



**Drinking Water Quality and Compliance  
For Sask. Valley Rural Water Utility  
2018 Annual Notice to Consumers**

*(Note: This short form may be used for communities or waterworks serving a population of less than 5000).*

**Introduction**

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 Sask. Valley Rural Water Utility Gruenthal water quality and sample submission compliance record for the Jan. 1<sup>st</sup> to Dec. 31<sup>st</sup> 2018 time period. This report was completed on April 17<sup>th</sup> 2019. Readers should refer to the Agency's Municipal Drinking Water Quality Monitoring Guidelines, November 2002, EPB 202 for more information on minimum sample submission requirements and the meaning of type of sample. Permit requirements for a specific waterworks may require more sampling than outlined in the Agency'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 (%)
Total Coliform and Background Bacteria	0 Organisms/100 mL Less than 200/100 mL	26	26	0.0%

**Water Disinfection –**

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

Parameter	Minimum Limit	Total Chlorine Residual Range	Free Chlorine Residual Range	# Tests Required	# Tests Submitted	# Adequate Chlorine (%)
Chlorine Residual	0.1 mg/L free OR 0.5 mg/L total	0.77 to 1.61	NA	26	26	100%

**Water Disinfection – Total 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
Total Chlorine Residual	at least 0.5	0.96 to 1.82	365	0

*A minimum of 0.1 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 0.1 mg/L free chlorine residual. Water is supplied by the City of Saskatoon and is chloraminated so there is rarely a free chlorine residual. The system operates on total chlorine residual.*

**Turbidity – From Water Treatment Plant Records**

Parameter	Limit (NTU)	Test Level Range	# Tests Not Meeting Requirements	Maximum Turbidity (NTU)	# Tests Required	# Tests Performed
Turbidity	1.0	.10 to .29	0	.29	26	26
365						

**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.

\* Water is supplied by the City of Saskatoon. Results from these tests can be seen at [www.saskatoon.ca](http://www.saskatoon.ca)

Parameter	Limit MAC(mg/L)	Limit IMAC (mg/L)	Sample Result(s)	# Samples Exceeding Limit
Arsenic	0.010		_____	_____
Barium	1.0		_____	_____
Boron		5.0	_____	_____
Cadmium	0.005		_____	_____
Chromium	0.05		_____	_____
Fluoride (avg*)	1.5		_____	_____
Lead	0.01		_____	_____
Nitrate (avg.*)	45.0		_____	_____
Selenium	0.01		_____	_____
Uranium	0.02		_____	_____

\* Results expressed as average values for communities or waterworks that fluoridate drinking water supplies or those with elevated concentrations of fluoride or nitrates.

**Chemical – Trihalomethanes (THMs)**

Parameter	THMs Limit (mg/L)	Sample Result (average)	# Samples Required	# Samples Submitted
Trihalomethanes	0.1	.0351	4	3
Haloacetic Acids	0.080	.0236	4	3

THMs and Haloacetic Acids are generated during the water disinfection process as a by-product of reactions between chlorine and organic material. THMs are generally found only in drinking water obtained from surface water supplies. THMs and HAAs are to be monitored on a quarterly basis and the IMAC result is expressed as an average of 4 quarterly samples. 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.

**General Chemical**

Parameter	Aesthetic Objectives * (mg/L)	Sample Results (average)	# Samples Required	# Samples Submitted
Alkalinity	500	_____	_____	_____
Bicarbonate	No Objective	_____	_____	_____
Calcium	No Objective	_____	_____	_____
Carbonate	No Objective	_____	_____	_____
Chloride	250	_____	_____	_____
Conductivity	No Objective	_____	_____	_____
Hardness	800	_____	_____	_____
Magnesium	200	_____	_____	_____
PH	No Objective	_____	_____	_____
Sodium	300	_____	_____	_____
Sulphate	500	_____	_____	_____
Total dissolved Solids	1500	_____	_____	_____

All waterworks serving less than 5000 persons are required to submit water samples for WSA's General Chemical category once every two years if a ground water source and 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.

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\*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:  
 Sask. Valley Rural Water Utility  
 Rosthern Sask.  
 Call 306 232 4393 or fax 306 232  
 Email



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Cadmium	0.005		_____	_____
Chromium	0.05		_____	_____
Fluoride (avg*)	1.5		_____	_____
Lead	0.01		_____	_____
Nitrate (avg.*)	45.0		_____	_____
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#### Chemical – Trihalomethanes (THMs)

Parameter	THMs Limit (mg/L)	Sample Result (average)	# Samples Required	# Samples Submitted
Trihalomethanes	0.1	.0395	4	3
Haloacetic Acids	0.080	.0255	4	3

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