

**SPECIAL COUNCIL**  
**INFRASTRUCTURE SERVICES**  
**PUBLIC WORKS DIVISION**

**REPORT ENG-2023-34**  
**December 12, 2023**

**SUBJECT: 2023 WATER QUALITY MANAGEMENT SYSTEM UPDATE AND OPERATIONAL PLAN ENDORSEMENT – SAFE DRINKING WATER ACT, 2002**

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**RECOMMENDATION:**

THAT THE COUNCIL OF THE CITY OF WELLAND receives for information REPORT ENG-2023-34 the 2023 Water Quality Management System Update and Operational Plan Endorsement as required per the Safe Drinking Water Act 2002.

THAT Council approves and endorses the Water Quality Management System Operational Plan.

THAT Council authorizes the Mayor and Clerk to sign the Water Quality Management System Operational Plan on behalf of Council as evidence of Council's endorsement.

**RELATIONSHIP TO STRATEGIC PLAN**

This recommendation is aligned to Council's strategic priority of ensuring "Environmental Stewardship" to protect the ecosystems through a responsible approach to minimize the impact on the environment through supportive decision-making, professional processes, incentives, policies, and operational practices.

**BACKGROUND:**

The purpose of this report is to provide Council, as System Owner, with:

- Details of programs that support Infrastructure Services continued compliance with provisions of the Safe Drinking Water Act, 2002;

- An annual update for 2022 Water Quality Management System (QMS) activities;
- Details of continual improvement actions completed in 2023 to address audit, and other findings, and prepare for QMS Operational Plan endorsement;
- Recommendations to approve and endorse the water QMS Operational Plan to meet legislative requirements.

### **Programs Supporting Compliance with the Safe Drinking Water Act, 2022**

Council members have received a copy of an Ontario Municipal Drinking Water Compliance Program Overview (included as Appendix 1 to Report ENG-2023-34).

This document provides additional background information related to:

- Standard of care and communication with Council
- Municipal Drinking Water Licencing Program
- Quality management system roles and responsibilities
- Operational performance

#### *Municipal Drinking Water Licencing Program*

The Municipal Drinking Water Licencing Program (MDWLP) was developed in response to several recommendations of the Part II Report of the Walkerton Inquiry. Under the MDWLP, municipal drinking water systems (distribution) are required to maintain:

- Water Quality Management System Operational Plan (Operational Plan);
- Third-party accreditation of the Operational Plan for the Drinking Water; Quality Management Standard (the Standard);
- Drinking Water Works Permit; and
- Financial Plan.

Failure to maintain any MDWLP requirements may result in withdrawal of the City's Municipal Drinking Water Licence (Licence) by the Ministry of Environment, Conservation and Parks resulting in an inability to operate or restricted operations of the drinking water system by City staff.

Refer to Appendix 1 for additional compliance program information.

#### *Quality Management System Roles and Responsibilities*

The Operational Plan (Operational Plan) identifies key roles and responsibilities for operating and maintaining the quality management system. Council has been identified as the System Owner and several senior leaders (CAO, Director Infrastructure Services, and Manager Public Works) have been identified as Top Management.

The System Owner and Top Management are required by the Standard to provide written endorsement of the Operational Plan.

Other key roles identified in the Operational Plan include the Quality Management System Representative Water Compliance Supervisor appointed as and Infrastructure Services staff that comprise the Operating Authority.

Refer to Appendix 1 and Appendix 2 for additional quality management system roles and responsibilities.

## **DISCUSSION:**

### **2022 Annual Quality Management System Update**

The 2022 annual quality management system update describes activities conducted from January through December 2022. Annual updates are typically communicated to the System Owner in the first or second quarter of the next year.

Due to a prolonged vacancy of the Water Compliance Supervisor position, also the appointed Quality Management System Representative, the implementation of continual improvement findings was prioritized based on available resources. Once filled, Operating Authority staff evaluated all open continual improvement findings and prepared a plan for implementation. The resulting revisions to the Operational Plan have been captured in a later section of this report.

### **Internal and External Audit**

The quality management system is subject to annual internal audits; the 2022 internal and external audits were conducted in November 2022. Audits were conducted by separate third-party consultants.

Continual improvement findings observed during the internal audit include four (4) non-conformances, ten (10) opportunities for improvement, and zero (0) best management practices. These findings relate to the following elements of the Standard:

#### **Non-Conformance**

- Document and Records Control
- Risk Assessment and Outcomes
- Sampling, Testing, and Monitoring
- Internal Audits
- Continual Improvement

## **Opportunities for Improvement**

- Operational Plan
- QMS Policy
- Commitment and Endorsement
- Document and Records Control
- Drinking Water System
- Competencies
- Personnel Coverage
- Sampling, Testing, and Monitoring
- Management Review

Continual improvement findings observed during the external audit include one (1) non-conformance, 15 opportunities for improvement, and 0 best management practices. These findings relate to the following elements of the Standard or ISO 9001:2015:

### **Non-Conformance**

- ISO 9001:2015 Quality Objectives

### **Opportunities for Improvement**

- Operational Plan
- QMS Representative
- Risk Assessment and Outcomes
- Organizational Structure, Roles, Responsibilities, and Authorities
- Competencies
- Personnel Coverage
- Communications
- Essential Supplies and Services
- Calibration
- Emergency Management
- Continual Improvement

External audits are a means to achieve and maintain accreditation to the Standard. Accreditation is a condition of the City's Municipal Drinking Water Licence. Accreditation was maintained following the conclusion of the external audit.

The status of all continual improvement findings addressed in 2022-2023 has been provided in the *Revisions to the Operational Plan and Continual Improvement Plan Status* section of this report.

### **Risk Assessment**

An internal risk assessment is required every 36 months, with annual reviews completed at 12 and 24 months between assessments. A non-conformance

related to incomplete risk assessment records was identified during the 2022 internal audit.

A review of the existing assessment was conducted in April 2022. Based on available records it was determined that there were no new high scoring risks identified during the review. Any previously identified high-scoring risks have been mitigated through capital projects, operational adjustments, or through continual improvement initiatives.

The City's "critical control points", representing critical process steps, remain unchanged following the 2022 risk assessment review. These include:

- Free chlorine < 0.20 mg/L
- Pressure < 20 psi
- Private plumbing lead < 10 ug/L

A full risk assessment was conducted in March 2023. Risk assessment outcomes from the 2023 assessment have been incorporated into Operational Plan revisions where applicable and will be communicated through the 2023 Quality Management System Update.

### Management Review

Top Management and the Quality Management System Representative meet once per year to complete a review of the quality management system. At these meetings, Top Management reviews the status of the quality management system and identifies continual improvement opportunities to enhance the quality management system and associated operations.

Management review was conducted in March 2022. Top Management reviewed 12 open action items from previous reviews. During the meeting, zero (0) action items were closed and zero (0) additional actions were identified.

Four of the open action items will be closed following Operational Plan endorsement.

Management Review was conducted in April 2023. Management review actions 2023 review have been incorporated into Operational Plan revisions where applicable and will be communicated through the 2023 Quality Management System Update.

### Changes Impacting the Quality Management System

There were no changes impacting QMS identified during the 2022 management review.

## Public Access

The quality management system policy and third-party accreditation information are available to the public and service users on the City's external website.

The most current approved version of the Operational Plan is available upon request via Public Works staff.

### **Endorsement of the Water Quality Management System Operational Plan**

Council members have received a copy of the Water Quality Management System Operational Plan (included as Appendix 2 to Report ENG-2023-34).

While the previous endorsement of the Operational Plan is still valid, the Operating Authority has undertaken substantial revisions to the quality management system documentation to incorporate continual improvement findings resulting from quality management system processes.

The Operating Authority is recommending that the 2022-2026 term of Council (as System Owner) approve and endorse the revised Operational Plan.

A summary of revisions to the Operational Plan is included in the next section.

### **Revisions to the Operational Plan and Continual Improvement Plan Status**

Significant reorganization of QMS procedures and support documents have been completed throughout 2023 to address existing internal and external audit findings from 2021 and 2022. Previous findings touched all elements of the Standard. In addition, several previous management review action items were related to QMS documentation.

To address these findings the QMS framework was reorganized to follow the regulated Standard, deviating from the previous ISO 9001 organization. To date, eight (8) opportunities for improvement have been completed and three (3) have been reviewed and will not be implemented.

Upon endorsement of the water QMS Operational Plan and associated support documents, all seven (7) non-conformances, 22 opportunities for improvement, and four (4) management review action items will be closed; leaving five (5) previous findings open with three (3) in progress and two (2) to be evaluated. Open findings from previous years are prioritized based on business needs and resources.

**Table 1: Summary of Audit and QMS Findings (2021-2022)**

<b>Status</b>	<b>Management Review Action</b>	<b>Opportunity for Improvement</b>	<b>Non-Conformance</b>
Complete		8	
Evaluated - Not Implemented		3	
Pending Document Approval/ Endorsement	4	22	7
In Progress		3	
Not Started		2	

**FINANCIAL:**

Approximately \$6,000 in quality management system program costs were incurred in 2022; these routine costs include consulting fees for third-party internal and external audits. A similar allocation was made in 2023 (included in the approved 2023 operating budget) and requested as part of the 2024 operating budget for Public Works.

**CONCLUSION:**

The City of Welland continues to provide clean and safe drinking water to consumers and is committed to continual improvement of the Water Quality Management System.

It is recommended that Council receives the information for the 2022 Water Quality Management System Update, as required per The Safe Drinking Water Act 2002, Ontario Regulation 170/03.

In addition, it is recommended that Council endorse the Water Quality Management System Operational Plan to fulfill System Owner responsibilities and allow the City of Welland, as Operating Authority, to maintain compliance with regulations and conformance with the Standard.

**ATTACHMENT:**

Appendix I – Ontario Municipal Drinking Water Compliance Program Overview  
Appendix II – Drinking Water Quality Management System Operational Plan for the Welland Distribution System (QMS-ALL-WT-MAN-010)