



REGIONAL DISTRICT of NORTH OKANAGAN

Water Quality Report for April 2017

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-Tee station as one volume; it is not possible to separate the volumes of each reservoir. Table 1 shows the daily volumes used at each source. Well 4 and Well 10 have not been used this season. Paradise and Vance Reservoirs were brought online December 7.

Table 1 Daily Volume used at each Source

DATE	WELL # 1	WELL # 2	Well # 3	WELL # 5	PARADISE and VANCE	TOTAL
1	108	87		30	232	457
2	59	106		38	210	413
3	112	66		25	210	413
4	48	87		33	172	340
5	15	64		25	172	340
6	48	71		28	148	295
7	57	134		52	250	493
8	127	94		36	266	523
9	66	89		34	193	382
10	141	7		4	155	307
11	10	144		55	108	317
12	141	47		21	108	317
13	28	55		26	107	216
14	44	82		38	115	279
15	54	98		45	129	326
16	82	95		42	144	363
17	71	66		30	109	276
18	42	62		29	85	218
19	36	67		33	87	223
20	41	64		31	87	223
21	42	59		30	83	214
22	34	56		32	76	198
23	25	59		31	74	189
24	42	41		23	87	193
25	7	46		24	54	117
26	20	59		31	60	130
27	3	69		37	88	191
28	3	69		37	88	191
29	5	68		39	86	188
30	4	69		39	88	192

Distribution

SSW monitors contact time. Table 2 shows the chlorine residuals for the five sites that are monitored within the distribution system. Table 3 summarizes the calculated contact time. Table 4 summarizes the results for chlorine and bacterial for the distribution system.

Table 2 Free Chlorine Residuals within the Distribution

DATE	Firehall	Grandview	Pinnacles	Mid Tee	Maintenance
1		1.39	1.61		
2					
3	1.58	1.51	1.56	1.61	1.39
4		1.46	1.62		
5		1.51	1.58		
6		1.46	1.62		
7		1.44	1.55		
8		1.5	1.53		
9					
10	1.52	1.49	1.58	1.61	1.21
11		1.39	1.63		
12		1.47	1.6		
13		1.38	1.59		
14		1.45	1.64		
15		1.52	1.58		
16					
17					
18	1.5	1.3	1.59	1.67	1.03
19		1.35	1.63		
20					
21		1.39	1.58		
22					
23					
24	1.61	1.36	1.57	1.71	1.09
25					
26		1.41	1.61		
27					
28		1.39	1.63		
29					
30		1.39	1.61		

Table 3 SSW – Contact Time (CT)

Parameter	Days Monitored	Min	Max	Average
Days 99.9% achieved	19 Days	100%	100%	100%

99.9% is 3-log removal for Giardia

Table 4 SSW Distribution

Parameter	Laboratory		# of Samples	# of Exceedance	Min	Max	Average
Free Chlorine	grab sample	mg/L	20	-----	1.03	1.71	1.48
Total Chlorine	grab sample	mg/L	20	-----	1.15	1.84	1.58
E.coli	Caro	MPN/100 mL	16	-----	<1	<1	<1
Total Coliform	Caro	CFU/100 mL	16	-----	<1	<1	<1
Turbidity	grab sample	NTU	20	-----	0.22	0.42	0.33

Table 5 Mid-T UV Transmissivity

Parameter	Laboratory		# of Samples	# of Exceedance	Min	Max	Average
UVT (filtered)	grab sample	%	4	-----	99.2	99.6	99.4
UVT (unfiltered)	grab sample	%	4	-----	99.0	99.9	99.4
UVT (online)	Online	%	4	-----	98.5	98.7	98.6

Table 6 Mid-T Raw Water Monitoring

Parameter	Laboratory		# of Samples	# of Exceedance	Min	Max	Average
E.coli	Caro	Counts/100mL	2	-----	<1	<1	<1
Total Coliform	Caro	CFU/100 mL	2	-----	<1	<1	<1
Turbidity	grab sample	NTU	2	-----	0.23	0.25	0.24

Table 7 Vance and Paradise Raw Water Monitoring

Parameter	Laboratory		# of Samples	# of Exceedance	Min	Max	Average
E.coli	Caro	Counts/100mL	4	-----	<1	<1	<1
Total Coliform	Caro	CFU/100 MI	4	-----	<1	<1	<1
Turbidity	grab sample	NTU	4	-----	0.19	0.32	0.24