

## Outback Water System - Water Quality Report for December 2022

The following is the water quality summary for the Outback Water System.

### 1. Source

The Outback water system pumps raw water from Okanagan Lake through a screened intake line to a booster station. The booster station houses the Ultraviolet reactor, sodium hypochlorite injection, instrumentation and booster pumps to pump water to a two celled reservoir. A raw (untreated) water sample is taken at the intake lake pump station approximately once a month. Table 1 summarizes the results for bacterial, turbidity and UV Transmittance (UVT) for the untreated water at the lake pump station.

**Table 1 Outback Intake (untreated)**

Parameter	Laboratory		# of Samples	# of Deviations	Result	Min	Max	Average
E.coli <sup>2</sup>	Caro	MPN/100 mL	1	-----	<1	-----	-----	-----
E.coli <sup>2</sup>	GVW	MPN/100 mL	1	-----	<1	-----	-----	-----
Total Coliform	Caro	MPN/100 mL	1	-----	<1	-----	-----	-----
Total Coliform	GVW	MPN/100 mL	1	-----	2	-----	-----	-----
Turbidity <sup>1</sup>	GVW grab sample	NTU	1	-----	0.42	-----	-----	-----

<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): 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 Plants

The Outback water system uses Ultraviolet (UV) and chlorine disinfection. Table 2 summarizes results for chlorine, bacterial, turbidity, and UV Transmittance (UVT).

**Table 2 Outback Water Treatment Plant**

Parameter	Laboratory		# of Samples	# of Deviations	Min	Max	Average
Free Chlorine <sup>2</sup> (Reservoir)	GVW grab sample	mg/L	6	-----	1.39	1.85	1.54
Free Chlorine <sup>2</sup> (Reservoir)	SCADA <sup>1</sup> Daily Average	mg/L	31 Days	-----	1.09	1.91	1.49
Total Chlorine (Reservoir)	GVW grab sample	mg/L	6	-----	1.55	2.09	1.74
E.coli (Reservoir)	Caro	CFU/100 mL	4	-----	<1	<1	<1
Total Coliform (Reservoir)	Caro	CFU/100 mL	4	-----	<1	<1	<1
Turbidity <sup>2</sup> (Reservoir)	GVW grab sample	NTU	6	-----	0.20	0.44	0.25
Turbidity <sup>2</sup> (Reservoir)	SCADA <sup>1</sup> Daily Average	NTU	31 Days	-----	0.15	0.18	0.16
UVT (Unfiltered) Booster	SCADA <sup>1</sup> Daily Average	%	31 Days	-----	91.30	94.39	92.80

<sup>1</sup>SCADA: Supervisory Control and Data Acquisition.

<sup>2</sup>GVW WQ Deviation Response Plan - Free Chlorine >0.20 mg/L Turbidity < 1 NTU.

<sup>3</sup>One sample had a total coliform count of 9 CFU/100 mL from Caro Analytical. The site was resampled and sent to Caro Laboratory and RDNO Laboratory. Both samples came back <1 for Total Coliform and *E.coli*.

## Distribution

The Outback water system is owned and operated by Greater Vernon Water a service of the Regional District of North Okanagan. The water system, supplies bulk water from the reservoir to the Outback Resort. The Outback Resort (the water distribution system) is a “stand alone system” and the responsibility of the owner/ operator (Strata). Greater Vernon Water does not monitor the water quality in the Outback Resort (Strata). Table 3 summarizes the daily flow rates for the month.

**Table 3 Monthly Supply Volumes for Outback System over the Month**

Volumes	Outback
Min (ML/Day)	0.00
Max (ML/Day)	0.24
Average (ML/Day)	0.04
Monthly Total (ML)	1.06

**3. Outback resident Calls**

There were no water quality calls from the Outback Resort in December.