

Committee of the Whole (1) Report

DATE: Tuesday, March 2, 2021

WARD(S): ALL

TITLE: 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 Mayor and Members of Council information regarding the performance of the City's Water Distribution System and its Drinking Water Quality Management System (DWQMS), for the year 2020. 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 (SDWA)* by providing information on the quality of water supplied and the operation and performance of the drinking water system. This report to Council satisfies the annual reporting requirements of Ontario Regulation 170/03 - Drinking Water System.

Report Highlights

- In 2020, 99.3% of the 4,028 drinking water samples tested met regulatory standards and confirm the City's continued delivery of safe drinking water
- The City's drinking water system achieved a 100% inspection rating in the Ministry of the Environment, Conservation and Parks' Chief Drinking Water Inspector's Report for the 2019-2020 fiscal year
- A Management Review, to evaluate the continuing suitability, adequacy and effectiveness of the Quality Management System as required under Element 20 of the DWQMS, was completed on June 26, 2020

Recommendations

1. That this report be received for information.

Background

Annual reports on drinking water systems are required to satisfy statutory requirements

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 systems to annually produce a 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 as Attachment 1.

Regular updates and annual reporting assists Council in exercising its due diligence to meet its statutory standard of care

The Act imposes a standard of care upon individuals with decision-making authority over municipal drinking water systems. Council, through its decision-making power, protects the City's residents and businesses by demonstrating diligence over the supply and delivery of drinking water.

Council's commitment to the provision of safe drinking water ensures financial sustainability, asset management, and continual improvement of the City's drinking water system to proactively manage risks and increase efficiency.

Mitigating and monitoring potential public health risks related to drinking water ensures safety of drinking water users

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 over and beyond the regulatory mandated corrective actions or the City's Standard Operating Procedures (SOPs). For the 2020 reporting period, there were no additional corrective actions or water restrictions (e.g. boil water advisories or drinking water advisories) imposed on the City by the MOH.

Where an adverse water quality event or a water emergency occurs, procedures are in place to ensure close communication and co-operation between the MOH, York Region, and MECP, protecting public health.

Multi-barrier approach mitigates risks, protects the drinking water system and public health

The multi-barrier approach to protect 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, certification and training of operators, an operational plan and Quality Management System (DWQMS) based on Drinking Water Quality Management Standards along with a Provincial inspection and enforcement program.

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

Regulatory mandated training for certified drinking water operators provides required knowledge to operate complex drinking water systems

The City continues to participate in high quality operator training through MECP approved training providers and training courses. There are two components to drinking water operator training, in class training and on-the-job practical training. Both components are required to be completed by an operator to maintain certification. All of the City's operators and contractors are required to hold current MECP issued drinking water certificates before operating any component of the City's drinking water system.

Provincial inspections and enforcement assess compliance

The MECP's Provincial Officers conduct an on-site inspection to assess compliance with regulatory requirements including those laid out in the City's Municipal Drinking Water License and Drinking Water Works Permit. One detailed, unannounced, inspection is conducted by the MECP every three years.

The City's most recent announced MECP inspection took place on February 7, 2020. The City received a 100% inspection approval rating.

System Owners and Operators are informed of significant findings, that may affect public health, immediately during the inspection.

Internal and external audits of the DWQMS promote continuous improvement

In July 2020, staff completed an internal DWQMS audit with the assistance of an external consultant. The audit reviewed the elements of the DWQMS and their implementation.

The audit identified one minor non-conformance and four opportunities for improvement. The minor non-conformance and three opportunities for improvement were addressed immediately and closed; opportunities for improvement remain open and are being incorporated into the system, as appropriate.

Subsequent to the internal audit, the Annual Management Review took place to update senior management on the status of the drinking water system, actions taken and planned for the next calendar year. A summary of the Management Review is provided in Attachment 2.

In August 2019, an audit of the DWQMS was completed by an external MECP approved auditor. The audit identified one minor non-conformance and five opportunities for improvement. The minor non-conformance has been closed and opportunities for improvement have been reviewed and are being incorporated in the system.

Previous Reports/Authority

[2019 Update on Drinking Water System Performance](#)

Analysis and Options

99.3% of laboratory samples were within Regulatory limits in 2020, re-confirming that the City's drinking water is and continues to be safe

In 2020, the York-Durham Environmental Laboratory, a MECP accredited drinking water testing laboratory, and the City's Certified Drinking Water Operators performed 4,028 water quality tests. Of these tests, only 27 fell outside of the regulatory limits, these incidents are called Adverse Water Quality Incidents (AWQI).

Staff responded to each AWQI in accordance with the City's Standard Operating Procedures, performing corrective actions required under relevant regulations of the SDWA and direction of the Region's MOH. Promptly and appropriately addressing AWQIs and their causes maintained continuous delivery of drinking water and ensured the safety of the public.

MECP inspections provide opportunities for improvement of the Drinking Water System

The February 2020 MECP inspection report made three recommendations for improvement, including, updating the forms that identify the Overall Responsible Operator (ORO)/Operator-in-Charge from Operator-in-Training (OIT) which was to ensure an OIT is not designated as an ORO/OIC since these designations require a higher level operator certification under O.reg 128/04 made under SDWA. The second observation was that Woodland Acres pressure elevating system did not appear to be visited on a consistent schedule and the third recommendation was to provide clarity on the adverse resolution forms, providing a concise document and avoiding references to multiple documents.

All three MECP recommendations were implemented in 2020 through updates to the City's SOPs, creating recurring work orders, and management oversight processes.

Vaughan received a 100% inspection score on the Chief Drinking Water Inspector's 2019-2020 Annual Report

Ontario's Chief Drinking Water Inspector releases an annual report, scoring drinking water systems. Reporting timelines are based on the MECP's previous fiscal year April 1, 2019 to March 31, 2020.

The 2019-2020 Chief Drinking Water Inspector Report gave the City the highest possible score of 100%.

For comparison purposes, only seven of the nine local area municipalities in York Region received a score of 100%, with the remaining two receiving scores ranging from 90.59% to 91.39%. Of all the 657 municipal residential drinking water systems in Ontario, only 71% receive the score of 100%, illustrating that the City's drinking water system operations and management as amongst the best in the Province.

Financial Impact

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

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

In 2020, the City invested \$8.85 million to install, repair or replace equipment required to deliver safe drinking water. Costs were funded through the City’s water rates, associated reserves and the approved capital budget.

Broader Regional Impacts/Considerations

There is no impact to the Region.

Conclusion

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

The City’s drinking water system is subject to strict regulations implemented by the Province to keep drinking water safe. The results from both internal and external parties for the reporting year 2020 confirm that the City’s drinking water system is performing well.

These results are attributed to Council’s commitment to the City’s residents and business by providing safe, clean drinking water.

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

For more information, please contact: James Steele, Director, Environmental Services, ext. 6116

Attachments

1. Annual Report
2. Drinking Water Quality Management System – Summary of Management Review

Prepared by

James Steele, Director of Environmental Services, Extension: 6116

Approved by

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Zoran Postic, Deputy City Manager,
Public Works

Reviewed by

A handwritten signature in blue ink, appearing to be 'Jim Harnum', with a cursive style.

Jim Harnum, City Manager