



# REGIONAL DISTRICT NORTH OKANAGAN

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

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

On June 22, 2023, the Boil Water Notice (BWN) issued on May 17, 2023 was downgraded to a Water Quality Advisory (WQA).

On June 29, 2023, a No Outdoor Watering notice was issued from June 29, 2023 to July 4, 2023 due to water system capacity concerns during the July long weekend. On July 4, 2023, normal outdoor watering restrictions will be back in effect.

### 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	2	1
Total Coliform	Caro	MPN/100 mL	4	-----	8	41	23
Turbidity <sup>2</sup>	SCADA <sup>1</sup> Daily Average	NTU	30 Days	<b>30<sup>3</sup></b>	1.25	4.26	2.70
Turbidity <sup>2</sup>	Operator Grab Sample	NTU	13	<b>13<sup>4</sup></b>	1.46	4.06	2.79
UVT (unfiltered)	RDNO Lab	%	4	-----	83.60	87.50	85.10

<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.

<sup>4</sup>Thirty days in June had an average daily turbidity > 1 NTU but the water utility was on a Boil Water Notice and then a Water Quality Advisory through the month of June.

<sup>5</sup>Thirteen grab samples in June were > 1 NTU but the water utility was on a Boil Water Notice and then a Water Quality Advisory through the month of June.

### 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	30 Days	-----	1.60	1.72	1.67

<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; turbidity > 1.0 NTU

### 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 13,947 m<sup>3</sup>.

**Table 3 Mabel Lake Distribution Parameters**

Parameter	Laboratory		# of Samples	# of Deviations	Min	Max	Average
Free Chlorine	Operator Grab Sample	mg/L	44	-----	0.32	1.38	0.79
Total Chlorine	Operator Grab Sample	mg/L	44	-----	0.47	1.47	0.88
Turbidity	Operator Grab Sample	NTU	44	<b>44<sup>1</sup></b>	1.32	3.67	2.28
E.coli	Caro	CFU/100 mL	6	-----	<1	<1	<1
Total Coliform	Caro	CFU/100 mL	6	-----	<1	<1	<1

<sup>1</sup>Forty-four grab samples in June were > 1 NTU but the water utility was on a Boil Water Notice and then a Water Quality Advisory through the month of June.

### 4. Water Quality Customer Calls and Notifications

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

There were three customer calls this month.

**Table 4 Water Quality Customer Calls for the month**

# of Calls	Type of Call	Issue/Inquiry	Investigation	Comments
1	Inquiry	Boil Water Notice (BWN) and signage	Yes	Customer was told via phone that the BWN was still in effect and signage was investigated.
1	Inquiry	Water connection	No	Customer was updated via phone on water connection fees and requirements.
1	Inquiry	Fire protection	No	Customer inquiring on a standpipe installation.

**5. Operational or Maintenance Activity**

Operational activities within the Mabel Lake Water service area are tracked and recorded. There were two 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	Water Service Locate
0	Water Main Break Repair
0	Water Meter Inspection
0	Water Meter Maintenance
0	Water Service Install
0	Water Service Repair
2	Water Turn On/Off
0	Water Curb Stop Repair
0	Water Investigation