in the vulnerable areas where it could be a significant threat - all WHPA-As.

**Implementing Body:** City of Sault Ste. Marie

**Legal Effect:**

Land Use Planning – Must conform to

**Implementation Date:**

Planning Act Policy - the date the Source Protection Plan takes effect.

**Monitoring Policy: SSM-Planning-MP-1.1**  
**SSM-EOgeneral-MP-1.0**

#### **4.3.12 - Future Threat - The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage**

##### **Policy Number: SSM-Sewage-F-1.2**

**Objective:** To manage the establishment of new sewage works (sanitary and storm) to be developed as well as upgrades to existing sewage works and prevention of new septic systems within vulnerable areas where the threat could be significant.

##### **Policy:**

1) The Ministry of Environment, Conservation and Parks shall ensure that all new applications under their regulations for establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage (excluding septic systems) be evaluated to ensure new applications or modifications to existing Environmental Compliance Approvals formerly Certificates of Approval do not result in the creation of a significant threat within all WHPA-A.

2) The municipality shall ensure that all future development within the WHPA-A prohibit the use of septic systems

**1) Implementing Body:** Ministry of Environment, Conservation and Parks

**Legal Effect:** Must comply with

##### **Implementation Date:**

The Ministry of the Environment, Conservation and Parks shall comply with the policy within 3 years from the date the plan takes effect, or such other date as the Director determines based on a prioritized review of Environmental Compliance Approvals that govern significant drinking water threat activities.

**2) Implementing Body:** City of Sault Ste. Marie

**Legal Effect:** Must conform with

**Implementation Date:** The date the Source Protection Plan takes effect.

**Monitoring Policy: SSM-PIgeneral-MP-1.0**  
**SSM-Planning-MP-1.1**

#### **4.3.13 - Future Threat - Application, handling and storage of Agricultural Source Material (ASM) and Non-Agricultural Source Material (NASM)**

**Policy Number:** SSM-ASM-NASM-F-1.1

**Objective:** Management of application, handling and storage of ASM and NASM within vulnerable areas where the threat could be significant.

**Policy:**

Education and outreach materials will be developed for landowners within all WHPA-A to define ASM and NASM and their acceptable volumes for use.

**Implementing Body:** City of Sault Ste. Marie

**Legal Effect:** Must comply with

**Implementation Date:** Two years after the source protection plan takes effect.

**Monitoring Policy:** SSM-EOgeneral-MP-1.0

#### **4.3.14 - Future Threat - Runoff from de-icing of aircraft**

**Policy Number: SSM-de-icing-F-1.2**

**Objective:** Management of the use of de-icing chemicals within all vulnerable areas where the threat could be significant.

**Policy:**

The management of runoff that contains chemicals used in the de-icing of aircraft is designated for the purposes of Section 58 of the CWA and requires a Risk Management Plan within all vulnerable areas where it would be a significant threat.

All land uses in zoning by-law 2005-150 as amended, excluding residential, are designated for the purpose of Section 59 of the CWA Restricted Land Use in all areas where the management of run-off that contains chemicals used in the de-icing of aircraft would be significant - all WHPA-As.

**Implementing Body:** City of Sault Ste. Marie / Risk Management Official

**Legal Effect:** Must comply with

**Implementation Date:** The date the source protection plan takes effect.

**Monitoring Policy: SSM-RMO-MP-1.0**

#### **4.3.15 - Future and Existing Threat - Handling and Storage and Application of Commercial Fertilizer to Land**

**Policy Number: SSM-fert-F-1.1**

**Objective:** Risk management of storage, handling and application of commercial fertilizer within vulnerable areas where the threat could be significant.

**Policy:**

The handling and storage of commercial fertilizer is designated for the purposes of Section 58 of the *Clean Water Act* requiring a Risk Management Plan in the areas where the threat would be significant (all WHPA-As). Residential uses of Commercial fertilizer are excluded from the Risk Management Plan requirement.

All land uses in zoning by-law 2005-150 as amended, excluding residential, are designated for the purpose of Section 59 of the CWA Restricted Land Use in all areas where the handling, storage and application of commercial fertilizer would be significant - all WHPA-As.

Education and outreach materials will be developed for landowners in all WHPA-As.

**Implementing Body:** City of Sault Ste. Marie / Risk Management Official

**Legal Effect:** Must comply with

**Implementation Date:**

Risk Management Plan - date to be determined by the Risk Management Official.

Restricted Land Use - The date the source protection plan takes effect.

Education and Outreach – Two years after the source protection plan takes effect.

**Monitoring Policy: SSM-RMO-MP-1.0**  
**SSM-EOgeneral-MP-1.0**

#### **4.3.16 - Future and Existing Threat - Snow Storage**

##### **Policy Number: SSM-snow-F-2.1**

**Objective:** Risk management of snow storage sites within vulnerable areas where the threat could be significant.

##### **Policy:**

Snow storage is designated for the purposes of Section 58 of the CWA requiring a Risk Management Plan for snow storage sites for the areas where it would be a significant threat, all WHPA-As, except for the existing municipal snow storage site in the Lorna WHPA A.

All land uses in zoning by-law 2005-150 as amended, excluding residential, are designated for the purpose of Section 59 of the CWA Restricted Land Use in all areas where snow storage would be significant (all WHPA-As).

Education and outreach materials will be developed for snow storage for commercial and institutional land uses.

**Implementing Body:** City of Sault Ste. Marie / Risk Management Official

**Legal Effect:** Must comply with

##### **Implementation Date:**

Risk Management Plan - date to be determined by the Risk Management Official.

Restricted Land Use - The date the source protection plan takes effect.

Education and Outreach - Two years after the source protection plan takes effect.

**Monitoring Policy: SSM-RMO-MP-1.0**  
**SSM-EOgeneral-MP-1.0**

#### **4.3.17 - Future and Existing Threat - Handling and storage of pesticide and application of pesticide to land**

**Policy Number: SSM-pest-E/F-1.1**

**Objective:** Risk management of handling and storage of pesticides and prohibition of pesticide application to land within vulnerable areas where the threat would be significant.

**Policy:**

The handling and storage of pesticides is designated for the purposes of Section 58 of the CWA requiring Risk Management Plans in vulnerable areas where the threat would be significant, all WHPA-As. Residential uses of pesticides are excluded from the Risk Management Plan requirement.

The application of pesticides is designated for the purposes of Section 57 of the CWA Prohibition in the areas where the threat would be significant - all WHPA-As. Residential uses of pesticides are excluded from this prohibition.

All land uses in zoning by-law 2005-150 as amended, are designated for the purpose of Section 59 of the CWA Restricted Land Use in all areas where the handling and storage of pesticides and the application of pesticides would be significant (all WHPA-As), excluding residential.

Education and outreach materials will be developed for landowners in all WHPA-As.

**Implementing Body:** City of Sault Ste. Marie and Risk Management Official

**Legal Effect:** Must comply with

**Implementation Date:**

Risk Management Plan - the date the Source Protection Plan takes effect for future occurrences.

Existing occurrences – The date the source protection plan takes effect.

Restricted Land Use – The date the source protection plan takes effect.

Education and Outreach - Two years after the source protection plan takes effect.

**Monitoring Policy: SSM-RMO-MP-1.0**  
**SSM-EOgeneral-MP-1.0**

## **4.4 - Existing and Future Moderate Threat Policy**

### **4.4.1 - Future Moderate and Low Threats –Significant Groundwater Recharge Area**

**Policy Number: SSM-SGRA-F-4.0** – removed as per ministry direction Supplemental Bulletin #3 – Updates to Director’s Technical Rules and Tables of Drinking Water Threats 2017 (August 2018)<sup>2</sup>

**Monitoring Policy: SSM-SGRA-MP-F-3.0** – removed as per ministry direction Supplemental Bulletin #3 – Updates to Director’s Technical Rules and Table of Drinking Water Threats 2017 (August 2018)<sup>2</sup>

#### **4.4.2 – Existing and Future Moderate and Low Threats – Highly Vulnerable Aquifer Area**

##### **Policy Number: SSM-HVA-E/F-1.0**

**Objective:** To recognise the importance of the Highly Vulnerable Aquifer in Sault Ste. Marie with respect to new and existing activities. The Highly Vulnerable Aquifer areas are illustrated in **Figure 12**.

##### **Policy:**

Part A - The City of Sault Ste. Marie and the Sault North Planning Board are encouraged to protect the Highly Vulnerable Aquifers through Official Plan policies pertaining to Source Water that restrict uses that are associated with the following threat activities:

- Fuel Storage and Handling
- Handling and Storage of Organic Solvents
- Handling and Storage of DNAPLs
- The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage, threat subcategory: sewage system or sewage works – discharge of stormwater from a stormwater retention pond.

All planning decisions must have regard for this policy. The Official Plan should be updated to appropriately reflect this policy in accordance with section 26 of the Planning Act.

Part B - The City of Sault Ste. Marie is encouraged to continue with Best Management Practices (BMP) in regard to road salt application and is encouraged to seek strategies to optimise the use of road salt to recognise source water protection and public safety in the Highly Vulnerable Aquifer areas.

The Ministry of Transportation is encouraged to continue with Best Management Practices (BMP) in regard to road salt application and is encouraged to seek strategies to optimise the use of road salt to recognise source water protection and public safety in the Highly Vulnerable Aquifer areas.

Part C - Education and outreach materials should be developed and delivered to owners/operators of properties and businesses as well as residents within the HVA, to address the handling/storage of fuel, handling/storage of organic solvents, handling/storage of DNAPLs, road salt management, as well as the discharge of stormwater from stormwater management facilities.

##### **Implementing Body:**

Sault Ste. Marie Region Conservation Authority

City of Sault Ste. Marie  
Sault North Planning Board  
Ministry of Transportation

**Legal Effect:** Have regard to, non-legally binding commitment

**Implementation Date:**

Planning Act and Specific Action –Two years after the Updated Source Protection Plan takes effect.

Education and Outreach –Two years after the Updated Source Protection Plan takes effect.

**Monitoring Policy: SSM-PIgeneral-MP-1.0**

**SSM-EOgeneral-MP-1.0**

**SSM-HVA-MP-1.0**

City of Sault Ste. Marie and the Sault North Planning Board should report by February 1 of each year its decisions in the previous calendar year regarding any proposals, applications and changes in the official plan and zoning by-law, in the area where this policy applies. The Ministry of Transportation should report by February 1 of each year the results of the review of the Road Salt Management Plan and any changes as a result of changes to the Best Management Practices.

#### **4.4.4 – Future Significant – Hydrocarbon Pipelines within Vulnerable areas**

##### **Policy Number: SSM-HCPipeline-F-2.0**

**Objective:** Management of future Hydrocarbon Pipelines where the activity would be a significant drinking water threat, through the establishment and maintenance of effective communications and protective measures.

##### **Policy:**

City of Sault Ste. Marie and the Township of Prince shall develop a coordinated response plan with fuel pipeline owners to ensure prompt and effective communication in the event of a spill of any fuel within the area where the activity would be a significant drinking water threat

The coordinated response plan shall include procedures to notify the municipal drinking water system operator, MECP Spills Action Centre and local emergency responders.

The municipal drinking water system operator shall participate in developing a coordinated response plan for all future spills/leaks/ruptures.

**Implementing Body:** City of Sault Ste. Marie and Township of Prince

**Legal Effect:** Must comply with

**Implementation Date:** Two years after the Updated Source Protection Plan takes effect.

##### **Monitoring Policy: SSM-HCPipeline-MP-1.0**

City of Sault Ste. Marie and the Township of Prince in partnership shall report to the Source Protection Authority by February 1 of each year on any spill response within the area where the activity would be a significant drinking water threat. The report will include progress on the development and establishment of the coordinated response plan, outreach activities and emergency response exercises.

##### **Reasons for Monitoring Policy:**

The reporting of spills and related activities will determine the effectiveness of the coordinated response plan.

## **4.5 - General Monitoring Policies**

### **4.5.1 - Provincial Instrument Monitoring Policy**

For all future policies where the implementing body is a provincial ministry of the Government of Ontario, the following monitoring policy applies unless otherwise stated within a specific policy:

#### **Provincial Instrument Monitoring Policy: SSM-PIgeneral-MP-1.0**

The Ministry shall prepare an annual summary of the actions it has taken to achieve the outcomes of the source protection policy and make that report available to the SPC.

#### **Reason for the Monitoring Policy:**

This policy will allow the SPC to track the implementation of the policy with a provincial implementing body

### **4.5.2 - Education and Outreach Policy**

For all education and outreach policies identified within future threat policies, the following monitoring policy applies:

#### **Education and Outreach Policy: SSM-EOgeneral-MP-1.0**

The Conservation Authority shall provide an annual report to the Source Protection Authority of the education and outreach program indicating that the program has been delivered and providing details of the manner in which the program was released. The annual report due February 1 shall highlight cases from the previous calendar year known to the municipality or the Conservation Authority where protection was achieved through the program and inclusion of comments from those participating in the program or receiving the information. The annual report shall also include any education and outreach program activities and materials/products developed.

#### **Reason for the Monitoring Policy:**

An education and outreach report can assist the SPC in determining the effectiveness of the program

### **4.5.3 - Planning Approach General Monitoring Policy**

For all planning approach policies identified within the future threats policies, the following monitoring policy applies:

#### **Planning Approach General Monitoring Policy: SSM-Planning-MP-1.1**

City of Sault Ste. Marie shall report by February 1 of each year to the Source Protection Authority on the steps it has taken in the previous calendar year to implement the policies under the planning approach.

To satisfy the provisions of s. 40 and 42 of the CWA, the SSM OP and zoning shall be updated in accordance with the provisions of s. 26 of the Planning Act. Decisions under the Planning Act and Condominium Act must conform to the SDWT policies and have regard to policies that address moderate and low threats when the plan takes effect.

**Reason for the Monitoring Policy:**

To assist the SPC to track the implementation of the planning approach policies.

**4.5.4 - Section 65 Part IV Monitoring Policy**

For all policies that apply to Part IV under the *Clean Water Act, 2006* including Risk Management Plans, Restricted Land Uses, or Prohibition the following policy applies:

**Section 65 Part IV Monitoring Policy: SSM-RMO-MP-1.0**

By February 1 of each year the Risk Management Official shall report to the Source Protection Authority with the information required in Section 65 of Regulation 287/07 related to the previous calendar year.

**Reason for the Monitoring Policy:**

To assist the SPC in determining the effectiveness of the Part IV policies

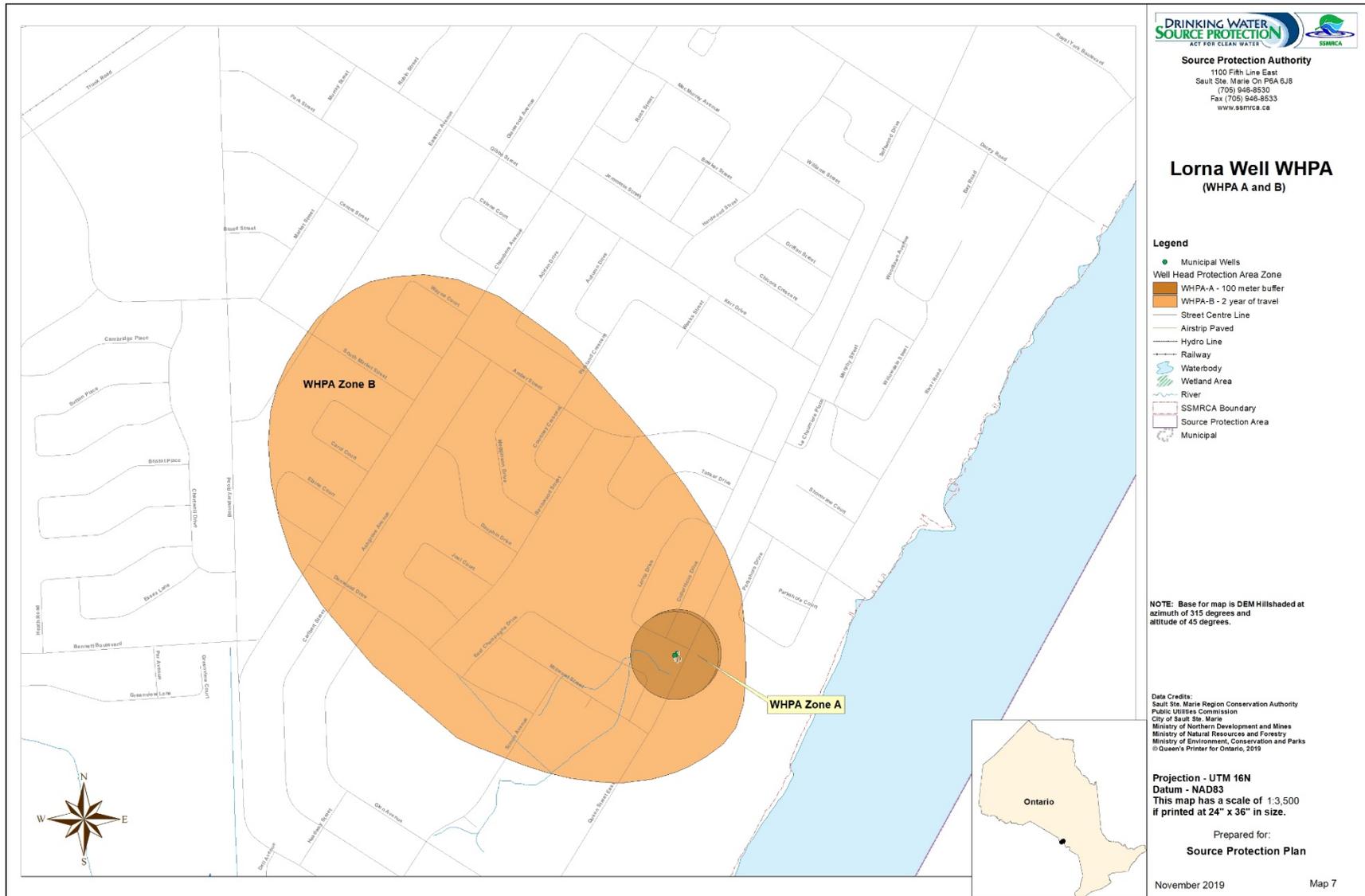


Figure 7: Drinking Water Source Protection Plan Map 7: Lorna Well WHPA (WHPA A and B)



Figure 8: Drinking Water Source Protection Plan Map 8: Shannon Well WHPA (WHPA A and B)

SSMR SPA Approved Updated Source Protection Plan, April 2021

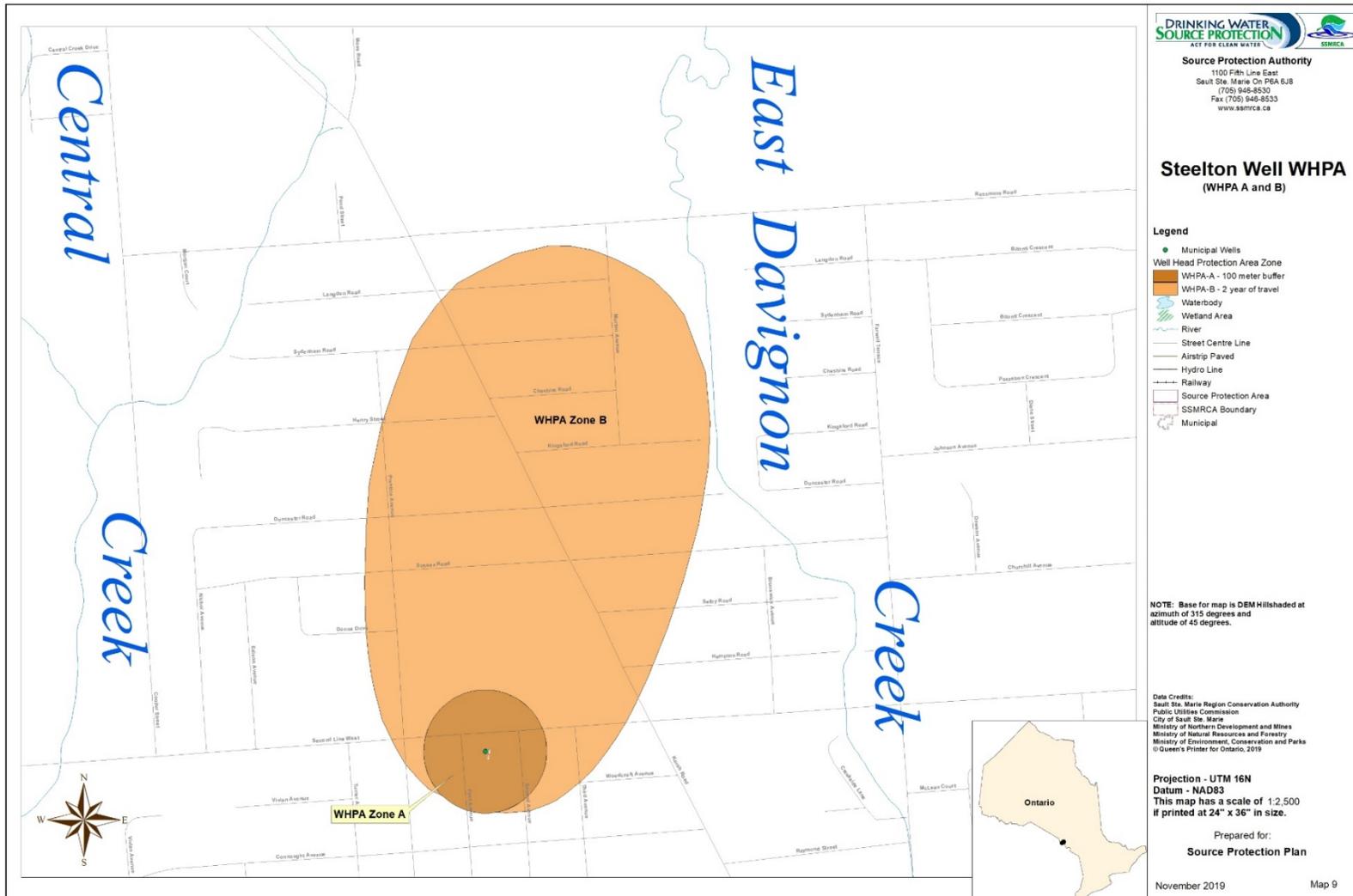


Figure 9: Drinking Water Source Protection Plan Map 9: Steelton Well WHPA (WHPA A and B)

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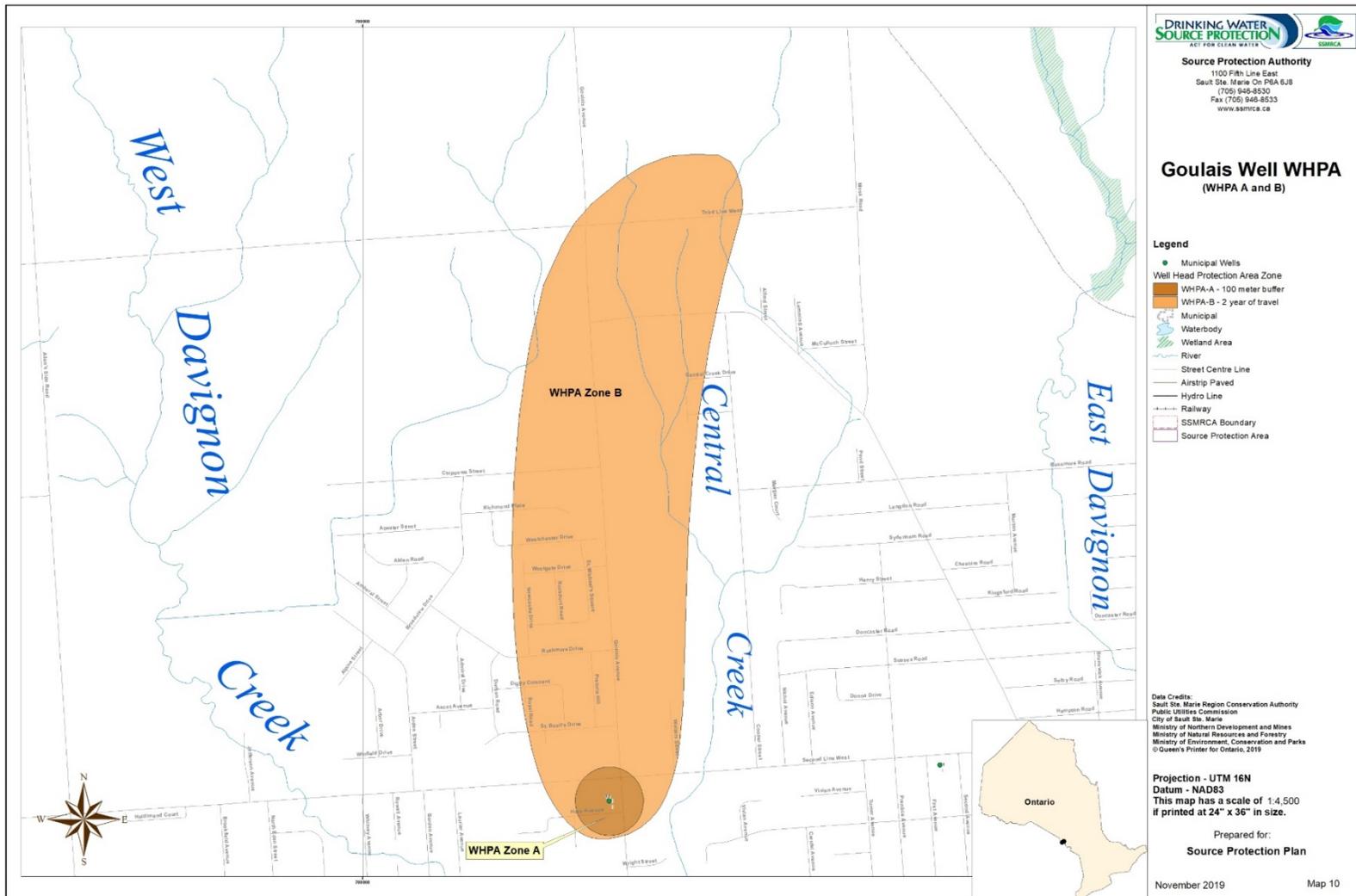


Figure 10: Drinking Water Source Protection Plan Map 10: Goulais Well WHPA (WHPA A and B)

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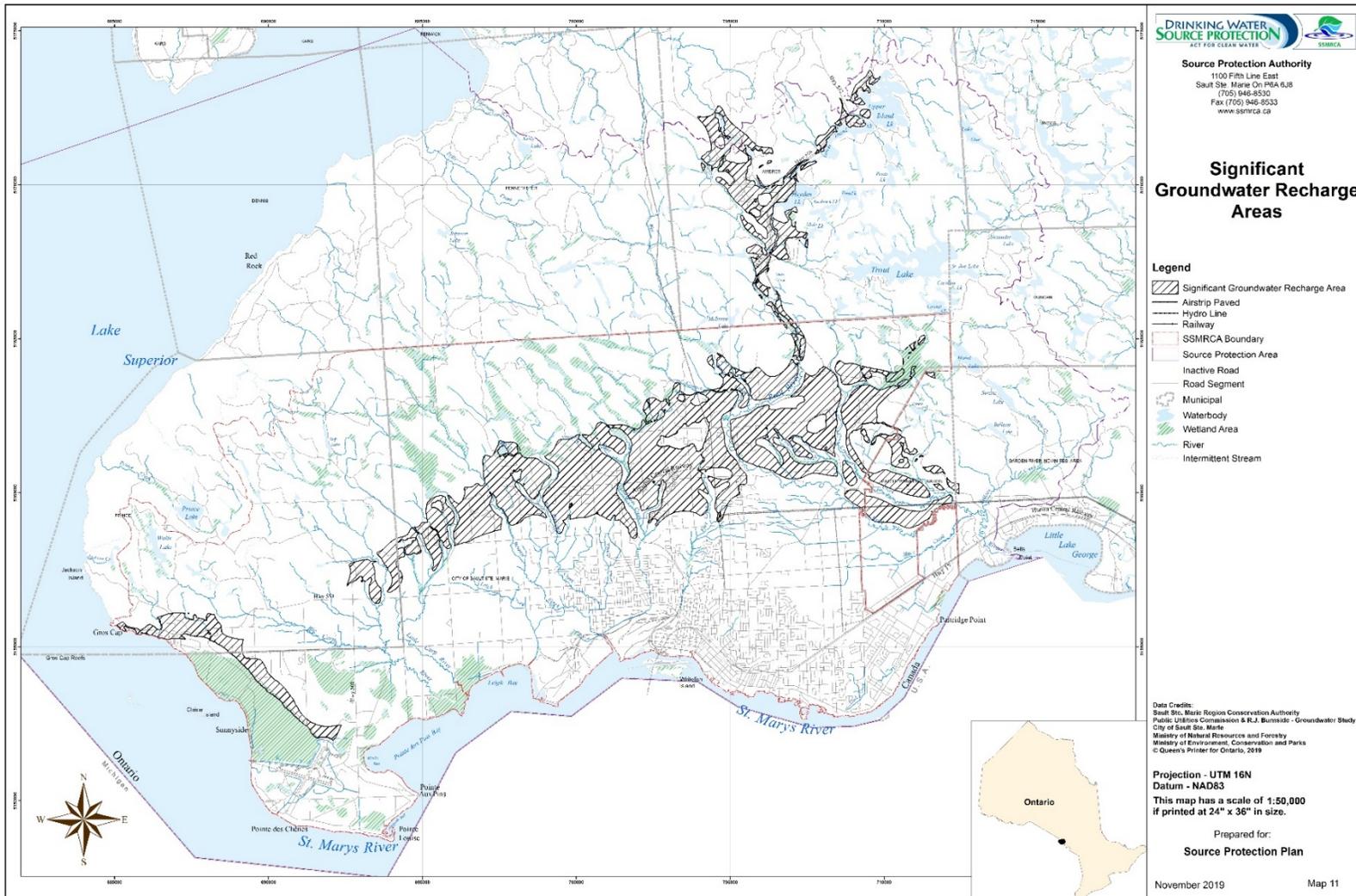


Figure 11: Drinking Water Source Protection Plan Map 11: Significant Groundwater Recharge Areas

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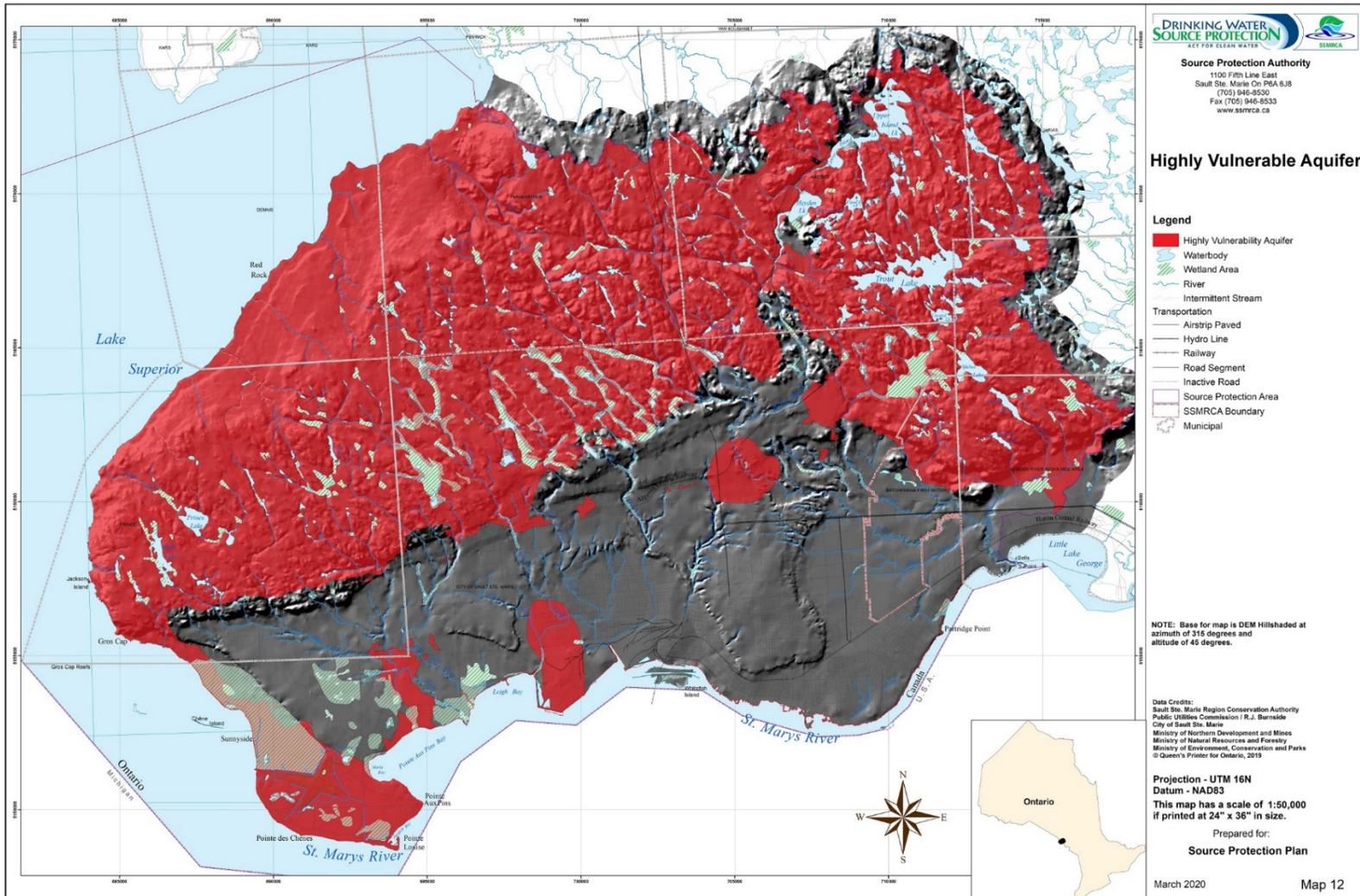


Figure 12: Drinking Water Source Protection Plan Map 12: Vulnerability Scores in HVAs

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## **APPENDIX A: LEGAL CONFORMITY**

### **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:”

SSM-lives-F-1.1  
SSM-Sewage-F-1.2  
SSM-Waste-F-2.3  
SSM-Waste-F-2.4  
SSM-Waste-F-2.5  
SSM-Fuel-F-1.1  
SSM-Salt-F-2.2  
SSM-DNAPL-F-2.2  
SSM-orgsolvents-F-1.1  
SSM-de-icing-F-1.2  
SSM-fert-F-1.1  
SSM-snow-F-2.1  
SSM-pest-E/F-1.1  
SSM-Planning-MP-1.1

### **List B**

#### **Moderate and low threat policies that affect decisions under the Planning Act and Condominium Act, 1988**

“Subsection 39 (1) (b) of the *Clean Water Act*, 2006 applies to the following policies:”  
SSM-HVA-E/F-1.0 – Part A

### **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:”

SSM-Waste-F-2.3  
SSM-Waste-F-2.4  
SSM-Waste-F-2.5  
SSM-Sewage-F-1.2

### **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 Applicable Policies

### **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:”

SSM-Sewage-E-1.4  
SSM-Snow-E-1.1  
SSM-Trans-E-2.1  
SSM-Salt-E/F-1.4  
SSM-ASM-NASM-F-1.1  
SSM-pest-E/F-1.1  
SSM-snow-F-2.1  
SSM-DNAPL-F-2.2  
SSM-orgsolvents-F-1.1  
SSM-lives-F-1.1  
SSM-fert-F-1.1  
SSM-HCPipeline-F-2.0

### **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:”

SSM-Sewage-MP-E-2.0  
SSM-Snow-MP-E-3.0  
SSM-transp-MP-E-1.0  
SSM-PIgeneral-MP-1.0  
SSM-Planning-MP-1.1  
SSM-RMO-MP-1.0  
SSM-salt-MP-F-1.0  
SSM-EOgeneral-MP-1.0  
SSM-HCPipeline-MP-1.0

### **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.*”

SSM-Fuel-F-1.1  
SSM-DNAPL-F-2.2  
SSM-orgsolvents-F-1.1  
SSM-pest-E/F-1.1

## **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.*”

SSM-Fuel-E-1.2  
SSM-Salt-F-2.2  
SSM-DNAPL-F-2.2  
SSM-orgsolvents-F-1.1  
SSM-de-icing-F-1.2  
SSM-fert-F-1.1  
SSM-snow-F-2.1  
SSM-pest-E/F-1.1

## **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.*”

SSM-Fuel-F-1.1  
SSM-Salt-F-2.2  
SSM-DNAPL-F-2.2  
SSM-orgsolvents-F-1.1  
SSM-de-icing-F-1.2  
SSM-fert-F-1.1  
SSM-snow-F-2.1  
SSM-pest-F-1.1

## **List J**

### **Strategic Action Policies**

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For the purposes of section 33 of Ontario Regulation 287/07, the following policies are identified as strategic action policies:

SSM-HVA-E/F-1.0

SSM-HVA-MP-1.0

## **List K**

### **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 Applicable Policies

**Table 1: Prescribed Instruments Which Apply to Source Protection Plan Policies in List C and D - s34 (4) of O. Reg. 287/07**

Policy #	Legal Effect (Conform with, have regard to)	Aggregate Resources Act	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
SSM-Sewage-F-1.2	Conform with		X						X		
SSM-Waste-F-2.3	Conform with		X								
SSM-Waste-F-2.4	Conform with		X								
SSM-Waste-F-2.5	Conform with		X								

**Table 2: Policy Summary Matrix**

Policy #	Legal Effect (conform with, have regard to, non-binding)	Policy 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 s. 22(2) of the CWA (List F)	Part IV Policies - Significant threat policies that are designated in the plan as requiring a risk management plan, are prohibited under s.57, or to which s.59 of the CWA applies (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 responsibly for implementing the policy ( <i>not listed in Appendix lists</i> )
SSM-Sewage-E-1.4	Comply with			X				

SSM-Snow-E-1.1	Conform with			X				
SSM-Trans-E-2.1	Conform with			X				
SSM-Salt-E/F-1.4	Comply with			X				
SSM-ASM-NASM-F-1.1	Comply with			X				
SSM-Sewage-MP-E-2.0	Comply with				X			
SSM-Snow-MP-E-3.0	Comply with				X			
SSM-transp-MP-E-1.0	Comply with				X			
SSM-HVA-MP-1.0	Comply with				X			
SSM-HCPipeline-MP-1.0	Comply with				X			
SSM-PIgeneral-MP-1.0	Comply with				X			
SSM-Planning-MP-1.1	Comply with				X			
SSM-RMO-MP-1.0	Comply with				X			
SSM-salt-MP-F-1.0	Comply with				X			
SSM-EOgeneral-MP-1.0	Comply with				X			
SSM-lives-F-1.1	Comply with Land Use-Conform to	X		X				
SSM-Sewage-F-1.2	Comply with		X					
SSM-HVA-E/F-1.0	Have regard to, non-legally binding	X					X	
SSM-Waste-F-2.3	Conform with	X	X					
SSM-Fuel-F-1.1	Comply with	X				X		
SSM-DNAPL-F-2.2	Comply with	X		X		X		

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SSM-orgsolvents-F-1.1	Comply with	X		X		X		
SSM-pest-E/F-1.1	Comply with	X		X		X		
SSM-Fuel-E-1.2	Conform with					X		
SSM-Salt-F-2.2	Comply with	X				X		
SSM-de-icing-F-1.2	Comply with	X				X		
SSM-fert-F-1.1	Comply with	X		X		X		
SSM-snow-F-2.1	Comply with	X		X		X		
SSM-HCPipeline-F-2.0	Comply with	X	X			X	X	
SSM-Waste-F-2.4	Conform with	X	X	X				
SSM-Waste-F-2.5	Conform with	X	X	X				

## **APPENDIX B: APPROVED ASSESSMENT REPORT**

As per requirements under the *Clean Water Act, 2006*, the Approved Updated Assessment Report, April 12, 2021 for the Sault Ste. Marie Region Source Protection Area along with all corresponding maps is provided electronically on our website at:

<http://ssmrca.ca/source-water-protection/reports-maps-and-resources/>

Table of Drinking Water Threats is accessible via the source protection homepage of Ontario.ca. The information that appears in the Table of Drinking Water Threats (i.e., drinking water threats that are significant in a given vulnerable zone and score) can also be generated by searching the Source Water Protection Threats Tool, accessible via <https://swpip.ca/>.

## APPENDIX C: ACRONYMS

ASM	Agricultural Source Material
CWA	<i>Clean Water Act, 2006</i>
DNAPL	Dense Non-Aqueous Phase Liquids
DWSP	Drinking Water Source Protection
EPA	Environmental Protection Act
IPZ	Intake Protection Zone
MMAH	Ministry of Municipal Affairs and Housing
MNR	Ministry of Natural Resources
MOE	Ministry of the Environment
MECP	Ministry of Environment, Conservation and Parks (formerly MOE and MOECC)
MP	Monitoring Policy
NASM	Non – Agricultural Source Material
OMAFRA	Ontario Ministry of Agriculture, Food and Rural Affairs
RMO	Risk Management Official
RMP	Risk Management Plan
SGRA	Significant Groundwater Recharge Area
SPA	Source Protection Authority
SPC	Source Protection Committee
SPP	Source Protection Plan
SSM	Sault Ste. Marie
SSMRCA	Sault Ste. Marie Region Conservation Authority
SSMR SPA	Sault Ste. Marie Region Source Protection Area
TSSA	Technical Standards and Safety Association
WHPA	Wellhead Protection Area

## APPENDIX D: REFERENCES

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Surface Water Vulnerability Analysis – Intake Protection Zone Delineation, W.F. Baird & Associates Coastal Engineers Ltd., January 2008.

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## APPENDIX E: GLOSSARY

The following definitions have been gathered from multiple sources and are provided for local information purposes to assist the reader to understand the Source Protection Plan for the Sault Ste. Marie Source Protection Area. Where pertinent, the legal definitions as per the “*Clean Water Act, 2006*” and associated Regulations and Director’s Technical Rules have been used.

**Agricultural Source Material** - material(s) applied to land as nutrients that originate from agricultural activities such as livestock operations. These include manure, livestock bedding, runoff water from animal yards or manure storage and compost (see *Nutrient Management Act, 2002* for legal description). Also see Non-agricultural Source Material.

**Anthropogenic** – influenced by human activity or human origin.

**Aquifer** - a water-bearing layer (or several layers) of rock or sediment capable of yielding supplies of water; typically consists of unconsolidated deposits of sandstone, limestone or granite, and can be classified as confined, unconfined or perched. The water in an aquifer is called groundwater.

**Assessment Report** - An Assessment Report is a science-based technical report that is prepared by a Source Protection Committee under Section 15 of the *Clean Water Act, 2006* for the Source Protection Area. The Assessment Report identified the watersheds and the vulnerable areas within the Source Protection Area. Threats to the vulnerable areas were assessed and compared to the Tables of Drinking Water Threats to determine whether they posed a significant threat to municipal residential drinking water systems. Assessment Reports provide Source Protection Committees with information that will help determine how best to protect the quality and supply of their local water resources. They are the basis for developing Source Protection Plans and making local policy decisions for protecting drinking water.

**“Clean Water Act”** - the *Clean Water Act, 2006* was passed as Bill 43 to protect drinking water at the source. The Act requires the development of a watershed based Source Protection Plan. A key focus of the legislation is the preparation of locally developed, terms of reference, science based assessment reports and source protection plans. While it is not possible to completely remove all risks to our drinking water, the *Clean Water Act, 2006* will help reduce risks by addressing threats to drinking water quantity and quality.

The Act is designed to promote voluntary initiatives but requires mandatory action where needed.

**Commercial Fertilizer** - has the same meaning as in Ontario Regulation 267/03 (General) made under the “Nutrient Management Act, 2002”.

**Conservation Authorities** - local watershed management agencies that deliver services and programs that protect and manage water and other natural resources in partnership with government, landowners and other organizations.

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

**Cosmetic Pesticide Ban Act** – The *Cosmetic Pesticide Ban Act, 2008* recognizes that the cosmetic use of pesticides to improve the appearance of lawns and gardens presents health and environmental risks. The Act restricts the use and sale of specific pesticides for cosmetic purposes on specific land uses.

**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.

**Drinking Water** –

a) Water intended for human consumption.

b) Water that is required by an Act, regulation, order, municipal by-law or other document issued under the authority of an Act, (i) to be potable, or (ii) to meet or exceed the requirements of the prescribed drinking water quality standards.

**Drinking Water Source Protection** - the first step in the multi-barrier approach to protecting drinking water. Drinking Water Source Protection was developed to identify and address existing or potential threats to municipal residential drinking water supplies by concentrating on zones immediately surrounding municipal well heads and surface water intakes.

**Drinking Water Threat** - has the same meaning as in the “*Clean Water Act, 2006*”. An existing activity, possible future activity or existing condition that results from a past activity 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.

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**Existing Threat** - an activity that commences or has been engaged in the past in a vulnerable area prior to the plan taking effect

**Future Threat** - an activity that commences at a location in a vulnerable area on or after the date the plan takes effect and is not an existing activity.

**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.

**Groundwater Recharge Area** - the area where an aquifer is replenished from: (a) natural processes, such as the infiltration of rainfall and snowmelt and the seepage of surface water from lakes, streams and wetlands, (b) from human interventions, such as the use of storm water management systems, and; (c) whose recharge rate exceeds a specified threshold.

**Highly Vulnerable Aquifer** - an aquifer on which external sources have or are likely to have a significant adverse effect and includes the land above the aquifer.

**Intake Protection Zone (IPZ)** - is one of four types of vulnerable areas identified in the Ontario *Clean Water Act, 2006*. Intake Protection Zone (IPZ) means the area of land and water that contributes source water to a drinking water system surface water intake within a specified distance.

**Livestock Density** – the number of farm animals grown, produced or raised per square kilometre of an area, separated by type of farm animals specified in section 3.1 of the Nutrient Management Protocol, as calculated based on the *Technical Bulletin: Proposed Methodology for Calculating Percentage of Managed Lands and Livestock Density for Land Application of Agricultural Source of Material, Non-Agricultural Source of Material and Commercial Fertilizers, December 2009*.

**Low Density Residential** – Residential uses including single DETACHED, SEMI DETACHED, duplex and triplex dwellings as defined in zoning by-law as amended.

**Managed Land** – land where materials are applied as nutrients.

**Municipal Residential Drinking Water System** – a municipality owned drinking water system that serves or is planned to serve a major residential development

**Non-Agricultural Source Materials** – material(s) applied 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). Also see Agricultural Source Material.

**Official Plan (OP)** - is a policy document prepared by a municipality, which states in broad terms the municipality's strategic vision for community development and land use. The primary role of the Official Plan is to establish a series of municipal policies to manage physical change and the effects on the social, economic and natural environment within the municipality.

**Ministry of Environment, Conservation and Parks (MECP)** - is the provincial Ministry that is spearheading Drinking Water Source Protection in the Province of Ontario. The *Clean Water Act, 2006* legislated in July 2007, ensures that communities are able to identify potential risks to their supply of drinking water and take action to reduce or eliminate these risks.

**Outdoor Confinement Area** - has the same meaning as in Ontario Regulation 267/03 (General) made under the "Nutrient Management Act, 2002".

**Parcel** – a parcel is a conveyable property, in accordance with the provisions of the *Land Titles Act*. The parcel is the smallest geographic scale at which risk assessment and risk management are conducted.

**Pesticides** - chemicals including insecticides, fungicides, and herbicides that are used to kill living organisms.

**Policy** - a statement of intention. A policy may be 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.

**Prescribed Drinking Water Threats** - The following activities are prescribed as drinking water threats for the purpose of the definition of "drinking water threat" in subsection 2 (1) of the *Clean Water Act*:

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

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

**Recharge Area** - an area in which water infiltrates and moves downward into the zone of saturation of an aquifer; area that replenishes groundwater.

Retail – as defined in the current zoning by-law for the City of Sault Ste. Marie includes the following:

**1.12 BUILDING, HARDWARE, AND GARDEN SUPPLY STORES**

Establishments primarily engaged in retailing building and home improvement materials, lawn and garden equipment and supplies, and nursery and garden products. Such uses may include the following or *similar uses*;

- Hardware stores
- Home care and decorating centers
- Lawn and garden equipment and supplies stores

- Nursery stores and gardening centers
- Paint and wallpaper stores

### **1.68 PERSONAL SERVICES**

Establishments primarily engaged in providing personal care services. Such uses may include the following or *similar uses*;

- Beauty salons and hair stylists
- Day spas and tanning salons
- Dry cleaning and laundry services (including coin operated)
- Formal wear and costume rental
- Funeral service establishments
- Linen and uniform supply
- Massage therapists
- Photographic studios
- Tailors
- Tattoo parlours
- Travel agents

### **1.80 RETAIL TRADE**

Establishments primarily engaged in the sale, lease, and rental of new and used merchandise, generally without transformation. Such uses generally provide services incidental to the sale, lease, or rental of merchandise. Such uses may include the following or *similar uses*;

- Auctioneers facilities
- Clothing and clothing accessories stores
- Consumer goods rental
- Copying facilities
- Department store type merchandise
- Food and beverage stores
- Furniture and home furnishings stores
- General merchandise stores
- Gift shops and antique stores
- Health and personal care stores
- Movie rental
- Photo finishing services
- Sporting goods, hobby, book and music stores

**Exclusions** – *Heavy equipment sales, repair, and maintenance, Fuel sales, and motor vehicle sales and parts dealers.*

**Runoff** - the portion of precipitation which is not absorbed by the ground surface and finds its way into surface stream channels and becomes the flow of water from the land to oceans or interior basins by overland flow and stream channels.

**Safe Drinking Water Act, 2002** - provides for the protection of human health and prevention of drinking water health hazards through the control and regulation of drinking water systems and drinking water testing.

**Septic System (Conventional)** - used to treat household sewage and wastewater by allowing solids to decompose and settle in a tank, then flow by gravity or pump/siphon to a drainage or tile field for soil absorption.

**Sewage** - has the same meaning as in the “Ontario Water Resources Act”.

**Significant Threat Policy** - (a) a policy set out in a source protection plan that, for an area identified in the assessment report as an area where an activity is or would be a significant drinking water threat, is intended to achieve an objective referred to in paragraph 2 of subsection 22 (2), or (b) a policy set out in a source protection plan that, for an area identified in the assessment report as an area where a condition that results from a past activity is a significant drinking water threat, is intended to achieve the objective of ensuring that the condition ceases to be a significant drinking water threat.

**Source Protection** - a program of education, stewardship, planning, infrastructure, and regulation activities that together serve to help prevent the contamination or overuse of source water.

**Source Protection Area** - Source Protection Areas and Regions have been defined in Ontario Regulation 284/07. Source Protection Area means those lands and waters that have been defined under Ontario Regulation 284/07 as the ‘study area’ for an Assessment Report and Source Protection Plan under the *Clean Water Act, 2006*.

**Source Protection Authority** - A Conservation Authority or other person or body that is required to exercise powers and duties under the *Clean Water Act, 2006*. Source Protection Authority refers to the role that Conservation Authorities play in Drinking Water Source Protection.

**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.

**Source Protection Plan** - the Source Protection Plan for each Source Protection Area (watershed) must set out policies intended to ensure that all significant drinking water threats cease to be significant and that potential threats are managed in such a way that they will never become significant drinking water threats.

**Source Water** - untreated water in streams, rivers, lakes or underground aquifers which is used for drinking water systems

**Surface Water Intake Protection Zone (IPZ)** - A surface water intake protection zone is an area that is related to a surface water intake. The contiguous area of land and water immediately surrounding a surface water intake

**Threat Policies** - policies in a source protection plan that address a drinking water threat of any risk level (significant, moderate or low)

**Waste Disposal Site** - any land upon, into, in or through which, or building or structure in which waste is deposited, disposed of, handled, stored, transferred, treated or processed, and any operation carried out or machinery or equipment used in connection with the depositing, disposal, handling, storage, transfer, treatment or processing of the waste (*Environmental Protection Act, R.S.O. 1990*).

**Water Quality** - a term used to describe the chemical, physical and biological characteristics of water, usually in respect to its suitability for a particular purpose, such as drinking.

**Wellhead Protection Area (WHPA)** - an area that is related to a wellhead and within which it is desirable to regulate or monitor drinking water threats (*Ontario Regulation 287/07*).