

## Silver Star Water (SSW) Water Quality Report for October 2020

The following is the water quality summary for the Silver Star Water (SSW) Utility.

### 1. Sources

Not all of Silver Star's water sources are utilized year round; the system is constructed so that the sources can be brought on line based on demand. As Silver Star is primarily a winter resort, the highest water demands occur during November to March. SSW has nine water sources used for domestic use: Well #1, Well#2, Well #3, Well #4, Well #5, Well #10, Well #12, Paradise Reservoir and Vance Reservoir. Paradise and Vance Reservoirs are metered in the Mid-T station as one volume; it is not possible to separate the volumes of each reservoir. Table 1 summarizes the results for bacterial and turbidity for the untreated water at the Mid-T which includes the blended water from the wells and surface sources, and the turbidity of the wells alone. Well 4 and Well 10 have not been used this season.

**Table 1 Mid-T Blended Raw Water Monitoring**

Parameter	Laboratory		# of Samples	# of Exceedance	Min	Max	Average
E.coli	Caro	MPN/100 mL	1	-----	<1	<1	<1
Total Coliform	Caro	MPN/100 mL	1	-----	<1	<1	<1
Turbidity "sample site d"	grab sample	NTU	2	-----	0.12	0.80	0.46
Turbidity of the Wells	SCADA <sup>1</sup> Daily Average	NTU	0 Days <sup>2</sup>	-----	0.00	0.00	0.00

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

<sup>2</sup>SCADA data could not be recovered for 19 days. This is being looked into and corrected.

### Distribution

SSW monitors contact time. Table 2 summarizes the results for chlorine, turbidity and bacterial for the distribution system from the following sites: Mid T Treated SS "c", Pinnacles, Grandview, and Maintenance Building. Table 3 summarizes the calculated contact time. Table 4 summarizes the UVT at the Mid-T. The monthly water volume used at Silver Star was approximately 7,543 m<sup>3</sup>.

**Table 2 SSW Distribution**

Parameter	Laboratory		# of Samples	# of Exceedance	Min	Max	Average
Free Chlorine <sup>1</sup>	grab sample	mg/L	38	-----	1.04	1.76	1.57
Total Chlorine	grab sample	mg/L	38	-----	1.11	1.84	1.64
Free Chlorine <sup>1,2</sup>	SCADA Daily Average	mg/L	11 Days <sup>3</sup>	-----	1.62	1.73	1.66
E.coli	Caro	CFU/100 mL	20	-----	<1	<1	<1
Total Coliform	Caro	CFU/100 mL	20	-----	<1	<1	<1
Turbidity	grab sample	NTU	38	-----	0.07	0.19	0.12
Turbidity Reservoir	SCADA Daily Average	NTU	11 Days <sup>3</sup>	-----	0.07	0.13	0.09
Turbidity Distribution	SCADA Daily Average	NTU	11 Days	-----	0.01	0.01	0.01

<sup>1</sup>WQ Deviation Response Plan - Free Chlorine <0.20 mg/L or >2.20 mg/L; Turbidity >1.0 NTU

<sup>2</sup>Chlorine residual taken 10 meters after chlorination.

<sup>3</sup>SCADA Data could not be covered for 19 days. This is being looking into and corrected.

**Table 3 SSW – Contact Time (CT)**

Parameter	Days Monitored	Min	Max	Average
<b>Days 99.9% achieved</b>	13 Days	100%	100%	100%

99.9% is 3-log removal for Giardia

**Table 4 Mid-T UV Transmissivity**

Parameter	Laboratory		# of Samples	# of Exceedance	Min	Max	Average
UVT (unfiltered)	grab sample	%	4	-----	95.1	100.0	100.0
UVT (online)	Online Reading	%	3	-----	94.2	100.0	97.1