

Delcliffe Water Utility - Water Quality Report for January 2024

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 per month. Table 1 summarizes 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
E.coli²	Caro	MPN/100 mL	1	-----	<1	-----	-----	-----
E.coli²	RDNO Lab	MPN/100 mL	2	-----	-----	<1	<1	<1
Total Coliform	Caro	MPN/100 mL	1	-----	7	-----	-----	-----
Total Coliform	RDNO Lab	MPN/100 mL	2	-----	-----	1	1	1
Turbidity¹	GVW WQ Tech	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 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
Free Chlorine²	SCADA ¹ Daily Average	mg/L	31 Days	-----	1.68	2.28	1.88
Turbidity²	SCADA ¹ Daily Average	NTU	31 Days	-----	0.16	0.31	0.22

¹SCADA: Supervisory Control and Data Acquisition.

²Operation Guideline: As outlined in Deviation Response Plan - free chlorine >0.50 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
Free Chlorine¹	Operator Grab Sample	mg/L	8	-----	1.60	1.97	1.83
Total Chlorine¹	Operator Grab Sample	mg/L	8	-----	1.73	2.10	1.98
E.coli	Caro	CFU/100 mL	6	-----	<1	<1	<1
Total Coliform	Caro	CFU/100 mL	6	-----	<1	<1	<1
Turbidity¹	Operator Grab Sample	NTU	8	-----	0.27	0.38	0.32

¹Operation Guideline: As outlined in 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
Min (ML/Day)	0.04
Max (ML/Day)	0.09
Average (ML/Day)	0.08
Monthly Total (ML)	2.47

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.