



## 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 Village of McLean water quality and sample submission compliance record for the January 1 to December 31, 2019 time period. This report was completed on January 02 2020. Readers should refer to Environment's [Municipal Drinking Water Quality Monitoring Guidelines, June 2015, EPB 502](#) 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:

### 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<br>Less than 200/100 mL | 24                       | 24                        | 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<br>0.5 mg/L total | 0.51-1.09                     | 0.10-0.76                    | 24               | 34                | 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 | 0.47-1.12        | 365               | 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

| Parameter | Limit (NTU) | Test Level Range | # Tests Not Meeting Requirements | Maximum Turbidity (NTU) | # Tests Required | # Tests Performed |
|-----------|-------------|------------------|----------------------------------|-------------------------|------------------|-------------------|
| Turbidity | 1.0         | 0.42-0.89        | 0                                | 0.89                    | 365              | 365               |

**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.

The last sample for Chemical Health analysis was submitted on Jan. 15, 2019. Sample results indicated that the provincial drinking water quality standards were not exceeded.

| Parameter       | Limit<br>MAC(mg/L) | Limit<br>IMAC (mg/L) | Sample<br>Result(s) | # Samples<br>Exceeding Limit |  |
|-----------------|--------------------|----------------------|---------------------|------------------------------|--|
| Arsenic         |                    | 0.025                | 0.0002              | _____                        | * 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                |                      | 0.075               | _____                        |  |
| Boron           |                    | 5.0                  | <0.1                | _____                        |  |
| Cadmium         | 0.005              |                      | <0.00015            | _____                        |  |
| Chromium        | 0.05               |                      | <0.00019            | _____                        |  |
| Fluoride (avg*) | 1.5                |                      | .00009              | _____                        |  |
| Lead            | 0.01               |                      | .00010              | _____                        |  |
| Nitrate (avg.*) | 45.0               |                      | 0.0017              | _____                        |  |
| Selenium        | <0.01              |                      | <0.00113            | _____                        |  |
| Uranium         | <0.02              |                      | 0.0038              | _____                        |  |

**General Chemical Jan 15/19**

| Parameter                 | Aesthetic<br>Objectives * (mg/L) | Sample Results<br>(average) | # Samples<br>Required | # Samples<br>Submitted |
|---------------------------|----------------------------------|-----------------------------|-----------------------|------------------------|
| Alkalinity                | <500                             | 252                         | _____1_____           | _____1_____            |
| Bicarbonate               | No Objective                     | 307                         | _____1_____           | _____1_____            |
| Calcium                   | No Objective                     | 82                          | _____1_____           | _____1_____            |
| Carbonate                 | No Objective                     | 0                           | _____1_____           | _____1_____            |
| Chloride                  | <250                             | 15.9                        | _____1_____           | _____1_____            |
| Conductivity              | No Objective                     | 706 uS/cm                   | _____1_____           | _____1_____            |
| Hardness                  | <800                             | 357                         | _____1_____           | _____1_____            |
| Magnesium                 | <200                             | 37                          | _____1_____           | _____1_____            |
| PH                        | No Objective                     | 7.8                         | _____1_____           | _____1_____            |
| Sodium                    | <300                             | 16                          | _____1_____           | _____1_____            |
| Sulphate                  | <500                             | 117.2                       | _____1_____           | _____1_____            |
| Total dissolved<br>Solids | <1500                            | 584                         | _____1_____           | _____1_____            |

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<sub>3</sub>), magnesium, sodium, sulphate and total dissolved solids.

The last sample for General Chemical analysis was required on January 15, 2019 and submitted on January 15, 2019. Sample results indicated that there were no exceedences 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 hazards. The aesthetic objectives for several parameters (including hardness as CaCO<sub>3</sub>, 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:**

Village of McLean  
Box 56, McLean, SK S0G 3E0 Phone 306-699-7279 Email: [villageofmclean@sasktel.net](mailto:villageofmclean@sasktel.net)