

Delcliffe Water Utility - Water Quality Report for September 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	-----	<1	-----	-----	-----
E.coli ¹	RDNO Lab	MPN/100 mL	2	-----	-----	<1	1	<1
Total Coliform	Caro	MPN/100 mL	1	-----	19	-----	-----	-----
Total Coliform	RDNO Lab	MPN/100 mL	2	-----	-----	18.7	29.5	24.1
Turbidity	GVW WQ Tech	NTU	1	-----	0.50	-----	-----	-----

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	30 Days	-----	1.46	1.95	1.60
Turbidity ²	SCADA ¹ Daily Average	NTU	30 Days	-----	0.33	0.48	0.39

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	7	-----	0.78	1.76	1.49
Total Chlorine¹	Operator Grab Sample	mg/L	7	-----	0.97	1.86	1.64
E.coli	Caro	CFU/100 mL	4	-----	<1	<1	<1
E.coli	RDNO Lab	MPN/100 mL	2 ²	-----	<1	<1	<1
Total Coliform	Caro	CFU/100 mL	4	-----	<1	<1	<1
Total Coliform	RDNO Lab	MPN/100 mL	2 ²	-----	<1	<1	<1
Turbidity¹	Operator Grab Sample	NTU	7	-----	0.36	0.70	0.57

¹Operation Guideline: As outlined in Deviation Response Plan - free chlorine >0.20 mg/L, turbidity <1.0 NTU.

²Additional samples taken of the Delcliffe temporary reservoir.

Table 4 Volumes for Delcliffe Distribution System over the Month

Volumes	Delcliffe
Min (ML/Day)	0.04
Max (ML/Day)	0.12
Average (ML/Day)	0.09
Monthly Total (ML)	2.57

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.

5. Localized WQA's and Other Activity

On September 20, 2024, a notice was sent to customers stating that starting September 24, 2024, residents on the Delcliffe water system would be put on a temporary reservoir while upgrades were being completed on the existing reservoir. Upgrades include changing the lining on the reservoir as well as repair of some of the concrete within the reservoir. On September 23, 2024, this notice was upgraded to a WQA. Work was expected to be completed October 30, 2024.