

Town of Porcupine Plain
Annual Notice to Consumers
Regarding Drinking-Water Quality and Water-Sample Compliance
For the Year Ending December 31, 2020

Introduction

Sask. Environment (SE) requires that, at least once each year, waterworks owners provide notification to consumers of

- the quality of water produced and supplied; and
- information on the performance in submitting samples as required by the Water Security Agency (WSA) for the Porcupine Plain waterworks system

The following is a summary of the Porcupine Plain water-quality data and sample-submission records for 2020. This report was completed on June 21, 2021.

Readers should refer to Saskatchewan Environment's "*Municipal Drinking Water Quality Monitoring Guidelines, November 2002, EPB202*" for more information on minimum sample submission requirements.

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 information is available from:

<http://www.hc-sc.gc.ca/hecs-sesc/water/dwgsup.htm>.

Water Quality Standards

Bacteriological Quality

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

The owner/operator is responsible to ensure that 100 percent of all bacteriological samples are submitted as required. All waterworks are required to submit samples for bacteriological water quality. The frequency of monitoring depends on the population served by the waterworks.

Water Disinfection – Chlorine Residual in Distribution System from Lab Test Results Submitted with Bacteriological Samples

Parameter	Minimum Limit	Free Chlorine Residual Range	Total Chlorine Residual Range	Number of All Tests Required	Number of All Tests Submitted	Number of All Tests Adequate
Chlorine Residual	0.1 mg/L free OR 0.5 mg/L total	.07 to 1.86	.33 to 2.60	52	52	52
Turbidity	1.0 (NTU)	Turbidity Range: .10 to .40		52	52	52

Note: The above is usually over 52 due to water breaks etc

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Water Disinfection – Free Chlorine Residual for Water Entering Distribution System From Water Treatment Plant Records

Parameter	Limit (mg/L)	Test Level Range	# Tests Performed	# Tests Not Meeting Requirements
Free Chlorine Residual OR Total Chlorine Residual	At least 0.1 ----- At least 0.5	.17 to 2.58 ----- .45 to 3.06	365	0

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 the 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 Range	Number of Tests Not Meeting Requirements	Maximum Turbidity (NTU)	Number of Tests Required	Number of Tests Performed
Turbidity	1.0	0.11 to .56	0	.60	365	365

Turbidity is a measure of water treatment efficiency. Turbidity measures the “clarity” of the drinking water and is generally reported in Nephelometric Turbidity Units (NTU). All waterworks are required to monitor turbidity at the water treatment plant. The frequency of measurement varies from daily for small systems to continuous for larger waterworks.

All waterworks serving less than 5,000 persons are required to submit water samples for Saskatchewan Environment’s “Chemical Health” category once every two years.

The last sample for “Chemical Health” analysis was submitted in February of 2020. “Chemical Health” tests are to be completed every two years). Analysis results indicated that the provincial drinking water quality limits were not exceeded.

NOTE: WILL NEED TO DO IN 2021 AGAIN!

Parameter	Maximum Acceptable Concentration (mg / L)	Aesthetic Objective (mg / L)	Sample Results	Exceeds Limit
Aluminum	None set	None set	<6.96	No
Arsenic	<10	None set	3.3	No
Barium	<1000	None set	18.7	No
Boron	<5	None set	.3	No
Cadmium	<5	None set	<.15	No
Chromium	<50	None set	<.19	No
Copper	<1000	1.0	32.7	No
Iron	<.3	0.3	.2	No
Lead	<10	None set	.30	No
Manganese	<.05	0.05	<.01	No
Selenium	<10	None set	<1.13	No
Uranium	<20	None set	1.8	No
Zinc	<5000	5.0	25.6	No
Antimony (ICPMS)	None Set	None Set	<.16	No
Silver (ICPMS)	None Set	None Set	<.20	No

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General Chemical

Parameter	Aesthetic Objectives* (mg/L)	Sample Results Average (mg/L)	Number of Samples Required	Number of Samples Submitted
Total Alkalinity	<500	458	1	1
Phenol Alkalinity	No objective	0.00	1	1
Bicarbonate	No objective	559	1	1
Calcium	No objective	164	1	1
Carbonate	No objective	0	1	1
Chloride	<250	36.6	1	1
Conductivity	<2300	1,245 us/cm	1	1
Hardness	<800	611	1	1
Magnesium	<200	49	1	1
pH	6.5-9.0	7.6	1	1
Sodium	<300	70	1	1
Total dissolved solids	<1,500	1100	1	1
Potassium	No objective	11	1	1
Sulfate	<500.0	210.1	1	1
Hydroxide	No objective	0	1	1
Nitrate	<45	< 0.2	1	1
Fluoride	<1.5	.20	1	1

All waterworks serving less than 5,000 persons are required to submit water samples for Sask. Environment's General Chemical category once every two years if a ground water source.

The last sets of samples for General Chemical analysis were submitted on February 24, 2021. The samples' results indicated that there were no exceedances of the provincial aesthetic objectives for the General Chemical category.

* 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:

Town of Porcupine Plain
Box 310; Porcupine Plain, Sask.; S0E 1H0
Telephone: 278-2262
Facsimile: 278-3378
E-mail: porcupineplain@sasktel.net

Water Hardness = 611MG/17.1 = 35.73 Grain/Gallon

Site for Water Hardness: <http://keisan.casio.com/exec/system/1350974216>

Saved As: Water&Sewer/WaterQualityDocuments/AnnualNoticetoConsumers.doc