Staff Report

To:	General Committee
Staff Report #, Subject and Ward(s):	INF01-25, Water Operations Branch 2024 Drinking Water System Report (All Wards)
Date:	February 26, 2025
Department Head Approval:	S. Diemert, P.Eng. Director of Infrastructure
Executive Management Approval:	B. Araniyasundaran, P.Eng., PMP General Manager of Infrastructure and Growth Management
CAO Approval:	M. Prowse Chief Administrative Officer

Recommendation(s):

1. That Staff Report INF01-25, regarding the City of Barrie's Drinking Water System be received for information purposes, including:

   a) Schedule A – 2024 Drinking Water System Operations Report;

   b) Schedule B – 2024 Annual Report, Section 11, Ontario Regulation (O.Reg.) 170/03;

   c) Schedule C – 2024 Municipal Summary Report, Schedule 22, O.Reg. 170/03;

   d) Schedule D – Ministry of Environment, Conservation and Parks Standard of Care; and

   e) Schedule E – Quality Management System Management Review Meeting Minutes.

Executive Summary:

The purpose of this report is to:

a) Summarize the Drinking Water System (the System) operating year of January 1st through December 31st, 2024; to provide information to City Council on the performance of the System; and to satisfy the regulatory requirements of the

Safe Drinking Water Act, including the Drinking Water Quality Management Standard and regulatory reporting requirements under Section 11 and Schedule 22 of O.Reg. 170/03. This report is a compilation of information that demonstrates the commitment of the Water Operations Branch (the Branch) to provide safe drinking water while being transparent and financially accountable;

b) Provide a summary to Council which includes updates, changes, and information related to the requirements of the Safe Drinking Water Act and the City of Barrie's Quality Management System; and

c) Solicit from Council an acknowledgement of their receipt of the Annual Report and Municipal Summary Report.

There are two (2) specific reporting requirements related to O.Reg. 170/03:

d) Section 11 requires that an Annual Report be prepared no later than February 28th of each year. This report provides a brief description of the System; chemicals used; a breakdown of monetary expenses related to required equipment; a summary of all test results; and a summary of adverse reports and corrective actions taken. In addition, the report entitled, "2024 Drinking Water System Annual Report", must be available to the public upon request and be posted for viewing on the City of Barrie website.

e) Schedule 22 requires the preparation of a summary report by March 31st each year, with a copy forwarded to members of Council. This allows the Owner of the System to assess the System's ability to meet both existing and planned uses. The report entitled, "Municipal Summary Report", lists the non-compliances in respect to the Safe Drinking Water Act, O.Reg. 170/03, the Municipal Drinking Water License, the Drinking Water Works Permit, orders applicable to the System received, and any corrective measures that were taken in respect of the non-compliances. It also summarizes the quantities of water supplied during the reporting year, including monthly average and maximum daily flows, along with a comparison to the related capacities.

Key Findings:

The System consists of a Surface Water Treatment Plant and associated Low Lift Pumping Station, 12 groundwater wells, three (3) in-ground storage facilities, three (3) elevated storage reservoirs and seven (7) booster stations, distribution watermains and associated hydrants, valves, and appurtenances in five (5) major pressure zones throughout the City of Barrie (City). Source water for the Surface Water Treatment Plant is drawn from Kempenfelt Bay of Lake Simcoe. Water supplied from the groundwater system relies on wells drilled into a deep aquifer. The distribution system consists of approximately 4,238 hydrants and 695 km of watermain and transmission main serving approximately 164,202 residents.

The total annual production was 14,791 ML with an average daily flow of 40 ML and a maximum daily flow of 90 ML.

The total cost to operate the System was approximately $1,310.99/ML. Of that total, the cost of production and treatment amounted to approximately $554.17/ML. The

proportion of the total attributable to distribution system operating costs amounted to approximately $5,438.65/km of watermain. The raw and calculated data associated with these costs can be found in Table 1.

Table 1: Raw and Calculated Costs

Raw Data				**Calculated Data**		
	Expenses	Total Volume Produced in 2024 (ML)	Total km of Watermain	Cost to Operate per ML	Total Cost of Production and Treatment Services	Total Distribution Costs per km
GWS + SWS	$8,196,752.38	14,791	695	Total Expense /Total Volume= **$1,310.99/ML**	GWS+SWS expenses/volume produced= **$554.17/ML**	WDS Expenses / km of watermain= **$5,438.65/km**
WDS	$3,779,860.48					
Other	$7,414,264.09					
Total Expenses	$19,390,876.95					

*Note: "Other" expenses include Water Customer Services, Compliance and Technical Support, and Water Operations Administration
GWS = Groundwater Supply
SWS = Surface Water Supply
WDS = Water Distribution Services

Approximately 103.5% of the projected operating budget was expended.

Approximately 3,000 samples were collected for independent laboratory analysis under the regulatory sampling program for chemical and microbiological parameters. The analytical results are used to assess and optimize system performance, develop corrective actions, ensure safe water for consumption and to meet legislative requirements.

There were ten (10) Adverse Water Quality Incidents (AWQIs) reported in 2024. Each were promptly resolved to the satisfaction of the MECP and Simcoe Muskoka District Health Unit (SMDHU).

The MECP conducted one announced, focused inspection of the System. The inspection covered the period from November 2023 to October 2024. Following the System inspection, the MECP issued a report summarizing the findings, including regulatory non-compliances. There were zero (0) non-compliances with regulatory requirements and zero (0) recommendations reported. **The MECP Final Inspection Rating for 2024 was 100%.**

The Quality Management System was subject to an external audit in December 2024. The re-accreditation audit consisted of an off-site desktop audit of the Operational Plan, and on-site audit of associated documents and records. **There were zero (0) non-conformances or opportunities for improvement identified by the external auditor and reaccreditation was maintained until 2027.**

Financial Implications:

There are no financial implications for the Corporation resulting from the proposed recommendation.

Alternatives:

As this Staff Report is being presented as a legislative requirement, and for information purposes only, no alternatives are presented.

Strategic Plan Alignment:

The recommendation(s) included in this Staff Report support the following goals identified in the 2022-2026 Strategic Plan:

Affordable Place to Live		
Community Safety		
Thriving Community		
Infrastructure Investments	X	• Update and improve water infrastructure.
Responsible Governance	X	• Maintaining focus on City ore services. • Ensure accountability and transparency.

Additional Background Information and Analysis:

There is no additional information and analysis requirements related to the recommendation.

Consultation and Engagement:

No public consultation was required in relation to the recommendation.

Environmental and Climate Change Impact Matters:

There are no environmental and climate change impact matters related to the recommendation.

Appendix:

Appendix A – Water Operations 2024 Drinking Water System Reports

Report Author:

D. Moreau, BES
Manager of Water Operations, Infrastructure

File #:

C11 - WAT

Pending # (if applicable):

N/A