PUBLIC WATER SYSTEM ANNUAL REPORT

2022

Rural Municipality of Rosser

UTILITY DEPARTMENT

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1.0 DESCRIPTION OF THE WATER SUPPLY, TREATMENT AND MONITORING

The Rural Municipality of Rosser is provided all water by the Cartier Regional Water Co-op (CRWC) from the Headingley Water Treatment Plant located on Gaol Road in the Rural Municipality of Headingley.

Information on the water treatment system, CRWC annual reports, and water chemistry are available at the CRWC website (CRWC.CA)

2.0 DESCRIPTION OF WATER DISTRIBUTION SYSTEM

The Municipal Utilities owns and manages the distribution system and related elements such as fire hydrants. The water distribution system can be viewed as three separate systems:

a. The rural distribution system consisting of small diameter watermains without fire flow capability.
b. The Grosse Isle distribution system from the Grosse Isle reservoir.
c. The CentrePort distribution system from the Rosser Reservoir.

The rural network currently services 100 customers on route to supplying the Grosse Isle reservoir. The water is provided through a series of pipe networks through the Rural Municipality of St. Francois Xavier into the Rural Municipality of Rosser at two metered entry points, St. Francois Xavier Shop (Holiday Road) and Marquette meter chamber (Hwy 248). There is approximately 42.5 kms of pipe in the Rural network.

The reservoirs in Grosse Isle and Rosser CentrePort are owned and operated by CRWC. The reservoirs include water storage, chlorination facilities and high-capacity pumps to provide water and fire flows to the distribution systems.

Grosse Isle Reservoir Pump Station holds roughly 400m3 water and services properties with potable water and fire protection from the 23 installed hydrants throughout the Village site. There are approximately 3.8 km of distribution watermains in Grosse Isle servicing 80 properties which include single family residents, a school, community centre and a few commercial buildings.

The CentrePort area is serviced from the Rosser/CentrePort Reservoir on Klimpke Road (Road 9E). Rosser Reservoir Pump Station holds roughly 7600 m3 water and services 54 water customers with potable water and fire protection from the 200 installed hydrants throughout the CentrePort area. There is roughly 22 kms of pipe in the CentrePort area.

3.0 WATER QUAILITY MONITORING

As per the Rural Municipality of Rosser's Operating Licence, the Municipality is required to sample for total coliform, E. coli, and chlorine residual on a bi-weekly interval from a sample point in the distribution system. Distribution samples are to be taken from the Rosser Rural Distribution System, Grosse Isle Village Distribution System, and the CentrePort Distribution System.

Table 1: Water Quality/Treatment Standards

Parameter	Quality Standard
Total Coliform	Less than one total coliform bacteria detectable per 100 mL in all distributed water
E. coli	Less than one E. coli bacteria detectable per 100 mL in all distributed water
Chlorine Residual	A free chlorine residual of at least 0.1 mg/L at all times at any point in the water distribution system
Total Trihalomethanes (THMs)	Less than or equal to 0.10 mg/L as locational annual average of quarterly samples
Total Haloacetic acids (HAAs)	Less than or equal to 0.08 mg/L as locational annual average of quarterly samples
Lead	Less than or equal to 0.005 mg/L
Manganese	Less than or equal to 0.12 mg/L

Table 2: Monitoring Schedule

Parameter	Monitoring Requirement
Bacteriological (total coliform and E. coli)	Biweekly sampling program with each set of samples consisting of a minimum of three distribution samples. Distribution samples are to be taken from the following locations: • One sample from the Rural Municipality of Rosser rural distribution system upstream of the Grosse Isle reservoir • One sample form the Grosse Isle Village distribution system • One sample form the CentrePort distribution system Consecutive sample sets to be separated by at least 12 days
Free Chlorine (distribution system)	At the same times and location(s) as bacteriological distribution system sampling
Total Chlorine (distribution system)	At the same times and location(s) as bacteriological distribution system sampling
Total Metals (distribution system)	One sample every two years at a mid-point in the distribution system
Total Trihalomethanes (THMs) (distribution system)	One preserved sample taken on a quarterly basis during February, May, August, and November, every second year at the furthest point in the distribution system beginning 2022
Total Haloacetic Acids	One preserved sample taken on a quarterly basis during February, May,

(HAAs) (distribution system)	August, and November, every second year at a mid-point in the distribution system beginning 2022
Lead	As per the instructions of the Drinking Water Officer
Manganese	Two distribution samples taken every year
Other Parameters	As per the instructions of the Drinking Water Officer

The following table identifies the results of the testing with respect to bacteriological monitoring and reporting:

2022 Bacteriological Report

Date Sampled	Sample Point/Identification	Total Coliform	E.Coli	Free CL2	Total CL2
Jan 11 2022	Rosser School	0	0	1.34	1.41
Jan 11 2022	Grosse Isle School	0	0	1.07	1.16
Jan 11 2022	340 Glodenrod	0	0	1.13	1.2
Jan 25 2022	11 Bluestem	0	0	0.77	0.81
Jan 25 2022	102E PR321	0	0	1.04	1.13
Jan 25 2022	MARQUETTE COOP	0	0	1.28	1.39
Feb 8 2022	Rosser School	0	0	0.99	1.08
Feb 9 2022	Grosse Isle School	0	0	1.17	1.27
Feb 9 2022	2575 Inkster	0	0	0.7	0.75
Feb 22 2022	20 Ronn RD	0	0	0.78	0.91
Feb 22 2022	27 Glengary	0	0	0.91	1.01
Feb 22 2022	MARQUETTE Curling	0	0	0.6	0.67
Mar 8 2022	Rosser School	0	0	1.3	1.4
Mar 8 2022	Grosse Isle School	0	0	0.9	1.03
Mar 8 2022	107 MTN Veiw	0	0	1	1.08
Mar 22 2022	25 Duram DR	0	0	0.63	0.69
Mar 22 2022	GI Hall	0	0	0.98	1.06
Mar 22 2022	Rosser Office	0	0	1.26	1.38
Apr 5 2022	Rosser School	0	0	1.15	1.21
Apr 5 2022	Grosse Isle School	0	0	1.05	1.11
Apr 5 2022	CO-OP Propane	0	0	0.71	0.77
Apr 19 2022	Hoas Farms	0	0	1.22	1.34
Apr 19 2022	086E PR 321	0	0	0.99	1.1
Apr 19 2022	400 Goldenrod	0	0	0.64	0.72
May 03 2022	Rosser School	0	0	1.2	1.37
May 03 2022	Grosse Isle School	0	0	1.08	1.17
May 03 2022	137 Wheatfield	0	0	1.22	1.3
May 17 2022	Rosser Shop	0	0	1.21	1.27
May 17 2022	72 022 PR322	0	0	1.03	1.13

Date Sampled	Sample Point/Identification	Total Coliform	E.Coli	Free CL2	Total CL2
May 17 2022	29 MTN View	0	0	1.21	1.27
May 31 2022	Rosser School	0	0	1.3	1.41
May 31 2022	Grosse Isle School	0	0	1.14	1.22
May 31 2022	302 Goldenrod	0	0	1.5	1.59
Jun 14 2022	Marquette COOP	0	0	1.28	1.38
Jun 14 2022	26 GlenGary	0	0	1.08	1.21
Jun 14 2022	1860 Brookside	0	0	1.19	1.26
Jun 28 2022	Rosser School	0	0	1.1	1.18
Jun 28 2022	Grosse Isle School	0	0	0.88	1.01
Jun 28 2022	490 Lucas Ave	0	0	0.28	0.35
Jul 12 2022	6W 71 010	0	0	1.08	1.19
Jul 12 2022	Patterson	0	0	0.85	0.93
Jul 12 2022	Canada Cartage	0	0	0.57	0.66
Jul 26 2022	Rosser Office	0	0	1.16	1.25
Jul 26 2022	50 Prairie Dog	21	0	0.88	0.94
Jul 26 2022	127 MTN View	0	0	1.04	1.08
July 28/22			Upstream	Site	Downstream
		T.C	0	0	0
		E.coli	0	0	0
Aug 9 2022	McRae Shop	0	0	1.25	1.36
Aug 9 2022	72 022 PR 322	0	0	0.85	0.89
Aug 9 2022	3010 Red Fife	0	0	0.95	1.01
Aug 23 2022	RM Transfer site	0	0	0.25	0.32
Aug 23 2022	43 Parkland	1	0	0.66	0.72
Aug 23 2022	63 154 Klimpke RD	0	0	0.78	0.85
Aug 24 Resample Results		0	0	0.77	0.84
Aug 25 Resample		0	0	0.75	0.85
Sept 6 2022	435 Lucas	0	0	0.79	0.83
Sept 6 2022	Grosse Isle School	0	0	0.79	0.86
Sept 6 2022	Rosser School	0	0	0.86	0.98
Sept 20 2022	31 Prairie Lane	0	0	1.14	1.26
Sept 20 2022	0088 RD321E	0	0	0.54	0.58
Sept 20 2022	15 Davis Way	0	0	1.14	1.26
Oct 04 2022	0028 RD 65N	0	0	1.2	1.29
Oct 04 2022	0071 RD 72 N	0	0	1.64	1.77
Oct 04 2022	28 Roy Roche	0	0	1.28	1.3
Oct 18 2022	330 Eagle Dr	0	0	0.82	0.91

Date Sampled	Sample Point/Identification	Total Coliform	E.Coli	Free CL2	Total CL2
Oct 18 2022	Grosse Isle School	0	0	0.96	1.03
Oct 18 2022	Rosser School	0	0	1.31	1.47
Nov 1 2022	6 West	0	0	1.2	1.33
Nov 1 2022	GI Hall	0	0	0.7	0.77
Nov 1 2022	580 Oakpoint	0	0	0.75	0.81
Nov 15 2022	1650 Oakpoint	0	0	0.46	0.51
Nov 15 2022	Grosse Isle School	0	0	0.84	0.97
Nov 15 2022	Rosser School	0	0	1.35	1.5
Nov 29 2022	11 Davis Way	0	0	1.39	1.45
Nov 29 2022	158 E PR 321	0	0	0.85	0.95
Nov 29 2022	Marquette Coop	0	0	1.21	1.39
Dec 13 2022	424 Lucas	0	0	1.44	1.5
Dec 13 2022	Grosse Isle School	0	0	0.86	0.94
Dec 13 2022	Rosser School	0	0	1.33	1.47
Dec 28 2022	30 Harvest Dr	0	0	0.85	0.93
Dec 28 2022	72 022 PR 322	0	0	0.83	0.93
Dec 28 2022	Rosser Shop	0	0	0.93	1.03

THM and HAA Sampling 2022

Date Sampled	Sample Point/Identification	Total THM	HAA
Feb 8 2022	72 022 PR 322	0.0371	
Feb 8 2022	117E PR 321		21.9
May 17 2022	72 022 PR 322	0.0327	
May 17 2022	117E PR 321		28.1
Aug 9 2022	72 022 PR 322	0.0742	
Aug 9 2022	117E PR 321		41.9
Nov 1 2022	72 022 PR 322	0.0706	
Nov 1 2022	117E PR 321		54.6

Total Metals March 22 2022

Parameter	Lowest Detection Limit	Units	Water
Aluminum (Al)-Total	0.0030	mg/L	0.0034
Antimony (Sb)-Total	0.00010	mg/L	<0.00010
Arsenic (As)-Total	0.00010	mg/L	0.00035
Barium (Ba)-Total	0.00010	mg/L	0.0158
Beryllium (Be)-Total	0.00010	mg/L	<0.00010

Parameter	Lowest Detection Limit	Units	Water
Bismuth (Bi)-Total	0.000050	mg/L	<0.000050
Boron (B)-Total	0.010	mg/L	0.120
Cadmium (Cd)-Total	0.0000050	mg/L	<0.0000050
Calcium (Ca)-Total	0.050	mg/L	22.3
Cesium (Cs)-Total	0.000010	mg/L	<0.000010
Chromium (Cr)-Total	0.00010	mg/L	<0.00010
Cobalt (Co)-Total	0.00010	mg/L	<0.00010
Copper (Cu)-Total	0.00050	mg/L	0.201
Iron (Fe)-Total	0.010	mg/L	0.034
Lead (Pb)-Total	0.000050	mg/L	0.000160
Lithium (Li)-Total	0.0010	mg/L	0.0140
Magnesium (Mg)-Total	0.0050	mg/L	6.55
Manganese (Mn)-Total	0.00010	mg/L	0.00185
Molybdenum (Mo)-Total	0.000050	mg/L	0.000338
Nickel (Ni)-Total	0.00050	mg/L	0.00057
Phosphorus (P)-Total	0.030	mg/L	0.271
Potassium (K)-Total	0.050	mg/L	2.74
Rubidium (Rb)-Total	0.00020	mg/L	0.00073
Selenium (Se)-Total	0.000050	mg/L	<0.000050
Silicon (Si)-Total	0.10	mg/L	1.71
Silver (Ag)-Total	0.000010	mg/L	<0.000010
Sodium (Na)-Total	0.050	mg/L	24.8
Strontium (Sr)-Total	0.00020	mg/L	0.0552
Sulfur (S)-Total	0.50	mg/L	17.2
Tellurium (Te)-Total	0.00020	mg/L	<0.00020
Thallium (Tl)-Total	0.000010	mg/L	<0.000010
Thorium (Th)-Total	0.00010	mg/L	<0.00010
Tin (Sn)-Total	0.00010	mg/L	<0.00010
Titanium (Ti)-Total	0.00030	mg/L	<0.00030
Tungsten (W)-Total	0.00010	mg/L	<0.00010
Uranium (U)-Total	0.000010	mg/L	0.000311
Vanadium (V)-Total	0.00050	mg/L	<0.00050
Zinc (Zn)-Total	0.0030	mg/L	0.0124
Zirconium (Zr)-Total	0.00020	mg/L	<0.00020

Manganese Sept 22 2022

Parameter	Lowest Detection Limit	Units	Water
Manganese (Mn)-Total	0.00010	mg/L	0.00406

4.0 WATER SYSTEM INCIDENTS AND CORRECTIVE ACTIONS

In 2022, no Water System Incidents had occurred. The 2021 Office of Drinking Water Annual Compliance Audit Reports no incidents of non-compliance.

5.0 DRINKING WATER ORDERS AND CORRECTIVE ACTIONS TAKEN

In 2022, no Drinking Water safety Orders were issued.

6.0 BOIL WATER ADVISORIES ISSUED AND ACTIONS TAKEN IN RESPONSE

In 2022, no Boil Water Advisories were issued.

7.0 WARNINGS ISSUED, CHARGES LAID IN ACCORDANCE WITH THE DRINKING WATER SAFETY ACT

In 2022, no charges or warnings were issued.

8.0 MAJOR EXPENSES / REPAIRS INCURRED

In 2022, no major expenses were incurred, no major equipment to be purchased in the next two years and no future expansion are planned for the next two years.