



**Drinking Water Quality and Compliance
for Special Services Area of Plunkett
2022 Annual Notice to Consumers**

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 Village of Plunkett water quality and sample submission compliance record for the January 1, 2022 to December 31, 2022 time period. This report was completed on Feb. 12, 2023. Readers should refer to the Agency's Municipal Drinking Water Quality Monitoring Guidelines, November 2015, 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-smt/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	25	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	3.90– 8.30	.02	24	25	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 0.1	.02	266	365

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

Parameter	Limit (NTU)	Test Level # Tests Range	# Tests Not Meeting Requirements	Maximum Turbidity (NTU)	# Tests Required	# Tests Performed
Turbidity	1.0	.33 – 2.90	89	2.90	365	266

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.

The last sample for Chemical Health analysis was submitted on January 31/2022. Sample results indicated that the provincial drinking water quality standards were not exceeded.

Parameter	Limit MAC(mg/L)	Limit IMAC (mg/L)	Sample Result(s)	# Samples Exceeding Limit	
Arsenic	0.010		.0016		* Results expressed as average values for communities or waterworks that fluoridate drinking water supplies or those with elevated concentrations of fluoride or nitrates.
Barium	1.0		.0038		
Boron		5.0	.61		
Cadmium	0.005		.0001		
Chromium	0.05		.0005		
Fluoride (avg*)	1.5		.25		
Lead	0.01		.0002		
Nitrate (avg.*)	45.0		4.8		
Selenium	0.01		.0001		
Uranium	0.02		.0002		

General Chemical

Parameter	Aesthetic	Sample Results	# Samples	# Samples
	Objectives * (mg/L)	(average)	Required	Submitted
Alkalinity	500	404	1	1
Bicarbonate	No Objective	493	1	1
Calcium	No Objective	176	1	1
Carbonate	No Objective	<1	1	1
Chloride	250	93	1	1
Conductivity	No Objective	3420	1	1
Hardness	800	825	1	1
Magnesium	200	94	1	1
pH	No Objective	7.86	1	1
Sodium	300	518	1	1
Sulphate	500	1240	1	1
Total dissolved Solids	1500	2610	1	1

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 CaCO₃), magnesium, sodium, sulphate and total dissolved solids.

The last sample for General Chemical analysis was required on 2022 and submitted on January 31, 2022. Samples exceeded provincial aesthetic objectives for the General Chemical category for the following parameters; Sodium, Sulphate, Hardness and Total Dissolved Solids.

*Objectives apply to certain characteristics of 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:

Special Services Area of Plunkett
c/o RM of Viscount #341
Box 100 Viscount, Sk. S0K 4M0
Ph. 306-944-2044
Fax. 306-944-2016
E-Mail rm341@sasktel.net

