

Region of Waterloo

Engineering and Environmental Services, Water and Wastewater Infrastructure Management

Report Title: 2024 Source Protection Annual Report

Summary

The Grand River Source Protection Plan (Plan) contains policies to protect Waterloo Region's municipal drinking water sources. The Clean Water Act requires the Region and area municipalities to report on the progress of implementation of Plan policies to the Grand River Conservation Authority in their role as the Source Protection Authority (SPA) by submitting two reports annually - the Municipal Annual Report and the Risk Management Official (RMO) Annual Report. The information presented in this report represents a summary of implementation progress in 2024 submitted by the Region, on behalf of the Region and area municipalities, to the SPA. The full submission questions and responses were developed by the Ministry of Environment Conservation and Parks (MECP) and are included in the report Appendix.

Implementation progress includes the following:

- Staff negotiated and signed 64 Risk Management Plans (RMPs), one of which replaced an RMP that had expired¹. Staff negotiated an additional 24 RMP amendments. The majority of these addressed winter maintenance (de-icing salt application) activities related to new or expanding parking lots and vehicle driveways and were required as part of the development and building permit approvals process.
- Staff completed 56 in-person inspections to confirm activities, document practices and collect site information, and to ensure compliance with negotiated RMPs. Staff continue to engage with property owners and/or managers to encourage compliance through proactive means, including traditional site visits, emails, and phone calls. External partners completed an additional 50 on-site consultations² to document practices and collect site information specifically related to de-icing salt application on existing parking lots and vehicle driveways.
- Staff continue to screen Planning and building permit applications to ensure compliance with Source Protection Plan policies in accordance with the Clean

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Water Act. Staff utilize the Region's innovative online source water protection mapping tool (TAPS), which flags Plan policies and required actions to ensure compliance. The TAPS tool issued 771 Notices of Source Protection Plan Compliance to developers/property owners in 2024, while staff generated an additional 80 Notices manually. Region staff continue to actively monitor system usage and provide guidance and training to municipal staff and public users when required.

- Area municipal staff completed 15 septic system inspections required under the Ontario Building Code in accordance with Plan policies as part of the third inspection cycle (2023-2027).
- The Plan identified twelve well systems with elevated levels and/or increasing trends of sodium, chloride, nitrate and/or trichloroethylene (TCE, an industrial solvent) representing source water quality concerns. Concentrations at 24 wells across nine of these systems showed increasing sodium and/or chloride trends in 2024 related to the application of winter de-icing salt on roads, parking lots, multi-use trails and sidewalks. While RMPs have been negotiated on over 500 properties since the Plan came into effect, the Clean Water Act does not provide sufficient authority to require less salt be applied due to the slip-and-fall liability framework in Ontario. Accordingly, the policies in the Plan are not enough to reverse the increasing impacts in the water supply sources and groundwater quality degradation is continuing.

The Clean Water Act requires municipalities in Ontario to develop watershed-based source protection plans which contain policies to protect municipal drinking water sources. The locally developed Plan was approved in 2015 and has been in effect since July 1, 2016.

The Plan policies affect thousands of properties within Waterloo Region. Staff have prioritized implementation on screening of development and building permit applications for RMP requirements and negotiating RMPs for existing activities close to municipal supply wells and in areas of higher vulnerability for wells with drinking water quality issues.

¹ Replacements for expired Risk Management Plans are not included in Annual Report numbers listed in Section 2 of the Appendix

² On-site winter maintenance consultations conducted by external consulting staff are not included in Annual Report numbers listed in Section 2 of the Appendix