

Staff Report



To	Committee of the Whole
Service Area	Infrastructure, Development and Enterprise Services
Date	Tuesday, April 4, 2023
Subject	2022 Water Services' Annual Report and Summary Report

Recommendation

1. That Guelph City Council approve the 2022 Water Services' Annual Report and Summary Report.
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Executive Summary

Purpose of Report

The Water Services' Annual Report and Summary Report ("the report") is a compilation of information that demonstrates to the water system Owner (City Council) and all stakeholders the ongoing delivery of an adequate and safe supply of drinking water to customers serviced by the City of Guelph Drinking Water System (Guelph DWS) and the Gazer Mooney Subdivision Distribution System (Gazer Mooney SDS, located in the Township of Guelph/Eramosa).

This report satisfies the regulatory requirements of the [Safe Drinking Water Act](#) (SDWA) including the [Drinking Water Quality Management Standard](#) (DWQMS); and regulatory reporting required under [O. Reg. 170/03 - Section 11](#) and [Schedule 22](#).

Through the report, the system owner, senior leaders, and customers are informed of the performance of Water Services for the period of January 1 to December 31, 2022.

Due to the regulatory requirements noted above, the Water Services' Annual Report and Summary Report are presented as a separate report from the Corporate Annual Report.

Key Findings

In 2022, Water Services maintained its commitment of providing consumers in the City of Guelph and the Gazer Mooney subdivision in Guelph/Eramosa Township with a safe, consistent supply of high-quality drinking water while meeting or exceeding, and continually improving on, legal, operational, and quality management system requirements.

Strategic Plan Alignment

This report is aligned with the Strategic Plan Priorities of Sustaining our Future by providing water in a sustainable way, Building our Future by maintaining and replacing water assets and Working Together for our Future through our collaborative approach to the delivery of water services.

Financial Implications

All financial implications of the Report were included as part the Council approved 2022 Water Services Non-Tax Operating and Capital Budgets.

Report

In satisfying the requirements of the [Safe Drinking Water Act \(2002\)](#), Water Services is pleased to present the 2022 Water Services' Annual Report and Summary Report for review and approval by the system Owner (City Council). Significant highlights of the report are described below. For Council and public reference, the complete reports are available for review at [Guelph.ca/water-testing](https://guelph.ca/water-testing).

Water Services works closely with the Ministry of the Environment, Conservation and Parks (MECP) and Wellington Dufferin Guelph Public Health (WDGPH) to maintain and continuously improve the drinking water system and ensure safe drinking water.

Ministry of the Environment, Conservation and Parks Inspection Results

The 2022-2023 MECP R170 Inspection is ongoing, and an inspection score has not been obtained for the Guelph DWS or the Gazer Mooney SDS. Upon receipt of this report by end of Q1, any non-compliances identified through the inspection will be immediately corrected. For any issues that are identified, Water Services and Compliance & Performance will engage in a root-cause analysis process (RCA), where continual improvement measures are identified and implemented, and new policies and procedures may be created to prevent such issues of non-compliance from reoccurring.

Through ongoing conversations with the MECP Inspector staff do not expect any major compliance issues or concerns.

Adverse Water Quality Incidents (AWQIs)

What is an AWQI? When something goes wrong with a Drinking Water System, the event may be referred to as an adverse drinking water quality incident (AWQI). An AWQI can be, but is not limited to, an adverse sample result, no free available chlorine (FAC) in a distribution system, or failure of a UV treatment device.

There was one AWQI in the Guelph Drinking Water System in 2022. The AWQI resulted in a non-compliance related to maintaining a secondary free chlorine residual above 0.05 mg/L in the distribution subsystem.

On September 07, 2022, Sample Station D0281 (Dawson Road) was sampled as part of the distribution subsystem microbiological sampling program and a chlorine residual of 0.00 mg/L was recorded. [O. Reg. 170/03](#) requires a minimum free chlorine residual of 0.05 mg/L in the distribution subsystem. Due to construction (watermain renewal) the Dawson Road watermain was cut and capped at Speedvale Ave., creating a dead-end which increased the water age, resulting in the adverse secondary disinfection residual. This area of the distribution system did not include any serviced customers. This location was added to the flushing program for the duration of the construction which resolved the issue, to maintain a secondary free chlorine residual.

External Audit Results

The third-party external verification audit was completed virtually between November 21 and November 23, 2022, by NSF International Strategic Registrations. The auditor looked at 23 processes at Water Services and participated in a virtual facility tour. Accreditation to the DWQMS Version 2.0 was maintained.

The auditor noted that there continues to be strong evidence of ongoing commitment to the DWQMS at the City of Guelph. System strengths observed during the audit included:

- Team: Commitment and passion
- Staff engagement and participation in internal audit and Management Review
- Risk Assessment processes
- Continual Improvement
- DWQMS documentation: management review, risk assessments, internal audit
- Emergency response processes

Four (4) minor non-conformances were identified for the Guelph Drinking Water System. One (1) minor non-conformance was identified for the Gazer Mooney Subdivision Distribution System.

A root cause analysis was performed, and corrective action plan was submitted to the external DWQMS auditor for each non-conformance. The external DWQMS auditor accepted the submitted corrective action plans, except for one and additional information was required. The additional information was prepared and submitted to the auditor as requested.

Resolution of the identified non-conformance will occur at the next external DWQMS audit (October 2023), the external DWQMS auditor will follow-up to ensure that the corrective action plan that was submitted for each non-conformance has been effectively implemented.

The external DWQMS auditor recommended to NSF that Water Services accreditation to the DWQMS continue.

Annual Water Services Management Review

Water Services conducts an annual Management Review, as required under the DWQMS. The Management Review meeting was conducted on February 15, 2023. Through the management review process, top management assess the continuing suitability, adequacy, and effectiveness of the QMS. The results of the management review, including any identified deficiencies, decisions and action items are reported to the Owner (Council). For more information, please see the Management Review meeting minutes appended to the [Summary Report](#).

Water Efficiency Strategy Progress

The Council approved the 2016 [Water Efficiency Strategy](#) (WES) defined programs, policies, and resources to help the City meet reduction targets in average daily water production set-out in the 2014 Water Supply Master Plan. The [2022 WES Progress Report](#) outlines the individual program successes and the progress to-date in achieving the reduction target of 9,147 cubic metres in average daily production by 2038.

Key Facts:

- Since the implementation of the 2016 WES, the cumulative water savings achieved to date is 1,470 cubic metres per day.
- The total water savings achieved for 2022 was 100.4 cubic metres per day, falling short of the annual target (629 cubic metres per day). Challenges included staffing gaps and transitions, and program activity reestablishment due to the COVID-19 pandemic
- Average daily residential water use in Guelph (166 L/person) decreased in 2021 and remains below the provincial (172 L/person) and national (215 L/person) averages. 2022 consumption data is not finalized in time to include in the annual report.
- In 2022, 561 residential rebate applications and audits were completed, two business upgrades were processed, and one significant facility upgrade resulting in water savings was completed. For more information on the individual water efficiency programs available, visit guelph.ca/rebates.
- Various indirect water savings programs, public outreach and education programs were also delivered to Guelph residents to motivate action around water conservation and efficiency.

Municipal Drinking Water Licence

For Water Services to be the Operating Authority for the Guelph Drinking Water System, the Corporation is required to obtain and maintain a Municipal Drinking Water Licence. The Municipal Drinking Water Licence must be renewed every 5 years. Water Services' Municipal Drinking Water Licence is set for renewal in January 2024 and expires in July 2024.

There are five components that make up the license that must be in place. They are:

1. A Drinking Water Works Permit

The Drinking Water Works Permit is issued by the Ministry of the Environment, Conservation and Parks and provides a description of the overall water system, including treatment, storage, and distribution and will include, when applied for, an authority to alter the system in a specified way.

2. Permits to Take Water

A Permit to Take Water is required for any water takings in Ontario that exceed more than 50,000 L of water per day. The purpose of the Ministry's Permit to Take Water (PTTW) program is to ensure the conservation, protection, wise use and management of the waters of the province. Permits are controlled, and not issued if the taking of more water in a given area would adversely affect existing users or the environment. The requirements of the Permit to Take Water reflect the Ontario government's continuing efforts to safeguard the province's water supply and detailed information is requested about individual water takings so that Ontario's water resources may be protected for all users. The City of Guelph holds 18 permits to take water for our drinking water sources that have different requirements, including different pumping rates and required monitoring of the environment in the surrounding area.

3. An Operational Plan

An Operational Plan is a plan prepared in accordance with the Drinking Water Quality Management Standard (DWQMS) and is required under the Safe Drinking

Water Act. This plan documents Water Services' Quality Management System. To fulfill the requirements of the Municipal Drinking Water Licence, the Operational Plan must be endorsed by Council once per term. The updated Operational Plan will be brought to council in June 2023.

4. The Operating Authority must be accredited

For Water Services to be an Accredited Operating Authority, the City must be accredited to the Drinking Water Quality Management Standard. Water Services has been accredited since 2009.

To maintain our accreditation, every year we complete a comprehensive audit and review of the Operational Plan along with our programs and processes by an independent certified accreditation body that is appointed by the province. Water Services completed this audit in November 2022 and maintained accreditation to the Drinking Water Quality Management Standard, version 2.0.

5. A Financial Plan

The final requirement of the Municipal Drinking Water License is a long-range water financial plan as defined under [Ontario Reg 453/07](#) to advise the Owner of financial resources needed to sustain compliance and a fit state of repair of the water system.

As your operator representative, Water Services, Wastewater Services and Compliance & Performance staff are currently working to finalize the updated 2023 Water and Wastewater Long Range Financial Plan which will be brought before Council for deliberation and approval in the last quarter of 2023.

Financial Implications

All financial implications of the Report were included as part of the Council approved 2022 Water Services' Non-Tax Operating and Capital Budgets.

Consultations

Departmental consultation completed in support of the 2022 Water Services' Annual Report and Summary Report, include:

- Engineering and Transportation Services
- Planning and Building Services

Attachments

Attachment-1 [2022 Water Services' Annual Report](#)

Attachment-2 [2022 Water Services' Summary Report](#)

Attachment-3 [2022 Water Efficiency Strategy Progress Report](#)

Departmental Approval

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