

The Corporation of the City of Kawartha Lakes

Council Report

Report Number WWW2019-012

Meeting Date: December 10, 2019

Title: Drinking Water Quality Management System Review and Endorsement

Description: Report to request Council's annual required endorsement of the Water and Wastewater Division Drinking Water Quality Management System.

Ward Number: ALL

Author and Title: Julie Henry, Quality Management and Policy Coordinator

Recommendation(s):

That Report WWW2019-012, Drinking Water Quality Management System Review and Endorsement, be received;

That the City of Kawartha Lakes Water and Wastewater Quality Management System be endorsed by Council;

That the City of Kawartha Lakes Quality Management System Policy statements be adopted;

That the Ontario Clean Water Agency Quality Management System Policy statements be received and endorsed;

That the external surveillance audit report for the Water and Wastewater Division (as the accredited Operating Authority) be received;

That the external surveillance audit report for Ontario Clean Water Agency (as the Accredited Operating Authority) be received; and

That the Water and Wastewater Division Management Review summary be received.

Department Head: _____

Financial/Legal/HR/Other: _____

Chief Administrative Officer: _____

Background:

The City of Kawartha Lakes owns twenty-one drinking water systems, all of which are licensed under the Ontario Municipal Drinking Water Licensing Program (MDWLP). This licensing program was established under the *Safe Drinking Water Act, 2002* as a result of recommendations made by Justice Dennis O' Connor in the *Report of the Walkerton Inquiry (2002)* and states that in order to receive a license (which allows an owner to legally operate its drinking water system(s)), the Owner of a municipal drinking water system must ensure that an accredited operating authority is operating the system(s) at all times. To remain an accredited operating authority, an established and successful Quality Management System that meets the requirements of the Ontario Drinking Water Quality Management Standard (DWQMS) must be maintained. Without this Quality Management System in place an Owner cannot attain a municipal drinking water license and as such, cannot legally operate a drinking water system. Therefore, it is imperative to attain owner endorsement and approval.

The Drinking Water Quality Management Standard provides the foundation for the operation of municipal residential drinking water systems for accredited operating authorities in the province of Ontario. Operating authorities must establish a Quality Management System that meets the requirements of the Standard and to develop and establish policy and directives that control and direct an organization's activities with regard to drinking water quality. This system is documented in the Operational Plan which is reviewed and updated annually. A documented, functioning Quality Management System is necessary for the production of safe, reliable drinking water and the Owner – as mandated by the Standard – must endorse it annually. This report facilitates this requirement.

The Owner of all twenty-one drinking water systems in Kawartha Lakes (treatment and distribution) is The Corporation of the City of Kawartha Lakes, represented by Mayor and Council. The Water and Wastewater Division of The Corporation of the City of Kawartha Lakes is the accredited operating authority for the Lindsay Drinking Water System (both treatment and distribution), six wastewater collection systems and the remaining twenty water distribution systems within the City. The Ontario Clean Water Agency (OCWA), under contract with the City, is the accredited operating authority for the remaining twenty water treatment systems and six wastewater treatment systems. **Both OCWA and the Water and Wastewater Division were granted accredited operating authority status in 2011 and have since successfully maintained their accreditation and licensed status.**

Council endorses the Water and Wastewater Division's Quality Management System every year by signing the Quality Management System Policy (signed by the Mayor and CAO as representatives of Council.) This policy is the mission statement, or commitment that an accredited operating authority makes in

regards to the delivery of safe drinking water. Element Three of the Standard states that: “The Operational Plan shall contain a written endorsement of its contents by Top Management and the Owner.” In response, Council has endorsed the Quality Management System annually since the initial accreditation in 2011. On December 11, 2018 Council endorsed the Quality Management System through the following resolution:

CR2018-652

That Report WWW2018-011, **Drinking Water Quality Management System Review and Endorsement**, be received:

That the City of Kawartha lakes Water and Wastewater Quality Management System be endorsed by Council in order to maintain accreditation as an Operating Authority;

That the City of Kawartha Lakes Quality Management System Policy statements be adopted:

That the Ontario Clean Water Agency Quality Management System be endorsed by Council in order to maintain accreditation as an Operating Authority; and

That the Ontario Clean Water Agency Quality Management System Policy statements be adopted.

Carried

Rationale:

The following section provides an overview of the standard that the City and OCWA have followed and the specific activities that were undertaken over the last year to ensure the Operational Plans and Quality Management System policies for the next year are endorsed and adopted by Council.

Drinking Water Quality Management Standard

The Drinking Water Quality Management Standard is based on a PLAN, DO, CHECK and IMPROVE methodology and states the commitments of the Accredited Operating Authority in the delivery of safe drinking water.

Each section of the DWQMS (included in this report as Appendix A), is referred to as an element and directs a portion of the process included in the production and delivery of safe drinking water.

The **PLAN** and **DO** related elements as follows:

1. **Quality Management System** – Encompasses the twenty-one elements of the Drinking Water Quality Management Standard.
2. **Quality Management System Policy** – Commitment to the maintenance and continual improvement of the Quality Management System. The policy for the Water and Wastewater Division is included in this report as Appendix B. The policy for Ontario Clean Water Agency is included in this report as Appendix F. Written endorsement of the QMS by the Owner.
3. **Commitment and Endorsement** – Written endorsement of contents by Top Management.
4. **Quality Management System Representative** – Identification of the Quality Management System Representative and Designate as appointed by Top Management. (For the Water and Wastewater Division of the City of Kawartha Lakes the QMS Representative is Julie Henry and the QMS Designate is Amber Hayter.)
5. **Document and Records Control** – Procedure to manage and control important documents and records.
6. **Drinking Water System** – Description of the Drinking Water Systems and Water Sources.
7. **Risk Assessment** – Procedure to manage and control important documents and records.
8. **Risk Assessment Outcomes** – Documentation of the Risk Assessment Outcomes.
9. **Organizational Structure, Roles, Responsibilities and Authorities** – Procedure that identifies the Owner, Operating Authority, Top Management and the roles and responsibilities of each.
10. **Competencies** – Procedure that documents the competencies required for all employees with positions directly related to the provision of safe drinking water.
11. **Personnel Coverage** - Procedure to ensure that sufficient, competent personnel are available at all time.
12. **Communications** – Procedure that describes how the QMS is communicated to and between Top Management, the Owner, the Operating Authority, Suppliers/Service Providers and the Public.

- 13. Essential Supplies and Services** – Identifies all supplies and services essential for the delivery of safe drinking water.
- 14. Review and Provision of Infrastructure** – Procedure for the annual review of drinking water infrastructure.
- 15. Infrastructure Maintenance, Rehabilitation and Renewal** – Procedure for infrastructure maintenance, rehabilitation and renewal programs for the drinking water system.
- 16. Sampling, Testing and Monitoring** – Procedure for sampling, testing and monitoring activities completed for finished drinking water quality.
- 17. Measurement and Recording Equipment Calibration and Maintenance** – Procedure to document the calibration and maintenance of measurement and recording equipment used for safe drinking water quality.
- 18. Emergency Management** – Procedure to document how the operating authority maintains a state of emergency preparedness.

The **CHECK** elements of the Drinking Water Quality Management Standard are:

- 19. Internal Audits** – Procedure documents the process for Internal Audits
- 20. Management Review** – Element prescribes the topics that must be discussed in the annual Management Review and the intent and goal of said review.

The **IMPROVE** element of the Drinking Water Quality Management Standard is:

- 21. Continual Improvement** – The element describes the requirement for the Operating Authority to continually improve the effectiveness of its Quality Management System through the use of the elements one to twenty (1 – 20) and the employment of the corrective action procedure.

All of the elements of the Quality Management Standard are addressed and adhered to within the Water and Wastewater Division's Quality Management System and documented within the Operational Plan.

External Audit

As part of the accreditation process, it is necessary for every Accredited Operating Authority to undergo an annual third-party external audit. The external audits follow a three-year cycle as follows:

The accreditation body will annually audit the QMS of an operating authority with a Certificate of Accreditation (Full Scope – Entire DWQMS), in accordance with the following schedule:

- a) In the first year following the year in which the certificate was issued and every third year thereafter, the accreditation body will undertake a surveillance audit;
- b) In the second year following the year in which the certificate was issued and every third year thereafter, the accreditation body will undertake a surveillance audit;
- c) In the third year following the year in which the certificate was issued and every third year thereafter, the accreditation body will undertake a re-accreditation audit.

Surveillance audits consist of enhanced desktop systems audits with no onsite verification component.

The Water and Wastewater Division and OCWA had their second year surveillance audits in 2019 and were audited on the revised version of the DWQMS V2. Changes from DWQMS V1 to V2 are:

- The update of Element 6 (Drinking Water System) to include descriptions for all types of drinking water systems included in the plan (treatment and distribution.)
- An update to Element 7 and 8 (Risk Assessment and Risk Assessment Outcomes) to include a list of potential hazardous events for municipal residential drinking water systems provided by the MECP (Ministry of Environment, Conservation and Parks)
- The update of Element 14 (Review and Provision of Infrastructure) to include the outcomes of the Risk Review in the annual infrastructure review (done to ensure the adequacy of infrastructure necessary to operate and maintain the system.)
- The update of Element 15 (Infrastructure Maintenance, Rehabilitation and Renewal) to include a long term forecast of major infrastructure maintenance, rehabilitation and renewal activities.
- An update to the Operational Plan to include a procedure or process for reviewing and considering best management practices.
- An update to the Operational Plan to include a procedure or process for the identification and management of corrective actions.

All updates had to be completed for the accredited operating authority to receive an updated status of accreditation. Both operating authorities completed these updates and received favorable reports from SAI Global (the third party accreditation body and QMS auditor), with zero non conformances reported. This confirms that both authorities are conforming to all twenty-one elements of the Drinking Water Quality Management Standard. Both Quality Management Systems were declared **effective** and both authorities received accreditation status on the updated version of the DWQMS V2.

Copies of the external audit report for the City of Kawartha Lakes and OCWA are included in Appendix C and F.

Internal Audits

In addition to external audits, the DWQMS requires Operating Authorities to conduct internal audits on all twenty-one elements of their Quality Management System on an annual basis. An auditing team is assigned and staff are questioned both on their knowledge of the QMS and on the suitability of the QMS with regards to controlling process and guiding staff on their responsibilities with regards to the production and delivery of safe drinking water. Similar to the external audits, the internal audits identify non-conformances and opportunities for improvement.

The 2019 internal audit was held the week of November 25, 2019 and the summary report has yet to be finalized. Once complete, the report will be available for review upon request.

Top Management Review

One of the requirements of the DWQMS is an annual Top Management Review. During this review, the Quality Management Representative presents to Top Management a report that summarizes and reviews the Quality Management System and provides details regarding its status. Members of Top Management provide feedback and resources for the maintenance and continual improvement of the system. The members of Top Management for the Water and Wastewater Division are:

Bryan Robinson – Director of Public Works
David Kerr – Manager, Environmental Services
Amber Hayter – Supervisor, Water and Wastewater Operations

Items included in the Top Management Review (as mandated in Element 20 of the DWQMS) are as follows:

- A. Incidents of Regulatory Compliance** – Annual inspection report from the MECP.

- B. Incidents of Adverse Drinking Water Tests** – Adverse drinking water quality incidents and resolutions.
- C. Deviations from Critical Control Point (CCP) Limits and Response Actions** – Deviations from set points and required limits with explanations.
- D. The Efficacy of the Risk Assessment Process** – The annual Risk Assessment and results.
- E. Internal and Third Party (external) Audit Results** – The results of audits.
- F. Results of Emergency Response Testing** – Emergency response testing is conducted annually. The report includes the results of the testing/training.
- G. Operational Performance** – The performance of staff, equipment, infrastructure etc., in regards to the delivery of safe drinking water.
- H. Raw Water Supply and Drinking Water Quality Trends** – Reports and data related to the raw water supply and any indicated trends.
- I. Follow-up on Action Items from Previous Management Reviews** – Any outstanding items are addressed.
- J. The Status of Management Action Items Identified Between Reviews** – Any opportunities for improvement or corrective actions identified by Management.
- K. Changes that Could Affect the Quality Management System** – Any items that could affect the system (staffing changes, MECP revisions, audit suggestions etc.).
- L. Consumer Feedback** – A report containing consumer calls/complaints is included. Trends and improvement measures are discussed.
- M. The Resources Needed to Maintain the Quality Management System** – Any resources required to maintain the current quality level and success of the system are identified.
- N. The Results of the Infrastructure Review** – Results of the Annual Review are Included for Consideration.
- O. Operational Plan Currency, Content and Updates** – Revisions made to the Operational Plan.

P. Staff Suggestions – Any suggestions made by staff are included for discussion and consideration presented, discussed and considered.

The specifications for the Top Management Review are described in Element 20 of the DWQMS and a summary of the review is provided to the Owner in Appendix D.

OCWA's Top Management Review for 2019 will be held later this month. A summary will be made available upon request.

Conclusions and Recommendations

Currently, both the Quality Management System for the Water and Wastewater Division of Kawartha Lakes and the Quality Management System for OCWA are in excellent standing. The City of Kawartha Lakes remains committed to providing safe and reliable drinking water and services to all of our residents, businesses and visitors. We continue to meet and surpass applicable legislation and regulations related to the provision of safe drinking water.

Owner commitment is a crucial component of a successful Quality Management System. Without the authority, direction and support of the system(s) owner, a QMS cannot be successfully maintained. Without a successful QMS, an Operating Authority cannot be accredited and without accreditation, cannot maintain its Municipal Drinking Water License (a mandated requirement for the legal production of drinking water). It is therefore recommended that Council accepts and re-endorses the Quality Management Systems for the Water and Wastewater Division of the City of Kawartha Lakes and for the Ontario Clean Water Agency and to adopt the QMS Policy Statements for both operating authorities as presented.

Other Alternatives Considered:

No alternatives were considered. The Drinking Water Quality Management Standard as mandated by the *Safe Drinking Water Act, 2002* under the Ministry of the Environment, Conservation and Parks requires the endorsement of an Accredited Operating Authority's Quality Management System for the continuation of accreditation. As mentioned, without owner endorsement we cannot attain accreditation and without accreditation, we cannot legally produce or supply drinking water to the public.

Financial/Operation Impacts:

There are no financial considerations related to this report.

Relationship of Recommendation(s) To The 2016-2019 Strategic Plan:

This project is consistent with the 2016-2019 Strategic Plan, specifically Goal 2 “An Exceptional Quality of Life” and Goal 3 “A Healthy Environment.” Maintaining a healthy and robust Quality Management System ensures the Water and Wastewater Division of the City of Kawartha Lakes has the ability to provide clean, safe drinking water while ensuring dedication and commitment to the environment via source water protection. Both goals add to the quality of life and health of City residents.

In addition, the recommendations in this report adhere to the City-wide strategic plan, embracing the pursuit of collaboration, continual improvement, excellence, innovation and results through the protection and enhancement of water quality.

Consultations:

Director of Public Works
Manager of Environmental Services
Supervisor of Water and Wastewater Operations

Attachments:

Appendix A – Drinking Water Quality Management Standard 2017 V2



DWQMS Standard _
February 2017.pdf

Appendix B – Owner Endorsement QMS Policy Statement WWW CKL



2019 QMS Policy
Endorsement.pdf

Appendix C – SAI Global CKL DWQMS V2 Surveillance Audit Report



DWQMS V2 Surv.
Audit Report.pdf

Appendix D – CKL Management Review Items Summary



CKL WWW Mgmt
Review Action Items.p

Appendix E – OCWA QMS Policy and CKL Endorsement



OCWA Signed
Commitment and Endc

Appendix F – SAI Global OCWA DWQMS V2 Surveillance Audit Report



OCWA Audit Report
2019.PDF

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