

Drinking Water Quality and Compliance 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 Town of Carlyle water quality and sample submission compliance record for the January 1 to December 31, 2009 time period. This report was completed on February 9, 2010. 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 type 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, more detailed information is available from: http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/index_e.html

Water Quality Samples Bacteriological Quality

Parameter/Location	Limit	Regular Samples		Regular Samples		# of Positive
		Required	Submitted	Required	Submitted	Regular Submitted
Total Coliform and Background Bacteria	0 Organisms/100 mL Less than 200/100 mL	52	52	52	52	0

Water Disinfection –

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

Parameter	Minimum	Total Chlorine	Free Chlorine	#Tests	#Tests	#Adequate
	Limit	Residual Range	Residual Range	Required	Submitted	Chlorine (%)
Chlorine Residual	0.1 mg/L free OR 0.5 mg/L total	0.52-2.23	0.2-1.25 mg/L	52	50	50 (100%)

A minimum of 0.1 milligrams per litre (mg/L) free chlorine residual OR 0.5 mg/L total 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.

Turbidity – From Water Treatment Plant Records

Parameter	Limit	Test Level	# Tests Not Meeting	Maximum	# Tests	# Tests
	(NTU)	Range	Requirements	Turbidity (NTU)	Required	Performed
Turbidity	1	.26-1.62	1	1.62	52	52

Chemical – Health Category

All waterworks serving less than 5,000 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, fluoride, lead, nitrate, selenium and uranium.

The last sample for Chemical Health was submitted on July 16, 2008. Sample results indicated that the provincial drinking water quality standards were not exceeded.

General Chemical

All waterworks serving less than 5,000 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 CaCO₃, magnesium, sodium, sulphate and total dissolved solids.

The last sample for General Chemical analysis was required in 2008 and submitted on July 14, 2008. Samples exceeded provincial aesthetic objectives for the General Chemical category for the following parameters:

Parameter	Aesthetic Objectives* (mg/L)	Sample Results	#Samples Required	#Samples Submitted
Conductivity	<2300	2681		
Sulfate Dissolved	<500	1057.7		
Sodium	<300	403		
Total Dissolved Solids	<1500	2292		

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.

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

Town of Carlyle, Box 10, Carlyle, Sask. S0C 0R0