



REGIONAL DISTRICT NORTH OKANAGAN

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

A potential water service interruption notice was issued to customers on September 22, 2022 due to a planned power outage by BC Hydro on September 24, 2022. Water service was not interrupted by the power outage.

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	2	0.5
Total Coliform	Caro	CFU/100 mL	4	-----	<1	6	3
Turbidity ²	SCADA ¹ Daily Average	NTU	30 Days	-----	0.36	0.83	0.52
Turbidity ¹	Operator Grab Sample	NTU	12	-----	0.43	1.49	0.71
UVT (unfiltered)	GVW	%	4	-----	86.4	87.8	86.9

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	30	-----	1.56	1.75	1.64

¹SCADA: Supervisory Control and Data Acquisition.

²WQ Deviation Response Plan - free chlorine <0.20 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 11,358 m³.

Table 3 Mabel Lake Distribution Parameters

Parameter	Laboratory		# of Samples	# of Deviations	Min	Max	Average
Free Chlorine ¹	Operator Grab Sample	mg/L	65	-----	0.21	1.68	0.98
Total Chlorine	Operator Grab Sample	mg/L	65	-----	0.27	1.80	1.08
Turbidity ¹	Operator Grab Sample	NTU	58	-----	0.22	0.98	0.55
E.coli	Caro	CFU/100 mL	8	-----	<1	<1	<1
Total Coliform	Caro	CFU/100 mL	8	-----	<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 was one customer call in September.

Table 4 Customer calls for the month

# of Calls	Type of Call	Issue/Inquiry	Investigation	Comments
1	Inquiry	Connection to water system requirements	No	RDNO staff discussed water connection requirements

5. Operational or Maintenance Activity

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

There were 0 distribution operational activities in September.

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