



**Drinking Water Quality and Compliance
for The Village of Muenster
2024 Annual Notice to Consumers**

Introduction

The Water Security Agency and the 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 Muenster's water quality and sample submission compliance records for the January 1, 2024 to December 31, 2024 time period. This report was completed on February 9, 2025 (*must be completed before June 30 each year on a calendar year based reporting frequency*). Readers should refer to Saskatchewan Water Security Agency'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:

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 E. coli | 0 Organisms/100 mL | 52 | 53 | 0 |
| Background Bacteria | Less than 200/100 mL | 52 | 53 | 0 |

The owner/operator is responsible to ensure that 100 per cent 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 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 | 0.68-1.21 | 0.50 - 0.94 | 52 | 53 | 100% |

A minimum of 0.1 milligrams per litre (mg/L) free chlorine residual OR 0.5 mg/L total chlorine residual is required at all times throughout the distribution system unless otherwise approved. A proper chlorine submission is defined as a bacteriological sample submission form with both the free and total chlorine residual fields filled out. An adequate chlorine is a result that indicates that the chlorine level is above the regulated minimums. An adequate chlorine may be counted even if the chlorine results were submitted incorrectly. A waterworks is required to submit chlorine residual test results on every bacteriological sample they submit.

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 | 0.48-0.96 | 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 # Tests Range | # Tests Not Meeting Requirements | Maximum Turbidity (NTU) | # Tests Required | # Tests Performed |
|-----------|-------------|--------------------------|----------------------------------|-------------------------|------------------|-------------------|
| Turbidity | 1.0 | 0.02- 0.13 | 0 | 0.13 | 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.

Chemical – Halo Acetic Acids (HAAs)

| Parameter | HAAs Limit (mg/L) | Sample Result (average) | # Samples Required | # Samples Submitted |
|-------------------|----------------------|----------------------------|-----------------------|------------------------|
| Halo Acetic Acids | 0.080 | 0.035 | 4 (1 every 3 months) | 4 |

Chemical – Trihalomethanes (THMs)

| Parameter | THMs Limit (mg/L) | Sample Result (average) | # Samples Required | # Samples Submitted |
|-----------------|----------------------|----------------------------|-----------------------|------------------------|
| Trihalomethanes | 0.1 | 0.0592 | 4 (1 every 3 months) | 4 |

THMs and Haloacetic Acids are generated during the water disinfection process as a by-product of reactions between chlorine and organic material. THMs are generally found only in drinking water obtained from surface water supplies. THMs and HAAs are to be monitored on a quarterly basis and the IMAC result is expressed as an average of 4 quarterly samples. Only water supplies derived from surface water or groundwater under the influence of surface water are required to monitor for THMs and Haloacetic Acids unless otherwise specified in the facility Permit to Operate.

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

Village of Muenster
Box 98
Muenster, Saskatchewan
S0K 2Y0
PH: 306-682-2794
Email: muenster@sasktel.net

ANNUAL FINANCIAL OVERVIEW (2024)

*Pre-Audit Overview – Village of Muenster

Total 2024 waterworks operating revenues (R) - \$222,721
 Total 2024 waterworks operating expenditures (E) - \$263,128
 Total debt payments of waterworks infrastructure loans (D) – \$26,580
 Comparison of waterworks operating revenues to operating expenditures plus debt payments,
 expressed as a ratio – $\frac{(\$222,721)}{(\$263,128) + (\$26,580)} = .77$

For 2024, waterworks operating revenues covered 77 percent of the waterworks operating expenditures. (Total 2024 waterworks expenditures of \$263,128 includes an amortization figure of \$47,645.)

RESERVES

Dec 31, 2024 Reserves available for waterworks capital infrastructure:
 Capital Trust Fund - \$221,107
 Utility Reserve Fund - \$19,514

Waterworks Information available for review at the Village of Muenster Office:

- Waterworks Rate Policy and Capital Investment Strategy
- Capital plans in place and related sources of funding for the projects.
- Financial Overview of the Waterworks
- Reserves available for Waterworks Projects
- Copy of the 2016 Waterworks System Assessment