

Report To: Halton-Hamilton Source Protection Committee
Report No.: SPC-23-09-02
From: Martin Keller, Senior Manager, Watershed Planning and Source Protection, mkeller@hrca.on.ca
Date: September 26, 2023
Subject: Draft Policy Package – Road Salt and Snow (**Revised**)

Recommendation

THAT the Halton-Hamilton Source Protection Committee receives for information the staff report SPC-23-09-02 Draft Policy Package – Road Salt and Snow

Executive Summary

Staff are continuing to analyze the implications of the updated technical framework and revised 2021 Technical Rules under the *Clean Water Act, 2006*, including revised circumstances for identifying significant drinking water threats in the Halton-Hamilton Source Protection Region (HHSPR). Draft policies for the application, handling and storage of road salt, and storage of snow were discussed at the Municipal Working Group meetings on July 26 and September 13, 2023 and are presented to the Source Protection Committee in this report for discussion and feedback.

Report

Background

In December 2021, the Ministry of the Environment, Conservation and Parks (MECP) revised the Technical Rules under the *Clean Water Act, 2006*. The rules are available at: <https://www.ontario.ca/page/2021-technical-rules-under-clean-water-act>

The recently submitted and approved comprehensive HHSPR updates under Section 36 of the *Clean Water Act, 2006* were undertaken following the 2017/2018 Technical Rules. The 2021 Technical Rules will apply to subsequent Assessment Report and Source Protection Plan updates at HHSPR.

Policy Development

Staff developed and presented draft policy text for the application, handling and storage of road salt and storage of snow to municipal staff and Risk Management Officials (RMO) at the July 26, 2023 Municipal Working Group meeting. Feedback from municipal staff and the RMOs was taken into consideration and revised policy text was presented at the September 13, 2023 Municipal Working Group meeting. Municipal staff and Risk Management Officials (RMO) are in support of the proposed draft policy text. Further changes may be made based on feedback from the Source Protection Committee.

Detailed descriptions of the new method to calculate the impervious surface areas, available policy tools, and most promising policy approaches for the application, storage and handling of road salt, as well as the storage of snow have been presented in the March 9, 2023 Program Update Report (SPC-23-03-01) and June 13, 2023 Update – 2021 Technical Rules Implications Report (SPC-23-06-02).

The intent of the policies with respect to the use of road salt is to limit or reduce the amount of salt applied to impervious surfaces including but not limited to, roads, sidewalks, and parking lots, where that activity would be a significant risk to drinking water sources, considering the need to manage snow and ice buildup for the protection of the traveling public. Storage of snow is proposed to be prohibited for areas greater than 2000mSq and managed below that threshold.

Appendix A provides an overview of the policy intent and tools, a comparison of current and proposed policy approaches, definitions, and draft proposed policy text for the application, storage and handling of road salt, and storage of snow.

Next Steps

Following feedback from Source Protection Committee members, any further policy revisions will be brought forward for discussion to the next Municipal Working Group and future SPC meetings, as applicable.

Signed & respectfully submitted:



Martin Keller
Senior Manager, Watershed Planning and Source Protection



Mardi Bergen
Source Water Information Coordinator, Watershed Planning and Source Protection

2021 Technical Rule Changes – Road Salt, Snow

Application of Road Salt

Intent – to limit or reduce the amount of salt applied to impervious surfaces including but not limited to, roads, sidewalks, parking lots, where the activity is or would be a significant risk to drinking water.

Tool – Risk Management Plans give the municipality and the RMO some liability protection. Low density residential properties are proposed to be excluded from RMPs. High density residential properties with 8 or more parking spaces or a parking area over 200mSq will be subject to RMP. Risk Management Plans create an Education and Outreach opportunity during inspections.

Storage and Handling of Salt

Intent – to eliminate existing and future salt storage that is exposed to precipitation and to manage the storage of salt that is potentially exposed to precipitation, where the activity is or would be a significant risk to drinking water.

Tool

- Prohibition (S.57) of existing and future exposed salt storage. Moving any existing salt storage, where they are a significant threat, from exposed to potentially exposed, is relatively easy, which makes prohibition feasible.
- Risk Management Plans (S.58) are proposed to manage storage of salt that is potentially exposed to precipitation. CTC policies have been reviewed and discussions with CTC staff are ongoing to help align policies across source protection regions.
- Education and Outreach is proposed for residential properties exempt from an RMP and to support salt policies in general.

Storage of Snow

Intent – to prohibit any future snow storage greater than 200mSq, to manage any future storage of snow no more than 200mSq and to manage any existing storage of snow that would be a significant risk to drinking water sources.

Tool

- Prohibition (S.57) of any future areas of stored snow greater than 200mSq.
- Risk Management Plans (S.58) to manage future snow storage no more than 200mSq, and any existing snow storage to ensure snow melt does not become a significant threat to drinking water (via storm water drainage system outfalls/from industrial or commercial site with no stormwater outfall).

Application, Storage and Handling of Salt

Activity	Circumstance	Vulnerable Area	Significant Threat VSA	Threshold	Policy Approach	Tool Options	Applicable to HHSPR	Notes
Application of Road Salt	all	WHPA-E	9	8%+	<ul style="list-style-type: none"> RMP (Existing / Future) Salt application area is greater than 200mSq or 8 parking spots Any land use except low density residential Specify Action policy (MTO Best Practices) E&O 	Part IV S.58	Carlisle WHPA-E	<ul style="list-style-type: none"> WHPA-E covers residential subdivision
Application of Road Salt	all	WHPA-A	10	30%+	<ul style="list-style-type: none"> RMP (Existing / Future) Salt application area is greater than 200mSq or 8 parking spots Any land use except low density residential Specify Action policy (MTO Best Practices) E&O 	Part IV S.58	Kelso Freelton Campbellville	<ul style="list-style-type: none"> Kelso, Freelton: mostly MTO Highways. Campbellville mostly v10 /with limited area of impervious area >30%
Storage and Handling of Road Salt	Exposed to precipitation or runoff	WHPA-E WHPA-A	WHPA-E 9 WHPA-A 10	>20 kg	<ul style="list-style-type: none"> Prohibition (Existing) Prohibition (Future) Specify Action policy for NEC E&O 	Part IV S.57	Carlisle WHPA-E All WHPAs	Easy to move into potentially exposed category by storing salt in a bin or bag.
Storage and Handling of Road Salt	Potentially exposed to precipitation or runoff	WHPA-A	10	>100 kg	<ul style="list-style-type: none"> RMP (Existing/Future) Exemption for low density residential Specify Action policy (Salt Management Plans) E&O 	Part IV S.58	Kelso Carlisle Freelton Greensville Walkers Line Campbellville	Collaborate with neighbours (CTC) and work with Halton Region and City of Hamilton to develop policies that are consistent in nature and applicable to HHSPR threats. Initial review of ortho photo shows few areas were >100kg of salt is likely stored. MUNICIPALITY TO CONFIRM

Storage of Snow

Activity	Circumstance	Vulnerable Area	Significant Threat VSA	Threshold	Policy Approach	Tool Options	Applicable to HHSPR	Notes
On Site – Storage of Snow	Commercial/Industrial site (no storm water outfall)	WHPA-A	10	<200mSq	<ul style="list-style-type: none"> RMP (Existing) RMP (Future) 	Part IV S.58	All WHPAs	Potential Locations: Freelton commercial properties. MUNICIPALITIES TO CONFIRM.
On Site – Storage of Snow	Commercial/Industrial site (no storm water outfall)	WHPA-A	10	>200mSq	<ul style="list-style-type: none"> RMP (Existing) Prohibition (Future) Specify Action policy (NEC) LUP (site plan) 	Part IV S.58 Part IV S.57	All WHPAs	Potential Locations: Freelton commercial properties. MUNICIPALITIES TO CONFIRM.
On Site – Storage of Snow	Commercial/Industrial site (no storm water outfall) / Storm water drainage	WHPA-E	8.1	>2000mSq	<ul style="list-style-type: none"> RMP (Existing) Prohibition (Future) LUP (site plan) 	Part IV S.58 Part IV S.57	Carlisle	Initial review of ortho photo does not show any areas where snow storage of this size would occur. MUNICIPALITIES TO CONFIRM.
On Site – Storage of Snow	Commercial/Industrial site (no storm water outfall) / Storm water drainage	WHPA-E	9	>200mSq	<ul style="list-style-type: none"> RMP (Existing) Prohibition (Future) LUP (site plan) 	Part IV S.58 Part IV S.57	Carlisle	Initial review of ortho photo does not show any areas where snow storage of this size would occur. MUNICIPALITIES TO CONFIRM.
On Site – Storage of Snow	Storm water drainage	WHPA-A	10	>200mSq	<ul style="list-style-type: none"> RMP (Existing) Prohibition (Future) LUP (site plan) 	Part IV S.58 Part IV S.57	All WHPAs	Potential Locations: Greensville Elementary Parking Lot Kelso Well House Parking Lot Campbellville Parking lots and cul de sacs

Current Policies

Threat	Education & Outreach	Incentives	Prescribed Instrument	Land Use Planning	Prohibited Activities	Restricted Land Uses	Risk Management Plans	Other
The application or handling and storage of road salt	T34-C a			T-32-C a T-53-C a			T-32-C b	T-33-S a T-35-C a T-36-S T-49-S a
The storage of snow				T-37-C a T-39-C a T-53-C a				T-38-S a

Definitions

Municipality(ies) – means one or more of the City of Hamilton, Region of Niagara, Town of Grimsby, Township of Puslinch, County of Wellington, Regional Municipality of Halton, City of Burlington, City of Mississauga, Town of Oakville, Town of Milton, and Town of Halton Hills.

Salt Application Area – means the area where Salt is applied to provide traction, ice or snow control including melting ice.

Salt – means any solid or liquid chloride-based chemical used to melt ice, provide traction and/or ice / snow control.

Low Density Residential – means any residentially zoned lot containing 4 or less units

Policy Comparison Overview

Application, Handling and Storage of Road Salt

Tool	Current Policy (2022)	Current Policy Number	Proposed Policy	New Policy Number
Land Use Planning	Prohibit salt storage facilities with 5000 tonnes using Planning Act tools.	T-32-C	Proposed to be repealed	N/A
Restricted Land Use (S. 59)	Prohibit through planning act tools salt storage facilities with greater than 5000 tones of capacity.	T-32-C	Proposed to be repealed	N/A
Prohibition (S. 57)	N/A	N/A	New: Existing and Future significant threat and storage of salt is or would be fully exposed to precipitation and run off or snow melt, to be prohibited.	T-32.1-C
Risk Management Plan (S.58)	N/A	N/A	New: Existing and Future significant threat where salt is stored on any property other than low density residential and the salt has the potential to be exposed to precipitation and run off or snow melt, to be managed with a RMP.	T-32.2-C
Other	Niagara Escarpment is requested to prohibit salt storage facilities with 5000 tonnes using Planning Act tools.	T-33-S	Niagara Escarpment is requested to prohibit the storage of salt that is fully exposed to precipitation and run off or snow melt.	T-33-S
Education and Outreach	Municipalities to develop and continue their education and outreach on the effects of road salt on drinking water sources.	T-34-C	Municipalities to develop and continue their education and outreach on the effects of road salt on drinking water sources.	T-34-C
Other	Salt Management Plans shall be updated within 2 years of SPP approval. WHPAs and IPZ to be identified and enhance best management practices.	T-35-C	Municipalities will ensure their Salt Management plans are up to date and correctly identify vulnerable zones (WHPA, IPZ) and enhance best management practices in these areas.	T-35-C
Other	MTO and De-icing contractors continue to implement best practises for salt application and are requested to update their salt management plans.	T-36-S	MTO and De-icing contractors continue to implement best practises for salt application and are requested to update their salt management plans.	T-36-S
Risk Management Plans (S. 58)	N/A	N/A	New: Existing and Future significant threat where salt could be applied, the area is 200+ meters square or 8 parking spaces and the property is NOT low density residential to be managed with a RMP.	T-36.1-C

Storage of Snow

Tool	Current Policy (2022)	Current Policy Number	Proposed Policy	New Policy Number
Land Use Planning	Prohibit future snow storage of 5000 tons or more using planning act tools.	T-37-C	Proposed to be repealed	N/A
Other	Niagara Escarpment is requested to prohibit future snow storage facilities.	T-38-S	Niagara Escarpment is requested to prohibit the storage of snow on an area greater than 200 metres square.	T-38-S
Land Use Planning	Site plan to include best management practices	T-39-C	Site plan to include best management practices (removed reference to ICA, added 200mSquare minimum threshold)	T-39-C
Risk Management Plan (S.58)	N/A	N/A	New: Where the area on which snow is or would be stored is less than 200 metres sq or where snow is stored is more than 200 metres sq. The drinking water threat will be managed with a RMP (S.58)	T-39.1-C

Proposed Policies

Policy ID	T-32.1-C
Threat	Handling and Storage of Road Salt
Policy Tool	Prohibition
Policy Implementer	Risk Management Official
Policy	<p>a) Where the handling and storage of road Salt is or would be a significant drinking water threat and the storage is exposed to precipitation or runoff from precipitation or snow melt, this activity shall be designated for the purpose of Section 57 of the CWA and shall be prohibited.</p> <p>b) The Risk Management Official shall document in their annual report, in accordance with Section 65 of Ontario Regulation 287/07, actions taken regarding the handling and storage of road Salt and submit this report to the Source Protection Authority by February 1 of each year.</p>
Legal Effect (Appendix C)	<p>a) Must conform with – legally binding. List G (S.57 prohibition policy)</p> <p>b) Must conform with – legally binding. List F (monitoring policy)</p>
Where Policy Applies	<p>See Figures 2 to 11.</p> <p>WHPA-A & B – V. score 10; WHPA-E – V. score 9; ICA (chloride)</p>
When Policy Applies	Existing/Future

Policy ID	T-32.2-C
Threat	Handling and Storage of Road Salt
Policy Tool	Risk Management Plan
Policy Implementer	Risk Management Official
Policy	<p>a) The handling and storage of road Salt is designated for the purpose of Section 58 of the CWA and a Risk Management Plan shall be required where all of the following applies:</p> <ol style="list-style-type: none"> 1. the activity is or would be a significant drinking water threat; and 2. the handling and storage of road Salt has the potential to be exposed to precipitation or runoff from precipitation or snow melt; and 3. the property is used for any land uses except low density residential. <p>b) The Risk Management Official shall document in their annual report, in accordance with Section 65 of Ontario Regulation 287/07, actions taken regarding the handling and storage of road Salt and submit this report to the Source Protection Authority by February 1 of each year.</p>
Legal Effect (Appendix C)	<p>a) Must conform with – legally binding. List H (S.58 RMP policies)</p> <p>b) Must conform with – legally binding. List F (monitoring policy)</p>
Where Policy Applies	<p>See Figures 2 to 11.</p> <p>WHPA-A & B – V. score 10; WHPA-E – V. score 9; ICA (chloride)</p>
When Policy Applies	Existing/Future

Policy ID	T-33-S
Threat	Handling and Storage of Road Salt
Policy Tool	Other Tools: Niagara Escarpment Plan
Policy Implementer	Niagara Escarpment Commission
Policy	<p>a) Where the handling and storage of road salt is or would be a significant drinking water threat and the storage is exposed to precipitation or runoff from precipitation or snow melt, the Niagara Escarpment Commission is requested to prohibit the activity in the Niagara Escarpment Plan.</p> <p>b) The Niagara Escarpment Commission is requested to provide to the Source Protection Authority by February 1 each year a report of the actions taken to prohibit the activity.</p>
Legal Effect (Appendix C)	<p>a) Strategic – non-legally binding. List K (other bodies)</p> <p>b) Must conform with – legally binding. List F (monitoring policy)</p>
Where Policy Applies	<p>See Figures 2 to 11.</p> <p>WHPA-A & B – V. score 10; WHPA-E – V. score 9; ICA (chloride)</p>
When Policy Applies	Existing/Future

Policy ID	T-34-C
Threat	Application, Handling and Storage of Road Salt
Policy Tool	Education and Outreach
Policy Implementer	City of Hamilton and the Regional Municipality of Halton
Policy	<p>Where the application, handling and storage of road Salt is or would be a significant drinking water threat,</p> <p>a) City of Hamilton and the Regional Municipality of Halton</p> <p>b) shall continue to implement an education and outreach programs to address the impacts of road salt on drinking water sources and the use of best management practices. Key messages should include efficient use of road salts and the use of alternatives to help address newly identified threats.</p> <p>c) The City of Hamilton and the Regional Municipality of Halton shall document the actions taken for any new or existing education and outreach program addressing the application, handling and storage of road salt, and report this information to the Source Protection Authority by February 1 of each year. At a minimum, the report must include additional details on how the significant drinking water threat was managed and/or ceased to be significant.</p>
Legal Effect (Appendix C)	<p>a) Must comply with – legally binding. List E (municipalities)</p> <p>b) Must conform with – legally binding. List F (monitoring policy)</p>
Where Policy Applies	<p>See Figures 2 to 11.</p> <p>WHPA-A & B – V. score 10; WHPA-E – V. score 9; ICA (chloride)</p>
When Policy Applies	Existing and future
Notes	Education and outreach programs inform public and private sectors about minimizing the impacts from the application, handling and storage of road salt on the sources of municipal drinking water while ensuring the safety of the traveling public.

Policy ID	T-35-C
Threat	Application, Handling and Storage of Road Salt
Policy Tool	Salt Management Plans
Policy Implementer	City of Hamilton, Town of Milton, Town of Halton Hills, City of Burlington, Town of Oakville, Township of Puslinch, County of Wellington
Policy	<p>Where the application, handling and storage of road Salt is or would be a significant drinking water threat,</p> <p>a) City of Hamilton, Town of Milton, Town of Halton Hills, City of Burlington, Town of Oakville, Township of Puslinch, County of Wellington shall ensure their Salt Management Plans are up to date and identify the location of wellhead protection areas and intake protection zones and enhance best management practices in these areas.</p> <p>b) City of Hamilton, Town of Milton, Town of Halton Hills, City of Burlington, Town of Oakville, Township of Puslinch, County of Wellington shall advise the Source Protection Authority of any revisions to the Salt Management Plans by February 1 of each year.</p>
Legal Effect (Appendix C)	<p>a) Must comply with - legally binding. List E (municipalities)</p> <p>b) Must conform with – legally binding. List F (monitoring policy)</p>
Where Policy Applies	<p>See Figures 2 to 11.</p> <p>WHPA-A & B – V. score 10; WHPA-E – V. score 9; ICA (chloride)</p>
When Policy Applies	Existing and future

Policy ID	T-36-S
Threat	Application of Road Salt
Policy Tool	Best Practices
Policy Implementer	Ministry of Transportation
Policy	<p>To seek collaboration on the use of best practices for the application of road salt on Provincial roads where this activity could be a significant, moderate, or low drinking water threat,</p> <ul style="list-style-type: none"> a) the Ministry of Transportation and their supporting de-icing contractors are requested to continue the proactive implementation of their salt management plans and to continue the use of best management practices within wellhead protection areas and intake protection zones. b) the Ministry of Transportation is requested to update their salt management plan, as required, to ensure consistency with the most current versions of Environment Canada's Code of Practice for the Environmental Management of Road Salts and the Transportation Association of Canada's Syntheses of Best Practices. c) the Ministry of Transportation should continue their ongoing investigation and implementation of innovative practices and new mitigative technologies regarding road salt application and the management of infiltration and runoff. d) the Ministry of Transportation is requested to actively consider the creation of a pilot project utilizing new practices and mitigative technologies for road salt application or the management of runoff that could benefit drinking water sources within the Halton-Hamilton Source Protection Region. e) the Halton Region and Hamilton Region Conservation Authorities shall consult with the Ministry of Transportation to: <ul style="list-style-type: none"> 1. determine the status of the Ministry's salt management plan and, if revised, request a copy; and 2. determine the status of pilot projects underway and proposed future pilot projects designed to protect drinking water sources in the Halton-Hamilton Source Protection Region and report on this information to the Source Protection Authority by February 1 of each year.

Legal Effect (Appendix C)	a), b), c), d) Significant threats: Strategic - non-legally binding. List K; Moderate and low threats: Strategic – non-legally binding. List J. e) Must conform with – legally binding. List F (monitoring policy)
Where Policy Applies	Significant threats: See Figures 2 to 11. WHPA-A & B – V. score 10; WHPA-E – V. score 9; ICA (chloride)
When Policy Applies	Existing and future
Notes	The investigation and implementation of innovative practices and new mitigative technologies regarding road salt application and the management of infiltration and runoff are key to protecting drinking water sources.

Policy ID	T-36.1-C
Threat	Application of Road Salt
Policy Tool	Risk Management Plan
Policy Implementer	Risk Management Official
Policy	<p>a) The application of road salt shall be designated for the purpose of Section 58 of the CWA, and a Risk Management Plan shall be required where all of the following applies:</p> <ol style="list-style-type: none"> 1. the activity is or would be a significant drinking water threat. 2. Salt is or could be applied to the property. 3. the Salt Application Area is equal to or greater than 200 square metres or 8 parking spots; and 4. the property is used for any land uses except low density residential. <p>b) The Risk Management Official shall document in their annual report, in accordance with Section 65 of Ontario Regulation 287/07, actions taken regarding risk management plans for the application of road Salt and submit this report to the Source Protection Authority by February 1 of each year.</p>
Legal Effect (Appendix C)	<p>a) Must conform with – legally binding. List H (S.58 RMP policies)</p> <p>b) Must conform with – legally binding. List F (monitoring policy)</p>
Where Policy Applies	<p>See Figures 2 to 11.</p> <p>WHPA-A & B – V. score 10; WHPA-E – V. score 9; ICA (chloride)</p>
When Policy Applies	Existing/Future

Policy ID	T-38-S
Threat	Storage of Snow
Policy Tool	Niagara Escarpment Plan
Policy Implementer	Niagara Escarpment Commission
Policy	<p>Where the storage of snow would be a significant drinking water threat and the area on which the snow would be stored is greater than 200 metres square,</p> <p>a) the Niagara Escarpment Commission is requested to prohibit the storage of snow in the Niagara Escarpment Plan.</p> <p>b) the Niagara Escarpment Commission is requested to provide to the Source Protection Authority by February 1 of each year a report on the actions taken to prohibit future storage of snow in the Niagara Escarpment Plan.</p>
Legal Effect (Appendix C)	<p>a) Strategic – non-legally binding. List K (other bodies)</p> <p>b) Must conform with – legally binding. List F (monitoring policy)</p>
Where Policy Applies	<p>See Figures 2 to 11.</p> <p>WHPA-A & B – V. score 10; WHPA-E – V. score 9; ICA (chloride)</p>
When Policy Applies	Future

Policy ID	T-39-C
Threat	Storage of Snow
Policy Tool	Land Use Planning
Policy Implementer	Municipal Planning Authority
Policy	<p>Where the future storage of snow would a significant drinking water threat and the area on which the snow would be stored is greater than 200 metres square,</p> <ul style="list-style-type: none"> a) the municipal planning authority shall prohibit the storage of snow on an area greater than 200m square through planning tools. b) the Municipal Planning Authority shall document in their annual report, in accordance with Section 65 of Ontario Regulation 287/07, actions taken to manage the activity and submit this report to the Source Protection Authority by February 1 of each year
Legal Effect (Appendix C)	<ul style="list-style-type: none"> a) Must conform with – legally binding. List A (Planning Authorities) b) Must conform with – legally binding. List F (monitoring policy)
Where Policy Applies	<p>See Figures 2 to 11.</p> <p>WHPA-A & B – V. score 10; WHPA-E – V. score 8; ICA (chloride)</p>
When Policy Applies	Future

Policy ID	T-39.1-C
Threat	Storage of Snow
Policy Tool	Risk Management Plan
Policy Implementer	Risk Management Official
Policy	<ul style="list-style-type: none"> a. The storage of snow shall be designated for the purpose of Section 58 of the CWA, and a Risk Management Plan shall be required where the following apply: <ul style="list-style-type: none"> 1. Any existing area upon which snow is stored; or 2. Any future area upon which snow would be stored is not more than 200 metres square. b. The Risk Management Official shall document in their annual report, in accordance with Section 65 of Ontario Regulation 287/07, actions taken to manage the activity and submit this report to the Source Protection Authority by February 1 of each year
Legal Effect (Appendix C)	<ul style="list-style-type: none"> a. Must conform with – legally binding. List H (S.58 RMP policies) b. Must conform with – legally binding. List F (monitoring policy)
Where Policy Applies	<p>See Figures 2 to 11.</p> <p>WHPA-A & B – V. score 10; WHPA-E – V. score 8; ICA (chloride)</p>
When Policy Applies	Existing/Future