



# REGIONAL DISTRICT NORTH OKANAGAN

## Mabel Lake Water (MLW) Utility Water Quality Report for February 2023

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 <sup>3</sup>	Caro	MPN/100 mL	4	-----	<1	<1	<1
Total Coliform	Caro	MPN/100 mL	4	-----	<1	1	<1
Turbidity <sup>2</sup>	SCADA <sup>1</sup> Daily Average	NTU	28 Days	-----	0.15	0.69	0.18
Turbidity <sup>2</sup>	Operator Grab Sample	NTU	12	-----	0.21	0.70	0.29
UVT (unfiltered)	RDNO Lab	%	4	-----	89.70	92.50	90.73

<sup>1</sup>SCADA: Supervisory Control and Data Acquisition.

<sup>2</sup>Operation Guideline: As outlined in Deviation Response Plan, turbidity < 1 NTU

<sup>3</sup>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 chlorine and turbidity levels from the pipe that flow into the distribution system.

**Table 2 Mabel Lake Water Treatment**

Parameter	Laboratory		# of Samples	# of Deviations	Min	Max	Average
Free Chlorine <sup>2</sup>	SCADA <sup>1</sup> Daily Average	mg/L	28 Days	-----	1.28	1.83	1.52

<sup>1</sup>SCADA: Supervisory Control and Data Acquisition.

<sup>2</sup>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 3,690 m<sup>3</sup>.

**Table 3 Mabel Lake Distribution Parameters**

Parameter	Laboratory		# of Samples	# of Deviations	Min	Max	Average
Free Chlorine <sup>1</sup>	Operator Grab Sample	mg/L	57	-----	0.29	1.65	0.90
Total Chlorine	Operator Grab Sample	mg/L	57	-----	0.32	1.72	0.97
Turbidity <sup>1</sup>	Operator Grab Sample	NTU	57	-----	0.19	0.46	0.27
E.coli	Caro	CFU/100 mL	4	-----	<1	<1	<1
Total Coliform	Caro	CFU/100 mL	4	-----	<1	<1	<1

<sup>1</sup>WQ Deviation Response Plan - free chlorine < 0.20 mg/L or > 2.20 mg/L, turbidity >1.0 NTU

**4. Water Quality customer Calls and Notifications**

Customer calls within the Mabel Lake Water Utility service area are tracked and recorded.

There were no customer calls this month.

**Table 4 Water Quality customer calls for the month**

# of Calls	Type of Call	Issue/Inquiry	Investigation	Comments
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**5. Operational or Maintenance Activity**

Operational activities within the Mabel Lake Water service area are tracked and recorded.

There were no distribution operational activities this month.

Table 5 outlines the distribution operational and maintenance activities during the month.

**Table 5 Monthly Operational Work and Maintenance**

NUMBER OF LOCATIONS	TYPE OF WORK
0	Standpipe Maintenance
0	Hydrant Maintenance
0	Water Service Locate
0	Water Main Break Repair
0	Water Meter Inspection
0	Water Meter Maintenance
0	Water Service Install
0	Water Service Repair
0	Water Turn On/Off
0	Water Curb Stop Repair
0	Water Investigation