



**Meeting Date:** December 6, 2023

**Submitted by:** Eric Joudrey – Manager of Environmental Services

**Report No:** PWE 50-2023

**Subject:** 2023 DWQMS System Annual Audit Summary and Annual Management and Infrastructure Review Meeting

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**Recommendation:**

THAT Report PWE-50-2023, re: 2023 Drinking Water Quality Management System – 2023 Internal & External Audit Results along with the Management Review and Infrastructure meeting notes be received for information.

**Purpose:**

To advise Council of the 2023 Internal and External Audit results for our Drinking Water Quality Management System and the outcomes of the management review and infrastructure review meetings.

**Background:**

Under the Safe Drinking Water Act, 2002, the Owner of a drinking water system is required to always have an accredited operating authority in place for the operation of their water systems.

The Municipality Middlesex Centre is the Owner and Operator of the water system. To meet the requirements of an accredited Operating Authority, it is required that Middlesex Centre maintain an Operational Plan (OP). The Operational Plan is comprised of twenty-one key elements, which document an understanding of the drinking water system, the responsibilities of Middlesex Centre, and a commitment to the provision of safe drinking water.

Annually, as per Element 19, an Internal Audit is performed to evaluate conformity of the quality management system with the requirements of the standard. The Internal audit was performed by Acclams Environmental Inc. The scope is to review the Operational Plan for 3 drinking water systems of the Municipality of Middlesex Centre (Birr Well Supply System, Melrose Well Supply System and Middlesex Centre Distribution System).

The objective is to identify shortcomings of the Operational Plan and the QMS against the DWQMS that need to be addressed prior to the surveillance audit to be conducted by the external auditor (NSF). To receive and maintain Full Scope Accreditation, annually an External Audit must be completed by an accredited third-party auditor designated by the Ministry of Environment, Conservation and Parks (MECP). NSF is the designated external auditor.

Annually as per Element 20 – Management Review the top management review that the QMS is suitable, adequate, and effective based on the DWQMS Standards.

**Analysis:**

The internal audit was conducted on September 1<sup>st</sup> and 5<sup>th</sup>, 2023 by Acclaims Environmental Inc. and the external audit was conducted on October 5<sup>th</sup>, 2023 by NSF. Each audit report summarizes the audit results into positive findings, non-conformances and opportunities for improvement.

**Internal Audit Findings:**

Acclaims Environmental our internal auditor identified the following positive findings during the audit:

- Culture of continual improvement
- Consistently throughout the audit, improvements were noted with regards to achieving intended outcomes of drinking water system processes and programs.
- Debrief sessions are held following the occurrence of failures, emergencies and other issues encountered with the goal of continual improvement.
- Corrective actions implemented to address system issues identified are verified for effectiveness at preventing recurrence prior to closing.
- All opportunities for improvement identified in the previous internal and external audits have been verified as completed or are in progress.

During the audit Acclaims Environmental did not identify any non-conformities during the audit.

Throughout the audit the following opportunities for improvement (OFI) were identified.

Reference	Opportunity for Improvement – Description
Director’s Directions for OP’s	In a future version of the OP, the date should be added to the title page.
Document & records control (El. 5)	Opportunity was identified for reviewing document references in the Operational Plan to reflect current information and document numbering.

Drinking water system (El. 6)	Opportunity to reference process flow diagrams – previously included as Appendix B in the Operational Plan, but now included only in Operations & Maintenance manuals.
Minimum training for all staff (El. 10)	Consideration should be given to developing a list of “mandatory” training staff need to maintain competency such as record keeping, sampling, watermain disinfection, etc.
Onboarding new staff (El. 10)	Consideration should be given to developing an onboarding program for new operators covering all operational duties.
Competencies (El. 10)	Periodic checks on the progress of Operators’ ongoing training could be improved.

NSF our extern auditor identified the following positive findings during the audit:

- Internal audit process
- Management review process

During the audit NSF did not identify any non-conformities during the audit.

Throughout the audit the following opportunities for improvement (OFI) were identified.

<b>Opportunity</b>	<b>Observations / Auditor Notes</b>
Opportunities for Improvement (DWQMS)-01	<b>Location of OFI</b> – Operational Plan <b>Discussion with:</b> Eric Joudrey / Jocelyn Tyler <b>Description:</b> Although found to generally meet the requirements of the Standard, consideration could be given to including the revision date/ level and “page x of y” on each page of the Operational Plan.
Opportunities for Improvement (DWQMS)-02	<b>Location of OFI</b> – QMS 21- 01 Continual Improvement Form (CFI) with Procedure: <b>Discussed with:</b> Eric Joudrey/Jocelyn Tyler <b>Description:</b> Although found to generally mee the requirements of the Standard, an opportunity exists to clarify the processes for verification of corrective / preventive action implementation.

The results of the internal and external DWQMS Audits for the Middlesex Centre Distribution System, Melrose Well Supply System and Birr Well Supply System, confirm that the Drinking Quality Management System is effective and does conform with the requirements of Drinking Water Quality Management Standard (DWQMS 2.0). While there are opportunities for improvement, they do not undermine the positive programs and attitudes already in place among the Municipality of Middlesex Centre staff.

### **Management Review and Infrastructure Review Meeting:**

At least once every calendar year the DWQMS is required to be reviewed by top management. On September 25, 2023, management reviewed the DWQMS suitability, adequacy and effectiveness of the system and it includes the review of the following:

- incidents of regulatory non-compliance,
- incidents of adverse drinking water tests,
- deviation from critical control point limits and response actions,
- the effectiveness of the risk assessment process,
- internal and third-party Audit results,
- results of emergency response testing,
- operational performance,
- raw water supply and drinking water quality trends,
- follow-up on action items from previous management reviews,
- the status of management action items identified between reviews,
- changes that could affect the Quality Management System,
- Consumer feedback,
- the resources needed to maintain the Quality Management System,
- the results of the infrastructure review,
- Operational Plan currency, content, and updates, and
- Staff suggestions.

Management also reviewed the adequacy of infrastructure necessary to operate and maintain (O&M) the drinking water systems (DWS's) through review and had discussions on the following:

- Review of previous year's budget
- Review of the latest risk assessment outcomes
- Discussion on adequacy of infrastructure
- Any infrastructure improvement needs?
- Which infrastructure needs are priority?
- Review long-term forecast of major infrastructure maintenance, rehabilitation and renewal activities

**Financial Implications:**

All costs related to the internal/external audits, the operational plans and maintenance of the DWQMS are part of the budgeted operational cost for the Middlesex Centre Water Systems.

**Strategic Plan:**

This matter aligns with following strategic priorities:

- Sustainable Infrastructure and Services
- Responsive Municipal Government

**Attachments:**

2023 Internal Audit Report completed by Acclains Environmental

NSF External Audit Report Registrations Audit Report.

Management Review Meeting Presentation\_September 25, 2023

QMS 14-02\_Infrastucture Review Meeting Form\_2023