



# REGIONAL DISTRICT NORTH OKANAGAN

## Mabel Lake Water (MLW) Utility Water Quality Report for July 2022

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

The Boil Water Notice (BWN) issued on June 26, 2022 due to high turbidity was downgraded to a Water Quality Advisory (WQA) on July 14, 2022. The turbidity levels that had gone over 5.0 NTU, which triggered the BWN, had decreased but were still exceeding acceptable levels (1.0 NTU), which was why the WQA was necessary.

No outdoor watering was in effect from July 28, 2022 to August 2, 2022 due to water system capacity concerns during the long weekend. This was to ensure water availability for essential domestic use and reduce risking loss of water.

### 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>2</sup>	Caro	CFU/100 mL	4	-----	<1	1	1
Total Coliform	Caro	CFU/100 mL	4	-----	<1	17	8
Turbidity <sup>2</sup>	SCADA <sup>1</sup> Daily Average	NTU	31 Days	<b>31<sup>1</sup></b>	1.02	4.87	2.40
Turbidity <sup>1</sup>	Operator Grab Sample	NTU	13	<b>13<sup>1</sup></b>	1.37	4.99	2.81
UVT (unfiltered)	GVW	%	4	-----	85.3	87.5	86.0

<sup>1</sup>WQ Deviation Response Plan - turbidity > 1.0 NTU

<sup>2</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 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 <sup>2</sup>	SCADA <sup>1</sup> Daily Average	mg/L	31 Days	-----	1.53	1.75	1.68

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

<sup>2</sup>WQ 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 16,858 m3.

**Table 3 Mabel Lake Distribution Parameters**

Parameter	Laboratory		# of Samples	# of Deviations	Min	Max	Average
Free Chlorine	Operator Grab Sample	mg/L	65	-----	0.32	1.61	0.90
Total Chlorine	Operator Grab Sample	mg/L	65	-----	0.49	1.75	1.02
Turbidity	Operator Grab Sample	NTU	65	<b>64<sup>1</sup></b>	0.99	3.82	2.33
E.coli	Caro	CFU/100 mL	8	-----	<1	<1	<1
Total Coliform	Caro	CFU/100 mL	8	-----	<1	<1	<1

<sup>1</sup>WQ Deviation Response Plan - free chlorine < 0.20 mg/L and 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 no customer calls in July.

**Table 4 Customer calls for the month**

# of Calls	Type of Call	Issue/Inquiry	Investigation	Comments
0	-----	-----	-----	-----

**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 July.

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
2	Standpipe Maintenance
0	Water Service Locate
0	Water Main Break Repair
0	Water Service Install
1	Water Turn On/Off
0	Water Curb Stop Repair
7	Water Investigation