Drinking Water Quality and Compliance
Rural Municipality of Sherwood
Station Number SK05JF0018
2023 Notification to Consumers

The Water Security Agency (WSA) requires that, at least once each year, waterworks owners provide notification to consumers of the quality of water produced and supplied as well as information on the performance of the waterworks in submitting samples as required by a Permit to Operate a waterworks. The following is a summary of the Rural Municipality of Sherwood water quality and sample submission compliance record for the January 1, 2023, to December 31, 2023 time period.

This report was completed on August 21, 2024. Readers should refer to the WSA's Municipal Drinking Water Quality Monitoring Guidelines for more information on minimum sample submission requirements and types of samples. Permit requirements for a specific waterworks may require more sampling than outlined in the Agency's monitoring guidelines. If consumers need to know more about drinking water in Saskatchewan, more detailed information is available from: **http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/index-eng.php**.

BACTERIOLOGICAL QUALITY

Parameter	Limit	Regular Samples Required	Regular Samples Submitted	# Positive of Regular Submitted
Total Coliform	0 Organisms/100 mL	52	52	0
E. Coli	0 Organisms/100 mL	52	52	0
Background Bacteria	Less than 200/100 mL	52	52	0

Analysis is performed on a single sample for all parameters mentioned above. All waterworks are required to submit samples for bacteriological water quality; the frequency of monitoring depends on the population served by the waterworks.

WATER DISINFECTION

Chlorine Residual in Distribution System – From Test Results Submitted with Bacteriological Samples

Parameter	Minimum Limit (either/or)	Range (mg/L)	# Tests Required	# Tests Submitted	# Adequate Chlorine
Free Chlorine	0.10 mg/L	0.01-1.76	52	52	51
Total Chlorine	0.50 mg/L	0.23-2.38	52	52	

A minimum of 0.10 milligrams per litre (mg/L) free chlorine residual **OR** 0.50 mg/L total chlorine residual is required at all times throughout the distribution system. An adequate chlorine is a result that indicates that the chlorine level is above the regulated minimum. A waterworks is required to submit chlorine residual test results on every bacteriological sample they submit.

A Bacteriological sample was submitted on November 13th 2023 that had a chlorine residual below the minimum threshold. The issue was located and fixed immediately and the WSA was contacted and informed of the issue.

Free Chlorine Residual for Water entering the Distribution System

Parameter	Minimum Limit (mg/L)	Range (mg/L)	# Tests Required	# Tests Performed	% Adequate Chlorine
Free Chlorine	0.10	0.91-2.25	365	Continuous	100

Residuals are monitored continuously and tests are performed on a daily basis by waterworks operators and are recorded in operation records. Additional testing was done for informational purposes.

TURBIDITY

Turbidity for Water Entering the Distribution System

Parameter	Limit (NTU)	Range (NTU)	# Tests Not Meeting Requirements	# Tests Required	# Tests Performed	# months Exceeding Limit
Turbidity	< 1.0 – 95% of measurements each month	0.06-3.31	13	365	Continuous	1

Turbidity is continuously monitored and recorded. Tests are performed on a daily basis by waterworks operators and are recorded in operation records. Additional testing was done for informational purposes.

The turbidity exceeded the limits during the period of September 3rd to September 15th due to an issue with Manganese. The WSA was notified and made aware of the issue.

Turbidity in the Distribution System – From Test Results Submitted with Bacteriological Samples

Parameter	Limit (NTU)	Range (NTU)	# Tests Required	# Tests Performed
Turbidity	No Limit	0.15-4.16	52	52

Turbidity is a measure of water treatment efficiency. Turbidity measures the “clarity” of the drinking water and is generally reported in Nephelometric Turbidity Units (NTU).

MANGANESE (on-site testing)

Parameter	Regulatory Limit	Aesthetic Objective (mg/L)	Average (mg/L)	# Tests Required	# Tests Submitted
Manganese	No Limit	0.05	0.039	24	360

Additional testing was done for informational purposes.

CHEMICAL – HEALTH

The permit for the RM of Sherwood requires sampling for Chemical Health parameters once every two years. 2023 is not a required sampling year. Additional sampling was done for informational purposes.

PARAMETER	MAC (mg/L)	IMAC (mg/L)	AO (mg/L)	SAMPLE RESULTS (mg/L)	# OF SAMPLES REQUIRED	# OF SAMPLES SUBMITTED
Aluminum	No Objective	No Objective	No Objective	<0.00696	0	1
Antimony	0.006			<0.00016	0	1
Arsenic	0.010			0.0003	0	1
Barium	1.0			0.0051	0	1
Boron		5.0		0.2	0	1
Cadmium	0.005			<0.00015	0	1
Chromium	0.05			0.0003	0	1
Copper			1.0	<0.00829	0	1
Iron			0.3	<0.1	0	1
Lead	0.01			<0.00007	0	1
Manganese			0.05	<0.01	0	1
Selenium	0.01			<0.00113	0	1
Silver	No Objective	No Objective	No Objective	<0.00020	0	1
Uranium	0.02			0.0092	0	1
Zinc			5	<0.00400	0	1

MAC – Maximum Acceptable Concentrations AO – Aesthetic Objective
IMAC – Interim Maximum Acceptable Concentrations

CHEMICAL – GENERAL

The permit for the RM of Sherwood requires sampling for General Chemical parameters once every two years. 2023 is not a required sampling year. Additional sampling was done for informational purposes.

PARAMETER	MAC	AO	SAMPLE RESULTS	# OF SAMPLES REQUIRED	# OF SAMPLES SUBMITTED
Total Alkalinity (mg/L)		500	317	0	1
Bicarbonate (mg/L)	No Objective	No Objective	387	0	1
Calcium (mg/L)	No Objective	No Objective	259	0	1
Carbonate (mg/L)	No Objective	No Objective	0	0	1
Chloride (mg/L)		250	65.6	0	1
Fluoride (mg/L)	1.5		0.36	0	1
Total Hardness (mg/L)		800	1161	0	1
Hydroxide (mg/L)	No Objective	No Objective	0	0	1
Magnesium (mg/L)		200	125	0	1
Nitrate (mg/L)	45		<0.2	0	1
pH (pH units)		7.0 – 10.5	7.6	0	1
Potassium (mg/L)	No Objective	No Objective	11	0	1
Sodium (mg/L)		300	57	0	1
Specific Conductivity (µs/cm)	No Objective	No Objective	1878	0	1
Sulphate (mg/L)		500	756.2	0	1
Total Dissolved Solids (mg/L)		1500	1661	0	1

MAC – Maximum Acceptable Concentrations AO – Aesthetic Objective

The aesthetic objective for Sulphate, Hardness, Total Dissolved Solids was exceeded, but all health regulatory requirements are met.

*Objectives apply to certain characteristics of or substances found in water for human consumptive or hygienic use. The presence of these substances will affect the acceptance of water by consumers and/or interfere with the practice of supplying good quality water. Compliance with drinking water aesthetic objectives is not mandatory as these objectives are in the range where they do not constitute health hazards. The aesthetic

objectives for several parameters (including hardness as $CaCO_3$, magnesium, sodium and total dissolved solids) consider regional differences in drinking water sources and quality.

More information on water quality and sample submission performance may be obtained from:

R.M. of Sherwood
4400 Campbell St
P.O. Box 40029 Grasslands PO
Regina SK S4W 0L3