REGIONAL DISTRICT
NORTH OKANAGAN

## Silver Star Water (SSW) Water Quality Report for July 2025

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

On July 18, 2025, a planned service replacement was completed. Prior to the work, customers in the affected area were notified of the potential interruption to their water service and were advised that a precautionary Water Quality Advisory (WQA) would be issued if a water outage occurred during construction. The work resulted in a water depressurization, therefore the WQA was implemented and remained in effect until bacteriological sampling confirmed water safety.

### 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 online based on demand. As Silver Star is primarily a winter resort, the highest water demands occur from 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.

The surface water sources, Paradise and Vance Reservoirs, are metered in the Mid T Water Treatment Plant (MTWTP) as one volume; it is not possible to separate the volumes of each reservoir.

Table 1 summarizes the results of the raw water entering the treatment process. This is a blend of sources depending on demands in the system. This results in data variation throughout the year. Table 2 summarizes the results for the untreated water from the wells.

Wells 4 and 10 have not been used this season. Vance Reservoir was turned off on April 22, 2025.

### Table 1 Mid T Raw Water Monitoring

| Parameter | Laboratory | | # of Samples | # of Deviations[1] | Min | Max | Average |
|---|---|---|---|---|---|---|---|
| E.coli | RDNO Lab | MPN/100 mL | 5 | ----- | <1 | <1 | <1 |
| Total Coliform | RDNO Lab | MPN/100 mL | 5 | ----- | <1 | <1 | <1 |
| Turbidity | Grab sample | NTU | 13 | ----- | 0.09 | 0.21 | 0.13 |
| Turbidity | SCADA[2] Daily Average | NTU | 31 | ----- | 0.07 | 0.17 | 0.11 |

[1]SSW WQ Deviation Response Plan – Turbidity >1.0 NTU
[2]SCADA: Supervisory Control and Data Acquisition.

**Table 2 Mid T Raw Water Monitoring – Wells**

| Parameter | Laboratory | | # of Samples | # of Deviations[1] | Min | Max | Average |
|---|---|---|---|---|---|---|---|
| Turbidity | SCADA[2] Daily Average | NTU | 31 | ----- | 0.09 | 0.19 | 0.13 |

[1]SSW WQ Deviation Response Plan – Turbidity >1.0 NTU
[2]SCADA: Supervisory Control and Data Acquisition.

## 2. Treatment Plant

SSW has a treatment plant, the Mid T Water Treatment Plant (MTWTP). The MTWTP uses a dual disinfection process of Ultra-violet (UV) disinfection and chlorine. Chlorine is added after UV treatment to ensure contact time for the removal of viruses. Tables 3, 4, and 5 summarize the results for chlorine, bacterial, turbidity, manganese, calculated contact time, and UV transmittance (UVT).

**Table 3 Mid T Water Treatment Plant**

| Parameter | Laboratory | | # of Samples | # of Deviations[1] | Min | Max | Average |
|---|---|---|---|---|---|---|---|
| Free Chlorine | SCADA[2] Daily Average | mg/L | 31 | ----- | 1.75 | 1.86 | 1.80 |
| Free Chlorine | Grab sample | mg/L | 5 | ----- | 1.66 | 1.77 | 1.71 |
| Total Chlorine | Grab sample | mg/L | 5 | ----- | 1.74 | 1.86 | 1.81 |
| E.coli | RDNO Lab | MPN/100 mL | 8 | ----- | <1 | <1 | <1 |
| Total Coliform | RDNO Lab | MPN/100 mL | 8 | ----- | <1 | <1 | <1 |
| Turbidity | SCADA[2] Daily Average | NTU | 31 | ----- | 0.06 | 0.10 | 0.07 |
| Turbidity | Grab sample | NTU | 5 | ----- | 0.14 | 0.16 | 0.15 |
| Manganese | RDNO Lab | mg/L | 5 | ----- | 0.006 | 0.013 | 0.009 |

[1]SSW WQ Deviation Response Plan – Free Chlorine <0.20 mg/L, Turbidity >1.0 NTU, Manganese >0.12 mg/L
[2]SCADA: Supervisory Control and Data Acquisition.
[3]Treatment Plant and Distribution bacterial samples are included in the required monthly bacterial sampling amounts as per Drinking Water Protection Regulations Schedule B.

### Table 4 Contact Time (CT)

| Parameter | Days Monitored | Min | Max | Average |
|---|---|---|---|---|
| **Days 99.9% achieved** | 4 | 100% | 100% | 100% |

99.9% is 3-log removal for Giardia

### Table 5 Ultra-violet (UV) Disinfection

| Parameter | Laboratory | Days Monitored | Min | Max | Average |
|---|---|---|---|---|---|
| UVT | SCADA[1] Daily Average | 31 | 93% | 101% | 98% |

[1]SCADA: Supervisory Control and Data Acquisition.

## 3. Distribution

Table 6 summarizes the results for chlorine, turbidity and bacterial for the distribution system from the following sites: Pinnacles, Grandview, Firehall, and Maintenance Building. The monthly water volume used at Silver Star was 9,235 $m^3$.

### Table 6 Distribution

| Parameter | Laboratory | | # of Samples | # of Deviations[1] | Min | Max | Average |
|---|---|---|---|---|---|---|---|
| Free Chlorine | Grab sample | mg/L | 11 | ----- | 0.74 | 1.66 | 1.34 |
| Total Chlorine | Grab sample | mg/L | 11 | ----- | 0.85 | 1.73 | 1.41 |
| E.coli | RDNO Lab | MPN/100 mL | 11[2] | ----- | <1 | <1 | <1 |
| Total Coliform | RDNO Lab | MPN/100 mL | 11[2] | ----- | <1 | <1 | <1 |
| Turbidity | Grab sample | NTU | 11 | ----- | 0.08 | 0.31 | 0.18 |

[1]SSW WQ Deviation Response Plan – Free Chlorine <0.20 mg/L, Turbidity >1.0 NTU
[2]Treatment Plant and Distribution bacterial samples are included in the required monthly bacterial sampling amounts as per Drinking Water Protection Regulations Schedule B.

## 4. Customer Calls and Notifications

**Customer calls** within the Silver Star Water Utility service area are tracked and recorded. Table 7 summarizes the customer calls for this month.

**Table 7 Customer Calls**

| # of Calls | Type of Call | Issue/Inquiry | Investigation | Comments |
|---|---|---|---|---|
| 1 | Inquiry | Sewer Service | No | Customer inquired about Silver Hawk Utilities and was informed that they are a private utility, not affiliated with the RDNO |
| **1** | Inquiry | WQA | No | Customer inquired about the WQA issued due to planned construction |
| **1** | Report | Water Pooling | Yes | Customer reported water running on the street. It was determined that the water was not potable. |

## 5. Operational or Maintenance Activity

Operational activities within the Silver Star Water service area are tracked and recorded. Table 8 summarizes the operational activities this month.

**Table 8 Monthly Operational Work and Maintenance**

| NUMBER OF LOCATIONS | TYPE OF WORK |
|---|---|
| 0 | Hydrant Maintenance |
| 0 | Hydrant Box Rental |
| 0 | Water Service Locate |
| 0 | Water Main Break Repair |
| 0 | Water Service Install/Inspection |
| **1** | Water Service Replacement |
| 2 | Water Turn On/Off |
| 0 | Water Service and/or Curb Stop Repair |
| 0 | Water Investigation |
| 0 | Reservoir Cleaning |
| 0 | Water Meter Install |
| 0 | Water Meter Inspection |
| 0 | Water Meter Maintenance |
| 1 | Water Meter Replacement |
| 0 | Water Meter Manual Read |
| 4 | ERT Install |
| 0 | ERT Inspection |
| 0 | ERT Maintenance |
| 0 | ERT Replacement |