



**Drinking Water Quality and Compliance**  
**SaskWater White City Potable Water Supply System**  
**2017 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, 2017 to December 31, 2017 time period. This report was completed on April 6, 2018. Readers should refer to the WSA's Municipal Drinking Water Quality Monitoring Guidelines, October 2012, EPB 202 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 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	0.1 mg/L	0.76 – 1.13	52	52	52
Total Chlorine	0.5 mg/L	1.04 – 1.67	52	52	

A minimum of 0.1 milligrams per litre (mg/L) Free Chlorine residual **OR** 0.5 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	0.1	0.47 – 1.72	365	Continuous	100

Minimum 0.1 milligrams per litre (mg/L) free chlorine residual is required for water entering a distribution system. Residuals are continuously monitored and recorded. Tests normally performed on a daily basis by waterworks operators are recorded in operation records.

**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	0.05 – 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	0.00 – 2.00	0.07	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). All waterworks are required to monitor turbidity at the water treatment plant.

**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. 2017 is a required sample year. The last sample for Chemical Health analysis was submitted on October 11, 2017. Sample results indicated that the provincial drinking water quality standards were not exceeded.

Parameter	MAC (mg/L)	IMAC (mg/L)	AO* (mg/L)	Sample Results (mg/L)	# of Samples Required	# of Samples Submitted
Aluminum	No Objective			<0.007	1	1
Antimony	0.006			<0.00016	0	1
Arsenic	0.010			0.00050	1	1
Barium	1.0			0.0138	1	1
Boron		5.0		0.1	1	1
Cadmium	0.005			<0.00015	1	1
Chromium	0.05			0.00020	1	1
Copper			1.0	0.0790	1	1
Iron			0.3	<0.1	1	1
Lead	0.01			0.00050	1	1
Manganese			0.05	<0.01	1	1
Selenium	0.01			<0.00113	1	1
Silver	No Objective			<0.00020	0	1
Uranium	0.02			0.0137	1	1
Zinc			5	<0.00400	1	1

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. 2017 is a required sample year. The last sample for General Chemical analysis was submitted on October 11, 2017. Sample results indicated that the provincial drinking water quality standards were not exceeded.

<b>Parameter</b>	<b>MAC</b>	<b>AO *</b>	<b>Sample Results</b>	<b># of Samples Required</b>	<b># of Samples Submitted</b>
Total Alkalinity (mg/L)		500	348	1	1
Bicarbonate (mg/L)	No Objective		425	1	1
Calcium (mg/L)	No Objective		123	1	1
Carbonate (mg/L)	No Objective		0	1	1
Chloride (mg/L)		250	10.5	1	1
Fluoride (mg/L)	1.5		0.33	1	1
Total Hardness (mg/L)		800	542	1	1
Hydroxide (mg/L)	No Objective		0	1	1
Magnesium (mg/L)		200	57	1	1
Nitrate (mg/L)	45		<0.2	1	1
pH (pH units)		6.5 - 9.0	7.4	1	1
Potassium (mg/L)	No Objective		5	1	1
Sodium (mg/L)		300	39	1	1
Specific Conductivity (µs/cm)	No Objective		1057	1	1
Sulphate (mg/L)		500	255.3	1	1
Total Dissolved Solids (mg/L)		1500	915	1	1

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<sub>3</sub>, 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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