



## DWQMS Management Review - Drinking Water Systems

Date: March 11, 2025  
Location: Dave Nichols Board Room  
Time: 2:30 PM  
Attendance: Ilmar Simanovskis Commissioner Municipal Operations  
Pat Devlin Vice President Water Service  
Michael Meyers Manger Water Utility  
René Gagnon Manger WTP  
Patricia Skopelianos Program Manger Quality Assurance

The Management Review results described in this report are from January 2024 – December 2024. The City of Peterborough has been granted LST accreditation as the Operating Authority as of March 5, 2025. This Management Review will follow SOP W01-QA-100 “Management Review – Water Services” under the City of Peterborough. The Water Services staff remains the same and a sizable portion of the program will also be the same. This transfer of the Operating Authority is already in progress and is further discussed in section 1.9.

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### 1.1. Regulatory Non-Compliance Issues

During 2024, there was a Ministry of the Environment, Conservation & Parks (MECP) Inspection on June 5, 2025, report -377450391. The Peterborough Drinking Water System received a 100% compliance rating. There were no recommended best practices noted in the report.

**Decision/Discussion:** None

### 1.2. Incidence of Adverse Drinking Water Tests

There was one incident of adverse drinking water quality test results in Peterborough for 2024. The adverse water quality sample was reported on November 20, 2024. The Water Distribution Department was performing regular hydrant maintenance activities on Duffus Street when a low chlorine residual result was recorded. The operators proceeded to flush the watermain until an acceptable chlorine residual was achieved. This was reported to the MECP, and no corrective action was required according to MECP standards, and the issue was resolved.

**Decision/Discussion:** The new adverse procedure W00-WS-009 should be reviewed to ensure that the communication to the Owner is directed to Commissioner, Municipal Operations – This was verified.

**Action Item**      **Patricia Skopelianos**

To review online Adverse reporting and report back to Manager WTP on efficiency of this process.

### 1.3. Deviations from Critical Control Point Limits and Response Actions

The critical control points for the Peterborough treatment and distribution systems have been determined to be as follows:

- Primary Disinfection - SOP-02-111 (new SOP W03-WTP-111)

Regulatory Limits – The Peterborough Water Treatment Plant DWWP must achieve a specified CT continuously monitored near a location where the intended contact time has been achieved. The minimum chlorine dosage of 1.0 mg/L at is Clearwell 3, if this is achieved a CT calculation must be conducted to ensure CT has been maintained.

Internal Limits - The primary disinfection internal alarm level for SCADA is set at a range of 1.2 mg/L – 2.5 (free chlorine) for the clearwells.

**2024 Data**

- The range of recorded results for both clearwells was 1.16 – 3.89 mg/L.
- All recorded levels below 1.2 mg/L were a result of analyzer switching, maintenance or generator use. Operational staff records were appropriate and described in the logbook. The data determined that there were no true deviations (results lower than 1.2 mg/L) during 2024.



- Secondary Disinfection – SOP-02-109 (new SOP W03-WTP-109)

Regulatory Limits: Minimum 0.05 mg/L free chlorine Maximum 4.0 mg/L

Internal Limits – The plant effluent (post chlorine) chlorine dosage level is set at approximately 1.2 mg/L to 1.5 mg/L (winter) and 1.5 mg/L to 2.20 mg/L (summer). Critical limits were set and are monitored through SCADA, the distribution system is monitored through hand samples, with a critical limit of 0.2 mg/L.

#### **2024 Data**

- The review of the recorded data on SCADA was 1.31 – 1.64 mg/L; any deviations recorded on SCADA were due to analyzer change outs and plant maintenance. The Operator responses to the deviations were appropriate and described in the logbook.
- Distribution samples ranged from 0.45 – 1.33 mg/L.
- Filter Water Turbidity – SOP-02-110 (new SOP W03-WTP-110)

Regulatory Limits –A NTU value of 0.3 for turbidity must not be exceeded in 95% of the monthly measurements, or if the turbidity exceeds 1.0 NTU for more than 15 minutes.

Internal Limit - The eleven filters at the Water Treatment Plant are monitored continuously through the SCADA system with an alarm at 0.15 NTU.

#### **2024 Data**

The range for all 11 filters was range was 0.02 – 0.96 NTU. Notations made in the Operator’s logbook verify deviations were a result of the backwashing procedure.

- Loss of Coagulant – SOP-02-112 (new SOP W03-WTP-112)

A coagulant is always required during the production of drinking water. The SOP requires a minimum dose of coagulant of 35-50 mg/L. A review of the dosage calculations in the electronic daily operations spreadsheet shows that there were no instances of dosage below 35 mg/L. The process for alum dose calculation is over an 8-hour period based on volume of water treated and coagulant used.

- Chemical Supply Contamination – SOP-02-113 (new SOP W03-WTP-113)

All quality chemicals added to the water for treatment can adversely affect the finished drinking water quality. All chemicals shall be obtained by reputable suppliers in the industry to ensure an acceptable level of quality assurance. There were no instances of deviation of stated QA/QC requirements with respect to chemical during 2024.

**Decision/Discussion:** None

#### **Action Item      Patricia Skopelianos**

Add to the report the regulatory limits for Primary, secondary disinfection, and turbidity for further clarity.



### 1.4. Risk Assessment Process

The risk assessment was reviewed on April 24<sup>th</sup>, 2024. This review was considered a full review and included the DWQMS updates. All changes to the risk matrix were completed in the Sharepoint file during the assessment.

**Decision/Discussion:** The risk assessment process continues to be effective.

**Action Item**      **Patricia Skopelianos**

A full Risk Assessment is required for the new Operating Authority. This will be scheduled in two parts May 2025. This meeting should also include Jodi Denoble, Director Emergency & Risk Management.

### 1.5. Results of Audits

An internal audit was conducted in September 2024. The audit was conducted over the month and covered specific processes of the Drinking Water System as outlined in SOP-02-101. The audit is a process- audit that is on a three-year cycle where all 21 elements will be audited over that period. In 2024 the following processes were audited.

- Source Water Protection
- Calibration, Sampling & Testing
- Procurement

The Operational Plan and associated standard operating procedures (SOP's) were well documented. The level of knowledge from the staff was excellent and, in most cases, conformance was found. There was one non-conformance that were issued relating to the Peterborough's QMS, and seven "opportunity for improvements" (OFI). They are described below.

Corrective Action	Action
None	N/A
OFI & Preventive Actions	Action
SOP-02-103 states that all equipment is calibrated and maintained according to manufacturing instruction. It was discussed with the WTP Supervisor that the manual is stored in paper copy in the lab or on the F Drive. There is an opportunity to leverage technology (QR codes) to have the manual available immediately, by the operator if required. QA Manager and WTP Supervisor will investigate this process.	On hold



OFI & Preventive Actions	Action
<p>The Water Quality Analyst described the process for ordering (non-essential supplies) from HACH. There seems to be a duplication of the receiving process that has occurred. The items are ordered, shipped to the Stores location at 1867 Ashburnham, re-packed and shipped again to the WTP. This is a duplication of resources to receive the product. This process should be reviewed with Purchasing to determine if this can be streamlined.</p>	<p>Discussed with Purchasing and determined the process was a company policy change to ensure product is received in a comparable manner. This may be revisited under the new Operating Authority’s procurement practices.</p>
<p>The procedure for quarterly calibration produces multiple records (electronic and paper). This is a duplication of records. This should be evaluated to determine what the official records are and which can be destroyed. The current process involves the documentation on form # 03052 Calibration for Portable Meters” is completed and signed off by a supervisor. The staff then scan the document for retention in the F Drive and maintain the paper copy in the filing cabinet. The records retention process should be reviewed to determine if this record should be placed in corporate file records (nexus), this is a duplication of records.</p>	<p>The records retention process should be reviewed to determine if this record should be placed in corporate file records (nexus), this appears to be a duplication of records kept both paper and electronic. This process evaluation will continue in the transition once City of Peterborough Records Management can review.</p>

The accreditation body, NSF International conducted a Surveillance Audit on November 25, 2024. There were zero non- conformances issued and one “opportunity for improvements” (OFI).

- The management was to consider reviewing the Critical Control Point outcomes more frequently than the annual Management Review.

The accreditation body, NSF conducted a Limited Scope Accreditation audit on Friday February 28, 2025, for the City of Peterborough as the new Operating Authority. The audit reviewed the 9 elements of the DWQMS and issued zero non-conformances. The following OFI were raised during the audit:

- Element 9 –The requirement is to describe the organizational structure of the Operating Authority (OA). As the Council and CAO (representing the Owner) are included in the organizational chart, it would be beneficial to clearly identify and outline the specific positions that constitute the OA as part of the improvement.
- Element 11 – Although Section 11 of the OP is in conformance, there is an opportunity to ensure that the reference number of the relevant procedure aligns accurately.



- Element 13 – Although Section 13 of the OP is in conformance, there is an opportunity to ensure that the reference number of the relevant procedure aligns accurately. Additionally, management should consider requiring the practice of recording the Certificate of Analysis batch number on the Chemical Delivery Log to ensure it matches the delivered product, as is done for Aluminum Sulphate, for all received Chlorine Gas.
- Since the OA produces and delivers drinking water, the procedure should give equal focus on water distribution. As an improvement, the management should include essential services required to ensure continuous safe drinking water delivery.
- Element 18 Although Section 18 of the OP is in conformance, there is an opportunity to ensure that the reference number of the relevant procedure aligns accurately.

**Action Item      Patricia Skopelianos**

During the transition to the City of Peterborough a new Operational report to Senior Leadership Team will be developed which will include CCP outcomes.

The OFI related to procedure updates have been corrected.

**Decision/Discussion:** All the above action items and Opportunities for improvement are being tracked through the Continual Improvement process.

## 1.6. Results of Emergency Response Testing

There was an emergency response testing on September 12, 2024. The ERP team met to discuss and review current emergency list in SOP-02-108. This training event included Staff from Water Treatment, Water Distribution, Engineering, and senior Management Staff. This event reviewed in 2024 was a low pressure in the distribution system, quality of water supply and drought.

**Decision/Discussion:** All action items listed below have been logged in the Continual Improvement Log for tracking.

**Action Items from meeting**

- Investigate the purchasing of additional purchase of pressure sensors.      - completed
- Discuss with Fire Department training for proper hydrant operations.      - Status – not required
- Information request from adjacent counties on number of wells for potential refill capability Completed
- Investigate the cost to include AMI water meters in Capital project for new water meter. Recent technology has capability of providing pressure and temperature in system. - 10-year plan is set for 2027
- Process Waste Refill Location Map out using Process waste building as a



water refill station

-In progress.

### 1.7. Operational Performance, Raw Water Supply & Drinking Water Quality Trends

This section is reviewed completely in the Annual Drinking Water Report in June of each year. This report is submitted to the Commission for their information.

**Decision/Discussion:** The report for 2025 will be presented to Council in June.

**Action Item**      **Patricia Skopelianos**

To submit the Annual Drinking Water Report to the City of Peterborough

### 1.8. Follow-up on Action Items

- a) Status of Management Action items from previous reviews:
- b) Status of Management Action items identified between reviews:

**Decision/Discussion:** This is the first Management Review under the new Operating Authority.

### 1.9. Changes Affecting the Quality Management System

**Decision/Discussion:** The Operating Authority and Licence will be transferred to the City of Peterborough on April 1, 2025.

**Action Item**      **Patricia Skopelianos**

- 1) To review and update the Operational Plan and SOP to be in line with the City of Peterborough.
- 2) Provide Operational Reports to SLT to align with QMS requirements and include CCP, the template of the report will be distributed to Senior manager for review and input.
- 3) The DWQMS processes will need to be completed in the year 2025 to achieve full accreditation under the City of Peterborough, ensure that appropriate City staff are included in this process change. (examples Risk Assessment, full internal audit etc.).
- 4) Provide training for all Water Services staff (and appropriate City staff) on the DWQMS.
- 5) Training in financial systems, administrative back end



### 1.10. **Consumer Feedback**

There has been no feedback from customers on the DWQMS. Consumer concerns about the water system are tracked by calls into the Water Department and the Water Treatment Plant. This data is stored in the UMS Work Order System under the customer's address and is reviewed annually in the Annual Drinking Water Report

**Decision/Discussion:** The UMS system is not used at the city, which currently tracks customer complaints. Water Services will need to work with PTS to ensure new software (customer service) will track these complaints as well.

**Action Item      Patricia Skopelianos**

To add the above discussion in to the continual improvement log to ensure its completion. With the current transition and pressure on the PTS department this is a lower priority for transition and tracking through UMS will continue. Additionally, Patricia will reach out to the PTS on the best contact for new software.

### 1.11. **Resources Needed to Maintain the Quality Management System**

The resources that will be required for the transfer of the Operating Authority have been adequate and are designated in budgetary process.

**Decision/Discussion:** None

### 1.12. **Infrastructure Review Results**

The Water Utility Engineer, Water Utility Manager and Water Treatment Plant Manager review the Asset Management Plan and Water Utility Master Plan annually in the fall for the recommendations to be incorporated into the budgetary process and presented to the Commission for approval. The yearly review includes assessing requirements for the treatment, pumping, and storage of water as well as an assessment of linear infrastructure including watermain and water services.

The following capital projects were initiated or completed in 2024.

- Cement Mortar Lining Project
- East City Large Valve Replacements
- Water Service Replacement Program
- Brealey Drive Watermain Replacement (COP Contract),
- Lansdowne Street PH2 Watermain Replacement (COP Contract)
- Armour Rd PH2 Watermain Replacement (COP Contract)

**Decision/Discussion:** The current utility infrastructure review program is effective in incorporating annual data for recommendations to the upcoming year's projects.



### 1.13. **Operational Plan Review of Updates**

In January 2025, an updated version of the Operational Plan was created that reflects the changes to the Operating Authority and reporting structure at the City of Peterborough. This Operational Plan was approved by Council on February 24<sup>th</sup>, 2025.

**Decision/Discussion:** None

### 1.14. **Staff Suggestions**

**Decision/Discussion:** None

### 1.15. **Review of Best Management Practices**

This DWQMS requirement, during the Management Review we will discuss previous Ministry BMPs that were reviewed by staff. The DWQMS requires a review and the consideration of applicable Best Management Practices including any published by the Ministry of Environment, Conservation & Parks, available on [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater)

- DWQMS Annual Workshop – Continual improvement process
- Review Regulatory changes.
- Review of latest Ministry Inspection – no items
- All others were highlighted in the audit section of the report.

**Decision/Discussion:** None

### 1.16. **Report to Commission/Owner**

**Decision/Discussion:** Patricia Skopelianos will prepare this report to go along with Council Standard of Care Training (June 2025).

#### **Action Item - Patricia Skopelianos**

The final Management Review meeting minutes are to be submitted to the Owners. This report will also be provided to the new Operating Authority (Council) in 2025.



## DWQMS Management Review - Drinking Water Systems

### Appendix A – Summary Table of Management Review Decisions & Action Items

Agenda	Decision/Deficiency	Action Item	Assigned To:	Target Completion
Regulatory non-compliance	100% Compliance			
Incidence of Adverse Water Quality		To review online Adverse reporting and report back to Manager WTP on efficiency of this process.	Patricia Skopelianos	April 30, 2025
Deviation from CCP	Add regulatory and operational limits in meeting notes.			
Risk Assessment Process		A full Assessment is required for the new Operating Authority. This will be scheduled in two parts May 2025. This meeting should also include Jodi DeNoble, Director Emergency & Risk Management.	Patricia Skopelianos	June 30, 2025
Audit Results		During the transition to the City of Peterborough a new Operational report to Senior Leadership Team will be developed which will include CCP outcomes.	Patricia Skopelianos	May, 2025
Emergency Response Testing	None			
Operational Performance		To submit the Annual Drinking Water Report to the City of Peterborough	Patricia Skopelianos	June 30, 2025
Previous Management Review Action Items	None			



Agenda	Decision/Deficiency	Action Item	Assigned To:	Target Completion
Changes Affecting the QMS		The entire QMS will need to be documented and validated prior to the external audit schedule in August for the accreditation process for the new OA	Patricia Skopelianos	August 30, 2025
Consumer Feedback		To add the above discussion in to the continual improvement log to ensure its completion. With the current transition and pressure on the PTS department this is a lower priority for transition and tracking through UMS will continue. Additionally, Patricia will reach out to the PTS on the best contact for new software.	Patricia Skopelianos	December 30, 2025
Resources needed to maintain QMS	No additional required			
Infrastructure Review	None			
Operational Plan Updates	On going with new accreditation			
Staff Suggestions	None			
Best Management Practices	None			
Report to Owner		The final Management Review meeting minutes are to be submitted to the Owners. This report will also be provided to the new Operating Authority (Council) in 2025	Patricia Skopelianos	June 30, 2025

