

## Delcliffe Water Utility - Water Quality Report for September 2020

### 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 summarizes the results for bacterial and turbidity for the untreated water.

**Table 1 Delcliffe Lake Pump Station (untreated)**

Parameter	Laboratory		# of Samples	# of Deviations	Reading(s)
<b>E.coli<sup>2</sup></b>	Caro	MPN/100 mL	1	-----	3
<b>E.coli<sup>2</sup></b>	GVW	MPN/100 mL	1	-----	<1
<b>Total Coliform</b>	Caro	MPN/100 mL	1	-----	127
<b>Total Coliform</b>	GVW	MPN/100 mL	1	-----	165.2
<b>Turbidity<sup>1</sup></b>	Operator Grab Sample	NTU	2	-----	0.52, 0.84

<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): 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>3</sup>Delcliffe Water Utility issued a Water Quality Advisory on July 26, 2020 due to continuous high turbidity. The advisory was rescinded on August 20, 2020.

### 2. Treatment Plant

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

**Table 2 Delcliffe Water Treatment**

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	-----	1.56	2.25	1.92
<b>Turbidity<sup>2</sup></b>	SCADA <sup>1</sup> Daily Average	NTU	30 Days	-----	0.24	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 or >2.20 mg/L; Turbidity <1.0 NTU.

<sup>3</sup>Delcliffe Water Utility issued a Water Quality Advisory on July 26, 2020 due to continuous high turbidity. The advisory was rescinded on August 20, 2020.

### 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 summarize 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
Free Chlorine <sup>1</sup>	Operator Grab Sample	mg/L	5	-----	1.58	1.91	1.73
Total Chlorine <sup>1</sup>	Operator Grab Sample	mg/L	5	-----	1.71	2.02	1.89
E.coli	Caro	CFU/100 mL	5	-----	<1	<1	<1
Total Coliform	Caro	CFU/100 mL	5	-----	<1	<1	<1
Turbidity <sup>1</sup>	Operator Grab Sample	NTU	5	-----	0.38	0.62	0.46

<sup>1</sup>WQ Deviation Response Plan - Free Chlorine <0.20 mg/L Turbidity < 1.0 NTU.

<sup>2</sup>Delcliffe Water Utility issued a Water Quality Advisory on July 26, 2020 due to continuous high turbidity. The advisory was rescinded on August 20, 2020.

**Table 4 Monthly Flows for Delcliffe Distribution System**

Flow Statistics	Min (ML/Day)	Max (ML/Day)	Average (ML/Day)	Monthly Total (ML)
Delcliffe	0.06	0.14	0.11	3.31

### 4. Customer Calls

Customer calls within the Delcliffe service area are tracked and recorded. There were no customer calls in September.