

## Thames – Sydenham and Region Source Protection Committee

# Meeting Notice

Please be advised that a meeting of the Thames-Sydenham and Region Source Protection Committee has been called for the following time. Please confirm attendance with Deb Kirk by email at [kirkd@thamesriver.on.ca](mailto:kirkd@thamesriver.on.ca)

**Meeting Date:** June 3, 2022

**Meeting Time:** 10:00 am 12:00 p.m.

**Meeting Location:** **Zoom Virtual Meeting - Meeting ID:** Join Zoom Meeting  
Meeting ID: Meeting ID: [813 8055 7157](https://zoom.us/j/81380557157)  
Passcode: 095934

### ***Proposed Agenda***

<b>1</b>	<b>Chair's Welcome, Roll Call and Certification of Quorum</b>	10:00-10:15
<b>2</b>	<b>Adoption of the Agenda</b>	
<b>3</b>	<b>Approval of March 25, 2022 SPC minutes</b>	
<b>4</b>	<b>Delegations</b> ( <i>none scheduled</i> )	
<b>5</b>	<b>Declaration of Conflict of Interest</b>	
<b>6</b>	<b>Business arising from the minutes</b>	
<b>7</b>	<b>Business</b>	
<b>7a</b>	<b>Confirmation of Acting SPC Chair- Motion required</b>	10:15-10:20
<b>7b</b>	<b>Section 36 Pre-Consultation –Motion required</b>	10:20-10:40
<b>7c</b>	<b>Approved 2021 Director's Technical Rules- Motion required</b> 7c(i) Salt Policies 7c(ii) Snow Policies 7c(iii) Fuel Policies	10:40-11:40
<b>8</b>	<b>Information-</b> 8i. Oxford & Perth Children's Water Festivals being held in person Link: <a href="https://www.childrenswaterfestival.ca/oxfordchildrenswaterfestival">https://www.childrenswaterfestival.ca/oxfordchildrenswaterfestival</a>	11:40-11:45
<b>9</b>	<b>In Camera Session</b> (not planned)	
<b>10</b>	<b>Other Business</b>	
<b>11</b>	<b>MECP Liaison report</b>	
<b>12</b>	<b>Members Reports</b>	11:45-12:00
<b>13</b>	<b>Adjournment &amp; Next Meeting</b>	12:00

SPC MEETING MINUTES  
MARCH 25, 2022  
Meeting #79

The Source Protection Committee Chair, Dean Edwardson called the meeting to order at 10:00 a.m. on March 25, 2022 via ZOOM. The following members and staff were in attendance;

**Members**

Dean Edwardson  
Johnny Bowes  
Brent Clutterbuck  
Jarrod Craven  
Gary Eagleson  
Pat Feryn  
Vince Gagner  
Matthew Jauernig  
George Marr  
Gary Martin

Valerie M'Garry  
Earl Morwood  
Christa Sawyer  
Karleen Sirna  
John Van Dorp  
Joe Salter (Liaison)  
Catherine Eby, (MECP Liaison)  
Andrew Powell (HU Liaison)

**Regrets:**

Carl Kennes

**Staff:**

Julie Welker  
Jenna Allain  
Deb Kirk  
Steve Clark  
Katie Ebel  
Ken Phillips  
Girish Sankar  
Jason Wintermute

1) Chair's Welcome

Dean Edwardson welcomed the committee. After the roll call, he acknowledged a quorum was achieved. Catherine Eby was introduced as the new MECP SP Liaison.

2) Adoption of the Agenda

The March 25, 2022 agenda was approved to include the MECP liaison Catherine Eby presentation under agenda #7.

Moved by Pat Feryn -seconded by George Marr

*“RESOLVED that the March 25, 2022 agenda was approved.”*

CARRIED.

3) Approval of November 5, 2021 SPC minutes

The November 5, 2021 previous meeting minutes be approved with one edit to the members' attendance list.

Moved by George Marr -seconded by Earl Morwood

*“RESOLVED that the November 5, 2021 meeting minutes were approved.”*

CARRIED.

4) Delegations

None.

5) Declaration of Conflict of Interest

No conflict of interest was identified.

6) Business Arising from the minutes

None.

7) Business

MECP Presentation

C. Eby gave a presentation and provided an update to the committee. She relayed that Kirsten Corbel is the new SP Branch Director. Kirsten has committed to meeting with the SP Chairs one on one annually to build relationships and share issues or ideas. As of December 13, 2021 she has met with all the SP Chairs with the exception of Sault Ste. Marie.

The Director Technical Rules were approved and posted on December 3, 2021. New guidance material was released February 15, 2022 which will assist the SPAs in implementing these updated rules. The SP project managers were encouraged to develop a focus list of questions. If needed, regional discussions can be arranged to answer any outstanding questions.

A Best Practices Guide for Source Water Protection was released February 18, 2022 to help communities and landowners to protect their drinking water sources; for areas not covered under the SPPs. The guide is interactive, user friendly and includes an on line survey on the Ontario.ca website. The feedback will help continually improve this tool.

The Ministry continues to review and consult on the submissions of s36 and s34 Plan Amendments. The different Ministries have completed their annual reports for 2021 and all have been submitted to the SPAs in February. Final Annual Progress reports from the SPAs are due May 1 to the Ministry.

The Ministry is working on *Best Management Practices* for road salt use and management to ensure protection of water/environment and public safety are considered. The first step is to hold series of workshops in March for representatives from key ministries, CAs, municipalities' industry leaders, First Nations and other stakeholders to discuss the challenges to addressing this issue in Ontario. A question was asked about road salt and the spreading of more salt than usual on highways. How do we stop this trend? Liability is an issue and there is not a lot of incentive for landowners to use less. MTO is looking at alternative products; some are more effective in different temperatures.

### **Annual Report Presentation:**

C. Eby gave a summary of key reporting items from the 2020 Source Protection Authority Annual Progress Reports. The CWA outlines that any implementing bodies need to report their progress to the SPA who in turn reports to the Ministry by region. The data is then analyzed and assists the Ministry in determining if there are any challenges.

### **Policy Implementation and Threats Addressed**

On average, 98 percent of the legally-binding significant drinking water threat policies and 97% of non-binding have been implemented/being implemented by provincial source protection regions.

### **Implementation progress:**

- 24 threat (low, moderate, significant) policies from eight SPR/As are experiencing delays in implementation. Of the 24 threat policies, 21 address significant threats (88%).
- The 21 SDWT threat policies from six SPR/As with implementation delays include: Specify action (11) Incentives (3) Risk Management Plan (RMP) (3) Land Use Planning (2) E&O (2)
- Reasons for delay vary include: COVID-19 restrictions hampering threat verification inspections for RMPs, municipality has not started exercise to conform with land use planning policy, municipality has not established incentive program, implementing bodies are considering options for implementation, activity not currently zoned to occur on landscape.
- Authorities reported steps they are taking to ensure implementation.
- On average, 83% of existing SDWTs addressed across provincial SPRs.

### **Part IV Implementation**

Risk Management Plans (RMP) in place, properties covered, threats managed across source protection regions and Sections 57 & 58 inspection results were reviewed.

- There are 1,139 RMPs (cumulative total) in place across the province since the effective dates of SPPs covering 1,655 properties and addressing 2,925 significant drinking water threats (cumulative total) on the ground.
- Trend: Increasing number of RMPs in place over time until all required properties has RMPs in place.
- Sections 57 & 58 inspection results: 98% compliance rate with sections 57 and 58 policies.

### **Provincial Ministry Implementation**

All nine (9) Ministry program areas that issue prescribed instruments continue to report having the following business processes in place for source protection:

- Staff training on source protection.

- Guidance documents to align with new program changes for source protection
- Mapping of prescribed instruments that are subject to policies.
- Screening to review incoming applications for prescribed instruments where they are a significant drinking water threat.
- Tracking prescribed instruments that are subject to source protection plan policies.
- Most program areas have additional processes in place related to: Tools to support stakeholders during applications and protocol in place to review previously issued prescribed instruments.
- 94% of previously issued PIs reviewed and/or on which actions taken for source protection.

Municipal and Source Protection Authority Implementation- a review of:

- 94% of municipalities have incorporated/in process of incorporating source protection into their Ops.
- A cumulative total of 1,779 source protection signs have been installed across source protection regions in Ontario.
- The number of septic systems that are inspected varies year to year due to the established 5-year inspection cycle of the septic inspection program meaning septic systems are inspected once every 5 years.
- 6 out of 47 or 13% of delineated drinking water issues are being reported as seeing an improvement in their concentration/trend in 2020.

Positive outcomes of Source Protection

Drinking Water Protection Zone signs are being noticed by the public, owners of fuel tanks and the local fuel suppliers more aware of the specific regulations they should be following and Oxford County has noted a change in the behaviour of people.

Water quality monitoring:

Some wells in the province have seen a leveling off in the rise of sodium and chloride levels. Some have shown sodium results have remained well below the Ontario drinking water quality aesthetic objective. Results of this monitoring have shown that nitrate levels have decreased and continue to decrease some wells in Ontario.

In summary: 91% of Source Protection Committees (SPC) are progressing well and are on target towards achieving objectives of the plan.

a) TSR 2021 Annual Progress Report Presentation.

Julie Welker provided an update on the 5<sup>th</sup> Annual Progress Report that will be submitted to the Director, May 1st, 2022 and covers the year 2021. Under the Clean Water Act, the SPC is required to review the report and provide written comments to the Source Protection Authority that the objectives set out in the Source Protection Plan are being achieved by the measures described in the report. The SPP Monitoring

policies require policy implementers to report to SPA by February 1st, annually and are submitted electronically through the Electronic Annual Reporting (EAR) Portal.

Two separate reports are generated in EAR: a Public report and a Supplemental Form. The reports were circulated to the SPC. A table outlined how the policies have been implemented for the TSR and Oxford County. A policy is considered implemented when the ministry has implemented its commitment to review and consider the policy. Multiple Implementers are involved to include Provincial Ministries, CAs and Municipalities. Many Policies are both Existing and Future threat Policies.

Status of Policies Table: outlined the status of policies that have been implemented for the TSR region as follows:

- 79 % of *Legally Binding Policies* have been implemented.
- 85% of *Non-Legally Binding Policies* that address significant drinking water threat activities have been implemented.
- 81% of Policies that address moderate-low drinking water threat activities.
- 69% Policies not directly associated with addressing specific drinking water threats (i.e., transport pathways, general E&O).
- The number of Risk Management plans (66) and inspections across the region was outlined.
- Section 59 Notices where neither 57 nor 58 applied was (12) and Section 59 Notices where 58 DID apply there were (3).
- Incoming prescribed instruments that MECP oversees were shown and cumulative counts indicate progress at 100%.
- There are 18 municipalities within the TSR that are required to complete an Official Plan conformity exercise, and 22 that are required to complete a Zoning By-Law conformity exercise
- (170) Source Protection signs can be found in the TSR region.
- (249) septic systems located in 8 municipalities within the TSR require mandatory inspection every 5 years. Most municipalities have completed the first round of inspections and are beginning to plan for the next round; a few still need to complete inspections.
- The microcystin issue will continue to be monitored. The nitrate issue in Wallaceburg will be removed as part of the Section 36 Amendments, and the nitrate is in Woodstock is being reviewed.
- Enumerated Threats Progress: Overall progress made is 53% but some level of uncertainty in enumerated threats data

Overall, significant progress in the Thames-Sydenham and Region has been made since the Source Protection Plan came into effect. During the last six years of plan implementation, 100% of the policies in the plan that address significant drinking water threats have been implemented or are in progress. In 2021, many of our member municipalities reported success stemming from the implementation of source protection plan policies. These included voluntary best management practices being undertaken by business and property owners; and

the development of a special training exercise for municipal emergency response staff which incorporated source protection information. Local Risk Management Officials in the Thames-Sydenham and Region have successfully managed 131 significant drinking water threats through the negotiation and establishment of 66 risk management plans in municipalities across the Source Protection Region since the Plan took effect.

Recommendation:

“That the Source Protection Committee approves the SPC comments on the Annual Report as drafted and direct staff to submit those comments to the Source Protection Authorities for inclusion in the Thames-Sydenham and Region Annual Progress Report submission

Moved by George Marr -seconded by Johnny Bowes

*“RESOLVED that the. “That the Source Protection Committee approves the SPC comments on the Annual Report as drafted and direct staff to submit those comments to the Source Protection Authorities for inclusion in the Thames-Sydenham and Region Annual Progress Report submission”*

CARRIED.

b) Section 36 Early Engagement

Julie Welker gave a presentation on the upcoming required early engagement with landowners. She provided some background information for the new members.

The section 36 Order issued by the Minister in 2018 required a workplan be developed outlining the steps for the comprehensive review and update to the Assessment Reports and Source Protection Plan. The section 36 Order also requires this workplan be completed in consultation with the TSR SPC. A comprehensive review and draft amendments to AR and SPP was completed in January 2022.

Next steps:

- Early Engagement with MECP. The SPC will review MECP comments when they are complete and agreed that an email motion can be used to approve these comments
- Pre-consultation with implementing bodies-and businesses/persons engaged in significant drinking water threats.
- Public Consultation.

A table was shown of all the various steps to each stage and timelines.

Pre-consultation, in two steps:

With all policy implementers and with persons/businesses believed to be engaged in significant threats: May (approx. 4 weeks)

- Post pre-con documents on secure website (SharePoint).
- Email notices to policy implementations and persons/businesses.
- Receive pre-con comments and address pre-con comments.
- Prepare public consultation package.

Public Consultation: (min 35 days)

June (Min. 35 days) Involves:

- Public posting.
- Receive and address public comments.
- Update documents and send to SPC
- Receive SPC and address SPC comments and prepare all documents.
- Source Protection Authority (SPA) board reports and Management Committee report to be completed
- SPA meetings to seek endorsement of the final submission by the boards.
- Prepare all supporting documentation and files including GIS shapefiles to submit to MECP..

The consultation will begin in June 2022 and be a (6) month process. We will be working closely with Oxford County to discuss approaches.

Public meetings can be held virtually and it is at the discretion of each region how many meetings to be held, as confirmed by Catherine Eby.

### c) Directors' Technical Rules

Julie Welker reported the Director's Technical Rules are being reviewed. She introduced Terry Chapman, the UTRCA GIS specialist who provided slides on mapping for our region.

#### **Existing Assessment Report**

Within the WHPAs, on-screen digitizing was performed using colour 2006 orthophotography to delineate areas interpreted as paved including road, parking lots, driveways and sidewalks. Area outside WHPA's, HVAs and SGRAs, a roads layer was combined with digitized data to complete the impervious area. The percentage of impervious surface areas was calculated using a one kilometre square grid. Percent area of impervious surface was calculated for each cell.

### **Proposed Changes**

- Areas of impervious surface area/road salt application , including roads, parking lots, driveways, and sidewalks.
- WHPA with vulnerability of 10 or IPZ with vulnerability of 9 or greater included.
- Update existing impervious surface area/road salt application information from 2006 imagery to 2020 imagery in applicable areas.
- To ensure each well is represented equal use an area of 100 metres around each well.
- Calculate the area of impervious surface/road salt application area for each individual well and also for area where 100 metres areas are combined as shown in Assessment Report.
- Calculate percentage of area of road salt application.

J. Welker gave a presentation titled *2021 Director's Technical Rules (DTRs) Top 4 Priorities in TSR*. DTRs are established under Section 107 of the Act and govern the assessment of risks to drinking water sources. The updated 2021 Rules took effect on December 2, 2021. The rules aim to clarify terminology the information needed to conduct a water quality climate change risk assessment, that the local threats provision intends to address activities that are not provincially or federally regulated and are area or community-specific and to Update the Tables of Drinking Water Quality Threats.

The TSR area of focus will be:

- Storage and Application of Road Salt
- Storage of Snow
- Handling and storage of fuel

Salt Application will require a *Desk Top Analysis* and will likely create a new salt application threats and will require new policies.

Salt Storage – Local salt storage in IPZ's and WHPA's will need to be reassessed and will most likely to create new significant threats in the TSR. The current TSR SPP Policies prohibit existing and future salt storage where it is a significant threat. The policy approach will need to be reviewed by the SPC (current s.57). The SPC can choose to address these newly identified areas using the same or different policy approach/tools. For example, where a plan includes a prohibition policy the SPC may choose to keep that policy and develop new policies to either prohibit or manage smaller volumes. Policies to manage may include RMPs, specify action, and E&O.

The circumstances for snow storage threats are now to be a function of the size of the storage area and whether snowmelt can infiltrate or discharge. Local snow storage in IPZs and WHPAs will need to be reassessed but is likely to create new significant

threats in the TSR. The current policy approach is a RMP for existing and future threats, which may need to be reassessed.

Snowbanks or ploughed snow in residential areas is not included.

Storage of snow designed to discharge to the environment requires an ECA (Environmental Compliance Approval). Where no ECA is required, s.57 or s.58 can address this activity. RMOs can use Access Environmental Ontario to determine whether an ECA exists already.

A question was asked of using salt on black top, gravel roads. This was discussed at the Project Managers meetings and needs to be considered. Snow banks not being considered also needs discussion. Programs such as Smart Salt and education and outreach can be used.

Handling and Storage of Fuel. The threshold for above ground storage of fuel as a significant threat in a WHPA with a score of 10 has been lowered from quantities of 2500L to 250L (size of a residential home heating oil tank). Although there are very few home heating oil tanks in the TSR, this change will likely add some new significant threats from agricultural and commercial fuel tanks that are between 250 and 2500 L. Some threats reassessment will be required by the RMOs. Current TSR SPP policy requires RMP's for significant fuel threats. This is focused on permanent tanks/structures.

When updating the plans, policies that used general language will not require a change. The TSR used general terms.

Next steps:

- Desk Top analysis for Impervious Surface Area for Application of Salt. And Ground Truthing results.
- Threat Verification completed by RMO/I.
- Discuss results at next SPC meeting and discuss need for new policies and policy approach.

## 8) Information

The items listed below were provided to the committee as a FYI:

- 8i.) Best Management Practices for Source Water
- 8ii.) Bulletin: 2001 Director's Technical Rules Guidance
- 8iii.) Bulletin: Climate Change Consideration
- 8iv.) Article: Salt contamination of Lake Simcoe a frightening warning about highway expansion

- 8v.) Article: 'Lethal levels of salt' seen in some southern Ontario waterways, warns WWF Canada
- 8vi.) Article: Local wastewater surveillance project
- 8vii.) Article: Oneida Nation on verge of joining Lake Huron water supply system
- 8viii.) World Water Day: Link: <https://www.worldwaterday.org/>

## 9) In Camera Session

None.

## 10) Other Business

None.

## 11) MOECP Liaison Report

Catherine Eby provided the update at the start of the meeting under Agenda #7.

## 12) Members Report

**Earl Morwood;** Thanked the staff for their hard work and making steady progress.

**Gary Martin:** noted that he is looking forward to agricultural reps on the CA boards as they are being hired now.

**John Van Dorp:** noted a concern of a drainage proposal that is in progress with a newly purchased parcel between Highway 401 and Stage Road. He noted the concern of concentrating water drainage from both the 401 and tile drainage via a municipal drain directly into the Thornton Wellhead area maybe better handled if the proposed drainage system with possible pollutants, continue on through the area and have the outlet placed directly into the Cedar Creek rather than to have it dump into the drinking water supply for Woodstock. Matthew Jauernig has been in touch with Doctor David Rudolph from the University of Waterloo and he has some concerns of elevated nitrates in some of the groundwater collected from the monitoring wells around the Thornton Wellfield and is looking into this further.

*Johnny Bowes*-noted there is more information relating to the article *Local wastewater surveillance project* and can be found: <https://covid19-sciencetable.ca/sciencebrief/the-role-of-wastewater-testing-for-sars-cov-2-surveillance/>. Other regions are doing the same surveillance.

13) Adjournment

There being no further business, the meeting was adjourned **at 11:30 a.m.**

Moved by George Marr -seconded by Valerie M'Garry

*“RESOLVED that the meeting be adjourned.”*

CARRIED.

PLEASE NOTE: Next SPC meeting **June 3, 2022**

# Thames – Sydenham and Region Drinking Water Source Protection Source Protection Committee Discussion Paper

**Report to** Chair and members  
Thames – Sydenham and Region  
Source Protection Committee

**Agenda #** 2022.06.03 7b

**Cc** SP Management Committee

**Date** June 3, 2022

**Prepared By** Julie Welker, Source Protection Coordinator

**Re:** S.36 Consultation

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## Purpose

To present the Source Protection Committee (SPC) with an update for pre-consultation for amendments to the Thames-Sydenham and Region Assessment Reports (ARs) and Source Protection Plan (SPP) as part of the order from the Minister of the Environment, Conservation and Parks under s.36 of the *Clean Water Act*.

## Background

At the March 13<sup>th</sup>, 2020 meeting of the Thames-Sydenham and Region Source Protection Committee, the Committee reviewed some of the proposed amendments to be included in the Section 36 update to the SPP and AR's. We have now moved into the consultation phase of the proposed amendments.

## Discussion

Below is a chart of comments received as part of the s.36 pre-consultation phase and a chart of the timelines of moving into the next phase with public consultation.

### A. Comments received as part of pre-consultation

Date	From	Comments	Response
May 4-11, 2022	Various residential homeowners	Inquired about nature of letter	Once addresses were confirmed to determined these were residential, just took an Education and Outreach approach by explaining why they received the letter and BMPs for their property since residential properties are except from most policies
April 28, 2022	Lambton Shores	Inquired if policy 2.39 amendments has changed anything for the municipality	We responded that nothing has changed for the municipality and that the existing RMPs remain the same.
April 28, 2022	Chatham-Kent	Inquired if amendments changes anything for the municipality	We responded that nothing has changed for the municipality and that the existing RMPs remain the same.

May 10, 2022	MTO	Inquired if any of the signs need to change	We responded that signs will remain in the same locations.
May 16, 2022	Transport Canada	Asked that we self- assess to determine if any changes effect Federal Lands	None of the changes effect Federal Lands
May 26, 2022	TSSA	No comment on amendments	No response necessary

## B. Timelines

No.	Step	Task and Timeline
1	<b>Pre-consultation</b> a) With all policy implementers; and b) With persons/businesses believed to be engaged in significant threats	April – May (approx. 4 weeks) <ul style="list-style-type: none"> <li>○ Post pre-con documents on TSR Source website</li> <li>○ Email notices to policy implementations and persons/business believed to be engaged in significant threats</li> <li>○ Receive pre-con comments</li> <li>○ Address pre-con comments</li> <li>● Prepare public consultation package</li> </ul>
2	<b>Public Consultation</b> (min 35 days)	June 13- July 17 (Min. 35 days) Involves: <ul style="list-style-type: none"> <li>● Public posting in Oxford Newspaper, St. Mary's newspaper, social media, on SPP website, on all SPA websites</li> <li>● Letter sent to Implementers</li> <li>● Webinar on Wednesday, July 6<sup>th</sup> at 7:00 p.m.</li> <li>● Receive public comment</li> <li>● Address comments</li> <li>● Update documents and send to SPC</li> <li>● Receive SPC comments</li> <li>● Prepare all supporting documentation and files including GIS shapefiles to submit to MECP</li> </ul>
3	Submission to MECP (including all supporting documentation)	August

## Recommendation

*That the SPC approve the comments received by implementers and persons/business engaged in significant threats.*

*That the SPC approved timeline for public consultation.*

# Thames – Sydenham and Region Drinking Water Source Protection Source Protection Committee Discussion Paper

**Report to** Chair and members  
Thames – Sydenham and Region  
Source Protection Committee

**Agenda #** 2022.06.03 7ci

**Cc** SP Management Committee

**Date** June 3, 2022

**Prepared By** Julie Welker, Source Protection Coordinator

**Re:** Policy Review: Application and Storage of Road Salt

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**Purpose:** To review the Source Protection Plan (SPP) policies for Road Salt Application and Storage and acquire SPC direction regarding policy revision.

**Summary:** Approved 2021 amendments to the Director’s Technical Rules (DTRs) include changes to the circumstances related to both salt application and salt storage that may result in significant drinking water threats (SDWT) for both of these activities. As such, a review of the current SPP policy is warranted.

## **Background: Nature of the Threat for Drinking Water - Sodium and Chloride:**

The Guidelines for Ontario Drinking Water Standards set an aesthetic objective of **200 mg/L for sodium**. Sodium concentrations above 200 mg/L may alter the taste of water. The local Medical Officer of Health is notified when the sodium concentration **exceeds 20 mg/L** in a water supply. Sodium in drinking water is not a health concern for most people but may be an issue for someone with hypertension, congestive heart failure or on a sodium-restricted diet. Chloride produces a detectable salty taste at the aesthetic objective level of **250 mg/L**.

Several municipal drinking water systems in the TSR region have elevated sodium levels, above the 20 mg/L threshold. Sodium is naturally occurring in this region, but without additional monitoring and data analysis, it is difficult to quantify the impact, if any, due to road salt application.

Road salt can cause serious damage to infrastructure, ecological functions, aquatic habitat, crops and drinking water. However, businesses are often concerned with liability and are hesitant to reduce salt usage.

## **Salt Application**

Both salt application and storage can be a significant drinking water threats in WHPA-A& B with vulnerability of 10 and IPZ-1 with vulnerability of 9-10, plus WHPA-E with vulnerability of 9-10.

- Under the 2017 rules, salt application was a SDWT in areas with 80 % impervious surface in WHPAs with score of 10. The approved DTR threshold is now **30%** impervious.
- Staff conducted a GIS review of impervious surface area calculations to identify areas where the salt application policies would apply using the new 30% threshold.
- Based on this review, **5** drinking water systems have impervious surface over 30%
- The table below lists the 5 systems identified. Sodium levels in recent drinking water tests have been included as well. Note that sodium could be both naturally occurring and due to anthropogenic activity.

<b>Municipality</b>	<b>Water System / WHPA</b>	<b>Sodium (mg/L)</b>
Embro	Well #1a	21.1 (2014)
Mitchell	Well #3	40(2018)
Mitchell	Well #4	40 (2018)
Stratford	Lorne Well	20.1 (2019)
St.Marys	Well #2a	47.13 (2019)

### How do the DTR changes impact Policy?

- The threat circumstances related to salt application do not include amounts of salt applied.
- Some regions addressed this problem by exempting small parking lots and/or residences from RMP requirements.
- Some considerations for policy review include financial impacts, effectiveness and appropriateness of the policy.
- In order to gauge the number of potential RMPs, staff conducted a GIS exercise to identify the area of impervious surfaces (100 m<sup>2</sup>) within the WHPA-10s in Embro, Mitchell, Stratford and St.Marys. The table below provides the size of parking lots and access roads.

<b>WHPA</b>	<b>Area over 100m<sup>2</sup></b>	<b>Total</b>	<b>Notes</b>
Embro	0	0	Dirt lot- exempt
Mitchell Well #3	0	0	Loading lot
Mitchell Well #4	0	0	Dirt Lot - exempt
Stratford	1	1	Church lot
St. Marys	0	0	Mostly residential and store front staff parking

### Salt Application – Policy Comparisons

Staff reviewed policies from other Regions and acquired feedback from Risk Management Officials (RMO) and project managers (PM) regarding implementation.

<b>Region</b>	<b>Policy Tool</b>	<b>Exemptions</b>	<b>Comments from RMO or PM</b>
Saugeen; Wellington	RMP Existing & future	Less than <b>200m<sup>2</sup></b> or 8 parking space; exempt Residential Units of 4 or less	Saugeen added the exemption in newly revised policy
Saugeen; Wellington	Specify Action		New policy would require municipality /MTO update their salt management plan (SMP) to include vulnerable areas
Lake Simcoe	RMP	-personal, domestic use; - NEW: paved area < <b>1 hectare</b>	1 <sup>st</sup> round -RMPs within WHPA-A; 2 <sup>nd</sup> round - extend policy to <b>parking lots &gt; 1 hectare in ICA</b> . Thresholds selected to ensure RMOs focus on the largest parking lots in ICA
Trent	RMP; E&O		Propose E&O for residential and small parking lot; Threshold TBD: (approx.. 50 parking spaces) 700 to 1,500 m <sup>2</sup>

Lake Erie Region	RMP; E&O		RMP for parking lots over 80 spaces; E&O for smaller <80 parking spaces
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### Road Salt Application – Suggest Policy

Developing policies for Road Salt Application is a local decision with no provincial guidance. Upon review of the sites that met the 30% impervious surface criteria, and choosing a 100m<sup>2</sup> sized lot to take a conservative approach to ensure we are capturing all access roads into the parking lots, only 1 well (Stratford) had a parking area of over 100 m<sup>2</sup>. Therefore, we concluded that Education and Outreach would make most sense as our tool.

### Suggest using Education and Outreach policy for Road Salt Application due to the low impact.

?	<p><b>Road Salt Application – Education &amp; Outreach</b></p> <p>To reduce the risk to municipal drinking water sources from road salt application, where this activity is, or would be, a significant drinking water threat, municipalities, in collaboration with the Conservation Authority, the Ministry of Environment, Conservation and Parks and/or wherever possible other bodies, shall develop and implement an education and outreach program directed at the owners and/or occupants of such properties.</p> <p>The program may include, but not necessarily be limited to, the provision of education material and information about the nature of the threat, how road salt can be handled in a manner so the activity cease to be or never becomes a significant drinking water threat.</p>	<p>Existing Future</p> <p>Significant</p> <p>WHPA-A (10) WHPA-B (10) IPZ-1 (9) WHPA-E (9)</p> <p>Conform with Strategic</p> <p>Risk Management Official MECP Municipalities Conservation Authorities MTO</p> <p>Educate</p>
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## C. Salt Storage:

- **2017 DTR:** Depending upon the exposure of stored road salt to precipitation, the quantity of storage of road salt that can be significant was 500 tonnes and greater in IPZ scored 10, and greater than 5,000 tonnes in WHPA scored 10. There are no significant threats in TSR at these thresholds therefore a Prohibition policy was developed (see below).
- **2021 DTR:** The quantity thresholds were not suitable to identify significant risks in all situations. The past thresholds didn't account for many areas (parking lots, commercial plazas etc.) storing smaller quantities of road salt where road salt had been identified as a water quality concern/issue. The circumstances were amended for this threat to account for three types of road salt storage based on their exposure to precipitation.
- For uncovered storage, minimum quantity is 10 kg.
- For partially coverage storage, the minimum is 100 kg
- Fully coverage, no threat
- The local authority can choose to address these using the same or different policy approaches/tools previously used to manage these threats. Can use RMPs, specify action, and E&O

### Current Policy: 5,000 Tonnes in WHPA – 10 and 500 tonnes in IPZ-1

2.35	<p><b>Road Salt Storage – Prohibition</b></p> <p>The handling and storage of road salt in any form (solid, liquid, mixed with sand and including for the use as a dust suppressant) shall be prohibited so that it ceases to be or never becomes a significant drinking water threat.</p>	<p>Existing Future</p> <p>Significant</p> <p>WHPA-A (10) WHPA-B (10) IPZ-1 (9)</p>
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	<p>In areas where it is or would be a significant drinking water threat, this activity shall be designated for the purposes of Section 57 of the Clean Water Act and shall also be prohibited through the Aggregate Resources Act (ARA) by prohibiting road salt stored in sites licensed or permitted under the ARA.</p>	<p>Conform with Strategic MNR Risk Management Official Prohibit Specify Action</p>
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## Suggested Policy Considerations:

### Road Salt Storage Policies:

**1.Exposed:** The quantity stored is more than 20 kg and less than 100 kg. IPZ (9-10) and WHPA (10) (storage in residential, small retail plazas, parking lots and small yards)

#### Suggest using E&O policy for these small sites

<p>2.35b</p>	<p><b>Road Salt Storage – Education &amp; Outreach</b></p> <p>To reduce the risk to municipal drinking water sources from road salt storage with <b>quantities more than 20 kg and less than 100 kg</b>, where this activity is, or would be, a significant drinking water threat, municipalities, in collaboration with the Conservation Authority, the Ministry of Environment, Conservation and Parks and/or wherever possible other bodies, shall develop and implement an education and outreach program directed at the owners and/or occupants of such properties.</p> <p>The program may include, but not necessarily be limited to, the provision of education material and information about the nature of the threat, how road salt can be stored in a manner so the activity cease to be or never becomes a significant drinking water threat.</p>	<p>Existing Future Significant WHPA-A (10) WHPA-B (10) IPZ-1 (9) Conform with Strategic Risk Management Official Conservation Authority Municipalities MTO MECP  Educate</p>
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**Justification:** It was thought that it would be far too complicated to attempt to write RMPs for every residential property or small business that depend on salt application to ensure members of a household or clients remain safe from falls on ice.

**2. Potentially Exposed:** the quantity is more than 100 kg. IPZ (10) and WHPA (10) (storage at mall parking lots or other large parking lots or yards)

#### Suggest using RMP for larger sites.

<p>2.35c</p>	<p><b>Road Salt Storage – Management</b></p> <p>The storage of road salt may only occur in accordance with an approved Risk Management Plan and is therefore designated for the purposes of s.58 of the <i>Clean Water Act</i></p> <ol style="list-style-type: none"> <li>The activity is or would be a significant drinking water threat;</li> <li>Salt is stored or handled on the property in quantities <b>greater than 100 kg;</b> and</li> <li>The property is used for any land uses except residential consisting of four units or fewer.</li> </ol> <p>The Risk Management Plan is to contain risk management measures which when implemented will ensure that existing operations</p>	<p>Existing Future Significant WHPA-A (10) WHPA-B (10) IPZ-1 (10) Conform with Risk Management Official  RMP</p>
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	continue to function in a manner that minimizes the risk to sources of municipal drinking water.	
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**Justification:** The past thresholds didn't account for many areas (parking lots, commercial plazas etc.) storing smaller quantities of road salt where road salt had been identified as a water quality concern/issue. The circumstances were amended for this threat to account for three types of road salt storage based on their exposure to precipitation.

### 3. Existing Policy – 2.35 Road Salt Storage – Prohibition

Recommend to amend policy to be specific to aggregates (originally, SPC felt the need to include aggregates despite there being no rules in DTR so that it never becomes a threat).

#### Summary Table:

Policy ID	Policy Title	Policy Tool	Implementer	Notes
A	TBD: Education and Outreach for Existing And Future Road Salt Application	E & O	Municipality RMO Conservation Authorities MECP MTO	Future and Existing
B	TBD: E&O for Salt Storage - Exposed	E&O	Municipality RMO Conservation Authorities MECP MTO	Future and Existing
C	TBD: RMP for Salt Storage – Potentially Exposed	RMP	RMO	Future and Existing
D	2.35 Road Salt Storage - Prohibition	Prohibition	RMO	Make specific to aggregates

#### Recommendation:

*A. That Policy A be approved pending SPC direction regarding preferred threshold of 100 m2 for salt application on parking lots;*

*B. That policy B & C be approved pending SPC direction regarding salt storage.*

*C. That policy D be approved to be specific to aggregates.*

# Thames – Sydenham and Region Drinking Water Source Protection Source Protection Committee Discussion Paper

**Report to** Chair and members  
Thames – Sydenham and Region  
Source Protection Committee

**Agenda #** 2022.06.03 7cii.

**Cc** SP Management Committee

**Date** June 3, 2022

**Prepared By** Julie Welker, Source Protection Coordinator

**Re:** Policy Review: Storage of Snow

**Purpose:** To review the Source Protection Plan (SPP) policies for Storage of Snow and acquire SPC direction regarding policy revision.

**Summary:** Approved 2021 amendments to the Director’s Technical Rules (DTRs) include changes to the circumstances related to storage of snow that may result in significant drinking water threats (SDWT) for this activities. As such, a review of the current SPP policy is warranted.

**Background:** The approved Phase II Director’s Technical Rules (DTR) include updates to clarify that the Storage of Snow (threat#14) includes snow disposal facility or disposal area designed to receive snow for retention and control or further discharging or infiltrating the meltwater to ground, land, surface water, or sewage works. The removal of snow below grade was made because this doesn’t exist in Ontario. Also, if a stormwater management Environmental Compliance Approval (ECA) does not exist for a site, the RMO may investigate further to determine whether the activity requires an RMP.

## Current TSR SPP policy:

<b>2.36</b>	<b>On-site Snow Storage – Management</b>	Existing Future
Snow storage	The storage of snow on-site shall be managed so that the activity ceases to be or never becomes a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required where the activity is or would be a significant drinking water threat. The Risk Management Plan shall prohibit snow transported to the storage area from off site and may include other such measures or requirements as are deemed necessary by the Risk Management Official.	Significant WHPA-A (10) WHPA-B (10) IPZ-1 (9) Conform with Risk Management Official RMP
<b>2.37</b>	<b>Storage of Snow in Aggregate Operations – Prohibition</b>	Existing Future
	To reduce the risk to municipal drinking water sources from the storage of snow in aggregate operations, the Province (Ministry of Natural Resources) shall include conditions on Aggregate Permits and site plan approvals under the Aggregate Resources Act. Where it could be a significant drinking water threat (existing), site plans should be reviewed to ensure that they are consistent with Aggregate Resources Policy A.R.5.00.14; and where it would be a significant drinking water threat (future), that Aggregate Resources Policy A.R.5.00.14 continue to apply for the approval of future sites.	Significant WHPA-A (10) WHPA-B (10) IPZ-1 (9) Strategic MNR Specify Action

## Risk Assessment: Additional Threats due to New Rules

The new circumstances apply to IPZ's with scores of 8-10 and WHPA-10s. For reference, 200m<sup>2</sup> is equivalent to 13 parking spaces, 2000m<sup>2</sup> is equivalent 130 parking spaces, where the threshold was previously 10,000m<sup>2</sup> or 650 parking spaces, or one city block. Storm water outfalls draining an area of snow storage is a new threat circumstance.

No significant drinking water threats were enumerated with the current thresholds. However, the addition of IPZ-8 may result in some SDWT, with some properties impacted by the change.

Current Approach	Does not acknowledge that snow storage and disposal may be regulated by an Environmental Compliance Approval (ECA) under the <i>Ontario Water Resources Act (OWRA)</i> . Creates duplication if both ECA and RMP required
Objective of Amendment	Clarify circumstances covered by OWRA. Snowbanks or ploughed snow in residential areas are not included.
Impact for TSRSPA	<ul style="list-style-type: none"> <li>Threats and policies will need to be reevaluated to include IPZ &gt;8</li> <li>Editorial change in policy to include IPZ&gt;8</li> <li>Storage of Snow now considered a SDWT for IPZ with score &gt;8, expands to LAWSS and Petrolia and WHPA 10s</li> <li>RMOs should investigate if a ECA exists for the site. If it doesn't the RMO may investigate further to determine whether the activity requires an RMP.</li> </ul>
Current polices in SPP	RMPs

Current Circumstance	New Circumstance (changes from proposed version shown)	Areas of SDWT
The <b>snow is stored</b> at or above grade Total storage area is <b>&gt;1 hectare</b> (10,000m <sup>2</sup> )	The <b>infiltration or discharge of snowmelt</b> from the storage of snow on a site where the predominant land use is commercial or industrial by any means other than a storm water drainage system outfall. The area upon which snow is stored <b>&lt;200m<sup>2</sup></b> (IPZ with score >9 and WHPA 10) The area upon which snow is stored <b>&gt;200m<sup>2</sup>&lt;2000m<sup>2</sup></b> (IPZ with score >9 and WHPA 10) The area upon which snow is stored <b>&gt;2000m<sup>2</sup></b> (IPZ with score <b>&gt;8</b> and WHPA 10)	Wallaceburg -9 LAWSS -8 Petrolia -8 WHPA – 10s
	<b>A storm water drainage system outfall</b> that serves a Snow Disposal Facility  The area upon which snow is stored <b>&gt;200m<sup>2</sup></b> (IPZ with score >9 and WHPA 10)) The area upon which snow is stored <b>&gt;2000m<sup>2</sup></b>	Wallaceburg LAWSS - 8 Petrolia - 8 WHPA – 10s

	(IPZ with score >8 and WHPA 10)	
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## Suggested Policy Consideration:

### Editorial

<b>2.36</b>	<p><b>On-site Snow Storage – Management</b></p> <p>The storage of snow on-site shall be managed so that the activity ceases to be or never becomes a significant drinking water threat. <b>Where an ECA is not required,</b> this activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required where the activity is or would be a significant drinking water threat. The Risk Management Plan shall prohibit snow transported to the storage area from off site and may include other such measures or requirements as are deemed necessary by the Risk Management Official.</p>	<p>Existing Future</p> <p>Significant</p> <p>WHPA-A (10) WHPA-B (10) IPZ-1 (8)</p> <p>Conform with Risk Management Official RMP</p>
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### New

<b>2.35.1</b>	<p><b>On-site Snow Storage – Prohibition</b></p> <p>The storm water drainage system outfall that serves as a snow disposal facility shall be prohibited so that it ceases to be or never becomes a significant drinking water threat.</p> <p>In areas where it is or would be a significant drinking water threat, this activity shall be designated for the purposes of Section 57 of the Clean Water.</p>	<p>Future</p> <p>Significant</p> <p>WHPA-A (10) WHPA-B (10) IPZ-1 (8)</p> <p>Conform with Strategic MECP Risk Management Official</p> <p>Prohibit Specify Action</p>
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## Recommendation:

- A. That policy 2.36 editorial changes be approved pending SPC direction
- B. That policy 2.36.1 be approved