Saskatchewan Ministry of Environment

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 **Resort Village of Lumsden Beach** water quality and sample submission compliance record for the **28 April 2016 to 10 Oct 2016** time period. This report was completed on **21 Jan 2017**.

Due to high turbidity levels over the past few years, the village began the year with the water classified for hygienic use only. However, after weeks of concerted effort and the installation of two filters in the treatment plant the turbidity levels were reduced to an acceptable level. On 16 August 2016 the Water Security Agency licensed the water supply as potable.

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, 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 .

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	**6**	**6**	**0%**

In addition to the regular monthly samples, 2 sets of three samples were taken prior to startup as a potable supply in August. All sample results were negative.

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	0.15 mg/L free OR 0.5 mg/L total	0.33 - 0.86	0.22 - 0.67	6	6	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 0.15	**0.19 - 1.27**	**166**	**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.

Turbidity – From Water Treatment Plant Records - Aug 16 to Oct 10

Parameter	Limit (NTU)	Test Level Range	# Tests Not Meeting Requirements	Maximum Turbidity (NTU)	# Tests Required	# Tests Performed
Turbidity	**<1.0**	**0.07 - 0.62**	**0**	**0.62**	**55**	**55**

Turbidity tests were not required during the hygienic use period.

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, fluoride, lead, nitrate, selenium and uranium.

Sample results (29 Jul 2016) indicated that the provincial drinking water quality standards were not exceeded.

General Chemical

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 $CaCO_3$), magnesium, sodium, sulphate and total dissolved solids.

Sample results (29 Jul 2016) indicated that the only exceedance of the provincial aesthetic objectives for the General Chemical category was for Manganese with a recorded value of 0.07 mg/L compared to the Guideline of <0.05 mg/L. Historically, manganese has always exceeded the guideline. The installation of the filters appears to have reduced the manganese level significantly - in 2015 the value for manganese was 0.16 mg/L

*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 $CaCO_3$, 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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