

October 2, 2019

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

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

**SUBJECT:** DWQMS Management Review

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On Monday, October 21, 2019 in the Water Treatment Plant (WTP) Control Room at 1:00 pm local time, the DWQMS Management Review took place for the period of July 1, 2018 through June 30, 2019. 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) The Management Review was to take place prior to June 30, 2019. The management review was delayed due to staffing issues (retirement and subsequent re-structuring of staffing at the WTP). These issues are now behind us and I expect the Management Review will be on schedule in 2020.
- 2) Late submission of O.Reg. 387/04 - Water Taking Report (May 14) and O.Reg. 450/07 -Industrial and Commercial Users Report (April 9) to the MECP. Both reports were due March 31, 2019. Both reports were not known to myself as required submissions. Upon notification from the Ministry of being past due, the reports were prepared and submitted and the Ministry was satisfied. No future late report submissions to the MECP are expected in 2020.
- 3) The annual WTP inspection by the MECP resulted in one non-conformance. Form 1 (notice of changes to the distribution system) was not on file. Our construction consultant (Hatch Engineering) had not prepared the form for the Town for the 2018 construction season. The Form 1 has since been completed for 2018 and is on file, along with Form 1 for the 2019 construction season. Again, I do not anticipate this recurring as a non-conformance going forward.
- 4) One distribution system water sample returned an adverse test result. With direction from the MECP, re-samples were taken and the re-samples returned no adverse results. It is suspected that the original sample was contaminated which lead to the adverse test result.
- 5) Succession Planning. Environmental Superintendent Doug Herr retired June 20, 2018 and I took over for Doug mid-July 2018. Overall Responsible Operator

Randy White retired on May 31, 2019. Brad Webb successfully bid to replace Randy. Greg Wiedenhoefte subsequently bid into the Operator In Charge role and is training towards his Class 3 Water Treatment License and is expected to be the Overall Responsible Operator upon Brad Webb's retirement in 2-3 years. The WTP staffing was restructured such that the third employee at the WTP is rotating in on a weekly basis to cross train the entire Water Distribution team at the WTP. The early indications is that this has been favourably received by the majority of our staff.

- 6) The DWQMS Operational Plan was updated in 2019 to fully align with the DWQMS 2.0 standard. The Operational Plan will have an external audit in November 2019 by SAI Global.
- 7) Previous external and internal audits in 2018 and 2019 have resulted in zero non-conformances.
- 8) Two (2) customer complaints were 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.
- 9) Staff suggestions included having 2 trained internal auditors for the DWQMS system and to utilize them on a rotating basis. Other items are identified in the minutes. It is important to note that the staff recognized that their suggestions are acted upon and are often included in the next year's capital program.

Overall, the Water Treatment Plant and Water Distribution Teams experienced a significant turnover in the period covered by the Management Review. The teams are now fully staffed and training is ongoing. The DWQMS Management Review identified areas that we can improve upon and I expect the 2019 – 2020 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:** 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.

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**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 11<sup>th</sup> and 12<sup>th</sup>, 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 Authorities

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 low 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



**Town of Fort Frances**

**Fort Frances Drinking Water Quality Management System**

**Management Review Meeting Notice**

**Date of Notice:** Thursday, October 10, 2019  
**Date of Meeting:** Monday, October 21, 2019  
**Time of Meeting:** 1:00 PM  
**Location of Meeting:** Fort Frances Water Treatment Plant

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**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 2018 Management Review meeting as well as a copy of the report that was submitted to Mayor and Council for their approval.

A handwritten signature in blue ink, appearing to read 'Craig Miller'.

Craig Miller, P.Eng.  
Environmental Superintendent

## Fort Frances Drinking Water System Management Review - Meeting Agenda

**Date:** Monday, October 21, 2019

**Time:** 1:00 pm

**Location:** Fort Frances Water Treatment Plant

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### **A. Introduction:**

Reference to Operational Plan - Element 20 Management Review

- See attached Element No. 20.

**Period: June 01, 2018 to May 31, 2019**

### **B. Review Items:**

#### **1. Incidents of regulatory non-compliance:**

Ministry of the Environment (MECP) Annual Inspection Report (2018/2019)

Date of Inspection: February 11<sup>th</sup> – 12<sup>th</sup>, 2019

Non-compliance with Regulatory Requirements: One (1)

- Form 1 not on record for for looping of DWS @ Frenette between First and Second St.
- Submitted Form 1 to MECP on March 19, 2019 to correct non-compliance

2018 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 March 25, 2019

Date submitted to Ministry of the Environment (MECP): April 4, 2019

Letters sent 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

Date submitted to Ministry of the Environment (MECP): February 28, 2019

Non-compliance with Regulatory Requirements: None

## **Fort Frances Drinking Water System Management Review - Meeting Agenda**

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 9, 2019  
Non-compliance with Regulatory Requirements: Late Submission

O. Reg. 387/04: Water Taking and Reporting  
Regulatory requirement: Not later than March 31  
Date submitted to Ministry of the Environment (MECP): May 14, 2019  
Non-compliance with Regulatory Requirements: Late Submission

### **2. Incidents of adverse drinking water tests:**

#### Water Treatment Plant:

No adverse treated water samples.

#### Water Distribution System:

One Adverse Sample – Sample Collected 2/25/2019

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 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 mains break, major fire
3. Cross connection

Reference - Element 7/8

## **Fort Frances Drinking Water System Management Review - Meeting Agenda**

### **4. The effectiveness of the risk assessment process:**

Operators reviewed the Risk Assessment process between March 5, 2019 and April 15, 2019. Added two (2) new potential risks to listing. See Item 3, above.

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

### **5. Internal and third-party audit results:**

#### Internal Audit results:

Latest Internal Audit:

May 29, 2019 - undertaken by Tyson Dennis.

No corrective actions identified.

List CAR's and copies of Corrective Action Records are attached.  
Operational Plan to be amended reflecting non-conformances.

Previous Audit:

May 22, 2018 - undertaken by Tyson Dennis.

No corrective actions 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 Authorities.

No non-conformances were identified

See Attachment B.5.

## **Fort Frances Drinking Water System Management Review - Meeting Agenda**

### **6. Results of emergency response testing:**

Standard Operating Procedures identified in the Emergency Response Binder was reviewed by the Water System Operators in Q1 2019.

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 2018/19 MECP inspection, no non-compliances identified.

##### Personnel:

ORO Randy White retired on May 31, 2019

Brad Webb successfully bid into ORO position.

##### Maintenance issues:

No other issues.



## Fort Frances Drinking Water System Management Review - Meeting Agenda

### **Distribution System:**

#### Actions & Recommendations from MECP:

No issues.

#### Personnel:

Water Distribution Operators:

Other employment – 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 throughout the Town since the last Management Review.

See Attachment B.7.

Frozen water services to report – 39 residences

Valve replacements done in 2018 – as part of the roadway/infrastructure replacement on:

- 1) Sinclair Street & Armit Avenue (VAL331)
- 2) Nelson Street & Armit Avenue (VAL332)
- 3) Wright Avenue & Third Street West (VAL118)
- 4) Reid Avenue & 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.

## **Fort Frances Drinking Water System Management Review - Meeting Agenda**

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

Fire hydrant replacements done 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)

### **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:**

#### 2018 Management Review Items:

Four (4) follow-up items identified.

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

Status: Due to lack of funding in 2018, the project has been postponed to 2019. Funding has been received from the Federal and Provincial Governments.

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.

## Fort Frances Drinking Water System Management Review - Meeting Agenda

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

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

### **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. (April 12, 2019; Revision No. 12)

### **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. Water main breaks.
3. Maintenance activities – valve exercising and flushing

Customer Complaint Processing form – See Attachment B.12

## **Fort Frances Drinking Water System Management Review - Meeting Agenda**

### **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

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 lower level

#### **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 3)

## **Fort Frances Drinking Water System Management Review - Meeting Agenda**

Hydrant flushing: flushing annually

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

Water main isolation valve replacements – 4 – See Section 7 for detailed list.

Main Replacement (Construction Projects):

- 1200 Block of Third Street East
- Colonization Road East / Mill Road from Elizabeth St. to Lake Road

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

Scheduled for 2019 Construction:

Replacement/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

### **15. Operational plan currency, content and updates:**

Current revision date – April 12, 2019, Rev. 12

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. All elements – updated to reflect new Environmental Superintendent after D. Herr retired in mid – 2018
2. Element 3 – updated to current council and management team
3. Element 6 – Updated distribution lists.

## **Fort Frances Drinking Water System Management Review - Meeting Agenda**

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 DWQMS 2.0
13. Appendices - Updated to match current contact information
14. Element 16 – Updated to match plant configuration and current process

### **16. Staff suggestions:**

Any concerns from operators/staff.

PROCEDURE TITLE: Management Review

REVISION #5

QMS REFERENCE: ELEMENT NO. 20

QMS REPRESENTATIVE: 

## **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.

PROCEDURE TITLE: Management Review

REVISION #5

QMS REFERENCE: ELEMENT NO. 20

QMS REPRESENTATIVE: \_\_\_\_\_

- 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.



# Attachment B.1

**Ministry of the Environment  
Conservation and Parks**

Northern Region  
Kenora Area Office  
808 Robertson Street  
Kenora, ON P9N 1X9  
Fax: (807) 468-2735  
Telephone: (807) 468-2718

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

Direction régionale du Nord  
Bureau du secteur de Kenora  
808 rue Robertson  
Kenora, ON P9N 1X9  
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February 28, 2019

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 Drinking Water System Inspection Report (2018/2019)**

Please find attached the 2018/2019 municipal water works inspection report. The unannounced inspection was conducted on February 11 and 12, 2019. The time and co-operation of all operators involved was greatly appreciated.

One non-compliance issue was identified during the inspection. Actions required to address the non-compliance is included on pages 11 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 12 and 13 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.

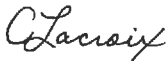
In order to measure individual inspection results, the Ministry has established an inspection compliance risk framework based on the principles on the Inspection, Investigation &

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) 475-1689.

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](http://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,



Ministry of the Environment, Conservation and Parks  
Northern Region - Kenora Area 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, Drinking Water Supervisor

cc. Kenora Area Office  
File Number: DK DY WI – 540



**Ministry of the Environment, Conservation and Parks**

**FORT FRANCES DRINKING WATER SYSTEM  
Inspection Report**

<b>Site Number:</b>	220000978
<b>Inspection Number:</b>	1-I4TQ4
<b>Date of Inspection:</b>	Feb 04, 2019
<b>Inspected By:</b>	Carolyn Lacroix

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**OWNER INFORMATION:**

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

**CONTACT INFORMATION**
**INSPECTION DETAILS:**

<b>Site Name:</b>	FORT FRANCES DRINKING WATER SYSTEM
<b>Site Address:</b>	901 COLONIZATION RD E FORT FRANCES P9A 3P9
<b>County/District:</b>	Fort Frances
<b>MECP District/Area Office:</b>	Kenora Area Office
<b>Health Unit:</b>	NORTHWESTERN HEALTH UNIT
<b>Conservation Authority:</b>	
<b>MNR Office:</b>	Fort Frances District Office
<b>Category:</b>	Large Municipal Residential
<b>Site Number:</b>	220000978
<b>Inspection Type:</b>	Unannounced
<b>Inspection Number:</b>	1-14TQ4
<b>Date of Inspection:</b>	Feb 04, 2019
<b>Date of Previous Inspection:</b>	Jan 22, 2018

**COMPONENTS DESCRIPTION**

<b>Site (Name):</b>	MOE DWS Mapping	<b>Sub Type:</b>	
<b>Type:</b>	DWS Mapping Point		

<b>Site (Name):</b>	SOURCE	<b>Sub Type:</b>	Surface
<b>Type:</b>	Source		

**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.

<b>Site (Name):</b>	TREATED WATER	<b>Sub Type:</b>	Pumphouse
<b>Type:</b>	Treated Water POE		

**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, and another 300 people in the neighbouring community of Couchiching First Nation. 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 unannounced, focused inspection was conducted on February 4 and 5, 2019, by Water Inspector, Carolyn Lacroix. 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 January 22 and 23, 2018, 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.

### 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 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.

There were no losses of flow data during the inspection review period.

- 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<sup>3</sup>/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 5780 m<sup>3</sup>, in August 2018. This represents 34 % of the rated capacity of the plant.



## Capacity Assessment

### 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, the undersigned Water Inspector 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 not 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 in Schedule B, section 3.0.

During the review period, Frenette Ave. was looped between 1st St. E. and 2nd St. E. and a Form 1 was not generated prior to the work being completed.

- 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.

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, clearwell level 60% capacity, treated water flow 17 000 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. At the time of the inspection, the treated water low level chlorine alarm was set to 1.2 mg/L.

Daily chemical feed and feed output reports were reviewed and demonstrated the consistent use of alum at all times the plant was treating water.

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 0.24 mg/L.

### 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.**  
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. There were no gaps in continuous data during the review period.
- **The secondary disinfectant residual was measured as required for the distribution system.**  
Daily chlorine residuals are collected from the water tower, meeting the requirements of O. Reg. 170/03, Schedule 7, subsections 7-2(3),(4). Chlorine residuals are also collected during bacteriological sampling.
- **Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.**  
Upon arrival at the WTP each morning, operators observe chlorine residuals from the previous 24 hour period on the circle chart recorder which is located next to the continuous chlorine analyzer.  
The circle chart recorder will hold up to a week of chlorine data. Operators then review a printout of the turbidity readings off each filter for the previous 24 hour period. These printouts display turbidity in 15 minute intervals; each 15 minute data set includes the minimum, maximum and mean turbidity value for the prior 15 minute time period. Operators then review continuous data for the previous 24 hour period on the SCADA computer.  
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 = 1.20 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 = - 0.1 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 60 seconds, every 15 minutes, the mean, maximum and average values of the previous 15 minutes of data are recorded.

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

O. Reg. 170/03, Schedule 6, 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 21, 2018 and had been previously calibrated on August 21, 2017. 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 23, 2018 and had been previously calibrated on August 21, 2017 (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.

The Operations Manual contains computer generated print outs from the SCADA system, of the components of the drinking water system, as well as a complete process diagram for the entire system.

- 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.

Only certified operators make entries in the logbook.

#### **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
- 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 subsystems during the review period. The ORO's hold valid certificates that are at the same level or higher than both subsystems.

The ORO listed in the distribution log book on Friday, remains the ORO for the subsystem throughout the weekend. The ORO for the WTP is listed in the WTP log book daily.

- 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 for the WTP is listed in the WTP log book daily. The OIC's for the distribution system is listed in the distribution log book daily, except for on weekends. The OIC's documented on Friday remains the OIC's for the weekend.

- 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, except for in December 2018. During this month, weekly microbiological samples were taken; however, due to a snow storm, the courier service was unable to deliver the December 27, 2018 samples to the lab, prior to them expiring. On December 31, 2018, operators became aware that the samples arrived at the lab past their holding time and notified the local ministry office to discuss. Since it was the end of the month, there was not enough time to re-take the expired samples.

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

Section 10-3, Schedule 10, O. Reg. 170/03 requires at least one treated water sample to be taken every week from the point of entry to the distribution system and tested for total coliform bacteria, E. coli and HPC. This requirement was met throughout the inspection review period except for during the week of December 27, 2018. During this week, a treated water sample was taken on December 27, 2018, but due to a snow storm, the courier service was unable to deliver this sample prior to it expiring. Operators became aware of this issue on December 31, 2018 and notified the local ministry office. Operators resumed weekly sampling later this week.

- 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 6, 2018 and had been previously sampled on March 7, 2017.

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

### Water Quality Monitoring

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 6, 2018, and had been previously sampled on March 7, 2017.

- **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. THMs) 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 54.65 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 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 residuals was 0.81mg/L. The limit for fluoride is 1.5 mg/L.

- **All water quality monitoring requirements imposed by the Municipal Drinking Water Licence and Drinking Water Works Permit 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**

Water Quality Monitoring

location that microbiological samples were obtained.

Water Quality Assessment

- Records showed 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).

Reporting & Corrective Actions

- 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 issues were also noted during the inspection:
  - O. Reg. 170/03, Schedule 13, section 13-6.1(1) requires that in each calendar quarter, a sample be taken and tested for HAA's 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 HAA's. In 2017, HAA samples were taken from the water tower, a location toward the end of the distribution system. In 2018, HAA samples were taken as follows:
    - Quarter 1 - location in middle of distribution system
    - Quarter 2 - location near the water treatment plant
    - Quarter 3 - water tower
    - Quarter 4 - water tower
  - On May 9, 2018, the MECP distributed a letter to municipalities, clarifying ministry guidance on HAA sampling. The guidance provided in the letter differs from how the Town of Fort Frances is choosing their HAA sampling locations.
  - Although the Fort Frances WTP has calculated a worst case scenario CT calculation and the calculation is kept in a filing cabinet at the water treatment plant office, it is not included in the operations manual. Operators may not be aware that the sample CT calculation can be found in the filing cabinet location.
  - For the majority of the review period, the same operator was designated as the distribution ORO and two other operators were designated as distribution OIC's. This was written in the log book daily, except for on weekends. There was an understanding amongst operators that these same individuals would remain designated as the ORO and OIC's over the weekend.
  - On occasion, it was not always made clear during maintenance or repair of the distribution system, who determined the category/level of contamination of the maintenance or repair. This determination is to be made by the OIC.
  - On occasion, an entry was made by an operator in the WTP log book and was directly followed by another operator's log book entry, with no space between the entries. This made it challenging to distinguish who made the entry because the entries were not written as two separate entries, by two separate operators.
  - On June 30, 2018, filter #3 was taken off-line at approximately 21:30 and was brought back into service on July 5, 2018. During this time the monthly filter effluent turbidity reading summaries for June 30, 2018 and July 1, 2018, did not reflect that this filter was off-line. This error impacts the accuracy of the monthly filter effluent turbidity calculation. The monthly calculations for June and July 2018 have been re-calculated and demonstrate this criteria was met for the review period.
  - Some of the operations manual content are not up to date i.e. contact information, watermain break repair procedure.

## 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. **The owner/operating authority was not 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 in Schedule B, section 3.0.

During the review period, Frenette Ave. was looped between 1st St. E. and 2nd St. E. and a Form 1 was not generated prior to the work being completed.

### **Action(s) Required:**

By April 5, 2019, the owner is to submit to the undersigned officer a completed Form 1, for the loop on Frenette Ave. between 1st. E and 2nd St. E. The documentation is to include written verification from:

- a Professional Engineer stating that the watermain loop meets the requirements of condition 3.1.1 of MWWP #224-201, Schedule B, section 3 and
- the owner of the drinking water system stating that the watermain loop meets the requirements of conditions 3.1.2 to 3.1.6 of MWWP # 224-201, Schedule B, section 3.

## 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 following issues were also noted during the inspection:**

1. To date, the majority of HAA samples have been taken from the water tower.
2. The Fort Frances WTP worst case scenario CT calculation is kept in a filing cabinet in the plant office and not the operations manual.
3. For the majority of the review period, the same operator was designated as the distribution ORO and two other operators were designated as distribution OIC's. This was written in the log book daily, except for on weekends. There was an understanding amongst operators that these same individuals would remain designated as the ORO and OIC's over the weekend.
4. On occasion, it was not always made clear during maintenance or repair of the distribution system, who determined the category/level of contamination of the maintenance or repair. This determination is to be made by the OIC.
5. On occasion, an entry was made by an operator in the WTP log book and was directly followed by another operator's log book entry, with no space between the entries. This made it challenging to distinguish who made the entry because the entries were not written as two separate entries, by two separate operators.
6. On June 30, 2018, filter #3 was taken off-line at approximately 21:30 and was brought back into service on July 5, 2018. During this time the monthly filter effluent turbidity reading summaries for June 30, 2018 and July 1, 2018, did not reflect that this filter was off-line. This error impacts the accuracy of the monthly filter effluent turbidity calculation. The monthly calculations for June and July 2018 have been re-calculated and demonstrate this criteria was met for the review period.
7. Some of the operations manual content are not up to date i.e. contact information, watermain break repair procedure.

**Recommendation:**

1. 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 suggests that in each year leading up to implementation of the HAA standard, HAA's are to be sampled annually from different locations (i.e. beginning, middle and end of distribution system). Attached in Appendix C is a copy of this letter. It is recommended that the details of this letter be reviewed and compared to where HAA samples have already been taken, in each calendar quarter, when determining the HAA sampling locations for 2019.
2. In addition to keeping a copy of the CT calculation in the WTP office filing cabinet, a copy should also be kept in the operations manual. The calculation should also include a description of the process used to achieve primary and secondary disinfection.
3. It is recommended that it be indicated in the log book, who is designated as the ORO and OIC over the weekend. This may be documented and clarified in the Friday log book entry.
4. It is recommended that the template that is used to track the details pertaining to watermain maintenance/repair, be updated to include a section that prompts the individual who made the determination of the category of the watermain maintenance/repair, to document their name. This determination is to be made by an OIC.
5. It is recommended that if an operator makes a new entry in the log book that they leave a space between their entry and the previous entry made by another operator. All entries made by an officer are to be signed off on by the operator who made the entry.
6. It is recommended that the computer technician re-assess how filter effluent turbidity data points are summarized



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in the monthly filter effluent print out and ensure the monthly calculation is being completed accurately.

7. It is recommended that the content of the operations manual be reviewed and updated where necessary. Particular attention shall be made to the contact information and the watermain break procedure.

**SIGNATURES**

Inspected By:  
Carolyn Lacroix

Signature: (Provincial Officer)



Reviewed & Approved By:  
Dave Manol

Signature: (Supervisor)



Review & Approval Date: February 28, 2019

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.

**Item B.2**

**Incidents of Adverse Drinking Water Tests**  
**Distribution System**  
(June 01, 2018 to May 31, 2019)

<b>Location</b>	<b>Incident Date</b>	<b>Parameter</b>	<b>Work Being Done</b>	<b>Resolution/Corrective Action</b>
1. From The Grind Up	02/27/2019	Total Coliforms	Weekly Routine Samples	* Re-sampled twice and passed. * DWA issued for sample location for duration of retesting and successful results.

## CAR LOG

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.								
May 22, 2018 - Internal Audit by Tyson Dennis (Auditor) - No non-conformances reported.								
November 20, 2018 - On-site Audit - Re-accreditation Audit by SAI Global - Accreditation Program for Operating Authorities. No non-conformances reported.								
May 29, 2019 - Internal Audit by Tyson Dennis (Auditor) - No non-conformances reported.								
								10
								11
								11
								12

# Attachment B.6.

## EMERGENCY BINDER RECORD SHEET

PERSON	DATE	TIME	ACTIVITY OR DESCRIPTION OF WORK
Paul W. Webb	Nov 20 2018	3:30 am	SOP 1-6
Paul W. Webb	Dec 12 2018	14:00	REVIEW
Paul W. Webb	Feb 20 2019	12:00	SOP 1-6
Paul W. Webb	Feb 21 2019	12:00 pm	SOP 1-6
Paul W. Webb	Feb 22 2019	12:00 pm	SOP 1-6
Paul W. Webb	Feb 23 2019	12:00 pm	SOP 1-6
Paul W. Webb	Feb 24 2019	12:00 pm	SOP 1-6
Paul W. Webb	Feb 25 2019	12:00 pm	SOP 1-6
Paul W. Webb	Feb 26 2019	12:00 pm	SOP 1-6
Paul W. Webb	Feb 27 2019	12:00 pm	SOP 1-6
Paul W. Webb	Feb 28 2019	12:00 pm	SOP 1-6
Paul W. Webb	Feb 29 2019	12:00 pm	SOP 1-6
Paul W. Webb	Feb 30 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 1 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 2 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 3 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 4 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 5 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 6 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 7 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 8 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 9 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 10 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 11 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 12 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 13 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 14 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 15 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 16 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 17 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 18 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 19 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 20 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 21 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 22 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 23 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 24 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 25 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 26 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 27 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 28 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 29 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 30 2019	12:00 pm	SOP 1-6
Paul W. Webb	Mar 31 2019	12:00 pm	SOP 1-6

PERSON	DATE	TIME	ACTIVITY OR DESCRIPTION OF WORK
Lois Pattison	Nov 2, 2015	10:30 am	Update Public Works Emergency Contact Listing
Travis George	March 24/16	1:00 pm	Read SOP's 1 to 6
Doug Brown	March 28/16	1:00 to 2:00 pm	Read all the SOP No # 1 to 6
Jeff Bayne	Apr 1 / 2016	1:00 pm - 2:00 pm	Read SOP # 1-6
Lois Pattison	September 1/16	10:00 am	Read SOP # 1-6 include
Doug Hise	September 10/16	5:30 am	SOP 1 thru 6
Greg Wiedenhoeff	Sept. 14/16	1:00 pm	Reviewed SOP 1 to thru 6
Brad Webb	Oct 3/16	11:00 am	SOP 1-6
Rebecca White	Oct 3/16	11:30 am	SOP 1-6
Paul Keresztes	Sep 14/16	09:00	Read SOP 1-6
Doug Hise	FEB. 8 / 2017	1:20 pm	Reviewed SOP 1 to 6
Travis George	March 1/17	1:50	Read SOP 1-6
Lois Pattison	March 03/17	1:00 pm	Read Binder
Travis Rob	March 23, 2017	2:35 pm	Read Binder
Greg Wiedenhoeff	Apr 5 / 2017	9:45 am	Read Binder
Lois Pattison	June 2/17	1:00 pm	Read Binder
Paul Keresztes	June 5/17	1:00 pm	Read Binder
Brad Webb	AUGUST 2017	10:00	REVIEWED SOP 1-6
Douglas Hise	Sept 27/17	7:30 am	SOP 1-6
Travis Rob	FEB. 27/18	2:30 pm	SOP - 1 through 6
Lois Pattison	March 8, 2018	2:26 pm	SOP - 1 through 6
Travis George	March 9 / 2018	11:30 am	SOP - 1 through 6
Doug Brown	March 9 / 2018	3:00 pm	SOP - 1 through 6
Greg Wiedenhoeff	April 4 / 2018	3:00 pm	SOP - 1-6
Greg Wiedenhoeff	June 4 / 2018	8:30 am	SOP - 1-6

# EMERGENCY BINDER RECORD SHEET

PERSON	DATE	TIME	ACTIVITY OR DESCRIPTION OF WORK
Doug Brown	June 12/12	1:30 to 3:30	Read - SOP No. 1, 2, 3, 4, 5 & 6 with the following staff: Randy White, Brad Webb, Mike Allen, Paul Lemenius & Travis Rob Doug Here
Doug Brown	June 13/12	8:30 am	up dated / Revised public Works Emergency Contact List Doug
Doug Brown	June 13/12	10:20 am	Replaced SOP No. 3, 4, 5 & 6 with unapproved or Draft policies.
Douglas Here	JUNE 27, 2012	1:00 P.M.	REPLACED DRAFT SOPs No. 3, 4, 5 & 6 WITH APPROVED SOPs
Douglas Here	JUNE 28, 2012	8:35 AM	REPLACED COMMUNITY CONTROL GROUP CONTACT LISTING WITH AN UPDATED EMERGENCY MANAGEMENT PROGRAM COMMITTEE LISTING.
Sandra Robertson	Nov 26, 2012	1:45 PM	Updated Suppliers of Bottle Drinking Water removed outdated Resource Contacts and updated Table of Contents
Grey Wiedenhaeft	Dec 19, 2012	7:30 AM - 9:30 AM	Read - SOP No. 1, 2, 3, 4, 5 & 6
Sandra Robertson	Jan 21, 2013	12:20 pm	Updated Public Works Emergency Contact Listing
Douglas Here	FEB. 19, 2013		EMERGENCY RESPONSE TRAINING - SOP No. 3 - COMPLETED.
Douglas Here	FEB. 21, 2013	9:30 a.m.	UPDATED SOP No. 3 (JUNE 2012 to FEBRUARY 2013)
Douglas Here	APRIL 24/13	3:00 pm	Read Sop 1-6
Doug Here	SEPT. 26, 2013	8:00 a.m.	Read - Sop 1, 2, 3, 4, 5 & 6 WITH THE FOLLOWING STAFF: RANDY WHITE, MIKE ALLEN, PAUL LEMENIUS, RANDY MAGNUSON & GREG WIEDENHAFT. AND LORI PATTISON
Lori Pattison	OCT 16/2013	1:00 pm	Revised emergency contact listing

# EMERGENCY BINDER RECORD SHEET

PERSON	DATE	TIME	ACTIVITY OR DESCRIPTION OF WORK
Brad Webb	Dec 16/13	10:00 AM	Read SOP # 1-6
Doug Brown	May 12/14	7:45 AM	Read SOP # 1, 2, 3, 4, 5 & 6
Brad Webb	May 26/14	3:00 PM	Read SOP 1-6 and rest of book
Lin Pattison	May 28/14	11:45 AM	Replaced Municipal Emergency Management Listing
Doug HEAR	SEPT. 25. 2014	2:30 P.M.	READ SOPs 1-6 WITH THE FOLLOWING STAFF: MIKE ALLEN, PAUL LEMESURIER, GREG WICKHAMBERT, TRAVIS GEORGE, DOUG WEBB, DAVE HEAR & LIN PATTISON.
Randy White	Sept 29/14	2:00 PM	Read SOPs 1 to 6 Randy White
Doug Brown	March 11/15	12:00 noon	Read SOP No. 1, 2, 3, 4, 5 & 6.
Travis George	March 27/15	7:30 AM	Read SOP # 1, 2, 3, 4, 5, 6
Lin Pattison	March 24/15	9:00 AM	Replaced Municipal Emergency Management Listing
Lin Pattison	March 31/15	10:45 AM	Read SOP # 1-6
Lin Pattison	19 Sept 27/15	4:00 PM	Read SOP # 1-6
Doug HEAR	SEPT. 24/15	4:20 PM	Read SOPs 1 through 6.
Greg Wickhambert	Sept 25/15	8:00 AM	Read SOP. 1-6
PAUL LEMESURIER	25 SEPT 2015	09:00	READ SOP 1-6
Brad Webb	25 Sept 15	2:00	Read SOP 1-6
Randy White	Sept 28/2015	9:00 AM	Read S.O.P.s 1 to 6



Attachment B.7

Location	Date	Type	Main System	Subcategory
Sixth St. W - 500 block	2018-06-27	Water	Main Break/Repairs	Repair water main break - crack in pipe. Installed repair clamp.
Sixth St. W - 416	2018-09-20	Water	Water Service Breaks/Repairs	Repair broken service goose neck
Mowat Ave - Intersecting Nelson	2018-12-12	Water	Main Break/Repairs	Repair water main on Nelson
Idylwild Dr - Along Point Park Playground	2019-01-08	Water	Main Break/Repairs	Main Break Repair
Calder Dr. - 1301	2019-01-09	Water	Main Break/Repairs	Repair broken water main at point park. 2 bolt joint.
Holmes Ave - 384	2019-01-24	Water	Main Break/Repairs	Main Break Repair
Armit Ave - 714	2019-02-13	Water	Water Service Breaks/Repairs	Repair broken service between main stop and c/s
Victoria - 907	2019-02-19	Water	Water Service Breaks/Repairs	Repair split water service
Armit Ave - 428	2019-03-14	Water	Main Break/Repairs	Applied repair clamp around circumferential crack
Armit - 200 Block	2019-05-06	Water	Main Break/Repairs	Main Break along Armit between Sinclair and Front

## Attachment B.8

### Raw Water Supply and Drinking Water Quality Trends

Raw Water Quality Trends:

Date Sampled	Parameters			
	Alkalinity (mg/L)	Colour (TCU)	pH	THMs (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
July 23, 2019			7.03	

No colour data

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

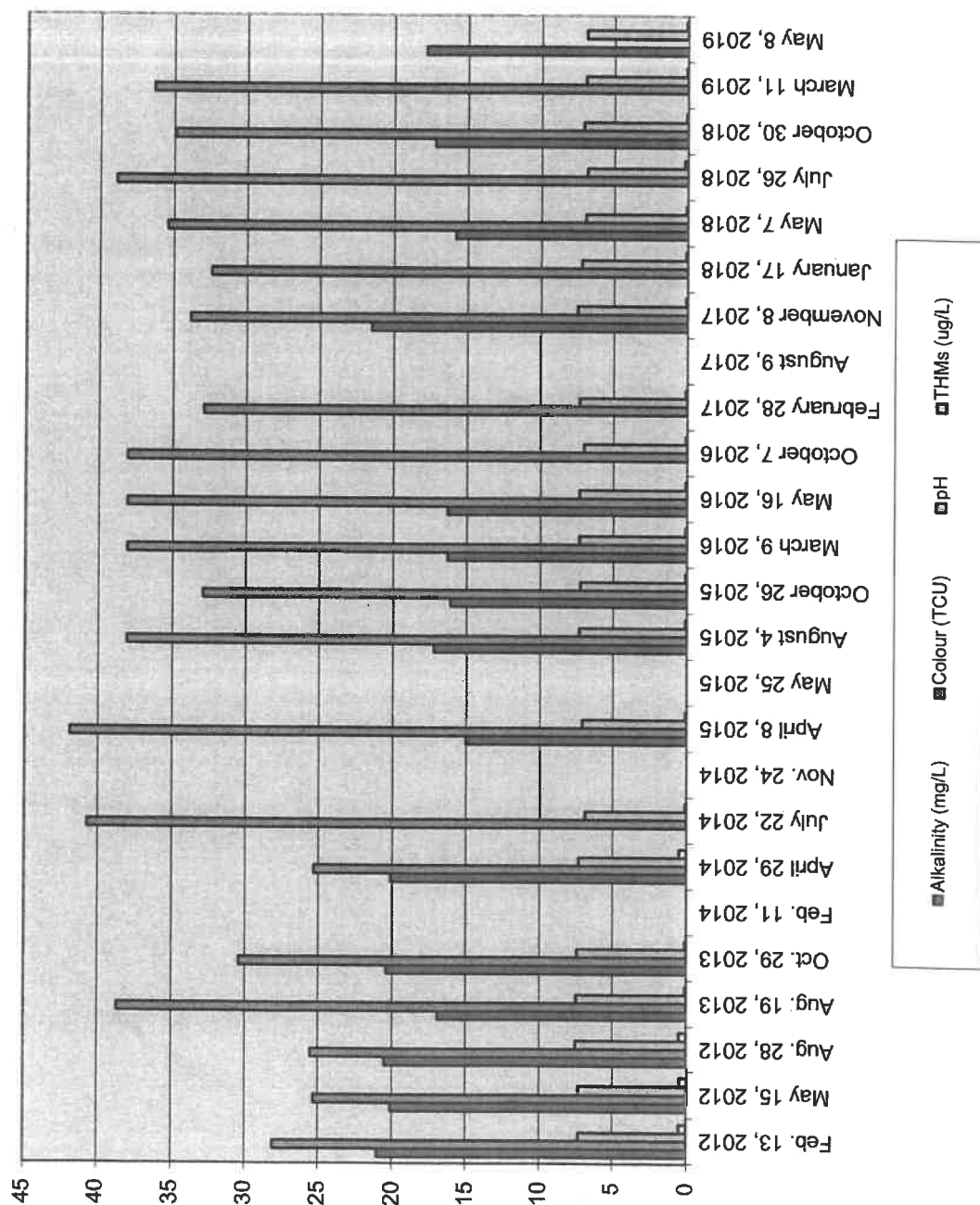
### Treated Water Quality Trends:

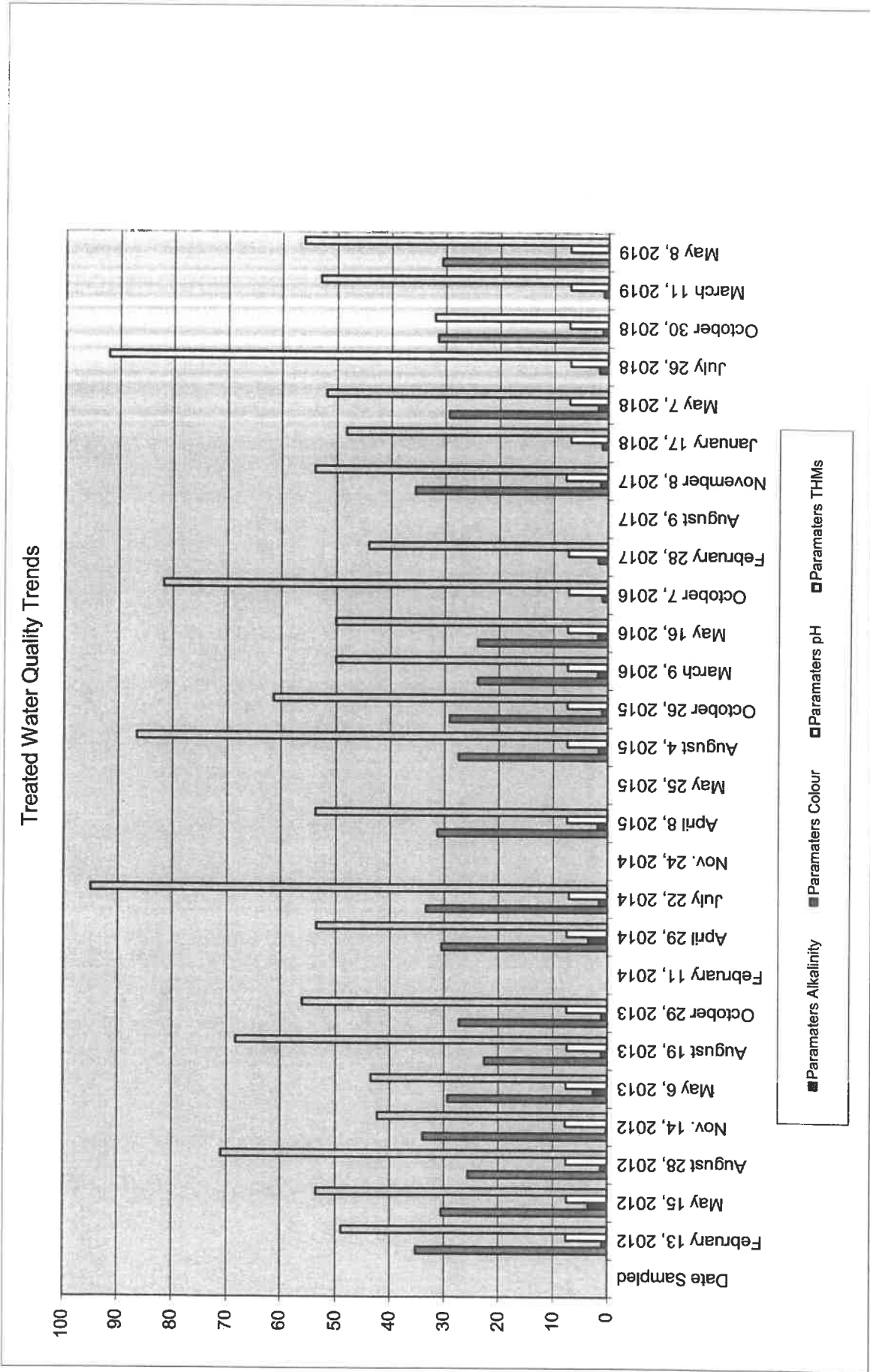
Date Sampled	Parameters			
	Alkalinity (mg/L)	Colour (TCU)	pH	THMs (ug/L)
February 13, 2012	35.2	1.0	7.59	49
May 15, 2012	30.5	3.5	7.46	53.5
August 28, 2012	25.6	1.2	7.63	71
Nov. 14, 2012	33.9	0.2	7.73	42.3
May 6, 2013	29.3	2.6	7.59	43.5
August 19, 2013	22.6	1.1	7.43	68.3
October 29, 2013	27.2	1.1	7.49	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
July 23, 2019			7.24	

No colour data

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

Raw Water Quality Trends





**Attachment B.12**

**Customer Complaints**  
(June 01, 2018 to May 31, 2019)

Location	Received	Resolved	Complaint	Resolution
1. 1213 Second St. E	9/21/2018	9/21/2018	Foul Odour and Taste	Problem had rectified itself prior to same day arrival. Advised customer to run cold water if problem recurred and to call back. 0.69 free chlorine residual.
2. 811 Armit Ave	12/4/2018	<del>12/11/2019</del> 2018	Foul Odour in bathroom	Took water sample. Advised customer to flush. 1.77 free chlorine residual. Bacti test results returned with no issues.

Attachment B.15

# 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



The Town of Fort Frances Water System  
General QMS Administration

PROCEDURE TITLE: Document Change Request Form

REVISION #4

QMS REFERENCE: Element No. 5 - APPENDIX "A"

QMS REPRESENTATIVE: *[Signature]*

## DOCUMENT CHANGE REQUEST FORM

Requested By: QMS Team

Date: April 12, 2018

Department: O. & F. Division

### Type of Change:

**Edit Existing Document**

**Create New Document**

**Delete Document**

### Changes Requested:

1. Replace references to "Doug Herr" with "Craig Miller"
2. Replace references to "Environmental and Facilities Superintendent" with "Environmental Superintendent"
3. Replace references to MOE and/or MOECC with MECP to reflect the proper name of the Ministry responsible for Environmental Legislation within the Province of Ontario.

### Justification for Changes:

The "Environmental & Facilities Superintendent" Doug Herr retired in June 2018 and the role was backfilled by Craig Miller as "Environmental Superintendent".

The Ministry of Environment was renamed to the Ministry of Environment, Conservation and Parks (MECP).

### Proposed Changes:

Global replacement of the above referenced terms throughout the QMS Operational Plan Document Revision No

### Approval:

QMS Representative: *[Signature]*

Date: 4/15/19

Comments: 2019 DCR #1 – Applicable to all sections

The Town of Fort Frances Water System  
General QMS Administration

PROCEDURE TITLE: Document Change Request Form

REVISION #4

QMS REFERENCE: Element No. 5 - APPENDIX "A"

QMS REPRESENTATIVE: 

## DOCUMENT CHANGE REQUEST FORM

**Requested By:** QMS Team

**Date:** April 12, 2018

**Department:** O. & F. Division

### Type of Change:

**Edit Existing Document**

**Create New Document**

**Delete Document**

### Changes Requested:

1. Update page 7 to reflect current council and administration as of April 2019.

### Justification for Changes:

The existing listing is out of date due to Municipal Elections in October 2018 and retirements from administration.

### Proposed Changes:

Existing	Proposed	Position
Roy Avis	June Caul	Mayor
Rick Wiedenhoeft	Rick Wiedenhoeft	Councilor
Paul Ryan	John McTaggart	Councilor
John Albanese	Michael Behan	Councilor
Sharon Tibbs	Douglas Judson	Councilor
Andrew Hallikas	Andrew Hallikas	Councilor
Ken Perry	Wendy Brunetta	Councilor
Mark McCaig	Doug Brown, P.Eng.	CAO
Doug Herr	Craig Miller, P.Eng.	Environmental Superintendent
Doug Brown	Travis Rob, P.Eng.	Operations & Facilities Manager

Page 1 of 1

### Approval:

**QMS Representative:**  **Date:** 4/15/19

**Comments:** 2019 DCR #2 – Applicable to Element #3 page 7.

The Town of Fort Frances Water System  
General QMS Administration

PROCEDURE TITLE: Document Change Request Form

REVISION #4

QMS REFERENCE: Element No. 5 - APPENDIX "A"

QMS REPRESENTATIVE: 

## DOCUMENT CHANGE REQUEST FORM

Requested By: QMS Team

Date: April 12, 2018

Department: O. & F. Division

### Type of Change:

**Edit Existing Document      Create New Document      Delete Document**

### Changes Requested:

1. Update first sentence from "The Town of Fort Frances ..." to "The Town of Fort Frances, as the owner and operator of the ...".
2. Add Friesen 5 (c/o George Friesen) immediately after Walleye Trailer Park
3. Add list of sites connected to the Town, located on Agency 1 lands.
4. Add clarification to the paragraph immediately following item 2 above.

### Justification for Changes:

Clarification of the role of the Town of Fort Frances.

### Proposed Changes:

1. The Town of Fort Frances, as the owner and operator of the water supply system, ...
2. d. Friesen 5 (c/o George Friesen): 121 Oakwood Drive
3. Also connected to the Town's water systems are 5 sites, located on Agency 1 federal lands. These are:
  - a. Rusty Myers Flying Service Ltd.
  - b. Treaty 3 Police Station
  - c. Nanicost Ltd.
  - d. Gizhewaadiziwin Health Access Centre
  - e. Seven Generations Educational Institute
4. The water treatment facility consists of ....

Page 1 of 1

### Approval:

QMS Representative:  Date: 4/18/19

Comments: 2019 DCR #3 – Applicable to Element #6 page 17

The Town of Fort Frances Water System  
General QMS Administration

PROCEDURE TITLE: Document Change Request Form

REVISION #4

QMS REFERENCE: Element No. 5 - APPENDIX "A"

QMS REPRESENTATIVE: 

## DOCUMENT CHANGE REQUEST FORM

**Requested By:** QMS Team

**Date:** April 12, 2018

**Department:** O. & F. Division

### Type of Change:

**Edit Existing Document**

**Create New Document**

**Delete Document**

### Changes Requested:

1. Update 7.2 to reflect consideration of "Potential Hazardous Events for Municipal Residential Drinking Water Systems to Consider in the DWQMS Risk Assessment" document issued by MECP.
2. Update last paragraph of 7.2 on page 29 to reflect change from "...once a year..." to "...once per calendar year..."

### Justification for Changes:

Requirement for DWQMS 2.0

### Proposed Changes:

Update 7.2 as per below:

In general, the procedure will:

- Identify and rank potential hazards to the water system
- Identify control measures to address hazards
- Identify Critical Control Points (CCPs) and associated methods of monitoring and controlling them.
- Consider potential hazardous events as identified in MECP document, issued February 2017, "Potential Hazardous Events for Municipal Residential Drinking Water Systems to Consider in the DWQMS Risk Assessment".

&

"...the QMS Team shall meet once per calendar year to review..."

### Approval:

**QMS Representative:** 

**Date:** 4/15/19

**Comments:** 2019 DCR #4 – Applicable to Element #7 pages 27, 28

The Town of Fort Frances Water System  
General QMS Administration

PROCEDURE TITLE: Document Change Request Form

REVISION #4

QMS REFERENCE: Element No. 5 - APPENDIX "A"

QMS REPRESENTATIVE: *194-1, done*

## DOCUMENT CHANGE REQUEST FORM

Requested By: QMS Team

Date: April 12, 2018

Department: O. & F. Division

### Type of Change:

**Edit Existing Document    Create New Document    Delete Document**

### Changes Requested:

1. Update "reservoir" element item on page 34 to change from AWWA to Ontario Provincial Standard.
2. Add "Treatment – Sustained Extreme Heat" element on page 36.
3. Add "Distribution – Sustained Extreme Cold" element on page 36.

### Justification for Changes:

1. Update in Ontario Provincial Standards.
2. Requirement for DWQMS 2.0
3. Requirement for DWQMS 2.0

### Proposed Changes:

1. Isolate one (1) reservoir. Notify MOH & MECP SAC. Drain, repair, clean and disinfect per "Procedure for Disinfection of Drinking Water in Ontario", increase chlorine dosage and issue water restrictions. – page 34
2. See attached – page 36

Page 1 of 1

### Approval:

QMS Representative: *[Signature]* Date: 4/15/19

Comments: 2019 DCR #5 – Applicable to Element #8 pages 34 and 36

The Town of Fort Frances Water System  
General QMS Administration

PROCEDURE TITLE: Document Change Request Form

REVISION #4

QMS REFERENCE: Element No. 5 - APPENDIX "A"

QMS REPRESENTATIVE: 

## DOCUMENT CHANGE REQUEST FORM

Requested By: QMS Team

Date: April 12, 2018

Department: O. & F. Division

### Type of Change:

**Edit Existing Document**

**Create New Document**

**Delete Document**

### Changes Requested:

1. Update "Operators" and "Operators in Training" responsibilities to include as QMS Team Members.

### Justification for Changes:


1. Entire Water Distribution and Water Treatment staff are part of QMS team.

### Proposed Changes:

1. Add "QMS Team Member" to final line under each role responsibility on page 44.

Page 1 of 1

### Approval:

QMS Representative: 

Date: 4/15/19

Comments: 2019 DCR #6 – Applicable to Element #9 page 44

The Town of Fort Frances Water System  
General QMS Administration

PROCEDURE TITLE: Document Change Request Form

REVISION #4

QMS REFERENCE: Element No. 5 - APPENDIX "A"

QMS REPRESENTATIVE: 

## DOCUMENT CHANGE REQUEST FORM

Requested By: QMS Team

Date: April 12, 2018

Department: O. & F. Division

### Type of Change:

**Edit Existing Document**

**Create New Document**

**Delete Document**

### Changes Requested:

1. Update "Over All" to "Overall" in section 10.1 on page 45.
2. Update "AWWA" to "Procedure for Disinfection of Drinking Water in Ontario" in section 10.1 page 47.
3. Update Class I, Class II and Class III Operators on pages 47 and 48.

### Justification for Changes:

1. Grammatical correction
2. Update to Ontario Standards.
3. Clarification to match Ontario Regulation 128/04.

### Proposed Changes:

1. The Overall Responsible Operator (OROs)...
2. Safely repair and maintain distribution system in accordance with the "Procedure for Disinfection of Drinking Water in Ontario" standard and Town of Fort Frances policies.
3. An Operator-In-Training may progress to become a Class I Operator after completing the necessary training, education, examinations and experience as required by the MECP, in accordance with Ontario Regulation 128/04.
4. A Class I Operator may progress to become a Class II Operator after completing the necessary training, education, examinations and experience as required by the MECP, in accordance with Ontario Regulation 128/04.
5. A Class II Operator may progress to become a Class III Operator after completing the necessary training, education, examinations and experience as required by the MECP, in accordance with Ontario Regulation 128/04.

Page 1 of 1

### Approval:

QMS Representative: 

Date: 4/15/19

Comments: 2019 DCR #7 – Applicable to Element #10 pages 45, 47, 48

The Town of Fort Frances Water System  
General QMS Administration

PROCEDURE TITLE: Document Change Request Form

REVISION #4

QMS REFERENCE: Element No. 5 - APPENDIX "A"

QMS REPRESENTATIVE:                     

## DOCUMENT CHANGE REQUEST FORM

Requested By: QMS Team

Date: April 12, 2018

Department: O. & F. Division

### Type of Change:

**Edit Existing Document      Create New Document      Delete Document**

### Changes Requested:

1. Edits to paragraph 12.4. Remove "Essential", add "as outlined in element 13"

### Justification for Changes:

1. To ensure all suppliers receive communications.

### Proposed Changes:

1. *QMS Communication Method* – Suppliers, as outlined in Element 13, will receive information from the Environmental Superintendent regarding the QMS if and when it relates to them either by phone, fax or e-mail.

Page 1 of 1

### Approval:

QMS Representative:  Date: 4/15/19

Comments: 2019 DCR #8 – Applicable to Element #12 page 52



The Town of Fort Frances Water System  
General QMS Administration

PROCEDURE TITLE: Document Change Request Form

REVISION #4

QMS REFERENCE: Element No. 5 - APPENDIX "A"

QMS REPRESENTATIVE:                     

## DOCUMENT CHANGE REQUEST FORM

**Requested By:** QMS Team

**Date:** April 12, 2018

**Department:** O. & F. Division

### Type of Change:

**Edit Existing Document      Create New Document      Delete Document**

### Changes Requested:

1. Edits to 13.2 page 54. Update re-order points for Aluminum Sulphate and \*Poly. Correct spelling of Aluminum.
2. Add Metcon Engineering as a supplier of Water Meters on page 57.

### Justification for Changes:

1. To ensure re-order points match daily practice.
2. To ensure supplier list is accurate.

### Proposed Changes:

1. Aluminum Sulphate – at low level  
\*Poly – when supply is one-half depleted (Qty 15 x 25 kg bags)
3. Metcon Sales and Eng'g  
3 – 15 Connie Cres  
Concord, ON  
L4K 1L3  
905-738-2355

Page 1 of 1

### Approval:

**QMS Representative:** 

**Date:** 4/15/19

**Comments:** 2019 DCR #9 – Applicable to Element #13 pages 54 and 57

The Town of Fort Frances Water System  
General QMS Administration

PROCEDURE TITLE: Document Change Request Form

REVISION #4

QMS REFERENCE: Element No. 5 - APPENDIX "A"

QMS REPRESENTATIVE: 

## DOCUMENT CHANGE REQUEST FORM

Requested By: QMS Team

Date: April 12, 2018

Department: O. & F. Division

### Type of Change:

**Edit Existing Document**

**Create New Document**

**Delete Document**

### Changes Requested:

1. Add "risk assessment outcomes" to first paragraph

### Justification for Changes:

1. To ensure all applicable documents are being reviewed.

### Proposed Changes:

1. At this meeting the water quality consumer complaints records, risk assessment outcomes, equipment and machinery breakdown records, process control data, GIS database and the monthly reports will be reviewed.

Page 1 of 1

### Approval:

QMS Representative: 

Date: 4/15/19

Comments: 2019 DCR #10 – Applicable to Element #14 page 58

The Town of Fort Frances Water System  
General QMS Administration

PROCEDURE TITLE: Document Change Request Form

REVISION #4

QMS REFERENCE: Element No. 5 - APPENDIX "A"

QMS REPRESENTATIVE: 

## DOCUMENT CHANGE REQUEST FORM

Requested By: QMS Team

Date: April 12, 2018

Department: O. & F. Division

### Type of Change:

**Edit Existing Document**

**Create New Document**

**Delete Document**

### Changes Requested:

1. Removed reference in 15.1 to ORO experience on page 60.
2. Change final sentence in 15.1 to reflect use of City Wide software package.
3. Update 15.4 to reflect "once per calendar year" on page 62.

### Justification for Changes:

1. Senior staff will be retiring in upcoming years and citing years of experience is not required for this section.
2. Update to reflect use of "City Wide" software package
3. Required per DWQMS 2.0.

### Proposed Changes:

1. The water operators at the Town's Water Treatment Plant (WTP) perform daily, weekly, quarterly and annual maintenance activities as per the operations/maintenance schedules outlined in Appendix "C". Equipment manufacturers and/or suppliers originally define scheduled maintenance tasks.
2. The town has selected a preventative maintenance software program called "City Wide" to manage the Town's tangible assets.
3. Once per calendar year, the O & F Division Manager prepares a 5-year capital budget document for the entire O & F Division. Included in this budget document is a summary of all major rehabilitation and renewal capital expenditures planned for the water system for the next 5 years.

Page 1 of 1

### Approval:

QMS Representative: 

Date: 4/15/19

Comments: 2019 DCR #11 – Applicable to Element #15 pages 60 and 62

The Town of Fort Frances Water System  
General QMS Administration

PROCEDURE TITLE: Document Change Request Form

REVISION #4

QMS REFERENCE: Element No. 5 - APPENDIX "A"

QMS REPRESENTATIVE: 16 4

## DOCUMENT CHANGE REQUEST FORM

**Requested By:** QMS Team

**Date:** April 12, 2018

**Department:** O. & F. Division

**Type of Change:**

**Edit Existing Document**

**Create New Document**

**Delete Document**

**Changes Requested:**

1. Full revision of Element 21

**Justification for Changes:**

1. Overhaul of Element 21 required per changes to DWQMS 2.0.

**Proposed Changes:**

1. See attached revisions to Element 21.

Page 1 of 1

**Approval:**

**QMS Representative:**



**Date:**

4/15/19

**Comments:** 2019 DCR #12 – Applicable to Element #21

The Town of Fort Frances Water System  
General QMS Administration

PROCEDURE TITLE: Document Change Request Form

REVISION #4

QMS REFERENCE: Element No. 5 - APPENDIX "A"

QMS REPRESENTATIVE:                     

## DOCUMENT CHANGE REQUEST FORM

**Requested By:** QMS Team

**Date:** April 12, 2018

**Department:** O. & F. Division

**Type of Change:**

**Edit Existing Document**

**Create New Document**

**Delete Document**

**Changes Requested:**

1. Updated cellular phone numbers and contacts listed in Appendix E and Schedule C

**Justification for Changes:**

1. Outdated information

**Proposed Changes:**

1. See attached revisions.

Page 1 of 1

**Approval:**

**QMS Representative:** 

**Date:** 4/15/19

**Comments:** 2019 DCR #13 – Applicable to Appendix E and Schedule C

The Town of Fort Frances Water System  
General QMS Administration

PROCEDURE TITLE: Document Change Request Form

REVISION #4

QMS REFERENCE: Element No. 5 - APPENDIX "A"

QMS REPRESENTATIVE: *4/15/19*

## DOCUMENT CHANGE REQUEST FORM

Requested By: QMS Team

Date: April 22, 2018

Department: O. & F. Division

### Type of Change:

**Edit Existing Document**

**Create New Document**

**Delete Document**

### Changes Requested:

1. Add reference in notes on p.67 to reflect possibility of reduced lead sampling under the "Lead" heading.
2. Correct the specified location for fluoride and alum sampling in section 16.1 page 68
3. Add "chlorine residual" to list of items that the operator records in section 16.2 page 69

### Justification for Changes:

1. The town can ask the MECP for reduced lead sampling requirements after a series of successful lead tests, as specified by the MECP.
2. The sampling locations for fluoride and alum are switched.
3. Chlorine residual is one of the items that the operators record on a regular basis.

### Proposed Changes:

1. In every third 12-month period samples are to be taken in each sampling periods (December 15 to April 15 and June 15 to October 15). Require for two consecutive periods. (3 samples to be taken at each location and tested for lead, total alkalinity & pH). At the MECP's discretion, reduced lead sampling can be applied after satisfactory compliance. This reduces the sampling requirements to 20 residential plumbing samples; 2 business plumbing samples and 4 hydrant samples from the distribution system.
2. ...
  - Fluoride residual is measured on the treated water.
  - Alum residual is measured on the filtered water.
3. The water distribution system operator records water sampling information, i.e., location, date, time, chlorine residual and operator name taking the sample and signs off within a logbook.

Page 1 of 1

### Approval:

QMS Representative: *[Signature]*

Date: 4/15/19

Comments: 2019 DCR #14 – Applicable to Element #16 pages 67-69



**Town of Fort Frances**

**Fort Frances Drinking Water System**

**Meeting Minutes**

**Date:** Wednesday June 13, 2018

**Time:** 10:00 A.M.

**Location:** Fort Frances Water Treatment Plant

**In Attendance:** Doug Brown, CAO, Doug Herr, Paul Lemesurier, Jay Bruyere, Greg Wiedenhoeft, Linda Carmody, Brad Webb, Bryan Patterson and Travis Rob.

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.

---

**Item 1 – Incidents of regulatory non-compliance:**

Ministry of the Environment (MOE) Annual Inspection Report (2017/2018)

Date of Inspection: January 22<sup>nd</sup> and January 23<sup>rd</sup>, 2018.

Non-compliance with regulatory requirements – No items identified.

**Actions Required:**

None.

**Item 2 – Incidents of adverse drinking water tests:**

WTP:

No adverse treated water samples

Water Distribution System:  
No adverse treated water samples.

**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 on January 29, 2018 and April 4, 2018.

No changes in limits or existing response actions.

New

The Ministry of the Environment and Climate Change approved revisions to the DWQMS Standard covering “Potential Hazardous Events for Municipal Residential Drinking Water Systems” which came into effect on April 6, 2017. The hazards identified in the document are to be considered at the time of the next scheduled Risk Assessment.

All the hazards identified in the “Potential Hazardous Events for Municipal Residential Drinking Water Systems” were considered by the team and the following hazards were added to the Town’s Risk Assessment:

- i) Long Term Impacts of Climate Change
- ii) Source Water Supply Shortfall
- iii) Extreme Weather Events
- iv) Algal Blooms

Reference – Element 7/8

**Item 4 – The effectiveness of the risk assessment process:**

The Operators reviewed the Risk Assessment Process on January 29, 2018 and April 4, 2018. We added four (4) new potential risks to listing. See 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 22, 2018 – undertaken by Tyson Dennis.  
No Corrective Actions were identified.



**Previous Audits:**

Issued May 29, 2017 – undertaken by Tyson Dennis  
No Corrective Actions were identified.

**External Audit Results:**

Latest off-site External Audit:

12 Month Surveillance Audit (November 1, 2017) – undertaken by SAI Global – accreditation program for operating authorities – No non-conformances were identified.

**Previous Off-Site External Audit**

Re-Accreditation Systems Audit

Off Site November 9, 2016 – undertaken by SAI Global – Accreditation Program for Operating Authorities

No non-conformances were identified.

On Site – November 4, 2015 – undertaken by SAI Global – Accreditation Program for Operating Authorities

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)

Updated Municipal Emergency Management Listing in the Emergency Response Binder March 7, 2018.

**Item 7 – Operational Performance:**

**WTP:**

Actions and recommendation from MOE  
As a result of the October 2017/18 MOE Inspection.

No non-compliances identified.

Personnel – Full complement

No other issues.

**Distribution System:**

Actions and recommendations from MOE  
As a result of the October 2017/18 MOE Inspection

No issues.

Personnel – Water Distribution Operators:  
Other employment – Travis George left April 6, 2018.

Addition – Bryan Patterson as of Tuesday April 24, 2018.

Full complement.

**Maintenance Issues:**

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

Frozen Waters – 35 residences

Valve Replacements done in 2017 as part of the roadway/infrastructure replacement on:

- a) Nelson Street – Crowe Avenue to Mosher Avenue – half block
- b) Second Street East – Mowat Avenue to Portage Avenue

During valve exercising some of the isolation valves began leaking or were very hard to turn. Replacement of these valves is recommended. Six (6) valves were scheduled for replacement in 2017, but due to costs only three (3) will be changed. These are over and above those to be replaced during the roadway/infrastructure reconstruction projects.

Main Valves replacements done in 2017:

- 1. Fifth Street West at Cornwall Avenue – East Side ( VAL 181)
- 2. Fifth Street East at Smith Street – East Side ( VAL372)
- 3. Strachan Place at Williams Avenue – East Side ( VAL550)

Some existing fire hydrants are obsolete, no parts to maintain them. Six (6) fire hydrants were scheduled for replacement in 2017, but due to costs only three (3) will be changed. These are over and above those to be replaced during the roadway/infrastructure reconstruction projects.

Fire Hydrant Replacements done in 2017:

1. Sixth Street East at Frenette Avenue (HYD252)
2. Second Street East at Shevlin Avenue (HYD283)
3. King's Highway approximately 100 m west of Pit Road No. 1 9HYD055)

**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:**

2017 Management Review Items

Four (4) items were identified in the last management review:

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 2018 – to go through the 2018 Capital Budget Process. Construction Season.

2. Installation of two additional valves along Sinclair Avenue between Victoria Avenue and Armit Avenue in order that the hospital facility can avoid unnecessary boil water advisories being issued.

Status: Letter sent to Riverside Healthcare requesting that their internal plumbing be upgraded to ensure adequate flow for fire protection from either Sinclair Street or Front Street. To date no response.

3. Ensure both Cemetery Irrigation Systems are properly plumbed to ensure the proper backflow protection c/w meter is in place.

Status: Due to lack of funding the project has been postponed to 2018 – to go through the 2018 Capital Budget Process. Construction Season.

4. Complete the installation of a watermain along Frenette Avenue between First Street East and Second Street East. First Street East is a dead end which causes water quality issues for customers and the Memorial Sports Centre.

Status: Scheduled to be completed in the 2018 Capital Construction Works.

**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 20, 2018; Revision No. 11).

**Item 12 - Consumer Feedback:**

Customer complaints: Last period – 8 complaints – this period 4 complaints.

Notes:

1. Construction projects last year and in 2017, therefore dead-end mains have been temporarily created as a result – causes stagnate and discoloured water issues.
2. Result of water main breaks
3. Maintenance – valve exercising.

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

Status: Ongoing

**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:

Interior painting of floors and process piping – in progress

Replaced bucket elevator on Soda Ash System.

Installed a new soda ash dust collector motor.

**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 2

Hydrant flushing: Flushing annually

Fire hydrant replacements:

2017 – Nelson Street Reconstruction (Bay City) – 1 of 1 hydrants

- Second Street East (Bay City) – 1 of 1 hydrants

- Various locations (Bay City) – 3 of 6 hydrants

Water main isolation valve replacements:

2017 – Nelson Street Reconstruction (Bay City) – 3 of 3 valves

- Second Street East (Bay City) – 0 of 0 valves

- Various locations (Bay City) – 3 of 6 valves

Water main replacement (Construction projects):

Nelson Street: Mosher Avenue to Butler Avenue – half block

Second Street East: Mowat Avenue to Portage Avenue

Water meters/backflow device installations – ICI sector, ongoing

**Scheduled for 2018 Construction:**

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

- a) Third Street East: Williams Avenue to Colonization Road East
- b) Colonization Road East/Mill Road; Elizabeth Street to Lake Road

**Item 15 – Operational plan currency, content and updates:**

Current revision date: April 20, 2018 – Revision 11

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. Element 8 – Risk Assessment Outcomes – revisions to the DWQMS Standard covering “Potential Hazardous Events for Municipal Residential Drinking Water Systems.”
2. Element 13 – Essential Suppliers and Services: Equipment supplier and services update.

3. Element 16 – Sampling, Testing and Monitoring – include testing for Haloacetic Acid (HAA) in drinking water systems and correction regarding in-house daily testing for fluoride and alum.

Status – ongoing

**Item 16 – Staff Suggestions:**

1. Replace approximately 500 meters of 150 mm diameter water main along Colonization Road West (from 1302 Colonization Road West to 1448 Colonization Road West).
2. 400 Block of Armit Avenue
3. 400 Block of Nelson
4. Mowat Avenue from Second Street to Church Street.
5. Ensure both Cemetery Irrigation Systems are properly plumbed to ensure the proper backflow protection c/w meter is in place. The timeline is in accordance with the 2018 budget process where the O & F Division Management will prepare the cost estimate for installation and present this capital expenditure to Council (owner) . The Riverview Cemetery Irrigation System modifications can take place at the same time as completing action item No. 1.

**Update – Revision to the Drinking Water Quality Management Standard**

Revisions have been made by the Ministry of the Environment and Climate Change to the Drinking Water Quality Management Standard, which came into effect April 6, 2017. As part of the revisions a supplementary document “Potential Hazardous Events for Municipal Residential Drinking Water Systems” was introduced. The hazards identified within this document were addressed and included in the Town’s present DWQMS Operational Plan. As for the remaining changes, they must be incorporated in the Operational Plan before the first audit taking in 2019.

June 21, 2018

Report To: Mayor and Council

From: Travis Rob, Manager of Operations and Facilities

**RE: Drinking Water Quality Management System - Management Review**

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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** (off-site table top verification) completed by SAI Global on November 1, 2017 - Auditor Ms. Krisi McLandress
- 2) **7th Internal Audit**, second audit completed by Mr. Tyson Dennis from May 1 to May 22, 2018.
- 3) **7th Management Review Meeting** held on Wednesday June 13, 2018 to review the implementation of the DWQMS for the period June 1 2017 to May 31, 2018.

Please find attached the agenda package plus the associated documents which were reviewed at the June 13, 2018 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 six (6) action items, **rated in priority**, that Council (owner) must review and endorse at this time:

Action Item No. 1) **Replace approximately 500 meters of 150mm diameter water main along Colonization Road West** (from 1302 Colonization Road West to 1448 Colonization Road West). The timeline is in accordance with the 2019 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. 2) **Replace Approximately 140m of 150mm diameter water main along the 400 Block of Armit Avenue**. The timeline is in accordance with the 2019 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 2019 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 2019 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.

**Action Item No. 6) Ensure both Cemetery Irrigation Systems are properly plumbed to ensure the proper backflow protection c/w meter is in place.** The timeline is in accordance with the 2018 budget process where the O & F Division Management will prepare the cost estimate for installation and present this capital expenditure to Council (owner). The Riverview Cemetery Irrigation system modifications can take place at the same time as completing action item No. 1

Administration recommends the following:

- 1) That Council (owner) has reviewed the agenda package of the management review meeting held on June 13, 2018.
- 2) That Council (owner) has reviewed and accepted the following six (6) action items as a result of the management review meeting held on June 13, 2018

**Action Item No. 1) Replace approximately 500 meters of 150mm diameter water main along Colonization Road West**

**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**

**Action Item No. 6) Ensure both Cemetery Irrigation Systems are properly plumbed to ensure the proper backflow protection c/w meter is in place.**



Travis Rob, P.Eng.  
Manager of Operations and Facilities

**Council Approval of this report will ensure the following:**

- 1) That Council (owner) has reviewed the agenda package of the management review meeting held on June 13, 2018.
- 2) That Council (owner) has reviewed and accepted the following six (6) action items as a result of the management review meeting held on June 13, 2018

**Action Item No. 1) Replace approximately 500 meters of 150mm diameter water main along Colonization Road West**

**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**

**Action Item No. 6) Ensure both Cemetery Irrigation Systems are properly plumbed to ensure the proper backflow protection c/w meter is in place.**