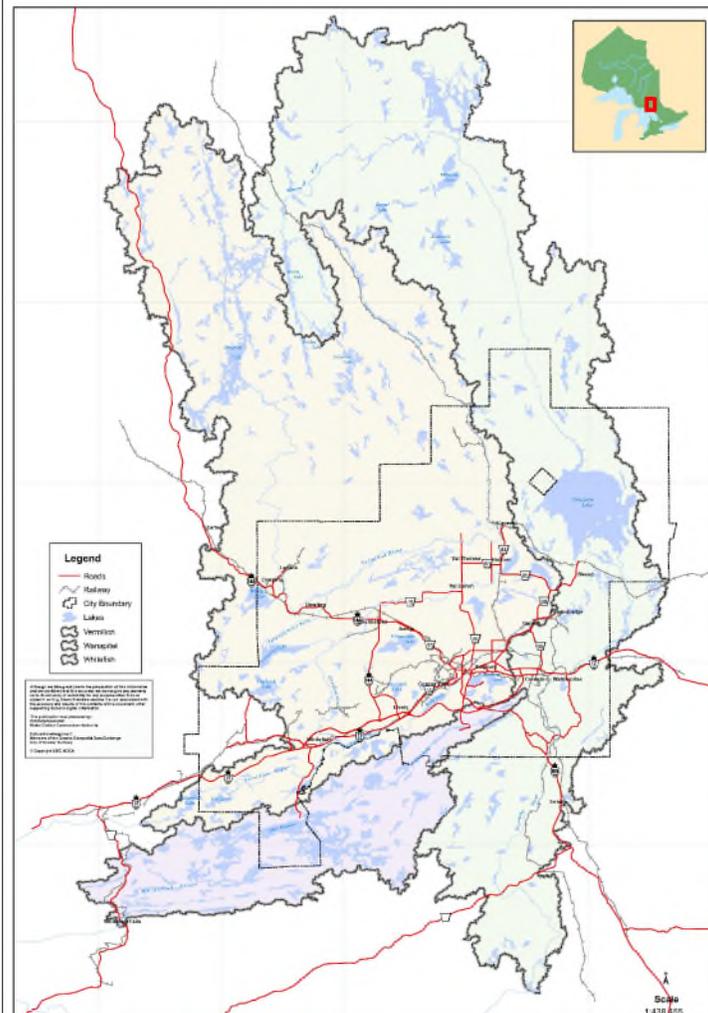


Source Protection Annual Progress Report |

04/28/2021

I. Introduction

This annual progress report outlines the progress made in implementing the source protection plan for the Sudbury Source Protection Area, as required by the Clean Water Act and regulations. The Fourth Annual Progress Report outlines progress made throughout 2020.



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 nearly 100% of policy requirements and continue to progress each year.

The establishment of risk managements advanced throughout 2020. It is anticipated all plans currently in progress will be established by the end of 2021.

The committee and implementing bodies continue to focus on addressing issues that have been identified in the source protection area. The environmental management of road salt, water quantity and blue green algae blooms remain priorities for the committee. Education and engagement with residents and businesses in the Greater Sudbury area will be conducted throughout 2021.

The committee acknowledges that the COVID-19 pandemic has had an impact on all aspects of the source protection program. It is with the continued dedication of the implementing bodies that the objectives of the source protection plan are achieved.

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 (97%) that address significant drinking water threats are implemented, 1 policy is not applicable, and 1 policy is in progress. As a result of policy implementation in our area, approximately 96% of existing significant drinking water threats on the landscape have been addressed (ie. eliminated or managed). We are on track to address 100% of existing significant threats to our sources of drinking water.

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; Phase One was approved 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 & Districts (PHSD) is the Principal Authority for these inspections and places priority based on proximity to drinking water, 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; 2020 was the ninth year of the inspection program. In 2020 38 properties were inspected; 30 located in the Ramsey Lake Drinking Water System and 8 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. To date, in this second round of inspections a total of 171 systems have been inspected. The first round of inspections took place from 2012-2016 where 223 systems were inspected; it was found that 99% of the systems were functioning as designed.

4. Risk Management Plans

P: Progressing Well/On Target

In 2020 three risk management plans were established in our Source Protection Area. 12 were established in previous years; ten in 2019, one in 2018 and one in 2016. Since the source protection plan took effect, a total of 15 risk management plans have been established. One risk management plan was established in 2017 to address a moderate threat related to fuel handling and storage. The number of risk management plans established to date represent 79% of plans required to address existing significant drinking water threats.

Once a threat is verified through a Section 59 review, the Risk Management Official/Inspector will correspond with the property owner and complete multiple site visits in order to determine the appropriate measures to include in the Risk Management Plan. On average a plan will take approximately 30 working days to negotiate, approve and establish.

42 inspections have been carried out by a Risk Management Official/Inspector for the purpose of Section 58 Risk Management Plans in 2020. There is a 100% compliance rate with the risk management plans established in our source protection area.

3 inspections were carried out for activities that are prohibited under Section 57 of the Clean Water Act at 16 properties in 2020. 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 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, 6 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 drinking water. In 2020, 3 pesticide permits and 1 sewage works permit 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

Cumulative - 127	Annual - 0
Provincial highways - 7	Provincial highways - 0
Municipal roads - 120	Municipal roads - 0

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 MTO on provincial highways.

The City of Greater Sudbury has a one minute television program that airs weekly titled EarthCare Minute. It highlights municipal environmental programs and provides viewers with tips to reduce their own environmental footprint. Episodes aired in 2020 related to source protection include "Children's Water Festival", "Winter Salt Management", and "Street Sweeping".

Due to the unforeseen circumstances brought about by the COVID-19 pandemic in 2020, it was difficult to conduct education and outreach in the same manner as previous years. Implementing bodies opted to use more digital outreach methods including television broadcasts, social media, and virtual events. The Source Protection Committee and implementing bodies continue to put forward their best efforts in connecting with community members and stakeholders in our Source Protection Area. We look forward to returning to public meetings and events once it is safe to do so.

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 2020 monitoring season, there were no blue-green algae blooms identified within the Intake Protection Zone 1. Phosphorus data has been collected annually or biennially during spring turnover since 2001, the trend in the data shows a decrease in phosphorus levels at a rate of 0.23ug/L per year (Mann Kendall $Z=2.20$, $p=0.014$). 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.

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. 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 DWSP stopped testing for sodium in 2016 and it is unknown when sampling will resume. However, the City of Greater Sudbury has continued to build on this dataset and moving forward with sampling twice per year will contribute to a robust dataset that can be analyzed to determine sodium trends in Ramsey Lake. Continued monitoring is also important to evaluate effectiveness of source protection salt and snow policies and to help shape future initiatives.

The Committee continues to highlight the importance of managing road salt near our drinking water sources. The City of Greater Sudbury's Road Maintenance Section strives to continuously implement best practices for the management of road salt as outlined in their Salt Optimization Plan. It is important to achieve the fine balance between the environmental management of road salt and providing safe conditions for motorists and pedestrians travelling in the winter season.

9. Science-Based Assessment Report: 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:

<http://www.sourcewatersudbury.ca>

