



TEMAGAMI NORTH & SOUTH DRINKING WATER SYSTEMS

Management Review Minutes

Review Period: November 1, 2018 to October 31, 2019



INTRODUCTION

The requirement to conduct a management review is dictated by Element # 20 'Management Review' of the Ministry of the Environment, Conservation & Parks Drinking Water Quality Management Standard (DWQMS). This element requires that a management review be conducted at least once a year to evaluate the effectiveness and adequacy of the Quality and Environmental Management System (QEMS). As the Operating Authority, OCWA fulfills this requirement.

The management review process looks at certain indicators that show how well the QEMS has been implemented, and how effectively it is operating. Any deficiencies identified shall be detailed in action plans which include the personnel responsible and proposed timelines for implementation.

The review must consider the following items:

- ✓ Incidents of regulatory non-compliance,
- ✓ Incidents of adverse drinking-water tests,
- ✓ Deviations from critical control point limits and response actions,
- ✓ The efficacy of the risk assessment process,
- ✓ Internal and third-party audit results,
- ✓ Results of emergency response testing,
- ✓ Operational performance,
- ✓ Raw water supply and drinking water quality trends,
- ✓ Follow-up on action items from previous management reviews,
- ✓ The status of management action items identified between reviews,
- ✓ Changes that could affect the QMS,
- ✓ Consumer feedback,
- ✓ The resources needed to maintain the QMS,
- ✓ The results of the infrastructure review,
- ✓ Operational plan currency, content and updates, and
- ✓ Staff suggestions.
- ✓ Best management practices (BMPs)

TEMAGAMI NORTH & SOUTH DRINKING WATER SYSTEMS MANAGEMENT REVIEW MEETING

Date :	December 11, 2019
Time:	2:00 pm
Location:	Conference Call Kirkland Lake Compliance Office & Haileybury WTP
Participants:	Yvan Rondeau, Safety, Process & Compliance Manager; Rebecca Marshall, Process and Compliance Technician; Bryce Logan, ORO & Team Lead
Regrets:	Victor Legault, Senior Operations Manager; Claude Mongrain, Team Lead
Previous Review:	December 5, 2018
Review Period:	November 2018 to October 31, 2019

Standing Agenda Items

1. Incidents of Regulatory Non-compliance

There were no incidents of regulatory non-compliance for the Temagami North or South Drinking Water Systems during the review period.

2. Incidents of Adverse Drinking Water Tests

Temagami North DWS

- **November 20, 2018(AWQI# 144124):** Loss of pressure to 16-20 residences; water was turned off for 5hrs to replace a hydrant and valve on Birch Cres.

Corrective Action: The Timiskaming Health Unit issued a Boil Water Advisory. After the repairs were completed the lines were flushed and 2 sets of samples were taken at least 24 hours apart and tested for E.coli and total coliforms. All sample results were good. The Health Unit lifted the Boil Water Advisory on November 23, 2018.

- **September 30, 2019 (AWQI# 148312):** The watermain feeding Poplar Crescent (6 residences) was shut off in order to install a new hydrant at the end of the street. There was no pressure from 13:00hrs to 17:30hrs.

Corrective Actions: The Timiskaming Health Unit issued a Boil Water Advisory to the 6 residences. Once the work was done the area was flushed and the first set of 4 samples was taken. The second set of 3 samples was taken over 24 later on October 1, 2019. All samples were clear of E.coli and total coliforms and the Boil Water Advisory was lifted on October 4, 2019.

3. Deviations from Critical Control Limits and Response Actions

Maximo, WISKI & Wonderware data from Nov. 1, 2018 to Oct. 31, 2019 was reviewed

Temagami North Drinking Water System Critical Control Limits (CCLs) include:

Filtration Process: Turbidity off the filters - 1.0 NTU (high)

- No deviations (all values above CCL are due to analyzer maintenance and calibrations)

Primary Disinfection: Treated free chlorine residual (FCR) ≥ 0.85 mg/L (low)

1. December 1, 2018 (0.68 mg/L): Low chlorine due to air in the chemical pump line.
Contact Time (CT) was met (primary disinfection was achieved). The operator bled the air from the line which resolved the problem.
2. January 1, 2019 (0.77 mg/L): Low chlorine due to a crack in the injector.
Contact Time met and injector repaired.
3. January 7, 2019 (0.82 mg/L): Low chlorine
Contact Time met
4. May 6, 2019 (0.77 mg/L): Low chlorine due to air in the chemical pump line (pin hole in the suction pipe).
Contact Time met, line bled and pin hole repaired
5. May 7, 2019 (0.77 mg/L): Low chlorine due to chemical pump issues and low chemical
Contact Time met. Operator added sodium hypochlorite to the day tank and increased the chlorine dose

Secondary Disinfection: Distribution free chlorine residual - 0.05 mg/L (low)

- No deviations

Clearwell Level: (#3 monitored and alarmed) - Minimum Level = 1.75 m

(There are 3 clearwells; #1 is not included in the CT calculation and #2 and #3 are always at the same level)

- No deviations

Temagami South Drinking Water System Critical Control Limits (CCLs) include:

Filtration Process: Turbidity off the filters - 1.0 NTU (high)

- No deviations (all values above CCL are due to analyzer maintenance and calibrations)

Primary Disinfection: Treated free chlorine residual (FCR) ≥ 1.0 mg/L (low)

- February 17, 2019 (0.88 mg/L): Low chlorine due to an airlock in the chemical pump line.
Contact Time met and operator bled air from line.

- March 4, 2019 (0.99 mg/L): Low chlorine due analyzer being adjusted during maintenance
Contact Time met and analyzer readjusted
- June 12, 2019 (0.99 mg/L): Low chlorine
Contact Time met and chlorine increased
- July 6, 2019 (0.42 mg/L): Low chlorine due to chemical pump issues
Contact Time met and pump fixed
- July 7, 2019 (0.97 mg/L): Low chlorine due to the chlorine dose be decreased too much after issues with high chlorine levels
Contact Time met and chlorine dose increased
- September 13, 2019 (0.88 mg/L): Low chlorine due to an airlock in the chemical pump line.
Contact Time met and operator bled air from line.

Secondary Disinfection: Distribution free chlorine residual - 0.05 mg/L (low)

- No deviations

Clearwell Level: Clearwell #1 and #2 - Minimum Level = 2.20 m

- December 4, 2019 (2.04 M): Plant backwashing

4. Effectiveness of the Risk Assessment Process

The Risk Assessment Procedure was reviewed and the Risk Assessments for Temagami North and South were re-done in September 2019. The MECP's Potential Hazardous Events were added, as per version 2.0 of the Drinking water Quality Management Standard, and other revisions made to ensure the risk assessment remains current and effective.

5. Internal Audit Results

The most recent internal audit was conducted on July 17, 2019; all elements were found to be in conformance. One Opportunity for Improvement was identified which has been considered and adopted.

- Element 14 - Review and Provision of Infrastructure: The spreadsheet used for the Infrastructure Review and five year forecast does not indicate whether or not the Risk Assessments outcomes were considered. The new spreadsheet which encompasses everything required will be used going forward.

6. Third Party Audit Results

A Surveillance Audit of the Temagami Drinking Water Systems Quality Environmental Management System was conducted on July 17, 2019 by SAI Global. Two Major Non-Conformances were identified which were resolved immediately;

1. Element 3 Commitment & Endorsement: The Operational Plan had not yet been endorsed by Top Management. At the time of the audit The Plan had been sent to the Municipality for endorsement but had not yet gone to council for approval. The Plan was endorsed by top management of the Municipality and OCWA as soon as it had been accepted by council.
2. Element 8 Risk Assessment Outcomes: MECP Potential Hazardous Events for Municipal Residential Drinking Water Systems had not yet been evaluated. This was resolved on September 19, 2019 when the 36 month risk assessment re-dos were completed.

Two Opportunities for Improvement were also identified;

1. Element 15 Infrastructure Maintenance, Rehabilitation & Renewal - Consider clarifying “long-term”. OP-14 and -15 identify a rolling 5-year Recommended Capital and Major Maintenance Report whereas a 6-Year Recommended Capital/Major Maintenance 2019-2024 was provided.
(This will be updated next review)
2. Element 21 Continual Improvement - Consider reviewing the QEMS - Summary of Findings spreadsheet to ensure all findings from internal and external audits are included and identify whether they are adopted.
(Completed)

7. Results of Emergency Response Testing

The “Critical Injury & “Critical Shortage of Staff” Contingency Plans were reviewed and tested using mock scenarios on July 10, 2019. No changes were required to the Contingency Plans or related procedures.

8. Operational Performance

Both plants generally run fairly well but equipment is getting old and there is a need for redundancy at the Temagami South water treatment plant. Improvements have been recommended for 2020, some of which will be based on approval for environmental grants and funding.

Remote access to the water plants will be available sometime in 2020.

9. Raw Water Supply and Drinking Water Quality Trends

Both plants generally run fairly well but equipment is getting old and there is a need for redundancy at the Temagami South water treatment plant.

- Microbiological testing is done weekly on the treated water at the plant and two locations in the distribution system and results have consistently been zero.
- Trihalomethanes (THMs) and Haloacetic Acids (HAAs) are being tested quarterly in the distribution system and results have been well below the limits.
- Lead is tested in April and November every third year from one location in the distribution system. Lead samples were last collected in 2018 and results were well below the limit. pH and alkalinity are monitored through testing in April and November of each year.

10. Follow up on Action Items from Previous Management Reviews

There were no action items identified during the previous Management Review Meeting.

11. Status of Management Action Items Identified Between Reviews

There were no action items identified between Management Review Meetings.

12. Changes that Could Affect the QEMS

No changes are foreseen at this time.

13. Consumer Feedback

No community complaints were received during the review period for either system.

14. Resources Needed to Maintain QEMS

Resources are monitored regularly and provided by Corporate Compliance and Management as required.

15. Results of the Infrastructure Review

The following tables identify items that were recommended by OCWA for 2019, items that were unplanned but were required during 2019 and the status of each item at the time of this Management Review Meeting.

Temagami North WTP

Recommended Capital for 2019	Status
Clearwell Inspection & Cleaning(if required)	Deferred
Submersible Pump	Deferred
New Turbidity Meters for Filters 1 & 2	Deferred to 2020
Generator Servicing	Completed
Painting of Floors	Deferred
Repair Doors	Deferred

Temagami North WTP

Unplanned Capital	Status
Reprogramming of the SCADA system	Completed
Refurbish BCA Auto Valves	Completed
New UPS for the PLC Panel	Completed
Replace Faulty Intrusion Pad	Completed
Tower Inspection	Completed
PLC Optimization (New PLC on filters)	Completed
Rebuild Sodium Hypochlorite Panel	Completed

Temagami South WTP

Recommended Capital for 2019	Status
Chemical Pump Parts	Deferred
Painting of the Floors	Deferred
Unplanned Capital	Status
Reprogramming of the SCADA system	Completed
Turbidity Alarm & Shut Down Programming	Completed
Refurbish BCA Auto Valves	Completed
Replace Process pH Probe	Completed
Repair Broken Antenna	Completed
Replace Faulty Intrusion Pad	Completed
Tower Inspection	Completed
New Rack & UPS for the PLC	Completed
Rebuild Sodium Hypochlorite Panel	Completed
New Raw & Treated pH Meters	Completed
Lifting Bracket	Completed
Data Logger Repair	Approved
pH and Temperature Out-Put Card	Completed
Replace Turbidity Controller	Completed

Temagami South WTP

Replace Solenoid Valves	Completed
Repair Waste Pit Pipe	Completed
Commissioning of Backwash pump	Completed
PLC Optimization (New PLC on filters)	Completed

16. Operational Plan Currency

The plan was updated in May 2019 to incorporate changes to the Drinking Water Quality Management Standard and corporate changes within OCWA.

- Relevant findings identified during audits or inspections will also be considered in the next update.

17. Staff Suggestions

The only suggestion was to have the towers upgraded.

18. Consideration of Applicable Best Management Practices

None identified at time of meeting.

Acceptance of Minutes of Management Review Meeting and Adjournment