



## Drinking Water Quality and Compliance Annual Notice to Consumers

The Water Security Agency and the Ministry of Environment 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 Minister's Order or Permit to Operate a waterworks. The following is a summary of the Town of Maple Creek water quality and sample submission compliance record for the 2020-year time period. This report was completed on 6 January 2021. Readers should refer to Water Security Agency's "Municipal Drinking Water Quality Monitoring Guidelines, June 2015, EPB 502" for more information on minimum sample submission requirements. Permit requirements for a specific waterworks may require more sampling than outlined in the department's monitoring guidelines. If consumers need more information on the nature and significance of specific water tests, for example, "what is the significance of selenium in a water supply", more detailed information is available from: [http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/index\\_e.html](http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/index_e.html).

### Water Quality Standards

#### Bacteriological Quality

Parameter/Location	Limit	Regular Samples Required	Regular Samples Submitted	# of Positive Regular Submitted (Percentage)
Total Coliform	0 Organisms/100 mg/L	52	52	0
E. coli	0 Organisms/100 ml	52	52	0

### Water Disinfection

#### Chlorine Residual in Distribution System for Test Results Submitted with Bacteriological Samples

Parameter	Minimum Limit (mg/L)	Free Chlorine Residual Range	Total Chlorine Residual Range	# Tests Required	# Tests Submitted	# Adequate Chlorine (Percentage)
Chlorine Residual	0.1 mg/L free OR 0.5 mg/L total	0.61-1.27	0.68-1.43	52	52	100

### Water Disinfection

#### Free Chlorine Residual for Water Entering Distribution System from Waterworks Records-From Water Treatment Plant Records

Parameter	Limit (mg/L)	Test Level Range	# Tests Performed	# Tests Not Meeting Requirements
Free Chlorine Residual	at least 0.7	0.83-1.19	366	0

A minimum of 0.7 milligrams per litre (mg/L) free chlorine residual is required for water entering the distribution system. Tests are normally performed on a daily basis by the waterworks operator and are to be recorded in operation records. This data includes the number of free chlorine residual tests performed, the overall range of free chlorine residual (highest and lowest recorded values) and the number of tests and percentage of results not meeting the minimum requirement of 0.7 mg/L free chlorine residual.



**Turbidity – From Water Treatment Plant Records**

Parameter	Limit (NTU)	Test Level Average	Test Frequency
Turbidity	0.1	0.01	Once every 1 second

**Chemical – Trihalomethanes (THMs) and Haloacetic Acids (HAAs)**

Parameter	Limit IMAC (mg/L)	Sample Result (average)	# Samples Required	# Samples Exceeding IMAC
Trihalomethanes (THMs)	0.1	0.00408 mg/L	4 (one every 3 months)	0
Haloacetic Acids (HAAs)	0.080	0.01 mg/L	4 (one every 3 months)	0

  

Trihalomethanes	Limit IMAC (mg/L)	Sample Results (mg/L)	# Samples Exceeding MAC/IMAC
10 February	0.10	0.00432	0
4 May	0.10	<0.004	0
4 August	0.10	<0.004	0
10 November	0.10	<0.004	0

  

Haloacetic Acids	Limit IMAC (mg/L)	Sample Results (mg/L)	# Samples Exceeding MAC/IMAC
10 February	0.080	<0.010	0
4 May	0.080	<0.010	0
4 August	0.080	<0.010	0
10 November	0.080	<0.010	0

Note: Only water supplies derived from surface water or groundwater under the influence of surface water are required to monitor for THMs and Haloacetic Acids unless otherwise specified in the facility Permit to Operate.



**Chemical – Health Category**

All waterworks serving less than 5000 persons are required to submit water samples for WSA's Chemical Health category once every 2 years. The chemical Health category includes analysis for arsenic, barium, boron, cadmium, chromium, fluoride, lead, nitrate, selenium and uranium.

The last sample for Chemical Health analysis was submitted on 26-Mar-2019. Sample results indicated that the provincial drinking water standards were not exceeded.

Parameter	Limit MAC (mg/L)	Limit IMAC (mg/L)	Sample Results	# Samples Exceeding MAC/IMAC
Arsenic	0.010		_0.0001	0
Barium	1.0		_0.013	0
Boron		5.0	_0.1	0
Bromate	0.01		_n/a	0
Cadmium	0.005		<0.00015	0
Chlorate	1.0		_n/a	0
Chlorite	1.0		_n/a	0
Chromium	0.05		<0.00019	0
Fluoride (avg. *)	1.5		_0.00005	0
Lead	<10		<0.00001	0
Nitrate (avg. *)	45.0		_1.3	0
Selenium	0.01		<0.00113	0
Uranium	0.02		_0.0008	0

**General Chemical**

Parameter	Aesthetic Objectives* (mg/L)	10 November	4 August	4 May	3 February	Sample Results (average)	# Samples Required	# Samples Submitted
Alkalinity	500	99.2 mg/L	143 mg/L	135 mg/L	145 mg/L	130.6 mg/L	4	4
Bicarbonate	No Objective	121 mg/L	174 mg/L	165 mg/L	176 mg/L	159 mg/L	4	4
Calcium	No Objective	10 mg/L	18 mg/L	16 mg/L	19 mg/L	15.8 mg/L	4	4
Carbonate	No Objective	0 mg/L	0 mg/L	0 mg/L	0 mg/L	0 mg/L	4	4
Chloride	250	3.4 mg/L	4.3 mg/L	4.5 mg/L	3.8 mg/L	4.0 mg/L	4	4
Conductivity	No Objective	217 µs/cm	321 µs/cm	302 µs/cm	323 µs/cm	291 µs/cm	4	4
Hardness	800	41 mg/L	78 mg/L	69 mg/L	80 mg/L	67 mg/L	4	4
Magnesium	200	4 mg/L	8 mg/L	7 mg/L	8 mg/L	6.8 mg/L	4	4
PH	No Objective	7.7	7.8	7.8	8.3	7.9	4	4
Sodium	300	30 mg/L	34 mg/L	36 mg/L	36 mg/L	34 mg/L	4	4
Sulphate	500	9.1 mg/L	18.5 mg/L	18.5 mg/L	21.9 mg/L	17.0 mg/L	4	4
Total dissolved solids	1500	181 mg/L	262 mg/L	252 mg/L	269 mg/L	241 mg/L	4	4



**Saskatchewan  
Ministry of  
Environment**



All waterworks serving less than 5000 persons are required to submit water samples for SE's General Chemical category once every two years if a ground water source or once per three months every second year if a surface water or blended surface/groundwater source. The General Chemical category includes analysis for alkalinity, bicarbonate, calcium, carbonate, chloride, conductivity, hardness (as CaCO<sub>3</sub>), magnesium, sodium, sulphate and total dissolved solids.

The last sets of quarterly samples for General Chemical analysis were required for 2020 and were submitted on 3-Feb-20, 4-May-20, 4-Aug-20, 10-Nov-20. Sample results indicated that there were no exceedences of the provincial aesthetic objectives for the General Chemical category.

\*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 hazard. 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.

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

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