



TO: GENERAL COMMITTEE

SUBJECT: WATER OPERATIONS BRANCH 2018 DRINKING WATER SYSTEM REPORTS

PREPARED BY AND KEY CONTACT: C. MARCHANT, MANAGER OF WATER OPERATIONS EXTENSION 6145

SUBMITTED BY: J. THOMPSON, P.ENG., CMM III IP, PMP, DIRECTOR OF ENVIRONMENTAL SERVICES

GENERAL MANAGER APPROVAL: B. PARKIN, P. ENG., GENERAL MANAGER OF INFRASTRUCTURE AND GROWTH MANAGEMENT

CHIEF ADMINISTRATIVE OFFICER APPROVAL: M. PROWSE, CHIEF ADMINISTRATIVE OFFICER

RECOMMENDED MOTION

1. That Staff Report ENV001-19 regarding the City of Barrie's Drinking Water System and the following Schedules A – E attached to Staff Report ENV001-19, be received for information purposes:
 - a) Schedule A – 2018 Drinking Water System Operations Report;
 - b) Schedule B – 2018 Annual Report, Section 11, Ontario Regulation (O.Reg.) 170/03;
 - c) Schedule C – 2018 Municipal Summary Report, Schedule 22, O.Reg. 170/03;
 - d) Schedule D – Ministry Environment, Conservation and Parks (MECP) Standard of Care; and
 - e) Schedule E – Quality Management System (QMS) Management Review Meeting Minutes.

PURPOSE & BACKGROUND

2. The purpose of this Staff Report is:
 - a) To summarize the Drinking Water System (the System) operating year of January 1st, 2018 through to December 31st, 2018; to provide information to City Council on the performance of the System; and to satisfy the regulatory requirements of the Safe Drinking Water Act (SDWA), including the Drinking Water Quality Management Standard (DWQMS) 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 providing safe drinking water while being transparent and financially accountable; and
 - b) To solicit from Council an acknowledgement of their receipt of the Annual Report and Municipal Summary Report.
3. The "2018 Drinking Water System Operations Report" summarizes the operating year of January 1st, 2018, through to December 31st, 2018.

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4. There are two (2) specific reporting requirements related to O.Reg. 170/03:
 - a) Section 11 requires that an Annual Report be prepared not 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, "2018 Drinking Water System Operations Report", must be available to the public upon request and be posted for viewing on the City of Barrie website.
 - b) Schedule 22 requires a summary report be prepared not later than March 31st of each year and a copy forwarded to members of Council to enable the Owner of the System to assess the capability of the System to meet existing and planned uses of the System. This Report entitled, "Municipal Summary Report", lists the non-compliances in respect to the SDWA, 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 the water supplied during the reporting year, including monthly average and maximum daily flows, along with a comparison to the rated capacities.
 5. In addition, under the DWQMS, there is an obligation for the Operating Authority to report the results of the management reviews, the identified deficiencies, decisions, and action items to the Owner.

ANALYSIS

6. The System consists of a Surface Water Treatment Plant (SWTP) and associated Low Lift Pumping Station (LLPS), 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 SWTP is drawn from Kempenfelt Bay of Lake Simcoe. Water supplied from the groundwater system relies on wells drilled into a deep aquifer that is not under the direct influence of surface water. The distribution system consists of approximately 3,753 hydrants and 634 km of watermain and transmission main serving approximately 44,230 services providing water to approximately 148,500 residents.
7. The total annual production for 2018 was 13,300 ML with an average daily flow of 36 ML and a maximum daily flow of 60 ML in the month of July 2018.
8. The total 2018 cost to operate the System was approximately \$1,483.73/ML. Of that total, the cost of production and treatment amounted to approximately \$462.42/ML. The proportion of the total attributable to distribution system operating costs amounted to approximately \$3,832.27/km of watermain.
9. Approximately 93% of the projected operating budget was expended. Efficiencies and the impacts of weather and consumption variations accounted for savings of 7% of the projected operating budget.
10. More than 2,900 samples were collected for independent laboratory analysis under the regulatory sampling program for chemical and microbiological parameters in 2018. The analytical results are used to assess and optimize system performance, develop corrective actions, ensure safe water for consumption and to meet legislative requirements.

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11. Two (2) Adverse Water Quality Incidents (AWQIs) were reported in 2018. Neither of the incidents represented a significant risk to the community. Both were resolved to the satisfaction of the MECP and Simcoe Muskoka District Health Unit (SMDHU).
 12. The Ministry of Environment, Conservation and Parks (MECP) conducted an annual inspection of portions of the System from December 2017 to February 2017. Following the System inspection, the MECP issued a report summarizing the findings, including regulatory non-compliances. One (1) non-compliance with regulatory requirements, was reported in the 2017 MECP Inspection Report issued on March, 2018 which the Branch promptly responded to.
 13. The QMS was subject to an external audit in December 2018. The re-accreditation audit included an off-site desktop and on-site audit of the Operational Plan. There was one (1) minor non-conformance identified by the external auditor, which was promptly corrected by the Branch. Reaccreditation was maintained until 2022.

ENVIRONMENTAL MATTERS

14. There are no environmental matters related to the recommendation.

ALTERNATIVES

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

FINANCIAL

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

LINKAGE TO COUNCIL STRATEGIC PRIORITIES

17. The 2018-2022 Council Strategic Plan has not been finalized as of the writing of this report. However, the information contained within the report relates to:
 - Fostering a Safe and Healthy City
18. This Staff Report is a compilation of information that demonstrates the commitment of the Branch in providing safe drinking water thereby ensuring the health and safety of the residents of the City of Barrie.