Drinking Water Quality and Compliance
Town of Kindersley
Station Number SK05GB0004
2024 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 Town of Kindersley water quality and sample submission compliance record for the January 1, 2024, to December 31, 2024, time period. This report was completed on February 1, 2025. 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

Sampling from Distribution System

Parameter	Limit	Regular Samples Required	Regular Samples Submitted	# of Positive Regular Submitted
Total Coliform	0 Organisms/100mL	106	106	0
E. Coli	0 Organisms/100m/L	106	106	0
Background Bacteria	Less than 200/100mL	106	106	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 the 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	0.81 – 3.42	106	106	106
Total Chlorine	0.50 mg/L	0.96 – 3.86	106	106	

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 residual is a result that indicates that the chlorine level is above the regulated minimums. A waterworks is required to submit chlorine residual test results on every bacteriological sample they submit.

Free Chlorine Residual for Water Entering Distribution System

Parameter	Minimum Limit (mg/L)	Range (mg/L)	# Tests Required	# Tests Performed	% Adequate Chlorine
Free Chlorine	0.30	0.76 – 3.72	366	930	100

Residuals are monitored continuously, and tests performed regularly by waterworks operators are recorded in operation records. Additional testing was done for informational purposes.

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TURBIDITY

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).

Turbidity in Raw Water Entering the Water Treatment Plant

Parameter	Limit (NTU)	Range (NTU)	# Tests Required	# Tests Performed	# Exceeding Limit
Turbidity	No Limit	0.66 – 114	52	366	0

Additional testing was done for information purposes.

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

Parameter	Limit (NTU)	Range (NTU)	# Tests Required	# Tests Performed	# Exceeding Limit
Turbidity	No Standard	0.05 – 0.31	106	106	0

Turbidity for Water Leaving the Filter

Filter #1

Parameter	Limit (NTU)	Range (NTU)	95th Percentile	# Tests Required	# Tests Performed	# of Months Exceeding 95th Percentile Limit
Turbidity	< 0.3 or 0.2 – 95% of measurements each month; not to exceed 0.3 or 0.2 for more than 12 consecutive hours; never >1.0	0.015 – 0.285	0.104	Continuous	Continuous	0

Filter #2

Parameter	Limit (NTU)	Range (NTU)	95th Percentile	# Tests Required	# Tests Performed	# of Months Exceeding 95th Percentile Limit
Turbidity	< 0.3 or 0.2 – 95% of measurements each month; not to exceed 0.3 or 0.2 for more than 12 consecutive hours; never >1.0	0.019 – 0.496	0.077	Continuous	Continuous	0

Filter #3

Parameter	Limit (NTU)	Range (NTU)	95th Percentile	# Tests Required	# Tests Performed	# of Months Exceeding 95th Percentile Limit
Turbidity	< 0.3 or 0.2 – 95% of measurements each month; not to exceed 0.3 or 0.2 for more than 12 consecutive hours; never >1.0	0.017 – 0.466	0.097	Continuous	Continuous	0

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	0.034	4	4

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	<0.010	4	4

MANGANESE (on-site testing)

Parameter	Regulatory Limit	Aesthetic Objective (mg/L)	Average (mg/L)	# Tests Required	# Tests Submitted
Manganese	No Limit	0.05	0.011	24	366

Additional testing done for informational purposes.

MICROCYSTIN-LR and/or TOTAL MICROCYSTIN

The Town of Kindersley is required to sample at the water treatment plant following detection of significant algal blooms affecting the water intake.

Parameter	Limit	Average	# Samples Required	# Samples Submitted	# Samples Exceeding Limit
Microcystin (mg/L)	0.0015	0.0002	1	1	0

ULTRAVIOLET DOSAGE

Parameter	Limit	Range	# Samples Required	# Samples Submitted	# Samples Outside of Limit
Ultraviolet Transmittance (%T)	> 90	84.3 – 98.7	366	374	1
Ultraviolet Dosage (mJ/cm^2)	> 12	40.0 – 162.0	366	369	0
Flow Rate (L/sec)	< 69.4	17.1 – 41.1	366	370	0

Ultraviolet transmittance, ultraviolet dosage, and ultraviolet flow rate were mistakenly not recorded on November 14, 2024. The Environment Officer was notified.

One ultraviolet transmittance reading of 84.3% occurred on February 16, 2024. The Environment Officer was notified.

CHEMICAL – GENERAL

The Town of Kindersley is required to submit water samples for the WSA's General Chemical category once every year.

Parameter	MAC	AO *	Sample Results	# of Samples Required	# of Samples Submitted
Total Alkalinity (mg/L)		500	155	1	1
Bicarbonate (mg/L)	No Objective		189	1	1
Calcium (mg/L)	No Objective		52	1	1
Carbonate (mg/L)	No Objective		<1	1	1
Chloride (mg/L)		250	19	1	1
Fluoride (mg/L)	1.5		0.14	1	1
Total Hardness (mg/L)		800	220	1	1
Hydroxide (mg/L)	No Objective		<1	1	1
Magnesium (mg/L)		200	22	1	1
Nitrate (mg/L)	45		0.21	1	1
pH (pH units)		7.0 – 10.5	7.83	1	1
Potassium (mg/L)	No Objective		2.9	1	1
Sodium (mg/L)		300	37	1	1
Specific Conductivity (µs/cm)	No Objective		595	1	1
Sulphate (mg/L)		500	120	1	1
Sum of Ions	No Objective		442	1	1
Total Dissolved Solids (mg/L)		1500	368	1	1

MAC – Maximum Acceptable Concentration AO – Aesthetic Objective

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CHEMICAL – HEALTH

The Town of Kindersley is required to submit water samples for the WSA's Chemical Health category once every year.

Parameter	MAC (mg/L)	IMAC (mg/L)	AO (mg/L)	Sample Results (mg/L)	# of Samples Required	# of Samples Submitted
Aluminum	No Objective			0.0210	1	1
Antimony	0.006			<0.0002	1	1
Arsenic	0.010			<0.0001	1	1
Barium	1.0			0.051	1	1
Boron		5.0		0.05	1	1
Cadmium	0.005			<0.00001	1	1
Chromium	0.05			<0.0005	1	1
Copper			1.0	0.0018	1	1
Iron			0.3	0.0009	1	1
Lead	0.01			<0.0001	1	1
Manganese			0.05	0.0056	1	1
Selenium	0.01			0.0002	1	1
Silver	No Objective			<0.00005	1	1
Uranium	0.02			0.0009	1	1
Zinc			5.0	0.0023	1	1

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

*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 a 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:

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