

## Delcliffe Water Utility - Water Quality Report for February 2019

The following is the water quality summary for the Delcliffe Water Utility.

### 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	Min	Max	Average
E.coli <sup>3</sup>	Caro	CFU/100 mL	1	-----	<1	<1	<1
E.coli <sup>3</sup>	GVW	MPN/100 mL	1	-----	<1	<1	<1
Total Coliform	Caro	CFU/100 mL	1	-----	<1	<1	<1
Total Coliform	GVW	MPN/100 mL	1	-----	1	1	1
Turbidity <sup>1</sup>	Operator Grab Sample	NTU	1	-----	0.73	0.73	0.73

<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.

### 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
Free Chlorine <sup>2</sup>	SCADA <sup>1</sup> Daily Average	mg/L	28 Days	-----	1.56	1.73	1.63
Turbidity <sup>2</sup>	SCADA <sup>1</sup> Daily Average	NTU	28 Days	-----	0.26	0.96	0.41

<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

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 3 Delcliffe Distribution Parameters**

Parameter	Laboratory		# of Samples	# of Deviations	Min	Max	Average
Free Chlorine	Operator Grab Sample	mg/L	4	-----	1.40	1.74	1.55
Total Chlorine	Operator Grab Sample	mg/L	4	-----	1.66	1.87	1.74
Turbidity	Operator Grab Sample	NTU	4	-----	0.40	0.61	0.47
E.coli	Caro	CFU/100 mL	4	-----	<1	<1	<1
Total Coliform	Caro	CFU/100 mL	4	-----	<1	<1	<1

<sup>1</sup>WQ Deviation Response Plan - Free Chlorine <0.20 mg/L or >2.20 mg/L; Turbidity < 1.0 NTU

Table 4 summarizes the daily flow rates for this month.

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

Flow Statistics	Min (ML/Day)	Max (ML/Day)	Average (ML/Day)	Monthly Total (ML)
Delcliffe	0.04	0.06	0.05	1.46

### 4. Customer Calls

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