

2024 Quinte Source Protection Area Annual Progress Report

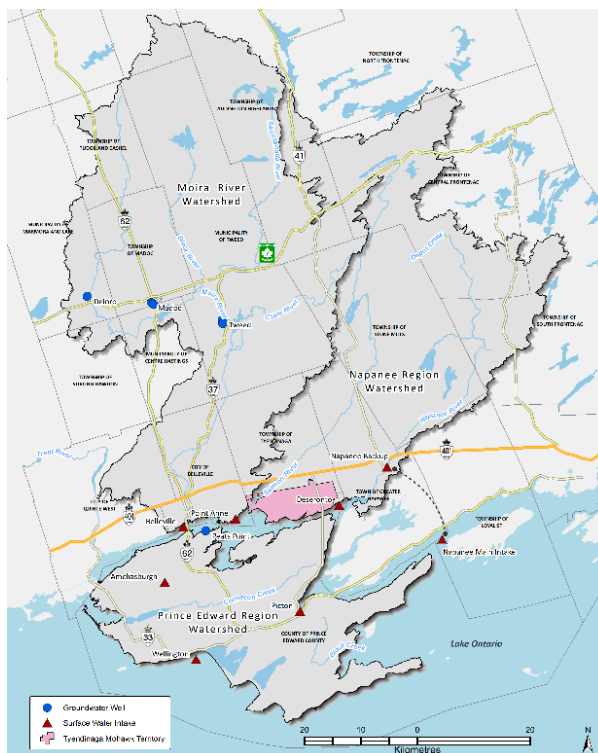
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I. Introduction

This annual progress report outlines the progress made in implementing the Quinte Region Source Protection Plan, as required by the Clean Water Act and regulations. Drinking water sources can be from surface water such as lakes and rivers, or groundwater from underground aquifers. Source protection focuses on protecting existing and future sources of municipal drinking water from overuse and contamination. Therefore, ensuring an adequate supply of clean water for current and future generations.

Approximately half the population of the Quinte Source Protection Area is serviced by eleven (11) municipal drinking water systems within the watershed (shown on the map below).

This annual progress report highlights the implementation status in several key program areas throughout 2024. This report is written for submission to the Ministry of the Environment, Conservation and Parks as required. However, it is also intended to inform the watershed residents, local municipalities, stakeholders, and other parties of progress made on implementation to date.



II. A message from your local Source Protection Committee

Overall Score: P – Progressing Well - The majority of the source protection plan policies have been implemented and/or are progressing.

The Quinte Region Source Protection Plan's objectives are to protect existing and future municipal drinking water sources and ensure that for every area identified in the Assessment Report, where an activity is, or would be a significant drinking water threat, the activity ceases to be or never becomes a significant drinking water threat.

The Quinte Source Protection Committee arrived at evaluation scores based on a summary of information provided by Quinte Source Protection Authority staff in the Annual Progress Report Template and through materials presented at the March 20, 2024, Source Protection Committee meeting.

The Committee received regular updates from Quinte Source Protection Authority staff on the status of policy implementation since the Plan came into effect on January 1, 2015.

The scoring system provided by the Ministry of the Environment, Conservation and Parks in the Annual Progress Report Supplemental Form and Template assisted the Committee in evaluating the progress achieved for the implementation of the Quinte Region Source Protection Plan. The Committee was able to assess the implementation progress of all 63 policies by considering how many policies are implemented versus how many policies have had no progress made towards implementation to date. This assessment was accomplished through a review of each of the sections in this eighth annual report and with statistics provided by Quinte Source Protection Authority staff.

III. Our Watershed

The Quinte Source Protection Area is located in southeastern Ontario and covers an area of approximately 6,200 square kilometres. The Quinte Area consists of the Moira River Watershed covering 2,880 square kilometres, the Napanee Region comprising the Salmon and Napanee River Watersheds with a combined area of 1,955 square kilometres, and the Prince Edward County Region at 1,365 square kilometres. The land that the Quinte Source Protection Area is situated on is the traditional territory of the Anishinaabek, Huron-Wendat, Mississaugas and Haudenosaunee peoples. Although the Tyendinaga Mohawks Territory is located within the Quinte watershed, the Quinte Region Source Protection Plan does not apply to their drinking water system.

The Quinte Area is home to 18 municipalities and approximately 117,000 residents with the majority living in the southern portions of the Quinte watershed. Approximately half of the watershed population live in towns and urban centres, such as the City of Belleville or the Town of Picton, and the remaining 51 percent live in rural areas.

The northern areas are rugged and form part of the Precambrian Shield covering approximately 50 percent of the Area. The Shield is largely forested with many wetlands and small lakes and is

sparsely populated. To the south of the Shield, the area is underlain by Paleozoic limestone bedrock with large areas of thin soil cover as well as some isolated areas of significant soil depth along the southwestern boundary of the Moira River Watershed. In the Prince Edward Region, the landscape is dominated by thin soil over limestone bedrock, with some areas of topographic relief provided by glacial deposits and bedrock escarpments.

The Quinte Source Protection Area has many significant surface water features which include the Napanee, Salmon, and Moira Rivers draining from the north into the Bay of Quinte (a connecting link to Lake Ontario) at the south. The Prince Edward Region is drained by several small drainage courses either flowing into Lake Ontario or the Bay of Quinte. Surface water is an important resource in the Quinte Source Protection Area since it supplies approximately half of the watershed residents with a drinking water source. These sources include private intakes and municipal drinking water systems in Belleville, Point Anne, Deseronto, Napanee, Ameliasburgh, Picton, and Wellington.

Groundwater is also an important source of drinking water since it supplies about 50 percent of residents in the Quinte Source Protection Area. Of these residents, the majority are on private wells, with approximately three percent on municipal groundwater systems in Deloro, Madoc, Tweed, and Peats Point. Groundwater is typically found in a shallow, unconfined fractured bedrock aquifer made up of either limestone or Precambrian rock. Well yields in the Quinte Area are typically low but sufficient for meeting current residential demand.

To protect sources of water used for municipal drinking water systems, the Quinte Region Source Protection Plan was developed by a local committee with multiple stakeholders. This committee includes members representing municipalities in the watershed, the agricultural community, industry, businesses, First Nations, government, and non-governmental organizations, as well as members of the public. The Source Protection Committee is supported by the Conservation Authority staff and the Executive Board, referred to as the 'Source Protection Authority' when undertaking source protection work. The Quinte Source Protection Authority is responsible for providing administrative and technical support to the committee and overseeing the source protection process.

To learn more, please visit www.quintesourcewater.ca to read the Quinte Assessment Report and the Quinte Region Source Protection Plan.

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

1. Source Protection Plan Policies and Addressing Significant Risks

Across the Quinte Source Protection Area, one hundred (100) percent of the legally binding policies as reported are implemented, in progress, and/or have been evaluated and determined to require no further action.

Municipalities, Provincial Ministries, Risk Management Officials, and the Source Protection Authority continue to work hard to ensure threats are managed according to the timelines set out in

the source protection plan. As a result of policies being continuously implemented across the Quinte watershed, over ninety-nine (99) percent of existing significant drinking water threats on the landscape have been addressed (i.e., eliminated, or managed).

The overall progress score on achieving source protection plan objectives across the Quinte Source Protection Area in this reporting period is:

P: Progressing Well/On Target - Most of the source protection plan policies have been implemented and/or are progressing well according to timelines in the Quinte Region Source Protection Plan.

2. Municipal Progress: Addressing Risks on the Ground

Eight (8) lower and single-tier municipalities in the Quinte Source Protection Area have vulnerable areas where significant drinking water threat policies apply. Additionally, one (1) upper-tier municipality is the Planning Act Approval Authority for its member lower-tier municipalities.

Municipalities in the Quinte Source Protection Area are required to review and update their Official Plan to ensure they conform to the local source protection plan. This review is required to occur during the first instance of an Official Plan cyclical review under the Planning Act, following the source protection plan coming into effect. All nine (9) municipalities have amended or are in the process of amending their Official Plans to conform to the Quinte Region Source Protection Plan.

All municipalities (100%), that have sewage infrastructure in vulnerable areas, are reporting sewage infrastructure inspections and maintenance are occurring as required.

Finally, all municipalities (100%) have elected to delegate the responsibility for the Education and Outreach policy to the Source Protection Authority. The Source Protection Authority has ensured that materials are created, disseminated, and updated as required by Policy G-1-E&F: Education and Outreach.

The overall progress score on achieving the Quinte Region Source Protection Plan objectives in this reporting period is:

P: Progressing Well/On Target

3. Septic Inspections

When an on-site sewage system is functioning properly, contaminants from the system are greatly reduced or eliminated. The Ontario Building Code requires that all septic systems within highly vulnerable areas be included in a Mandatory On-site Sewage System Inspection Program. Under the program, inspections are required on a five (5) year cycle.

These inspections may be administered by the local Health Unit, municipality, or Conservation Authority. In the Quinte Source Protection Area, all municipalities with septic threats employ

municipal staff to undertake these inspections. The Quinte Region Source Protection Plan contains a supporting policy, directing municipalities to complete these inspections, as required by the Ontario Building Code, and to prioritize these inspections based on the location and age of the septic systems.

Municipalities in the Quinte Source Protection Area have completed the initial round of inspections and are now in various stages of the second round of inspections. The majority of municipalities have completed the second round of inspections by 2024. All systems, or one hundred (100) percent of systems inspected during the second round, are functioning as designed. The remaining municipalities have delayed the second round of inspections due to staff capacity issues. This issue was resolved in November 2024 and inspections are anticipated to occur imminently.

As all municipalities have made progress to complete the second round of inspections, the Quinte Source Protection Committee decided the overall progress score on achieving source protection plan objectives in this reporting period is:

P: Progressing Well/On Target

4. Risk Management Plans

A risk management plan is a document that outlines the measures required to address an activity that has the potential to contaminate drinking water. These measures manage the risk associated with the activity so that all threats to drinking water are properly managed. A Risk Management Official (RMO) works with the person engaging in the threat activity to decide on the necessary components of the risk management plan. All municipalities in the Quinte Source Protection Area have delegated the responsibility of RMOs and Inspectors to Quinte Conservation. RMOs are the implementing body for thirty-three (33) of the policies in the Quinte Region Source Protection Plan and utilize tools under Part IV of the Clean Water Act (prohibition, risk management plans, and restricted land uses), to manage existing and future significant drinking water threats.

In 2024, three (3) risk management plans were established, and eight (8) inspections occurred in the Quinte Source Protection Area. Since the Quinte Region Source Protection Plan took effect in 2015, a total of eighty-one (81) risk management plans have been established.

RMOs are also responsible for reviewing building and planning applications in vulnerable areas, to ensure no new significant threats are created. Once there is confirmation that no new threats will be created, the RMO issues a Section 59 clearance notice. In 2024, forty-six (46) Section 59 notices were issued. Since the plan took effect, five hundred and eighty-five (585) Section 59 notices have been issued. The process of screening development applications is reported to be working well for all municipalities (100%).

The overall progress score on achieving source protection plan objectives in this reporting period is:

P: Progressing Well/On Target

5. Provincial Progress: Addressing Risks on the Ground

Ontario ministries (e.g., Ministry of Transportation, and Ministry of the Environment, Conservation and Parks) are responsible for reviewing previously issued 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 Quinte Region Source Protection Plan to address existing activities that pose a significant risk to sources of drinking water. The provincial approvals are being amended or revoked where necessary to conform to plan policies.

Provincial ministries are identified as the implementing body in eight (8) provincial approval policies in the Plan to address existing activities that pose a significant risk to sources of drinking water. Policies in Quinte's Plan set out a timeline of one to three years to complete the review and make any necessary changes. The ministries have reported full completion (100%) of the review of previously issued provincial approvals in the source protection area.

Within the reporting year, one (1) significant fuel related drinking water threat was identified and subsequently managed by provincial instruments within Belleville's Intake Protection Zone 1.

There were a number of responses provided that were deemed too general or commented on process rather than implementation statuses. As such, SPA staff were unable to confirm the accuracy of responses. SPA staff highlighted these responses to the Drinking Water Source Protection branch of MECP. Unfortunately, MECP staff were unable to amend responses due to the provincial election period.

The overall progress score on achieving source protection plan objectives in this reporting period is:

S: Satisfactory

6. Source Protection Awareness and Change in Behaviour

There is one (1) education and outreach policy within the Quinte Region Source Protection Plan. This was purposely placed as the first policy within the plan to recognize the importance of education and outreach to the success of the Plan. All eight (8) municipalities required to implement this policy collaborate on their education and outreach initiatives and one hundred (100) percent reported implementation of this policy. These initiatives include resources on the quintesourcewater.ca website, a series of brochures and fact sheets for a variety of stakeholders including watershed residents, well and borehole drillers, real estate professionals, etc. and outreach via social media.

Drinking Water Protection Zone road signs were identified as an effective tool for raising awareness of the Drinking Water Source Protection program. These signs alert travelers to the vulnerable area, are intended to prompt spill reporting and response, and to encourage good stewardship practices. To date, eight (8) signs have been installed on provincial highways and thirty-three (33) signs on municipal roads, where required by policies in the Quinte Region Source Protection Plan. The

erection of these forty-one (41) signs equals full (100 %) implementation by all municipalities, as well as the Ministry of Transportation. The first road sign in Ontario was installed in 2015 in the Town of Greater Napanee.

The first social media campaign of the year occurred July 6- August 31 and focussed on the following themes: Rivers, Agriculture, and general drinking water source protection messaging. The next social media campaign ran from September 21 to November 9 focussed on the Basics of Source Water Protection. The purpose of the campaign was to support the implementation of source protection plans and increase public awareness about Drinking Water Source Protection across Ontario.

Starting in the winter, a multi-week public information campaign was launched about how to Salt Responsibly during the winter. New education tools included social media posts and an online mapping application about the impacts of road salt across Ontario. The objective of the campaign was to raise awareness of road salt issues and to promote salt reduction and better road salt management while striking a balance with human safety when travelling.

The overall progress score on achieving source protection awareness in this reporting period is:

P : Progressing Well/On Target

7. Source Protection Plan Policies: Summary of Delay

A municipality is slightly delayed from completing the second round of septic inspections. A multitude of factors contributed to this delay: COVID, and high staff turnover being the largest contributing factors. Staff have been hired, and a plan has been developed to complete the second round of inspections in the near future.

A few of the non-legally binding policies have not yet been implemented or implementing bodies have reported 'limited progress' on their implementation status as resources were used to implement the legally binding significant threat policies initially. Source Protection Authority staff will continue to work with these bodies to collect information and to support those who are working to implement these policies.

8. Source Water Quality: Monitoring and Actions

A contaminant is defined as a water quality issue when the contaminant is present at a level of concern or showing an upward trend, results from human activity, and threatens the municipal drinking water source. The issue contributing area (ICA), as defined in the Quinte Region Source Protection Plan is an area of land or water within a vulnerable area where activities could contribute to the water quality issue(s). These activities are classified as significant threats to drinking water.

Issues were identified at the Village of Madoc's municipal drinking water system in Centre Hastings. These issues include E. coli, Total Coliform, and Organic Nitrogen. For the Village of

Madoc wells, this area is a 30-metre setback from watercourses and wetlands within the WHPA E and F. Due to the proximity of the wells to the northern neighbouring municipality, the Issues Contributing Area falls within the Municipality of Centre Hastings and the Municipality of Madoc Township.

A nitrate issue was also identified in the municipality of Tweed. Levels of nitrates in the raw water showed an upward trend and exceeded half the maximum allowable concentration.

In response to these issues, the municipalities engaged in the following activities:

- Reported annually on the implementation of policies to address the issues to the Quinte Source Protection Authority.
- Monitored the issues through raw samples collected at the municipal drinking water system.
- Completed two rounds of septic inspections in the ICA, and any necessary upgrades/replacements (these upgrades/replacements were only necessary in the first round of inspections).
- Completed Education and Outreach activities related to sewage threats and agricultural activities.
- The Municipality of Centre Hastings has installed a new municipal well to replace one of the existing wells that experienced quality and quantity issues.
- Within the municipality of Tweed, amended policies now require nitrate soil sampling prior to application, and additional septic systems require inspections.

Raw water samples from Madoc show Organic Nitrogen results are improving. Since 2013, only one (1) sample from each well showed an exceedance of Organic Nitrogen above the provincial operational guideline. E. coli and Total Coliform remain elevated in raw water results but are starting to show a decreasing trend. Since these wells are both groundwater under the direct influence of surface water (GUDI), it is anticipated some level of these parameters will exist in the raw water samples. Additionally, as the new well is in a different aquifer, it is anticipated that results will be positively affected. Due to limited data from the new well, combined with a slight decreasing trend in issues, the raw water data will continue to be monitored to aid the Committee in future decision-making.

In Tweed, data is limited to a single year, since policy amendments were approved. Despite the small dataset, there appears to be a decrease in nitrates in the raw water. The raw water data will continue to be monitored to aid the Committee in future decision-making.

9. Science-based Assessment Reports: Work Plans

No work plans were required to be implemented for the Quinte Region Assessment Report.

10. More from the Watershed

On March 28, 2024, The Quinte Source Protection Committee submitted the amended source protection plan under Section 36 to the Ministry of the Environment Conservation and Parks for

approval. The changes to existing policies are required to address implementation gaps and adapt to the 2021 Ministry of Environment, Conservation and Parks Technical Rules.

This year marks 10 years of source water protection implementation in the Quinte Source Protection Area. The Quinte Source Protection Committee commends the numerous implementing bodies on their efforts to protect drinking water sources in the Quinte Area, where locally all policies have been successfully implemented.

For more information about Drinking Water Source Protection and what the Quinte Source Protection Authority has been doing to address threats and implement the source protection plan visit www.quintesourcewater.ca.