

Delcliffe Water Utility - Water Quality Report for March 2021

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)
E.coli²	Caro	MPN/100 mL	1	-----	<1
E.coli²	GVW	MPN/100 mL	1	-----	<1
Total Coliform	Caro	MPN/100 mL	1	-----	2
Total Coliform	GVW	MPN/100 mL	1	-----	<1
Turbidity¹	Operator Grab Sample	NTU	1	-----	0.40

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

²Drinking 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.

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 SCADA Data

Parameter	Laboratory		# of Samples	# of Deviations	Min	Max	Average
Free Chlorine²	SCADA ¹ Daily Average	mg/L	31 Days	-----	1.44	1.86	1.67
Turbidity²	SCADA ¹ Daily Average	NTU	31 Days	-----	0.22	0.39	0.29

¹SCADA: Supervisory Control and Data Acquisition.

²WQ 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 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 ¹	Operator Grab Sample	mg/L	5	-----	1.51	1.75	1.65
Total Chlorine ¹	Operator Grab Sample	mg/L	5	-----	1.64	1.94	1.83
E.coli	Caro	CFU/100 mL	5	-----	<1	<1	<1
Total Coliform	Caro	CFU/100 mL	5	-----	<1	<1	<1
Turbidity ¹	Operator Grab Sample	NTU	5	-----	0.26	0.49	0.33

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

Table 4 Monthly Flows for Delcliffe Distribution System

Flow Statistics	Min (ML/Day)	Max (ML/Day)	Average (ML/Day)	Monthly Total (ML)
Delcliffe	0.05	0.08	0.05	1.70

4. Customer Calls

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