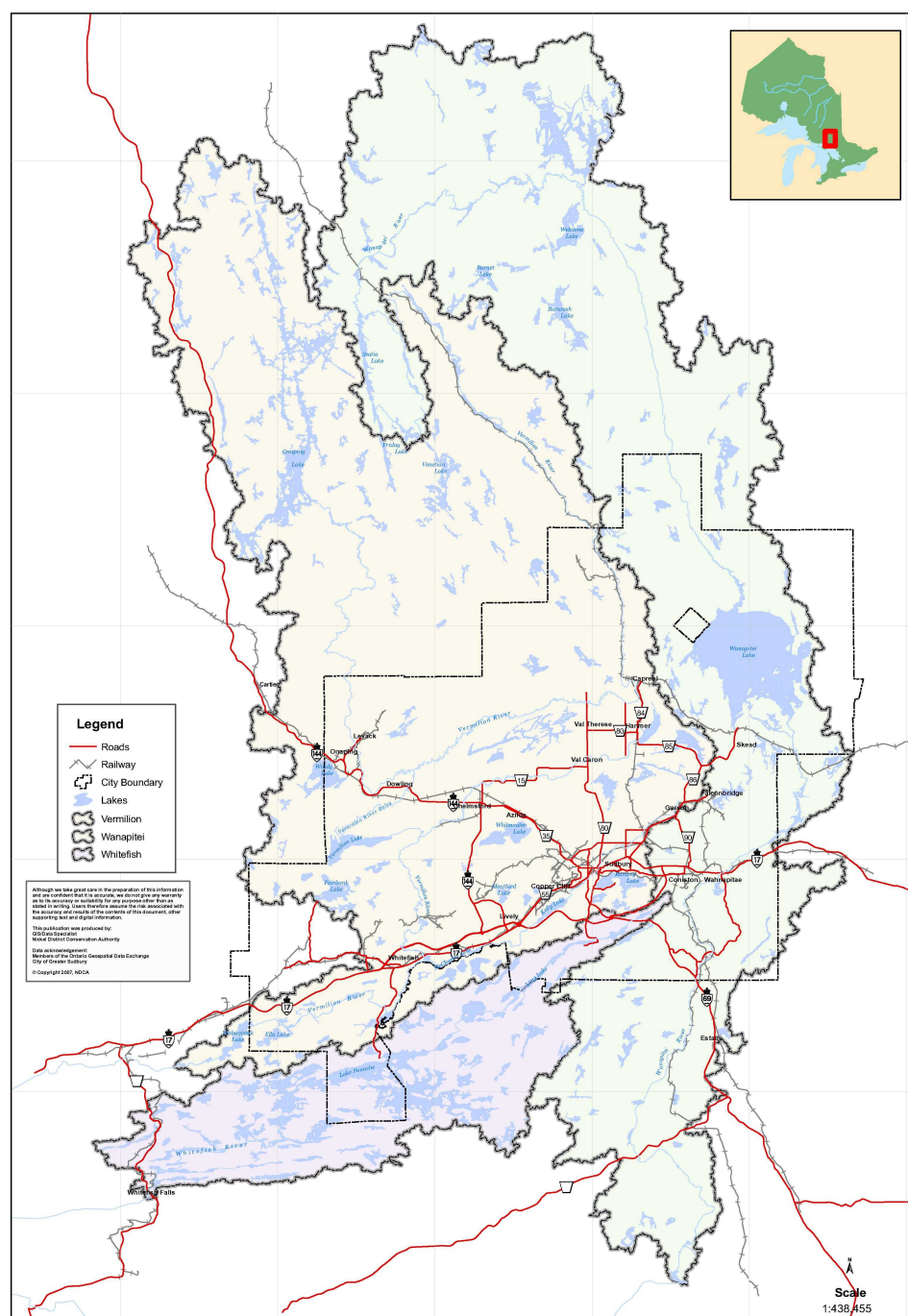


Source Protection Annual Progress Report

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 Seventh Annual Progress Report outlines progress made throughout 2023.



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 acknowledges significant progress made on policy implementation since the effective date of the Source Protection Plan. Implementing bodies have achieved 100% of policy requirements.

In 2023, the City of Greater Sudbury finalized an update to the Tier 3 Water Quantity Risk Assessment for the Valley Drinking Water System. The assessment included new water quantity information and resulted in a low risk to water quantity for the drinking water system.

The establishment of risk management plans advanced throughout 2023. To date, all required existing significant threats have been managed through a risk management plan.

Implementing bodies placed an emphasis on education and outreach in 2023. The City of Greater Sudbury completed a 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; 2023 was the twelfth year of the inspection program. In 2023 50 properties were inspected; 46 located in the Ramsey Lake Drinking Water System and 4 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

In 2023 one risk management plan was established in our source protection area. Since the source protection plan took effect, a total of 20 risk management plans have been established. The number of risk management plans established to date represent 100% of plans required to address existing significant drinking water threats. One risk management plan remains in progress – to address a future road salt threat. 58 inspections have been carried out by a Risk Management Official/ Inspector for the purpose of Section 58 Risk Management Plans in 2023. 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 2023. 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 2023, no permits were issued with conditions to manage a significant threat to drinking water 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 2022, the City of Greater Sudbury launched a Road Salt Campaign and continued the campaign in the winter of 2023. The campaign included the distribution of handouts on responsible salt use to local businesses. 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 Road Salt Campaign was featured on CBC Radio and in a Time Magazine article.

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.

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 2023 monitoring season, there were no blue-green algae blooms identified within the Intake Protection Zone 1 and there were no microcystins present in any water quality sample results. Public Health Sudbury & Districts did not report on any cyanobacteria blooms in the vulnerable areas. 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 0.1 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 2016. Since 1991 sodium levels have been increasing on average 0.46mg/year, however over the last 10 years the sodium concentration has remained relatively stable. In addition, sampling for sodium and chloride is conducted throughout the ice-free season in three locations on Ramsey Lake. Sodium and chloride sampling is conducted in the spring and fall in Frobisher Creek. Results of this sampling indicates that best management practices have been effective in reducing sodium and chloride runoff from Frobisher Depot. In 2023 the Salt Optimization Plan was updated to improve winter control operations and responsible use of road salt throughout the City of Greater Sudbury. This included the conversion of eight road segments from salt to sand routes in the Ramsey Lake Issue Contributing Area. 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/>