



## Drinking Water Quality and Compliance Village of Canwood – Annual Notice to Consumers

### Introduction

Saskatchewan 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 Village of Canwood's water quality and sample submission compliance record for the January 1 to December 31, 2017, time period. This report was completed on February 13, 2018. Readers should refer to Environment's [Municipal Drinking Water Quality Monitoring Guidelines, November 2002, EPB 202](#) for more information on minimum sample submission requirements and the meaning of the types of sample. 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 (%)
Total Coliform and Background Bacteria	0 Organisms/100 mL Less than 200/100 mL	24	24	0 (0%)

#### Raw Water Bacteriological Samples

Parameter/Location	Limit	Regular Samples Required	Regular Samples Submitted	# of Positive Regular Submitted (%)
Total Coliform and Background Bacteria	0 Organisms/100 mg/L Less than 200/100 mL	12	12	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	0.55 – 1.00	0.31 – 0.86	24	24	24 (100%)

#### Free Chlorine Residual –

#### for water entering Distribution System from Waterworks Records in Water Treatment Plant

Parameter	Test Level Limit (mg/L)	# Tests Range	# Tests Performed	# Not Meeting Requirements
Free Chlorine Residual	at least 0.1	0.53 – 1.36	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 performed on a daily basis 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 results not meeting the minimum requirement of 0.1 mg/L free chlorine residual.

#### Turbidity – from Waterworks Records in Water Treatment Plant

Parameter	Limit (NTU)	Test Level Range	# Tests Not Meeting Requirements	Maximum Turbidity (NTU)	# Tests Required	# Tests Performed
Turbidity	Max 1.0	0.08 – 0.49	0	0.49	365	365

#### Nitrate – in Distribution System from test results submitted with Bacteriological Samples

Parameter	Limit MAC(mg/L)	Test Level Range	# Samples Exceeding Limit	Maximum Nitrate (mg/L)	# of Tests Required	# of Tests Performed
Nitrate	45.0	9 – 16	0	16	24	24

### **Chemical – General**

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 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, nitrate, pH, sodium, sulphate and total dissolved solids.

The last sample for General Chemical analysis was completed on October 5, 2016. The next sample is to be taken in the 2018 calendar year. The 2016 analysis indicated that no category surpassed the provincial limits for the General Chemical. The sample exceeded provincial water quality standards and aesthetic objectives for the following parameters:

<b>Parameter</b>	<b>Limit MAC(mg/L)</b>	<b>Sample Results</b>	<b># Samples Required</b>	<b># Samples Submitted</b>
Nitrate	<45	8.5	1	1
Fluoride	<1.5	0.11	1	1

<b>Parameter</b>	<b>Aesthetic Objectives * (mg/L)</b>	<b>Sample Results</b>	<b># Samples Required</b>	<b># Samples Submitted</b>
Alkalinity	<500	218	1	1
Bicarbonate	No Objective*	266	1	1
Calcium	No Objective*	66	1	1
Carbonate	No Objective*	0	1	1
Chloride	<250	10	1	1
Conductivity	<2300 µS/cm	476	1	1
Hardness	<800	247	1	1
Magnesium	<200	20	1	1
pH	6.5 – 9.0 pH units	7.7	1	1
Sodium	<300	5	1	1
Sulphate	<500	23.7	1	1
Total dissolved solids	<1500	401	1	1

\*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) are considered regional differences in drinking water sources and quality.

### **Chemical – Health Category**

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

The last sample for Chemical Health analysis was completed on October 5, 2016. The next sample to be taken will be in the 2018 calendar year. The 2016 samples exceeded provincial water quality standards for the following parameters:

<b>Parameter</b>	<b>Limit</b>	<b>Sample Results</b>	<b># Samples Required</b>	<b># Samples Submitted</b>
Boron	<5.0 mg/L	<0.1	1	1
Arsenic (ICPMS)	<10 µg/L	0.40	1	1
Barium (ICPMS)	<100 µg/L	155	1	1
Lead (ICPMS)	<10 µg/L	0.10	1	1
Selenium (ICPMS)	<10 µg/L	<1.13	1	1
Uranium (ICPMS)	<20 µg/L	0.90	1	1

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

Village of Canwood  
Erin Robertson, Administrator  
Box 172  
Canwood, SK  
S0J 0K0  
Phone: (306) 468-2016  
Fax: (306) 468-2805  
Email: canwood.town@sasktel.net