

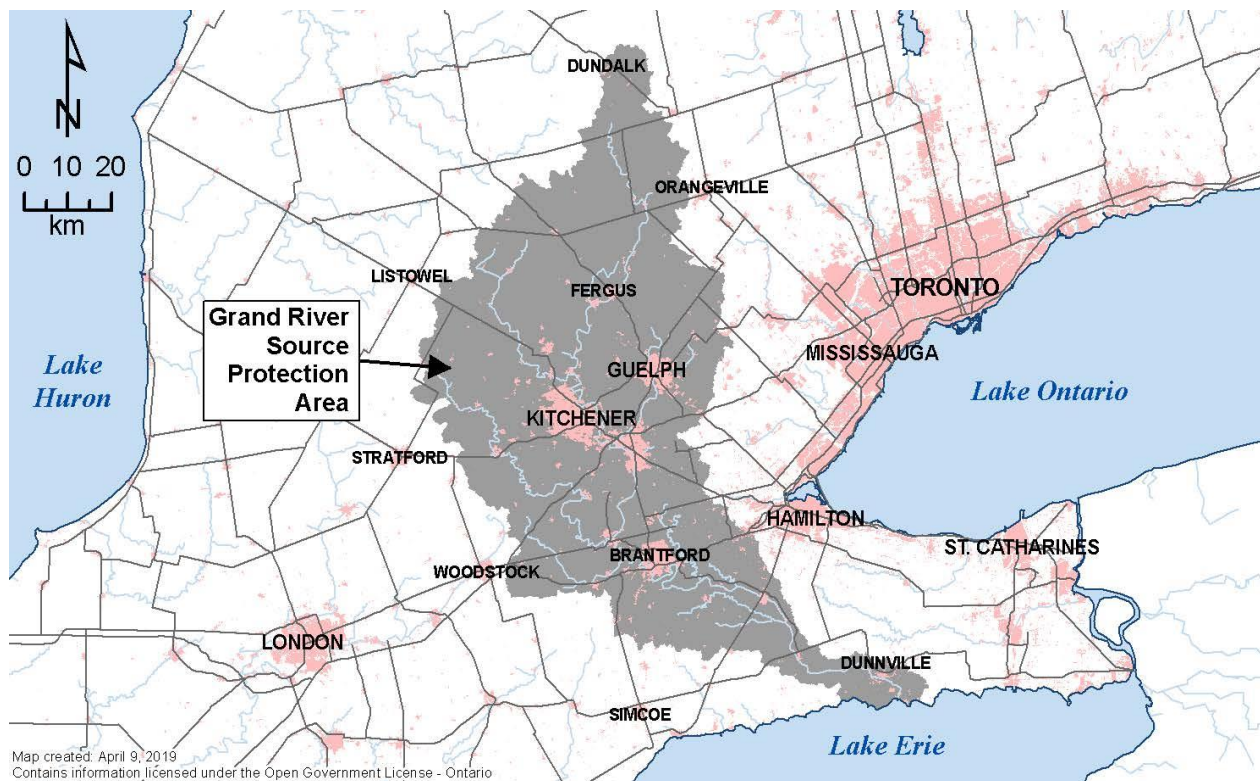
Grand River Source Protection Area Annual Progress Report 2024

I. Introduction

This annual progress report outlines the progress made in implementing our Source Protection Plan for the Grand River Source Protection Area, as required by the *Clean Water Act, 2006* and its regulations.

The Source Protection Plan is the culmination of extensive science-based assessment, research, consultation, and collaboration with local stakeholders and the provincial government. When policies in the plan are implemented it ensures that activities carried out near municipal wells and surface water intakes will not pose significant risk to the sources of our drinking water.

We acknowledge and recognize the efforts made by our local municipalities, stakeholders, and Source Protection Committee in the development and implementation of the Source Protection Plan.



Map 1 Grand River Source Protection Area

II. A message from your local Source Protection Committee

P: Progressing Well / On Target – The majority of the Plan policies have been implemented and/or are progressing.

All legally-binding plan policies that address significant drinking water threats (100%) are implemented or in progress.

When the source protection plan came into effect in 2016, 7,449 Existing significant drinking water threats were identified. “Existing” threats are, in general terms, activities that were occurring on the landscape before the Source Protection Plan was approved. Since then, amendments to the Grand River Source Protection Plan in 2019, 2020, 2021, 2022, and 2024 have resulted in an increase to the number of Existing significant drinking water threats.

A total of 14,998 potential Existing significant drinking water threats have been identified in the Grand River Source Protection Area as of December 31, 2024. Of these threats, 2,317 have been determined through field verification to no longer exist because the activity was not actually engaged in after all, or is no longer engaged in, at a particular location. A total of 5,791 Existing threats have been reported as managed and no longer pose a significant risk to municipal drinking water sources. All municipalities in the Grand River Source Protection Area have processes in place to ensure planning decisions conform to our Source Protection Plan and are managing or prohibiting new threats as appropriate.

The increase in the number of potential Existing threats in recent years has substantially increased the workload for municipalities. Municipalities have also experienced an increase in the number of development reviews that are required to be screened to identify and manage or prohibit new threats in accordance with source protection plan policies. Risk Management Officials continue to prioritize risk management measures as appropriate, but progress is slow.

III. Our Watershed

The Grand River Source Protection Area (watershed) is the largest in southern Ontario, covering an area of approximately 6,800 square kilometers. The Grand River begins as a small stream in the Dufferin Highlands and travels about 300 kilometers before emptying into Lake Erie at Port Maitland.

A key feature of the watershed is its major moraine systems, including the Orangeville, Waterloo, and Paris and Galt moraines. The moraines have extensive sand and gravel deposits and their overburden aquifers provide groundwater for municipal and private use. The extensive sand and gravel deposits associated with the Norfolk Sand Plain yield substantial water supplies to local users. Bedrock aquifers, including the Gasport, Guelph, and Salina formations, are also an important source of water.

There are 39 municipalities and two First Nations communities within the Grand River Source Protection Area, with a total watershed population of about one million people. About 80% of the population lives in the cities of Kitchener, Waterloo, Cambridge, Guelph and Brantford. The Grand River is home to the Six Nations of the Grand River and the Mississaugas of the Credit First Nation.

The residents of the Grand River watershed receive drinking water supplies from both private and municipal supplies. There are currently 44 municipal systems and one First Nation system in the Grand River Source Protection Area, including 7 surface water intakes and 216 wells. The watershed is also an intensive agricultural area. Agriculture remains the largest land use in the watershed with 61% of the total watershed area.

IV. At a Glance: Progress on Source Protection Plan Implementation

1. Source Protection Plan Policies and Addressing Significant Risks

P: Progressing Well / On Target

The Grand River Source Protection Plan includes policies, across 14 municipal chapters, to address prescribed threats, protect sources of drinking water and monitor the progress of policy implementation.

Of the legally-binding plan policies that address significant drinking water threats, 100% are implemented, in progress, or implemented because policy outcome(s) have been evaluated and it is determined that no further action(s) is required.

2. Municipal Progress: Addressing Risks on the Ground

P: Progressing Well / On Target

Within the Grand River Source Protection Area, 33 municipalities have vulnerable areas where significant drinking water threat policies apply. Planning departments and building officials are screening applications for locations within vulnerable areas where threats to drinking water sources are possible and Source Protection Plan policies may apply.

Municipalities are also required to review and update their Official Plan to ensure it conforms with the Protection Plan the next time they undertake an Official Plan review under the *Planning Act, 1990*. As of December 31, 2024, all of the upper- and single-tier municipalities have completed or are in the process of completing their Official Plan amendments. Of the lower-tier municipalities, 5 have reported that their Official Plan conformity is complete, with 3 of these requiring updates to conform to recent Source Protection Plan amendments. The remaining lower-tier municipalities have experienced delays as a result of the legislative changes introduced in the *More Homes Built Faster Act, 2022*.

3. Septic Inspections

P: Progressing Well / On Target

The Ontario Building Code requires that small sewage systems be inspected every five years through a mandatory on-site sewage system inspection program. In the Grand River Source Protection Area there are 1683 on-site sewage systems that require inspections every five years in accordance with the Ontario Building Code.

Of the 181 systems that were due for inspection in 2024, 129 (71%) of the inspections were completed. Of the systems that were inspected, results found 9 systems (7%) required minor maintenance work (e.g. lid replacement, etc.), and 7 systems (5%) required major maintenance work (e.g. tank replacement, etc.).

Municipalities are working with landowners to obtain additional information needed to complete the outstanding inspections. Where landowners refused entry compliance orders are being sought.

4. Risk Management Plans

P: Progressing Well / On Target

The Grand River Source Protection Plan contains policies that require the development of Risk Management Plans to manage certain drinking water threats. All Plan policies that require a Risk Management Plan have been reported as implemented or in progress.

A total of 524 Risk Management Plans are in place in the Grand River Source Protection Area. An additional 35 Risk Management Plans were previously agreed to but were later cancelled because the activity was no longer occurring or was no longer subject to Risk Management Plan policies following a Source Protection Plan amendment.

In 2024, 87 Risk Management Plans were agreed to, managing 141 significant drinking water threat activities on 117 properties throughout the Source Protection Area. An additional 306 Risk Management Plans were reported as in progress at the end of 2024.

Risk Management Officials also reported completing inspections to achieve compliance or to verify threats for activities designated under Section 58 of the *Clean Water Act, 2006*. A total of 180 inspections were carried out for an activity requiring a Risk Management Plan. Six inspections in Brant County and two inspections in Oxford County found activities taking place without a Risk Management Plan as required by the Source Protection Plan. Three of the inspections in Wellington County found non-compliance with the contents of a Risk Management Plan. An additional 246 inspections were carried out for activities that are prohibited under section 57 of the *Clean Water Act, 2006*. One inspection in the Region of Waterloo found activities taking place on the landscape even though they were prohibited by Source Protection Plan policies.

To manage future threat activities, municipalities have screening processes in place to ensure development applications are reviewed for potential threat activities and applicability of Plan policies.

There is no timeline for establishing Risk Management Plans in the Lake Erie Source Protection Region. Municipalities continue to prioritize areas and properties that pose the highest risk when establishing Risk Management Plans. This is reflected in incremental improvements across all threat categories, rather than a significant improvement for certain threats. Risk Management Plan negotiations are complex and take time to complete.

5. Provincial Progress: Addressing Risks on the Ground

P: Progressing Well / On Target

Provincial ministries review applications for new or amended provincial approvals (i.e. prescribed instruments, such as Environmental Compliance Approvals issued under the Environmental Protection Act) where they have been identified as a tool in the Plan to address activities that pose a significant risk to source water.

The Province has established Standard Operating Policies to ensure that approvals take into account the science generated through the Drinking Water Source Protection Program and policies in the Source Protection Plan. Provincial approvals are issued, denied, amended, or revoked to conform to Plan policies. Where necessary, conditions are added to approvals to ensure that the activity does not pose a significant threat to sources of drinking water.

The Plan sets a timeline of 3 years to complete the review and make any necessary changes to previously issued approvals. Ministries have completed review of previously issued Provincial approvals in the Grand River Source Protection Area. Ministry of the Environment, Conservation and Parks (MECP) Waste Disposal Sites (Landfilling and Storage) and MECP Wastewater/Sewage Works reported that a preliminary list of previously issued Environmental Compliance Approvals for waste disposal sites and sewage works has been identified for review for source protection. The review of these newly identified existing instruments will be undertaken in 2025 and the results will be reported in 2026.

In 2024, Ontario ministries reported that within the Grand River Source Protection Area 16 applications for prescribed instruments underwent a detailed review for source protection. In total, six prescribed instruments were reviewed where the Source Protection Plan policy required the significant drinking water threat to be managed through conditions. Four prescribed instruments have been issued or amended with conditions. These include:

- 2 Permits to Take Water in Wellington County (see policy WC-MC-22.1)
- 1 wastewater/sewage works Environmental Compliance Approval in Wellington County (see policy WC-MC-3.7)
- 1 waste disposal site Environmental Compliance Approval in Guelph/Eramosa Township (see policy GC-MC-3)

A decision is pending on 2 applications for wastewater/sewage disposal sites that are still under review.

6. Source Protection Awareness and Change in Behaviour

To raise awareness about the protection of local drinking water sources, municipalities across the Grand River Source Protection Area have installed a total of 331 drinking water protection signs on municipal roads and trails surrounding vulnerable areas. In addition, 15 signs have been installed on Provincial highways since the Source Protection Plan came into effect in 2016.

Municipalities across the Lake Erie Source Protection Region have established education and outreach programs, which contribute to enhancing awareness of source water protection. Municipalities, Conservation Authorities and other implementing bodies within the Grand River Source Protection Area work with landowners and business owners to help protect our sources of drinking water.

Examples of efforts to build awareness include:

- Training for municipal staff on how source protection relates to municipal planning, building, sewage, roads, and risk management operations.
- Development reviews and inspections continue to provide proponents with educational material about threats present, review process, source protection plan policies, and property specific mapping.
- Where necessary, stickers and metal tags were provided to proponents listing the Spills Action Centre number and that their location is located within a vulnerable area for municipal wells.
- Outreach to winter maintenance contractors
- Hosted Septic Social events in support of mandatory septic inspection program
- Education and outreach at Children's Water Festival, World Toilet Day, World Water Day, Fall Fairs, and other community and school events.
- Ongoing updates to municipal websites, brochures, fact sheets, etc.
- Social media and local newspaper outreach, including topics such as water conservation, road salt and fertilizer use.
- Promoting source water protection best practices through education and outreach to owners of non-municipal drinking water systems.

7. Source Protection Plan Policies: Summary of Delays

All policies in the Grand River Source Protection Plan have been implemented or are in the process of being implemented.

8. Source Water Quality: Monitoring and Actions

As of December 31, 2024, there are 11 drinking water systems in the Grand River Source Protection Area with identified drinking water Issues (i.e. chloride, nitrate, sodium, and trichloroethylene).

Nitrate Issues have been identified in 5 drinking water systems in the County of Brant, City of Guelph, and Region of Waterloo. A decreasing concentration/trend has been reported for the Guelph Well Supply, Mannheim Village Well Supply, and Shingletown Well Supply (Wilmot Centre). At the Paris Well Supply an increasing concentration/trend was observed at the Gilbert wellfield and no change in concentration/trend was reported at the Telfer wellfield.

Trichloroethylene (TCE) Issues have been identified in 5 drinking water systems in the Township of Centre Wellington, City of Guelph, and Region of Waterloo with no change in concentration/trend reported.

Chloride Issues have been identified in 6 drinking water systems in the Township of Centre Wellington, Guelph / Eramosa Township, and Region of Waterloo with an increasing concentration/trend reported for most wellfields. No wells reported a decrease in chloride concentrations in 2024.

Sodium Issues have been identified in 4 drinking water systems in Guelph / Eramosa Township, and the Region of Waterloo with an increasing concentration/trend reported for most wellfields. No wells reported a decrease in sodium concentrations in 2024.

Issue Contributing Areas (WHPA-ICAs) have been delineated for all Issues with the exception of the identified Chloride and Sodium Issues at the Rockwood Well Supply, which are currently under review.

Municipalities continue to implement risk management strategies to address threat activities associated with Issue Contributing Areas. All municipalities have monitoring and treatment systems in place to ensure that municipal drinking water meets the requirements of the *Safe Drinking Water Act, 2002*. Municipalities have used the results of ongoing monitoring to determine where further investigation is needed and to conduct assessments to identify sources and/or explain concentration variability. Over time, appropriate monitoring will help determine if implementation of plan policies and other actions are improving raw water quality for these systems.

9. Science-based Assessment Reports: Work Plans

An order was received from the Ministry in June 2020 providing for a comprehensive review and update to the Grand River Assessment Report and Source Protection Plan (Plan) under Section 36 of the *Clean Water Act, 2006*. The Plan update is currently underway.

Examples of tasks in the workplan include incorporation of:

- Growth and infrastructure changes (e.g. new drinking water supply wells)
- Technical Rule changes
- Transport pathway updates
- Results of environmental monitoring programs (e.g. review of monitoring data to evaluate existing or the potential for Issues identified at municipal drinking water wells)

10. More from the Watershed

To learn more about the Grand River Source Protection Area, visit the [Lake Erie Source Protection website](#).