

## Delcliffe Water Utility - Water Quality Report for November 2023

### 1. Source

The Delcliffe water utility pumps raw water from Okanagan Lake through a screened intake line to a covered reservoir. The water is chlorinated with sodium hypochlorite as it enters the baffled reservoir. The reservoir provides chlorine contact time and the system is then fed from a booster station located at the reservoir. A raw (untreated) water sample is taken at the lake pump station at least once a month. Table 1 summarize the results for bacterial and turbidity for the untreated water.

**Table 1 Delcliffe Intake (untreated)**

Parameter	Laboratory		# of Samples	# of Deviations	Result	Min	Max	Average
<b>E.coli<sup>2</sup></b>	Caro	MPN/100 mL	1	-----	2	-----	-----	-----
<b>E.coli<sup>2</sup></b>	RDNO Lab	MPN/100 mL	1	-----	1	-----	-----	-----
<b>Total Coliform</b>	Caro	MPN/100 mL	1	-----	10	-----	-----	-----
<b>Total Coliform</b>	RDNO Lab	MPN/100 mL	1	-----	4.1	-----	-----	-----
<b>Turbidity<sup>1</sup></b>	GVW WQ Tech	NTU	1 <sup>3</sup>	-----	0.59	-----	-----	-----

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

<sup>2</sup>Drinking Water Treatment Objectives\_ BC (Sec 4.3):

The number of E. coli in raw water should not exceed 20/100 mL in at least 90% of the weekly samples from the previous six months.

<sup>3</sup>The turbidity readings are grab samples. Turbidity is monitored continuously online for turbidity and will go to moderate deviation if the 24 hour average is >1 NTU.

### 2. Treatment Plant

The Delcliffe water utility uses chlorine disinfection only. Table 2 summarizes chlorine and turbidity levels at the point the water enters the distribution system.

**Table 2 Delcliffe Water Treatment SCADA Data**

Parameter	Laboratory		# of Samples	# of Deviations	Min	Max	Average
<b>Free Chlorine<sup>2</sup></b>	SCADA <sup>1</sup> Daily Average	mg/L	30 Days	-----	1.18	2.08	1.62
<b>Turbidity<sup>2</sup></b>	SCADA <sup>1</sup> Daily Average	NTU	30 Days	-----	0.23	0.30	0.27

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

<sup>2</sup>WQ Deviation Response Plan - free chlorine < 0.20 mg/L, turbidity > 1.0 NTU.

### 3. Distribution

The Delcliffe water utility provides potable water to 30 residential connections. The majority of connected residents are seasonally occupied, with approximately 11 connections considered year-round or permanent. The population increases to an estimated one hundred and eighty (180) persons during peak summer months. Table 3 summarizes the results for chlorine, turbidity, and bacteria for the distribution system. Table 4 summarizes the daily flow rates for this month.

**Table 3 Delcliffe Distribution Parameters**

Parameter	Laboratory		# of Samples	# of Deviations	Min	Max	Average
<b>Free Chlorine<sup>1</sup></b>	Operator Grab Sample	mg/L	6	-----	1.20	1.92	1.68
<b>Total Chlorine<sup>1</sup></b>	Operator Grab Sample	mg/L	6	-----	1.39	2.03	1.86
<b>E.coli</b>	Caro	CFU/100 mL	4	-----	<1	<1	<1
<b>Total Coliform</b>	Caro	CFU/100 mL	4	-----	<1	<1	<1
<b>Turbidity<sup>1</sup></b>	Operator Grab Sample	NTU	6	-----	0.34	0.40	0.38

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

**Table 4 Volumes for Delcliffe Distribution System over the Month**

Volumes	Delcliffe
<b>Min (ML/Day)</b>	0.08
<b>Max (ML/Day)</b>	0.11
<b>Average (ML/Day)</b>	0.09
<b>Monthly Total (ML)</b>	2.71

### 4. Water Quality Customer Calls

Water quality customer calls within the Delcliffe service area are tracked and recorded. There were no customer calls this month.