



2018 DWQMS Internal Audit  
Town of Newmarket



ENVIRONMENTAL CONSULTING, AUDITING AND SCIENTIFIC SERVICES

# 2018 DWQMS Internal Audit

## Town of Newmarket

Operating Authority & Owner:

Town of Newmarket

Prepared by:  
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Audit Date: September 19 & 20, 2018

Report Date: October 1, 2018

Project No. NEW\_ECM1718\_104



## 1.0 AUDIT SUMMARY

An on-site internal DWQMS audit of the Town of Newmarket Water Distribution System for the Town of Newmarket was conducted by AET Group Inc. ("AET") on September 19 & 20, 2018.

The audit included a review of available documents and records on the Town of Newmarket server, and in hard copy at the Town of Newmarket's Operations Center. It also included interviews with Operating Authority Staff operators to observe conformance with the Operational Plan.

There were two major non-conformances, two minor non-conformances, and six opportunities for improvement. These non-conformances must be addressed before the Quality Management System can be found to be in conformance with the standard. Please review Section 4 of this report for the full detail of each finding. The full checklist used to assess the conformance of the QMS is located in Appendix A.

Please note findings were split into five main categories including:

**Major Non-Conformances:** A major systemic breakdown of an element of the QMS or several minor non-conformances, which cumulatively indicate a larger problem within that element of the QMS.

**Minor Non-Conformances:** Elements for which there have been omissions from elements of the QMS. These discrepancies are not serious enough compromise the overall performance of that element of the QMS.

**Opportunities for Improvement:** All objective evidence about the element indicates conformance with the QMS, however there are discrepancies which, in the opinion of the auditor, do not currently constitute risk to the provision of safe drinking. However, if these elements are not addressed, they could develop into larger issues, which may result in non-conformances.

**Comments:** All objective evidence about the element indicates conformance with the QMS. Additional comments have been made about this element in the body of the report.

**Conformance:** All objective evidence collected at the time of the audit leads to the conclusion the Operating Authority follows the policies and procedures outlined by the QMS.

### **Audit Objectives**

The objective of the audit was to determine whether the drinking water Quality Management System (QMS) for the Town of Newmarket conforms to the requirements of the Ontario Ministry of the Environment, Conservation and Parks Drinking Water Quality Management Standard (DWQMS).

### **Audit Scope**

The facilities and processes associated with the Operating Authority's QMS were evaluated to obtain objective evidence and to determine whether the quality management activities and related results conform with DWQMS requirements, and if they have been effectively implemented.

### **Audit Criteria**

The Drinking Water Quality Management Standard (February 2017)

Current QMS manuals, procedures and records implemented by the Town of Newmarket.

### **Audit Dates**

The DWQMS internal audit was held on September 19 & 20, 2018.

### **Audit Team Members**

Lead Auditor: Ryan Bourner, AET Group Inc.

## 2.0 SUMMARY OF FINDINGS

Requirement	Finding
1. Quality Management System	Mj
2. Quality Management System Policy	C
3. Commitment and Endorsement	C
4. Quality Management System Representative	C
5. Document and Records Control	Mj
6. Drinking-Water System	C
7. Risk Assessment	OFI
8. Risk Assessment Outcomes	OFI
9. Organizational Structure, Roles, Responsibilities and Authorities	C
10. Competencies	C
11. Personnel Coverage	C
12. Communications	Mn
13. Essential Supplies and Services	C
14. Review and Provision of Infrastructure	Mn
15. Infrastructure Maintenance, Rehabilitation & Renewal	C
16. Sampling, Testing and Monitoring	C
17. Measurement & Recording Equipment Calibration and Maintenance	OFI
18. Emergency Management	C
19. Internal Audits	OFI
20. Management Review	OFI
21. Continual Improvement	Mj & OFI
<b>Mj</b>	Major non-conformity. The auditor has determined one of the following: (a) a required element of the DWQMS has not been incorporated into a QMS; (b) a systemic problem with a QMS is evidenced by two or more minor non-conformities; or (c) a minor non-conformity identified in a corrective action request has not been remedied.
<b>Mn</b>	Minor non-conformity. In the opinion of the auditor, part of a required element of the DWQMS has not been incorporated satisfactorily into a QMS.
<b>OFI</b>	Opportunity for improvement. Conforms to requirement, but there is an opportunity for improvement.
<b>C</b>	Conforms to requirement. The element is operational, implemented and performed in accordance with the requirement.
<b>N/A</b>	Not applicable to this audit
<b>*</b>	Additional comment added by auditor in the body of the report.

## 3.0 FINDINGS/COMMENTS

### 3.1 Positive Comments

The following comments were noted on the QMS' conformance with the standard:

**DWQMS Reference:**                    **10 Competencies**

**Requirement:**

The Operating Authority shall undertake activities to:

- a) meet and maintain competencies for personnel directly affecting drinking water quality and shall maintain records of these activities; and
- b) ensure that personnel are aware of the relevance of their duties and how they affect safe drinking water and shall maintain records of these activities.

**Client Reference:**

Operational Plan Element 10 Competencies (Rev. 12 June 2018)

**Results:**

**Comment**

**Details:**

Records and interviews with selected staff members verified the training program is implemented and documented effectively according to the requirements of the Competencies procedure.

**DWQMS Reference:**

**16 Sampling Testing & Monitoring**

**Requirement:**

The Operational Plan shall document:

- a) a sampling, testing and monitoring procedure for process control and finished drinking water quality, including requirements for sampling, testing and monitoring at the conditions most challenging to the subject system;
- b) a description of any relevant sampling, testing or monitoring activities that take place upstream of the subject system; and
- c) a procedure that describes how sampling, testing and monitoring results are recorded and shared between the Operating Authority and the Owner, where applicable.

<b>Client Reference:</b>	DWQMS Operational Plan Element 16 – Sampling Testing & Monitoring (Rev: 12 June 2018)
<b>Results:</b>	<b>Comment</b>
<b>Details:</b>	Verified the sampling, testing, and monitoring program for chlorine residuals, microbiology, and lead was effective for the sampled records.

### 3.2 Non-conformances

Two major and two minor non-conformances were found at the time of the audit

<b>DWQMS Reference:</b>	<b>5 Document and Record Control</b>
<b>Requirement:</b>	The Operational Plan shall document a procedure for document and records control that describes how: <ul style="list-style-type: none"><li>a) documents required by the Quality Management System are:<ul style="list-style-type: none"><li>i) kept current, legible and readily identifiable;</li><li>ii) retrievable;</li><li>iii) stored, protected, retained and disposed of; and</li></ul></li><li>b) records required by the Quality Management System are:<ul style="list-style-type: none"><li>i) kept legible, and readily identifiable;</li><li>ii) retrievable;</li><li>iii) stored, protected, retained and disposed of.</li></ul></li></ul>
<b>Client Reference:</b>	DWQMS Operational Plan Appendix 5(a) Document Control Procedure (Rev: 12 June 2018)
<b>Results:</b>	<b>Major non-conformance</b>
<b>Details:</b>	Document and record control issues exist in the QMS, as follows: <ul style="list-style-type: none"><li>• Inconsistencies within procedures (Element 4 &amp; Element 19);</li><li>• Current procedures were not documented (Element 12 &amp; Element 21);</li><li>• Document storage locations did not match the Master List of Documents and Records;</li></ul>

- No records were available for monthly verification of calibrations outlined in Element 17;
- Forms were not completed in full (Supplier evaluation, and Opportunity For Improvement Follow-up Report); and
- Emergency Management procedure (Element 18) is not followed for emergency testing. It is conducted annually, but the emergency test schedule, required by the procedure, is not generated or followed.

<b>DWQMS Reference:</b>	<b>21 Continuous Improvement</b>
<b>Requirement:</b>	The Operating Authority shall strive to continually improve the effectiveness of its Quality Management System by implementing and conforming to the procedure.
<b>Client Reference:</b>	Element 21 Continual Improvement (Rev: 23 April 2018)
<b>Results:</b>	<b>Major non-conformance</b>
<b>Details:</b>	There was no evidence found that Corrective Action Requests, Opportunity for Improvement Follow-up Reports, or actions taken to address non-conformities or opportunities for improvement from the 2017 Internal Audit were completed
<b>DWQMS Reference:</b>	<b>12 Communications</b>
<b>Requirement:</b>	The Operational Plan shall document a procedure for communications that describes how the relevant aspects of the Quality Management System are communicated between Top Management and: <ul style="list-style-type: none"><li>b) Operating Authority Personnel,</li><li>c) Suppliers that have been identified as essential under Plan (a) of Element 13 of this Standard</li></ul>
<b>Client Reference:</b>	Operational Plan; Element 12 Communications (Rev: 12 June 2018 )
<b>Results:</b>	<b>Minor Non-Conformance</b>

<b>Details:</b>	<p>Could find no evidence of several required aspects of communication:</p> <ul style="list-style-type: none"><li>• Tender documents with the QMS relevancy statement for suppliers was not provided at the time of the audit</li><li>• A contact update letter was provided under this element, but it is not mentioned in the procedure.</li><li>• No evidence was provided at the time of the audit to verify the Operational Plan has been reviewed by staff in the last three years. This review is required by Element 12 of the Operational Plan to raise awareness of the relevance of the QMS throughout the Operating Authority.</li></ul>
<b>DWQMS Reference:</b>	<b>14 Review and Provision of Resources</b>
<b>Requirement:</b>	<p>The Operational Plan shall document a procedure for reviewing the adequacy of the infrastructure necessary to operate and maintain the Subject System that:</p> <p>b) Ensures that the adequacy of the infrastructure necessary to operate and maintain the Subject System is reviewed at least once every Calendar Year.</p>
<b>Client Reference:</b>	DWQMS Operational Plan – Element 14 Review and Provision of Resources (Rev: 12 June 2018)
<b>Results:</b>	<b>Minor non-conformance</b>
<b>Details:</b>	No evidence was found at the time of the audit of an Infrastructure Review being conducted during the Management Review, as required by the procedure. A 5-year capital plan was provided at the time of the audit, but the procedure requires a 10-year Capital Plan be documented

### 3.3 Opportunities for Improvement

Six opportunities for improvement were found at the time of the audit.

<b>DWQMS Reference:</b>	<b>3 Commitment and Endorsement</b>
<b>Requirement:</b>	Top Management shall provide evidence of its commitment to an effective Quality Management System by:  e) determining, obtaining or providing the resources needed to maintain and continually improve the Quality Management System.
<b>Client Reference:</b>	DWQMS Operational Plan: Element 3 Commitment and Endorsement (Rev: 12 June 2018)
<b>Results:</b>	<b>Opportunity for Improvement</b>
<b>Details:</b>	Ensure the new Compliance Coordinator is hired in a timely fashion to address the challenges with staff resources during the transition phase.
<b>DWQMS Reference:</b>	<b>7 Risk Assessment</b>
<b>Requirement:</b>	The Operating Authority shall perform a risk assessment consistent with the documented process.
<b>Client Reference:</b>	DWQMS Operational Plan – Element 7 Risk Assessment (Rev: 12 June 2018)
<b>Results:</b>	<b>Opportunity for Improvement</b>
<b>Details:</b>	Consider synchronizing the required frequency of your risk assessment with the standard. The date of your most recent risk assessment (December 5, 2017) exceeded one year since the previous risk assessment (November 21, 2016).
<b>DWQMS Reference:</b>	<b>8 Risk Assessment Outcomes</b>
<b>Requirement:</b>	The Operational Plan shall document:  e) the identified critical control points and their respective critical control limits;
<b>Client Reference:</b>	DWQMS Operational Plan – Element 8 Risk Assessment Outcomes (Rev: 12 June 2018)

<b>Results:</b>	<b>Opportunity for Improvement</b>
<b>Details:</b>	Ensure that the comments column is provided on the RA table to provide rational for additional CCP.
<b>DWQMS Reference:</b>	<b>17 Measurement and Recording Equipment Calibration and Maintenance</b>
<b>Requirement:</b>	The Operational Plan shall document a procedure for the calibration and maintenance of measurement and recording equipment.
<b>Client Reference:</b>	DWQMS Operational Plan – Element 17 Measurement and Recording Equipment Calibration and Maintenance (Rev: 12 June 2018)
<b>Results:</b>	<b>Opportunity for Improvement</b>
<b>Details:</b>	Consider reviewing the frequency at which the calibration of devices is required. Once reviewed, ensure the required calibration frequency is followed.
<b>DWQMS Reference:</b>	<b>20 Management Review</b>
<b>Requirement:</b>	Top Management shall implement and conform to the procedure and shall:  a) provide a record of any decisions and action items related to the management review including the personnel responsible for delivering the action items and the proposed timelines for their implementation, and
<b>Client Reference:</b>	DWQMS Operational Plan Element 20 Management Review (Rev: 12 June 2018)
<b>Results:</b>	<b>Opportunity for Improvement</b>
<b>Details:</b>	Timelines should be included along with action items and responsible personnel for deficiencies identified in the management review.

<b>DWQMS Reference:</b>	<b>21 Continuous Improvement</b>
<b>Requirement:</b>	<p>The Operating Authority shall develop a procedure for tracking and measuring continual improvement of its Quality Management System by:</p> <ul style="list-style-type: none"><li>b) documenting a process for identifying and implementing Preventive Actions to eliminate the occurrence of potential non-conformities in the Quality Management System that includes:<ul style="list-style-type: none"><li>i) reviewing potential non-conformities that are identified to determine if preventive actions may be necessary,</li><li>ii) documenting the outcome of the review, including the action(s), if any, that will be taken to prevent a non-conformity from occurring, and</li><li>iii) reviewing the action(s) taken to prevent a non-conformity, verifying that they are implemented and are effective in preventing the occurrence of the non-conformity.</li></ul></li></ul>
<b>Client Reference:</b>	Element 21 Continual Improvement (Rev: 23 April 2018)
<b>Results:</b>	<b>Opportunity for Improvement</b>
<b>Details:</b>	Consider including Management Review Action Items when documenting your preventive action procedure.

## 4.0 CONCLUSIONS

This audit report presents an overview of DWQMS conformance findings, reflecting AET's best judgment using information reasonably available to the auditors at the time of AET's audit. AET has prepared this audit report using information understood to be factual and correct and shall not be responsible for conditions arising from information or facts that were concealed or not fully disclosed to AET during the period of time for which the work was being conducted.

This DWQMS audit report, which was derived from a sampling of document/record reviews, site observations and personnel interviews, aims to establish the current position of the Town of Newmarket with respect to conformance with the DWQMS Standard. While comments were made throughout the report, an in-depth inspection was not carried out.

Respectfully Submitted,

**AET Group Inc.**

Prepared by:



Ryan Bourner, B. Eng, Dip EMA, EP, TSRP  
Environmental Technologist

**APPENDIX A: INTERNAL AUDIT CHECKLIST**

## DWQMS STANDARD AUDIT

SURVEILLANCE

VERIFICATION

INTERNAL

SYSTEM NAME: Newmarket Distribution System

OWNER: Town of Newmarket

OPERATING AUTHORITY: Town of Newmarket

DATE: September 19 & 20, 2018

AUDITOR: Ryan Bourner

SUBSYSTEMS: N/A

## AUDIT SUMMARY RECORD

File No. NEW\_ECM1718\_104

(if applicable)

EL	DESCRIPTION	AD	OFI	Mn	Mj	NA	NC
	<b>PLAN and DO Elements of the DWQMS</b>						
1	Quality Management System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Quality Management System Policy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>3</b>	<b>Commitment and Endorsement</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>4</b>	<b>QMS Representative</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Document and Records Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Drinking-Water System	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>7</b>	<b>Risk Assessment</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>8</b>	<b>Risk Assessment Outcomes</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Organizational Structure, Roles, Responsibilities and Authorities	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>						
10	Competencies	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Personnel Coverage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Communications	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Essential Supplies and Services	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Review and Provision of Infrastructure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Infrastructure Maintenance, Rehabilitation and Renewal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Sampling, Testing and Monitoring	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	Measurement and Recording Equipment						
	Calibration and Maintenance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Emergency Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>CHECK Elements of the DWQMS</b>						
<b>19</b>	<b>Internal Audits</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>20</b>	<b>Management Review</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>21</b>	<b>Continual Improvement</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\*\*Minimum System Audit coverage Elements 3, 4, 7, 8 19, 20 & 21

Lead Auditor: Ryan Bourner

Date: September 19 & 20, 2018

**Element 1 Quality Management System**

**PLAN**

The Operational Plan shall document a Quality Management System that meets the requirements of this Standard.

**DO**

The Operating Authority shall establish and maintain the Quality Management System in accordance with the requirements of this Standard and the policies and procedures documented in the Operational Plan.

<b>FINDING:</b> <input type="checkbox"/> CON <input type="checkbox"/> OFI <input type="checkbox"/> MN <input checked="" type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comment</b>
	<i>The Quality Management System was found to have two major non-conformances (Element 5 &amp; 21) and two minor non-conformances (Element 12 &amp; 14).</i>

**Element 2 Quality Management System Policy**

**PLAN**

The Operational Plan shall document a Quality Management System Policy that provides the foundation for the Quality Management System, and:

- a. is appropriate for the size and type of the subject system;
- b. includes a commitment to the maintenance and continual improvement of the Quality Management System;
- c. includes a commitment to the consumer to provide safe drinking water;
- d. includes a commitment to comply with applicable legislation and regulations; and is in a form that provides for ready communication to all Operating Authority personnel, the Owner and the public.

**DO**

The Operating Authority shall establish and maintain a Quality Management System that is consistent with the Policy.

<b>FINDING:</b> <input checked="" type="checkbox"/> CON <input type="checkbox"/> OFI <input type="checkbox"/> MN <input type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comments</b>
	Policy statement includes commitments to b), c) &d) in an easy to distribute format.  QMS Policy is in the Mapping Room, the Inventory Room and near the main stairwell by the entrance to the Operations Center.
<b>REF</b>	<b>E2: (Quality Management Policy)19 June 2018</b>



**Element 3 Commitment and Endorsement**

**PLAN**

The Operational Plan shall contain a written endorsement of its contents by Top Management and the Owner.

**DO**

Top Management shall provide evidence of its commitment to an effective Quality Management System by:

- a. ensuring that a Quality Management System is in place that meets the requirements of this Standard;
- b. ensuring that the Operating Authority is aware of all
- c. applicable legislative and regulatory requirements;
- d. communicating the Quality Management System according to the procedure for communications; and
- e. determining, obtaining or providing the resources needed to maintain and continually improve the Quality Management System.

FINDING: <input checked="" type="checkbox"/> CON <input type="checkbox"/> OFI <input type="checkbox"/> MN <input type="checkbox"/> MJ <input type="checkbox"/> NC	
Standard:	Comments
	<p>Commitment statement signed by Top Management (Commissioner, Development &amp; Infrastructure Services; Manager, Water/Wastewater; and Director, Public Work Services) and Ownership (Mayor and CAO).</p> <p>Verified that the OA has provided the resources necessary to maintain the QMS.</p> <p>Top Management has displayed a definite commitment to continual improvement of the drinking water system through the studies to address the problems with system residuals.</p> <p><b>OFI: Ensure the new Compliance Coordinator is hired in a timely fashion to minimize the challenges with staff resources during the transition phase.</b></p>
REF	<b>DWQMS Operational Plan   Issued: 6 May 2009   Rev: 12 June 2018</b>

**Element 4 QMS Representative**

**PLAN**

The Operational Plan shall identify a Quality Management System representative.

**DO**

Top Management shall appoint and authorize a Quality Management System representative who, irrespective of other responsibilities, shall:

- a. administer the Quality Management System by ensuring that processes and procedures needed for the Quality Management System are established and maintained;
- b. report to Top Management on the performance of the Quality Management System and any need for improvement;
- c. ensure that current versions of documents required by the
- d. Quality Management System are being used at all times;
- e. ensure that personnel are aware of all applicable legislative and regulatory requirements that pertain to their duties for the operation of the subject system; and promote awareness of the Quality Management System throughout the Operating Authority.

<b>FINDING:</b> <input checked="" type="checkbox"/> CON <input type="checkbox"/> OFI <input type="checkbox"/> MN <input type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comments</b>
	QMS rep assigned to Manager – Water/Wastewater.  Communication with Top management is addressed under Element.20 Management Review Communication of regulatory requirement and awareness of the QMS is addressed in Element 12 Communications. Currency of documentation is addressed in Element 5 Document and Record Control.
<b>REF</b>	<b>DWQMS Operational Plan   Issued: 6 May 2009   Rev: 12 June 2018</b>

**Element 5 Document and Records Control**

**PLAN**

The Operational Plan shall document a procedure for document and records control that describes how:

- a. documents required by the Quality Management System are:
  - i. kept current, legible and readily identifiable;
  - ii. retrievable;
  - iii. stored, protected, retained and disposed of; and
- b. records required by the Quality Management System are:
  - i. kept legible, and readily identifiable;
  - ii. retrievable;
  - iii. stored, protected, retained and disposed of.

**DO**

The Operating Authority shall implement and conform to the procedure for document and records control and shall ensure that the Quality Management System documentation for the subject system includes:

- a. the Operational Plan and its associated processes and procedures;
- b. documents and records determined by the Operating Authority as being needed to ensure the effective planning, operation and control of its operations; and
- c. the results of internal and external audits and management reviews.

<b>FINDING:</b> <input type="checkbox"/> CON <input type="checkbox"/> OFI <input type="checkbox"/> MN <input checked="" type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comments</b>
	<p>Documents and records are stored in hard copy and on the server. Verified that all documents have Title, Revision Date and Identifier on each document.</p> <p>Template records all have a date, title and record author field.</p> <p>Verified the following records were available in the location indicated on the Document/Record log:                      * Corporate Drive Dead End Flushing Form (link broken)                      * Equipment Calibration Records (Compliance Office)                      * AWQI Reports (Compliance Office)                      * COC Form (T shared drive)                      * Lab Test Results (Licensed laboratory)                      * Policies and Procedures Referenced in OP (T shared drive)</p> <p>Write-access is limited to QMS Rep, QMS Admin, and Supervisor of W/WW. Server back-up occurs nightly and is located at Town Hall.</p> <p>Verified the QMS admin goes through the QMS supervisor, with final approval.</p> <p>Documents are stored off the ground in the Compliance Office</p> <p><b>Mj - Many issues related to the currency and consistency within the operational plan are documented in the following OFI:</b></p> <p><b>OFI – Documents are currently stored in the compliance office, but document control table indicates other locations.</b></p> <p><b>OFI – Element 9 is not consistent with Element 4 in naming the QMS Rep.</b></p> <p><b>OFI- Element 19 lists that Internal Auditor training is not required (just recommended) but</b></p>



	<p>Appendix 19b indicates it is part of internal auditor qualification. Cannot determine if Jeff Ellis' lack of Internal Auditor Training is a non-conformance.</p> <p>OFI- Current procedure for addressing OFI/ Preventive actions have not been documented in the Operational Plan.</p> <p>OFI – Currently OA plans to discuss procedures and the QMS at Tailboard meetings, but these discussions are not mentioned in Element 12 under OA Communication.</p> <p>OFI - Date of evaluation for Corix Water Services was not complete on Supplier Evaluation form.</p> <p>OFI- Completion date and sign-off not provided for Opportunity for Improvement forms in response to External Audit.</p> <p>OFI- Emergency Management schedule is not used to generate ER testing schedule. It is currently done on an annual basis.</p> <p>OFI- Begin keeping records or monthly verifications of monitoring equipment by Water Operators.</p> <p>OFI – Include detail on discussion of all items listed on agenda in the Management Review meeting minutes</p> <p>OFI - OA had difficulty finding some documents and records on the Electronic Drive. Many different people have responsibility for filing their documents on the electronic filing system leading to difficult to find and access records. Also, some records had missing fields or were unavailable for review.</p>
<b>REF:</b>	DWQMS Operational Plan   Issued: 6 May 2009   Rev: 12 June 2018



**Element 6 Drinking-Water System**

PLAN – The Operational Plan shall document, as applicable:

a) for the Subject System:

- i. the name of the Owner and Operating Authority,
- ii. if the system includes equipment that provides Primary Disinfection and/or Secondary Disinfection:
  - A. a description of the system including all applicable Treatment System processes and Distribution System components, ✓
  - B. a Treatment System process flow chart,
  - C. a description of the water source, including:
    - I. general characteristics of the raw water supply, ✓
    - II. common event-driven fluctuations, and ✓
    - III. any resulting operational challenges and threats. ✓
  - iii. if the system does not include equipment that provides Primary Disinfection or Secondary Disinfection:
    - A. a description of the system including all Distribution System components, and ✓
    - B. a description of any procedures that are in place to maintain disinfection residuals. ✓

b) if the Subject System is an Operational Subsystem, a summary description of the Municipal Residential Drinking Water System it is a part of including the name of the Operating Authority(ies) for the other Operational Subsystems.

c) if the Subject System is connected to one or more other Drinking Water Systems owned by different Owners, a summary description of those systems which:

- i. indicates whether the Subject System obtains water from or supplies water to those systems, ✓
- ii. names the Owner and Operating Authority(ies) of those systems, and ✓
- iii. identifies which, if any, of those systems that the Subject System obtains water from are relied upon to ensure the provision of safe drinking water. ✓

DO – The Operating Authority shall ensure that the description of the Drinking Water System is kept current.

<b>FINDING:</b>	<input checked="" type="checkbox"/> CON <input type="checkbox"/> OFI <input type="checkbox"/> MN <input type="checkbox"/> MJ <input type="checkbox"/> NC
<b>Standard:</b>	<b>Comments</b>
	<p>DWS services approximately 84, 224. Distribution only. Water sourced from Region of York (mixed supply). Manages all treatment and pressure maintenance system. Water is chloraminated.</p> <p>To maintain residual: free Cl conversions, enhance sampling, additional maintenance, and additional analysis of performance metrics.</p> <p>Verified through Operator interviews and discussions with OA staff that there have been no substantial changes to the process.</p> <p>Verified activities to maintain residuals through the Maintenance Records review described in Element 15.</p> <p><b>OFI – Booster station is no longer online, but this is not outlined in the OP.</b></p>
<b>REF</b>	DWQMS Operational Plan   Issued: 6 May 2009   Rev: 12 June 2018



**Element 7 Risk Assessment**

PLAN – The Operational Plan shall document a risk assessment process that:

- a) Considers potential hazardous events and associated hazards, as identified in the Ministry of the Environment and Climate Change document titled Potential Hazardous Events for Municipal Residential Drinking Water Systems, dated February 2017 as it may be amended. A copy of this document is available at [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater). ✓
  - b) identifies additional potential hazardous events and associated hazards, ✓
  - c) assesses the risks associated with the occurrence of hazardous events, ✓
  - d) ranks the hazardous events according to the associated risk, ✓
  - e) identifies control measures to address the potential hazards and hazardous events, ✓
  - f) identifies Critical Control Points, ✓
  - g) identifies a method to verify, at least once every calendar year, the currency of the information and the validity of the assumptions used in the risk assessment, ✓
  - h) ensures that the risks are assessed at least once every thirty-six months, and ✓
  - i) considers the reliability and redundancy of equipment. ✓
- DO – The Operating Authority shall perform a risk assessment consistent with the documented process.

<b>FINDING:</b> <input type="checkbox"/> CON <input checked="" type="checkbox"/> OFI <input type="checkbox"/> MN <input type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comments</b>
	<p>RA Team assigned by QMS Implementation Team</p> <p>RPN = Likelihood + Consequence + Detectability                      CCP are:                      *controllable                      *RPN ≥ 10                      *Risks added or removed based on discussion at RA Review. Must be identified in the comment’s column.</p> <p>Full review of RA completed 5-Dec-17, 21-Nov-16, as per the revision history of Element 8.</p> <p>Minutes were created for last RA assessment (5-Dec-17) with QMS Rep, QMS Admin, Jeff Ellis, and Pauline Pierce in attendance. Previous risk assessment performed 4-Aug-16</p> <p><b>OFI - Consider revisiting the frequency of review to ensure you meet the requirements of your procedure and the standard.</b></p>
<b>REF</b>	DWQMS Operational Plan   Issued: 6 May 2009   Rev: 12 June 2018



**Element 8 Risk Assessment Outcomes**

**PLAN**

The Operational Plan shall document:

- a. the identified potential hazardous event and associated hazards; ✓
- b. the assessed risks associated with the occurrence of hazardous events; ✓
- c. the ranked hazardous events; ✓
- d. the identified control measures to address the potential hazards and hazardous events; ✓
- e. the identified critical control points and their respective critical control limits; ✓
- f. procedures and/or processes to monitor the critical control limits; ✓
- g. procedures to be undertaken in response to deviations from the critical control limits; and ✓
- h. procedures for reporting and recording deviations from the critical control limits. ✓

**DO**

The Operating Authority shall implement and conform to the procedures.

<b>FINDING:</b> <input type="checkbox"/> CON <input checked="" type="checkbox"/> OFI <input type="checkbox"/> MN <input type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comments</b>
	<p>Interviews with Operators identify they can identify the correct procedures and apply those procedures.</p> <p>Several risks without RPN &gt; 10 are not included as CCP (controlability?). Others with RPN &lt;10 are included but no comments provide the rationale.</p> <p><b>OFI - Ensure that the comments column is provided on the RA table to provide rational for additional CCP.</b></p>
<b>REF</b>	DWQMS Operational Plan   Issued: 6 May 2009   Rev: 12 June 2018

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

**PLAN**

The Operational Plan shall:

- a. describe the organizational
- b. structure of the Operating Authority, including respective roles, responsibilities and authorities;
- c. delineate corporate oversight roles, responsibilities and authorities in the case where the Operating Authority operates multiple subject systems;
- d. identify the person, persons or group of people within the management structure of the organization responsible for undertaking the Management Review;
- e. identify the person, persons or group of people having Top Management responsibilities required by this Standard, along with their responsibilities; and
- f. identify the Owner of the subject system.

**DO**

The Operating Authority shall keep current the description of the organizational structure, including respective roles, responsibilities and authorities, and shall communicate this information to Operating Authority personnel and the Owner.

<b>FINDING:</b> <input checked="" type="checkbox"/> CON <input type="checkbox"/> OFI <input type="checkbox"/> MN <input type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comments</b>
Additional Comments	<p>Lists the roles, responsibilities and authorities for Ownership, Top management (Commissioner D&amp;IS; Director, PWS; Manager W/WW S), Supervisor W/WW, Compliance Coordinator (QMS Rep),and Operators, Water Quality Admin Assistant and the Water Quality Analyst</p> <p>Verified the roles and responsibilities of the following persons through interview; CAO, Commissioner of Development &amp; Infrastructure Services, Director, Public Works Services, and Operators.</p> <p>Also verified that following roles and responsibilities through audit observation: WQ Admin Assistant, Manager of Water and Wastewater Services, and the Supervisor of Water and Wastewater.</p>
<b>REF</b>	DWQMS Operational Plan   Issued: 6 May 2009   Rev: 12 June 2018



**Element 10 Competencies**

**PLAN**

The Operational Plan shall document competencies required for

- a. personnel performing duties directly affecting drinking water quality; ✓
- b. activities to develop and maintain competencies for personnel performing duties directly affecting drinking water quality; and ✓
- c. activities to ensure that personnel are aware of the relevance of their duties and how they affect safe drinking water. ✓

**DO**

The Operating Authority shall undertake activities to:

- a. meet and maintain competencies for personnel directly affecting drinking water quality and shall maintain records of these activities; and ✓
- b. ensure that personnel are aware of the relevance of their duties and how they affect safe drinking water, and shall maintain records of these activities. ✓

<b>FINDING:</b> <input checked="" type="checkbox"/> CON <input type="checkbox"/> OFI <input type="checkbox"/> MN <input type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comments</b>
	<p>Operators must provide evidence of Certificate (posted at Operations Centre) Verified Operator Certificates for Four Operators.</p> <p>Training reviewed annually, along with a performance review. Verified for Blair Saunders and Alex Begley (9-Apr-2018).</p> <p>Employee outcomes identify the Employee’s desired training moving forward. Supervisor of W/WW keeps a summary on his desk and accommodates training desires where possible. Follow-up meeting is held after 6 months to discuss the status of these items.</p> <p>Verified through several tailgate meetings that SOPs are reviewed on an infrequent basis (17-May-18, 15-Feb-18, 16-Mar-18). See finding under Element 12.</p> <p>Currently transitioning the Compliance 365 software package to streamline record keeping for Training and Sample Results.</p>
<b>REF</b>	DWQMS Operational Plan   Issued: 6 May 2009   Rev: 12 June 2018

**Element 11 Personal Coverage**

PLAN

The Operational Plan shall document a procedure to ensure that sufficient personnel meeting the identified competencies are available for duties that directly affect drinking water quality.

DO

The Operating Authority shall implement and conform to the procedures.

<b>FINDING:</b> <input checked="" type="checkbox"/> CON <input type="checkbox"/> OFI <input type="checkbox"/> MN <input type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comments</b>
	<p>M-F 7:30 – 4:00</p> <p>ORO – available at all times... Verified e-mail sent detailing ORO will be away and designating Manager – Water and Wastewater as ORO.</p> <p>On-call crews – at least one Class 1 Operator. Verified the On-call list was available for Summer 2018. The on-call list for Winter 2018 will be released shortly.</p> <p>Contractors and other municipalitys can support.</p> <p>Verified Corex (also listed on ESS list), and TriSan (ESS list) are some of these contractors.</p> <p>Non-unionized workplace, so no labour shortages.</p>
<b>REF</b>	DWQMS Operational Plan   Issued: 6 May 2009   Rev: 12 June 2018

**Element 12 Communications**

PLAN – The Operational Plan shall document a procedure for communications that describes how the relevant aspects of the Quality Management System are communicated between Top Management and:

- a) the Owner,
- b) Operating Authority personnel,
- c) Suppliers that have been identified as essential under Plan (a) of Element 13 of this Standard, and
- d) the Public.

DO – The Operating Authority shall implement and conform to the procedure.

<b>FINDING:</b> <input type="checkbox"/> CON <input type="checkbox"/> OFI <input checked="" type="checkbox"/> MN <input type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comments</b>
Owner	Verified the MR Minutes were communicated to council Report 2018-13 (19-Mar-18). OP available on the server.
OA	<p>TM – Quarterly QMS meetings &amp; monthly management meetings. Staff – Orientation session, OP review (every 3 yrs), and</p> <p>Daily tailgate meetings are conducted, but there is limited discussion of the QMS. (not listed in the OP, see finding under Element 5)</p> <p>Could find no evidence of the OP review at the time of the audit.</p>



	<p>Verified awareness of the QMS through contractor sign-off forms with QMS statement.</p> <p>Verified that Crowle and 26-Jun-2013 and WAMCo 26-Jun-2013, but no additional letters have been received.</p> <p>Verified the contact information was sent in 2013. No further update letters have been received since that date.</p> <p>Verified QMS Policy is available in the mapping room and on the website (accessed 20-Sep-2018)</p>
	<p><b>Could find no evidence of QMS statement provided in tender documents</b></p> <p>OFI- Consider documenting how the contact update letters are used within the procedure. (e.g. for verifying qualifications, and DWQMS update). Last returned contact information update letter was from 2013.</p>
<b>REF</b>	<p>DWQMS Operational Plan; Element 12 Communication   Issued: 6 May 2009   Rev: 12 June 2018</p>



**Element 13 Essential Supplies & Services**

PLAN

The Operational Plan shall:

- a. identify all supplies and services essential for the delivery of safe drinking water and shall state, for each supply or service, the means to ensure its procurement; and
- b. include a procedure by which the Operating Authority ensures the quality of essential supplies and services, in as much as they may affect drinking water quality.

DO

The Operating Authority shall implement and conform to the procedures.

<b>FINDING:</b> <input checked="" type="checkbox"/> CON <input type="checkbox"/> OFI <input type="checkbox"/> MN <input type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comments</b>
List	Contact list most recently updated 18-Jan-2018. Rentals, contractors, maintenance contractor, parts suppliers, lab equipment supplier and services, etc.
Quality	OA oversight & using reputable supplies. Contractors are overseen and reviewed by OA staff. Verification of review of Corix Water Services from <b>(no date of evaluation, see findings under Element 5)</b> . Evaluation form is completed for each vendor (about 20 or so).  Two major suppliers. Built a rapport with supplies, and long established relationships.
<b>REF</b>	DWQMS Operational Plan   Issued: 6 May 2009   Rev: 12 June 2018

**Element 14 Review & Provision of Resources**

PLAN – The Operational Plan shall document a procedure for reviewing the adequacy of the infrastructure necessary to operate and maintain the Subject System that:

- a) Considers the outcomes of the risk assessment documented under Element 8, and
- b) Ensures that the adequacy of the infrastructure necessary to operate and maintain the Subject System is reviewed at least once every Calendar Year.

DO – The Operating Authority shall implement and conform to the procedure and communicate the findings of the review to the Owner.

<b>FINDING:</b> <input type="checkbox"/> CON <input type="checkbox"/> OFI <input checked="" type="checkbox"/> MN <input type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comments</b>
	<p>Annual review by W/WW Sup, Manager of W/WW Ops, and Dir. Of PWS, during the management review.</p> <p>W/WW Supervisor indicates that feedback is provided on the 5 year capital plan through e-mail. Infrastructure committee meetings occur on monthly basis. Little evidence of discussion of the condition of infrastructure.</p> <p>Mn – Reviewed Management review. At that point there was no evidence of discussion of the 5 year capital plan as it relates to more current infrastructure needs.</p> <p>5 year project Construction Plan for Water Projects (Last updated 29-Jun-2018)</p> <p>Could provide no evidence the capital plan extends to the required 10 year projection.</p>
<b>REF</b>	DWQMS Operational Plan   Issued: 6 May 2009   Rev: 12 June 2018

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

PLAN – The Operational Plan shall document:

- a) a summary of the Operating Authority’s infrastructure maintenance, rehabilitation and renewal programs for the Subject System, and
- b) a long term forecast of major infrastructure maintenance, rehabilitation and renewal activities.

DO – The Operating Authority shall:

- a) keep the summary of the infrastructure maintenance, rehabilitation and renewal programs current,
- b) ensure that the long term forecast is reviewed at least once every Calendar Year,
- c) communicate the programs to the Owner, and
- d) monitor the effectiveness of the maintenance program.

<b>FINDING:</b> <input checked="" type="checkbox"/> CON <input type="checkbox"/> OFI <input type="checkbox"/> MN <input type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comments</b>
Planned Activities	<p><b>Unidirectional Flushing-</b> Yearly rotating Programs or as determined by monitoring.</p> <p><b>Dead End Flushing-</b> Flushing schedule will be determined by monitoring.</p> <p><b>Hydrant Inspections-</b>Yearly</p> <p><b>Valve Inspections-</b>Year rotating program to ensure each valve has been operated over a 4 year period</p> <p>Verified the following dead ends met internal requirements for flushing 702 Hempen Crt (Once quarterly) and 114 Eden (twice quarterly) for the first three quarters of 2018.</p> <p><b>No evidence of valve inspections. Water Analyst indicates that valve inspections occur as part of the uni-directional flushing program and the swabbing program. See finding under Element 5.</b></p>
Long Term forecast	<b>5 year project infrastructure plan provided (26-Jun-2018). See element 14.</b>
Monitor effectiveness	<b>Provided a spreadsheet with KPI (main breaks, CCTV inspection of watermain line ) to monitor . Verified spreadsheet outlining Main breaks, and the mapping online with common locations of main breaks.</b>
REF	DWQMS Operational Plan   Issued: 6 May 2009   Rev: 12 June 2018

**Element 16 Sampling Testing & Monitoring**

PLAN

The Operational Plan shall document:

- a. a sampling, testing and monitoring procedure for process control and finished drinking water quality, including requirements for sampling, testing and monitoring at the conditions most challenging to the subject system;
- b. a description of any relevant sampling, testing or monitoring activities that take place upstream of the subject system; and
- c. a procedure that describes how sampling, testing and monitoring results are recorded and shared between the Operating Authority and the Owner, where applicable.

DO

The Operating Authority shall implement and conform to the procedures.

<b>FINDING:</b> <input checked="" type="checkbox"/> CON <input type="checkbox"/> OFI <input type="checkbox"/> MN <input type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comments</b>
<b>Sampling</b>	<p>Chlorine Residuals – checked throughout week - 27 chlorine residual – (35-40 per day)                      Micor – 92 samples per month... Verified that 130 samples collected in July 2018 and 100 samples collected in Novemeber 2017                      Lead – Reg Relief– 8 Distribution samples – Dec 15, 2017 to April 15, 2018- 9 distribution samples collect on 22-Mar-18 all BDL                      THM last sampled Jul 30, 2018.                      Verified Lead Regulator Relief in MDWL 124-10 (7-Mar-2018)</p> <p>Follow-up for adverse results was verified with 3 samples taken, one upsteam, one at the sampling point and one downstream. The following adverse results were reviewed AWQI140190, and 138101.</p> <p>Data Reporting software called WaterTrax, shifting to compliance 365.</p>
<b>Communication with Owner</b>	<b>Verified the Annual Summary was communicated to council through Information Report (2017-14, 26-Feb-18)</b>
<b>REF</b>	DWQMS Operational Plan   Issued: 6 May 2009   Rev: 12 June 2018

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

PLAN

The Operational Plan shall document a procedure for the calibration and maintenance of measurement and recording equipment.

DO

The Operating Authority shall implement and conform to the procedures.

<b>FINDING:</b> <input type="checkbox"/> CON <input checked="" type="checkbox"/> OFI <input type="checkbox"/> MN <input type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comments</b>
	<p>Verified calibrations for Two Colorimeters through calibration sticker and calibration forms from Hach (1-Nov-2017); PCS test (1-Jan-17) internally, and DR 2800 Spectrophotometer (1-Nov-17).</p> <p>Requires units are calibrated every 6 months by Qualified Contractor (test kits),</p>



	<p>however this calibration is overdue for the Colorimeters and the Spectrometers.</p> <p>pH/temp pens calibrated as needed by operators (monthly max). Monthly calibrations occur according to calibration records.</p> <p><b>OFI – Consider reviewing the frequency at which the calibration of devices is required. Last calibration of devices occurred in November 2017.</b></p>
<b>REF</b>	DWQMS Operational Plan   Issued: 6 May 2009   Rev: 12 June 2018



## Element 18 Emergency Management

### PLAN

The Operational Plan shall document a procedure to maintain a state of emergency preparedness that includes:

- a. a list of potential emergency situations or service interruptions; ✓
- b. processes for emergency response and recovery; ✓
- c. emergency response training and testing requirements; ✓
- d. Owner and Operating Authority responsibilities during emergency situations; ✓
- e. references to municipal emergency planning measures as appropriate; and ✓
- f. an emergency communication protocol and an up-to-date list of emergency contacts. ✓

### DO

The Operating Authority shall implement and conform to the procedures.

<b>FINDING:</b> <input type="checkbox"/> CON <input checked="" type="checkbox"/> OFI MN <input type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comments</b>
List	References RA Outcomes for a list of Emergency Events. Last updated 7-Dec-2017, as per revision history.
Procedures	Refers to SOPs for Emergency Procedures. Verified during audit that their procedures identify actions required and the communication procedure. Main Break (PWS-POL-002) and Low chlorine residual (PWS-POL-001A).
Communication	Verified through operator interviews that they understand and would follow the identified chain of command in the event of an emergency.
<b>Training</b>	<p>Actual emergency occurred after a watermain break near CN rail tracks. Called in On-call, and emergency contractor. Called appropriate authorities. E-mail provided with appropriate response measures listed, which was sent to staff members who were involved. There was no evidence of a debrief meeting provided at the time of the audit. Verified SOP review– Watermain Break Review on 2-Nov-17.</p> <p>Verified the Emergency Response and notification procedure was followed for AWQI 140190 &amp; 138101.</p> <p><b>OFI - The SOPs are not reviewed at the indicated frequency. More pressing concerns such as maintenance. In the process of revising procedures, and will review when complete. Consider planning more frequent SOP reviews during tailboard talk meetings.</b></p>
<b>Test</b>	Desktop exercise or mock scenario as per ER Testing schedule. Contracted out to Team 1 Academy Inc. on October 16, 2017. Review of sanitary main failures.
<b>REF</b>	DWQMS Operational Plan   Issued: 6 May 2009   Rev: 12 June 2018

**Element 19 Internal Audits**

PLAN – The Operational Plan shall document a procedure for internal Audits that:

- a) evaluates conformity of the Quality Management System with the requirements of this Standard,
- b) identifies internal Audit criteria, frequency, scope, methodology and record-keeping requirements,
- c) considers previous internal and external Audit results, and
- d) describes how Quality Management System Corrective Actions are identified and initiated.

DO – The Operating Authority shall implement and conform to the procedure and shall ensure that internal Audits are conducted at least once every Calendar Year.

<b>FINDING:</b> <input checked="" type="checkbox"/> CON <input type="checkbox"/> OFI <input type="checkbox"/> MN <input type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comments</b>
	<p>Internal Auditor Qualifications include a requirement for Internal Auditor Training.</p> <p>Training provided for Pauline Pierce (Iss. 7-Mar-2015). No internal auditor training certificate provided for Jeff Ellis.</p> <p>Verified the internal audit was conducted in 2017 by Pauline Pearce, Alison Day, and Jeff Ellis (2-Aug-2017), and in 2018 by (Pauline Pierce, Blair Saunders, and Luigi Colangelo).</p> <p>Follow-up as CAR.</p>
REF	DWQMS Operational Plan   Issued: 6 May 2009   Rev: 12 June 2018

## Element 20 Management Review

### PLAN

The Operational Plan shall document a procedure for management review that evaluates the continuing suitability, adequacy and effectiveness of the Quality Management System and that includes consideration of:

- a. incidents of regulatory non- compliance; ✓
- b. incidents of adverse drinking- water tests; ✓
- c. deviations from critical control point limits and response actions; ✓
- d. the efficacy of the risk assessment process; ✓
- e. internal and third-party audit results; ✓
- f. results of emergency response testing; ✓
- g. operational performance; ✓
- h. raw water supply and drinking water quality trends; ✓
- i. follow-up on action items from previous management reviews; ✓
- j. the status of management action items identified between reviews; ✓
- k. changes that could affect the QMS; ✓
- l. consumer feedback; ✓
- m. the resources needed to maintain the QMS; ✓
- n. the results of the infrastructure review; ✓
- o. Operational Plan currency, content and updates; and ✓
- p. staff suggestions. ✓

DO – Top Management shall implement and conform to the procedure and shall:

- a) ensure that a management review is conducted at least once every Calendar Year,
- b) consider the results of the management review and identify deficiencies and actions items to address the deficiencies,
- c) provide a record of any decisions and action items related to the management review including the personnel responsible for delivering the action items and the proposed timelines for their implementation, and
- d) report the results of the management review, the identified deficiencies, decisions and action items to the Owner

<b>FINDING:</b> <input type="checkbox"/> CON <input checked="" type="checkbox"/> OFI <input type="checkbox"/> MN <input type="checkbox"/> MJ <input type="checkbox"/> NC	
<b>Standard:</b>	<b>Comments</b>
	<p>Verified Management review too place 5-Dec-2017 with representative from Top Management (Director of Public Works), QMS Representative/Lead, Manager of Water/Wastewater, and Overall Responsible Operator (ORO)</p> <p>Summary report of all PLAN sub-elements verified through PP presentation. Verified action items and responsible person identified.</p> <p><b>OFI- Include timelines for action items on the Management Review meeting minutes.</b></p> <p><b>Also see Finding under Element 5 for Management Review meeting minutes.</b></p> <p>Verified the Minutes were communicated to council Report 2018-13 (19-Mar-18)</p>
<b>REF</b>	DWQMS Operational Plan   Issued: 6 May 2009   Rev: 12 June 2018

**Element 21 Continual Improvement**

PLAN – The Operating Authority shall develop a procedure for tracking and measuring continual improvement of its Quality Management System by:

- a) reviewing and considering applicable best management practices, including any published by the Ministry of the Environment and Climate Change and available on [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater), at least once every thirty-six months;
- b) documenting a process for identification and management of Quality Management System Corrective Actions that includes:
  - i. investigating the cause(s) of an identified non-conformity,
  - ii. documenting the action(s) that will be taken to correct the non-conformity and prevent the non-conformity from re-occurring, and
  - iii. reviewing the action(s) taken to correct the non-conformity, verifying that they are implemented and are effective in correcting and preventing the re-occurrence of the non-conformity.
- c) documenting a process for identifying and implementing Preventive Actions to eliminate the occurrence of potential non-conformities in the Quality Management System that includes:
  - i. reviewing potential non-conformities that are identified to determine if preventive actions may be necessary,
  - ii. documenting the outcome of the review, including the action(s), if any, that will be taken to prevent a non-conformity from occurring, and
  - iii. reviewing the action(s) taken to prevent a non-conformity, verifying that they are implemented and are effective in preventing the occurrence of the non-conformity.

DO – The Operating Authority shall strive to continually improve the effectiveness of its Quality Management System by implementing and conforming to the procedure.

<b>FINDING:</b>	<input type="checkbox"/> CON <input type="checkbox"/> OFI <input type="checkbox"/> MN <input checked="" type="checkbox"/> MJ <input type="checkbox"/> NC
<b>Standard:</b>	<b>Comments</b>
	<p>Speak with counterparts at other municipalities, review of technical magazine (OWWA, AWWA, Optflow, etc.), review Ministry website regularly. Looking at a Continual Improvement policy.</p> <p>OFI/suggestions are addressed through OFI Follow-up Report, however this is not documented under El. 19 or El 21 of the OP. See finding under <b>Element 5 Document and Record Control</b></p> <p>External Audit –                  Mn addressed as verified on the CAR report for Element 19. Under construction watermark removed.                  OFI Under element 3 was addressed by referencing the correct appendix (3a)</p> <p><b>However no CAR or OFI forms were available for 2017 Internal Audit.</b>  <b>Mj under Element 2 was not addressed explicitly, but tailboard talks do occur which discuss the QMS but is not listed in Element 12 (see finding under Element 5).</b>  <b>Mj under Element 17 - nothing done to address calibration during procedure reviews.</b>  <b>OFI under Element 10 for training on the relevance of their duties to the QMS has not been addressed.</b>  <b>OFI - Consider including MR review action items in the same manner as other continual improvement initiative.</b></p> <p>Verified Opportunity for Improvement Follow- up report was completed for El3 - Outlining Top</p>



	<p>Management, Ownership and ORO roles in the Corporate structure.</p> <p>Problems with the central zone for low Chlorine residuals due to water age. OA has begun to implement programs such as :</p> <ul style="list-style-type: none"><li>• free Cl conversions, enhanced sampling, additional maintenance, and additional analysis of performance metrics. Brought in a consulting engineer with a report on water age and how to splitting up pressure to reduce water age, and improve water quality.</li></ul>
<b>REF</b>	Element 21 Continual Improvement   Issued: 6 May 2009   Rev: 23 April 2018 Page 3 of 3



## **APPENDIX B: MEETING ATTENDANCE LIST**



\*  
**TOWN OF NEWMARKET  
INTERNAL DWQMS AUDIT**

**Meeting Attendance List**

FILE NO: NEW-ECM1718-104

Auditor: AET Group Inc.

Auditee: Town of Newmarket

Opening Meeting Date: 19-Sep-18 ~~19-Mar~~ Time Start: 8:00AM Time End: 9:30AM

Closing Meeting Date: 20-SEP-18 Time Start: 3:15 PM Time End: 4:16:30 PM

NAME	POSITION	INITIALS	
		OPENING	CLOSING
Ryan Bourner	Lead Auditor	RB	RB
Pauline Pierce	Acting Compliance	PP	PP
JEFF FELLIS	W/WW SUPERVISOR ORO	JF.	JF.
LUIGI COLANGELO	MANAGER OF W/WW	LC.	LC.

The auditee understands that the audit will only serve the purpose of conformance review to verify conformance with the DWQMS at that one-time sampling. Conformance will indicate that the requirements of the Standard were met on the particular audit day(s) and should not be construed by the auditee, or anyone else, to interpret that the auditee will function in conformance following the audit.

I was advised of the above by the Auditor: Luigi Colangelo

Lead Auditor: Ryan Bourner  
Signature

19-Sep-18  
Date