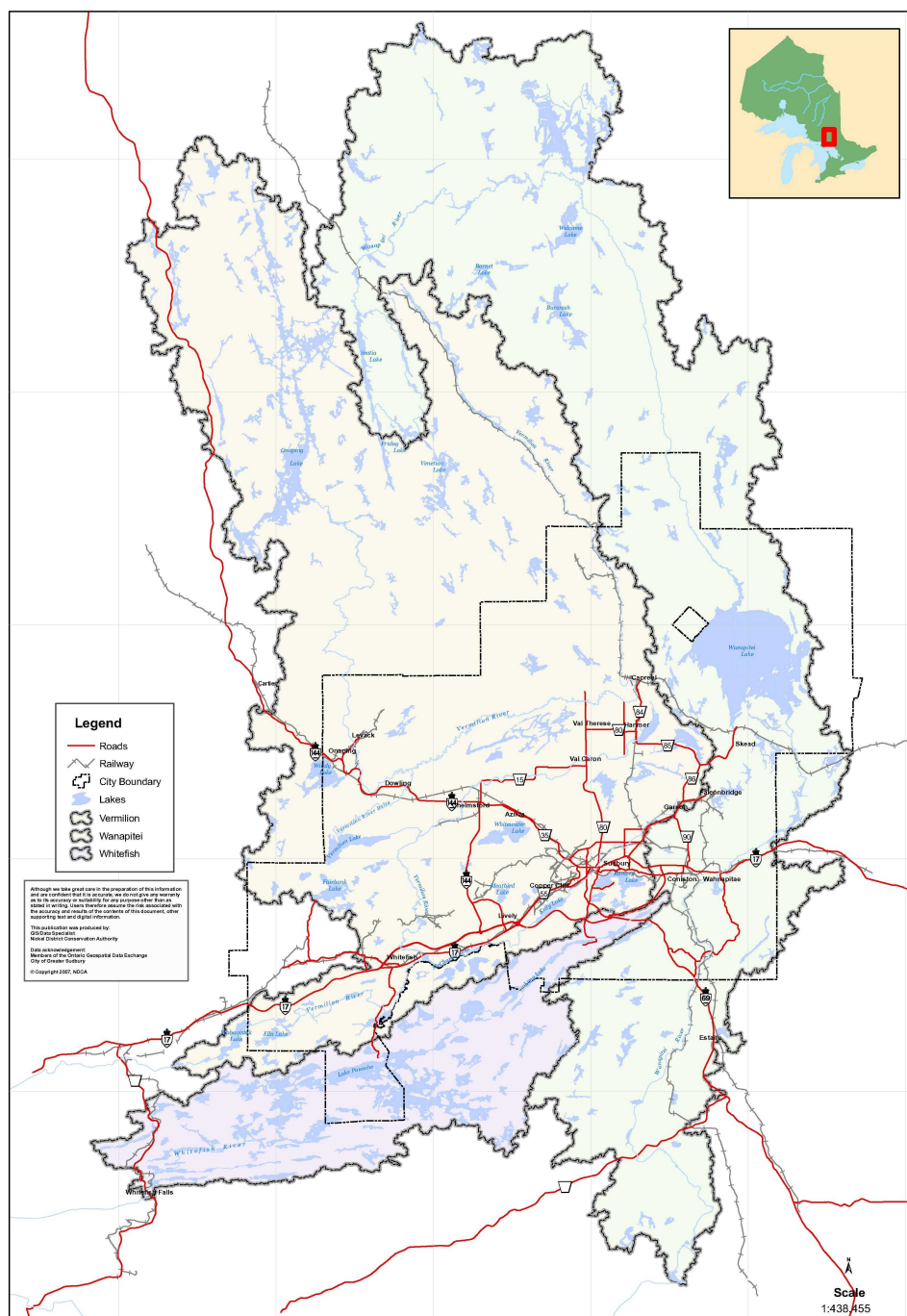


Source Protection Annual Progress Report

I. Introduction

This annual progress report outlines the progress made in implementing our source protection plan for the Sudbury Source Protection Area, as required by the Clean Water Act and regulations. The Eighth Annual Progress Report outlines progress made throughout 2024.



II. A message from your local Source Protection Committee

Our progress score on achieving source protection plan objectives this reporting period:

- P: Progressing Well/On Target** – The majority of the source protection plan policies have been implemented and/or are progressing.
- S: Satisfactory** – Some of the source protection plan policies have been implemented and/or are progressing.
- L: Limited progress** – A few of source protection plan policies have been implemented and/or are progressing.

The committee recognizes the significant advancements made in the implementation of policies since the Source Protection Plan came into effect. Implementing bodies have met all significant threat policy requirements, achieving 100% in policy implementation. This highlights the commitment of the implementing bodies to safeguard our sources of municipal drinking water.

To date, all required risk management plans have been successfully established. The City of Greater Sudbury has established screening procedures to effectively identify any new significant threats to drinking water.

In 2024, the City of Greater Sudbury expanded the Ramsey Lake inflow monitoring program by adding five new monitoring sites. These sites will monitor sodium and chloride levels. This monitoring program will help evaluate the effectiveness of established risk management plans in the Ramsey Lake Issue Contributing Area.

The committee acknowledges the emphasis placed on education and outreach in 2024 by implementing bodies. The City of Greater Sudbury re-launched their Municipal Road Salt Campaign to educate local businesses and the community on responsible salt application and source protection.

III. Our Watershed

To learn more, please read our assessment report(s) and source protection plan(s).

The Sudbury Source Protection Area (SSPA) includes all of the Vermilion, Wanapitei and Whitefish River watersheds. This is the same jurisdictional area as the Nickel District Conservation Authority (Ontario Regulation 284/07) but also includes the bottom reaches of the Whitefish River and Wanapitei River watersheds.

The SSPA has an area of 9,150 km² and is home to over 160,000 residents. It includes the City of Greater Sudbury and parts of the Town of Espanola, the Municipality of Markstay-Warren, the Municipality of Killarney, the Township of Nairn and Hyman, and the Sudbury East Planning Board.

The policies in the Source Protection Plan only apply to the City of Greater Sudbury and the Municipality of Markstay-Warren because the other communities do not have municipal drinking water systems or the associated vulnerable areas that fall within the SSPA.

There are eight drinking water systems in the SSPA including both surface water and groundwater systems:

- Ramsey Lake (surface water intake)
- Wanapitei River (surface water intake)
- Vermilion River (surface water intake, owned and operated by Vale)
- Valley, including Capreol (13 groundwater wells)
- Garson (3 groundwater wells)
- Falconbridge (3 groundwater wells)
- Onaping (3 groundwater wells)
- Dowling (2 groundwater wells)

Approximately 85% of the City of Greater Sudbury's population obtains its drinking water from a municipal source.

IV. At a Glance: Progress on Source Protection Plan Implementation

1. Source Protection Plan Policies and Addressing Significant Risks

P: Progressing Well/On Target

The majority of the legally binding policies (99%) that address significant drinking water threats are implemented, 1 policy is not applicable. As a result of policy implementation in our area, 100% of existing significant drinking water threats on the landscape have been addressed (ie. eliminated or managed).

2. Municipal Progress: Addressing Risks on the Ground

P: Progressing Well/On Target

Two municipalities in the Sudbury Source Protection Area have vulnerable areas where significant threat policies apply (The City of Greater Sudbury and the Municipality of Markstay-Warren). The City of Greater Sudbury is the only municipality with Part IV responsibilities.

The City of Greater Sudbury has well established screening processes in Planning Services and Building Services to ensure that potential new threats are identified and properly managed by the Risk Management Office.

The City of Greater Sudbury incorporated source protection information into their Official Plan (OP) and Zoning By-Law early on to conform with land use planning policies. The OP is currently in its 5-year review cycle as defined in the Planning Act. Phase One of the review was approved by the Province in 2019 and Phase Two of the review is currently underway.

3. Septic Inspections

P: Progressing Well/On Target

In accordance with S.1.10, Division C, of the Ontario Building Code (OBC), mandatory maintenance inspections are performed each year on properties in vulnerable areas where septic systems could be a significant threat. Public Health Sudbury and Districts (PHSD) is the Principal Authority for these inspections and places priority based on proximity to drinking water source, age of the septic system, and/or whether there is a previous history of septic system failure in the area.

PHSD re-inspects each property every five years; 2024 was the thirteenth year of the inspection program. In 2024 34 properties were inspected; 28 located in the Ramsey Lake Drinking Water System and 6 in the Valley East Drinking Water System. All properties were in compliance with S. 8.9 Division B of the OBC in that no sewage was noted discharging onto the surface of the ground. The second round of inspections took place from 2017-2021 where 205 systems were inspected; it was found that 100% of the systems were functioning as designed.

4. Risk Management Plans

P: Progressing Well/On Target

Since the source protection plan took effect, a total of 51 sites have been investigated for the potential requirement of a risk management plan. To date, a total of 20 risk management plans have been established, 29 threat sites have been removed and 3 are managed by a provincial approval. The number of risk management plans established to date represent 100% of plans required to address existing significant drinking water threats. 68 inspections have been carried out by a Risk Management Official/ Inspector for the purpose of Section 58 Risk Management Plans in 2024. There is a 100% compliance rate with the risk management plans established in our source protection area. Regular inspections were carried out for activities that are prohibited under Section 57 of the Clean Water Act in 2024. None showed that prohibited activities were taking place on the landscape.

5. Provincial Progress: Addressing Risks on the Ground

P: Progressing Well/On Target

There are nine prescribed instrument policies that cover the following threats:

- Water quantity (permits to take water)
- Fuel storage
- Pesticide application
- Transportation of septage
- Waste disposal sites
- Sewage threats

All prescribed instrument policies that address significant drinking water threats have been implemented. Ontario ministries have reviewed previously issued provincial approvals to ensure that the measures included align with the policies in the Sudbury Source Protection Plan. 100% of previously issued permits have been revisited since the plan was approved: 11 sewage works/wastewater approvals, six municipal drinking water licenses and drinking water works permits, and one provincial water taking permit. Pesticide permits are issued on a seasonal basis and expire each year, new applications are screened, and applicable prescribed instrument policy requirements are included in the permit.

Provincial Ministries have well established screening processes for incoming applications to identify new potential threats to municipal drinking water. Applications in vulnerable areas undergo detailed review to ensure appropriate conditions are incorporated into permits to address significant drinking water threats. In 2024, one Environmental Compliance Approval application for wastewater/sewage works was managed through Prescribed Instrument Conditions in our source protection area.

6. Source Protection Awareness and Change in Behaviour

Cumulatively 127 Drinking Water Protection Zone signs have been installed throughout the Sudbury Source Protection Area - 119 signs have been installed by the City of Greater Sudbury on municipal roads, 1 sign was installed by the Municipality of Markstay-Warren and 7 signs have been installed by the Ministry of Transportation on provincial highways.

In 2024, the City of Greater Sudbury continued efforts on their municipal Road Salt Campaign. The campaign launched in the fall of 2022 and included the distribution of over 400 handouts on responsible salt use to local businesses and contractors. The materials included information on winter preparedness tips, Smart About Salt training and certification coupon, source protection maps, and a salt cup flyer. 2000 salt cups were distributed in the community to demonstrate the proper amount of salt to apply.

The City of Greater Sudbury continues to utilize MCTV to convey environmental messaging through "EarthCare Minute". It highlights municipal environmental programs and provides viewers with tips to reduce their own environmental footprint. Source Protection topics include road salt, toxic waste disposal, stormwater and agriculture with an estimated reach of 80,000 viewers.

The City of Greater Sudbury hosts the Children's Water Festival annually to educate grade 3 students along with their teachers about water related topics including source protection. In 2024 the event hosted 650 students over two days. Messaging around water conservation, efficiency, protection, science and technology is relayed to attendees.

In 2024, the Source Protection Authority shared social media campaigns on several source protection topics including road salt, hazardous waste, septic systems and chemicals.

7. Source Protection Plan Policies: Summary of Delays

Not applicable to our source protection area.

8. Source Water Quality: Monitoring and Actions

The Ramsey Lake (David St.) drinking water system has 2 identified drinking water issues: Microcystin LR (Blue Green Algae) and Sodium.

Microcystin LR: The City of Greater Sudbury monitors phosphorus levels in Ramsey Lake each spring through the Lake Water Quality Program, because of the known correlation between lake phosphorus levels and algal blooms. The lake is monitored weekly for blue-green algal blooms from June to October. A Standard Operating Procedure is in place within the Water/Wastewater Treatment and Compliance Services to ensure drinking water is treated accordingly when an algal bloom is detected within the Intake Protection Zone 1. In the 2024 monitoring season, there was one potential cyanobacterial bloom observed in the Intake Protection Zone 1. Daily sampling and shoreline inspections were completed by water treatment plant operators however there were no microcystins present in any water quality sample results. Public Health Sudbury & Districts reported one cyanobacteria bloom in September outside of the Intake Protection Zone 1. Phosphorus data has been collected annually or biannually during spring turnover since 2001, the trend in the data shows a decrease in phosphorus levels at a rate of 0.06 ug/L per year. The SPC highlights that in 2011 the City of Greater Sudbury implemented a city-wide ban on the application of fertilizers containing phosphorus on existing established lawns. Through the Environmental Planning Initiatives “Love Your Lake Program” all shoreline properties on Ramsey Lake have been inspected and outreach highlighting the links between water quality and phosphorus levels has been conducted. The EarthCare Minute “Phosphorus Free Lawn Care” is aired regularly. Information pamphlets on blue-green algae are available and have been distributed.

Sodium: The Water/Wastewater Division at the City of Greater Sudbury collects samples from the David Street Water Treatment Plant to monitor sodium levels in Ramsey Lake. Historically, sodium levels were reported every five years in accordance with Ontario Regulation 170/03 of the Safe Drinking Water Act. More recently, raw water sampling has increased to bi-annually, conducted in the spring and fall. Data analyzed and included in the original Assessment Report was collected through the Drinking Water Surveillance Program (DWSP) completed by the Ministry of the Environment, Conservation and Parks in partnership with the City of Greater Sudbury. The City of Greater Sudbury has continued to build on this dataset since 2017. Since 1991 sodium levels have been increasing on average 0.60mg/L per year, however over the last 10 years the sodium concentration has remained relatively stable. Chloride data collected through the DWSP was analyzed, from 1991-2019 chloride concentrations have increased at a rate of 1.46mg/L per year. Data collected through the Lake Partnership Program will be analyzed in the future to determine more recent trends in chloride concentration in Ramsey Lake.

The Risk Management Office at the City of Greater Sudbury has carried out sodium and chloride sampling in Frobisher Creek in the spring and fall as part of the Frobisher Depot Salt Dome Risk Management Plan. In 2024, five new sites were added to monitor sodium and chloride in the inflows to Ramsey Lake. This data will be used to monitor the effectiveness of the Risk Management Plans related to road salt in the Ramsey Lake Issues Contributing Area.

Since 2005, the City of Greater Sudbury has been operating with a comprehensive Salt Management Plan that is updated every three years. In 2024 the updated Salt Management Plan was finalized, and several best management practices identified in the plan have already been implemented. This includes pre-wetting salt to reduce the application rate by 20%, minimizing salt brine runoff to environmentally sensitive areas, and providing training to snowplow operators.

Continued monitoring is important to evaluate effectiveness of source protection salt and snow policies and to help shape future initiatives.

9. Science-based Assessment Reports: Work Plans

No work plans were required to be implemented for our assessment report.

10. More from the Watershed

To learn more about our source protection region/area, visit our website at:

<https://www.conservationsudbury.ca/watershed-management/source-protection/>