

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

Review – 2020 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 \(DWQMS\)](#).

	Requirement of Element 20 - Management Review	Achieved?	Conforms to
1	Ensure that a Management Review is conducted at least once every calendar year Completed on June 26, 2020 with the top management and the Owner representative for the 2020 operational year	Yes ✓	Yes ✓
2	Consider the results of the Management Review and identify deficiencies and action items to address the deficiencies Completed. See the Management Review Summary below	Yes ✓	Yes ✓
3	Provide a record of any decisions and action items related to the management review including the personnel responsible for delivering the action items related and the proposed timelines for their implementation All decisions and action items discussed during the review have been captured through record of minutes. Follow up on actions is tracked.	Yes ✓	Yes ✓
4	Report the results of the management review, the identified deficiencies, decisions, and action items to the Owner (the Council) Completed through this report, submitted for information March 8, 2020.	Yes ✓	Yes ✓

Management Review Summary

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

The QMS Policy was reviewed with all attendees. It was discussed that the Policy should update the wording to replace residents with citizens. This will be reviewed and considered in the next update of the DWQMS

Action Items: One (1) action item pending from 2020 report.

b) Incidents of regulatory non-compliance

There was no non-compliance identified in Ministry of Environment, Conservation and Parks inspection on February 7, 2020.

Action Item: No action item pending from 2020 report.

c) Incidents of adverse drinking water tests

Indicators of adverse water quality are immediately reported to York Region Public Health and the Ministry of the Environment, Conservation and Parks (MECP) Spills Action Centre and appropriate corrective action is taken. In 2020, there were a total of 27 water quality reportable events, all of which were immediately addressed as required by the regulation. None of these events resulted in the integrity and safety of the drinking water supply being compromised. It was discussed that the number of adverse incidents from past 3 years will be included in the 2021 Management Review and moving forward.

Action Item: One (1) action item pending from the 2020 report.

d) Deviations from Critical Control Points (CCP)

Critical control limits have been established based on known critical control points identified through Risk Assessment outcomes. There was no deviation from the two identified CCP's, both the CCP's are related to potential contamination during a watermain break.

Action Item: No action items pending from 2020 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 thirty-six (36) months. The 36-month Comprehensive Review of the Risk Assessment was held on March 25, 2020. Water Operations staff participated in the review process by ranking the identified potential hazards. The ranking was updated for the following hazards: Bulk Water Services, Unauthorized Hydrant Connections, Extreme Weather Events, and Backflow. No new Critical Control Points (CCP) were identified. Other potential hazards discussed: Considered adding Pandemic as a potential hazard and added Watermain Break/Closure piece as a hazardous event under Unauthorized Hydrant Connections.

Action Item: No action items pending from 2020 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 13 OFIs issues during the 2019 internal audit held July 29 and 30 have been addressed. The 2020 Internal Audit was held July 6 and 7- one (1) minor non-conformance and three (3) opportunities for improvement were addressed and the minor non-conformance was closed. The opportunities for improvement remain open and are being incorporated into the system. The 2020 external audit was held August 4 and 5- one (1) minor non-conformance has been and five (5) opportunities for improvement have been reviewed and are being incorporated into the system. It was discussed whether the internal audit should be conducted more than once per year- this will be discussed further at the next Management Review.

Action Item: There are eight (8) OFIs still in progress, one (1) action item pending from the 2020 report.

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 (2) years. Testing will be conducted in 2021.

Action Item: No action items pending from 2020 report.

h) Operational performance

Annual MECP inspections ensure that the City meets the requirements identified in applicable legislation and regulations. The MECP Inspection was held on February 7, 2020. Three (3) recommendations were made: Separate the attendance/activity/task and ORO/OIC identification into two different forms, City of Vaughan should synchronize the Woodland Acres Pressure Elevation System visits with the Maplewood Booster Station, and Staff responsible for Notice of Issue Resolution to include a more detailed summary of actions taken and results achieved. All recommendations were addressed immediately after the report was issued.

Action Item: Completed.

i) Raw water supply and drinking water quality trends

The Annual Report and Annual Summary Report provide data on drinking water quality trends within the City's drinking water. The 2019 Annual Report and Annual Summary Report were posted on the City's website prior to February 28 and March 31, 2020. The City has an exemption under the Municipal Drinking Water Licence (MDWL) for lead sampling from plumbing systems. It was also discussed to extend an invitation to Council for a tour of the drinking water system and facilities. This will be postponed due to COVID-19 situation.

Action Item: Invitation to Council for tour of drinking water system is pending.

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

The previous Management Review (prior to 2020) was held July 18, 2019. There was a total of 19 action items.

Action Item: There are actions pending. Inquiring about York Region's communication protocol, and mapping of water quality inquiries with GIS.

k) The status of management action items identified between reviews

The City's Internal Audit Department investigation and findings identified key areas of improvement for Environmental Services.

Action Items: The most urgent items identified by the Internal Auditing Team have been addressed. A plan is in place with the timelines to address the remaining recommendations. Progress is monitored on a regular basis.

l) Changes that could affect the Quality Management System

The impact from COVID-19 pandemic could affect the way work is conducted within the City. The QMS may see changes as a result of alternate work arrangements for staff. Some areas that may be affected: number of samples taken, SOPs may require adjustments. At that time of the 2020 Management Review, it was confirmed that the City is able to continue business as usual.

Action Items: No action items pending from 2020 report.

m) Consumer feedback

Consumer feedback allows the City to identify if the water system is operating effectively. In the 2020 Management Review report, there was a total of 159 calls that were classified as odour, taste, lead inquiry/testing, discoloured, and general inquiries (water testing, sample results, etc.). It was noted that there were a high number of lead inquiry calls for this report as a result of the media. All the concerns/inquiries were addressed appropriately and in a timely manner. Some resolutions include sharing information and laboratory results.

Action Items: No action items pending from the 2020 report.

n) Resources needed to maintain the QMS

At the time of the 2020 Management Review the Supervisor of Compliance and Training position has been filled. Water Operations Staff have been trained for DWQMS Awareness and

an Environmental Services Information sharing session occurred with Engineering and Development on May 7, 2020.

The Water Operations Coordinator position will be posted and will be converted into another Team Lead. This action has been completed.

Action Items: No action items pending from 2020 report.

o) The results of the infrastructure review

Physical condition of water infrastructure is regularly evaluated to maintain a state of good repair. Capital projects were identified by Environmental Services and Infrastructure Delivery via the City's capital budget process. In the 2020 Management Review reporting period, there were 44 watermain breaks. A total of 24km of watermain was added/replaced during the 2020 reporting period. Preventative maintenance on the drinking water system during 2020 included: 3,000 valves exercised by external contractor and 500 exercised by the City.

Action Items: Completed.

p) Operational Plan currency, contact and updates

The Operational Plan has been revised to incorporate corrective actions, preventive actions, and opportunities for improvement from the 2019 Internal and External Audits

Action Items: No action items pending from 2020 report.

q) Staff suggestions

Water Operations staff participated in the 36-month Comprehensive Review of the Risk Assessment in 2020. During this time, staff provided feedback on the ranking of potential hazards to the drinking water system. This resulted in the consideration of re-ranking some identified hazards. Water Operations also continue to provide input and assist in the development of the Standard Operating Procedure Manual. Water Operations keeps a One Drive folder with meeting minutes which captures staff discussions which will be shared with the Compliance team to review any staff suggestions.

There were 14 Best Management Practices identified during this reporting period from the 2019 Internal Audit. They have tracked and the status of each have been reviewed.

Action Items: One (1) action item pending from the 2020 report.

r) New Business

Staff discussed the increased use of technology amongst Water Operations during this reporting period (i.e. e-log books, new SCADA at Maplewood, DR-300 units, Eris, dashboards for tracking

chlorine residual trending). It was also noted that the City's nitrification study concluded this Quarter 2 2020.

Action Items: No action items pending from 2020 report.

s) 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 2020 report.

Conclusion

The Management Review is recognized as a best practice for continual improvement for the City of Vaughan'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 systems, that their duties and responsibilities of Standard of Care under the Act are being met.