



## Staff Report

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**Report To:** Dan Best, Chief Administrative Officer

**From:** **Don Giberson, Director of Infrastructure & Development**  
**Shawn Young, Manager of Environmental Services**

**Date:** December 6 2021

**Report:** ESD.21.26

**Subject:** Results of 2021 DWQMS Internal Audit

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### **Recommendations:**

**That** South Huron Council receives the report from Don Giberson, Director of infrastructure and Development and Shawn Young, Manager of Environmental Services Re: Results of 2021 DWQMS Internal Audit.

### **Purpose:**

The purpose of this report is to advise Council of the results of the 2021 DWQMS Internal Audit.

### **Background and Analysis:**

The *Safe Drinking Water Act* requires the Operating Authority of Municipal Drinking Water Systems to conduct an Internal Audit of their Drinking Water Quality Management System (DWQMS) at least once every calendar year.

The purpose of the internal audit is to verify conformity of the QMS with the requirements of the DWQMS and to consider previous internal and external audit results. The QMS Operational Plan outlines the procedure for internal audits, identifies internal audit criteria, frequency, scope, methodology, record-keeping requirements and describes how Quality Management System corrective actions are identified and initiated. An Internal Audit identifies what needs to be corrected/improved and how the correction/improvement is initiated when something is found during the

internal audit. The results of the Internal Audit, corrective actions, and opportunities for improvement are reported to the Owner. The Internal Audit includes a review of all 21 elements of the Drinking Water Quality Management Standard, as follows:

- Element 1 - Quality Management System
- Element 2 - Quality Management System Policy
- Element 3 - Commitment and Endorsement
- Element 4 - Quality Management System Representative
- Element 5 - Document and Records Control
- Element 6 - Drinking Water System
- Element 7 - Risk Assessment
- Element 8 - Risk Assessment Outcomes
- Element 9 - Operational Structure, Roles, Responsibilities and Authorities
- Element 10 - Competencies
- Element 11 - Personnel Coverage
- Element 12 - Communications
- Element 13 - Essential Supplies and Services
- Element 14 - Review and Provision of Infrastructure
- Element 15 - Infrastructure Maintenance, Rehabilitation and Renewal
- Element 16 - Sampling, Testing and Monitoring
- Element 17 - Measurement and Recording Equipment Calibration and Maintenance
- Element 18 - Emergency Management
- Element 19 - Internal Audit
- Element 20 - Management Review
- Element 21 - Continual Improvement

Due to the COVID19 pandemic the Internal Audit was carried out remotely by zoom. The Internal Audit was conducted on October 26, 2021 by Don Giberson, QMS Representative, Shawn Young, Manager of Environmental Services and Ange Barnes Compliance Officer. The Internal Audit included all 21 elements, required by the DWQMS. The following is a summary of the Internal Audit results:

### **Element 1 – Quality Management System**

The Operational Plan document is complete and up to date. Staff and Operators have a digital copy on their tablet. A digital copy is on the main server and a copy is available to the public on the Municipal Web Site.

### **Element 2 – Quality Management System Policy**

The Operational Plan document contains a Policy that meets the requirements and carries out the measures identified. A copy of the Policy is

posted in the public area of the Clerks Department at the Municipal Office and at the Environmental Services Operations Center.

### **Element 3 – Commitment and Endorsement**

The Operational Plan document contains the necessary endorsement passed by South Huron Council by Resolution #051-2019 and will remain valid until the next Municipal Election in October 2022.

### **Element 4 – Quality Management System Representative**

The Operational Plan document identifies Don Giberson as the QMS Representative. Documented activities meet the requirements of this element.

### **Element 5 – Document and Records Control**

The Operational Plan document contains procedures for document and record control and describe how documents and records are kept current, readily identifiable, retrievable, stored, protected, retained and disposed of.

#### OFI#1

*Update QMS Operational Plan to document that City Wide electronic work order system is now being utilized to schedule and document maintenance activities.*

### **Element 6 – Drinking Water System**

The Operational Plan document meets the requirements and is current. The drinking water system description is consistent with the description in the Water Distribution System Operation & Maintenance Manual.

#### OFI#2

*Figure 2 requires updating to reflect zone names consistent with the text of the QMS Operational Plan and to remove connections to the North Middlesex system at Corbett Line and Shipka Line.*

### **Element 7 – Risk Assessment**

The Risk Assessment process meets the requirements of the QMS Operational Plan and is current. The Operational Plan includes a process to review the mandatory potential hazardous events, all other hazards, assess risks, rank risks, control measures, CCPs and method to verify annually.

### **Element 8 – Risk Assessment Outcomes**

The Risk Assessment Outcomes meets the requirements and is current. Risk Assessment Tables in the QMS Operational Plan identified hazards, assessed risks, occurrence of hazard, ranked risks, procedures to monitor and critical control points (CCPs) and include a procedure to report deviations from CCPs.

**Element 9 – Organizational Structure, Roles, Responsibilities and Authorities**

The Operational Plan document contains the necessary information and is up to date. The QMS Operational Plan includes a description of the individuals with responsibility for drinking water, including an oversight role. The QMS Operational Plan identifies the individuals responsible for conducting Management Review; identifies Top Management and Owner of the system.

**Element 10 – Competencies**

The Operational Plan document contains the necessary information and is up to date. QMS Operational Plan documents the competencies of all personnel performing duties on the water system; description of how competencies are maintained and how their activities affect the safety of the drinking water. Competencies are achieved by training, MECP Licensing and updated Job Descriptions.

**Element 11 – Personnel Coverage**

The QMS Operational Plan contains the necessary information to ensure that sufficient personnel meeting identified competencies are available for duties that directly affect drinking water. CityWide electronic work order system documents all work activities and ensures that personnel coverage is carried out in accordance with the QMS Operational Plan. After hours coverage is confirmed by the annual On Call schedule.

**Element 12 – Communication**

The Operational Plan document contains the necessary information and is up to date. Communication between Owner and Top Management is maintained through Council Reports, Management Reviews and Annual Water System Report. Communication between Top Management and Operating Authority personnel is maintained through memos, emails, and staff meetings. Communication with essential suppliers is through correspondence, memos and emails. Communication with the Public is through Council Meetings & Agendas, print media, social media posts and Municipal Web Site.

**Element 13 – Essential Supplies and Services**

The Operational Plan document contains the necessary information and is up to date. Contingency Plan includes list of Essential Suppliers and Services. Procurement By-law #09-2021 includes a requirement for vendors to comply with the applicable DWQMS regulations.

**Element 14 – Review and provision of Infrastructure**

The Operational Plan document contains the necessary information and procedures. Risk Assessment Outcomes are considered as part of the annual

budget process (ie. low chlorine residual at Exeter Water Tower and chlorine gas at Huron Park Water Tower).

The adequacy of the infrastructure necessary to operate and maintain the system is reviewed every year as part of the annual budget process.

### **Element 15 – Infrastructure Maintenance, Rehabilitation and Renewal**

The Operational Plan document contains the necessary information and procedures. A summary of maintenance, rehabilitation and renewal activities are documented in the CityWide electronic work order system. Long term planning is achieved through the 10-year forecast in the annual budget; Asset Management Plan; Water Rate Study & Financial Plan and Water System Master Plan. Sampling results, main break reports and maintenance records are reviewed annually for consideration of rehabilitation/renewal work. Communication of these activities to the Owner is achieved by Reports to Council. Effectiveness of maintenance programs is monitored by reviewing the results of on-line chlorine analyzers; AWQ reports, bacteriological sampling results; water quality complaints, operational issues and work orders issued for water system repairs.

#### OFI#3

*In a future edition of the QMS Operational Plan, include information regarding the Asset Management Plan and update to a "10 year" capital forecast annually.*

### **Element 16 – Sampling, Testing and Monitoring**

The Operational Plan document contains the necessary information and procedures. QMS Operational Plan has description of all Sampling, Testing and Monitoring procedures for the South Huron system. LHPWSS samples and tests treated water at the Lake Huron Water Treatment Plant prior to entering the South Huron Drinking Water System. Sampling results are communicated to the Owner and the Public through Reports to Council.

### **Element 17 – Measurement and Recording Equipment Calibration and Maintenance**

The Operational Plan document contains the necessary information and procedures. Gas detectors are calibrated by staff with each use and documented by gas detection software. Flow meters and gas detectors are calibrated annually by a third party, who provides a certification of Calibration. On-line Chlorine analyzers are calibrated monthly by staff and calibrated annually by an outside contractor.

### **Element 18 – Emergency Management**

The Operational Plan document contains the necessary information and procedures. The Water Contingency Plan includes a list of potential water

related emergencies and appropriate responses. South Huron Emergency Response Plan includes a process for emergency response and recovery; Owner and Operating Authority responsibilities and communication protocol. The QMS Operational Plan includes testing requirements for Operating Authority personnel and references South Huron Emergency Response Plan.

### **Element 19 – Internal Audits**

The Operational Plan document contains the necessary information and procedures. The previous Internal Audit was carried out on December 10, 2020; the Audit Report included a summary of Comments, Opportunities for Improvement and any related non-conformities and CAR's.

### **Element 20 – Management Review**

The Operational Plan document contains the necessary information and procedures. Due to COVID19 pandemic the 2021 Management Review was scheduled to be carried out by zoom on November 4, 2021.

### **Element 21 – Continual Improvement**

The Operational Plan document contains the necessary information and procedures. Continual Improvement section documents processes to identify and manage Corrective Actions and Preventative Actions, including investigating cause of non-conformity, documenting action to correct and prevent non-conformity from re-occurring; reviewing corrective action to verify effectiveness and preventing re-occurrence.

The Internal Audit confirmed that the Quality management System as compliant with the DWQMS, no non-conformities were found, and no "Corrective Action Reports" (CARs) were issued. However, there were three "opportunities for improvement" (OFIs) issued for items to be clarified and updated in the next version of the QMS Operational Plan. A complete copy of the complete Internal Audit report is available from the Environmental Services Department.

### **Operational Considerations:**

This report is for information purposes and there were no alternatives considered.

### **South Huron's Strategic Plan:**

Section 6.2.2 of the Municipality of South Huron 2015- 2019 Strategic Plan identifies key objectives that are reflective of the collective perspectives of the strategic planning process.

The recommendations and actions outlined in this report are reflective of the following strategic objectives:

- ✓ Administrative Efficiency and Fiscal Responsibility
- ✓ Increased Communications and Municipal Leadership
- ✓ Transparent, Accountable and Collaborative Governance
- ✓ Dedicated Economic Development Effort

**Financial Impact:**

There are no financial implications for the Corporation resulting from the proposed recommendation.

**Legal Impact:**

There are no legal implications for the Corporation resulting from the proposed recommendation.

**Staffing Impact:**

There are no staffing implications for the Corporation resulting from the proposed recommendation.

**Communication Actions:**

Results of the Internal Audit will be communicated to the public through the publishing of the Council Minutes.

**Policies/Legislation:**

1. Safe Drinking Water Act, 2002, S.O. 2002, c. 32
2. Ontario Regulation 170/03 - Drinking Water Systems
3. Ontario Regulation 188/07 - Licensing of Municipal Drinking Water Systems
4. DWQMS Regulation
5. South Huron QMS Operational Plan

**Consultation:**

Ange Barnes, Compliance Officer

**Related Documents:**

None

Respectfully submitted,

**Don Giberson, Director of Infrastructure & Development**

AND

**Shawn Young, Manager of Environmental Services**