



REGIONAL DISTRICT NORTH OKANAGAN

Mabel Lake Water (MLW) Utility Water Quality Report for October 2022

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	4	-----	<1	<1	<1
Total Coliform	Caro	CFU/100 mL	4	-----	3	7	5.5
Turbidity ²	SCADA ¹ Daily Average	NTU	31 Days	-----	0.18	0.48	0.32
Turbidity ¹	Operator Grab Sample	NTU	11	-----	0.28	0.56	0.36
UVT (unfiltered)	GVW	%	4	-----	87.8	88.7	88.4

¹WQ Deviation Response Plan - Turbidity > 1.0 NTU

²Drinking 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	-----	1.42	1.60	1.52

¹SCADA: Supervisory Control and Data Acquisition.

²WQ 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 4,552 m3.

Table 3 Mabel Lake Distribution Parameters

Parameter	Laboratory		# of Samples	# of Deviations	Min	Max	Average
Free Chlorine ¹	Operator Grab Sample	mg/L	64	-----	0.22	1.53	0.64
Total Chlorine	Operator Grab Sample	mg/L	64	-----	0.29	1.68	0.73
Turbidity ¹	Operator Grab Sample	NTU	59	-----	0.19	0.57	0.33
E.coli	Caro	CFU/100 mL	4	-----	<1	<1	<1
Total Coliform	Caro	CFU/100 mL	4	-----	<1	<1	<1

¹GWV WQ Deviation Response Plan – free chlorine < 0.20 mg/L turbidity > 1.0 NTU

4. Customer Calls and Notifications

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

There were 2 customer calls in October.

Table 4 Customer calls for the month

# of Calls	Type of Call	Issue/Inquiry	Investigation	Comments
1	Water Quality	Brown Water	Yes	Work in area caused water to be stirred up. Operations flushed the area.
1	Water Quality	Brown Water	Yes	Work in area caused water to be stirred up. Operations flushed the area.

5. Operational or Maintenance Activity

Operational activities within the Mabel Lake Water service area are tracked and recorded. There were no distribution operational activities in October.

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	Water Service Locate
0	Water Main Break Repair
0	Water Service Install
0	Water Turn On/Off
0	Water Curb Stop Repair
0	Water Investigation