REGIONAL DISTRICT
NORTH OKANAGAN

**Mabel Lake Water (MLW) Utility Water Quality Report for May 2022**

The following is the water quality summary for the Mabel Lake Water Utility (MLW).

## 1. Source

The MLW system draws raw water from Mabel Lake through a screened intake line to a clear well. Water from the clear well is chlorinated and pumped into a 526 meter long pipe which provides chlorine contact time. Water then flows into the distribution system. Table 1 summarizes the results for bacterial and turbidity for the untreated water at the treatment plant.

### Table 1 Mabel Lake Intake

| Parameter | Laboratory | | # of Samples | # of Deviations | Min | Max | Average |
|---|---|---|---|---|---|---|---|
| E.coli[2] | Caro | CFU/100 mL | 5 | ----- | <1 | <1 | <1 |
| Total Coliform | Caro | CFU/100 mL | 5 | ----- | <1 | **1** | <1 |
| Turbidity[2] | SCADA[1] Daily Average | NTU | 31 Days | ----- | 0.17 | 0.38 | 0.23 |
| Turbidity[1] | Operator Grab Sample | NTU | 12 | ----- | 0.16 | 0.41 | 0.26 |
| UVT (unfiltered) | GVW | % | 4 | ----- | 90.4 | 91.4 | 90.9 |

[1]WQ Deviation Response Plan - Turbidity > 1.0 NTU
[2]Drinking Water Treatment Objectives_ BC (Sec 4.3): Determine number of raw water samples with E. coli >20 CFU. The number of E. coli in raw water does not exceed 20/100 mL in at least 90% of the weekly samples from the previous six months.

## 2. Treatment Plant

MLW utilizes chlorine disinfection only. Table 2 summarizes the chlorine levels from the pipe that flows into the distribution system.

### Table 2 Mabel Lake Water Treatment

| Parameter | Laboratory | | # of Samples | # of Deviations | Min | Max | Average |
|---|---|---|---|---|---|---|---|
| Free Chlorine[2] | SCADA[1] Daily Average | mg/L | 31 Days | ----- | 1.45 | 1.62 | 1.55 |

[1]SCADA: Supervisory Control and Data Acquisition.
[2]WQ Deviation Response Plan - Free Chlorine <0.20 mg/L or >2.20 mg/L

## 3. Distribution

MLW provides potable water to 3 commercial and 338 residential connections. The majority of connected residents and all 3 commercial connections are seasonally occupied, with approximately 20 connections considered year-round or permanent. The population increases to an estimated one thousand three hundred and fifty (1350) persons during peak summer months.

Table 3 summarizes the results for chlorine, turbidity, and bacteria for the distribution system. The monthly water volume used at Mabel Lake this month was 6,509 $m^3$.

**Table 3 Mabel Lake Distribution Parameters**

| Parameter | Laboratory | | # of Samples | # of Deviations | Min | Max | Average |
|---|---|---|---|---|---|---|---|
| Free Chlorine | Operator Grab Sample | mg/L | 59 | ----- | 0.48 | 1.74 | 0.95 |
| Total Chlorine | Operator Grab Sample | mg/L | 59 | ----- | 0.59 | 1.78 | 1.09 |
| Turbidity | Operator Grab Sample | NTU | 59 | ----- | 0.15 | 0.54 | 0.28 |
| E.coli | Caro | CFU/100 mL | 10 | ----- | <1 | <1 | <1 |
| Total Coliform | Caro | CFU/100 mL | 10 | ----- | <1 | <1 | <1 |

## 4. Customer Calls and Notifications

Customer calls within the Mabel Lake Water Utility service area are tracked and recorded. There were no customer calls in May.

## 5. Operational or Maintenance Activity

Operational activities within the Mabel Lake Water service area are tracked and recorded. There were 2 distribution operational activities in May. Table 4 outlines the distribution operational and maintenance activities during the month.

**Table 4 Monthly operational work and maintenance**

| NUMBER OF LOCATIONS | TYPE OF WORK |
|---|---|
| 0 | Hydrant Maintenance |
| 0 | Water Service Locate |
| 0 | Water Main Break Repair |
| 0 | Water Service Install |
| 1 | Water Turn On/Off |
| 0 | Water Curb Stop Repair |
| 0 | Leak Detection |
| 1 | Water Service Repair |