

Delcliffe Water Utility - Water Quality Report for July 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.coli ¹	Caro	MPN/100 mL	1	-----	2	-----	-----	-----
E.coli ¹	RDNO Lab	MPN/100 mL	2	-----	-----	1	5.2	3.1
Total Coliform	Caro	MPN/100 mL	1	-----	304	-----	-----	-----
Total Coliform	RDNO Lab	MPN/100 mL	2	-----	-----	140.1	201.4	170.8
Turbidity	GVW WQ Tech	NTU	2	-----	-----	0.46	0.66	0.56

¹Drinking 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 Chlorine ²	SCADA ¹ Daily Average	mg/L	31 Days	-----	1.24	1.96	1.51
Turbidity ²	SCADA ¹ Daily Average	NTU	31 Days	-----	0.31	0.52	0.40

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. Most 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	9	-----	1.39	1.65	1.49
Total Chlorine¹	Operator Grab Sample	mg/L	9	-----	1.61	1.94	1.73
E.coli	Caro	CFU/100 mL	5	-----	<1	<1	<1
Total Coliform	Caro	CFU/100 mL	5	-----	<1	<1	<1
Turbidity¹	Operator Grab Sample	NTU	9	-----	0.42	0.61	0.52

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)	0.07
Max (ML/Day)	0.14
Average (ML/Day)	0.11
Monthly Total (ML)	3.33

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.