September 3, 2020

Report To: Travis Rob, P.Eng., Manager of Operations & Facilities

From: Craig Miller, P.Eng., Environmental Superintendent

SUBJECT: 2020 DWQMS Management Review

On Thursday, August 27th in the 52 Canadian Arena Lobby at 10:00 am local time, the DWQMS Management Review took place for the period of June 1, 2019 through May 31, 2020. Attached are the minutes from the meeting, as well as the review package.

There were some non-conformances identified. These non-conformances and their explanations, as well as other highlights, are:

1) Late submission of O.Reg. 450/07 - Industrial and Commercial Users Report (submitted April 1) to the MECP. Report was due March 31, 2020. There were technical difficulties with the MECP online submission website and the MECP was aware of the submission being 1 day late. It is not anticipated to be an issue in 2021.

2) The annual WTP inspection by the MECP identified three non-conformances:

    a. Where an activity has occurred that could introduce contamination, all parts of the drinking water system were not disinfected in accordance with Schedule B, Condition 2.3 of the Drinking Water Works Permit.\

        i. Engineering project manager was instructed accordingly. Form created and accepted by MECP to formally document all required info.

    b. The secondary disinfectant residual was not measured as required for the distribution system.

        i. CR's were not recorded in the logbook. New spreadsheet has been created to allow visual tracking of the CR's and if anything has been missed.

    c. A review of the distribution logbook found that more than one operator was recorded as OIC during the same operating shift, for the same subsystem.

        i. Directive has been issued to staff indicating who is designated OIC in the logbooks on any given day.

3) There were no adverse water samples reported during the Management Review time period.

4) Succession Planning. The WTP staffing was restructured in September 2019 such that the third employee at the WTP is rotating in on a weekly basis to cross train the Water Distribution team at the WTP. This has been favourably received by the majority of our staff.

5) The DWQMS Operational Plan was certified to the DWQMS 2.0 standard by SAI Global following the External Surveillance Audit. The Operational Plan will have an external audit in November 2020 by SAI Global.

6) The 2019 External Audit identified one minor non-conformance: evidence of written endorsement by top management and owner. This non-conformance was resolved February 14, 2020. The 2020 Internal Audit resulted in zero non-conformances.

7) Previous external audits in 2018 and internal audits in 2018 and 2019 have resulted in zero non-conformances.

8) One (1) customer complaint was identified in the Management Review. Upon discussion, it was determined that we can do a better job at tracking and documenting customer complaints to ensure that they are being resolved and closed. Improving the recording of customer complaints will be undertaken by myself.

9) Staff suggestions included:

    a. Lining the water mains under CN tracks along Keating Avenue and Wright Avenue
    b. Review and clarify the new Ontario Water Main Disinfection Procedure with the MECP and NWHU to ensure clear understanding
    c. Standardize on one type of hydrant and valve for the Town.
    d. Develop a hydrant maintenance program similar to annual valve exercising program.
    e. Install Wi-Fi at the water treatment plant.
    f. Improve network speeds for uploading videos to network and utilizing GIS.

The Water Treatment Plant and Water Distribution Teams experienced a significant turnover in the period covered by the previous Management Review. The teams are now fully staffed and training is ongoing. The Covid-19 Pandemic has created challenges to training, however training providers are adapting and training is expected to resume in Q3 and Q4 2020. The DWQMS Management Review identified areas that

we can improve upon and I expect the 2020 - 2021 Management Review will reflect this continuous improvement.

Respectfully submitted,

Craig Miller, P.Eng.
Environmental Superintendent

Town of Fort Frances

Fort Frances Drinking Water System

Management Review Meeting Minutes

Date: Thursday August 27, 2020

Time: 10:00 A.M.

Location: Fort Frances Memorial Sports Centre

In Attendance: Doug Brown, CAO, Craig Miller, Paul Lemesurier, Jay Bruyere, Brad Webb, Bryan Patterson, Joel Nicolay, Eric Gustafson and Travis Rob.

Absent: Greg Wiedenhoeft

Part of the QMS Operational Plan requires that management shall review the QMS once every twelve (12) months to assess and ensure the continuing suitability, adequacy and effectiveness of the QMS. Element 20 – Management Review was discussed. Management Reviews shall be included in the internal audit schedule.

Introduction:

Reference to Operational Plan – Element 20 Management Review

Period June 1, 2019 to May 31, 2020

The Environmental Superintendent red through Element 20 with the committee members and there were no concerns or changes that needed to be made.

Item 1 – Incidents of regulatory non-compliance:

Ministry of the Environment (MOE) Annual Inspection Report (2019/2020)
Date of Inspection: February 11th and 12th, 2019
Non-compliance with regulatory requirements – Three (3)

Where an activity has occurred that could introduce contamination, all parts of the drinking water system were not disinfected in compliance with Schedule B. Condition 2.3 of the Drinking Water Works Permit. We have instructed the Engineering project manager (Hatch Eng) accordingly. A form has been created and accepted by MECP to formally document all of the required information.

Also the secondary disinfectant residual was not measured as required for the distribution system. CR's were not recorded in the log book – a new spreadsheet has been created to help with visual tracking.

There was more that one operator recorded as OIC during the same operating shift for the same subsystem. Staff have been requested to indicated who is the designated OIC in the logbooks on any given day in the future going forward.

2019 Annual Summary Report (Schedule22) O. Reg. 170/03
Regulatory requirement: No later than March 31, 2020
Reported to O & F Executive Committee and Council
Council Approval was received April 13, 2020 – due to covid 19 pandemic
Date submitted to MECP – June 11, 2020.
Non Compliance with Regulatory Requirements: None

2020 Annual Report – O. Reg. 170/03
Regulatory Requirement: Not later than February 28, 2019
Date submitted to MECP: February 28, 2019
Non Compliance with Regulatory Requirements: None

O. Reg 450/07: Charges for Industrial and Commercial Water Users
Regulatory Requirement: Not later than March 31, 2020
Date submitted to MECP: April 1, 2020
Non Compliance with Regulatory Requirements: Late submission – online submission was creating errors in March therefore it was emailed to MECP on April 1, 2020.

O. Reg. 387/04: Water Taking and Reporting
Regulatory Requirement: Not later than March 31, 2019
Date submitted to MECP: May 14, 2019
Non-compliance with Regulatory Requirements: Late submission

Item 2 – Incidents of adverse drinking water tests:

WTP:
No adverse treated water samples

Water Distribution System:
No adverse distribution system samples

See attachment B.2

Item 3 – Deviations from critical control-point limits and response actions:

The QMS Team had undertaken a Risk Assessment Review of the risks and their critical control-point/response actions between March 2020 and June 2020.

No changes/additions/deletions were noted

Reference Element 7/8

Item 4 – The effectiveness of the risk assessment process:

The Operators reviewed the Risk Assessment Process between March 2020 and April 2020. No changes/additions/deletions were noted.

Reviewed on a yearly basis in accordance with Element 7.

Item 5 – Internal and third party audit results:

Internal Audit Results:

Latest Internal Audit:
July 3, 2020 – undertaken by Adam Mitchell
No Corrective Actions were identified.

Previous Audits:

May 29, 2019 – undertaken by Tyson Dennis
No Corrective Actions were identified.

External Audit Results:
Latest External Audit:
12 Month Upgrade Surveillance Audit
Off site (November 20, 2019) – undertaken by SAI GLOBAL – Accreditation Program for Operating Authorities
One minor non conformance was identified. Evidence of written endorsement by top management and owner – this was resolve on February 14, 2020.

Previous Off-Site External Audit
Re-Accreditation Systems Audit
On site (November 18, 2018) – undertaken by SAI GLOBAL – Accreditation Program for Operating Authorties
No non-conformances were identified.

See Attachment B.5

Item 6 – Results of emergency response testing:

Standard Operating Procedures identified in the Emergency Response Binder had been reviewed with the Water System Operators in March 2020

Emergency SOP's Reviewed:

1. Policy 4.24 – SOP No. 1 – for the Destruction (bombing/major fire) of Water Treatment Plant or Water Tower.

2. Policy 4.23 – SOP No. 2 – for Pandemic Situation – affecting the Water Treatment Plant Operators and Community.

3. Policy 4.15 – SOP No. 3 – for Water Main Breaks and Repairs.

4. Policy 4.8 – SOP No. 4 – for breakdown of equipment at the Water Treatment Plant.

5. Policy 4.4 – SOP No. 5 – for Raw Water Source Contamination

6. Policy 4.27 – SOP No. 6 – for Standby Generator – WTP (New)

See Attachment B.6

Item 7 – Operational Performance:

WTP:
Actions and recommendation from MECP
As a result of the 2019/20 MECP Inspection – 3 non compliances were identified and corrective actions were then put into place. See Section B. Item 1

Personnel
Addition: Greg Wiedenhoeft as of August 16, 2019 (Operator in Charge)
Changed the 3rd employee at the Water Treatment Plant from a permanent position to a weekly rotation of operators from the water distribution team to allow for better cross training.

Maintenance issues:

No issues

Distribution System:
Actions and recommendations from MECP:
Designation of OIC in the distribution system.

Personnel – Water Distribution Operators:
Addition: Erik Gustafson as of July 3, 2019 (Operator in Training)
Deletion – Greg Wiedenhoeft as of July 25, 2019.
Full Complement of staff as of August 16, 2019.

Maintenance Issues:
A total of 8 water main (4) and service breaks (4) throughout the Town since the last Management Review.

4 water main breaks
4 water service breaks

See Attachment B.7

Frozen Waters – 1 residence

Valve Replacements done in 2019 as part of the roadway/infrastructure replacement on"

1. Nelson Street and Armit Avenue (VAL332)
2. Scott and Mosher Avenue (VAL411)

Three (3) valves were scheduled for replacement in 2019 but due to costs, only two (2) were changed, per the list above.

Some existing fire hydrants are obsolete and we have no parts in order to maintain them. Four (4) fire hydrants were replaced in 2019. 2 were budgeted for as part of the 2019 construction program, 1 was paid for privately due to an accident and 1 was paid for out of 2019 WWTP Capital Budget.

Fire Hydrant Replacement completed in 2019:

1. 660 Second Street East (HYD248)
2. 827 Huffman Court (HYD402) – accident damage
3. SW corner of Victoria and Second Street East (HYD185)
4. Wastewater Treatment Plant (HYD035)

Item 8 – Raw water supply and drinking water quality trends:

No changes in raw water supply and drinking water quality trends.

Regular seasonal water turnover of Rainy Lake.

Item 9 – Follow up on action items from previous management review:

2019 Management Review Items
Four (4) follow up items identified

1. Have two (2) trained auditors for the DWQMS and utilize on a rotating basis.

   Both Adam Mitchell and Cody Vangel have been designated as internal auditors for the Town.

2. Maintain four (4) valve intersections – No action required.

3. When a dead end is created ensure there is a flushing point created as wll

   Flushing points included for the 2020 construction season.

4. Remodel the water system – No work done on this

5. Review SOP #3 – new disinfection procedure

   Ontario has issued a new disinfection procedure that is effective with new drinking water license renewals.

Item 10 – The status of management action items identified between reviews:

No management action items were identified between reviews.

Item 11 – Changes that could affect the Quality Management System (QMS)

Internal/External Audit: No issues

Management Review: No issues.

Any new business development upstream of water intake could potentially contaminate raw water source or supply. No concerns at this time.

Information only:

Where to find – electronically: Revision updates – Last version – check electronic version (latest version) found in W:\QMS Operational Plan\...file name (April 12, 2019; Revision No. 12).

Item 12 - Consumer Feedback:

Customer complaints: Last period – 2 complaints – this period 1 complaint.

Notes:

Typical root causes of complaints

1. Construction projects creating dead-end mains can cause stagnate and discoloured water issues.

2. Result of water main breaks

3. Maintenance – valve exercising and flushing

Status: Ongoing

Item 13 – The Resources needed to maintain the Quality Management System (QMS):

Council's commitment to provide the following:

Personnel – No issues

Financial – No issues

Item 14 – The results of infrastructure review:

Six (6) year capital plan (In OP – Appendix 1) 2021 is the end of the six (6) year plant
On an annual basis
Proposed infrastructure upgrades are discussed and reviewed with operators.
Council reviews and approves.

WTP:

On a monthly basis the WTP Overall Responsible Operator generates a report outlining operational and maintenance activities. The report is circulated and reviewed by the

Environmental and Facilities Superintendent, Manager of Operations and Facilities, the O & F Executive Committee and Council.

Upgrades for this period:

Installed two new soda ash pumps

Low lift pump motor rebuild

Replaced fluoride transfer pump

Replaced filtered and settled water sample pumps

Replace inline mixer motor

Replaced external lighting on facility to LED

Significant painting of the facility took place due to Covid 19.

Water Distribution System:

On a monthly basis, Environmental and Facilities Superintendent generates a report outlining maintenance activities. The report is circulated and reviewed by the Manager of O & F and the O & F Executive Committee and Council.

Upgrades during this period:

Water main valve exercise program – 20% per year – Area 1

Hydrant flushing: Flushing annually

Fire hydrant replacements: see section 7 for a detailed list – 4 hydrants

Water main isolation valve replacements: see section 7 for a detailed list – 2 valve

Water main replacement (Construction projects):
300 Block of Second Street Est between Portage Avenue and Victoria Avenue

Water meters/backflow device installations – ICI sector, ongoing

Scheduled for 2020 Construction:

Replacements/new installation of water mains and services along the following streets:

a) 900 block to 1200 block of Scott Street (Reid Avenue to Colonization Road East
b) Colonization Road West (Armstrong Place to East of Riverview Cemetery
c) King's Highway (Pit Road 1 to Pit Road 2)

Item 15 – Operational plan currency, content and updates:

Current revision date: June 3, 2020– Revision 13

Updates – since previous period

Audits – amended OP after the audit review

List CAR's and provide copies of Corrective Action Records.

Document Request Change (DRC) – document changes to Operational Plan such as spelling, grammar, personnel change, etc.. A result of conducting staff meetings to review the Elements within the Operational Plan - these Elements were amended as follows:

1. Element 3 – updated to current Council and Management Team

2. Element 4 – updated to add Operators and Operators-In-Training to QMS Team

3. Element 11 – updated personnel coverage to match management changes made in mid 2019.

4. Element 16 – updated employee list and contacts.

Item 16 – Staff Suggestions:

It was brought up to look at being more consistent with the type of hydrants and hardware that we or contractors install. Would like to see it implemented to have it defined clearly in the construction specs as to what type of hydrants and hardware should be used.

Town of Fort Frances

Fort Frances Drinking Water Quality Management System

Management Review Meeting Notice

Date of Notice:	Friday, August 14, 2020
Date of Meeting:	Thursday, August 27, 2020
Time of Meeting:	10:00 AM
Location of Meeting:	52 Canadian Arena Lobby

DWQMS Team Members:

Please find attached your agenda packages for the Management Review meeting that is scheduled per above.

Along with your agenda package, you find a copy of the management review minutes from the 2010 Management Review meeting as well as a copy of the report that was submitted to Mayor and Council for their approval.

Craig Miller, P.Eng.
Environmental Superintendent

Fort Frances Drinking Water System
Management Review - Meeting Agenda

Date: **August 27, 2020**

Time: **10:00 am**

Location: **52 Canadian Arena Lobby**

A. Introduction:

Reference to Operational Plan - Element 20 Management Review

- See attached Element No. 20.

Period: June 01, 2019 to May 31, 2020

B. Review Items:

1. Incidents of regulatory non-compliance:

Ministry of the Environment (MECP) Annual Inspection Report (2019/2020)
Date of Inspection: January 16 – 17, 2020
Non-compliance with Regulatory Requirements: Three

- Where an activity has occurred that could introduce contamination, all parts of the drinking water system were not disinfected in accordance with Schedule B, Condition 2.3 of the Drinking Water Works Permit.
    - Engineering project manager (Doug Herr – Hatch Eng.) has been instructed accordingly. Form created and accepted by MECP to formally document all required info.

- The secondary disinfectant residual was not measured as required for the distribution system.
    - CR's were not recorded in the logbook. New spreadsheet has been created to allow visual tracking of the CR's and if anything has been missed.

- A review of the distribution logbook found that more than one operator was recorded as OIC during the same operating shift, for the same subsystem.
    - Directive has been issued to staff indicating who is designated OIC in the logbooks on any given day.

2019 Annual Summary Report (Schedule 22) – O. Reg. 170/03
Regulatory requirement: No later than March 31
Reported to O. & F. Executive Committee and Council.
Council Approval April 13, 2020 (late approval due to Covid-19 Pandemic)
Date submitted to Ministry of the Environment (MECP): June 11, 2020 (extension received from MECP due to Covid-19 Pandemic)
Non-compliance with Regulatory Requirements: None

2019 Annual Report – O. Reg. 170/03
Regulatory requirement: Not later than February 28
Date submitted to Ministry of the Environment (MECP): February 28, 2020
Non-compliance with Regulatory Requirements: None

O. Reg. 450/07: Charges for Industrial and Commercial Water Users
Regulatory requirement: Not later than March 31
Date submitted to Ministry of the Environment (MECP): April 1, 2020
Non-compliance with Regulatory Requirements: Late Submission. Online submission was creating errors in March. Emailed to MECP on April 1.

O. Reg. 387/04: Water Taking and Reporting
Regulatory requirement: Not later than March 31
Date submitted to Ministry of the Environment (MECP): February 27, 2020
Non-compliance with Regulatory Requirements: None

2. Incidents of adverse drinking water tests:

Water Treatment Plant:
No adverse treated water samples.

Water Distribution System:
No adverse distribution system samples.

See Attachment. – B.2.

3. Deviations from critical control-point limits and response actions:

The QMS Team had undertaken a Risk Assessment review of the risks and their critical control-points/response actions between March 2020 and June 2020.

No changes / additions / deletions were noted.

Reference - Element 7/8

4. The effectiveness of the risk assessment process:

Operators reviewed the Risk Assessment process between March 2020 and June 2020. No changes / additions / deletions were noted.

(Reviewed on a yearly basis in accordance with Element 7).

5. Internal and third-party audit results:

Internal Audit results:

Latest Internal Audit:
July 3, 2020 - undertaken by Adam Mitchell
No corrective actions identified.

Previous Audit:

May 29, 2019 - undertaken by Tyson Dennis.
No corrective actions identified.

External Audit results:

Latest External Audit:
12-Month Upgrade Surveillance Audit –
Off-Site (November 20, 2019) - undertaken by SAI GLOBAL - Accreditation Program for Operating Authorities.
One minor non-conformance was identified. Evidence of written endorsement by top management and owner. Resolved February 14, 2020.

Previous External Audit:
Re-Accreditation Systems Audit –
On-site (November 18, 2019) - undertaken by SAI GLOBAL - Accreditation Program for Operating Authorities.
No non-conformances were identified.

See Attachment B.5.

6. Results of emergency response testing:

Standard Operating Procedures identified in the Emergency Response Binder was reviewed by the Water System Operators in Q1 2020.

Emergency SOP's Reviewed:

1. Policy 4.24 – SOP No. 1 – for the Destruction (Bombing/Major Fire) of Water Treatment Plant or Water Tower.
2. Policy 4.23 – SOP No. 2 – for Pandemic Situation – Affecting the Water Treatment Plant Operators & Community.
3. Policy 4.15 – SOP No.3 – for Water Main Breaks and Repairs.
4. Policy 4.6 – SOP No. 4 – for breakdown of equipment at the Water Treatment Plant
5. Policy 4.4 – SOP No. 6 – for Raw Water Source Contamination
6. Policy 4.27 – SOP for Standby Generator – WTP

See Attachment B.6.

7. Operational performance:

WTP:
Actions & Recommendations from MECP:

As a result of the 2019/20 MECP inspection, three non-conformances were identified and corrective actions put into place. See Section B, Item 1.

Personnel:

Addition – Greg Wiedenhoeft as of August 16, 2019 (Operator-in-Charge). Changed the 3rd employee at the water treatment plant from a permanent position to a weekly rotation of operators from the water distribution team to allow for better cross-training.

Maintenance issues:

No issues.

Distribution System:
Actions & Recommendations from MECP:

Designation of OIC in the distribution system.

Personnel:

Water Distribution Operators:
Addition – Erik Gustafson as of July 3, 2019 (Operator-in-Training).
Deletion – Greg Wiedenhoeft as of July 25, 2019
Full complement of staff as of August 16, 2019.

Maintenance issues:

A total of 8 water main (4) & service breaks (4) throughout the Town since the last Management Review.

See Attachment B.7.

Frozen water services to report – 1 residence

Valve replacements done in 2019 – as part of the roadway/infrastructure replacement on:

1) Scott Street & Mosher Avenue (VAL411)
2) Nelson Street & Armit Avenue (VAL332)

Three (3) valves were scheduled for replacement in 2019, but due to costs, only two (2) were changed, per the list above.

Some existing fire hydrants are obsolete, no parts to maintain them. Four fire hydrants were replaced in 2019. 2 were budgeted for as part of the 2019 construction program, 1 was paid for privately due to an accident and 1 was paid for out of 2019 Wastewater Treatment Plant Capital Budget.

Fire hydrant replacements done in 2019:

1) 660 Second Street East (HYD248)
2) 827 Huffman Court (HYD402) (accident damage)
3) SW Corner of Victoria and 2nd Street East (HYD185)
4) Wastewater Treatment Plant (HYD035)

8. Raw water supply and drinking water quality trends:

No changes in raw water supply and drinking water quality trends.

Regular seasonal water turnover of Rainy Lake.

See Chart - Attachment B.8. (Information obtained from DWSP sampling).

9. Follow-up on action items from previous management reviews:

2019 Management Review Items:

- Have two (2) trained auditors for the DWQMS and utilize on a rotating basis
    - Both Adam Mitchell and Cody Vangel have been designated as internal auditors for the town.
- Maintain four (4) valve intersections
    - No action required.
- When a dead end is created ensure there is a flushing point created as well
    - Flushing points included for the 2020 construction season.
- Remodel the water system
    - No work done on this.
- Review SOP #3 – new disinfection procedure
    - Ontario has issued a new disinfection procedure that is effective with new drinking water license renewals.

10. The status of management action items identified between reviews:

No management action items identified between reviews.

11. Changes that could affect the Quality Management System (QMS):

Internal/External Audit: No issues.

Management Review: No issues.

Any new business development upstream of water intake could potentially cause contamination of raw water source or supply. No concerns at this time.

Information Only:
Where to find – electronically: Revision Updates – Last version. Check electronic version (latest version) found in W:\QMS Documentation\QMS Operational Plan\…file name. (June 3, 2020; Revision No. 13)

12. Consumer feedback:

Customer complaints: Last period – 2 complaints; this period 1 complaint.

Notes:

Typical root causes of complaints:

1. Construction projects creating dead-end mains can cause stagnate and discoloured water issues.
2. Water main breaks.
3. Maintenance activities – valve exercising and flushing

Customer Complaint Processing form – See Attachment B.12

13. The resources needed to maintain the Quality Management System (QMS):

Council's commitment to provide the following:

Personnel – No issues.

Financial – No issues.

14. The results of infrastructure review:

Six (6) year capital plan (In OP – Appendix I)
On an annual basis –
Proposed Infrastructure upgrades are discussed and reviewed with operators.
Council reviews and approves.

WTP:
On a monthly basis the WTP Overall Responsible Operator generates a report outlining operational and maintenance activities. The report is circulated and reviewed by the Environmental Superintendent., O&F Manager, the O&F Executive Committee and Council.

Upgrades for this period:

Installed two new soda ash pumps

Low lift pump motor rebuild

Replaced fluoride transfer pump

Replaced Filtered and Settled Water sample pumps

Replaced inline mixer motor

Replaced external lighting on facility to LED

Significant painting of the facility took place due to Covid-19

Water Distribution System:
On a monthly basis, the Environmental Superintendent generates a report outlining maintenance activities. The report is circulated and reviewed by the O&F Manager and the O&F Executive Committee and Council.

Upgrades during this period:

Water main valve exercise program: 20% per year (Area 1)

Hydrant flushing: flushing annually

Fire hydrant replacements – 4 – see Section 7 for detailed list.

Water main isolation valve replacements – 2 – See Section 7 for detailed list.

Main Replacement (Construction Projects):

300 Block of Second Street East between Portage Avenue and Victoria Avenue.

Water meters/backflow device installations – ICI sector, on going.

Scheduled for 2020 Construction:

Replacement/new installation of water mains and services along the following streets:

a. 900 Block to 1200 Block of Scott Street (Reid Avenue to Colonization Road East)
b. Colonization Road West (Armstrong Place to East of Riverview Cemetery)
c. King's Highway (Pit Road 1 to Pit Road 2)

15. Operational plan currency, content and updates:

Current revision date – June 3, 2020, Rev. 13

Updates (since previous period):

Audits - Amended OP after the audit review.

List CAR's and provide copies of Corrective Action Records. See Attachment B.5

Document Request Changes (DRC) – document changes to Operation Plan other than the CAR changes as described above. (Spelling, grammar, personnel change, etc.). A result of conducting staff meetings to review the Elements within the Operation Plan these Elements were amended as follows:

1. Element 3 – updated to current council and management team
2. Element 4 – updated to add operators and operators-in-training to QMS Team
3. Element 11 – Updated personnel coverage to match management changes made in mid-2019.
4. Element 16 – Updated employee list and contacts

16. Staff suggestions:

Any concerns from operators/staff.

20 Management Review

20.1 Review Frequency

Top management shall review the QMS once every twelve (12) months to assess and ensure the continuing suitability, adequacy and effectiveness of the QMS.

Management review(s) shall be included in the internal audit schedule.

20.2 Review Participants

Management review participants shall include:

- CAO
- Operations & Facilities Manager
- Environmental Superintendent (QMS Representative)
- Overall Responsible Operator
- Operator In Charge (Water Distribution System)

The Operations & Facilities Manager may include other personnel at his discretion.

Attendees shall be notified of the management review meeting by e-mail and/or internal memo.

20.3 Review Input

The QMS Representative and the Secretary/Receptionist shall provide a summary of the following information in a suitable format to the management review meeting attendees at least seven (7) days prior to the meeting:

- Incidents of regulatory non-compliance.
- Incidents of adverse drinking-water tests.
- Deviations from critical control-point limits and response actions.
- The effectiveness of the risk assessment process.
- Internal and third-party audit results.
- Results of emergency response testing.
- Operational performance.
- Raw water supply and drinking water quality trends.
- Follow-up on action items from previous management reviews.
- The status of management action items identified between reviews.
- Changes that could affect the QMS.

- Consumer feedback.
- The resources needed to maintain the QMS.
- The results of the infrastructure review.
- Operational plan currency, content and updates.
- Staff suggestions.

20.4 Review Process

The QMS Representative shall prepare a meeting agenda and distribute the meeting agenda with the management review data.

The management review participants shall review all data presented, and where necessary, identify opportunities for improvements. These may include opportunities for improvement related to the:

- Effectiveness of the QMS and related procedures.
- Ability of the Operating Authority to implement the QMS
- Provision of adequate human and financial resources.
- The level of consumer satisfaction.

For all opportunities identified, the management review participants shall identify action items, personnel responsible for implementing action items and timelines for action items.

Records of management reviews, recommendations, decisions, action items, personnel responsibilities, and timelines shall be forwarded to the Operations & Facilities Executive Committee upon completion for acceptance and then forward to Council (Owner) of the Town of Fort Frances for review and acceptance.

Records shall be maintained by the QMS Representative. The records shall reflect all new action items and any decisions made by the Management Review Team, deficiencies, personnel responsible for action items, and timelines.

Ministry of the Environment, Conservation and Parks

Drinking Water and Environmental Compliance Division, Northern Region
Thunder Bay District, Kenora Office
808 Robertson Street
Kenora, ON P9N 1X9
Tel.: 807 468-2718
Fax: 807 468-2735

Ministère de l'Environnement, de la Protection de la nature et des Parcs

Division de la conformité en matière d'eau potable et d'environnement, Direction régionale du Nord
District de Thunder Bay, Bureau de Kenora
808 rue Robertson
Kenora, ON P9N 1X9
Tel. : 807 468-2718
Téléc.: 807 468-2735

March 11, 2020

Town of Fort Frances
320 Portage Ave.
Fort Frances, ON
P9A 3P9

Attention: Craig Miller, Environmental and Facilities Superintendent

Dear Mr. Miller:

Re: Fort Frances Water Treatment Plant Inspection Report (2019/2020)

Please find attached the 2019/2020 municipal water works inspection report. The announced focused inspection was conducted on January 16 and 17, 2020. The time and co-operation of all operators involved was greatly appreciated.

Three non-compliance issues were identified during the inspection. Actions required to address each of these non-compliance issues are included on pages 13 through 14 of the inspection report. Please note that "Actions Required" are linked to incidents of non-compliance with regulatory requirements contained within an Act, a Regulation, or site-specific approvals, licenses, permits, orders, or instructions. Such violations could result in the issuance of mandatory abatement instruments including Orders, tickets, penalties, or referrals to the ministry's Investigations and Enforcement Branch.

Best practice issues and associated recommendations, for the continued improvement of operations of the Fort Frances drinking-water system, are provided on pages 15 and 16 of the inspection report. *"Recommended Actions"* convey information that the owner or operating authority should consider implementing in order to advance efforts already in place to address such issues as emergency preparedness, the fulsome availability of information to consumers, and conformance with existing and emerging industrial standards. Please note that items which appear as recommended actions do not, in themselves, constitute violations.

In order to measure individual inspection results, the Ministry has established an inspection compliance risk framework based on the principles on the Inspection, Investigation & Enforcement (II&E) Secretariat and advice in internal/external risk experts. The Inspection

Summary Rating Record (IRR), included as Appendix B of the inspection report, provides the Ministry, the system owner and the local Public Health Units with a summarized quantitative measure of the drinking water system's annual inspection and regulated water quality testing performance. Please note the attached IRR methodology memo describing how the risk rating model has improved to better reflect the health related and administrative non-compliance found in an inspection report. IRR ratings are published (for the previous inspection year) in the Ministry's Chief Drinking Water Inspector's Annual Report. If you have any questions or concerns regarding the rating, please contact Dave Manol, Drinking Water Program Supervisor, at (807) 627-7632.

Section 19 of the Safe Drinking Water Act (Standard of Care) creates a number of obligations for individuals who exercise decision-making authority over municipal drinking water systems. Please be aware that the Ministry has encouraged such individuals, particularly municipal councilors, to take steps to be better informed about the drinking water systems over which they have decision-making authority. These steps could include asking for a copy of this inspection report and a review of its findings. Further information about Section 19 can be found in *"Taking Care of Your Drinking Water: A guide for members of municipal council"* found under "Resources" on the Drinking Water Ontario website at www.ontario.ca/drinkingwater.

If you have any questions or comments in regards to this inspection, or if you would like to discuss Ontario's drinking water legislation, please contact Carolyn Lacroix at (807) 468-2727.

Sincerely,

CLacroix

Ministry of the Environment, Conservation and Parks
Thunder Bay District, Kenora Office

CL/cl

cc. Northwestern Health Unit
21 Wolsley Street
Kenora, Ontario
P9N 3W7
Attention: Thomas Nabb, Program Manager

cc. Ministry of Natural Resources and Forestry
922 Scott Street
Fort Frances, Ontario
P9A 6S7
Attention: Greg Chapman, District Manager

cc. Ministry of the Environment, Conservation and Parks
435 James Street South
Suite 331
Thunder Bay, Ontario
P7E 6S7
Attention: Dave Manol, Water Supervisor

cc. Thunder Bay District, Kenora Office
File Number: DK DY WI – 540

Ontario

Ministry of the Environment, Conservation and Parks

FORT FRANCES DRINKING WATER SYSTEM

Inspection Report

Site Number:	220000978
Inspection Number:	1-KZ2A8
Date of Inspection:	Jan 20, 2020
Inspected By:	Carolyn Lacroix

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OWNER INFORMATION:

Company Name:	FORT FRANCES, THE CORPORATION OF THE TOWN OF		
Street Number:	320	**Unit Identifier:**	
Street Name:	PORTAGE Ave		
City:	FORT FRANCES		
Province:	ON	**Postal Code:**	P9A 3P9

CONTACT INFORMATION

INSPECTION DETAILS:

Site Name:	FORT FRANCES DRINKING WATER SYSTEM
Site Address:	901 COLONIZATION Road East FORT FRANCES ON P9A 3P9
County/District:	FORT FRANCES
MECP District/Area Office:	Kenora Area Office
Health Unit:	NORTHWESTERN HEALTH UNIT
Conservation Authority:	
MNR Office:	Fort Frances District Office
Category:	Large Municipal Residential
Site Number:	220000978
Inspection Type:	Announced
Inspection Number:	1-KZ2A8
Date of Inspection:	Jan 20, 2020
Date of Previous Inspection:	Feb 04, 2019

COMPONENTS DESCRIPTION

Site (Name): MOE DWS Mapping
Type: DWS Mapping Point **Sub Type:**

Site (Name): SOURCE
Type: Source **Sub Type:** Surface
Comments:
The raw water supply for the Fort Frances municipal drinking water system is taken from the Rainy River at the outflow of Rainy Lake. The source water is generally of good quality, however it can be subject to elevated levels of colour, turbidity, and dissolved organic carbon.
Source water is gravity-fed into a low-lift pump well located within the plant. It is then drawn through a 630 mm diameter, 190 m long intake line that is equipped at the terminal end with a stainless steel screen. Coarse material is screened at the initial intake point and again through a set of screens within the raw water well.

Site (Name): TREATED WATER
Type: Treated Water POE **Sub Type:** Pumphouse
Comments:
Three (3) vertical turbine low lift pumps deliver raw water through a common header equipped with alum and soda ash injection points, an in-line mixer, and a flow meter. Alum is added at all times when water is being produced;

soda ash is added only when needed based on the pH of the raw water supply. Polymer is then injected as the water passes into two solids contact clarifiers. The clarifiers are equipped with blow-down devices to remove excess sludge, which is discharged to the municipal sanitary sewer. Clarified water passes through one of four dual media (anthracite coal/sand) filters. Each filter effluent line is monitored for pH and turbidity. Water is disinfected in a baffled contact chamber by the addition of chlorine gas. Soda ash, used for pH adjustment is added to the clearwell, as well as hydrofluosilicic acid. Treated water flows are measured using an in-line flow meter.
Four high lift pumps (rated at 63.1 L/s (2), 94.7 L/s and 126.2 L/s) pressurize treated water as it is directed to the distribution system. Distribution system pressure is also maintained by the elevated storage tank located in the southwest portion of Fort Frances.
A complete description of the treatment system can be found in Drinking Water Works Permit No. 224-201.

Site (Name): DISTRIBUTION (WATER INSPECTION)
Type: Other **Sub Type:** Other
Comments:
The Fort Frances distribution system services a population of approximately 8,000 in Town, another 300 people in the neighbouring community of Couchiching First Nation and has one connection to a property in the neighbouring Alberton Township. The distribution system is comprised of ductile steel, cast iron, and PVC piping. The original system was installed in the early 1900's. As older pipes are replaced, PVC piping comprises an increasing proportion of the works. Some sections of the distribution system have been looped at the recommendation of a consulting engineer, however several dead ends still remain. The distribution system is 70.73 kilometres in length and contains 399 fire hydrants.
A 4,500 cubic meter elevated storage tower is located in the southwest portion of the town. A telemetry system is used to maintain water levels in the tower. A paced-to-flow chlorination system injects liquid calcium hypochlorite at the outflow from the storage tower to maintain adequate chlorine residuals in the distribution system.

INSPECTION SUMMARY:

Introduction

- **The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as evaluating conformance with ministry drinking water related policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment and distribution components as well as management practices.**

  This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O.Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.

  This report is based on a "focused" inspection of the system. Although the inspection involved fewer activities than those normally undertaken in a detailed inspection, it contained critical elements required to assess key compliance issues. This system was chosen for a focused inspection because the system's performance met the ministry's criteria, most importantly that there were no deficiencies as identified in O.Reg. 172/03 over the past 3 years. The undertaking of a focused inspection at this drinking water system does not ensure that a similar type of inspection will be conducted at any point in the future.

  This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

  This announced, focused inspection was conducted on January 16 and 17, 2020, by Water Inspector, Carolyn Lacroix and Acting Water Inspector, Megan Smith. The inspection included a tour of the Drinking Water System (DWS) components, document review and interview with DWS personnel. The inspection review period is the period of time from the date of the previous Ministry of the Environment Conservation and Parks (MECP) inspection conducted on February 4 and 5, 2019, to the date of this inspection, unless otherwise stated.

  Text highlighted in bold-type is computer-generated based on yes/no responses to standard questions answered during the inspection. Supporting information, in regular font, has been added by the undersigned Water Inspector to qualify standard responses and to provide additional guidance/information.

Source

- **The owner did not have a harmful algal bloom monitoring plan in place.**

  Drinking water systems on a surface water source may experience blue-algal blooms in their source water during the warmer months of the year. The Ministry has previously issued guidance via a letter asking systems to monitor for algal blooms.
  The Town of Fort Frances does not currently have an algal bloom monitoring plan in place. To date, the facility has not had any issues with algal blooms.
  All updated Municipal Drinking Water Licences will now include harmful algal bloom conditions related to monitoring, sampling and reporting.

Capacity Assessment

- **There was sufficient monitoring of flow as required by the Municipal Drinking Water Licence or Drinking Water Works Permit issued under Part V of the SDWA.**

  Conditions 2.1.1 and 2.1.2, Schedule C, Municipal Drinking Water Licence (MDWL) #224-101, requires continuous

Capacity Assessment

measurements and recording of the flow rate and daily volume of raw water flowing into the water treatment plant (WTP) and of treated water flowing from the WTP into the distribution system. The Fort Frances WTP is equipped with one raw water flow meter and one treated water flow meter. This information is recorded into the facility's SCADA monitoring system.

During the inspection review period, there were three occasions where small data gaps (<30 minutes) in both raw and treated data were identified. During these periods; however, the plant was shutdown due to power failure.

- **The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the Municipal Drinking Water Licence issued under Part V of the SDWA.**

  Condition 1.1, Schedule C, MDWL #224-101, identifies the rated capacity of the Fort Frances WTP as 17,000 m^3/day. This represents the maximum daily volume of treated water that is allowed to be directed to the distribution system, from the WTP.
  During the review period, the highest volume of treated water pumped to the distribution system, in a single day, was 5260m^{-3}, in May of 2019. This represents 31% of the plants rated capacity.

Treatment Processes

- **The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.**

  During the inspection, ministry staff toured the WTP and the water tower.

  The following discrepancy was noted in Schedule A of Drinking Water Works Permit (DWWP) #224-201:
  •The alum chemical metering pump is described as "having a calibration cylinder controlled automatically on the basis of the raw water flow". A new chemical metering pump has been installed and the new pump does not have a calibration cylinder. The instrument is now calibrated manually by weighing a sample.
  During the next Drinking Water Works Permit and Municipal Drinking Water License renewal, the above item is to be updated.

- **The owner/operating authority was in compliance with the requirement to prepare Form 1 documents as required by their Drinking Water Works Permit during the inspection period.**

  Municipal Water Works Permit (MWWP) # 224-201 allows for the Fort Frances drinking water system to be altered by adding, modifying, replacing or extending a watermain within the distribution system if certain conditions are met. These conditions are outlined in MWWP, Schedule B, section 3.0(3.3) and includes the requirement for all work to be recorded on a "Form 1 - Record of Watermains Authorized as a Future Alteration", prior to the watermain, addition, modification.
  During the inspection review period, one form 1 was completed for the following work:
  Second Street East:
  •194m of 150mm PVC VM installed on Second Street East between Portage Avenue and Victoria Avenue.
  •32m of 200mm & 24m of 400mm PVC VM installed in the intersection of Second Street & Victoria Avenue.
  Erin Crescent:
  •340m of 150mm PVC VM installed on Erin Crescent connecting to existing 150mm stubs on Kaitlyn Drive.

  During the inspection, it was confirmed that the Form 1 document was prepared when required and in accordance with their Drinking Water Works Permit.

- **Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a Drinking Water Works Permit and/or Municipal Drinking Water Licence issued under Part V of the SDWA at all times that water was being supplied to consumers.**

Treatment Processes

In accordance with O. Reg. 170/03, Schedule 1-2(2), surface water systems must have chemically assisted filtration and disinfection and achieve an overall performance of at least a 2-log (99%) removal/inactivation of Cryptosporidium oocysts, a 3-log (99.9%) removal/inactivation of Giardia cysts, and a 4-log (99.99%) removal/inactivation of viruses, by the time the water is delivered to the first consumer. The Fort Frances WTP achieves the above performance criteria using conventional treatment consisting of coagulation, flocculation, sedimentation filtration, and chlorine disinfection.

Trends on the SCADA system were reviewed to ensure that minimum chlorine residuals were met continuously. Under worst case conditions (temp 0.5 degrees Celsius, pH 7.5, clear-well level 60% capacity, treated water flow 17000 cubic meters per day), the plant must maintain their chlorine residual above 0.85 mg/L. Records reviewed during the inspection confirmed that the system was providing the required level of treatment throughout the inspection review period. If the treated water chlorine residual dropped below the alarm set point, the high lift pumps will shut down and stop the flow of water to the distribution system.

Monthly turbidity summaries were reviewed to ensure that the filtered water turbidity was less than or equal to 0.3 NTU in 95% of the measurements taken each month. This was met throughout the inspection review period.

- **Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined.**

  Distribution chlorine levels must be maintained at or above 0.05 mg/L at all times. The lowest recorded chlorine level in the distribution system during the inspection review period was 0.33 mg/L. This reading was recorded with a handheld colorimeter, on August 21, 2019, at the facilities water storage tower.

- **Where an activity has occurred that could introduce contamination, all parts of the drinking water system were not disinfected in accordance with Schedule B, Condition 2.3 of the Drinking Water Works Permit.**

  Municipal Water Works Permit (MWWP) # 224-201, Schedule B, Condition 2.3 requires all parts of the drinking water system in contact with drinking water which are: added, modified, replaced, extended, or taken out of service for inspection, repair or other activities that lead to contamination, shall be disinfected before being put into service in accordance with the ministry's Watermain Disinfection Procedure.
  During the inspection review period, Bay City Contracting performed work on the distribution system, on behalf of the DWS owner. Prior to bringing the affected portion of the distribution system back into service, disinfection was required; however, since disinfection records were not maintained, the undersigned officer could not confirm that the appropriate disinfection procedure was followed.

Treatment Process Monitoring

- **Primary disinfection chlorine monitoring was conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved.**

  The treated water chlorine residual is monitored by a continuous analyzer at the point where treated water enters the distribution system.

- **Continuous monitoring of each filter effluent line was being performed for turbidity.**

  O. Reg. 170/03, Section 7-3(2)(b) requires the owner of the system to ensure that sampling and testing for turbidity is carried out by continuous monitoring equipment on each filter effluent line.
  All four filters in the WTP are equipped with turbidity analyzers. Continuous turbidity data from each filter is printed daily, reviewed by operators and filed in the WTP office.
  During the inspection review period, there were 5 occurrences where a data gap was observed. For each occurrence, the treatment logbook confirmed that the plant was not running during this time.

Treatment Process Monitoring

- **The secondary disinfectant residual was not measured as required for the distribution system.**

  O.Reg 170, Section 7-2(3) requires that the owner and operating authority of a large municipal residential system that provides secondary disinfection shall ensure that at least seven (7) distribution samples are taken each week in accordance with subsection (4). For systems which provide chlorination, samples must be tested immediately for free chlorine residual.

  During the review period, a daily distribution chlorine residual was taken from the water tower and the result documented in the water tower log book except for on July 5, 2019 and December 28, 2019. On these days, the operator made an entry in the log book that they were at the water tower; however, a distribution chlorine residual was not recorded.

- **Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.**

  Daily, operators review continuous treated water chlorine residual data, for the previous 24 hours, off the circle chart recorder and filter effluent turbidity from a printout of each filters continuous data, for the previous 24 hour period. In addition, the trending for these parameters are reviewed on the facility's SCADA system, every 24 hours. The operations manual has a standard operating procedure for "Reviewing Continuous Monitoring Turbidity Test Results.

- **All continuous monitoring equipment utilized for sampling and testing required by O. Reg.170/03, or Municipal Drinking Water Licence or Drinking Water Works Permit or order, were equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6.**

  Currently, the alarm set points for chlorine and turbidity are as follows:
  • Final Effluent Low Chlorine Alarm = 1.4 mg/L - If final effluent chlorine levels drop below this set point, an alarm will sound immediately and the high lift pumps will shut down. The system will run off of the water tower.
  • Final Effluent High Chlorine Alarm = 3.2 mg/L - calls out operator on duty.
  • Filter Effluent Turbidity High Alarm = 0.3 NTU - plant alarm sounds, if the filter effluent turbidity continues to exceed the set point for more than 10 min, the filter that is exceeding will shut down and a call out will be made to the on-call operator.
  • Filter Effluent Turbidity High High Alarm = 0.80 NTU - plant immediately alarms, calls out the on-call operator and filter shuts down.
  • Filter Effluent Turbidity Low Alarm = - 0.01 mg/L.

- **Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format.**

  Final effluent chlorine residuals and filter effluent turbidity from of each filter, are read and recorded in the SCADA system every 60 seconds. Final effluent chlorine residuals are also documented on a chart recorder.
  Daily, the SCADA system prints out a summary of all the filter effluent turbidity data. Based on the data collected, every 15 minutes, the mean, maximum and average values of the previous 15 minutes of data are recorded.

  During the inspection, it was confirmed that the minimum testing and recording frequency was met for the inspection review period.

- **All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation.**

Treatment Process Monitoring

O. Reg. 170/03, section 6-5(1)8, requires that the continuous monitoring equipment must be checked and calibrated in accordance with the manufacturer's instructions.
The Rosemont Chlorine Residual Analyzer is used to continuously monitor the treated water chlorine residual. The instruction manual for this instrument does not state how frequently the instrument is to be calibrated; therefore, O. Reg. 170/03, Schedule 6, section 6-5(1)10 applies. This section requires that the instrument be checked and calibrated as frequently as necessary to ensure that the margin of error for free chlorine residual test results are within 0.05 mg/L, if the concentrations usually measured by the equipment are less than or equal to 1.0 mg/L, and proportionally higher if the concentrations usually measured are greater than 1.0 mg/L.

Documentation shows that the analyzer was last calibrated by an outside party on August 20, 2019 and had been previously calibrated on August 23, 2018. In addition, manual chlorine residuals are taken daily and compared to the on-line analyzer. If the analyzer starts to drift, an in- house calibration is completed.

Rosemount Clarity II Turbidity Analyzers are used to continuously monitor the filter effluent turbidity on each filter. The instruction manual, for these instruments requires that they be calibrated annually. Documentation shows that the filter 1, 3 and 4 turbidity analyzers were calibrated on August 20, 3019 and had been previously calibrated on August 23, 2018 (filter #2 was not calibrated because it is currently off-line and there are no plans to bring it back on-line at this time). In addition, in-house calibrations of the # 1, 3 and 4 filter effluent turbidity analyzers are completed monthly.

Operations Manuals

- **The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.**

  O.Reg 128/04, Section 28 requires that the owner or operating authority ensure that operators and maintenance personnel in the subsystem have ready access to the comprehensive operations and maintenance manuals that contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the subsystem.

  The facility's Operations and Maintenance Manual is located in at the WTP, readily accessible to all operators and contains all information required by O.Reg 128/04, s.28.

- **The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA.**

Logbooks

- **Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.**

  During the review period, only certified operators operated the water treatment plant and the distribution system.

Security

- **The owner had provided security measures to protect components of the drinking water system.**

  Security measures provided at the WTP include:
  • "No Trespassing" signs;
  • alarm system; and
  • locked doors when employees are not present.
  Security measures provided at the water tower include:
  • "No Trespassing" signs; and

Security

• a fence around the water tower that is gated and locked
There are a limited number of keys available for the WTP and the water tower.

Certification and Training

- **The overall responsible operator had been designated for each subsystem.**

  The Fort Frances WTP is a Class 3 subsystem and the distribution system is a Class 2 subsystem.

  Two operators operated as the ORO for both the WTP and distribution system during the inspection review period. Both ORO's hold a valid class 3 certificate for water treatment subsystem and a Class 2 certificate for the distribution system. The ORO for the WTP and distribution system is listed in each logbook daily.

  During a review of the distribution daily logbook, it was noted that there were no entries made (i.e. no operator was identified) on the following dates:
  • February 10, 2019
  • February 16 and 17, 2019
  This non-compliance, failure to identify ORO on a weekend, was identified and required action as a result of the 2018-19 Inspection. The 2018-19 inspection report was sent to the DWS owner on February 28, 2019, since this date, this non-compliance has since been corrected.

- **Operators-in-charge had been designated for all subsystems which comprised the drinking water system.**

  Only operators with the appropriate level of certification were designated as the OIC for the review period. The OIC's for both the WTP and distribution system are listed in the WTP and distribution logbook daily.

- **All operators possessed the required certification.**

- **Only certified operators made adjustments to the treatment equipment.**

Water Quality Monitoring

- **All microbiological water quality monitoring requirements for distribution samples were being met.**

  O. Reg. 170/03, Schedule 10, section 10-2 requires owners and operating authorities of DWS's that serve 100,000 people or fewer to ensure that at least eight distribution samples plus one additional distribution sample for every 1,000 people served by the system are taken each month.
  At least one of the samples must be taken each week. The samples must be tested for E. coli and total coliform bacteria with at least 25% of the required samples to be tested for general bacteria measured using heterotrophic plate counts (HPC).

  The Fort Frances DWS serves a population of approximately 8,000 people; therefore, at least 16 distribution samples must be taken every month. This requirement was met throughout the inspection review period.

- **All microbiological water quality monitoring requirements for treated samples were being met.**

  Section 10-3, O. Reg. 170/03, requires drinking water system owners to ensure that at least one treated water sample is taken every week (from the point of entry to the distribution system) and is tested for total coliform bacteria, E. coli, and HPC bacteria. Samples must be taken at least 5 days and not more than 10 days from when the previous weekly treated water sample was taken.
  This requirement was met throughout the inspection review period

Water Quality Monitoring

- **All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

  Treated water samples must be taken at least once every 12 months (+/- 30 days from the anniversary of the previous sampling date) and tested for the inorganic parameters listed in O. Reg. 170/03, Schedule 23. These parameters were last sampled for on March 12, 2019, and had been previously sampled on March 6, 2018.

- **All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

  Treated water samples must be taken at least once every 12 months (+/- 30 days from the anniversary of the previous sampling date and tested for organic parameters listed in O. Reg. 170/03, Schedule 24. These parameters were last sampled for on March 12, 2019, and had been previously sampled on March 6, 2018 .

- **All haloacetic acid water quality monitoring requirements prescribed by legislation are being conducted within the required frequency and at the required location.**

  In accordance with section 13-6.1, Schedule 13, O. Reg. 170/03, a sample from the distribution system or plumbing is required to be taken and tested for Haloacetic acid (i.e. HAAs) once in each calendar quarter, from a location that is likely to have an elevated potential for the formation of HAA's. During the inspection review period, HAA samples were collected from the water tower in each calendar quarter.

- **All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.**

  In accordance with section 13-6, Schedule 13, O. Reg. 170/03, a sample from the distribution system or plumbing is required to be taken and tested for Trihalomethanes (i.e. HAAs) once in each calendar quarter, from a location that is likely to have an elevated potential for the formation of THM's.
  During the inspection review period, THM samples were collected from the water tower, in each calendar quarter. The running annual average THM concentration at the time of the inspection was 75.64 ug/L, the maximum acceptable concentration is 100 ug/L.

- **All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency for the DWS.**

  Treated water samples must be taken every three months for analysis of nitrate and nitrite, in accordance with O.Reg. 170/03, Schedule 13, section 13-7. During the inspection review period, samples were collected in each calendar quarter. All nitrate and nitrite samples were collected from the WTP at the point of entry to the distribution system. All samples met the requirements listed above.

- **All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

  Sodium samples must be collected from the WTP at the point of entry to the distribution system at least once every 60 months to meet the requirements of O. Reg. 170/03, Schedule 13, section 13-8. A sodium sample was last collected from the Fort Frances WTP on March 9, 2015 and the result was 16.4 mg/L. It had been previously sampled on March 8, 2010.

- **The required daily samples were being taken at the end of the fluoridation process.**

  Schedule 7, section 7-4 of O. Reg. 170/03 requires that if a drinking water system provides fluoridation, the owner of the system and the operating authority for the system shall ensure that a water sample is taken at the end of the fluoridation process at least once every day and is tested for fluoride. Fluoride residuals were being recorded daily by operators. Fluoride is monitored by a continuous analyzer at the same location as the treated water chlorine analyzer, after treatment, prior to water leaving the plant.
  During the review period, the highest observed fluoride residual observed from the daily recording of fluoride residual was 0.79 mg/L. The limit for fluoride is 1.5 mg/L.

Water Quality Monitoring

- **All water quality monitoring requirements imposed by the MDWL or DWWP issued under Part V of the SDWA were being met.**

  Suspended solids are required to be monitored quarterly at the point of discharge to the Rainy River. Records indicate that manual composite samples were collected quarterly during the inspection review period and were tested for suspended solids.

- **Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.**

Water Quality Assessment

- **Records did not show that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O.Reg. 169/03).**

  During the inspection review period, the DWS had one (1) adverse water quality incident (AWQI), for the presence of Total Coliforms (TC) which occurred on February 27, 2019. This sample result exceeded the Ontario Drinking Water Quality Standards, Schedule 1, Microbiological Samples. The incident was documented into the ministry's database as AWQI # 144882.

Reporting & Corrective Actions

- **Corrective actions (as per Schedule 17) had been taken to address adverse conditions, including any other steps that were directed by the Medical Officer of Health.**

  A review of the ministry's incident report for AWQI # 144882 mentioned above confirmed that operators met all of the corrective action requirements of O.Reg 170/03, Section 17-6 (presence of total coliforms).

- **All required notifications of adverse water quality incidents were immediately provided as per O. Reg. 170/03 16-6.**

  A review of the ministry's incident report for AWQI # 144882 confirmed that the operator reported the adverse test result as required by O.Reg 170/03, section 16-1(1). The incident was immediately reported to both the ministry's Spills Action Centre and the Medical Officer of Health.

- **Where required continuous monitoring equipment used for the monitoring of chlorine residual and/or turbidity triggered an alarm or an automatic shut-off, a qualified person responded in a timely manner and took appropriate actions.**

  On average, it takes an operator approximately 10 minutes to respond to an alarm call out. Only certified operators responded to alarms during the inspection review period.

Other Inspection Findings

- **The following instance(s) of non-compliance were also noted during the inspection:**

  Section 26 of O. Reg 128/04 (Certification of Drinking Water System Operators and Water Quality Analysts) outlines the responsibilities of an Operator-in-Charge (OIC). A review of the distribution logbook found that more than one operator was recorded as OIC during the same operating shift, for the same subsystem. Although more than one OIC can be designated for one operating shift, each OIC must have separated areas of responsibility. On days when more than one OIC was designated for the distribution system, the logbook entries did not include information identifying different areas of responsibility. Having multiple OICs for the same process area leads to a lack of clarity around which operator is in charge and who can give instruction to other operators.

Other Inspection Findings

- **The following issues were also noted during the inspection:**

  1.) The facility utilizes a daily turbidity print out report, whereby they review the previous 24 hours of data each day. This is one of the ways in which operators demonstrate that they are continuously examining test results within 72 hours after tests are conducted, as required by O. Reg. 170/03, section 6-5(1)3. Once operators have completed their review, the print out is signed and dated.
  A review of the daily turbidity reports identified that, on occasion, operators did not identify anomalies such as turbidity spikes and data gaps on the reports, nor were the anomalies linked back to the logbook. If anomalies are not identified, it cannot be confirmed that the data is being reviewed.
  2.) During the inspection, it was identified that on September 29, 2019, an operator responded to an alarm; however, the operator did not identify the reason for the alarm in the logbook.
  3.) MDWL # 224-10, Schedule B, Section 16.2.3 requires that a description of the process used to achieve primary and secondary disinfection within the drinking water system, be included in the facility's Operations and Maintenance Manual. During a review of this manual, it was determined that although the facility has included a copy of the CT calculations, the manual lacked a detailed description of all the processes the facility uses to achieve primary disinfection (i.e. chemically assisted filtration in combination with chlorination).
  4.) The facility's Monthly Turbidity Report provides a daily summary of backwash run time for each filter, as well as a total monthly summary of backwash run time for each filter. A review of these reports identified, that on occasion, the daily backwash run time did not add up to the monthly backwash run time total. This observation was brought forward to operating staff, who verified that the daily backwash run time data in the table is correct; however, the monthly totals are sometimes incorrect.

- **The following items are noted as being relevant to the Drinking Water System:**

  O. Reg. 170/03, Section 13-6.1 requires at least one distribution sample be taken in each calendar quarter, from a point in the drinking water system's distribution system or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of haloacetic acids.
  On May 9, 2018, the ministry sent a letter to all municipal drinking water system owners clarifying the ministry's guidance for HAA sampling. This letter suggested that in each year leading up to implementation of the HAA standard, HAA's be sampled annually from different locations (i.e. beginning, middle and end of distribution system) in order to characterize the HAA's throughout the distribution system.
  A review of the quarterly HAA sampling from 2017-2019 confirms that HAA samples were taken from various locations throughout the distribution system and the greatest formation of HAAs, was observed at facility's Water Tower.

NON-COMPLIANCE WITH REGULATORY REQUIREMENTS AND ACTIONS REQUIRED

This section provides a summary of all non-compliance with regulatory requirements identified during the inspection period, as well as actions required to address these issues. Further details pertaining to these items can be found in the body of the inspection report.

1. **Where an activity has occurred that could introduce contamination, all parts of the drinking water system were not disinfected in accordance with Schedule B, Condition 2.3 of the Drinking Water Works Permit.**

   Municipal Water Works Permit (MWWP) # 224-201, Schedule B, Condition 2.3 requires all parts of the drinking water system in contact with drinking water which are: added, modified, replaced, extended, or taken out of service for inspection, repair or other activities that lead to contamination, shall be disinfected before being put into service in accordance with the ministry's Watermain Disinfection Procedure.
   During the inspection review period, Bay City Contracting performed work on the distribution system, on behalf of the DWS owner. Prior to bringing the affected portion of the distribution system back into service, disinfection was required; however, since disinfection records were not maintained, the undersigned officer could not confirm that the appropriate disinfection procedure was followed.

   Action(s) Required:

   Effective immediately, the owner and operating authority shall ensure that all information required by Section 4.0 of the Watermain Disinfection Procedure, is recorded when performing maintenance and repair activities as per section 1.4 and 3 of the procedure. Specifically, information pertaining to disinfection is to include:
   - if post-repair flushing has taken place
   - for Category 2 - Special Cases, include site specific plan. If chlorine disinfection was used, indicate initial concentration, contact time, final concentration and final concentration as percentage of initial concentration
   - Disinfectant residual on final post repair flushing. If final disinfectant residual is less than 0.2 mg/L free chlorine
   By no later than March 31, 2020, the operating authority shall submit to the undersigned water inspector, a written procedure which details how they will ensure that the information outlined in Section 4, of the Watermain Disinfection Procedure, is documented, including when the work and disinfection is performed by an outside company.

2. **The secondary disinfectant residual was not measured as required for the distribution system.**

   O.Reg 170, Section 7-2(3) requires that the owner and operating authority of a large municipal residential system that provides secondary disinfection shall ensure that at least seven (7) distribution samples are taken each week in accordance with subsection (4). For systems which provide chlorination, samples must be tested immediately for free chlorine residual.

   During the review period, a daily distribution chlorine residual was taken from the water tower and the result documented in the water tower log book except for on July 5, 2019 and December 28, 2019. On these days, the operator made an entry in the log book that they were at the water tower; however, a distribution chlorine residual was not recorded.

   Action(s) Required:

   Effective immediately, the owner shall ensure that distribution chlorine residuals are taken and the result recorded, in accordance with O. Reg. 170, Section 7-2(3).

3. **The following instance(s) of non-compliance were also noted during the inspection:**

   Section 26 of O. Reg 128/04 (Certification of Drinking Water System Operators and Water Quality Analysts) outlines the responsibilities of an Operator-in-Charge (OIC). A review of the distribution logbook found that more than one operator was recorded as OIC during the same operating shift, for the same subsystem. Although more than one

OIC can be designated for one operating shift, each OIC must have separated areas of responsibility. On days when more than one OIC was designated for the distribution system, the logbook entries did not include information identifying different areas of responsibility. Having multiple OICs for the same process area leads to a lack of clarity around which operator is in charge and who can give instruction to other operators.

Action(s) Required:

By March 31, 2020, the owner of the Fort Frances Drinking Water System shall submit to the undersigned officer a written procedure detailing how they will address the issue concerning multiple OIC's being designated in the distribution system, during the same operating shift. The written response is to include a procedure that:

1. details how it will be determined who is designated as OIC
2. If multiple OIC's are designated during the same operating shift, how it will be ensured that the responsibility of the OIC can be identified by other operators and verified by the ministry

SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

This section provides a summary of all recommendations and best practice issues identified during the inspection period. Details pertaining to these items can be found in the body of the inspection report. In the interest of continuous improvement in the interim, it is recommended that owners and operators develop an awareness of the following issues and consider measures to address them.

1. The owner did not have a harmful algal bloom monitoring plan in place.

Drinking water systems on a surface water source may experience blue-algal blooms in their source water during the warmer months of the year. The Ministry has previously issued guidance via a letter asking systems to monitor for algal blooms.
The Town of Fort Frances does not currently have an algal bloom monitoring plan in place. To date, the facility has not had any issues with algal blooms.

Recommendation:

It is recommended that the operating authority develop a plan for monitoring algal blooms. Harmful algal bloom (HAB) plans may include details relating to: 1.) visual monitoring of HABs at or near the drinking water system intake(s), 2.) details relating to visual monitoring of shoreline or drinking water systems where the proximity of the intake(s) may be of concern; 3.) details relating to reporting the observed or suspected HAB; 4.) a sampling plan, including the identification of sample location(s) and frequencies and triggers that may increase the sampling frequency, and 5.) up-to-date records documenting staff training on the HAB monitoring, reporting and sampling procedures.

2. The following issues were also noted during the inspection:

1.) The facility utilizes a daily turbidity print out report, whereby they review the previous 24 hours of data each day. This is one of the ways in which operators demonstrate that they are continuously examining test results within 72 hours after tests are conducted, as required by O. Reg. 170/03, section 6-5(1)3. Once operators have completed their review, the print out is signed and dated.
A review of the daily turbidity reports identified that, on occasion, operators did not identify anomalies such as turbidity spikes and data gaps on the reports, nor were the anomalies linked back to the logbook. If anomalies are not identified, it cannot be confirmed that the data is being reviewed.
2.) During the inspection, it was identified that on September 29, 2019, an operator responded to an alarm; however, the operator did not identify the reason for the alarm in the logbook.
3.) MDWL # 224-10, Schedule B, Section 16.2.3 requires that a description of the process used to achieve primary and secondary disinfection within the drinking water system, be included in the facility's Operations and Maintenance Manual. During a review of this manual, it was determined that although the facility has included a copy of the CT calculations, the manual lacked a detailed description of all the processes the facility uses to achieve primary disinfection (i.e. chemically assisted filtration in combination with chlorination).
4.) The facility's Monthly Turbidity Report provides a daily summary of backwash run time for each filter, as well as a total monthly summary of backwash run time for each filter. A review of these reports identified, that on occasion, the daily backwash run time did not add up to the monthly backwash run time total. This observation was brought forward to operating staff, who verified that the daily backwash run time data in the table is correct; however, the monthly totals are sometimes incorrect.

Recommendation:

1.) It is recommended that operators document any abnormalities found in the daily turbidity print out reports, on the daily turbidity print out reports, to demonstrate that are reviewing this data and ensuring an explanation for the abnormality had been provided i.e. linking data gap back to entry in log book. The purpose of reviewing this data is to ensure that the plant is alarming and recording data as it should.
2.) As required by O. Reg. 128/04, section 26(5), the operator shall document any unusual or abnormal conditions

that were observed in the subsystem during the shift, any action taken, and conclusions drawn from the observations. It is recommended that operators review the necessary information they are to document in response to an alarm, including:
- the time of the alarm
- when operator responded
- the reason for the alarm
- observations made
- any action taken

3.) It is recommended that the facility update their Operations and Maintenance Manual, to include a description of the processes used to achieve primary disinfection. The process is to include what is required to achieve both chemically assisted filtration and chlorination.
4.) It is recommended that the DWS owner make the necessary corrections to the Monthly Turbidity Report so that the backwash run time summaries are calculated accurately.

SIGNATURES

Inspected By:	Signature: (Provincial Officer)
Carolyn Lacroix	C Lacroix

Reviewed & Approved By:	Signature: (Supervisor)
Dave Manol	

Review & Approval Date: March 11, 2020

Note: This inspection does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they apply or may apply to this facility. It is, and remains, the responsibility of the owner and/or operating authority to ensure compliance with all applicable legislative and regulatory requirements.

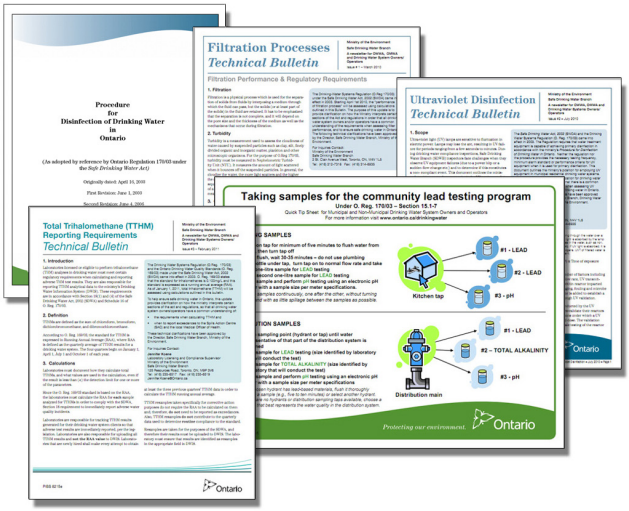
Key Reference Materials

Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

Many useful materials are available to help you operate your drinking water system. Below is a list of key materials owners and operators of municipal residential drinking water systems frequently use.

To access these materials online click on their titles in the table below or use your web browser to search for their titles. Contact the Public Information Centre if you need assistance or have questions at 1-800-565-4923/416-325-4000 or **picemail.moe@ontario.ca**.

For more information on Ontario's drinking water visit **www.ontario.ca/drinkingwater** and email **drinking.water@ontario.ca** to subscribe to drinking water news.



PUBLICATION TITLE	PUBLICATION NUMBER
Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils	7889e01
FORMS: Drinking Water System Profile Information, Laboratory Services Notification, Adverse Test Result Notification Form	7419e, 5387e, 4444e
Procedure for Disinfection of Drinking Water in Ontario	4448e01
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids	7152e
Total Trihalomethane (TTHM) Reporting Requirements Technical Bulletin (February 2011)	8215e
Filtration Processes Technical Bulletin	7467
Ultraviolet Disinfection Technical Bulletin	7685
Guide for Applying for Drinking Water Works Permit Amendments, Licence Amendments, Licence Renewals and New System Applications	7014e01
Certification Guide for Operators and Water Quality Analysts	
Guide to Drinking Water Operator Training Requirements	9802e
Taking Samples for the Community Lead Testing Program	6560e01
Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption	7423e
Guide: Requesting Regulatory Relief from Lead Sampling Requirements	6610
Drinking Water System Contact List	7128e
Technical Support Document for Ontario Drinking Water Quality Standards	4449e01

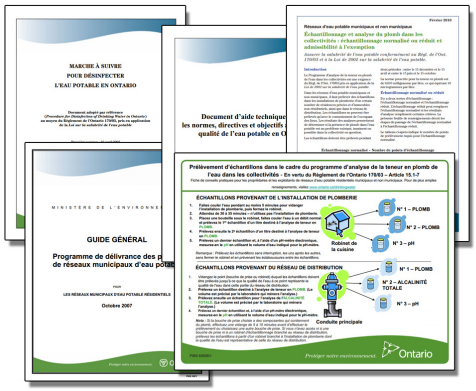
PIBS 8990b01

Ontario

Principaux guides et documents de référence sur les réseaux résidentiels municipaux d'eau potable

De nombreux documents utiles peuvent vous aider à exploiter votre réseau d'eau potable. Vous trouverez ci-après une liste de documents que les propriétaires et exploitants de réseaux résidentiels municipaux d'eau potable utilisent fréquemment.

Pour accéder à ces documents en ligne, cliquez sur leur titre dans le tableau ci-dessous ou faites une recherche à l'aide de votre navigateur Web. Communiquez avec le Centre d'information au public au 1 800 565-4923 ou au 416 325-4000, ou encore à **picemail.moe@ontario.ca** si vous avez des questions ou besoin d'aide.



Pour plus de renseignements sur l'eau potable en Ontario, consultez le site **www.ontario.ca/eaupotable** ou envoyez un courriel à **drinking.water@ontario.ca** pour suivre l'information sur l'eau potable.

TITRE DE LA PUBLICATION	NUMÉRO DE PUBLICATION
Prendre soin de votre eau potable – Un guide destiné aux membres des conseils municipaux	7889f01
Renseignements sur le profil du réseau d'eau potable, Avis de demande de services de laboratoire, Formulaire de communication de résultats d'analyse insatisfaisants et du règlement des problèmes	7419f, 5387f, 4444f
Marche à suivre pour désinfecter l'eau potable en Ontario	4448f01
Strategies for Minimizing the Disinfection Products Thrihalomethanes and Haloacetic Acids (en anglais seulement)	7152e
Total Trihalomethane (TTHM) Reporting Requirements: Technical Bulletin (février 2011) (en anglais seulement)	8215e
Filtration Processes Technical Bulletin (en anglais seulement)	7467
Ultraviolet Disinfection Technical Bulletin (en anglais seulement)	7685
Guide de présentation d'une demande de modification du permis d'aménagement de station de production d'eau potable, de modification du permis de réseau municipal d'eau potable, de renouvellement du permis de réseau municipal d'eau potable et de permis pour un nouveau réseau	7014f01
Guide sur l'accréditation des exploitants de réseaux d'eau potable et des analystes de la qualité de l'eau de réseaux d'eau potable	
Guide sur les exigences relatives à la formation des exploitants de réseaux d'eau potable	9802f
Prélèvement d'échantillons dans le cadre du programme d'analyse de la teneur en plomb de l'eau dans les collectivités	6560f01
Échantillonnage et analyse du plomb dans les collectivités : échantillonnage normalisé ou réduit et admissibilité à l'exemption	7423f
Guide: Requesting Regulatory Relief from Lead Sampling Requirements (en anglais seulement)	6610
Liste des personnes-ressources du réseau d'eau potable	7128f
Document d'aide technique pour les normes, directives et objectifs associés à la qualité de l'eau potable en Ontario	4449f01

ontario.ca/eaupotable

PIBS 8990b01

Ontario

Inspection Summary Rating Record

Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2019-2020)

DWS Name:	FORT FRANCES DRINKING WATER SYSTEM
DWS Number:	220000978
DWS Owner:	Fort Frances, The Corporation Of The Town Of
Municipal Location:	Fort Frances
Regulation:	O.REG 170/03
Category:	Large Municipal Residential System
Type Of Inspection:	Focused
Inspection Date:	January 20, 2020
Ministry Office:	Kenora Area Office

Maximum Question Rating: 506

Inspection Module	Non-Compliance Rating
Capacity Assessment	0 / 30
Treatment Processes	21 / 81
Operations Manuals	0 / 28
Logbooks	0 / 14
Certification and Training	0 / 42
Water Quality Monitoring	0 / 112
Reporting & Corrective Actions	0 / 66
Other Inspection Findings	0 / 0
Treatment Process Monitoring	21 / 133
TOTAL	**42 / 506**

Inspection Risk Rating	**8.30%**

FINAL INSPECTION RATING:	**91.70%**

Inspection Rating Record Generated On 11-MAR-20 (Inspection ID: 1-KZ2A8).

Ministry of the Environment - Detailed Inspection Rating Record (Reporting Year - 2019-2020)

DWS Name:	FORT FRANCES DRINKING WATER SYSTEM
DWS Number:	220000978
DWS Owner:	Fort Frances, The Corporation Of The Town Of
Municipal Location:	Fort Frances
Regulation:	O.REG 170/03
Category:	Large Municipal Residential System
Type Of Inspection:	Focused
Inspection Date:	January 20, 2020
Ministry Office:	Kenora Area Office

Non-compliant Question(s)	Question Rating
Other Inspection Findings	
In the event that an issue of non-compliance outside the scope of this inspection protocol is identified, a "No" response may be used if further actions are deemed necessary (and approved by the DW Supervisor) to facilitate compliance.	0
Treatment Process Monitoring	
Is the secondary disinfectant residual measured as required for the distribution system?	21
Treatment Processes	
Are all parts of the drinking water system, including new, or where an activity has occurred that could introduce contamination (e.g: that are taken out of service for inspection, repair), disinfected in accordance with a procedure listed in Schedule B, Condition 2.3 of the Drinking Water Works Permit?	21
TOTAL QUESTION RATING	42

Maximum Question Rating: 506

Inspection Risk Rating	**8.30%**

FINAL INSPECTION RATING:	**91.70%**

Inspection Rating Record Generated On 11-MAR-20 (Inspection ID: 1-KZ2A8).

APPLICATION OF THE RISK METHODOLOGY USED FOR MEASURING MUNICIPAL RESIDENTIAL DRINKING WATER SYSTEM INSPECTION RESULTS

The Ministry of the Environment (MOE) has a rigorous and comprehensive inspection program for municipal residential drinking water systems (MRDWS). Its objective is to determine the compliance of MRDWS with requirements under the Safe Drinking Water Act and associated regulations. It is the responsibility of the municipal residential drinking water system owner to ensure their drinking water systems are in compliance with all applicable legal requirements.

This document describes the risk rating methodology, which has been applied to the findings of the Ministry's MRDWS inspection results since fiscal year 2008-09. The primary goals of this assessment are to encourage ongoing improvement of these systems and to establish a way to measure this progress.

MOE reviews the risk rating methodology every three years to account for legislative and societal changes that affect acceptable risk levels. As a result of the most recent review, the methodology has been modified to present an improved metric for the evaluation of the risk/safety of MRDWS operations.

The Ministry's Municipal Residential Drinking Water Inspection Protocol contains up to 14 inspection modules and consists of approximately 120 regulatory questions. Those protocol questions are also linked to definitive guidance that

PIBS 6797e

ministry inspectors use when conducting MRDWS inspections. The questions address a wide range of regulatory issues, from administrative procedures to drinking water quality monitoring. Additionally, the inspection protocol contains a number of non-regulatory questions.

A team of drinking water specialists in the ministry have assessed each of the inspection protocol regulatory questions to determine the risk (not complying with the regulation) to the delivery of safe drinking water. This assessment was based on established provincial risk assessment principles, with each question receiving a risk rating referred to as the Question Risk Rating. Based on the number of areas where a system is deemed to be non-compliant during the inspection, and the significance of these areas to administrative, environmental, and health consequences, a risk-based inspection rating is calculated by the ministry for each drinking water system.

It is important to be aware that an inspection rating that is less than 100 per cent does not mean that the drinking water from the system is unsafe. It shows areas where a system's operation can improve. To that end, the ministry works with owners and operators of systems to make sure they know what they need to do to achieve full compliance.

The inspection rating reflects the inspection results of the specific drinking water system for the reporting year. Since the methodology is applied consistently over a period of years, it serves as a comparative measure both provincially and in relation to the individual system. Both the drinking water system and the public are able to track the performance over time, which encourages continuous improvement and allows systems to identify specific areas requiring attention.

The ministry's annual inspection program is an important aspect of our drinking water safety net. The ministry and its partners share a common commitment to excellence and we continue to work toward the goal of 100 per cent regulatory compliance.

Determining Potential to Compromise the Delivery of Safe Water

The risk management approach used for MRDWS is aligned with the Government of Ontario's Risk Management Framework. Risk management is a systematic approach to identifying potential hazards; understanding the likelihood and consequences of the hazards; and taking steps to reduce their risk if necessary and as appropriate.

The Risk Management Framework provides a formula to be used in the determination of risk:

RISK = LIKELIHOOD × CONSEQUENCE
(of the consequence)

Every regulatory question in the inspection protocol possesses a likelihood value (L) for an assigned consequence value (C) as described in **Table 1** and **Table 2**.

TABLE 1:

Likelihood of Consequence Occurring	Likelihood Value
0% - 0.99% (Possible but Highly Unlikely)	L = 0
1 – 10% (Unlikely)	L = 1
11 – 49% (Possible)	L = 2
50 – 89% (Likely)	L = 3
90 – 100% (Almost Certain)	L = 4

TABLE 2:

Consequence	Consequence Value
Medium Administrative Consequence	C = 1
Major Administrative Consequence	C = 2
Minor Environmental Consequence	C = 3
Minor Health Consequence	C = 4
Medium Environmental Consequence	C = 5
Major Environmental Consequence	C = 6
Medium Health Consequence	C = 7
Major Health Consequence	C = 8

The consequence values (0 through 8) are selected to align with other risk-based programs and projects currently under development or in use within the ministry as outlined in **Table 2**.

The Question Risk Rating for each regulatory inspection question is derived from an evaluation of every identified consequence and its corresponding likelihood of occurrence:

- All levels of consequence are evaluated for their potential to occur
- Greatest of all the combinations is selected.

The Question Risk Rating quantifies the risk of non-compliance of each question relative to the others. Questions with higher values are those with a potentially more significant impact on drinking water safety and a higher likelihood of occurrence. The highest possible value would be 32 (4×8) and the lowest would be 0 (0×1).

Table 3 presents a sample question showing the risk rating determination process.

TABLE 3:

Does the Operator in Charge ensure that the equipment and processes are monitored, inspected and evaluated?

Risk = Likelihood × Consequence							
C=1	C=2	C=3	C=4	C=5	C=6	C=7	C=8
Medium Administrative Consequence	**Major** Administrative Consequence	**Minor** Environmental Consequence	**Minor** Health Consequence	**Medium** Environmental Consequence	**Major** Environmental Consequence	**Medium** Health Consequence	**Major** Health Consequence
L=4 (Almost Certain)	L=1 (Unlikely	L=2 (Possible)	L=3 (Likely)	L=3 (Likely)	L=1 (Unlikely	L=3 (Likely)	L=2 (Possible)
R=4	**R=2**	**R=6**	**R=12**	**R=15**	**R=6**	**R=21**	**R=16**

Application of the Methodology to Inspection Results

Based on the results of a MRDWS inspection, an overall inspection risk rating is calculated. During an inspection, inspectors answer the questions that relate to regulatory compliance and input their responses as “yes”, “no” or “not applicable” into the Ministry’s Laboratory and Waterworks Inspection System (LWIS) database. A “no” response indicates non-compliance. The maximum number of regulatory questions asked by an inspector varies by: system (i.e., distribution, stand-alone), type of inspection (i.e., focused, detailed), and source type (i.e., groundwater, surface water).

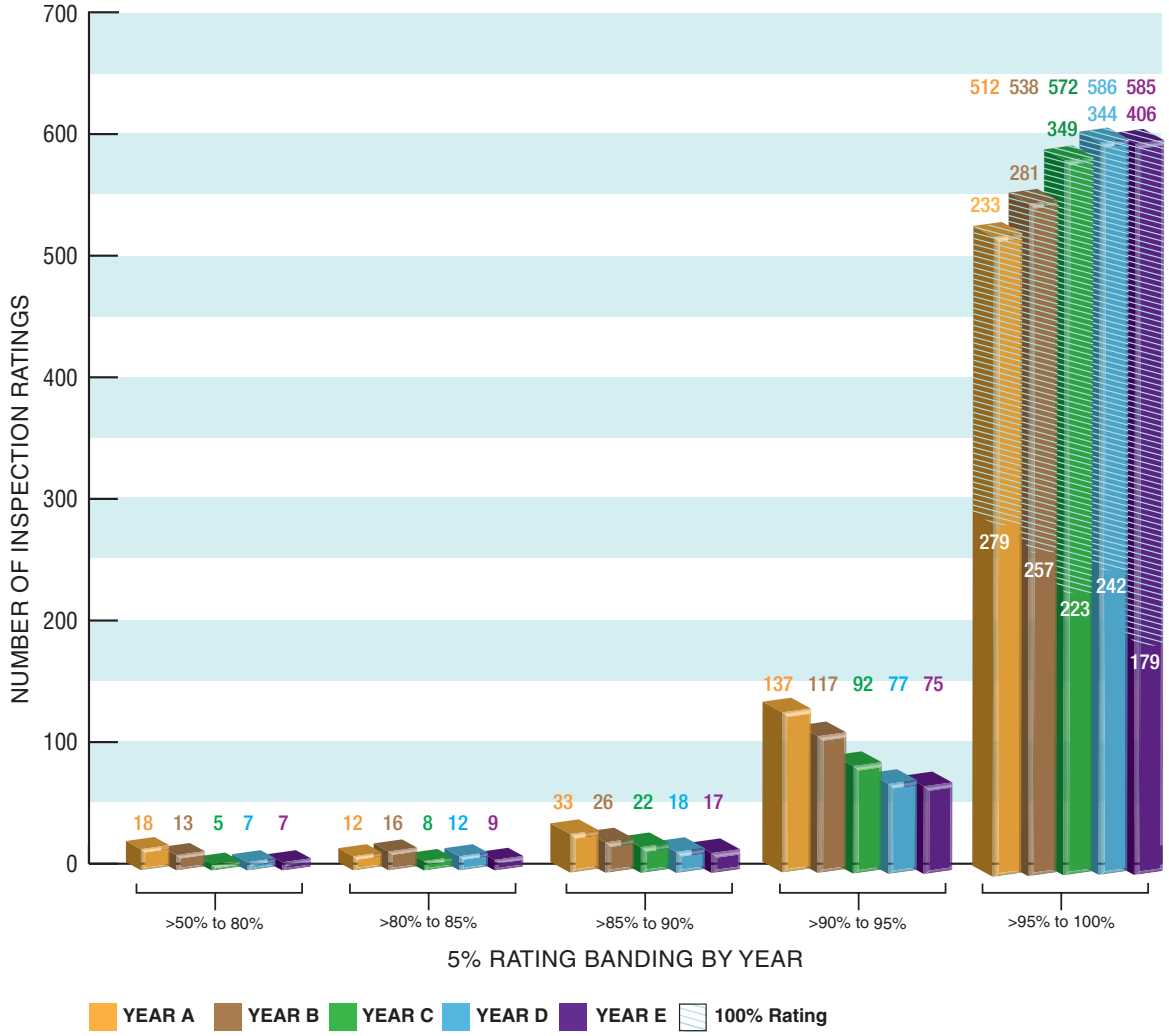
The risk ratings of all non-compliant answers are summed and divided by the sum of the risk ratings of all questions asked (maximum question rating). The resulting inspection risk rating (as a percentage) is subtracted from 100 per cent to arrive at the final inspection rating.

Application of the Methodology for Public Reporting

The individual MRDWS Total Inspection Ratings are published with the ministry's Chief Drinking Water Inspector's Annual Report.

Figure 1 presents the distribution of MRDWS ratings for a sample of annual inspections. Individual drinking water systems can compare against all the other inspected facilities over a period of inspection years.

Figure 1: Year Over Year Distribution of MRDWS Ratings



Reporting Results to MRDWS Owners/Operators

A summary of inspection findings for each system is generated in the form of an Inspection Rating Record (IRR). The findings are grouped into the 14 possible modules of the inspection protocol, which would provide the system owner/operator with information on the areas where they need to improve. The 14 modules are:

1. Source
2. Permit to Take Water
3. Capacity Assessment
4. Treatment Processes
5. Process Wastewater
6. Distribution System
7. Operations Manuals
8. Logbooks
9. Contingency and Emergency Planning
10. Consumer Relations
11. Certification and Training
12. Water Quality Monitoring
13. Reporting, Notification and Corrective Actions
14. Other Inspection Findings

For further information, please visit **www.ontario.ca/drinkingwater**

Item B.2

Incidents of Adverse Drinking Water Tests
Distribution System
(June 01, 2019 to May 31, 2020)

	Location	Incident Date	Parameter	Work Being Done	Resolution/Corrective Action
1.	No Adverse Samples Reported During This Period				

CAR LOG

Attachment B.5

CAR NUMBER	ELEMENT	DESCRIPTION (Non-conforming situation)	DATE ISSUED	ASSIGNED TO	REPLY REQUIRED BY	DATE RESOLVED	COMMENTS	OPERATIONAL PLAN REV. NUMBER
November 1, 2017 - External S2 Surveillance Audit by SAI Global - Accreditation Program for Operating Authorities. No non-conformances reported.								10
May 22, 2018 - Internal Audit by Tyson Dennis (Auditor) - No non-conformances reported.								11
November 20, 2018 - On-site Audit - Re-accreditation Audit by SAI Global - Accreditation Program for Operating Authorities. No non-conformances reported.								11
May 29, 2019 - Internal Audit by Tyson Dennis (Auditor) - No non-conformances reported.								12
2019-001	3	Evidence of a written endorsement of the contents of the Operational Plan by Top Management and the Owner was not provided for audit	November 20, 2019	Craig Miller	18-Feb-20	February 14, 2020	External Auditor - Rod Seabrook	12
July 3, 2020 - Internal Audit by Adam Mitchell (Auditor) - No non-conformances reported.								13

Audit Report

Upgrade Audit for

The Corporation of the Town of Fort Frances

1631580-02

Audited Address: 320 Portage Avenue, Fort Frances, Ontario, CAN, P9A 2P9

Start Date: Nov 18, 2019 End Date: Nov 18, 2019

Type of audit – Upgrade Surveillance System Audit

Issue Date: April 12, 2019
Revision Level: *12*

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BACKGROUND INFORMATION

SAI Global conducted an audit of The Corporation of the Town of Fort Frances beginning on Nov 18, 2019 and ending on Nov 18, 2019 to DRINKING WATER QUALITY MANAGEMENT STANDARD VERSION 2 - 2017.

The purpose of this audit report is to summarise the degree of compliance with relevant criteria, as defined on the cover page of this report, based on the evidence obtained during the audit of your organization. This audit report considers your organization's policies, objectives, and continual improvement processes. Comments may include how suitable the objectives selected by your organization appear to be in regard to maintaining customer satisfaction levels and providing other benefits with respect to policy and other external and internal needs. We may also comment regarding the measurable progress you have made in reaching these targets for improvement.

SAI Global audits are carried out within the requirements of SAI Global procedures that also reflect the requirements and guidance provided in the international standards relating to audit practice such as ISO/IEC 17021-1, ISO 19011 and other normative criteria. SAI Global Auditors are assigned to audits according to industry, standard or technical competencies appropriate to the organization being audited. Details of such experience and competency are maintained in our records.

In addition to the information contained in this audit report, SAI Global maintains files for each client. These files contain details of organization size and personnel as well as evidence collected during preliminary and subsequent audit activities (Documentation Review and Scope) relevant to the application for initial and continuing certification of your organization.

Please take care to advise us of any change that may affect the application/certification or may assist us to keep your contact information up to date, as required by SAI Global Terms and Conditions.

This report has been prepared by SAI Global Limited (SAI Global) in respect of a Client's application for assessment by SAI Global. The purpose of the report is to comment upon evidence of the Client's compliance with the standards or other criteria specified. The content of this report applies only to matters, which were evident to SAI Global at the time of the audit, based on sampling of evidence provided and within the audit scope. SAI Global does not warrant or otherwise comment upon the suitability of the contents of the report or the certificate for any particular purpose or use. SAI Global accepts no liability whatsoever for consequences to, or actions taken by, third parties as a result of or in reliance upon information contained in this report or certificate.

Please note that this report is subject to independent review and approval. Should changes to the outcomes of this report be necessary as a result of the review, a revised report will be issued and will supersede this report.

Standard:	DRINKING WATER QUALITY MANAGEMENT STANDARD VERSION 2 - 2017
Scope of Certification:	Drinking Water
Drinking Water System Owner:	Town of Fort Frances
Operating Authority:	Town of Fort Frances
Population Services:	8,230
Activities:	Treatment and distribution
Drinking Water Systems	Fort Frances drinking water system
Total audit duration:	**Person(s):** 1 **Day(s):** 0.75
Audit Team Member(s):	Team Leader Rod Seabrook

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Definitions and action required with respect to audit findings

Major Non-conformance:

Based on objective evidence, the absence of, or a significant failure to implement and/or maintain conformance to requirements of the applicable standard. Such issues may raise significant doubt as to the capability of the management system to achieve its intended outputs (i.e. the absence of or failure to implement a complete Management System clause of the standard); or

A situation which would on the basis of available objective evidence, raise significant doubt as to the capability of the Management System to achieve the stated policy and objectives of the customer.

NOTE: The "applicable Standard" is the Standard which SAI Global are issuing certification against, and may be a Product Standard, a management system Standard, a food safety Standard or another set of documented criteria.

Action required: This category of findings requires SAI Global to issue a formal NCR; to receive and approve client's proposed correction and corrective action plans; and formally verify the effective implementation of planned activities. Correction and corrective action plan should be submitted to SAI Global prior to commencement of follow-up activities as required. Follow-up action by SAI Global must 'close out' the NCR or reduce it to a lesser category within 90 days for initial certification and within 60 days for surveillance or re-certification audits, from the last day of the audit.

If significant risk issues (e.g. safety, environmental, food safety, product legality/quality, etc.) are detected during an audit these shall be reported immediately to the Client and more immediate or instant correction shall be requested. If this is not agreed and cannot be resolved to the satisfaction of SAI Global, immediate suspension shall be recommended.

In the case of initial certification, failure to close out NCR within the time limits means that the Certification Audit may be repeated.

If significant risk issues (e.g. safety, environmental, food safety, product legality/quality, etc.) are detected during an audit these shall be reported immediately to the Client and more immediate or instant correction shall be requested. If this is not agreed and cannot be resolved to the satisfaction of SAI Global, immediate suspension shall be recommended.

In the case of an already certified client, failure to close out NCR within the time limits means that suspension proceedings may be instituted by SAI Global.

Follow-up activities incur additional charges.

Minor Non-conformance:

Represents either a management system weakness or minor issue that could lead to a major nonconformance if not addressed. Each minor NC should be considered for potential improvement and to further investigate any system weaknesses for possible inclusion in the corrective action program

Action required: This category of findings requires SAI Global to issue a formal NCR; to receive and approve client's proposed correction and corrective action plans; and formally verify the effective implementation of planned activities at the next scheduled audit.

Opportunity for Improvement:

A documented statement, which may identify areas for improvement however shall not make specific recommendation(s).

Action required: Client may develop and implement solutions in order to add value to operations and management systems. SAI Global is not required to follow-up on this category of audit finding.

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Audit Type and Purpose

Upgrade Surveillance Audit:

A systems desktop audit in accordance with the systems audit procedure as it applies to Full Scope accreditation. The audit also included consideration of the results of the most recent audit undertaken in accordance with this Accreditation Protocol and any of the following that have occurred subsequent to that audit including but limited to;

(a) the results of any audits undertaken in accordance with element 19 of the DWQMS V2;

(b) historical responses taken to address corrective action requests made by an Accreditation Body;

(c) the results of any management reviews undertaken in accordance with element 20 of the DWQMS V2; and,

(d) any changes to the documentation and implementation of the QMS.

Audit Objectives

The objective of the audit was to determine whether the drinking water Quality Management System (QMS) of the subject system conforms to the requirements of the Ontario Ministry of the Environment & Climate Change (MOECC) Drinking Water Quality Management Standard (DWQMS V2).

The audit was also intended to gather the information necessary for SAI Global to assess whether accreditation can continue or be offered or to the operating authority.

Audit Scope

The documentation and processes associated with the operating authority's QMS were objectively evaluated to obtain audit evidence and to determine a) whether the quality management activities and related results conform with DWQMS V2 requirements, and b) if they have been effectively implemented and/or maintained.

Audit Criteria:

- The Drinking Water Quality Management Standard Version 2
- Current QMS manuals, procedures and records implemented by the Operating Authority
- SAI Global Accreditation Program Handbook

Confidentiality and Documentation Requirements

SAI Global stores their records and reports to ensure their preservation and confidentiality. Unless required by law, SAI Global will not disclose audit records to a third party without prior written consent of the applicant. The only exception will be that SAI Global will provide audit and corrective action reports to the Ontario Ministry of the Environment. For more information, please refer to the SAI Global Accreditation Program Handbook. As part of SAI Global Terms, it is necessary for you to notify SAI Global of any changes to your Quality Management System that you believe are significant enough to risk non-conformity with DWQMS V2: For more information, please refer to the SAI Global Accreditation Program Handbook.

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EXECUTIVE OVERVIEW

The results of this surveillance system audit indicate that the management system does not fully meet the requirements of the standard based on the area of non-conformance identified during the audit and as documented in the attached Non-conformance Report. Failure to address the non-conformance within the 60 day timeframe may lead to suspension of certification.

Recommendation

The results of this audit indicate that the management system does not fully meet the requirements of the standard based on the area of non-conformance identified during the audit and as documented in the attached Non-conformance Report.

A recommendation for continued certification to the standard and to the scope of certification identified in this report is on hold pending the receipt, review and acceptance of the corrective action taken.

Opportunities for Improvement:

The following opportunities for improvement have been identified.

- E-21 Consider reviewing the concept of preventative actions in the context of addressing potential non-conformities (i.e. near misses) and listing sources of information regarding potential non-conformities (e.g. OFI's, emergency testing results, customer complaints etc.)

It is suggested that the opportunity for improvement be considered by management to further enhance the Operating Authority's Quality Management System and performance.

Management System Documentation

The management systems operational plan was reviewed and found to be in conformance with the requirements of the standard.

Management Review

Records of the most recent management review meetings were verified and found to meet the requirements of the standard. All inputs were reflected in the records, and appear suitably managed as reflected by resulting actions and decisions.

Internal Audits

Internal audits are being conducted at planned intervals to ensure conformance to planned arrangements, the requirements of the standard and the established management system.

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Summary of Findings

1. Quality Management System	Conforms
2. Quality Management System Policy	Conforms
3. Commitment and Endorsement	Minor NCR-2019-01
4. Quality Management System Representative	Conforms
5. Document and Records Control	Conforms
6. Drinking-Water System	Conforms
7. Risk Assessment	Conforms
8. Risk Assessment Outcomes	Conforms
9. Organizational Structure, Roles, Responsibilities and Authorities	Conforms
10. Competencies	Conforms
11. Personnel Coverage	Conforms
12. Communications	********
13. Essential Supplies and Services	Conforms
14. Review and Provision of Infrastructure	Conforms
15. Infrastructure Maintenance, Rehabilitation & Renewal	********
16. Sampling, Testing and Monitoring	Conforms
17. Measurement & Recording Equipment Calibration and Maintenance	Conforms
18. Emergency Management	Conforms
19. Internal Audits	Conforms
20. Management Review	********
21. Continual Improvement	OFI

Major NCR #	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 with a corrective action request has not been remedied.
Minor NCR #	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.
OFI	Opportunity for improvement. Conforms to requirement, but there is an opportunity for improvement.
Conforms	Conforms to requirement.
NANC	Not applicable/Not Covered during this audit.
********	Additional comment added by auditor in the body of the report.

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PART D. Audit Observations, Findings and Comments

DWQMS Reference:	1 Quality Management System
Client Reference:	Operational Plan Rev 12
Details: *With the exception of the non-conformance, the Operational Plan documents a Quality Management System that meets the requirements of DWQMS V2.0*	

DWQMS Reference:	2 Quality Management System Policy
Client Reference:	Operational Plan Section 2 Rev 9
Details: *Documented policy contains the three commitments required by the Standard*	

DWQMS Reference:	3 Commitment and Endorsement
Client Reference:	Operational Plan Section 3 Rev 4
Details: ***See NCR-2019-01***	

DWQMS Reference:	4 Quality Management System Representative
Client Reference:	Operational Plan Section 4 Rev 4
Details: *QMS rep, QMS alternate rep and QMS team established with documented responsibilities assigned to each*	

DWQMS Reference:	5 Document and Record Control
Client Reference:	Operational Plan Section 5 Rev 10
Details: *Procedure covers creation, approval, storage, protection, revisions, removal from use and retention for documents and records; management of external documents; Document and Record Master Control Table current Apr 12, 2019*	

DWQMS Reference:	6 Drinking Water System
Client Reference:	Operational Plan Section 6 Rev 10
Details: *Source Upper Rainy River; raw water characteristics listed; Owner and Operating Authority Town of Fort Frances; Class III water treatment, Class II distribution system; four subsystems and five additional connections to the system listed; processes described; distribution system includes elevated storage tank; threats and fluctuations discussed; process flow diagram current Apr 12, 2019*	

DWQMS Reference	7 Risk Assessment
Client Reference:	Operational Plan Section 7 Rev 6
Details: *Procedure includes consideration of potential hazards/hazardous events, including those identified by MECP, process under consideration listed; risk assessment rating (likelihood, severity, detectability); threshold value of 8 for critical control points; risk assessment conducted every 36 month and reviewed annually*	

DWQMS Reference:	8 Risk Assessment Outcomes
Client Reference:	Operational Plan Section 8 Rev 10
Details: *Risk assessment outcomes current Apr 12, 2019; assessment includes consideration of MECP potential hazardous events; three CCPs identified; critical control limits established as appropriate; controls developed (EPR or SOP)*	

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DWQMS Reference:	9 Organizational Structure, Roles, Responsibility and Authorities
Client Reference:	Operational Plan Section 9 Rev 5
Details: *Org chart dated Apr 12, 2019; responsibilities and authorities described for all positions*	

DWQMS Reference:	10 Competencies
Client Reference:	Operational Plan Section 10, Rev 5
Details: *Competencies and qualifications described for positions directly affecting drinking water; processes listed for ensuring competencies*	

DWQMS Reference:	11 Personnel Coverage
Client Reference:	Operational Plan Section 11, Rev 5
Details: *Three qualified operators; treatment plant manned 7:30 a.m. – 4:00 p.m. Monday to Friday; rotating on-call schedule established; designated and backup OROs; plant alarmed; agreement with OCWA to provide assistance as required*	

DWQMS Reference:	12 Communications
Client Reference:	Operational Plan Section 12 Rev 4
Details: *Processes described for communications with the Owner, staff, suppliers and the public; Operational Plan available on Town website https://www.fortfrances.ca/town/operations-facilities/water-sewer* ***NOTE: The version of the Operational Plan posted on the Town website is not current***	

DWQMS Reference:	13 Essential Supplies and Services
Client Reference:	Operational Plan Section 13, Rev 10
Details: *Chemical suppliers meet ANSI/ANAB standards; labs must be accredited; licensing, accreditation and specifications in purchasing contracts; list of essential supplies and services current Apr 12, 2019*	

DWQMS Reference:	14 Review and Provision of Infrastructure
Client Reference:	Operational Plan Section 14 Rev 5
Details: *Annually Environmental & Facilities Superintendent meets with operations staff; inputs to review described including risk assessment outcomes; meeting minutes prepared and distributed; 5 year cost projections prepared and reviewed by management; budget presented and reviewed by owner; budget endorsed by owner subject to review outcome*	

DWQMS Reference:	15 Infrastructure Maintenance, Rehabilitation and Renewal
Client Reference:	Operational Plan Section 15 Rev 9; App C; App H
Details: *Maintenance schedules prepared and implemented for water treatment plant and distribution system; records of planned and unplanned maintenance maintained; 5 year capital projection for rehabilitation, renewal and routine maintenance activities* ***NOTE: – The five year capital forecast (2017 - 2021) in the Operational Plan is not current***	

DWQMS Reference:	16 Sampling, Testing and Monitoring
Client Reference:	Operational Plan Section 16 Rev 10
Details: *Sampling program as per O. Reg. 170/03 and drinking water licence for treatment and distribution; sampling plan prepared dated Apr 12, 2019; accredited laboratory used for analysis; SCADA continuous online sampling; daily in-house testing by operators; monthly and annual reports prepared and submitted*	

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DWQMS Reference:	17 Measurement and Recording Equipment Calibration and Maintenance
Client Reference:	Operational Plan Section 17 Rev 5
Details: *Annual calibrations of meters and analyzers conducted by qualified outside contractor; continuous water quality analyzers also calibrated by qualified in-house staff; records retained*	

DWQMS Reference:	18 Emergency Management
Client Reference:	Operational Plan Section 17 Rev 10
Details: *Six potential emergency situations/services interruptions identified; emergency response procedures prepared; link to municipal emergency response described; annual training and testing conducted; emergency contact list in emergency response binder (not viewed)*	

DWQMS Reference:	19 Internal Audits
Client Reference:	Operational Plan Section 19 Rev 4
Details: *Internal audits conducted by qualified internal or external auditors; all elements audited at least every 12 months; audit checklist prepare/utilized; report prepared; results communicated; CARs prepared/addressed and records maintained* *Internal audit conducted May 10 – May 28, 2019; qualified internal auditor utilized; Version 2.0 of Standard audited; checklist and audit report completed; 3 OFIs identified*	

DWQMS Reference:	20 Management Review
Client Reference:	Operational Plan Section 20 Rev 5
Details: *Top management review QMS once per 12 months; required participants listed; mandatory inputs required by Standard listed; review process and outputs described; records retained* *Management review conducted Oct 21, 2019 covering period Jul 1, 2018 to Jun 30, 2019; all required topics covered; minutes recorded; summary report to management prepared* ***NOTE: the date of the summary report to management (Oct 2, 2019) predates the date of the management review (Oct 21, 2019) – areas for improvement described***	

DWQMS Reference:	21 Continual Improvement
Client Reference:	Operational Plan Section 21 Rev 4
Details: *Key processes identifying non-conformances and opportunities for improvement and assessing root cause and developing corrective and preventive actions prepared; BMPs reviewed annually during management review* ***OFI – Consider reviewing the concept of preventative actions in the context of addressing potential non-conformities (i.e. near misses) and listing sources of information regarding potential non-conformities (e.g. OFI's, emergency testing results, customer complaints etc.)***	

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Details regarding the personnel interviewed and objective evidence reviewed are maintained on file at SAI Global.

This report was prepared by:

Rod Seabrook
SAI Global Management Systems Auditor

The audit report is distributed as follows:

- SAI Global
- Operating Authority
- Owner
- MOECC

Notes

Copies of this report distributed outside the organization must include all pages.

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Activity #:	1631580-02	**Client:**	The Corporation of the Town of Fort Frances	**App/Cert:**	
Function/Area/Process:	Commitment and Endorsement			**Site:**	320 Portage Avenue, Fort Frances
Std. and Clause No(s):	DRINKING WATER QUALITY MANAGEMENT STANDARD VERSION 2 - 2017 3	NCR#:	2019-01	**Category:**	Minor

Section 1- Details of non-conforming situation:

Non-conforming situation:

Evidence of a written endorsement of the contents of the Operational Plan by Top Management and the Owner was not provided for audit

Requirement:

DWQMS V2.0 Element 3

Objective evidence:

Operational Plan Section 3 Rev 4

Due Date: 01/17/2020

Audit Team Leader	**Name**	Rod Seabrook	**Organization's acknowledgement of receipt of NCR**	**Name**	
	Date:	11/18/2019		**Date:**	

SAI Global Verification Method: (record if site visit is required or what information is to be provided):

Section 2- Organization's Response: (Attach separate sheet if required)

Root Cause Analysis (record or attach 5 why, 8D, fishbone diagram, etc to support this analysis):

Correction with completion dates (what was the immediate fix? Submit objective evidence of correction):

Corrective Action Taken/Planned (with completion date(s) (record what action is planned or will be taken to prevent recurrence. Submit objective evidence of completed corrective actions):

Organization Representative : **Name:** **Date:**

Section 3- SAI Global Response Review:

Reviewer: Date:

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Section 4- SAI Global Verification of Corrective Action for effectiveness	
Section 5- SAI Global NCR Closure:	
Name:	Date:

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The Corporation of The Town of Fort Frances

To: Craig Miller, QMS Representative

From: Adam Mitchell, QMS Internal Auditor

CC: Brad Webb, ORO; Travis Rob, QMS Representative Alternate

Date: 9/4/2020

Re: 2020 QMS Operational Plan Internal Audit Results

Dear Craig Miller,

Please accept the submission of the Internal Audit Report conducted on the QMS Operational Plan for the Town of Fort Frances Operations and Facilities Division. The internal audit was completed between June 18th, 2020 and July 3rd, 2020. This is well within the timelines initially set out in the audit schedule.

The attached report details the results of the document review as well as the staff interviews. I have also attached a copy of the Internal Audit Checklists completed during the document review phase of the audit. I would like to thank yourself and all affected staff for their cooperation during this study of the Operational Plan. If you have any questions regarding the content of the attached documents, please do not hesitate to contact myself.

Sincerely,

Adam Mitchell, P.Eng
QMS Internal Auditor
Ph: 274-5323 ext. 1315
amitchell@fortfrances.ca

Fort Frances Drinking Water System

Internal Audit Report

Element Audited: QMS Operational Management System, June 3rd, 2020 Revision 13

Date: July 3rd, 2020

Auditor: Adam Mitchell

Scope

This Internal Audit covers 21 elements of the DWQMS, the Town of Fort Frances water Treatment Plant and Water Distribution System. The Internal Audit was completed between June 18th and July 3, 2020 as per the Internal Audit Schedule. Interviews took place for the QMS Team Staff on June 22nd and June 25th, 2020. Final Audit Report deadline was scheduled with Craig Miller to be completed July 3, 2020.

Document Review

The QMS Operational Plan, June 3rd, 2020 Revision 13 was reviewed. Other documents included the Emergency Response Binder and Operations Manual. The findings of the documents reviewed, and personal interviews are as outlined below:

Findings

DWQMS Reference: Results: Details:	1. Quality Management System **Conforms** The information provided in the Operational Plan meets the requirements of the standard
DWQMS Reference: Results: Details:	2. Quality Management System Policy **Conforms** The information provided in the Operational Plan meets the requirements of the standard.
DWQMS Reference: Results:	3. Commitment and Endorsement **Conforms**

Details:	The commitment and Endorsement have been reviewed and signed by Council.
DWQMS Reference: Results: Details:	4. Quality Management System Representative **Conforms** The information provided in the Operational Plan meets the requirements of the standard. Added Operators and Operators-in-training to the QMS team.
DWQMS Reference: Results: Details:	5. Document and Records Control **Conforms** The information provided in the Operational Plan meets the requirements of the standard.
DWQMS Reference: Results: Details:	6. Drinking Water System **Conforms** The information provided in the Operational Plan meets the requirements of the standard.
DWQMS Reference: Results: Details:	7. Risk Assessment **Conforms** The information provided in the Operational Plan meets the requirements of the standard.
DWQMS Reference: Results: Details:	8. Risk Assessment Outcomes **Conforms** The information provided in the Operational Plan meets the requirements of the updated standard.
DWQMS Reference: Results: Details: Results: Details:	9. Organizational Structure, Roles, Responsibilities and Authorities. **Conforms** The information provided in the Operational Plan meets the requirements of the standard. **Opportunity for Improvement** Succession planning must be looked at within the QMS team. The

	division is in the middle of a retirement shift and it will be important to retain as much knowledge from senior staff as possible.
DWQMS Reference: Results: Details:	10. Competencies **Conforms** The information provided in the Operational Plan meets the requirements of the standard.
DWQMS Reference: Results: Details:	11. Personnel Coverage **Conforms** The information provided in the Operational Plan meets the requirements of the standard. **Opportunity for Improvement** The Water Treatment Plant is now staffed with three (3) employees. One is the Overall Responsible Operator (ORO). One is the Operator-In-Charge (OIC). The third is a weekly rotation of Water Distribution Employees who either have their operator license or have their Operator-in-Training (OIT) certificate. As employees rotate, recent events should be properly communicated to team members who were out of rotation.
DWQMS Reference: Results: Details:	12. Communications **Conforms** The information provided in the Operational Plan meets the requirements of the standard.
DWQMS Reference: Results: Details:	13. Essential Supplies and Services **Conforms** The information provided in the Operational Plan meets the requirements of the standard.
DWQMS Reference: Results: Details:	14. Review and Provision of Infrastructure **Conforms** The information provided in the Operational Plan meets the requirements of the standard.

DWQMS Reference: Results: Details:	15. Infrastructure Maintenance, Rehabilitation, and Renewal **Conforms** The information provided in the Operational Plan meets the requirements of the standard.
DWQMS Reference: Results: Details:	16. Sampling, Testing, and Monitoring **Conforms** The information provided in the Operational Plan meets the requirements of the standard. All staff information has been updated. The secretary role is missing from appendix E list. This role is outlined in this document several times, should the desk phone be added to this list.
DWQMS Reference: Results: Details: Results: Details:	18. Emergency Management **Conforms** The information provided in the Operational Plan meets the requirements of the standard. **Opportunity for Improvement** Opportunity for improvement would be to complete a table-top exercise as discussed in the QMS. The emergency Community Control Group in the Town of Fort Frances annually has a mock emergency exercise. This would be an ideal opportunity to include the new members of the QMS team, upper management and Owner to understand what steps takes place during an emergency. Many of the members have not practices or worked during an emergency.
DWQMS Reference: Results: Details:	19. Internal Audits **Conforms** The information provided in the Operational Plan meets the requirements of the standard.
DWQMS Reference: Results: Details:	20. Management Review **Conforms** The information provided in the Operational Plan meets the requirements of the standard.

DWQMS Reference: Results: Details: Results: Details:	21. Continual Improvement **Conforms** The information provided in the Operational Plan meets the requirements of the standard.

Interviews

The following persons were interviewed as part of the Internal Audit:

- Craig Miller, Environmental Superintendent QMS Representative
- Travis Rob, Operations and Facilities Manager, QMS Representative Alternate
- Brad Webb, ORO Water Treatment Plant
- Paul Lemesurier, Operator Water Treatment Plant
- Greg Weidenhoft, OIC Water Distribution System
- Jay Bruyere, Operator Water Distribution
- Bryan Patterson, OIT Water Distribution
- Joel Nicolay, OIT Water Distribution
- Lori Pattison, Secretary
- Erik Gustafson, Operator Water Distribution

Findings

The following outlines the findings from my review of the Operational Plan and from the interviews of the above-mentioned personnel.

- Element 2: For the importance of the document I feel like a little more detail here could be beneficial. I feel like mentioning regulation 170/03, Ontario Drinking Water Act and Safe Drinking Water Act would add knowledge here rather than simply stating you will comply with applicable requirements.

- Element 5: It was found that the Operational Plan at the Water Treatment Plant is not current and should be updated. I know this is not a critical document however due to the location and convenience of accessing the document, it is important that this stay updated.

- Elements 7&8: The QMS team showed good understand of Risk Assessment and the associated procedures. One area of improvement would be a more regular occurrence of a tabletop exercises or mock field exercise. This specifically relates to the participation in the Town's Emergency Community Control Group.

- Element 9: The QMS team understands the operational structure and how to effectively communicate information as required. Improvements could be made here for tracking communication, meeting minutes, records. A work order structure could be beneficial, allowing for information to be tracked more effectively and easier to review previous records.

- Element 10: Overall, the water staff meets all certification requirements and the staff follows routine training programs. This is important and should be maintained. Overall, all staff has a thorough understanding of there roles and responsibilities. Less experience members rely on the guidance of senior staff, and senior staff engages well with newer staff. All staff take pride in their work and understand the importance of providing safe drinking water.

- Element 14: The covid pandemic has caused some delays in completing the necessary reviews of the QMS elements however this remains a priority and plans are in place to ensure all parties complete a thorough review in a timely manner. This will be documented however I have no concerns that any issues will arise because of this delay.

- Element 18: Emergency Management is current to the standard but one opportunity for improvement is to complete a tabletop or mock exercise with the Emergency Community Control Group in the Town of Fort Frances on a more frequent basis. With new employees and management members, this would be a great learning opportunity. Members of the QMS mentioned this as an area of interest for training exercises.

- Element 21: There is a lot of young staff on the QMS team. Succession planning should be made a priority and trying to harness as much knowledge from the senior staff remains important for the younger crew. Support for the rotating schedule for the 3rd WTP operator seems to be strengthening. One level of concern would be with rotating staff communication can be a challenge so efforts to track information and maintain records is important.

Summary of Findings During the Audit Process

SUMMARY OF FINDINGS				
Operating Authority				
The Town of Fort Frances				
Auditor	**Date**			
Adam Mitchell	July 3, 2020			
System (s)				
1. The Town of Fort Frances Drinking Water System				
Requirement	**System**			
	1	**2**	**3**	**4**
1. Quality Management System	**C**			
2. Quality Management System Policy	**C**			
3. Commitment and Enforcement	**C**			
4. Quality Management System Representative	**C**			
5. Document and Records Control	**C**			
6. Drinking-Water System	**C**			
7. Risk Assessment	**C**			
8. Risk Assessment Outcomes	**C**			
9. Organizational Structure, Roles, Responsibilities and Authorities	**C**			
10. Competencies	**C**			
11. Personnel Coverage	**OFI**			
12. Communications	**C**			
13. Essential Supplies and Services	**C**			
14. Review and Provision of Infrastructure	**C**			
15. Infrastructure Maintenance and Rehabilitation & Renewal	**C**			
16. Sampling, Testing and Monitoring	**C**			
17. Measurement & Recording Equipment Calibration and Maintenance	**C**			
18. Emergency Management	**OFI**			
19. Internal Audits	**C**			

20. Management Review	**C**			
21. Continual Improvement	**C**			

C	Conformance. In the opinion of the auditor this element is in conformance with the DWQMS.
Mj	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
Mn	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.
OFI	Opportunity for improvement. Conforms with the requirement, but there is an opportunity for improvement

Adam Mitchell, Lead Auditor

APPENDIX

I-Adam Mitchell Certificate of Qualification, Internal Auditor for DWQMS
II-Internal Audit Schedule
III-Kick off Meeting Minutes
IV-DWQMS Checklists
V- Internal Audit Opening Meeting Agenda

Fort Frances Drinking Water System
Internal Audit Schedule

Internal Audit Schedule			
Date of Revision:	June 3, 2020 Revision No. 13		
Date	**Process**	**DWQMS Element**	**Auditor(s)**
June 18, 2020	All processes in Scope	Elements 1-5	Adam Mitchell
July 2nd, 2020	All processes in Scope	Element 5	Adam Mitchell
June 25th, 2020	All processes in Scope	Elements 7-8	Adam Mitchell
July 2nd, 2020	All processes in Scope	Elements 9-11	Adam Mitchell
June 29th ,2020	All processes in Scope	Elements 12-13	Adam Mitchell
June 29th, 2020	All processes in Scope	Elements 14-15	Adam Mitchell
July 2nd, 2020	All processes in Scope	Elements 16-17	Adam Mitchell
July 2nd, 2020	All processes in scope	Elements 6, 18-21	Adam Mitchell
June 22nd & June 25th, 2020	Interviews of the QMS Team		Adam Mitchell
	Document Review and Final Report Preparation		Adam Mitchell
	Final Meeting of Findings of QMS Audit		Adam Mitchell

Fort Frances Drinking Water System
Internal Audit Kick Off Meeting Minutes

DATE: June 18th, 2020
TIME START: 10:00 am
TIME END: 10:30 am
LOCATION: Microsoft Teams

IN ATTENDANCE:
Travis Rob
Craig Miller
Lori Pattison
Joel Nicolay
Adam Mitchell

Item #	Item Discussed	Action By
1.	Kick off the Internal Audit. Adam Mitchell gave a break down of what the intent of the audit was for and his back round with his position and auditing. Had everyone sign in and list position title and contact information.	Adam
2.	Went over the schedule for document review, personal schedules, and interviews for the audit. No issues were brought forward.	Adam
3.	Talked about the privacy of the interviews. No information would use names of any individual during the audit process. This audit is done to ensure proper procedure is occurring.	Adam
4.	Any questions please feel free to contact Tyson at your earliest convenience. Adam's contact information was made available to the QMS team.	Adam
	Please report any errors or omissions. Minutes prepared by: Adam Mitchell	

Town of Fort Frances Drinking Water System
Personnel Interview Schedule

The scheduled date for the personnel interviews is broken up over 2 days

Day 1 – Monday June 22nd, 2020 – Water Treatment Operators 9:00 a.m. to 3:00 p.m.

-Craig Miller	9:00 am
-Lori Pattison	1:00 pm
-Brad Webb	1:30 pm
-Greg Wiedenhoeft	2:30 pm
- Randy White	3:00 pm

Day 2 – Thursday, June 25th, 2020 - Water Distribution 1:00 p.m. to 3:00 p.m.

-Travis Rob	9:00am
-Paul LeMesurier	1:00 pm
-Jay Bruyere	1:30 pm
-Bryan Patterson	2:00 pm
-Joel Nicolay	2:30 pm
-Erik Gustafson	3:00 pm

*I will strive to hold to the meeting interview times and have allocated what I feel is extra time just in case they run long.

Should there be a scheduling conflict with any of the above noted times, please let me know as soon as possible and I will work to reschedule the interview for another time or date.

Town of Fort Frances Internal Audit Checklist

FORTFRANCES
BOUNDLESS

Date of Internal Audit: **June 18th, 2020 – July 3rd, 2020**

Auditor Name(s): **Adam Mitchell**

Areas Visited: **Public Works, Water Treatment Plant, Distribution Digs, Maintenance Tasks in the Field**

People Interviewed: **QMS Team**

Documents Viewed: **QMS Operational Plan, SOP's, Emergency Manual, Operations and Maintenance Manual**

DWQMS Requirement	Notes	Method in Place?	Documented?
1. Quality Management System PLAN – The Operational Plan shall document a Quality Management System that meets the requirements of this Standard.	Complete	PL	Yes
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.	Complete	DO	Yes
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 e) is in a form that provides for ready communication to all Operating Authority personnel, the Owner and the public.	Does not specify specific regulations or standards States it will comply with appropriate legislation and regulations, might be beneficial to state such documents.	PL	
		a)	Yes
		b)	Yes
		c)	Yes
		d)	Yes
		e)	Yes
DO – The Operating Authority shall establish and maintain a Quality Management System that is consistent with the Policy.	Complete	DO	Yes
3. Commitment and Endorsement PLAN – The Operational Plan shall contain a written endorsement of its contents by Top Management and the Owner.		PL	Yes

DWQMS Requirement	Notes	Method in Place?	Documented?
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 applicable legislative and regulatory requirements, c) communicating the Quality Management System according to the procedure for communications, and d) determining, obtaining or providing the resources needed to maintain and continually improve the Quality Management System.	Complete Signatures were completed	DO	Yes
		a)	Yes
		b)	Yes
		c)	Yes
		d)	Yes
4. Quality Management System Representative PLAN – The Operational Plan shall identify a Quality Management System representative.		PL	Yes
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 Quality Management System are being used at all times, d) 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 e) promote awareness of the Quality Management System throughout the Operating Authority.	Complete Added Operators and Operators-in-training to the QMS team	DO	
		a)	Yes
		b)	Yes
		c)	Yes
		d)	Yes
		e)	Yes

DWQMS Requirement	Notes	Method in Place?	Documented?
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.	QMS Binder at WTP Operational Plan dated 2008	PL	
		a)i.	No
		ii.	Yes
		iii.	Yes
		b)i.	Yes
		ii.	Yes
		iii.	Yes
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 policies 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.	Complete	DO	
		a)	Yes
		b)	Yes
		c)	Yes
DO – The Operating Authority shall ensure that the description of the drinking-water system is kept current.	Complete	DO	Yes

DWQMS Requirement	Notes	Method in Place?	Documented?
7. Risk Assessment PLAN – The Operational Plan shall document a risk assessment process that: a) identifies potential hazardous events and associated hazards, b) assesses the risks associated with the occurrence of hazardous events, c) ranks the hazardous events according to the associated risk, d) identifies control measures to address the potential hazards and hazardous events, e) identifies critical control points, f) identifies a method to verify at least once a year, the currency of the information and the validity of the assumptions used in the risk assessment, g) ensures that a risk assessment is conducted at least once every thirty-six months, and h) considers the reliability and redundancy of equipment.		PL	
		a)	Yes
		b)	Yes
		c)	Yes
		d)	Yes
		e)	Yes
		f)	Yes
		g)	Yes
		h)	Yes
DO – The Operating Authority shall perform a risk assessment consistent with the documented process.	Complete	DO	Yes
8. Risk Assessment Outcomes PLAN – The Operational Plan shall document: a) the identified potential hazardous events 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 respond to deviations from the critical control limits, and		PL	
		a)	Yes
		b)	Yes
		c)	Yes
		d)	Yes
		e)	Yes
		f)	Yes
		g)	Yes

DWQMS Requirement	Notes	Method in Place?	Documented?
h) procedures for reporting and recording deviations from the critical control limits.		h)	Yes
DO – The Operating Authority shall implement and conform to the procedures.	Complete	DO	Yes
9. Organizational Structure, Roles, Responsibilities and Authorities PLAN – The Operational Plan shall: a) describe the organizational structure of the Operating Authority including respective roles, responsibilities and authorities, b) identify the person, persons or group of people within the management structure of the organization responsible for undertaking the Management Review, c) identify the person, persons or group of people, having Top Management responsibilities required by this Standard, along with their responsibilities, and d) identify the Owner of the subject system.		PL	
		a)	Yes
		b)	Yes
		c)	Yes
		d)	Yes
		e)	Yes
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.	***Complete***	DO	Yes
10. Competencies PLAN – The Operational Plan shall document: a) competencies required for personnel performing duties directly affecting drinking water quality,		PL	
		a)	Yes

DWQMS Requirement	Notes	Method in Place?	Documented?
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.		b)	Yes
		c)	Yes
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.	Complete	DO	Yes
		a)	Yes
		b)	Yes
11. Personnel Coverage PLAN – The Operational Plan shall document a procedure to ensure that sufficient personnel meeting identified competencies are available for duties that directly affect drinking water quality.		PL	Yes
DO – The Operating Authority shall implement and conform to the procedure.	Complete The 3rd staff at the WTP is not a rotational position	DO	Yes
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, and d) the public.		PL	
		a)	Yes
		b)	Yes
		c)	Yes
		d)	Yes
DO – The Operating Authority shall implement and conform to the procedure.	Complete	DO	Yes

DWQMS Requirement	Notes	Method in Place?	Documented?
13. Essential Supplies and 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.		PL	
		a)	Yes
		b)	Yes
DO – The Operating Authority shall implement the procedure.	Complete	DO	Yes
14. Review and Provision of Infrastructure PLAN – The Operational Plan shall document a procedure for the annual review of the adequacy of the infrastructure necessary to operate and maintain the subject system.		PL	Yes
DO – The Operating Authority shall implement and conform to the procedure and communicate the findings of the review to the Owner.	Complete Consider removing the word “Generally” from opening paragraph.	DO	Yes
15. Infrastructure Maintenance, Rehabilitation and Renewal PLAN – The Operational Plan shall document a summary of the Operating Authority’s infrastructure maintenance, rehabilitation and renewal programs for the subject system.		PL	Yes
DO – The Operating Authority shall: a) keep the summary current, b) communicate the programs to the Owner, and c) monitor the effectiveness of the maintenance program.	Complete	DO	
		a)	Yes
		b)	Yes
		c)	Yes
16. Sampling, Testing and Monitoring	Sampling and documentation is thoroughly completed	PL	

DWQMS Requirement	Notes	Method in Place?	Documented?
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.		a)	Yes
		b)	Yes
		c)	Yes
DO – The Operating Authority shall implement and conform to the procedures.	Complete Appendix E updated with staffing changes	DO	Yes
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.		PL	Yes
DO – The Operating Authority shall implement and conform to the procedure.	Complete	DO	Yes
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		PL	
		a)	Yes
		b)	Yes
		c)	Yes
		d)	Yes
		e)	Yes

DWQMS Requirement	Notes	Method in Place?	Documented?
f) an emergency communication protocol and an up-to-date list of emergency contacts.		f)	Yes
DO – The Operating Authority shall implement and conform to the procedure.	Complete	DO	Yes
19. Internal Audits PLAN – The Operational Plan shall document a procedure for internal audits that: a) evaluates conformity of the QMS 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.		PL	
		a)	Yes
		b)	Yes
		c)	Yes
		d)	Yes
DO – The Operating Authority shall implement and conform to the procedure and shall ensure that internal audits are conducted at least once every twelve months.	Complete	DO	Yes
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,		PL	
		a)	Yes
		b)	Yes
		c)	Yes
		d)	Yes
		e)	Yes
		f)	Yes
		g)	Yes
		h)	Yes

DWQMS Requirement	Notes	Method in Place?	Documented?
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 Quality Management System, l) consumer feedback, m) the resources needed to maintain the Quality Management System, n) the results of the infrastructure review, o) Operational Plan currency, content and updates, and p) staff suggestions.		i)	Yes
		j)	Yes
		k)	Yes
		l)	Yes
		m)	Yes
		n)	Yes
		o)	Yes
		p)	Yes
DO – Top Management shall implement and conform to the procedure and shall: a) ensure that a management review is conducted at least once every twelve months, 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, d) report the results of the management review, the identified deficiencies, decisions and action items to the Owner.	Complete	DO	
		a)	Yes
		b)	Yes
		c)	Yes
		d)	Yes
21. Continual Improvement DO- The Operating Authority shall strive to continually improve the effectiveness of its Quality Management System through the use of corrective actions.	Annual training on emergency preparedness needs to be made more frequent. The QMS team should be included in the Town's Emergency Community Control Groups annual tabletop or mock field exercise.	DO	Yes

EMERGENCY BINDER RECORD SHEET

PERSON	DATE	TIME	ACTIVITY OR DESCRIPTION OF
Brad Webb	Nov 20 2018	3:30 pm	SOP 1-6
PAUL LEMESURIER	23NOV2018	14:00	REVIEW
Brad Webb	Feb 22/2019	12:00	SOP 1-6
Randy Webb	Feb 21/2019	12:00 pm	SOP 1-6
Jay Bruyere	Feb 21/2019	12:30 pm	SOP 1-6
Morris Bob	March 5 2019	3:30 pm	SOP 1-6
Jim Pattison	March 5/2019	4:10 pm	SOP 1-6
[illegible]	March 7/2019	3:50 pm	SOP 1-6
[illegible]	March 12/2019	3:46 pm	SOP 1-6
Craig Miller	May 13/2019	10:03 am	Full Binder Review
Greg Wiedenhoeft	May 14/2019	11:00 Am	SOP 1-6
Brad Webb	May 13/2019	1:00	SOP 1-6
[illegible]	Jan 8 2020	9:00	Full Binder Review
Brad Webb	Jan 14 2020	2:30 Pm	SOP 1-6
Jay Bruyere	Mar 9/2020	1:45 pm	SOP 1-6
Brad Webb	March 17/2020	10:30 Am	SOP 1-6
Greg Wiedenhoeft	April 15/2020	9:30 Am	SOP 1-6
[illegible]	July 16/2020	3:20pm	SOP 1-6

LOCATON	DATE	TYPE	NOTES
360 SCOTT STREET	5-Jun-19	WATERMAIN	INTALLED REPAIR CLAMP OVER HOLE IN MAIN
520 SCOTT STREET	12-Jun-19	WATER SERVICE	LIVETAP NEW 1 1/2" COPPER WATER SERVICE; RETIRED OLD 3/4" COPPER WATER SERVICE AT MAIN; INSTALLED NEW CS AT PROPERTY
1716 COLONIZATION ROAD WEST	18-Jun-19	WATER SERVICE	REPLACED 2FT SECTION OF WATER SERVICE
472 CHURCH STREET	30-Jul-19	WATER SERVICE	REPLACED LEAKING 3/4" LEAD SERVICE WITH 3/4" COPPER SERVICE FROM MAIN TO CS ON PROPERTY
SIXTH ST E AT ARMIT AVE N	23-Mar-20	WATERMAIN	WATERMAIN REPAIR - REPLACED FAILED 2-BOLT JOINT WL0566
839 ARMIT AVENUE	11-Mar-20	WATER SERVICE	WATER SERVICE REPAIR - REPLACED 4FT SECTION OF 3/4" COPPER AT MAIN STOP TOWARDS PROPERTY, INSULATED
ELLINGSTON AVENUE - ALLEY BEHIND 1230 SECOND STREET EAST	29-Jan-20	WATERMAIN	REPAIRED WATERMAIN BREAT AT JOINT - SEE FILE
SINCLAIR ST AT ARMIT AVENUE	19-Mar-20	WATERMAIN	WATERMAIN REPAIR - REPAIRED CIRCUMFERENTIAL CRACK AT BELL 16.7M WEST OF VAL331 - WL0237

Attachment B.8

Raw Water Supply and Drinking Water Quality Trends

Raw Water Quality Trends:

	Paramaters				
	Alkalinity	Colour	pH	THMs	
Date Sampled	(mg/L)	(TCU)		(ug/L)	
Feb. 13, 2012	21	28.1	7.36	0.5	
May 15, 2012	20.1	25.3	7.37	0.5	
Aug. 28, 2012	20.5	25.5	7.56	0.5	
Aug. 19, 2013	16.9	38.6	7.52	0.1	
Oct. 29, 2013	20.4	30.4	7.46	0.1	
Feb. 11, 2014	Samples Froze				
April 29, 2014	20.1	25.3	7.37	0.5	
July 22, 2014		40.7	6.91	0.1	
Nov. 24, 2014	Samples Froze				
April 8, 2015	15	41.9	7.13	0.1	
May 25, 2015	Data not received from lab				
August 4, 2015	17.2	38.0	7.35	0.1	
October 26, 2015	16.1	32.9	7.28	0.1	
March 9, 2016	16.3	38.0	7.37	0.1	
May 16, 2016	16.3	38.0	7.37	0.1	
October 7, 2016		38.0	7.05	0.1	
February 28, 2017		32.9	7.37	0.1	
August 9, 2017	Data not received from lab				
November 8, 2017	21.5	33.8	7.53	0.1	
January 17, 2018		32.4	7.22	0.1	
May 7, 2018	15.8	35.4	6.97	0.1	
July 26, 2018		38.8	6.86	0.2	
October 30, 2018	17.2	34.9	7.12	0.1	
March 11, 2019		36.3	6.97	0.1	
May 8, 2019	17.8		6.92	0.1	No colour data
July 23, 2019			7.03		
November 5, 2019					

Alkalinity - defined as its capacity to neutralize acid. (pH less than 7)
pH - A measure of the acidity or alkalinity of a solution (Neutral is 7)
THMs (Trihalomethanes) - Are created when chlorine is added to water. They are toxic chemical substances that consist of a methane molecule and one of the halogen elements

Data collected from other sources

Attachment B.8

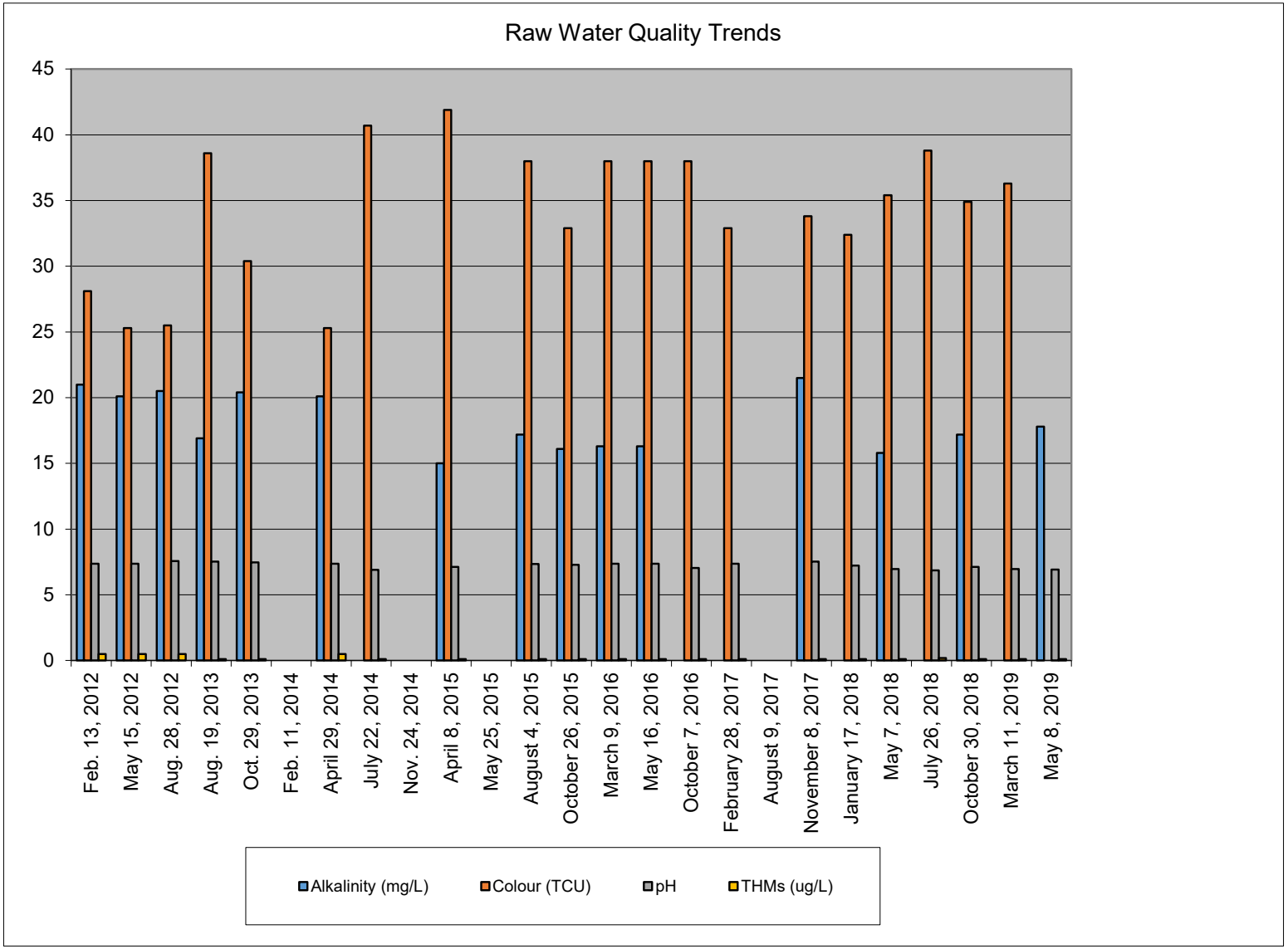
Treated Water Quality Trends:

	Paramaters				
	Alkalinity	**Colour**	**pH**	**THMs**	
Date Sampled	**(mg/L)**	**(TCU)**		**(ug/L)**	
February 13, 2012	35.2	1.0	7.59	49	
May 15, 2012	30.5	3.5	7.46	53.5	
August 28, 2012	25.6	1.2	7.63	71	
Nov. 14, 2012	33.9	0.2	7.73	42.3	
May 6, 2013	29.3	2.6	7.59	43.5	
August 19, 2013	22.6	1.1	7.43	68.3	
October 29, 2013	27.2	1.1	7.49	56	
February 11, 2014	Samples Froze				
April 29, 2014	30.5	3.5	7.46	53.5	
July 22, 2014	33.4	1.5	7.09	95.0	
Nov. 24, 2014	Samples Froze				
April 8, 2015	31.3	1.8	7.43	53.7	
May 25, 2015	Data not received from lab				
August 4, 2015	27.4	1.6	7.38	86.5	
October 26, 2015	29.1	1.0	7.39	61.3	
March 9, 2016	24.0	1.8	7.36	50.1	
May 16, 2016	24.0	1.8	7.36	50.1	
October 7, 2016		1.0	7.18	81.7	
February 28, 2017		1.7	7.28	44.1	
August 9, 2017	Data not received from lab				
November 8, 2017	35.5	1.3	7.75	54.0	
January 17, 2018		1.1	6.87	48.3	
May 7, 2018	29.3	1.8	7.09	51.9	
July 26, 2018		1.6	6.94	92	
October 30, 2018	31.4	1.0	7.14	32	
March 11, 2019		0.8	6.99	53	
May 8, 2019	30.7		7.01	56	No colour data
July 23, 2019			7.24		
November 5, 2019					

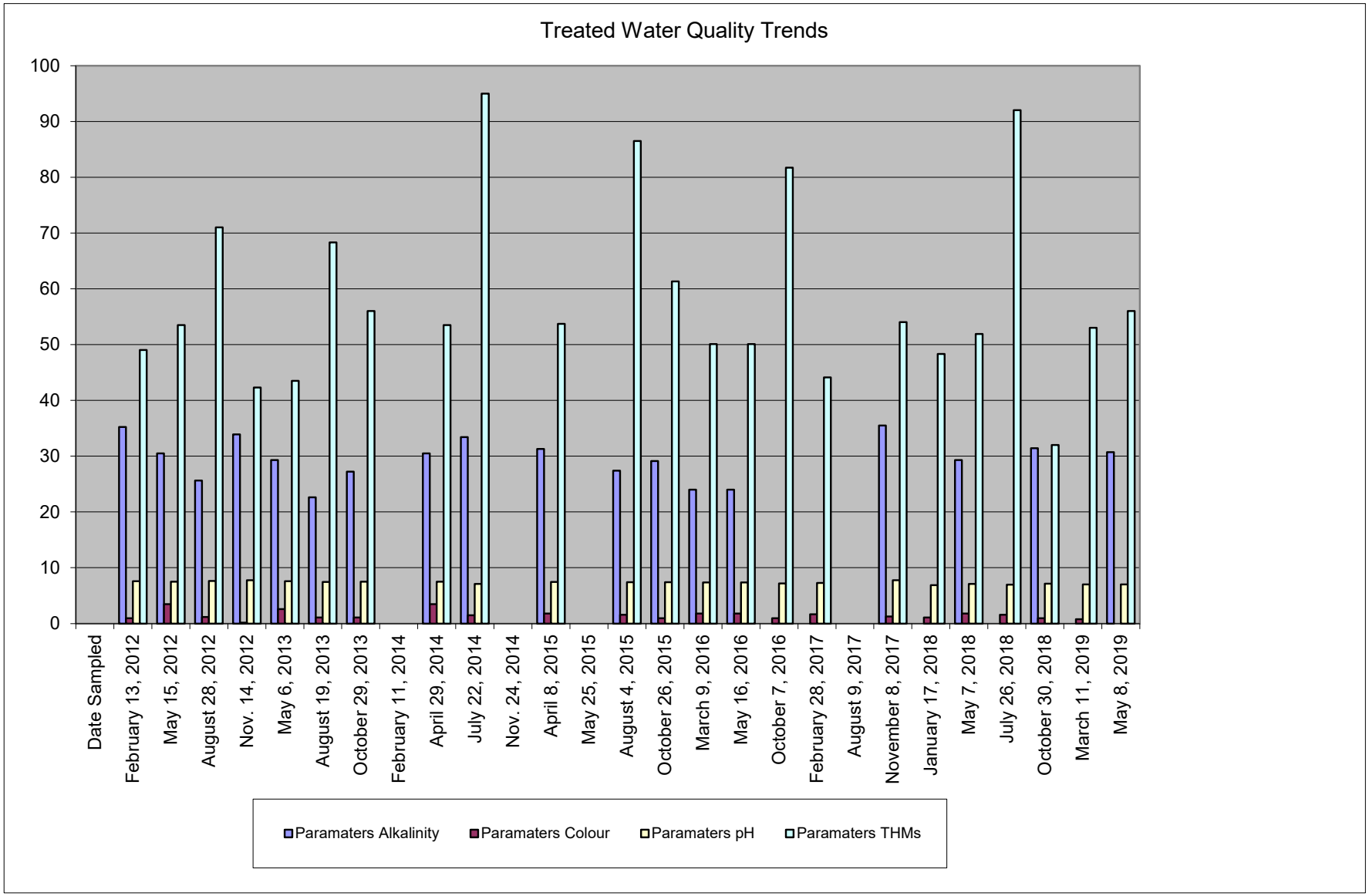
Alkalinity - defined as its capacity to neutralize acid. (pH less than 7)
pH - A measure of the acidity or alkalinity of a solution (Neutral is 7)
THMs (Trihalomethanes) - Are created when chlorine is added to water. They are toxic chemical substances that consist of a methane molecule and one of the halogen elements

Data collected from other sources

Attachment B.8



Attachment B.8



Attachment B.12

Customer Complaints

(June 01, 2019 to May 31, 2020)

	Location	Received	Resolved	Complaint	Resolution
1.	408 Williams	Jan 17, 2020	Jan 17, 2020	Brown Water	Advised resident to flush cold water tap. Discolouration most likely due to valve turning to due break. Asked if she wanted her water tested and said no.

DOCUMENT CHANGE REQUEST (DCR)
REVISION SUMMARY

NUMBER	ELEMENT	REQUESTED BY	DATE ISSUED	DESCRIPTION	DATE APPROVED	DATE OPERATIONAL PLAN UPDATED	OPERATIONAL PLAN REV. NUMBER
1	11	QMS Team	July 26, 2012	Refer to 2012 DCR 1 (1 page)		November 26, 2012	4
2	13	QMS Team	September 27, 2012	Refer to 2012 DCR 2-5 (4 pages)		November 26, 2012	4
3	16	QMS Team	October 11, 2012	Refer to 2012 DCR 6-8 (3 pages)		November 26, 2012	4
4	19	QMS Team	October 30, 2012	Refer to 2012 DCR 9-10 (2 pages)		November 26, 2012	4
5	6	QMS Team	November 22, 2012	Refer to 2012 DCR 11-14 (4 pages)		November 26, 2012	4
6	16, 4, 5, 9, 18 & 20	QMS Team	April 15, 2013	Refer to 2013 DCR 1-7 (7 pages)	April 16, 2013	May 29, 2013	5
7	3	QMS Team	April 16, 2013	Refer to 2013 DCR 8 (1 page - Page 1 of 2 only)	Not Approved		
8	17	QMS Team	April 16, 2013	Refer to 2013 DCR 9 (1 page - Page 2 of 2 only)	April 16, 2013	May 29, 2013	5
9	6 & 9	Doug Brown	April 17, 2013	Refer to 2013 DCR 10 (1 page)	May 28, 2013	May 29, 2013	5
10	All	Doug Herr	April 18, 2013	Refer to 2013 DCR 11 (1 page)	May 28, 2013	May 29, 2013	5
11	6, 9, 10, 11, 13 & 14	QMS Team	April 25, 2013	Refer to 2013 DCR 12-17 (6 pages)	May 28, 2013	May 29, 2013	5
12	15 & 16	QMS Team	April 26, 2013	Refer to 2013 DCR 18-19 (2 pages)	May 28, 2013	May 29, 2013	5
13	5	QMS Team	May 7, 2013	Refer to 2013 DCR 20 (1 page)	May 28, 2013	May 29, 2013	5
14	5	QMS Team	May 15, 2013	Refer to 2013 DCR 21 (1 page)	May 28, 2013	May 29, 2013	5
15	1 & 5	QMS Team	November 28, 2013	Refer to 2013 DCR 22 - 24 (3 pages)	November 28, 2013	September 26, 2014	6
16	6	QMS Team	December 17, 2013	Refer to 2013 DCR 25 (2 pages)	December 17, 2013	September 26, 2014	6
17	15	Doug Herr	May 1, 2014	Refer to 2014 DCR 1 (1 page)	May 1, 2014	September 26, 2014	6
18	15, 16 & 18	QMS Team	May 28, 2014	Refer to 2014 DCR 2 (6 pages)	May 28, 2014	September 26, 2014	6
19	7	Doug Herr	July 18, 2014	Refer to 2014 DCR 3 (1 page)	July 18, 2014	September 26, 2014	6
20	16	Doug Herr	September 25, 2014	Refer to 2014 DCR 4 (1 page)	September 25, 2014	September 26, 2014	6
21	6	Doug Herr	April 6, 2015	Refer to 2015 DCR 1 (2 pages)	July 17, 2015	July 17, 2015	7
22	15	Doug Herr	April 6, 2015	Refer to 2015 DCR 2 (1 page)	July 17, 2015	July 17, 2015	7
23	7	Doug Herr	July 15, 2015	Refer to 2015 DCR 3 (1 page)	July 17, 2015	July 17, 2015	7
24	Cover Page, Appendices & 2	Doug Herr	March 9, 2016	Refer to 2016 DCR 1 (4 pages - Page 1 of 4)	March 30, 2016	March 31, 2016	8
25	5	Doug Herr	March 9, 2016	Refer to 2016 DCR 1 (2 pages - Page 2 of 4)	March 30, 2016	March 31, 2016	8
26	6	Doug Herr	March 9, 2016	Refer to 2016 DCR 1 (4 pages - Page 3 of 4)	March 30, 2016	March 31, 2016	8
27	6	Doug Herr	March 9, 2016	Refer to 2016 DCR 1 (8 pages - Page 4 of 4)	March 30, 2016	March 31, 2016	8
28	8	Doug Herr	March 15, 2016	Refer to 2016 DCR 2 (3 pages - Page 1 of 1)	March 30, 2016	March 31, 2016	8
29	13	Doug Herr	March 30, 2016	Refer to 2016 DCR 3 (6 pages - Page 1 of 2)	March 30, 2016	March 31, 2016	8
30	15	Doug Herr	March 30, 2016	Refer to 2016 DCR 3 (5 pages - Page 2 of 2)	March 30, 2016	March 31, 2016	8
31	6	Doug Herr	June 7, 2016	Refer to 2016 DCR 4 (3 pages - Page 1 of 1)	June 8, 2016	June 30, 2016	9
32	5	QMS Team	March 1, 2017	Refer to 2017 DCR 1 (2 pages - Page 1 of 1)	March 22, 2017	March 24, 2017	10
33	6	QMS Team	March 8, 2017	Refer to 2017 DCR 2 (4 pages - Page 1 of 2)	March 22, 2017	March 24, 2017	10
34	8	QMS Team	March 8, 2017	Refer to 2017 DCR 2 (3 pages - Page 2 of 2)	March 22, 2017	March 24, 2017	10
35	13	QMS Team	March 9, 2017	Refer to 2017 DCR 3 (2 pages - Page 1 of 1)	March 22, 2017	March 24, 2017	10
36	16	QMS Team	March 15, 2017	Refer to 2017 DCR 4 (4 pages - Page 1 of 2)	March 22, 2017	March 24, 2017	10
37	Cover Page & Appendices (Schedule "C")	QMS Team	March 15, 2017	Refer to 2017 DCR 4 (3 pages - Page 2 of 2)	March 22, 2017	March 24, 2017	10
38	18	QMS Team	March 17, 2017	Refer to 2017 DCR 5 (3 pages - Page 1 of 2)	March 22, 2017	March 24, 2017	10
39	18 (cont'd)	QMS Team	March 17, 2017	Refer to 2017 DCR 5 (3 pages - Page 2 of 2)	March 22, 2017	March 24, 2017	10
40	15	QMS Team	March 20, 2017	Refer to 2017 DCR 6 (3 pages - Page 1 of 1)	March 22, 2017	March 24, 2017	10

41	8	QMS Team	April 12, 2018	Refer to 2018 DCR 1 (9 pages - Page 1 of 1)	April 17, 2018	April 20. 2018	11
42	13	QMS Team	April 17, 2018	Refer to 2018 DCR 2 (1 page - Page 1 of 2)	April 17, 2018	April 20. 2018	11
43	13 (cont'd)	QMS Team	April 17, 2018	Refer to 2018 DCR 2 (6 pages - Page 2 of 2)	April 17, 2018	April 20. 2018	11
44	16	QMS Team	April 19, 2018	Refer to 2018 DCR 3 (3 pages - Page 1 of 1)	April 20, 2018	April 20. 2018	11
45	All	QMS Team	April 12, 2019	Refer to 2019 DCR 1	April 15, 2019	April 12, 2019	12
46	3	QMS Team	April 12, 2019	Refer to 2019 DCR 2	April 15, 2019	April 12, 2019	12
47	6	QMS Team	April 12, 2019	Refer to 2019 DCR 3	April 15, 2019	April 12, 2019	12
48	7	QMS Team	April 12, 2019	Refer to 2019 DCR 4	April 15, 2019	April 12, 2019	12
49	8	QMS Team	April 12, 2019	Refer to 2019 DCR 5	April 15, 2019	April 12, 2019	12
50	9	QMS Team	April 12, 2019	Refer to 2019 DCR 6	April 15, 2019	April 12, 2019	12
51	10	QMS Team	April 12, 2019	Refer to 2019 DCR 7	April 15, 2019	April 12, 2019	12
52	12	QMS Team	April 12, 2019	Refer to 2019 DCR 8	April 15, 2019	April 12, 2019	12
53	13	QMS Team	April 12, 2019	Refer to 2019 DCR 9	April 15, 2019	April 12, 2019	12
54	14	QMS Team	April 12, 2019	Refer to 2019 DCR 10	April 15, 2019	April 12, 2019	12
55	15	QMS Team	April 12, 2019	Refer to 2019 DCR 11	April 15, 2019	April 12, 2019	12
56	21	QMS Team	April 12, 2019	Refer to 2019 DCR 12	April 15, 2019	April 12, 2019	12
57	Appendices	QMS Team	April 12, 2019	Refer to 2019 DCR 13	April 15, 2019	April 12, 2019	12
58	16	QMS Team	April 12, 2019	Refer to 2019 DCR 14	April 15, 2019	April 12, 2019	12
59	3	QMS Team	June 3, 2020	Refer to 2020 DCR 1	June 3, 2020	June 3, 2020	13
60	4	QMS Team	June 3, 2020	Refer to 2020 DCR 2	June 3, 2020	June 3, 2020	13
61	11	QMS Team	June 3, 2020	Refer to 2020 DCR 3	June 3, 2020	June 3, 2020	13
62	16	QMS Team	June 3, 2020	Refer to 2020 DCR 4	June 3, 2020	June 3, 2020	13

DOCUMENT CHANGE REQUEST FORM

Requested By: QMS Team **Date:** June 3, 2020

Department: O. & F. Division

Type of Change:

X Edit Existing Document ☐ **Create New Document** ☐ **Delete Document**

Changes Requested:

1. Update page 7 with signatures.

Justification for Changes:

The previous revision did not show the endoresments.

Proposed Changes:

Same list as previous revision but with signatures.

Approval:

QMS Representative: _____ **Date:** _____

Comments: 2020 DCR #1 – Applicable to Element #3 page 7.

_____

DOCUMENT CHANGE REQUEST FORM

Requested By: QMS Team **Date:** June 3, 2020

Department: O. & F. Division

Type of Change:

X Edit Existing Document ☐ **Create New Document** ☐ **Delete Document**

Changes Requested:

1. Update page 8 to add operators and operators-in-training to the QMS team.

Justification for Changes:

When we work on and review the QMS program, we engage the entire staff of operators and operators-in-training.

Proposed Changes:

Add: Operators and Operators-in-Training to the QMS Team section listed on page 8.

Approval:

QMS Representative: _____ **Date:** _____

Comments: 2019 DCR #2 – Applicable to Element #4 page 8.

_____

DOCUMENT CHANGE REQUEST FORM

Requested By: QMS Team **Date:** June 3, 2020

Department: O. & F. Division

Type of Change:

X Edit Existing Document ☐ Create New Document ☐ Delete Document

Changes Requested:

1. Update personnel coverage to reflect changes made in mid-2019

Justification for Changes:

The existing personnel coverage reflects a dedicated 3-employee staffing at the WTP. In the summer of 2019, the rotation was changed to a dedicated 2-employee staffing at the WTP and a rotating 3rd employee from the water distribution team.

Proposed Changes:

The Water Treatment Plant in Fort Frances is normally staffed with three (3) employees. One is the Overall Responsible Operator (ORO). One is the Operator-In-Charge (OIC). The third is a weekly rotation of Water Distribution Employees who either have their operator license or have their Operator-in-Training (OIT) certificate.

These operators work on a rotating on-call system with each operator being on-call for a week period. The operator on-call period begins on a Tuesday at 7:30 a.m. and ends the following Tuesday at 7:30 a.m. at which time the next operator on-call begins. The Environmental Superintendent will establish the annual on-call rotation schedule.

Page 1 of 1

Approval:

QMS Representative: _____ **Date:** _____

Comments: 2020 DCR #3 – Applicable to Element #11 page 52.

_____

DOCUMENT CHANGE REQUEST FORM

Requested By: QMS Team **Date:** June 3, 2020

Department: O. & F. Division

Type of Change:

X Edit Existing Document ☐ **Create New Document** ☐ **Delete Document**

Changes Requested:

1. Update employee list and associated telephone numbers.

Justification for Changes:

Staff retirement in 2019 and job posting changes.

Proposed Changes:

WATER TREATMENT PLANT

BRAD WEBB (ORO)	275-5215
GREG WIEDENHOEFT (OIC, INTERIM ORO)	275-8814
EMPLOYEE #3 ROTATES WEEKLY FROM DISTRIBUTION SYSTEM	
RANDY WHITE (INTERIM ORO – CASUAL)	275-8733

DISTRIBUTION SYSTEM

PAUL LEMESURIER (INTERIM ORO)	275-5045
JAY BRUYERE	271-2925
BRYAN PATTERSON	276-7379
JOEL NICOLAY	861-0399
ERIK GUSTAFSON	276-38734

Page 1 of 1

Approval:

QMS Representative: _____ **Date:** _____

Comments: 2020 DCR #4 – Applicable to Element #16, Appendix E, Page 94.

Town of Fort Frances

Fort Frances Drinking Water System

Management Review Meeting Minutes

Date: Monday October 21, 2019

Time: 1:00 P.M.

Location: Fort Frances Water Treatment Plant

In Attendance: Doug Brown, CAO, Craig Miller, Paul Lemesurier, Jay Bruyere, Brad Webb, Joel Nicolay, Eric Gustafson and Travis Rob.

Absent: Greg Wiedenhoeft and Bryan Patterson

Part of the QMS Operational Plan requires that management shall review the QMS once every twelve (12) months to assess and ensure the continuing suitability, adequacy and effectiveness of the QMS. Element 20 – Management Review was discussed. Management Reviews shall be included in the internal audit schedule.

Introduction:

Reference to Operational Plan – Element 20 Management Review

Period June 1, 2018 to May 31, 2019

The Environmental Superintendent red through Element 20 with the committee members and there were no concerns or changes that needed to be made.

Item 1 – Incidents of regulatory non-compliance:

Ministry of the Environment (MOE) Annual Inspection Report (2018/2019)
Date of Inspection: February 11th and 12th, 2019
Non-compliance with regulatory requirements – One (1)

Form 1 not on record for looping of DWS at Frenette between First and Second Street

Actions Taken: Form 1 was submitted to MECP on March 19, 2019 in order to correct non-compliance

2018 Annual Summary Report (Schedule22) O. Reg. 170/03
Regulatory requirement: No later than March 31, 2019
Reported to O & F Executive Committee and Council
Council Approval was received March 25, 2019
Date submitted to MECP – April 4, 2019
Letter were sent out on April 4, 2019 to the Owners that connect and receive water from the Town's Water Distribution System
Non Compliance with Regulatory Requirements: None

2018 Annual Report – O. Reg. 170/03
Regulatory Requirement: Not later than February 28, 2019
Date submitted to MECP: February 28, 2019
Non Compliance with Regulatory Requirements: None

O. Reg 450/07: Charges for Industrial and Commercial Water Users
Regulatory Requirement: Not later than March 31, 2019
Date submitted to MECP: April 9, 2019
Non Compliance with Regulatory Requirements: Late submission

O. Reg. 387/04: Water Taking and Reporting
Regulatory Requirement: Not later than March 31, 2019
Date submitted to MECP: May 14, 2019
Non-compliance with Regulatory Requirements: Late submission

Item 2 – Incidents of adverse drinking water tests:

WTP:
No adverse treated water samples

Water Distribution System:
One Adverse Sample – Sample Collected February 25, 2019 with results being received on February 27, 2019 (From the Grind Up)

Item 3 – Deviations from critical control-point limits and response actions:

The QMS Team had undertaken a Risk Assessment Review of the risks and their critical control-point/response actions between March 5, 2019 and April 15, 2019

Two hazards were added, to align with DWQMS 2.0: "Treatment – Sustained Extreme Heat (Score of 7)" and "Distribution – sustained Extreme Cold (Score of 5)". There were no other changes in limits or existing response actions.

Risks with a threshold above or equal 8 (Threshold – 8)

1. Railway activity (Spill of chemical or contamination)
2. Loss of Pressure: water main break, major fire
3. Cross connection

Item 4 – The effectiveness of the risk assessment process:

The Operators reviewed the Risk Assessment Process between March 5, 2019 and April 15, 2019. Added two (2) new potential risks to the listing. Refer to item 3 above.

Reviewed on a yearly basis in accordance with Element 7.

Item 5 – Internal and third party audit results:

Internal Audit Results:

Latest Internal Audit:
Issued May 29, 2019 – undertaken by Tyson Dennis.
No Corrective Actions were identified.

Previous Audits:

Issued May 22, 2018 – undertaken by Tyson Dennis
No Corrective Actions were identified.

External Audit Results:
Latest External Audit:
Re-Accreditation Systems Audit
On site (November 20,2018) – undertaken by SAI GLOBAL – Accreditation Program for Operating Authorities
No non-conformances were identified.

Previous Off-Site External Audit
12 month surveillance audit
Off site (November 1, 2017) – undertaken by SAI GLOBAL – Accreditation Program for Operating Authorties
No non-conformances were identified.

Item 6 – Results of emergency response testing:

Standard Operating Procedures identified in the Emergency Response Binder had been reviewed with the Water System Operators on April 4, 2018.

Emergency SOP's Reviewed:

1. Policy 4.24 – SOP No. 1 – for the Destruction (bombing/major fire) of Water Treatment Plant or Water Tower.

2. Policy 4.23 – SOP No. 2 – for Pandemic Situation – affecting the Water Treatment Plant Operators and Community.

3. Policy 4.15 – SOP No. 3 – for Water Main Breaks and Repairs.

4. Policy 4.8 – SOP No. 4 – for breakdown of equipment at the Water Treatment Plant.

5. Policy 4.4 – SOP No. 5 – for Raw Water Source Contamination

6. Policy 4.27 – SOP No. 6 – for Standby Generator – WTP (New)

Item 7 – Operational Performance:

WTP:
Actions and recommendation from MECP
As a result of the 2018/19 MECP Inspection – 1 non compliance due to a late submission.

Personnel
ORO Randy White retired on May 31, 2019
Brad Webb successfully bid into ORO position

Maintenance issues:
No other issues

Distribution System:
Actions and recommendations from MECP

No issues.

Personnel – Water Distribution Operators:
Linda Carmody left July 13, 2018
Addition: Joel Nicolay as of July 16, 2018
Full Complement of staff as of May 31, 2019.

Maintenance Issues:
Numerous water main/service breaks through the Town since the last Management Review.

Frozen Waters – 39 residences

Valve Replacements done in 2018 as part of the roadway/infrastructure replacement on"

1. Sinclair Street and Armit Avenue (VAL331)
2. Nelson Street and Armit Avenue (VAL332)
3. Wright Avenue and Third Street West (VAL118)
4. Reid Avenue and First Street East (VAL454)

Six (6) valves were scheduled for replacement in 2018 but due to costs, only four (4) were changed, per the list above.

Some existing fire hydrants are obsolete and we have no parts in order to maintain them. Six (6) fire hydrants were scheduled for replacement in 2018 but once again due to costs, only four (4) were changed.

Fire Hydrant Replacement completed in 2018:

1. First Street East and Crowe Avenue (HYD226)
2. Third Street East and Reid Avenue (HYD265)
3. 400 Block of Keating Avenue (HYD135)
4. 1300 Block of Fifth Street East (HYD318)

Item 8 – Raw water supply and drinking water quality trends:

No changes in raw water supply and drinking water quality trends.

Regular seasonal water turnover of Rainy Lake.

Item 9 – Follow up on action items from previous management review:

2018 Management Review Items
Four (4) follow up items identified

1. Replacement of approximately 500 meters of 150 mm diameter water main along Colonization Road West (from 1302 Colonization Road West to 1448 Colonization Road West):

   Status: Due to lack of funding the project has been postponed to 2019 – to go through the 2020 Capital Budget Process. Construction Season.

2. 400 Block of Armit Avenue

   Status: No capital funding available in 2019

3. 400 Block of Nelson Street

   Status: No capital funding available in 2019.

4. Ensure both cemetery irrigation systems are properly plumbed to ensure the proper backflow protection c/w meter is in place.

   Status: No capital fund available in 2019. The Riverview Cemetery works can take place at the same time as item 1 above.

Item 10 – The status of management action items identified between reviews:

No management action items were identified between reviews.

Item 11 – Changes that could affect the Quality Management System (QMS)

Internal/External Audit: No issues

Management Review: No issues.

Any new business development upstream of water intake could potentially contaminate raw water source or supply. No concerns at this time.

Information only:

Where to find – electronically: Revision updates – Last version – check electronic version (latest version) found in W:\QMS Operational Plan\...file name (April 12, 2019; Revision No. 12).

Item 12 - Consumer Feedback:

Customer complaints: Last period – 4 complaints – this period 2 complaints.

Notes:

Typical root causes of complaints

1. Construction projects creating dead-end mains can cause stagnate and discoloured

water issues.

2. Result of water main breaks

3. Maintenance – valve exercising and flushing

Status: Ongoing

Item 13 – The Resources needed to maintain the Quality Management System (QMS):

Council's commitment to provide the following:

Personnel – No issues

Financial – No issues

Item 14 – The results of infrastructure review:

Six (6) year capital plan (In OP – Appendix 1)

On an annual basis

Proposed infrastructure upgrades are discussed and reviewed with operators.

Council reviews and approves.

WTP:

On a monthly basis the WTP Overall Responsible Operator generates a report outlining operational and maintenance activities. The report is circulated and reviewed by the Environmental and Facilities Superintendent, Manager of Operations and Facilities, the O & F Executive Committee and Council.

Upgrades for this period:

Installed two new soda ash pumps

Received upgraded SCADA computers from Lakeside Process Control

New polymer line to clarifier #1

Installed new recirculation pump on boiler

Installed new filtered water sample pump

Painted pipe stands on lowel level

Water Distribution System:

On a monthly basis, Environmental and Facilities Superintendent generates a report outlining maintenance activities. The report is circulated and reviewed by the Manager of O & F and the O & F Executive Committee and Council.

Upgrades during this period:

Water main valve exercise program – 20% per year – Area 3

Hydrant flushing: Flushing annually

Fire hydrant replacements: see section 7 for a detailed list

Water main isolation valve replacements: see section 7 for a detailed list

Water main replacement (Construction projects):
1200 Block of Third Street East
Colonization Road East/Millroad from Elizabeth Street to Lake Road

Water meters/backflow device installations – ICI sector, ongoing

Scheduled for 2019 Construction:

Replacements/new installation of water mains and services along the following streets:

a) 300 Block of Second Street East including intersection of Victoria Avenue and Second Street East.

Item 15 – Operational plan currency, content and updates:

Current revision date: April 12, 2019 – Revision 12

Updates – since previous period

Audits – amended OP after the audit review

Document Request Change (DRC) – document changes to Operational Plan such as spelling, grammar, personnel change, etc.. A result of conducting staff meetings to

review the Elements within the Operational Plan - these Elements were amended as follows:

1. D. Herr retired in mid 2018.
2. Element 3 was updated to current Council and Management Team
3. Element 6 – updated distribution list.
4. Element 7 updated to align with DWQMS 2.0
5. Element 8 – updated to align with DWQMS 2.0
6. Element 9 – included entire staff of water department as part of DWQMS Team
7. Element 10 – grammar corrections and clarification to match O. Reg. 128/04
8. Element 12 – grammar corrections
9. Element 13 – updated to match current work processes
10. Element 14 – updated to ensure all applicable documents are reviewed
11. Element 15 – updated to match current work processes
12. Element 21 – full revision of Continuous Improvement section to align with DWQMS 2.0
13. Appendices – updated to match current contact information
14. Element 16 – updated to match plant configuration and current process

Item 16 – Staff Suggestions:

1. Have two (2) trained auditors for the DWQMS and utilize on a rotating basis
2. Maintain four (4) valve intersections
3. When a dead end is created ensure there is a flushing point created as well
4. Remodel the water system
5. Review SOP #3 – new disinfection procedure

November 6, 2019

Report To: Mayor and Council

From: Travis Rob, Manager of Operations and Facilities

RE: Drinking Water Quality Management System - Management Review

Over the past 12 months a couple of significant milestones have been completed in regards to the Drinking Water Quality Management System and are summarized below:

1) **External Surveillance Audit** (on-site verification) completed by SAI Global on November 20, 2018 - Auditor Mr. Rod Seabrook
2) **8th Internal Audit,** third audit completed by Mr. Tyson Dennis from May 13 to May 29, 2019.
3) **8th Management Review Meeting** held on Monday October 21, 2019 to review the implementation of the DWQMS for the period July 1, 2018 to June 30, 2019.

Please find attached the agenda package plus the associated documents which were reviewed at the October 21, 2019 Management Review meeting. Presently under the process outlined in the Operational Plan Element No. 20 - Management Review (See pages No. 75 & 76 of Operational Plan), there were five (5) action items, **rated in priority**, that Council (owner) must review and endorse at this time:

Action Item No. 1) **Train a new Internal Auditor**. Tyson Dennis is no longer employed by the Corporation and therefore we need to train a new internal auditor. It was discussed to train two internal staff to provide coverage in the case that someone leaves the organization and provide relief should one staff not be able to undertake the audit on any given year.

Action Item No. 2) **Replace Approximately 140m of 150mm diameter water main along the 400 Block of Armit Avenue**. The timeline is in accordance with the 2020 budget process where the O & F Division Management will prepare the cost estimate for installation and present this capital expenditure to Council (owner). Further grant opportunities will be explored to offset the cost of this work.

Action Item No. 3) **Replace Approximately 222m of 150mm diameter watermain along the 400 Block of Nelson Street**. The timeline is in accordance with the 2020 budget process where the O & F Division Management will prepare the cost estimate for installation and present this capital expenditure to Council (owner). Further grant opportunities will be explored to offset the cost of this work.

Action Item No. 4) **Replace Approximately 144m of 200mm diameter watermain along Mowat Avenue from First Street to Church Street.** The timeline is in accordance with the 2020 budget process where the O & F Division Management will prepare the cost estimate for installation and present this capital expenditure to Council (owner). Further grant opportunities will be explored to offset the cost of this work.

Action Item No. 5) **Installation of two additional valves along Sinclair Avenue between Victoria Avenue & Armit Avenue in order that the hospital facility can avoid unnecessary boil water advisories being issued** In 2016 a letter was sent to Riverside Healthcare requesting that their internal plumbing be upgraded or upsized to ensure proper fire flow protection can be achieved from the water supplied from either Sinclair or Front Street watermains prior to the installation of two additional isolation valves along Sinclair Avenue. To date no response has been received.

Administration recommends the following:

1) That Council (owner) has reviewed the agenda package of the management review meeting held on October 21, 2019.

2) That Council (owner) has reviewed and accepted the following five (5) action items as a result of the management review meeting held on October 21, 2019

Action Item No. 1) **Train two new Internal Auditors**.

Action Item No. 2) **Replace Approximately 140m of 150mm diameter water main along the 400 Block of Armit Avenue**.

Action Item No. 3) **Replace Approximately 222m of 150mm diameter watermain along the 400 Block of Nelson Street**.

Action Item No. 4) **Replace Approximately 144m of 200mm diameter watermain along Mowat Avenue from First Street to Church Street.**

Action Item No. 5) **Installation of two additional valves along Sinclair Avenue between Victoria Avenue & Armit Avenue in order that the hospital facility can avoid unnecessary boil water advisories being issued**.

Respectfully Submitted

Travis Rob, P.Eng
Manager of Operations and Facilities

It is the recommendation of the Operations and Facilities Executive Committee that:

1) **That Council (owner) has reviewed the agenda package of the management review meeting held on October 21, 2019.**

2) **That Council (owner) has reviewed and accepted the following five (5) action items as a result of the management review meeting held on October 21, 2019**

   Action Item No. 1) Train a new Internal Auditor.

   Action Item No. 2) Replace Approximately 140m of 150mm diameter water main along the 400 Block of Armit Avenue.

   Action Item No. 3) Replace Approximately 222m of 150mm diameter watermain along the 400 Block of Nelson Street.

   Action Item No. 4) Replace Approximately 144m of 200mm diameter watermain along Mowat Avenue from First Street to Church Street.

   Action Item No. 5) Installation of two additional valves along Sinclair Avenue between Victoria Avenue & Armit Avenue in order that the hospital facility can avoid unnecessary boil water advisories being issued.