

## Annual Report to the South Nation Source Protection Authority

**Municipality:** City of Ottawa  
**Reporting Period:** January 1, 2022 to December 31, 2022  
**Report Date:** January 31, 2023  
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The *Clean Water Act, 2006* requires that Source Protection Plans include monitoring policies for each significant threat policy (as per Subsection 22(2)). The monitoring policies will help to ensure that the Source Protection policies are effective and are being properly implemented.

The Source Protection Plan for the South Nation Source Protection Area became effective on April 1, 2015. The plan includes several policies that detail municipal reporting requirements to the Source Protection Authority. This report addresses reporting requirements as outlined in the table below.

<b>Monitoring Policy</b>	<b>Reporting Requirement</b>	<b>Table</b>
MONITORING-1	Number of Approved Risk Management Plans for Existing Activities	Table 1
MONITORING-1	Number of Approved Risk Management Plans for Future Activities	Table 2
MONITORING-1	Number of Activities Prohibited by the Municipality	Table 3
MONITORING-1	Risk Management Official Reporting	Table 4
MONITORING-1	Risk Management Office Reporting on Restricted Land Uses	Table 5
MONITORING-2	Planning Act Policies and Conformance	Table 6
MONITORING-4	Summary of Education and Outreach Programs	Table 7
MONITORING-5	Implementation of Specific Actions directed at Municipalities	Table 8

**Reporting Requirements for Policy: MONITORING-1**

<b>Policy MONITORING-1</b>
<b>Part IV <i>Clean Water Act, 2006</i> tools (restricted land use, Risk Management Plans and prohibition)</b>
<p>The Risk Management Official shall report annually by February 1<sup>st</sup> to the Source Protection Authority on significant threat policies that designate an activity for the purpose of Section 58 (Risk Management Plans) or Section 57 (prohibition) of the <i>Clean Water Act, 2006</i>. This report will include the information required in Section 65 of Regulation 287/07 (information on the establishment and enforcement of Risk Management Plans, inspections and abatement measures in addition to descriptions of the administrative, enforcement and compliance results) related to the previous calendar year.</p> <p>Additionally, the Risk Management Official shall inform the Source Protection Authority of the method/procedure used to implement GENERAL-6 (restricted land uses).</p>

Table 1: Number of Approved Risk Management Plans for Existing Activities

<b>Policy</b>	<b>Approved Risk Management Plans for Existing Activities</b>	<b>Qty.</b>
AG-2	Agricultural activities.	-
CHEM-1	Chemical threats.	-
FUEL-1	Fuel oil storage (O.Reg. 213/01).	-
FUEL-2	Liquid fuels (O.Reg. 217/01).	-
PEST-2	Application, storage and handling of pesticide.	-
SALT-2	Storage of road salt and snow.	-
WASTE-3	Waste sites without a prescribed instrument.	-

Table 2: Number of Approved Risk Management Plans for Future Activities

<b>Policy</b>	<b>Approved Risk Management Plans for Future Activities</b>	<b>Qty.</b>
AG-2	Agricultural activities.	-
FUEL-1	Chemical threats.	-
FUEL-2	Fuel oil storage (O.Reg. 213/01).	-
PEST-2	Liquid fuels (O.Reg. 217/01).	-

Table 3: Number of Activities Prohibited by the Municipality

<b>Policy</b>	<b>Activities Prohibited by the Municipality</b>	<b>Qty.</b>
CHEM-2	Chemical threats.	-
FUEL-4	Liquid fuel facilities (O.Reg. 217/01).	-
PEST-3	Commercial storage and handling of pesticides.	-
SALT-3	Storage of salt and snow.	-
WASTE-4	Waste sites without a prescribed instrument.	-

Table 4: Risk Management Official Reporting

<b>Risk Management Official Reporting</b>	<b>Qty.</b>	<b>Details Attached (Y/N)</b>
Risk Management Plans agreed to by the RMO under subsection 56(1) or 58(5) of the Act and the number of plans established by the RMO under subsection 56(6), 58(10) or (12) of the Act	-	N
Risk Management Plans the RMO refused to agree to or to establish under subsection 56(9), 58(15) or (16)	-	N
Orders issued under Part IV of the Act	-	N
Notices given to or by the RMO under subsection 61(2), (7) and (10) of the Act	-	N
Inspections carried out under section 62 of the Act (for the purpose of enforcement)	-	N
Risk assessments submitted under section 60 of the Act	-	N
RMO caused a thing to be done under section 64 of the Act	-	N
Prosecutions and convictions under section 106 of the Act	-	N

Table 5: Risk Management Office Reporting on Restricted Land Uses

<b>Detail</b>	<b>Qty.</b>
Number of Planning Act or Building Code Act applications screened by the Risk Management Office.	-
Number of notices issued under Section 59 2(a) of the <i>Clean Water Act, 2006</i> .	-
Number of notices issued under Section 59 2(b) of the <i>Clean Water Act, 2006</i> .	-
<b>Description of the method used to implement policy: GENERAL-6</b>	
<p>An interim Section 59 screening procedure is currently being implemented for new Planning Act applications:</p> <ul style="list-style-type: none"> <li>The location of the activity is verified by the municipal planner. If the activity is within a vulnerable area, the application is forwarded and reviewed by the RMO to determine any proposed activities could pose a significant drinking water threat. If there are none, a clearance e-mail is sent from the RMO to the planner stating that there is no potential for significant threat activities.</li> <li>If there is potential for a significant drinking water threat associated with the proposed activity, then the RMO consults directly with the proponent to determine if the specific activity (i.e. circumstances) is subject to Section 57 (Prohibition) or Section 58 (Risk Management Plan).</li> </ul> <p>Internal screening procedures related to applications under the Planning Act and Building Code Act will be updated through the development and implementation of a by-law to screen out activities within certain land-use designations that have no potential for significant drinking water threats. Following approval of the new Official Plan in 2021, the City has initiated the process of developing a new zoning by-law to implement the policies in the new Official Plan, including implementing new zone provisions to conform to source protection policies. Source Protection Regions will be consulted when the by-law is developed.</p>	

**Reporting Requirements for Policy: MONITORING-2**

<b>Policy MONITORING-2</b>
<b>Planning Act, 1990 policies</b>
<p>The local planning authority shall provide the Source Protection Authority with the following information for the previous calendar year:</p> <ul style="list-style-type: none"> <li>• A copy of the sections of the Official Plan and zoning by-laws which were amended to conform with the Source Protection Plan;</li> <li>• A copy of any approvals made under the Planning Act, 1990 for applications for properties in the designated land uses listed in GENERAL-6 (restricted land use); and</li> <li>• A copy of the permit for approvals made under a change of use by-law, if applicable, for properties in designated land uses listed in GENERAL-6 (restricted land use), when the permit is issued.</li> </ul>

Table 6: Planning Act Policies and Conformance

<b>Policy</b>	<b>Detail</b>	<b>Y/N</b>
GENERAL-3	The Municipality has amended sections of the Official Plan or zoning by-laws to conform to the Source Protection Plan.	Y <sup>1</sup>
GENERAL-6	The Municipality has approved applications under the Planning Act, 1990 for properties in areas designated as restricted land uses.	N
SEWG-3	The Municipality has replaced an existing sewage treatment plant. Decisions made by the planning authority under the Planning Act, 1990 conform to the policy.	N
SEWG-3	The Municipality has expanded an existing municipal sewage treatment facility to provide full services to a new or existing development which is partially serviced or a development where on-site septic systems are failing. Decisions made by the planning authority under the Planning Act, 1990 conform to the policy.	N
SEWG-5	The Municipality has established a review process for future development and/or lot creation that considers the protection of municipal source water in relation to future and proposed on-site sewage.	Y <sup>2</sup>
SEWG-7	The Municipality has prohibited the future establishment, operation and maintenance of a stormwater management facility with a WHPA-A or IPZ-1 where stormwater discharges would be a significant drinking water threat.	N <sup>3</sup>
WASTE-2	The Municipality has prohibited the establishment of future waste disposal sites where they would be a significant drinking water threat.	N <sup>3</sup>

**Notes:**

1. The new Official Plan was adopted by City Council on October 27, 2021. The Plan was approved by the Ministry of Municipal Affairs and Housing on November 4th, 2022 and is now in full force and effect. Source protection policies in the new Official Plan conform to local Source Protection Plans and can be found in Section 4.9.5 of under the heading, "Implement the policies of the Mississippi-Rideau Source Protection Plan and the Source Protection Plan for the Raisin-South Nation Source Protection Region". Source protection policies were developed in consultation with the local Source Protection Regions.

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**Notes Continued:**

Following approval of the new Official Plan, the City has initiated the process of developing a new Zoning By-law to implement the policies in the new Official Plan, including implementing new zone provisions to conform to source protection policies. Source Protection Regions will be consulted on zoning by-law amendments related to source protection policies.

2. New *Planning Act* and *Building Code Act* applications are reviewed through an internal Section 59 screening process; procedures to be updated following enactment of Section 59 By-Law.
3. Following the approval of the new Official Plan in fall 2021, the City has initiated the process of amending zoning by-law provisions to conform to Source Protection Policies. This will include prohibition of sewer works as listed in policy SEW-7 and waste disposal sites as listed in policy WASTE-2. Source Protection Regions will be consulted on zoning by-law amendments. Currently, new development applications are screening through an internal Section 59 screening process.

**Reporting Requirements for Policy: MONITORING-4**

<b>Policy MONITORING-4</b>
<b>Education and Outreach</b>
<p>By February 1<sup>st</sup> of each year, the Municipality or designate shall report to the Source Protection Authority with a description of the actions/measures they have taken in the previous calendar year to implement the education/outreach program described in the Source Protection Plan.</p> <p>The report shall include an evaluation of the program and suggestions to improve the effectiveness.</p>

Table 7: Summary of Education and Outreach Programs

<b>Education and Outreach Actions/ Measures:</b>	<p>The City of Ottawa developed and maintains Outreach and Education materials including 19 factsheets and a City-hosted Source Protection website with an interactive map; see <a href="http://Ottawa.ca/SourceProtection">Ottawa.ca/SourceProtection</a> or <a href="http://Ottawa.ca/protectiondessources">Ottawa.ca/protectiondessources</a>. Drinking Water Protection Zones are also included and maintained as a map layer on the City’s interactive geoportal (<a href="http://GeoOttawa.ca">GeoOttawa.ca</a>).</p> <p>The City plans to implement a recurring social media campaign in 2023 to promote program awareness and safe practices to protect our shared drinking water resources.</p>
<b>Evaluation of Program:</b>	The program will be reviewed and evaluated in 2023.
<b>Suggestions for Improvement:</b>	Plans for continuation of Source Protection education campaigns within targeted vulnerable areas.

**Reporting Requirements for Policy: MONITORING-5**

<b>Policy MONITORING-5</b>
<b>Specify Action</b>
Where a policy requires the Municipality to implement a specific action, the Municipality shall report the Source Protection Authority annually by February 1 <sup>st</sup> on the steps taken to implement this policy.

Table 8: Implementation of Specific Actions directed at Municipalities

<b>Policy</b>	<b>Detail</b>	<b>Y/N</b>
SEWG-1	The Municipality has established and implemented a sewage inspection and maintenance program where sanitary sewers could be a significant threat.	Y <sup>1</sup>
SEWG-1	The Municipality has established a process to ensure that future applicants are aware of the requirements for new sanitary sewers where they are a significant drinking water threat.	Y <sup>2</sup>
SEWG-4	The Municipality has established a process to manage existing and future septic systems and septic holding tanks where they would be a significant drinking water threat through the Ontario Building Code Act, 1992 and Ontario Regulation 315/10 (as amended) in accordance with the On-Site Sewage System Maintenance Inspection Program.	Y <sup>3</sup>
SEWG-4	The Municipality has established a process to ensure that existing septic systems and septic holding tanks are decommissioned where inspectors determine the need for replacement or when connecting to municipal services.	Y <sup>3</sup>
SEWG-4	The Municipality has passed a Mandatory Connection By-law (under the authority of the Municipal Act, 2001) to require connection to municipal sewer services (capacity permitting) where available at the property line in the following situations: failure of a Phase II inspection; the Principal Authority deems the existing system inadequate to service a proposed redevelopment/renovation; or for new development on existing vacant lots of record.	Y <sup>4</sup>
SEWG-4	The Municipality has established a process to review and consider the potential for municipal servicing within significant threat areas which currently have private services.	Y <sup>5</sup>
SEWG-4	Shadow Ridge Municipal Well System: The City of Ottawa has committed to deepening the Shadow Ridge Municipal Well to the Nepean aquifer to reduce significant threats related to septic systems and septic holding tanks in the Village of Greely.  <u>PROJECT UPDATE:</u> The City of Ottawa initiated the Nepean Aquifer Study in December 2016 to explore the potential to deepen the Shadow Ridge Municipal well system to the Nepean Aquifer and gain information about the hydrogeologic properties of the Nepean Aquifer within Greely. The study is being completed in Q1 2023	Y <sup>6</sup>

	<p>and early results indicate that the Nepean Aquifer is a viable and prolific source. The City acquired land to construct the new municipal wells for Shadow Ridge, adjacent to the existing pumping station and municipal water treatment and distribution facility.</p> <p>Since the municipal system will draw groundwater from a different aquifer, an Environmental Assessment (EA) was identified as a requirement by the MECP. A public open house for the EA was held in April 2022 and the EA Notice of Commencement was published in May 2022. It is expected that the EA will be finalized in 2023 and a second open house will be held in 2023.</p> <p>The City moved forward with drilling two new deeper production wells. The first well will be completed early in Q1 2023, a second production well will be drilled in late Q1 2023. Aquifer testing (pump tests) will be completed in Q2 2023. If the testing identifies that another well is required to support the yield, then a third well will be drilled and tested later in 2023. Data from well testing will support the detailed design of the pump station modifications and upgrades, as well as the source protection technical work.</p> <p>A Notice under subsection 48 (1.1) of Ontario Regulation 287/07 under <i>the Clean Water Act</i> was sent to the Source Protection Authority (SPA) on January 28, 2022 to inform the Source Protection Region of the new municipal well project and request notification from the SPA once the source protection technical work is completed to their satisfaction, required as part of amended Drinking Water License prior to the provision of water. A Terms of Reference was developed for the source protection technical work and a consultant was selected to complete the work. Source protection technical work includes the delineation of a Wellhead Protection Area (WHPA) for the new well system and the identification of existing significant drinking water threat activities within the new WHPA. Source protection technical studies will commence following the pump tests on the new production wells, expected in the first half of 2023. It is anticipated the source protection technical work will be completed in the first half of 2024.</p>	
GENERAL-8	The Municipality has reviewed and updated sewer-use by-laws to place limits on waste discharges where sewage, organic solvents, and/or dense non-aqueous phase liquids (DNAPLs) could be a significant threat.	Y <sup>6</sup>
GENERAL-7	The Municipality has established a process to review and provide notice (under Section 27 (3) and (4) of O.Reg. 287/07 under the Clean Water Act) when transport pathways are created or modified.	Y <sup>2,6</sup>
GENERAL-7	The Municipality has established a procedure to review new earth energy systems within Wellhead Protection Areas (WHPAs) to ensure they do not endanger the municipal drinking water source.	N <sup>6</sup>
GENERAL-9	The Municipality has updated their Emergency Response Plans for areas which include a Wellhead Protection Area or an Intake Protection Zone along a transportation corridor (railways, highways s defined in Subsection 1(1) of the Highway Traffic Act, 1990, St. Lawrence Seaway and the Ottawa River).	N <sup>6</sup>

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GENERAL-11	The Municipality has installed road signs along Municipal roads – where municipal arterial roads are located within Wellhead Protection Areas with a vulnerability score of 10 and/or and Intake Protection Zone or Wellhead Protection Area E with a vulnerability score of 8 or higher.	N <sup>6</sup>
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Notes:

1. Sanitary sewer inspection and maintenance program:
  - Vars: there is no sanitary sewer infrastructure within the Vars WHPA.
  - Greely-Shadow Ridge: The required procedure for the sanitary sewer inspection and maintenance program identified in source protection plan policy SEWG-1 is not feasible for the existing sewer infrastructure at Shadow Ridge. The City has proposed a suitable methodology to meet the intent of the policy to the Source Protection Region, based on a modified methodology of exfiltration testing. The City will provide average daily sewage flows during both dry and wet weather events to demonstrate that the flows do not fluctuate with wet weather events, eliminating the likelihood of infiltration. The first flow comparison was conducted in 2020 and confirms that the flows during wet and dry weather events are similar. In compliance with the Source Protection Plan, an automated preventative maintenance program has been set up within the City's MMS to trigger this assessment every five years.
  
2. New development applications are screened through internal Section 59 screening process. Internal screening procedures related to applications under the Planning Act and Building Code Act will be updated through the development and implementation of a by-law to screen out activities within certain land-use designations that have no potential for significant drinking water threats.
  
3. Sewage inspection and maintenance program managed by the Ottawa Septic System Office.
  
4. The Sewer Connection By-Law is currently under review at the City, a new clause related to mandatory connection within areas identified in the Source Protection Plan has been included. The program has been delayed, but the update is expected to be complete by 2024. The update includes the following:
 

The City shall require connection to the Public Sewage Works in areas where the on-site sewage system is a significant drinking water threat as described in the Clean Water Act, as amended, and associated Technical Rules, as amended, (capacity permitting) where services are available at the property line in the following situations:

  - (1) where an existing system has failed a Phase II Maintenance Inspection and/or an order has been issued to replace or do significant upgrades; or
  - (2) when the Principle Authority has deemed an existing system inadequate to service a proposed redevelopment or renovation; or
  - (3) for new development or existing vacant lots of record.
  
5.
  - a) Greely-Shadow Ridge well system: The City does not intend, within the Official Plan horizon, to extend municipal services to the entire Village of Greely. However, the Shadow Ridge municipal wells will be deepened into a bedrock formation (commonly called the "Nepean Aquifer") that has a greater degree of isolation from surface activities and would result in greater protection from surficial activities.
  
  - b) The Village of Vars well system: There are no leaching beds within the significant threat area, but there is a holding tank (pumped approximately two times per year) servicing the treatment plant building. The holding tank falls under the City's On-Site Sewage System Maintenance Inspection Program, managed by the Ottawa Septic System Office. The closest sanitary sewer is more than 25 km from the Vars water treatment plant.
  
6. This is a non-legally binding policy