

**Drinking Water Quality and Compliance
City of Meadow Lake Distribution System
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 City of Meadow Lake Distribution System water quality and sample submission compliance record for the January 1, 2023, to December 31, 2023, time period. This report was completed on February 1, 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	156	153	0
E. Coli	0 Organisms/100 mL	156	153	0
Background Bacteria	Less than 200/100 mL	156	153	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.

Three samples collected for the week of October 22, 2023, were not able to be tested because of a delivery delay. The Environment Officer was notified.

WATER DISINFECTION

Chlorine Residual – 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	0.20 – 1.96	156	156	156
Total Chlorine	0.50 mg/L	0.68 – 2.44	156	156	

Chlorine Residual for Water within the Distribution System

Parameter	Minimum Limit (either/or)	Range (mg/L)	Average (mg/L)	# Tests Required	# Tests Performed	# Adequate Chlorine
Free Chlorine	0.10 mg/L	0.48 – 2.01	1.18	365	365	365
Total Chlorine	0.50 mg/L	0.79 – 2.50	1.54	365	365	

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.

City of Meadow Lake Distribution System

TURBIDITY

Turbidity – From Test Results Submitted with Bacteriological Samples

Parameter	Limit (NTU)	Range (NTU)	# Tests Required	# Tests Performed	# Exceeding Limit
Turbidity	No standard	0.14 – 1.10	156	156	0

Turbidity for water entering the distribution system

Parameter	Limit (NTU)	Range (NTU)	95 th Percentile (NTU)	# Tests Required	# Tests Performed	Exceeded Limit
Turbidity	< 1.0 NTU in 95% of measurements	0.10 – 0.88	0.56	365	365	No

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).

CHEMICAL – TRIHALOMETHANES (THM)

Trihalomethanes are formed when chlorine reacts with organic matter in water. The four THM compounds are: chloroform, dibromochloromethane, bromodichloromethane (BCDM) and bromoform. The sum of the concentrations of these four components is referred to as Total Trihalomethanes. The limit for THM is a long-term objective based on an annual average of seasonal samples.

Parameter	Maximum Limit (mg/L)	Average (mg/L)	# Samples Required	# Samples Submitted
Total Trihalomethanes	0.100	0.076	8	8

CHEMICAL – HALOACETIC ACIDS (HAAs)

Haloacetic acids are formed when chlorine reacts with organic matter in water. The five regulated haloacetic acids are: monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid. The sum of the concentrations of these five components is referred to as HAA5. The limit for HAA5 is a long-term objective based on an annual average of seasonal samples.

Parameter	Maximum Limit (mg/L)	Average (mg/L)	# Samples Required	# Samples Submitted
Haloacetic Acids 5	0.080	0.067	8	8

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

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