

RM of Montcalm
Public Water System
Annual Report – 2018

The RM of Montcalm Public Water System, 2018 Annual Report was placed on the RM website (www.rmofmontcalm.com) on May 3, 2019

Free paper copies of the report are available at the RM of Montcalm administration building located at 46 – 1st Street East, Letellier, MB.

The public will be notified via the town newsletter (published quarterly), on the RM website, as well as a poster on the bulletin board in the Town office.

RM of Montcalm Public Water System

Annual Report, 2018

Licence Numbers: PWS-08-243-01, PWS-08-244-01

Water System Codes: 114.00, 142.75

Name of the Public Water Systems:

RM of Montcalm (RRR) – PWS

RM of Montcalm (Morris) – PWS

Name of Legal Owner – Rural Municipality of Montcalm

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Report Prepared: April 30, 2019

The 2018 Annual Report for the RM of Montcalm PWS, summarizes the Water Utility's ability to distribute safe, potable water and meet provincial regulations

1. Description of the Water System

The RM of Montcalm PWS provides potable water to a population of approximately 780 residents. Treated water is supplied by the Pembina Valley Water Coop and meets all objectives as stated in the Guidelines for Canadian Drinking Water Quality.

1.1 Water Supply Source

The RM of Montcalm Water System receives treated water from the Pembina Valley Water Coop (PVWC). For more information on the water treatment process, go to: www.pvwc.ca

1.2 Storage Reservoirs

1.2.1 St Joseph WTP

Reservoir Capacity: 79 600 L

1.2.2 St Jean Baptiste WTP

Reservoir Capacity: 348 342 L

1.3 Distribution System

1.3.1 St Joseph WTP

Treated water from the reservoirs is pumped throughout the RM of Montcalm distribution system via 2 pumps; a 1 horsepower duty pump and a 5 horsepower duty pump

1.3.2 St Jean Baptiste WTP

Treated water from the reservoirs is pumped throughout the RM of Montcalm distribution system via two 5 horsepower duty pumps and a gas operated emergency pump

1.3.3 Other

Locations within the RM of Montcalm but outside of St Joseph and St Jean Baptiste that have water service, receive their supply directly from the PVWC distribution system

1.4 Number of Connections, population serviced and types of users

The RM of Montcalm distribution system is comprised of 480 service connections of which 430 are domestic and 50 are commercial. All connections are metered

1.5 Classification and Certification

Operators are certified under Manitoba Conservation's Water and Wastewater Facility Operators Regulation under the Environmental Act

Chad Buhlin – Supervisor WD1, WT1, WWC1, WWT1

Matthew Klapka WD2, WT2

Legend

WT-Water Treatment

WD-Water Distribution

WWT-Waste Water Treatment

WWC-Waste Water Collection

CC-Conditional Certificate

2. Disinfection system in use

The last step before distribution is the addition of 12% sodium hypochlorite to the water while entering the reservoirs. The dosage is flow-paced to maintain a minimum of 0.5 mg/L free chlorine before entering the distribution system. There is a minimum of 0.1 mg/L of free chlorine at all times in the distribution system.

2.1 Equipment and Monitoring requirements

As required, the RM of Montcalm PWS insures continuous disinfection is maintained by stocking all spare parts for chlorinators and a complete spare chlorinator is kept at the reservoirs. Free Available and Total Chlorine residuals are monitored **daily** at the reservoirs and bi-weekly throughout the distribution system. A Hach portable test kit is used for the testing. All results are recorded on the appropriate monitoring forms. Bi-Weekly samples are sent to ALS Labs for testing. Monthly chlorination reports are sent to the Drinking Water Officer at the end of each month.

Tests performed by-Weekly:

Total coliform: a measurement of the total coliform present in bi-weekly samples submitted to ALS Labs

Escherichia coli: a measurement of Escherichia coli present in bi-weekly samples submitted to ALS Labs

Every second year, quarterly samples are also collected in the distribution system and submitted to the lab for **THM and HAA** testing

THM: is the abbreviation for Trihalomethane, which is a chlorinated disinfection byproduct.

HAA: is the abbreviation for Haloacetic Acids which is a chlorinated disinfection byproduct.

2.2 Overall performance

For 2018, the RM of Montcalm did not meet all daily sampling requirements. The following tables outline the requirements and performance of the PWC in the RM of Montcalm for 2018 as outlined in the Operating License:

Disinfection Monitoring and Reporting

	Regulatory Requirement	PWS Performance
A)Free Chlorine residual entering the distribution system Section 21(1)a-MR40/2007	$\geq 0.5\text{mg/L}$	97.25%
B)Frequency of Testing entering the distribution system Section A-MR40/2007	Daily	100%
C)Free Chlorine residual in the distribution system Section 22a-MR40/2007	$\geq 0.1\text{mg/L}$	98.9%
D)Frequency of Testing in the distribution system Section A-MR40/2007	Bi-Weekly	100%
E)Report Submissions Section 25(2)-MR40/2007	Monthly	91.67%

There were 4 occasions in St Joseph and 15 occasions in St Jean where Free Chlorine residual entering the distribution system was slightly less than 0.5mg/L. There were 4 occasions in the rural distribution system where Free Chlorine residual was less than 0.1mg/L.

Bacteriological Monitoring and Reporting

	Regulatory Requirement	PWS Performance
A)Number of raw/incoming water samples Schedule A-MR40/27	26x7	100%
B)Number of treated water samples Schedule A-MR40/2007	26x7	100%
C)Number of distribution water samples Schedule A-MR-40/27	26x7	100%
D)Frequency of Testing Schedule A-MR40/27	Bi-Weekly	100%
E)Total Coliform present in samples Section 3(1)b-MR40/2007	0 TC per 100ml	100%
F)E. Coli present in samples Section 3(1)a-MR40/2007	0 EC per 100ml	100%

The PWS has met all regulatory requirements for 2018. The water system was deemed to be in compliance with all terms and conditions in the operating license.

Disinfection By Products Monitoring and Reporting – THM and HAA

As specified by the operating license, the RM of Montcalm PWS is required to sample for Trihalomethanes (THM) and Haloacetic Acids (HAA) on a quarterly basis every 2 years. The public water system failed to submit water samples in February for testing on PWS code 142.75.

2018 THM/HAA Quarterly Reporting

Water System Name	Code	Feb THM	May THM	Aug THM	Nov THM	AVG THM
Montcalm RM (RRR) Dist (Letellier) - PWS	114.00	0.177	0.198	0.218	0.145	0.185
Montcalm RM (Morris Reg) - PWS	142.75		0.063	0.098	0.077	0.079
		Feb HAA	May HAA	Aug HAA	Nov HAA	AVG HAA
Montcalm RM (RRR) Dist (Letellier) - PWS	114.00	0.066	0.077	0.094	0.056	0.073
Montcalm RM (Morris Reg) - PWS	142.75		0.041	0.045	0.054	0.047

The drinking water quality standards regulation (DWQSR) MR 41(2007) Schedule B – Chemical standards for PWS, which stated maximum THM 0.1 mg/L and HAA 0.08 mg/L

3. Water System Incidents

In 2018 there were no major incidents

4. Drinking water orders

In 2018 there were no Safety Orders issued for the RM of Montcalm public water system

5. Boil Water Advisories issued and actions taken

In 2018, RM of Montcalm PWS was issued 2 Boil Water Advisories.

On the evening of June 6, we conducted Fire Hydrant testing along with a full load test of our gas powered standby pump. On June 7, meter readings from the plant's incoming and outgoing meters had a difference of approximately 540 cubic meters. After some investigation, it was determined that we had a catastrophic failure of our outgoing distribution pipe within the reservoir causing the water to short circuit from the distribution pumps back into the reservoir. On June 8, the Boil Water Advisory was issued and Contec was contracted to drain the reservoir replace the distribution pipe within. In order to provide uninterrupted water supply to the town of St Jean, we fed water directly from the Pembina Valley water system to fire hydrants adjacent to the St Jean water plant. Once the pipe was repaired, the reservoir was then cleaned, filled and super chlorinated and allowed to sit for 24hrs. On June 9, 10, and 13, water samples for bacteria testing were taken and sent to ALS labs. All samples came back with no traces of bacteria and the boil water order was lifted from the St Jean System on June 14.

On November 30, there was a noticeable water leak along PR246 just south of HWY 23. After discussions with both PVWC and Office of Drinking water, it was determined in order to conduct this repair, we would be required to depressurize the main line along PR246 and St Mary's Rd to which a Boil Water Advisory was issued. On December 5, the Boil Water Advisory was issued and LET Construction was contracted to repair the leak. Once the water main was exposed, it was determined that a nylon fitting for a service connection had

cracked and was causing the leak. The fitting was replaced and the line was then again pressurized. We took water samples for Bacteria Testing on December 5 and 6 to which all samples came back with no traces of bacteria and the Boil Water Advisory was lifted on December 7.

6. System Upgrades & Improvements

In 2018, the St Jean WTP received a new Stainless Steel distribution header and new outgoing water meter.

7. Future Upgrades and Improvements

Generator and standby pump for the St Jean WTP

Meter replacements in 2 meter pits. Road 12 North at Highway 75 and Railway Street at Park Road in St Jean.

New Water Main install along Road 8 North between Old 14 South and Highway 75

8. Training

Both certified water operators have been and will continue to attend CEU (continuing education units) qualified training, in accordance with the water license requirements.

Report Prepared by: Matthew Klapka