

Drinking Water Quality and Compliance Annual Notice to Consumers

Introduction

The Ministry of Environment (MOE) 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 Kelvington's water quality and sample submission compliance record for the 2010 calendar year. This report was completed on April 8, 2011. Readers should refer to MOE'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: www.saskh20.ca.

Water Quality Standards

Bacteriological Quality

Parameter/Location	Limit	Regular Samples Required	Regular Samples Submitted	# of Positive Regular Samples Submitted (%)
Total Coliform and Background Bacteria	0 Organisms/100 mL Less than 200/100 mL	52	52	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	0.93-1.94 mg/l	n/a	52	52	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	at least 0.50	1.07-2.15	365	0

A minimum of 0.5 milligrams per litre (mg/L) total chlorine residual is required for water entering and throughout 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 total chlorine residual tests performed, the overall range of total chlorine residual (highest and lowest recorded values) and the number of tests and percentage of results not meeting the minimum requirement of 0.5 mg/L 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 ntu	0.19-0.73	0	0.73	365	365

Chemical – Health Category

All waterworks serving less than 5000 persons are required to submit water samples for Saskatchewan Environment'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 in 2010. Sample results indicated that the provincial drinking water quality standards were not exceeded.

Parameter	Limit MAC(mg/L)	Limit IMAC(mg/L)	Samples Result(s) Exceeding Limit	# Samples
Aluminum	0.1 (Canadian Standard)			
Arsenic	0.025 (under review for 0.010)			
Boron	5.0			
Chloride	250			
Chromium	0.05			
Fluoride (avg*)	1.5			
Lead	0.01			

Nitrate (avg*)	45.0
Selenium	0.01
Sulphate	500
Uranium	0.02

*Results expressed as average values for communities or waterworks that fluoride 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		0	0

Note: Only water supplies derived from surface water or groundwater under the influence of surface water are required to monitor for THMs. Waterworks using groundwater sources beyond the influence of surface water do not need to report THMs since sampling/analysis will not likely have been performed.

General Chemical

Parameter	Aesthetic Objectives *(mg/L)	Sample Results (Average)	# of Samples Required	# of Samples Submitted
Alkalinity	500		0	0
Barium	1.0			
Bicarbonate	No Objective			
Cadmium	0.005			
Carbonate	No Objective			
Conductivity	No Objective			
Copper	1.0			
Hardness	800 (as Calcium Carbonate)			
Iron	0.3			
Magnesium	200			
Manganese	0.05			
PH	6.5-9.0			
Sodium	300			
Total Dissolved Solids	1500			
Zinc	5.0			

All waterworks serving less than 5000 persons are required to submit water samples for Saskatchewan Environment's General Chemical category once every 2 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 in 2010.

*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 CaCO₃, 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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