

Attachment 2: Drinking Water Quality Management System – Summary of Management Reviews

Review – 2023 Operational Performance

The purpose of this summary is to provide Council with mandatory updates regarding the City of Vaughan’s drinking water systems performance as mandated through Element 20 of the [Drinking Water Quality Management Standard](#) (DWQMS).

	Element 20 - Management Review Requirements	Achieved?	Conforms to DWQMS?
1	<p>Ensure that a Management Review is conducted at least once every calendar year.</p> <p>Completed on July 19, 2023 and November 22, 2023 with Top Management and the Owner representative for the 2023 operational year.</p>	<p>Yes</p> <p>✓</p>	<p>Yes</p> <p>✓</p>
2	<p>Consider the results of the Management Review and identify deficiencies and action items to address the deficiencies.</p> <p>Completed. See the Management Review Summary below.</p>	<p>Yes</p> <p>✓</p>	<p>Yes</p> <p>✓</p>
3	<p>Provide a record of any decisions and action items related to the Management Review including the personnel responsible for delivering the action items and the proposed timelines for their implementation.</p> <p>All decisions and action items discussed during the Management Review have been captured through record of minutes. Action follow-up is tracked.</p>	<p>Yes</p> <p>✓</p>	<p>Yes</p> <p>✓</p>
4	<p>Report the results of the Management Review, the identified deficiencies, decisions and action items to the Owner (Council).</p> <p>Completed through this report, submitted for information on March 5, 2024.</p>	<p>Yes</p> <p>✓</p>	<p>Yes</p> <p>✓</p>

Management Review Summary

a) Annual Review of QMS 02- Quality Management System (QMS) Policy

The QMS Policy was reviewed with all attendees.

Action Item: No action items are pending from the 2023 report.

b) Incidents of regulatory non-compliance

During the July 19, 2023 review there was one incident of regulatory non-compliance identified by the City with respect to Ontario Regulation 170/03 of the *Safe Drinking Water Act*. The instance was associated with a new development site where a contractor's staff member was conducting a flushing program for a new development site without being a certified operator or water quality analyst. Corrective actions were initiated and City reported the incident to the local Ministry of the Environment, Conservation and Parks (MECP) drinking water inspector on May 12, 2023. The drinking water inspector was satisfied with the information provided and corrective actions implemented and had no further instruction.

Action Item: No action items are pending from the 2023 report.

c) Incidents of adverse drinking water tests

Indicators of adverse water quality are immediately reported to York Region Public Health and the MECP Spills Action Centre and appropriate corrective action is taken. In 2023, there were a total of 23 reportable events, all of which were immediately addressed as required by the regulation. None of these events resulted in the integrity and/or safety of the drinking water supply being compromised.

Action Item: No action items are pending from the 2023 report.

d) Deviations from Critical Control Points (CCPs)

Critical control limits have been established based on known CCPs identified through Risk Assessment outcomes. There is one CCP related to potential contamination during a watermain break and one CCP related to damage and/or contamination to the drinking water system and/or water quality as a result of a terrorist threat/vandalism. There was no deviation from the identified CCPs.

Action Item: No action items are pending from 2023 report.

e) The effectiveness of the risk assessment process

Verification of risks to public health and the drinking water system is conducted at least once every calendar year and assessed at least once every 36 months. The City's 36-month Comprehensive Risk Assessment was held on March 28, 2023 and resulted in minor wording updates to ensure current procedure titles and revision numbers are captured. The overall rank for two potential hazards to the drinking water system were increased and one potential hazard was removed as it is referenced in the Provincial Watermain Disinfection Procedure and poses no risk to the Vaughan distribution system. No new CCPs were identified and no new potential hazards were identified. The next Annual Review of the Risk Assessment Outcomes will occur during 2024.

Action Item: No action items are pending from 2023 report.

f) Internal and third-party Audit results

Internal and third-party audits assess how the City meets the requirements of the Drinking Water Quality Management Standard (DWQMS). The first internal DWQMS audit took place on August 14, 2023 and August 15, 2023. The audit identified zero instances of non-conformance and four OFIs. The OFIs have been reviewed incorporated into the Operational Plan. The second internal DWQMS audit took place on November 16, 2023 and November 17, 2023. The audit identified zero instances of non-conformance and four OFIs. The OFIs identified in the second internal audit have been reviewed, one has been incorporated into the System, and planning for the implementation of the remaining OFIs in 2024 is complete.

MECP-approved Drinking Water Quality Management System Auditors, Intertek SAI Global, performed a surveillance audit on June 28, 2023. Zero instances of non-conformance were identified and five opportunities for improvement have been reviewed and incorporated into the Quality Management System.

Action Item: There are three OFIs to be implemented in 2024.

g) Results of emergency response testing

Testing of emergency response ensures that staff are prepared for emergency situations and allows the City to identify what could happen in the Drinking Water System to cause an emergency. The DWQMS requires the City to complete emergency response testing at least once every two years. A desktop exercise was conducted for water-related emergencies in Q4 of 2023. The next emergency response testing exercise will be conducted in 2025.

Action Item: No action items are pending from 2023 report.

h) Operational performance

The City participated in one announced MECP inspection on January 5, 2023 spanning the August 21, 2021 to January 5, 2023 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 received a 100% inspection rating following the inspection that took place on January 5, 2023.

The City also participated in an unannounced MECP inspection on July 6, 2023 spanning the January 6, 2023 to July 6, 2023 inspection period. The MECP inspection included a site visit to the Maplewood Booster Station and Woodland Acres Pressure Elevating Station on July 6, 2023 followed by a comprehensive review of the City's operational documents and records. The City received the final inspection report and there were no instances of non-conformance.

Action Item: No action items are pending from 2023 report.

i) Raw water supply and drinking water quality trends

The Annual Water Quality Report and Annual Summary Report provide data on drinking water quality trends within the City's drinking water. The 2023 Annual Water Quality Report and Annual Summary Report will be posted on the City's website prior to February 28, 2024 and

March 31, 2024, respectively. The City has an exemption under the Municipal Drinking Water Licence (MDWL) for lead sampling from plumbing systems.

Action Item: No action items are pending from 2023 report.

j) Follow-up on action items from previous management reviews

The previous Management Review was held on December 15, 2022. There were a total of six action items identified, majority of which have been actioned.

Action Item: There is one action item pending:

- Determining the feasibility of offering DWQMS awareness training to staff in departments outside of the Environmental Services Department.

k) The status of management action items identified between reviews

All actions from the City's Internal Audit of Water, Wastewater, and Stormwater Operations have been completed and implemented.

Action Items: No action items are pending from 2023 report.

l) Changes that could affect the Quality Management System (QMS)

The Municipal Drinking Water Licence (MDWL) renewal application deadline was December 23, 2023. The application for renewal was sent to the MECP on December 19, 2023 and the City receive confirmation from the MECP that the application was received and is currently undergoing technical review. At the discretion of the MECP, additional system-specific requirements may be identified through the licence renewal process that the City may be required to comply with such as additional sampling, testing, and monitoring.

Action Items: No action items are pending from 2023 report.

m) Consumer feedback

Consumer feedback allows the City to identify if the water system is operating effectively. In 2023, there were a total of 102 calls that were received related to water odour, taste, colour, and quality inquiries. All concerns/inquiries were addressed appropriately and in a timely manner. Resolutions included field investigations, testing, and sharing information and laboratory results.

Action Items: No action items are pending from 2023 report.

n) Resources needed to maintain the QMS

Adequate resources are in place to maintain the QMS. There is currently one DWQMS Coordinator position that is temporarily vacant. Water Operations staff were trained for DWQMS Awareness in Q4 of 2023.

Action Items: No action items are pending from 2023 report.

o) The results of the infrastructure review

The physical condition of water infrastructure is regularly evaluated to maintain a state of good repair. Capital projects were identified by Environmental Services and Infrastructure Planning and Corporate Asset Management via the City's capital budget process. In 2023, there were 29

watermain breaks. Preventative maintenance of the Drinking Water System included the following during 2023: 3,000 valves were visited for preventative maintenance programming by an external contractor and 8,148 hydrants were maintained by an external contractor.

Action Items: No action items are pending from 2023 report.

p) Operational Plan currency, contact and updates

The Operational Plan has been revised to reflect majority of the OFIs from the 2023 External and Internal Audits.

Action Items: The following two OFIs are the only remaining OFIs under review for implementation into the DWQMS Operational Plan:

- QMS-21: Consider updating QMS-19 and QMS-21 and related forms to remove the redundancy in the record keeping requirements for Continual Improvement; and
- QMS-21: Consider referencing the internal audit process as a way verifying effectiveness.

q) Staff suggestions

Water Operations staff continue to provide input and assist in the development of Standard Operating Procedures through the Standard Operating Procedure Review Committee. Water Operations maintains a One Drive folder with meeting minutes which capture staff discussions and suggestions.

Action Items: No action items are pending from 2023 report.

r) Review of Best Management Practices (BMPs)

There were no BMP improvements identified during the 2023 reporting period.

Action Items: No action items are pending from 2023 report.

s) New Business

None identified.

Action Items: No action items are pending from 2023 report.

t) Date of Next Meeting

The DWQMS dictates that the Management Review meeting be held at least once every calendar year.

Action Items: No action items pending from 2023 report.

Conclusion

The Management Review is recognized as a best practice for continual improvement for the City's Drinking Water Quality Management System, Drinking Water System, and associated monitoring and maintenance programs.

The on-going maintenance of the Quality Management System and focus on continual improvement provides assurance to Council, as the Owner of the municipal Drinking Water System, that its duties, responsibilities, and standard of care under the Act are being met.