

Committee of the Whole (1) Report

DATE: Tuesday, February 28, 2023

WARD(S): ALL

TITLE: 2022 ANNUAL DRINKING WATER SYSTEM REPORT

FROM:

Zoran Postic, Deputy City Manager, Public Works

ACTION: FOR INFORMATION

Purpose

The purpose of this Report is to provide information regarding the performance of the City's Drinking Water System and associated Operational Plan during 2022 based on the Drinking Water Quality Management Standard (DWQMS). This Report and its attachments support Council, as the System Owner, in meeting its statutory standard of care under the *Safe Drinking Water Act, 2002* by providing information on water quality and the operational performance of the drinking water system. This Report to Council satisfies the annual reporting requirements under *Ontario Regulation 170/03 – Drinking Water Systems*.

Report Highlights

- The City's Drinking Water System achieved a 100% inspection rating in the Ministry of the Environment, Conservation and Parks' (MECP) 2021-2022 Chief Drinking Water Inspector's Report.
- In 2022, 99.1% of the 3,925 annual drinking water samples met regulatory standards. Prompt and decisive action was taken, in collaboration with the MECP and York Region Public Health, to address any Adverse Water Quality Incidents which upheld the City's commitment to ensure public safety and facilitated continuous delivery of safe drinking water throughout 2022.
- The City's Drinking Water System's Quality Management System (QMS) was audited on May 19, 2022.
- Two Management Reviews were completed during 2022 (July 27, 2022 and December 15, 2022) to evaluate the continued suitability, adequacy, and effectiveness of the City's QMS as required under Element 20 of the DWQMS.

Recommendation

1. That this Report be received for information.

Background

An annual Summary Report on the City's Drinking Water System is required to satisfy the statutory annual reporting requirement under *Ontario Regulation 170/03 – Drinking Water Systems*.

Drinking water and Drinking Water Systems are regulated by the Province through the Ministry of the Environment, Conservation and Parks (MECP).

The *Safe Drinking Water Act, 2002 (the Act)*, mandates owners and operating authorities of the municipal Drinking Water System to produce an Annual Summary Report containing information on the System's operation, management, sampling, testing, certification of staff, and water quality and quantity. The Summary Report must be completed and made available to the public by March 31st of each year and is included in Attachment 1.

Annual reporting and regular information sharing assists Council in exercising the due diligence required to meet the statutory standard of care under *the Act*.

The Act imposes a standard of care upon individuals with decision making authority over municipal Drinking Water Systems. Council, through its decision-making role, protects the City's residents and businesses by demonstrating diligence and prudent oversight of the supply and distribution of drinking water.

Council's commitment to the provision of safe drinking water ensures responsible action is taken to manage risk and increase efficiency through sustainable financial planning, proactive asset management, and systematic continuous improvement.

Drinking water protection is a vital responsibility shared by many partners as safe drinking water is one of the key pillars of public health in Ontario.

York Region's Medical Officer of Health (MOH) has a key role in protecting public health by assessing potential health impacts from adverse water quality test results. The MOH may direct the owner of a Drinking Water System to take corrective actions exceeding regulatory mandates and/or the City's Standard Operating Procedures (SOPs). For the 2022 reporting period, there were no additional corrective actions or restrictions (e.g., boil water or drinking water advisories) imposed on the City by the MOH.

Should an adverse water quality event or water emergency occur, procedures are in place to protect public health by ensuring close communication and cooperation between the MOH, York Region, and the MECP.

Ontario has an integrated system of procedures, processes, and tools that collectively prevent or reduce the risk of contamination in drinking water to protect public health.

This multi-faceted approach to protecting drinking water in Ontario was a key recommendation in Justice O'Connor's report on the Walkerton tragedy in 2000.

Elements of this approach include source water protection, health-based standards, regular and reliable testing, strong legislative and regulatory framework, mandatory certification and training of drinking water operators, a Provincial inspection and enforcement program, and implementation of an Operational Plan and QMS based on the DWQMS.

Multiple barriers protect the public and ensure that preventative and corrective actions are taken to address potential risks.

Drinking Water System Operators play a vital operational role in providing safe drinking water so the Province established requirements for the training and certification of Drinking Water System Operators under *Ontario Regulation 128/04 – Certification of Drinking Water System Operators and Water Quality Analysts*.

The City continues to participate in high quality Operator training through MECP-approved training providers and training courses. Drinking Water System Operators must complete annual in-class and on-the-job training to maintain certification. All City Operators and contractors responsible for operating any component of City's Drinking Water System are required to hold current MECP issued Drinking Water Certificates.

Every municipal residential Drinking Water System is inspected at least once a year by the MECP to assess compliance with *the Act*.

The MECP's Provincial Officers conduct on-site inspections to assess compliance with regulatory requirements including those detailed in the City's Municipal Drinking Water License and Drinking Water Works Permit. Inspections include a review of the Drinking Water System's source, treatment, and distribution components, as well as water quality monitoring results and procedures to evaluate system management and operations.

One inspection is conducted by the MECP annually, including at least one unannounced inspection every three years.

The City participated in one announced MECP inspection on January 5, 2023 covering the August 21, 2021 to December 28, 2022 inspection period. The MECP inspection included a site visit to the Maplewood Booster Station on January 5, 2023 followed by a comprehensive review of the City's operational documents and records. The City is awaiting the Inspection Summary Rating Record from the MECP for the January 5, 2023 inspection.

If Provincial Officers uncover significant findings that may affect public health, System Owners and Operators are informed immediately during the inspection.

Annual internal and external audits of the City's Operational Plan and Quality Management System are mandated and are used to facilitate continuous improvement.

The City's DWQMS was re-accredited on June 22, 2021 followed by an external surveillance audit of the City's Operational Plan on May 19, 2022. The audit identified zero instances of non-conformance and three opportunities for improvement (OFI). The OFIs have been reviewed and are being incorporated in the System. Re-accreditation is a requirement under *the Act* for the City to continue to operate the Drinking Water System.

An internal DWQMS audit was completed in October 2022 by a contracted auditing company. The internal audit identified zero instances of non-conformance and five OFIs. The OFIs have been reviewed and will be incorporated into the System, as appropriate.

Two Management Reviews were held to update Top Management, as defined in the DWQMS, on the status of the Drinking Water System, actions taken in the current calendar year, and actions planned for the next calendar year. The Management Reviews took place on July 27, 2022 and December 15, 2022. A summary of the Management Reviews is provided in Attachment 2.

Previous Reports/Authority
[2021 Annual Drinking Water System Report](#)

Analysis and Options

In 2022, 99.1% of laboratory samples were within regulatory limits which reaffirms the City's commitment to supplying safe drinking water.

The York-Durham Environmental Laboratory (YEDL), an MECP accredited drinking water laboratory, and the City's certified Drinking Water Operators performed 3,925 water quality tests during 2022. Of these tests, only 36 tested outside of the regulatory limits. These incidents are called Adverse Water Quality Incidents (AWQI).

Staff responded to each AWQI in accordance with City's SOPs, performing corrective actions as required under *Ontario Regulation 170/03 – Drinking Water Systems of the Act* and as directed by York Region's MOH. Prompt and decisive action to address AWQIs and their causes maintained continuous delivery of safe drinking water and ensured public safety.

MECP inspections show the City is achieving strong and consistent performance levels and also highlight opportunities for the City to improve the Drinking Water System.

The City is awaiting the final results of the January 5, 2023 announced MECP inspection for the August 21, 2021 to December 28, 2022 inspection period. During the 2022 inspection period, the City identified and reported four instances of non-compliance to the MECP. All four instances were associated with new development sites which were found to be in contravention of the City's Drinking Water Works Permit (#011-201) as contractors had conducted work on the City's distribution system without the presence of a City of Vaughan MECP-certified Drinking Water Operator.

The City's Water By-law 106-2022 regulates private connections to the City's Drinking Water System including practices and actions that put the integrity of Drinking Water System at risk. The City continues to engage the development community throughout the development process to promote and support compliance with Water By-law 106-2022.

The City received a 100% inspection rating on the MECP's 2021-2022 Chief Drinking Water Inspector's Report.

Ontario's Chief Drinking Water Inspector releases an Annual Report rating Drinking Water Systems across the Province. The 2021-2022 Chief Drinking Water Inspector's Annual Report includes in-depth information on the performance of Ontario's drinking water systems and licensed laboratories.

The 2021-2022 Chief Drinking Water Inspector Report gave the City the highest possible inspection rating of 100%.

For comparison purposes, eight of the nine local area municipalities in York Region received an inspection rating of 100%, with the remaining one receiving an inspection rating 98.29%. Of the 657 municipal residential Drinking Water Systems in Ontario, 78% received an inspection rating of 100%. This illustrates that the operation and management of the City's Drinking Water System is amongst the best in the Province.

Financial Impact

In May 2019, Council approved the [Long Term Water Financial Plan for 2020 to 2031](#), committing to the long-term financial sustainability of the City's Drinking Water System and ensuring continuous delivery of safe drinking water. The Plan identifies the financial support required to operate, maintain, and perform asset management planning on the Drinking Water System and was a component in the City's Municipal Drinking Water License renewal submission to the MECP.

Under Section 11 of *Ontario Regulation 170/03 – Drinking Water Systems*, Owners are required to describe “any major expenses incurred during the period covered by the report to install, repair or replace required equipment.”

In 2022, the City invested \$18,344,200 to install, repair, and/or replace equipment required to deliver safe drinking water. Costs were funded through the City's water rates, associated reserves, and the approved capital and operating budgets.

Broader Regional Impacts/Considerations

There is no impact to the Region.

Conclusion

This report and its attachments are provided to support Council's statutory standard of care under Provincial drinking water regulations and allows Council to demonstrate its due diligence in performing informed decision making.

The City's Drinking Water System is subject to strict regulations implemented by the Province to keep drinking water safe. The audit and inspection results from both internal and external parties for the 2022 reporting year confirm the City's Drinking Water System is performing well.

These results are attributed to Council's commitment to provide safe drinking water to the City's residents and businesses.

As part of the City's regulatory requirements, links to this report and its attachments will be posted on the City's external website.

For more information, please contact:

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Attachments

1. 2022 Annual Summary Report.
2. Drinking Water Quality Management Standards – Summary of Management Reviews.

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