

Region of Waterloo

Engineering and Environmental Services, Water and Wastewater Services

Report Title: 2022 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 2022 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 and are included in the report Appendix.

Implementation progress includes the following:

- Staff negotiated and signed 73 Risk Management Plans (RMPs) and 15 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 21 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.
- Planning and building permit applications continue to be screened through 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 696 Notices of Source Protection Plan Compliance to developers/property owners in 2022, while Region staff continue to actively monitor system usage,

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and provide guidance and training to municipal staff and public users when required.

- Area municipal staff have completed the second cycle (2018-2022) of septic system inspections required under the Ontario Building Code in accordance with Plan policies with 261 inspections conducted in 2022. The Region provided 146 rebates totalling \$32,850 to eligible homeowners to assist with the cost of pumping out their systems prior to inspection.
- Twelve well systems with elevated levels and/or increasing trends of sodium, chloride, nitrate and/or trichloroethylene (TCE, an industrial solvent) were identified in the Plan, representing source water quality concerns. Concentrations at 21 wells across nine of these systems showed increasing sodium and/or chloride trends in 2022 related to the application of winter de-icing salt on roads, parking lots and sidewalks. While RMPs have been negotiated on over 450 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 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.

Appendix

Section 1: Policy Implementation Status

Table 1.1 provides a summary of the status of the policies in the Grand River Source Protection Plan using the definitions defined by the Ministry of Environment Conservation and Parks. Policies can be found in the Region of Waterloo chapter of the Grand River Source Protection Plan available at www.sourcewater.ca.

Definitions:

Implemented – means action(s) was taken for these policies by the implementing body(ies) or if it is an ongoing activity, then processes have been established and are in place.

Policy outcome(s) evaluated; no further action(s) required – means that through their evaluation, the implementing body has determined that current and/or existing procedures/processes/programs achieve the policy outcome(s), or that it is not advisable to take action at this time. As a result, a decision was made by the implementing body that the policy is considered implemented.

In progress/some progress made – means that some action(s) were taken on the policy, but further action(s) is planned or is underway.

No progress made – means that no action(s) were taken yet on the policy by the implementing body(ies) and it remains under consideration.

No information available/no response received – means that an implementing body(ies) does not have enough information to determine the implementation status of a particular policy(ies).

No response required/not applicable – means that the monitoring policies do not require a response or a report on actions taken; the implementing body is not named in the monitoring policy OR, that the policy is not applicable to the implementing body.

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Table 1.1 - Policy Implementation Status

Policy Number	Threat Type	Implementation Status
RW-CW-1.3	Future and Existing	Implemented
RW-MC-1.4	Future	In progress/some progress made
RW-MC-1.5	Future and Existing	In progress/some progress made
RW-MC-1.6	Future and Existing	Implemented
RW-MC-1.18	Existing	Implemented
RW-NB-1.20	Existing	In progress/some progress made
RW-NB-1.21	Existing	Implemented
RW-NB-1.22	Future and Existing	Implemented
RW-NB-1.23	Future	In progress/some progress made
RW-NB-1.24	Future and Existing	In progress/some progress made
RW-NB-1.25	Future and Existing	In progress/some progress made
RW-CW-3	Future	Implemented
RW-CW-4	Existing	In progress/some progress made
RW-CW-5	Future and Existing	In progress/some progress made
RW-MC-6	Future	In progress/some progress made
RW-MC-7	Future	In progress/some progress made
RW-MC-8	Future and Existing	Implemented
RW-MC-8.1	Existing	Implemented
RW-CW-12.1	Future	Implemented
RW-CW-14	Existing	In progress/some progress made

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Policy Number	Threat Type	Implementation Status
RW-MC-17	Future	In progress/some progress made
RW-MC-18	Future	In progress/some progress made
RW-CW-19	Existing	In progress/some progress made
RW-CW-19.1	Future	Implemented
RW-CW-20.1	Existing	No progress made
RW-CW-20	Future and Existing	Implemented
RW-CW-20	Future	Implemented
RW-CW-20	Existing	In progress/some progress made
RW-CW-21	Future and Existing	In progress/some progress made
RW-CW-24	Future and Existing	In progress/some progress made
RW-CW-24	Future and Existing	Implemented
RW-CW-23	Future	Implemented
RW-CW-23	Existing	In progress/some progress made
RW-CW-28	Future and Existing	Implemented
RW-CW-29	Future	Implemented
RW-CW-29	Existing	In progress/some progress made
RW-CW-30	Future and Existing	In progress/some progress made
RW-CW-30	Future and Existing	Implemented
RW-CW-31	Future	Implemented
RW-CW-32	Future	Implemented
RW-CW-32	Existing	In progress/some progress made

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Policy Number	Threat Type	Implementation Status
RW-CW-33	Future	In progress/some progress made
RW-CW-33	Existing	In progress/some progress made
RW-CW-33	Existing	Implemented
RW-CW-34	Future	Implemented
RW-CW-34.1	Future and Existing	In progress/some progress made
RW-CW-35	Future	Implemented
RW-CW-35	Existing	In progress/some progress made
RW-CW-35.1	Future	Implemented
RW-CW-35.1	Existing	In progress/some progress made
RW-MC-36	Future	In progress/some progress made
RW-CW-37	Future and Existing	In progress/some progress made
RW-CW-37	Future and Existing	Implemented
RW-CW-39	Existing	In progress/some progress made
RW-CW/NB-40	Future	In progress/some progress made
RW-CW-41	Future and Existing	In progress/some progress made
RW-CW-42	Future	Implemented
RW-CW-42	Existing	In progress/some progress made
RW-CW-43	Future and Existing	In progress/some progress made
RW-CW-43	Existing	Implemented
RW-CW-45	Future and Existing	In progress/some progress made
RW-CW-46	Future	Implemented

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Policy Number	Threat Type	Implementation Status
RW-CW-46	Existing	In progress/some progress made
RW-CW-47	Future	In progress/some progress made
RW-CW-48	Future and Existing	In progress/some progress made
RW-CW-48	Future and Existing	Implemented
RW-CW-50	Future and Existing	In progress/some progress made
RW-CW-51	Future	Implemented
RW-CW-51	Existing	In progress/some progress made
RW-CW-52	Existing	Implemented
RW-CW-53	Future and Existing	In progress/some progress made
RW-CW-54	Future and Existing	In progress/some progress made
RW-CW-55	Future	Implemented
RW-CW-55	Existing	In progress/some progress made
RW-CW-55.1	Existing	Implemented
RW-CW-56	Future and Existing	Implemented
RW-CW-56	Future	Implemented
RW-CW-56	Existing	Implemented
RW-CW-57	Future and Existing	In progress/some progress made
RW-CW-58	Future	Implemented
RW-CW-58	Existing	In progress/some progress made
RW-CW-59	Existing	Implemented
RW-CW-60	Future and Existing	In progress/some progress made

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Policy Number	Threat Type	Implementation Status
RW-CW-62	Future and Existing	In progress/some progress made
RW-CW-63	Future and Existing	In progress/some progress made
RW-CW-64	Future	In progress/some progress made
RW-CW-68	Future	No progress made

Section 2: Annual Reporting Questions

A number of additional questions are required to be answered depending on the implementation status response in Table 1.1. The specific questions and answers that apply to the Region of Waterloo are provided below.

Table 2.1 – Annual Reporting Questions and Responses

Report ID	Question Details	Response
15	If the implementation statuses "no progress made" or "no information available/no response received" were chosen for any policy(ies) in Section 2 (as summarized in Table 1.1), please list the policy(ies) number, explain why no progress was made or no information was available, and outline next steps to support implementation.	<p>RW-CW-20.1 - The Region of Waterloo has not prioritized storm water incentives due to a lack of eligible properties. The Region will continue to evaluate the requirement of an incentive program, and will implement one as warranted;</p> <p>RW-MC-68 - Staff have not yet completed a review of Official Plan policies for water taking in the WHPA-Q.</p>

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20	<p>State the number of Risk Management Plans (RMP) agreed to by the RMO under subsection 56 (1) or 58 (5) of the Act within the source protection area, in this reporting period.</p> <p>Note – this number does not include Risk Management Plan amendments.</p>	73
21	<p>State the number of RMPs established by the RMO under subsection 56(6), 58(10) or (12) of the Act within the source protection area, in this reporting period.</p>	0
22	<p>For each RMP agreed to by the RMO for this reporting period (under subsection 56 (1) or 58 (5) of the Act), and established by the RMO for this reporting period (under subsection 56 (6), 58 (10) or (12) of the Act), please list the RMP number, the location of the property to which the RMP relates, the type of Protection Zones(s) (e.g., WHPA, IPZ) where the property is located, and the activity(ies) to which the RMP relates.</p>	See Table 2.2 – Risk Management Plan Summary
23	<p>How many existing* significant drinking water threats have been managed through risk management plans agreed to or established in this reporting period (* meaning engaged in OR enumerated as existing significant threats)?</p>	37

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24	Please state the number of known properties with existing significant drinking water threat activities that are subject to section 58 policy but are not yet managed with an established or agreed to risk management plan. This number is a snapshot in time and may change from one reporting period to the next.	2294
27	Were any risk management plans cancelled within your municipality because of updates or amendments or other changes, for this reporting period?	0 (none)
28	State the number of properties (i.e., parcels) with risk management plans agreed to or established for this reporting period	112
30	State the number of RMPs currently in-progress [Optional]	125
36	State the number of RMPs the RMO refuses to agree to or to establish under subsection 56(9), 58(15) or (16) of the Act during the reporting period.	
37	For each RMP that the RMO refused to agree to or establish during the reporting period, please list the location of the property, the type of Protection Zone (e.g., WHPA-IPZ) where the property is located, the activity(ies) to which the RMP relates, and a brief description of the reason for the refusal.	Not applicable

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42	How many section 59 notices were issued in this reporting period for activities to which a risk management plan (section 58) policy applied, as per ss. 59(2)(b) of the Clean Water Act?	66
43	How many section 59 notices were issued in this reporting period for activities to which neither a prohibition (section 57) nor a risk management plan (section 58) policy applied, as per ss. 59(2)(a) of the Clean Water Act?	724
50	State the number of notices and/or copies of prescribed instruments that state the prescribed instrument conforms with the significant drinking water threat policies in the source protection plan (i.e., statement of conformity confirms the instrument holder is exempt from requiring a risk management plan) did the risk management official give under subsections 61(2), (7) and (10) during the reporting period?	0
51	State the number of notices and/or copies of prescribed instruments that state the prescribed instrument conforms with the significant drinking water threat policies in the source protection plan (i.e., statement of conformity confirms the instrument holder is exempt from requiring a risk management plan) did the risk management official RECEIVE under subsections 61(2), (7) and (10) of O. Reg. 287/07 in this reporting period?	0

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52	For each notice given or received during the reporting period, (under subsections 61 (2), (7) and (10)) please list the notice number, whether the RMO received/gave the notice, the location of the property to which the notice relates, the type of Protection Zone (e.g., WHPA-IPZ) where the property is located, the activity(ies) to which the notice relates, and the type of Prescribed Instrument (if any) referred to in the notice.	Not applicable
57	State the number of inspections carried out under section 62 of the Clean Water Act, 2006, during the reporting period.	21
58	For each inspection carried out under section 62 of the Clean Water Act, 2006, during the reporting period, please list the inspection number, and the activity(ies) to which the inspection relates.	See Table 2.3 - Inspection Summary
63	State the number of inspections carried out in respect of an activity to which section 56 of the Clean Water Act, 2006, applies during the reporting period.	0
64	State the number of those cases (inspections under s.56) in which the person was not complying with a risk management plan agreed to or imposed under section 56 of the Clean Water Act, 2006, during the reporting period	0
66	State the number of inspections that were carried out for activities (existing or future) that are prohibited under section 57 of the Clean Water Act, 2006, for this reporting period.	1

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67	State the number of those cases (inspection under s.57) that showed activities were taking place on the landscape even though they were prohibited (i.e., in contravention) under section 57 of the Act, in this reporting period.	0
70	How many existing significant drinking water threats have been prohibited as a result of section 57 prohibitions in this reporting period?	1
80	State the number of inspections that were carried out for activities that require a risk management plan under section 58 of the Clean Water Act, 2006, for this reporting period.	21
82	State the number of those cases (inspections under s.58) in which the person was carrying out an activity in contravention of subsection 58 (1) of the Act (i.e., person engaging in a drinking water threat activity without a risk management plan in place as required by the source protection plan), during the reporting period.	0
83	State the number of those cases (inspections under s.58) in which the person was not complying with a risk management plan under section 58 of the Clean Water Act, 2006, for this reporting period.	0
84	State the total number of notices issued where there were cases of contraventions and/or non-compliance found with section 57 for this reporting period.	0

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85	State the total number of notices issued where there were cases of contraventions and/or non-compliance found with section 58 for this reporting period.	0
86	State the number of orders issued for contraventions and/or non-compliance found with section 57 for this reporting period.	0
87	State the number of orders issued for contraventions and/or non-compliance found with section 58 for this reporting period.	0
90	For each order issued during this reporting period, please list the order number, the location of the property to which the order relates, the type of Protection Zone (e.g., WHPA-IPZ) where the property is located, the activity(ies) to which the order relates, and a brief description of the circumstances related to the order.	Not applicable
135	State the number of risk assessments submitted under section 60 of the Clean Water Act, 2006, during the reporting period.	0
140	State the number of risk assessments accepted during the reporting period.	0
145	State the number of risk assessments not accepted during the reporting period.	0

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150	For each risk assessment submitted during this reporting period, please list the risk assessment number, the location of the property to which the order relates, the type of Protection Zone (e.g., WHPA-IPZ) where the property is located, and the activity(ies) to which the risk assessment relates.	Not applicable
180	State the number of times the RMO caused a thing to be done under s.64 of the Clean Water Act, 2006, during the reporting period.	0
185	For each thing (under s.64) during this reporting period, please list the notice number, the location of the property to which the thing relates, the type of Protection Zone (e.g., WHPA-IPZ) where the property is located, and the activity(ies) to which the notice under s.64 relates.	Not applicable
206	State the total number of prosecutions during the reporting period.	0
207	State the number of prosecutions that resulted in a conviction under section 106 of the Clean Water Act, 2006, during the reporting period.	0
208	For each prosecution during this reporting period, briefly describe each offense, and whether the prosecution resulted in a conviction.	Not applicable
223	What is the current status of your Official Plan conformity exercise?	See Table 2.4 - Official Plan Conformity Status
226	What is the current status of your Zoning By-Law conformity exercise?	See Table 2.5 - Zoning By-Law Conformity Status

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241	State the number of source water protection signs installed on municipal roads in your municipality for this reporting period.	0
242	State the number of source water protection signs installed at other locations (i.e. not on municipal or provincial roads) (if applicable) in your municipality, for this reporting period.	0
260	Current total number of on-site sewage systems in your municipality that are assessed as significant drinking water threat activities and that are required to be inspected every five years in accordance with the Ontario Building Code. This reportable provides a snapshot in time and may change year to year.	776
261	Of those requiring inspections, how many inspections of on-site sewage systems were due to be carried out in this reporting period?	296
262	How many inspections of on-site sewage systems that were due, were completed in this reporting period?	261
263	Of the on-site sewage systems inspected during this reporting period, how many required minor maintenance work (e.g. tank lid replacement, etc)?	6
264	Of the on-site sewage systems inspected during this annual reporting period, how many on-site sewage systems inspected required major maintenance work (e.g. tank replacement, etc)?	2

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270	Of the on-site sewage systems inspected during this annual reporting period, how many required no maintenance work?	253
271	For those on-site sewage systems that were due to be inspected this reporting period but were not, and are now out of compliance, please indicate why they were not all inspected.	Inspections delayed/postponed due to COVID-19 restrictions; no response and/or no entry so additional follow up is pending; waiting on additional information from landowner
276	If applicable, please indicate if your municipality has not yet established or initiated the mandatory on-site sewage system inspection program (i.e., the first inspection cycle) in your source protection region/area. As part of your response, please indicate the reason(s) for not yet initiating the mandatory on-site sewage inspection program (if known) and the steps that have been taken to ensure compliance with the mandatory inspection program.	Not applicable
281	If applicable, report on the current status (as of previous year) of Issues identified in your reporting area. Begin by identifying the drinking water system(s) and any associated drinking water issue(s)/parameter(s) (chemical or pathogen) that have been identified, then indicate whether an Issue Contributing Area (ICA) was delineated for the identified issue(s), and any observations in the concentration or trend for each issue.	See Table 2.6 - Issue Contributing Area Summary

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<p>285</p>	<p>If your municipality has an Issue Contributing Area, describe any actions taken by the municipality to ensure the safe delivery of drinking water.</p>	<p>Chloride concentrations continue to increase in several well systems related to the application of winter de-icing salt on roads, parking lots and sidewalks. This trend is consistent with staff's assessment that it will take several to tens of years for changes in de-icing practices at surface to potentially change concentrations in the wells. With that being said, the number of properties with approved RMPs for salt application is not sufficient to change the overall salt loading to groundwater, and it will take many more years of implementation before this changes. Region staff continue to engage local stakeholders (including other municipal staff, property owners/managers, and the public) on a variety of initiatives, including RMP negotiations, education and awareness campaigns (i.e. Shifting Salt), and promotion of best practices. The Region expanded the area where an RMP is required to the entire ICA of a well with a designated chloride and/or sodium water quality issue. This change was implemented in the 2020 Plan amendment, and made</p>
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		<p>in recognition that the current scope of RMP requirements is not sufficient to mitigate the impact of salt application related to winter maintenance on roads and parking lots. While the Region has negotiated RMPs on hundreds of properties since the Source Protection 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 degradation is continuing. A more detailed description of the issues and recommendation to MECP to address this issue can be found in the Lake Erie Source Protection Committee Report SPC -19-12-02 dated December 19, 2019.</p>
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<p>309</p>	<p>Indicate which of the listed Significant Drinking Water Threats (SDWTs) were being engaged in (enumerated as existing significant threats) at the time of plan approval. Then, using the formula for the running tally of enumerated threats as explained below, complete the cells with the information for each SDWT indicated as existing in the source protection area.</p> <p>The running tally consists of the formula: A+B-C-D where: A = Estimate of SDWTs engaged in/enumerated when latest source protection plan approved; B = Additional SDWTs identified after latest source protection plan approved as a result of field verification (i.e., not part of "A" estimate); C = SDWTs included in enumeration estimates at time of latest plan approval but subsequently determined through field verification that: (i) it was not actually engaged in at a particular location after all OR (ii) it was no longer engaged in (e.g., land may still have an agricultural operation but owner no longer applying pesticides for their own reasons); and D = SDWTs (from category A or B) that have been addressed because a policy(ies) have been implemented.</p>	<p>See Table 2.7 – Significant Drinking Water Threats Summary</p>
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311	Please provide comments below to explain the overall progress made in addressing existing significant threat activities and include the percentage of overall progress made within the comments provided.	Implementation will be phased in over tens of years given the large number of properties and limited staff resources. Region staff have taken the approach to prioritize Risk Management Plan policies for properties and activities with the highest potential for impact. The percentage of overall progress, which includes activities managed through Risk Management Plans and septic systems inspected, or to be inspected, during the 2018-2022 cycle, is 30%
330	Do you have any other item on which you wish to report?	Not applicable

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<p>340</p>	<p>What positive outcomes (e.g., less water consumption, changes in behaviour, reduction in phosphorus and nitrogen concentrations, less chloride from road salt, reduction in algal blooms, human health protected, etc.), if any, have potentially resulted from the implementation of source protection plan policies?</p>	<p>Region of Waterloo staff continue to engage with property owners/managers and the public on the impacts of salt application and the importance of winter maintenance best practices utilizing a variety of approaches, including education campaigns and Risk Management Plan negotiations. Unfortunately, chloride concentrations continue to increase in the majority of well systems related to the application of winter de-icing salt on roads, parking lots and sidewalks. While the Region has negotiated RMPs on hundreds of properties since the Source Protection Plan came into effect and implemented other related programs, 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 degradation continues.</p>
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360	If applicable to your municipality's monitoring policies, please report if any applications or environmental assessments have been initiated for new airport facilities within vulnerable areas, during the current reporting period.	Not applicable
368	If applicable to your municipality's monitoring policies, document the nature of any new education and outreach program established regarding fuel oil tanks, the number of persons contacted, and the location of the participants, during the current reporting period.	Not applicable
400	If applicable to your municipality's monitoring policies, please provide a summary of the actions taken during the current reporting period to ensure that the management of runoff that contains chemicals used in the de-icing of aircraft never becomes a significant drinking water threat.	Not applicable

Table 2.2 - Risk Management Plan Summary

RMP Number	Protection Zone	Activities
10164-01	WHPA	Application of road salt
10140-01	WHPA	Application of road salt
00148-01	WHPA	Application of road salt/Discharge from a storm water management facility
00144-01	WHPA	Application of road salt/Discharge from a storm water management facility
00150-01	WHPA	Application of road salt
10177-01	WHPA	Application of road salt

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RMP Number	Protection Zone	Activities
00129-01	WHPA	Application of road salt/Discharge from a storm water management facility
00147-01	WHPA	Application of road salt/Discharge from a storm water management facility
00155-01	WHPA	Application of road salt
10059-01	WHPA	Application of road salt
10011-01	WHPA	Application of road salt/Handling and storage of fuel
00153-01	WHPA	Application of road salt
00154-01	WHPA	Application of road salt
10176-01	WHPA	Application of road salt
00158-01	WHPA	Application of road salt/Discharge from a storm water management facility
10104-01	WHPA	Application of road salt
00149-01	WHPA	Application of road salt
00111-01	WHPA	Application of road salt/Discharge from a storm water management facility
00151-01	WHPA	Application of road salt/Discharge from a storm water management facility
00158-01(2)	WHPA	Application of road salt
10156-01	WHPA	Application of road salt
10175-01	WHPA	Application of road salt
00157-01	WHPA	Application of road salt/Discharge from a storm water management facility

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RMP Number	Protection Zone	Activities
10180-01	WHPA	Application of road salt
00156-01	WHPA	Application of road salt/Discharge from a storm water management facility
10182-01	WHPA	Application of road salt/Storage of road salt
10147-01	WHPA	Application of road salt
10181-01	WHPA	Application of road salt/Discharge from a storm water management facility
00161-01	WHPA	Application of road salt/Discharge from a storm water management facility
10179-01	WHPA	Application of road salt
00160-01	WHPA	Application of road salt/Discharge from a storm water management facility
10185-01	WHPA	Application of road salt/Discharge from a storm water management facility
10185-01	WHPA	Application of road salt
00162-01	WHPA	Application of road salt
00166-01	WHPA	Application of road salt/Discharge from a storm water management facility
00152-01	WHPA	Application of road salt
00143-01	WHPA	Application of road salt
00168-01	WHPA	Application of road salt/Discharge from a storm water management facility
00169-01	WHPA	Application of road salt/Discharge from a storm water management facility

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RMP Number	Protection Zone	Activities
00172-01	WHPA	Application of road salt/Discharge from a storm water management facility
00170-01	WHPA	Application of road salt/Discharge from a storm water management facility
10169-01	WHPA	Application of road salt
00165-01	WHPA	Application of road salt
00164-01	WHPA	Application of road salt
00174-01	WHPA	Application of road salt
00171-01	WHPA	Application of road salt
00163-01	WHPA	Application of road salt
10193-01	WHPA	Application of road salt
10187-01	WHPA	Application of road salt/Storage of hazardous wastes
00176-01	WHPA	Application of road salt
00173-01	WHPA	Application of road salt
00177-01	WHPA	Application of road salt
10194-01	WHPA	Application of road salt
10192-01	WHPA	Application of road salt/Discharge from a storm water management facility
10186-01	WHPA	Application of road salt
00178-01	WHPA	Application of road salt/Discharge from a storm water management facility
00179-01	WHPA	Application of road salt/Discharge from a storm water management facility

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RMP Number	Protection Zone	Activities
00175-01	WHPA	Application of road salt/Discharge from a storm water management facility
00186-01	WHPA	Application of road salt/Discharge from a storm water management facility
00167-01	WHPA	Application of road salt
00182-01	WHPA	Application of road salt/Discharge from a storm water management facility
00183-01	WHPA	Application of road salt
00188-01	WHPA	Application of road salt/Discharge from a storm water management facility
00189-01	WHPA	Application of road salt/Discharge from a storm water management facility
10195-01	WHPA	Application of road salt
10188-01	WHPA	Application of road salt
10210-01	WHPA	Application of road salt/Discharge from a storm water management facility
10208-01	WHPA	Application of road salt
10189-01	WHPA	Application of road salt
00192-01	WHPA	Application of road salt
00180-01	WHPA	Application of road salt
10209-01	WHPA	Application of road salt
10221-01	WHPA	Application of road salt
00191-01	WHPA	Application of road salt/Discharge from a storm water management facility

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Table 2.3 - Inspection Summary

Inspection Number	Activities
2022-8002	Application of road salt
2022-8493	Application of road salt
2022-8494	Application of road salt
2022-8557	Application of road salt
2022-8613	Application of road salt
2022-9078	Application of road salt
2022-9079	Application of road salt
2022-9080	Application of road salt
2022-9092	Application of road salt
2022-9093	Application of road salt
2022-9094	Application of road salt
2022-9095	Application of road salt
2022-9130	Application of road salt/Handling and storage of a dense non-aqueous phase liquid/Storage of hazardous wastes
2022-9206	Application of road salt
2022-9207	Application of road salt
2022-9282	Application of road salt/Handling and storage of a dense non-aqueous phase liquid/Storage of hazardous wastes
2022-9338	Application of road salt
2022-9339	Application of road salt
2022-9340	Application of road salt

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Inspection Number	Activities
2022-9356	Application of road salt
2022-9417	Application of road salt

Table 2.4 - Official Plan Conformity Status

Municipality	Current Status
Region of Waterloo	In progress
City of Cambridge	Not started
City of Kitchener	Not started
Township of North Dumfries	Not started
City of Waterloo	Not started
Township of Wellesley	Not started
Township of Wilmot	In progress
Township of Woolwich	In progress

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Table 2.5 - Zoning By-Law Conformity Status

Municipality	Current Status
Region of Waterloo	Not applicable
City of Cambridge	Not started
City of Kitchener	Not started
Township of North Dumfries	Not started
City of Waterloo	Not started
Township of Wellesley	Not started
Township of Wilmot	In progress
Township of Woolwich	In progress

Table 2.6 - Issue Contributing Area Summary

Drinking Water System (Well Field)	Well / Intake	Drinking Water Issue	ICA Delineated?	Temporal Observations
Branchton Meadows	BM1, BM2	Chloride	Yes	No Change in Concentration / Trend
Elgin Street	G9	Chloride	Yes	Increasing Concentration / Trend
Elgin Street	G9	Sodium	Yes	Increasing Concentration / Trend
Elgin Street	G9	Trichloroethylene	Yes	No Change in Concentration / Trend

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Drinking Water System (Well Field)	Well / Intake	Drinking Water Issue	ICA Delineated?	Temporal Observations
Greenbrook	K1A, K4B, K4C, K5A	Chloride	Yes	Increasing Concentration / Trend
Greenbrook	K2A, K8	Chloride	Yes	No Change in Concentration / Trend
Greenbrook	K1A, K4B, K4C, K5A	Sodium	Yes	Increasing Concentration / Trend
Greenbrook	K2A, K8	Sodium	Yes	No Change in Concentration / Trend
Hespeler	H4A	Chloride	Yes	Increasing Concentration / Trend
Hespeler	H3, H3A	Chloride	Yes	No Change in Concentration / Trend
Mannheim West	K24, K26	Nitrate	Yes	No Change in Concentration / Trend
Mannheim West	K23	Nitrate	Yes	Decreasing Concentration / Trend
Middleton Street	G1, G1A, G2, G3, G14	Chloride	Yes	Increasing Concentration / Trend

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Drinking Water System (Well Field)	Well / Intake	Drinking Water Issue	ICA Delineated?	Temporal Observations
Middleton Street	G1, G1A, G2, G3, G14	Sodium	Yes	Increasing Concentration / Trend
Middleton Street	G1, G1A, G2, G3, G14	Trichloroethylene	Yes	No Change in Concentration / Trend
Parkway	K31, K32, K33	Chloride	Yes	Increasing Concentration / Trend
Parkway	K31, K32, K33	Sodium	Yes	Increasing Concentration / Trend
Parkway	K32	Trichloroethylene	Yes	No Change in Concentration / Trend
Pinebush	G5	Chloride	Yes	Increasing Concentration / Trend
Pinebush	G5	Sodium	Yes	Increasing Concentration / Trend
Rahmans (Pinebush)	P9, P15	Chloride	Yes	Increasing Concentration / Trend
Strange Street	K10A	Chloride	Yes	Increasing Concentration / Trend

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Drinking Water System (Well Field)	Well / Intake	Drinking Water Issue	ICA Delineated?	Temporal Observations
Strange Street	K10A	Sodium	Yes	Increasing Concentration / Trend
William Street	W1B, W1C, W2	Chloride	Yes	Increasing Concentration / Trend
William Street	W1B, W1C, W2	Sodium	Yes	Increasing Concentration / Trend
William Street	W1B, W1C, W2	Trichloroethylene	Yes	No Change in Concentration / Trend
Wilmot Centre	K50, K51, K52	Nitrate	Yes	Decreasing Concentration/ Trend

Table 2.7 – Significant Drinking Water Threats Summary

Threat ID	Threat	A	B	C	D	Total Enumerated Threats
1	The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act.	43	0	17	2	24
2	The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	1103	74	106	747	324

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Threat ID	Threat	A	B	C	D	Total Enumerated Threats
3	The application of agricultural source material to land.	90	0	29	8	53
4	The storage of agricultural source material.	73	0	29	1	43
5	The management of agricultural source material.	0	0	0	0	0
6	The application of non-agricultural source material to land.	5	0	3	0	2
7	The handling and storage of non-agricultural source material.	8	2	3	0	7
8	The application of commercial fertilizer to land.	109	0	21	8	80
9	The handling and storage of commercial fertilizer.	65	0	22	0	43
10	The application of pesticide to land.	58	0	9	1	48
11	The handling and storage of pesticide.	43	0	26	0	17
12	The application of road salt.	3012	380	394	151	2847
13	The handling and storage of road salt.	457	62	87	13	419
14	The storage of snow.	39	0	14	0	25
15	The handling and storage of fuel.	52	7	27	3	29

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Threat ID	Threat	A	B	C	D	Total Enumerated Threats
16	The handling and storage of a dense non-aqueous phase liquid.	37	7	18	0	26
17	The handling and storage of an organic solvent.	20	2	7	0	15
18	The management of runoff that contains chemicals used in the de-icing of aircraft.	0	0	0	0	0
19	Water taking from an aquifer without returning the water to the same aquifer or surface water body	0	0	0	0	0
20	Reducing recharge of an aquifer	0	0	0	0	0
21	The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard. O. Reg. 385/08, s. 3.	65	0	23	0	42
22	The establishment and operation of a liquid hydrocarbon pipeline	0	0	0	0	0
1000	Water conditioning salts from water softeners	0	0	0	0	0
1001	Transportation of specified substances along corridors	0	0	0	0	0
1002	Spill of Tritium from Nuclear Generating Station	0	0	0	0	0
1003	Handling storage of fuel	0	0	0	0	0

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Threat ID	Threat	A	B	C	D	Total Enumerated Threats
1004	Transportation, storage and handling of diesel/gasoline	0	0	0	0	0
1005	Transportation of Agricultural and Non-Agricultural Source Materials	0	0	0	0	0
1006	International Shipping Channel within IPZ2	0	0	0	0	0
1007	Transportation of hazardous substances along transportation corridors	0	0	0	0	0
1008	Transportation or Storage and Handling of Fuel in an Event Based Area	0	0	0	0	0
1009	Waterfowl	0	0	0	0	0
1010	Local condition	0	0	0	0	0
-----	Totals	5279	534	833	934	4044