

**TO: Chair and Members of the Source Protection Committee
Meeting #2/25, March 19, 2025**

**FROM: Behnam Doulatyari, Senior Manager, Watershed Plans and
Source Water Protection**

RE: CTC Source Protection Plan Annual Progress Report 2024

RECOMMENDATION

THAT the CTC Source Protection Committee receive the staff report CTC Source Protection Plan Annual Progress Report 2024 for information.

AND THAT the CTC Source Protection Committee, provide its assessment of the implementation of the CTC Source Protection Plan.

AND THAT the CTC Source Protection Committee direct staff to update the 2024 Annual Progress Report and Supplementary Report with its assessment of implementation.

AND FURTHER THAT SPA staff be directed to present the CTC Source Protection Committee's comments along with the Annual Progress Report 2024 to the Credit Valley, Toronto and Region, and Central Lake Ontario Source Protection Authorities for submission to the Ministry of the Environment, Conservation and Parks.

EXECUTIVE SUMMARY

CTC Source Protection Plan implementation progress has been analysed by staff and is summarized below. Reports on implementation progress are received from implementing bodies, including municipalities and provincial ministries on an annual basis. The 2024 Annual Progress Report and Supplemental Report have been prepared for review by the CTC Source Protection Committee and Source Protection Authority Boards prior to its submission to the Ministry of the Environment, Conservation and Parks.

Background

The CTC Source Protection Plan (the Plan or Plan) came into effect December 31, 2015, providing a framework of policies to protect the quality and quantity of the source waters for municipal drinking water systems located in the CTC Source Protection Region (SPR). The objectives of the Plan are:

1. to protect existing and future drinking water sources in the CTC Source Protection Region

2. to ensure that existing activities cease to be, or do not become, significant drinking water threats, and that new activities never become significant drinking water threats.

Source Protection Authorities (SPAs) are required to submit annual reports on implementation progress to the Ministry of the Environment, Conservation and Parks (MECP) under section 46 of the *Clean Water Act, 2006* (the Act). The 2024 report on implementation progress will be the eighth such report since the Plan came into effect.

Annual progress reports are prepared using data provided by municipalities, provincial ministries, and other implementing bodies as required by the monitoring policies in the Plan and in accordance with section 81 of the Act and section 65 of Ontario Regulation 287/07. Municipal and provincial reports are required to be submitted to SPAs annually by February 1st and reflect implementation efforts from the previous calendar year, January 1 to December 31, 2024.

Staff aggregate and evaluate implementation data to populate two reporting templates provided by the MECP: 1) a summary-level annual progress report and 2) a more detailed supplemental form. Annual reports must be shared with the CTC Source Protection Committee (SPC) at least 30 days before being submitted to the Director, Conservation and Source Protection Branch, of the MECP.

The CTC uses an online Electronic Annual Reporting (EAR) platform to streamline collating and assessing reported data from implementing bodies. The implementation status of policies are answered directly in an online policy interface (<https://policy.swpip.ca/>), which makes the information available to the public.

The SPC is required to review the annual progress report and provide written comments to the SPAs about the extent to which, in the opinion of the SPC, the objectives set out in the Plan are being achieved by the measures described in the report.

The plain-language draft annual progress report (**Attachment 1**) includes a summary of Plan implementation, highlighting municipal progress in aligning Official Plans with the Source Protection Plan, septic system inspections, and risk management plans, provincial implementation progress, and water quality monitoring results.

The supplemental form (**Attachment 2**) includes two questions that require SPC input.

1. In the opinion of the Source Protection Committee, to what extent have the objectives of the source protection plan been achieved in this reporting period? (Question ID 350)
2. Please provide comments to explain how the Source Protection Committee arrived at its opinion. Include a summary of any discussions that might have been had amongst the Source Protection Committee members, especially where no consensus was reached. (Question ID 351)

The MECP has clarified that notwithstanding the reference to “in this reporting period”, the intent of this question is to reflect progress made in plan implementation since it came into

effect (2015), and not just in the previous year. Three response options are provided by the MECP:

- Progressing Well - The majority of the policies from the approved original or an amended source protection plan have been implemented and/or are progressing well
- Satisfactory - Some of the policies from the approved original or an amended source protection plan have been implemented and/or are progressing well
- Limited Progress made - A few of the policies from the approved original or an amended source protection plan have been implemented and/or are progressing well

Progress on some metrics may see apparent declines relative to the previous year, at a CTC-wide or municipal level. This can be due to amendments (i.e. s.34 or s.36) to Assessment Reports or the Source Protection Plan that can:

- adjust the base enumeration of significant drinking water threats
- result in current policies no longer assessed as being implemented
- create new policies or modify current policies
- result in more Risk Management Plans, septic inspections, etc. being required

Staff have provided the information below to inform the Committee's assessment in in Section II of Attachment 1.

Highlights

Source Protection Plan Policies

As of the end of 2024, 89% of legally binding policies that address significant drinking water threats have been implemented. Similarly, as of the end of 2024, 91% of non-legally binding policies that address significant drinking water threats have been implemented, and the rest are in progress, or have been considered and do not require further action. Fifty-eight percent of policies addressing moderate and low threats have been implemented and the remainder are in progress.

Furthermore, approximately 98.3% of existing significant drinking water threats have been addressed through policy implementation or removed through threats verification. This compares to 97.7% for the previous year.

Septic Inspections

The Ontario Building Code requires that small sewage systems identified as significant drinking water threats be inspected every five years through a mandatory program. Within the CTC Region, 279 septic systems are currently identified as requiring inspections every 5 years to satisfy the requirements of the Ontario Building Code.

In 2024, 27 onsite sewage system inspections were completed, representing 10% of the total inspections required over the 5-year cycle. **Table 1** below shows the number of completed and

outstanding inspections across the CTC SPR. Of the systems inspected in 2024, 78% did not require any maintenance work, 11% required minor maintenance, and 11% required major maintenance.

At the conclusion of 2024, two local municipalities reported ongoing inspection delays for twenty-nine septic systems.

Table 1. Septic system maintenance inspections across CTC (2018-2024)

| Municipality | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | Outstanding Inspections |
|---|------|------|------|------|------|------|------|-------------------------|
| Dufferin (Amaranth, East Garafraxa, Mono) | 0 | 12 | 0 | 0 | 0 | 0 | 10 | 0 |
| Orangeville | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| Erin | 0 | 0 | 0 | 0 | 0 | 107 | 15 | 0 |
| Caledon | 0 | 0 | 0 | 8 | 7 | 0 | 0 | 0 |
| Halton Hills | 2 | 1 | 1 | 50 | 5 | 1 | 2 | 0 |
| York (Whitchurch-Stouffville, Vaughan) | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 29 |
| Durham (Uxbridge) | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 |

Risk Management Plans

Risk management plans (RMPs) are site specific documents that outline the actions required to address significant drinking water threats. These are negotiated with property owners and businesses by Risk Management Officials (RMOs).

A total of twenty-seven RMPs were signed in 2024 in the CTC Source Protection Region, compared to thirty-three in 2023. As of the end of 2024, there were 206 RMPs in place across CTC. **Figure 1** illustrates the number of RMPs currently in place, finalized or in-progress, and still required at the end of 2024.

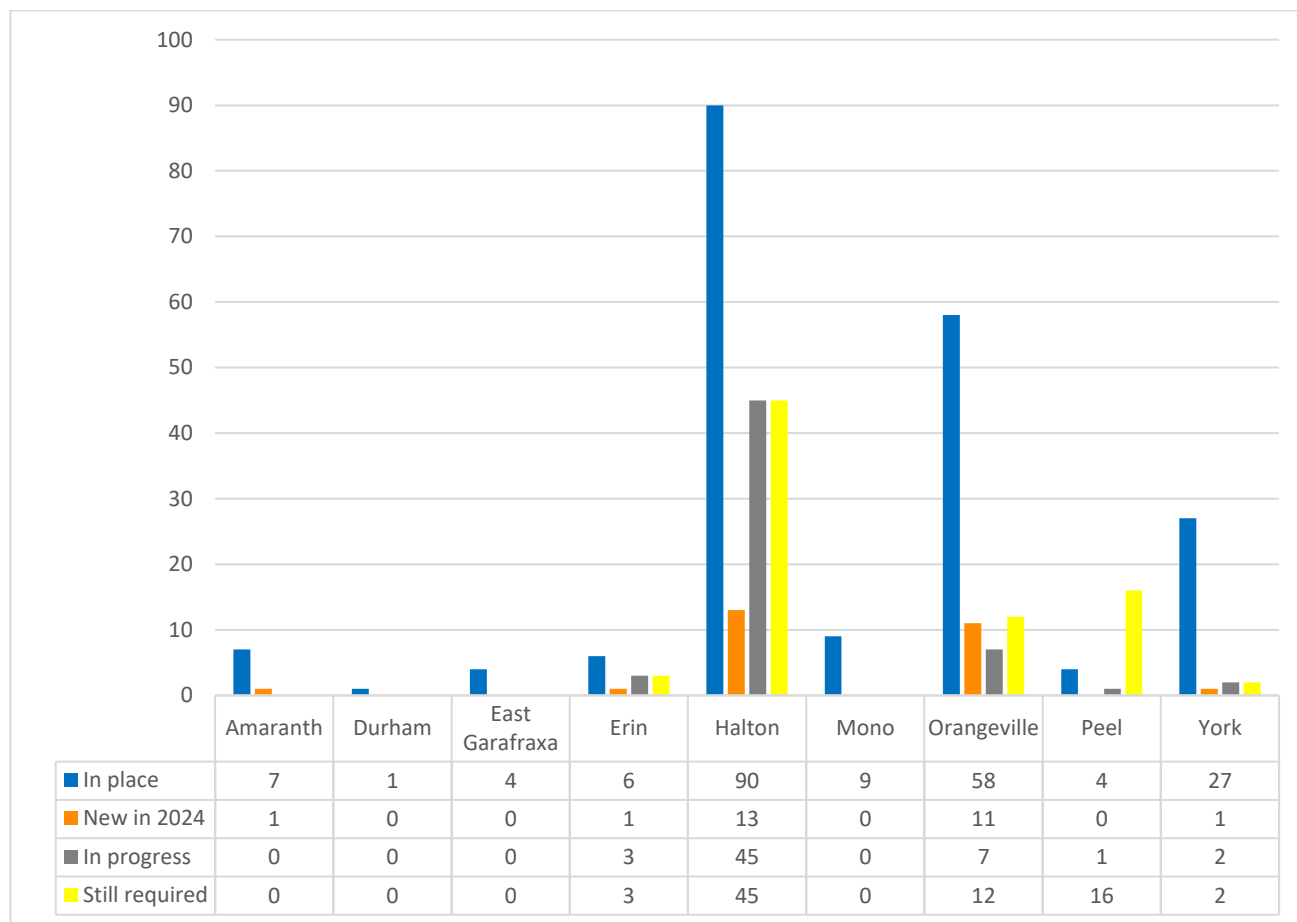


Figure 1. RMP status as of December 31, 2024

The total number of significant drinking water threats that remain to be addressed in the CTC as of the end of 2024, was 175, down from 241 at the end of 2023. Outstanding significant threats are predominantly associated with application and storage of road salt, handling and storage of dense non-aqueous phase liquids, sewage, snow storage, and the application and storage of agricultural source materials, commercial fertilizer and pesticides.

Of these 175 significant threats, 110 are considered “existing” threats that were identified at the time of the initial Source Protection Plan approval in 2015, and that have a December 31, 2025 deadline for Risk Management Plans to be established to manage their risk. A further 29 of these 175 threats relate to overdue septic inspections. The remaining 36 significant threats are a mix of “future” threat activities or “existing” threats identified in recent Source Protection Plan amendments.

At the conclusion of 2024, there were 78 RMPs that remain to be negotiated to manage existing significant threats; sixty of which are required to be in place by the end of 2025. In 2024, thirty s.58(7) Notices were sent to property owners requiring a Risk Management Plan who did not respond to municipal outreach efforts, and four s.58(10) Orders were sent to landowners requiring a Risk Management Plan who did not respond to s.58(7) notices. An update on the

number of outstanding risk managements plans for “existing” significant drinking water threats, and that need to be completed by the end of 2025, can be found in **Table 2**.

Table 2. CTC outstanding existing significant drinking water threat and risk management plan progress*

| Municipality | Outstanding existing significant threats or risk management plans | As of January 1, 2023 | As of June 30, 2023 | As of January 1, 2024 | As of July 1, 2024 | As of January 1, 2025* |
|---------------------|---|-----------------------|---------------------|-----------------------|--------------------|------------------------|
| Town of Erin | # of significant drinking water threats | 29 | 25 | 18 | 16 | 9 |
| Town of Erin | # of risk management plans | 11 | 7 | 7 | 5 | 3 |
| Halton Region | # of significant drinking water threats | 165 | 124 | 95 | 88 | 73 |
| Halton Region | # of risk management plans | 116 | 95 | 72 | 66 | 45 |
| Town of Orangeville | # of significant drinking water threats | 66 | 39 | 42 | 33 | 28 |
| Town of Orangeville | # of risk management plans | 34 | 30 | 22 | 19 | 12 |

*York Region identified two RMPs that are required to address existing significant threats due to property ownership changes. These properties had previously had RMPs established.

*Peel Region identified sixteen RMPs that are required to address existing significant threats identified in 2024 amendments to the CTC Source Protection Plan.

There were 160 inspections carried out by municipal Risk Management Inspectors in 2024 for prohibited or risk managed activities. The inspections did not identify any significant threat activities occurring to which a prohibition applied, nor any significant threat activities occurring without a risk management plan. Risk Management staff are following up with property owners regarding fourteen occurrences of non-compliance with RMP administrative requirements.

Provincial Prescribed Instruments

Ontario ministries review applications for new or amended provincial approvals (i.e., Prescribed Instruments, such as Environmental Compliance Approvals under the *Environmental Protection Act*), where they have been identified as a tool in the CTC Source Protection Plan, to address activities that pose a significant risk to sources of drinking water. Where necessary, conditions are added to approvals to ensure that the activity does not pose a significant threat to sources of drinking water.

In 2024, MECP reported three Permit to Take Water applications that underwent a detailed review for source protection, as required by DEM-1 policy. The ministry reported issuing three

permits for long-term water takings in York Region which included conditions to manage the threat. Source Protection Authority staff reviewed these permits on the Access Environment portal and found no conditions relevant to source protection policy, mapping, or stress level.

MECP reported three Wastewater/Sewage Works Environmental Compliance Approval (ECA) applications that required a detailed review for source protection purposes, two of which were determined to be governing a significant drinking water threat activity and managed through Prescribed Instrument conditions. Source Protection Authority staff reviewed these ECAs on the Access Environment portal and found that one was mapped incorrectly and does not have any relevant source protection conditions. It does reference an existing off-site stormwater management facility that includes requirements for a spill contingency plan which should be made available to the Source Protection Authority upon request. The other Wastewater/Sewage Works ECA includes requirements for a spill contingency plan which, along with other operational documents, should be made available to the Source Protection Authority upon request.

MECP reported identification of a preliminary list of previously issued/existing ECAs for sewage works and waste disposal sites for review for source protection. A review of these newly identified previously issued/existing ECAs will be undertaken in 2025. The results of this review will be reported in February 2026.

MNR identified an existing Prescribed Instrument (Aggregate Resources License) to be a significant drinking water threat. The CTC Source Protection Plan policy FUEL-2 has been triggered as a result of an increase in vulnerability identified in technical work for Caledon Village supply wells ([Meeting #4/22](#)). MNR will continue to work with the CTC SPA and the Licensee to ensure that this Aggregate License is in compliance with source protection policy requirements.

Source Water Quality

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*.

To support municipalities and the requirements of Plan policies GEN-7, SAL-9, and SAL-13, along with questions raised by the Source Protection Committee, SPA staff have been continuing to work with municipal partners on implementing a multi-phase water quality assessment project. The project included a review and update of the statistical trend analysis method, established water quality data management standards, provided water quality sampling frequency recommendations, and involved the collaboration with the Oak Ridges Moraine Groundwater Program (ORMGP) to develop an automated water quality status and trend analysis tool.

The ORMGP CTC Source Protection Region Municipal Wells Water Quality Status, Trends, and Projections snapshot tool provides a platform for users to analyze municipal well water quality data (chloride, sodium, and nitrate+nitrite) using the preferred statistical analysis method. Through this tool, specific water quality parameters can be evaluated through status, trend, and

projection analysis to monitor changes over time, and to monitor existing drinking water Issues (defined in the 2021 Technical Rules under the *Clean Water Act, 2006*). SPA and municipal staff can also use the tool to monitor and track projections of chloride, sodium, and nitrate+nitrite parameters at municipal production wells that do not have existing Issues.

The automated tool can be explored here:

<https://owrc.github.io/snapshots/ctc/MunicipalWellWaterQualityStatus.html>.

To date, thirteen drinking water Issues exist at municipal production wells in three drinking water systems in the CTC Source Protection Region. The Source Protection Plan (policies SAL-9 and GEN-7) requires that municipalities establish more frequent sampling of raw groundwater from municipal production wells with existing Issues to help characterize the status, trend, and projections of the parameter concentrations associated with the Issue. Analysis of current Issues are based on the ORMGP automated water quality status and trend analysis tool and approved issue identification criterion.

In the Orangeville Drinking Water System (DWS), five wells have an existing chloride Issue (6, 9A, 9B, 10, and 11) and three wells have a sodium Issue (6, 9A, and 9B). Each of the wells with a chloride Issue showed an increasing trend in concentrations for the current monitoring period. Each of the wells with a sodium Issue showed an increasing trend in concentration for the current monitoring period.

In the Acton DWS, two wells (Davidson 1 and 2) have an existing nitrate Issue. Statistical analysis suggests seasonal variability in nitrate concentrations, however a stable and/ or decreasing trend is displayed for the current monitoring period.

In the Georgetown DWS, three wells have an existing chloride Issue (Cedarvale 1A, 4 and 4A). Each of the wells with a chloride Issue showed an increasing trend in concentrations for the current monitoring period.

Discussion

Results presented above show good overall progress in implementation of the plan. Several causes for concern remain, as follows:

Establishment of RMPs in most municipalities and to address “future” threats have occurred within the timelines set by the Source Protection Plan, with inspections indicating good adherence to the RMP requirements and Plan prohibitions.

Progress on establishment of RMPs that have an end of 2025 deadline, will require significant efforts in affected municipalities. Challenges have included reluctant or difficult to reach landowners or property managers, time-consuming nature of negotiations, and staff resources. Should RMP negotiations not progress successfully with landowners successfully, municipalities may need to resort to issuing Orders under s.58(10) of the *Clean Water Act* in order to meet the year-end deadline.

Most municipalities and almost 90% of septic systems requiring inspections across CTC are in compliance with inspection requirements. Yet, at the conclusion of 2024, two local municipalities reported ongoing inspection delays for twenty-nine septic systems. This was attributed to resident financial constraints, seasonal weather obstacles, and difficulties enforcing compliance. These municipalities have reported that they will complete their outstanding inspections in 2025.

The eleven municipal production wells with existing chloride and sodium Issues continue to show increasing trends in concentrations for the current monitoring period. Increasing chloride and sodium trends are also observed in numerous municipal production wells that do not have an identified Issue across the CTC SPR. Nitrate levels at a few municipal wells across the CTC SPR that do not have an identified Issue are projected to increase above the half-MAC (Maximum Acceptable Concentration) within the next 15 years. Implementation of additional sampling and continued improvements to monitoring and analytical methods are key tools that can be used to assess whether the identification of additional drinking water Issues will be required.

Provincial ministries have reported 100% completion of their review of previously issued or existing provincial approvals in the CTC Source Protection Region; as well, they review applications for new or amended provincial approvals for activities that may pose significant risks to sources of drinking water. Where necessary, conditions are added to approvals to ensure that activities do not pose a significant threat to sources of drinking water.

Some provincial ministries or branches were unable to submit their annual reporting data by February 1, 2025 because of the provincial election period, which affected SPA annual reporting analysis.

Additional annual reporting detail from the Province would allow SPA staff to better determine whether Prescribed Instrument Policies are being implemented as intended by the Source Protection Plan policies. SPA staff will continue to follow-up with MECP to address these concerns. As well, proposed policies being brought forward as part of the Section 36 update will encourage the Province to provide additional requirements or information related to these instruments.

The CTC Source Protection Committee is requested to provide its assessment of the implementation of the CTC Source Protection Plan.

Next Steps

Staff will update the 2024 Annual Progress Report and Supplementary Report with the Committee's assessment of implementation. The 2024 Annual Progress Report and the SPC's assessment and comments on CTC Source Protection Plan implementation will then be presented to the Credit Valley, Central Lake Ontario, and Toronto and Region Source Protection Authorities (SPAs) for their consideration at meetings in April 2024. Following SPA direction, staff will submit the annual progress report and supplementary form to MECP by May 1, 2025. Following submission to the province, the annual progress report will be posted to the CTC website (ctcswp.ca).

Report prepared by:

Craig Jacques, Senior Specialist, Watershed Plans and Source Water Protection, Credit Valley Conservation

T: 905-670-1615, ext. 5510

Email: craig.jacques@cvc.ca

Behnam Doulatyari, Senior Manager, Watershed Plans and Source Water Protection, Credit Valley Conservation

T: 905-670-1615, ext. 3790

Email: behnam.doulatyari@cvc.ca

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Attachments (2):

Attachment 1: 2024 CTC Source Protection Plan Annual Progress Report

Attachment 2: 2024 CTC Source Protection Plan Supplementary Report