2020 Drinking Water Quality Data

Water quality data presented below has been compiled from the results of laboratory testing. Water samples were taken from the Buffalo Pound Water Treatment Plant and comprehensive water quality analyses for all parameters were conducted in the plant laboratory.

Water quality test results for bacteriological, chlorine residual and turbidity were given in the 2020 Drinking Water Quality and Compliance Report.

Parameter	Testing Result Annual Average (mg/L)	Saskatchewan Environment Water Quality Objective (mg/L)
Sodium (Na)	43.4	300 (AO)
Sulphate (SO4)	139.3	500 (AO)
Total Dissolved Solids (TDS)	360	1500
Manganese (Mn)	0.00	0.05 (AO)
Nitrate (NO3)	0.06	45
Potassium (K)	5.0	No Standard
Hardness (as CaCO3)	201	800
Iron (Fe)	0.00	0.3 (AO)
Magnesium (Mg)	22.4	200 (AO)
Calcium (Ca)	44.0	No Standard
Chloride (Cl)	26.6	250 (AO)
Fluoride (F)	0.10	1.5
Alkalinity (as $CaCO_3$)	129.8	500 (AO)

Notes:

- *Values are given in milligrams per litre (mg/l) which is equivalent to parts per million (ppm)*
- *No fluoride was added to Regina water. Fluoride measured is naturally occurring.*
- *"AO" means "Aesthetic Objective"*
- *"IMAC" means "Interim Maximum Allowable Concentration"*

2020 Drinking Water Quality and Compliance Report

Annual Notice to Customers

Introduction

The City of Regina performs regular sampling at 18 locations throughout its distribution system to ensure water quality throughout the City. These samples are taken to comply with the City's Permit to Operate. They include tests for chlorine and turbidity, as well as samples for bacteriological quality and trihalomethane.

Saskatchewan Water Security Agency 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 water works in submitting samples as required by the Minister's Order or Permit to Operate a Waterworks.

The following is a summary of the City of Regina water quality and sample submission compliance records for the period January 1, 2020 - December 31, 2020. This report was completed on May 6, 2021.

Readers should refer to Saskatchewan Water Security Agency document: Saskatchewan Drinking Water Standards and Objectives for more information on minimum sample submission requirements and the meaning of each type of sample.

http://www.saskh2o.ca/pdf/epb507.pdf

Permit requirements for a specific waterworks may require more sampling than outlined in the Authority's monitoring guidelines. If consumers need more information on the nature and significance of specific water tests, for example, "what is the significance of sulphate?"

https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html#t2

Water Quality Standards

I. Bacteriological Quality

Parameter	Maximum Limit	Regular Samples Required	Total Samples Tested	No. of Samples Positive
Total Coliform and Background Bacteria	Zero Organisms/100ml Less than 200/100ml	936	951	0[a]

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II. Water Disinfection - Chlorine Residual in Distribution System for Test Results Submitted with Bacteriological Samples

Parameter	Minimum Requirements (mg/l)	Test Level Range (mg/l)	No. of Tests Required	No. of Tests Performed	No. of Samples Not Meeting Requirements
Chlorine Residual	0.1 mg/L Free	0.15 - 1.16	936	951	0[b]
	0.5 mg/L Total	0.29 – 1.50			

III. Turbidity

Parameter	Maximum Limit (NTU)	Test Level Range	No. of Tests Required	No. of Tests Performed	No. of Tests Not Meeting Requirements
Turbidity	1.0	0.01 – 0.67	936	951	0

(NTU) Nephelometric Turbidity Unit - a unit of measurement used to indicate the clarity of drinking water

IV. Chemical - Trihalomethanes

Parameter	Maximum Limit (mg/l)	Sample Result (Average)	No. of Samples Required	No. of Samples Taken
Trihalomethanes	0.1	0.038 mg/l	8	8

Notes:

a. Positive bacteriological samples are resampled to confirm the presence or absence of pathogens. Follow up tests confirmed the absence of pathogens in all cases.

b. To meet Regulations, either free or total chlorine residual must meet or exceed the minimum requirements.

Contact Information

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

City of Regina
Tel: 306-777-7000
Web: www.regina.ca

2020 Additional Drinking Water Data

The following water quality parameters are tested by the Buffalo Pound Water Treatment Plant and at accredited labs. The tested parameters include those required by the Water Security Agency. There are additional parameters within Health Canada guidelines which are not typically tested in this region. The City of Regina has tested these additional parameters with the results given below.

Parameter	Testing Results	Detection Threshold	Health Canada Guideline Water Quality Objective
	(mg/L)	(mg/L)	(mg/L)
Antimony	0.00026	0.00010	0.006
Azinphoz-methyl	ND	0.0001	0.02
Calcium	47.5	0.050	Not Regulated
Chloramines	0.16	0.050	Not Regulated
Chlorite	ND	0.050	1
Diquat	ND	0.0001	0.07
Diuron	ND	0.018	0.15
Formaldehyde	ND	0.001	Not Regulated
Metribuzin	ND	0.0001	0.08
Nitrite	ND	0.010	3
N-Nitrosodimethyalmine	ND	0.00005	0.00004
Paraquat	ND	0.0001	0.01
Uranium	0.0004	0.000010	0.02
	(Bq/L)	(Bq/L)	(Bq/L)
Cesium-137	ND	0.2	10
Iodine-131	ND	0.2	6
Lead-210	ND	0.02	0.2
Radium-226	0.008	0.0074	0.5
Strontium-90	ND	0.05	5

Notes:

- *Milligrams per liter (mg/l) which is equivalent to parts per million (ppm)*
- *Becquerel (Bq/L) is a measure of the strength of radioactivity*
- *ND means "None Detected"*

Parameter	Testing Results	Detection Threshold	Health Canada Guideline Water Quality Objective
Total Asbestos (MFL)[a]	ND	0.16	Not Regulated

Notes:

a. MFL means Millions of Fibers per Liter. This is a measure of fibers present within a liter of tested water.