



Subject: Port Colborne Distribution System 2022 Annual Summary Report

To: Council

From: Public Works Department

Report Number: 2023-43

Meeting Date: March 14, 2023

Recommendation:

That Public Works Department Report 2023-43, including the attached 2022 Annual Summary Report, be received.

Purpose:

The Ministry of the Environment, Conservation and Parks (MECP) requires that an annual status summary report on the performance of the City's Drinking Water System be prepared and provided to Council in accordance with the regulatory requirements of Schedule 22 and Section 11 of Ontario Regulation (O. Reg.) 170/03 under the *Safe Drinking Water Act, 2002* (SDWA).

This report also provides Council with a summary of the 2022 Management Review, which is required under Element 20 of the Drinking Water Quality Management Standard (DWQMS) and provides an overview of the results of the 2022 MECP Inspection.

Background:

The Statutory Standard of Care provisions of the SDWA make individuals with oversight responsibilities for municipal drinking water systems legally responsible for decisions made regarding the system. The intent of this provision is to ensure that owner representatives (City Council) and various levels of decision makers of the municipal drinking water systems are acting diligently and making informed decisions when required. These decisions can impact the quality and safety of the municipal drinking water provided to all customers.

Every person who oversees the operating authority or exercises decision making authority must:

- (a) exercise the level of care, diligence and skill that a reasonably prudent person would be expected to exercise in a similar situation; and
- (b) act honestly, competently and with integrity, with a view to ensuring the protection and safety of the users of the municipal drinking water system

This Report is the primary method in which Senior Management and Council demonstrate due diligence in providing oversight of the municipal drinking water system and meeting their Standard of Care legal requirement.

Municipal Drinking Water System Annual Report

In accordance with the *Safe Drinking Water Act, 2002*, the 2022 Annual Drinking Water System Summary Report (Appendix A) has been prepared for the Port Colborne Drinking Water System. Under Schedule 22 and Section 11 of O. Reg. 170/03, drinking water system owners must prepare reports by February 28 that provide the following information:

- the requirements of the Act and other approvals relating to the system;
- brief description of the system;
- any incidents of adverse test results or where any mandatory requirement was not met, and corrective actions;
- all test results; and
- a summary of the amount of water supplied with a comparison to the system's rated capacity.

The report is published to the City's website, with copies available at the Engineering and Operations Centre located at 1 Killaly Street West. Notification of report completion is posted to the City's website and advertised in City Hall News.

DWQMS Requirements

The Municipal Drinking Water Licensing Program implemented by the MECP requires all municipal drinking water systems to be operated by accredited Operating Authorities. The Port Colborne Operating Authority underwent a third-party reaccreditation audit in December 2022. Accreditation is based on the Operating Authority's ability to implement and maintain a Drinking Water Quality Management System (DWQMS) as documented in their Operational Plans.

The provincial DWQMS requires each Operating Authority to conduct an annual Management Review that evaluates the continuing suitability, adequacy, and effectiveness of the Quality Management System. In conformance with the Operational

Plan and requirements of the DWQMS, the results of the Management Review are provided in this report.

2022 MECP Inspection Report

Every year, the MECP inspects the Port Colborne Distribution System (PCDS) to assess compliance with the requirements of the *Safe Drinking Water Act, 2002*, the *Ontario Water Resources Act, 1990* and the City's Municipal Drinking Water Licence, and Drinking Water Works Permit. The MECP has a rigorous and comprehensive inspection program for municipal residential drinking water systems. The 2022 inspection was a focused announced inspection and will be discussed below.

Discussion:

2022 Annual Summary Report

The Annual Drinking Water Quality Report was prepared on February 25, 2023, and is provided in Appendix A. The Report has been posted to the City website and notification of the report's availability will be published in the next issue of the City Hall News.

Highlights include:

- 813 routine chlorine samples and 1129 non-routine were taken. All sample results were within regulated limits.
- 66 routine turbidity samples and 1129 non-routine were taken. All sample results were within the aesthetic objective.
- Alkalinity, pH, Trihalomethanes and Haloacetic Acids were also sampled and all well within the regulated standards.
- 404 regulated bacteriological samples were collected, with 1 sample being adverse (Total Coliforms).
- One reportable adverse water quality incident (AWQI) was recorded in 2022. Total Coliforms were detected in one sample. Follow up samples indicated that the water was microbiologically safe and the minimum free chlorine residuals were maintained the entire time. The AWQI was reported as required to MECP and to Public Health, and corrective actions were completed to the satisfaction of all parties. At no time was the safety of the drinking water in Port Colborne compromised.
- The Port Colborne Water Treatment Plant Annual Summary Report prepared by the Region's Water and Wastewater Services Division provides information related to quantities and flow rates of water within the system. According to the Region's Summary Report, provided in Appendix B, the Water Treatment Plant is operating, on average, at 19% capacity, and has sufficient capacity to meet the City's long-term growth demands. The water distribution system meets present

needs but may require upgrades and extensions to satisfy growth demands as they are identified.

- The City retained a consultant to complete an Infrastructure Needs Study (INS) for the PCDS, with expected completion in mid-2023. The information from the INS will feed into the City's Asset Management Plan and into the City's Financial Plan. These recommendations within the INS, together with the outcomes from the annual Infrastructure Review, form the basis for future watermain builds and replacements. The City continues to assess conditions of the water system and identify asset replacements.
- The City also tracks maintenance related to its water infrastructure assets through the work order system, City Wide. Water infrastructure assets are maintained in good condition through effective preventative maintenance, optimized infrastructure decision-making and strategic capital planning (replacement, repair, expansion).

2022 Management Review Summary

The City's DWQMS is documented in the Operating Authority's water system Operational Plan. The Operational Plan reflects a fully implemented DWQMS with a focus on continual improvement and is made available to the public. The provincial DWQMS requires each Operating Authority to conduct an annual Management Review. The purpose of the Management Review is to summarize the activities of the PCDS Operating Authority so that Top Management can ensure the continuing effectiveness of the Quality Management System.

The Management Meeting QMS Summary Report that was provided to all attendees is attached to this report as Appendix C and a copy of the minutes from this meeting are included in Appendix D. The Standard also requires that the outcomes of the annual Management Review of the Operating Authority's DWQMS be communicated to the system Owner as presented below:

- The management review was conducted in November 2022 and covered a period from September 1, 2021, to October 31, 2022. Management reviewed the system performance including annual report data, results of internal and external audits, customer feedback and any suggestions brought forward by staff.
- The internal DWQMS audit was conducted in October 2022. The findings were positive and a few minor administrative opportunities for improvement (OFIs) were brought forward and one minor non-conformance. All OFIs are being addressed through the DWQMS Continual Improvement Process. The non-conformance was related to the measuring devices used for sampling and the recordkeeping associated with them. It was immediately addressed with staff and corrected.

- During the reporting period, there were a total of 31 main breaks. Continued monitoring of breaks will be conducted to assess the long-term trending. An increasing trend would suggest the need for accelerated watermain replacement.
- The City's water purchases decreased in 2021, falling by 7%. As the volume of water sold to the City's customers only experienced a 1% decrease in 2021, it is likely that the majority of the decrease in purchases is a direct result of the efforts by the Water/Wastewater Division to not only find and repair any watermain breaks in a timely fashion, but also to take a conservative, prudent approach to maintenance flushing activities. At the time of the report, only 2021 data was available in full.
- At the time of the management review unaccounted water was at 27%.
- Water quality complaints totaled 19 in 2021 and 7 in 2022. Where the source of the complaint could be determined, activities in the distribution system (valve turning, hydrant flushing) were the most common sources.
- Several planned preventative maintenance activities are carried out annually to help optimize the useful service life and efficiency of water infrastructure assets.

2022 MECP Inspection Results

The 2021-22 MECP inspection was an announced inspection covering the period from November 1, 2021, to November 30, 2022. The requested documents were sent to the Ministry Inspector and were reviewed remotely.

An official Inspection Report, detailing any findings and the City's Inspection Rating was issued on January 4, 2023; a copy of the inspection is provided in Appendix E. Once an inspection is completed, the Inspector generates an Inspection Rating for the drinking water system.

Overall, the inspection indicated the City's drinking water system provides a safe and reliable source of drinking water. The MECP inspection noted two instances of non-compliance and awarded a score of 94%. The non-compliances are summarized in the table below along with a description of the corrective actions implemented. Corrective actions are based on a root cause analysis of the incident and are completed within the timelines prescribed by the MECP.

Instances of Non-Compliance	Corrective Action
Sampling: pH and alkalinity samples were scheduled on a day that ended up being an excessive snow event and operating staff were working on a COVID shift schedule. The samples were missed.	As soon as staff discovered the missed samples, it was reported to the MECP. Sample calendar alerts were setup in Outlook calendars for all water/wastewater staff. No further action was required by the Ministry.

Administrative: The operations and maintenance manual content met the requirements of the Licence, but some procedures are over 10 years old and contained some administrative information that was no longer valid.	An up-to-date operations and maintenance manual will be provided to the Ministry by August 31, 2023. Staff have a plan and are working through various procedures to update and revise them.
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Internal Consultations:

There are no comments from other departments.

Financial Implications:

There are no financial implications. Capital works projects discussed in this report have been previously approved in the 2023 budget.

Public Engagement:

There was no public notification or engagement initiatives as part of this report. The Annual Drinking Water Quality Report will be posted on the City's website and hardcopies available upon request.

Strategic Plan Alignment:

The initiative contained within this report supports the following pillar(s) of the strategic plan:

- Service and Simplicity - Quality and Innovative Delivery of Customer Services
- City-Wide Investments in Infrastructure and Recreational/Cultural Spaces

Conclusion:

The 2022 Annual Drinking Water Quality Report demonstrates Public Works' continued commitment to provide a safe and reliable supply of municipal drinking water for the City's residents, visitors, and businesses.

Appendices:

- a. 2022 Port Colborne Distribution System Annual Drinking Water Quality Report

- b. 2022 Port Colborne Water Treatment Plant Annual Summary Report (Niagara Region)
- c. Port Colborne Distribution System, Summary QMS Report for the Management Review
- d. Management Review Meeting Minutes
- e. Port Colborne Distribution System Inspection Report

Respectfully submitted,

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Report Approval:

All reports reviewed and approved by the Department Director and also the City Treasurer when relevant. Final review and approval by the Chief Administrative Officer.