Drinking Water Quality and Compliance
SaskWater White City Potable Water Supply System
2022 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 SaskWater White City Potable Water Supply System water quality and sample submission compliance record for the January 1, 2022 to December 31, 2022 time period. This report was completed on February 1, 2023. 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 the Raw Water entering the Water Treatment Plant

Parameter	Limit	Regular Samples Required	Regular Samples Submitted	# Of Positive Regular Submitted
Total Coliform	No Limit	12	12	0
E. Coli	No Limit	12	12	0
Background Bacteria	No Limit	12	12	0

Sampling from Water Entering the Distribution System

Parameter	Limit	Regular Samples Required	Regular Samples Submitted	# Of Positive Regular Submitted
Total Coliform	0 Organisms/100mL	52	52	0
E. Coli	0 Organisms/100m/L	52	52	0
Background Bacteria	Less than 200/100mL	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 Water Entering 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	0.72 – 1.12	52	52	52
Total Chlorine	0.50 mg/L	0.96 – 1.50	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 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.

White City Potable Water Supply System

Free Chlorine Residual for Water Entering Distribution System

Parameter	Minimum Limit (mg/L)	Range (mg/L)	# Tests Required	# Tests Performed	% Adequate Chlorine
Free Chlorine	0.10	0.62 – 1.19	365	Continuous	100

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

TURBIDITY

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

Parameter	Limit (NTU)	Range (NTU)	# Tests Required	# Tests Performed	# Exceeding Limit
Turbidity	No standard	0.04 – 0.30	52	52	0

Turbidity in Water entering the Distribution System

Parameter	Limit (NTU)	Range (NTU)	95th Percentile	# Tests Required	# Tests Performed	# months exceeding 95% limit
Turbidity	< 1.0 NTU – 95% of the time each month	0.02 – 2.00	0.06	730	Continuous	0

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). The turbidity is done daily with a bench testing instrument, as well as continuous with an in-line analyzer. Additional testing done for informational purposes.

CHEMICAL – HEALTH

The White City Potable Water Supply System is required to submit water samples for the WSA’s Chemical Health category once every second year. 2022 is not a required sample year. The 2021 results are shown below for informational purposes.

Parameter	MAC (mg/L)	IMAC (mg/L)	AO* (mg/L)	2021 Sample Results (mg/L)	# of Samples Required	# of Samples Submitted
Aluminum	No Objective			<0.00696	0	0
Antimony	0.006			<0.00016	0	0
Arsenic	0.010			0.00020	0	0
Barium	1.0			0.0136	0	0
Boron		5.0		0.2	0	0
Cadmium	0.005			<0.00015	0	0
Chromium	0.05			<0.00019	0	0
Copper			1.0	0.100	0	0
Iron			0.3	<0.1	0	0
Lead	0.01			0.00010	0	0
Manganese			0.05	<0.01	0	0
Selenium	0.01			<0.00113	0	0
Silver	No Objective			<0.00020	0	0
Uranium	0.02			0.0055	0	0
Zinc			5	0.0078	0	0

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

CHEMICAL – GENERAL

The White City Potable Water Supply System is required to submit water samples for the WSA's General Chemical category once every second year. 2022 is not a required sample year. The 2021 results are shown below for informational purposes.

Parameter	MAC	AO *	2021 Sample Results	# of Samples Required	# of Samples Submitted
Total Alkalinity (mg/L)		500	295	0	0
Bicarbonate (mg/L)	No Objective		360	0	0
Calcium (mg/L)	No Objective		80	0	0
Carbonate (mg/L)	No Objective		0	0	0
Chloride (mg/L)		250	10.7	0	0
Fluoride (mg/L)	1.5		0.35	0	0
Total Hardness (mg/L)		800	352	0	0
Hydroxide (mg/L)	No Objective		0	0	0
Magnesium (mg/L)		200	37	0	0
Nitrate (mg/L)	45		<0.2	0	0
pH (pH units)		7.0 – 10.5	8.0	0	0
Potassium (mg/L)	No Objective		5	0	0
Sodium (mg/L)		300	40	0	0
Specific Conductivity (µs/cm)	No Objective		853	0	0
Sulphate (mg/L)		500	161.8	0	0
Total Dissolved Solids (mg/L)		1500	695	0	0

MAC – Maximum Acceptable Concentration 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:

SaskWater
200-111 Fairford Street East
Moose Jaw SK S6H 1C8
Toll Free: 1-888-230-1111
Fax: 306-694-3207
Email: customerservice@saskwater.com