

Village of Silverton



Water System Annual Report 2024

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Village of Silverton Water System

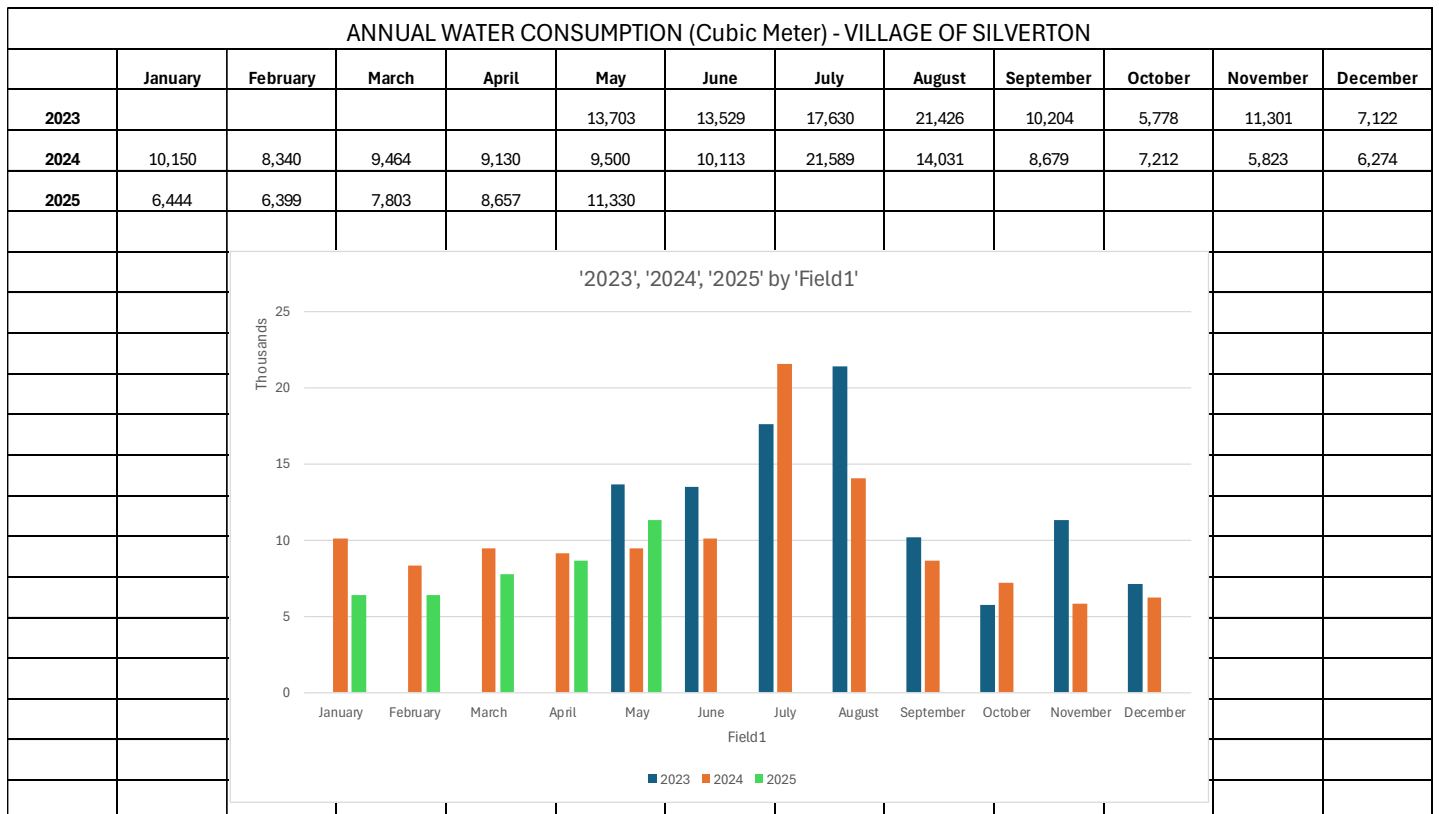
The Village maintains compliance with federal, provincial and local regulations and policies in maintaining our water distribution systems in the Village. Although the Village is not required to have a certified operator on staff, it is recommended by the Interior Health Authority to have a minimum Level 1 Water Distribution Operator. As such, my certifications are well beyond the minimum requirement, being a level 2 Water Distribution Operator and a Level 2 Water Treatment Operator, as certified by the EOCP, who governs the provincial certifications of operators. Public Works Assistant Tim Eden, is accruing water distribution hours for which he will eventually challenge the Level 1 Water Distribution accreditation. This will help create redundancy in our operations moving forward.

The Village draws its water from a ground water source aquifer to our infrastructure which includes 2 deep water wells. The water is pumped to 2 water reservoirs then is distributed to 163 connections, comprised of 151 residential and 14 commercial connections. The Village has approximately 5,600 feet (1.7km) of water distribution mains of varying diameters along with 23 fire hydrants that are maintained annually.

This report is comprised of the best information available at the time of completion.

Annual Water Consumption

Consumption reporting from May 2023 through to February 2024 was inconsistent from month to month due to incomplete documentation being done on a weekly basis, sometimes missing the last week of the month thus creating inaccurate monthly readings. Reporting will be more accurately done moving forward as it is documented on a daily basis, weekends not included.



Monthly Notes

January 13 – High Water alarm

No Data entry at Pumphouse in the month of May – consumption was estimated

July 8-12 – High environmental temperatures, 35+ C

July 9 – High Temperature Alarm at Pumphouse

- Steve Williams, Mountain Logic Controls, made an adjustment to the internal sensor

July 19 – Start of Wildfire

July 24 – Village evacuated due to the encroachment of the wildfire

July 24 or 25 – Boil Water Advisory enacted

July 30 – Residents allowed to return to the Village

August 9 – Boil Water Advisory lifted

September 9 – Well #1 Alarm – Breaker issue

September 9 – Pump #2 failed due to electrical issue

October 1 – Well and Reservoir Radio communication infrastructure fails

- Reservoir low level alarm as a result of the lack of communication

October 24 – New Radio Communications installed by Steve Williams, Mountain Logic Controls

November 12 – Well pump #2 replacement commences

December 3 – Well #2 flushed upon completion of installation

December 4 – New solar panels installed along with the #2 Well levels set by Steve Williams

December 8(morning) – Pump #2 manually run by Alex (Wired by Alex), and Jason Chernoff to check operational integrity.

December 8(late afternoon) – Pump #1 Failure – breaker tripped due to pump #1 electrical issues which resulted in permanent failure of pump.

December 9 – Pump #2 ran manually by operator in order to fill the low reservoir

December 10 - #2 Air pressure Relief Valve replaced

December 12 – Low Level alarm – Alex reset the controller

Weekly Water Test Results

The year started with weekly water testing being carried out by IHA, by June the testing was carried out by Passmore Labs. All samples carried out were within Drinking Water Guidelines as acceptable, with the exception of the June 6, 2024 samples which were deemed, “Too long in transit”; there is a 24–30-hour window for water quality samples to be transported and received for proper tested. In this case, I am unsure as to how or why these particular samples were beyond that window of sample/delivery time but the results were still able to reflect Total Coliforms and E.Coli to be less than 1, as required. The “Background Growth” in the Well #1 sample refers to the presence of bacteria other than the target indicator organisms like coliforms or E. coli. While not necessarily harmful themselves, high levels of background bacteria can indicate potential issues such as biofilm formation or increased risk of pathogen contamination. These background bacteria can interfere with accurate counting of target organisms and may require further investigation to ensure safe drinking water. These bacteria are referred to as background colonies, they are typically counted as colony-forming units (CFU) per 100ml. If the background colony count is low, it may not be reported, however, if the count is high (e.g., exceeds 200 CFU/100ml, it will be reported as a precautionary note. If there are too many background colonies to count accurately, it is reported as “overgrown” or “too numerous to count”. As this seems to be a “one-off” in the year of testing, I feel this is not an indicator of any ongoing problem within our system as there had been no further indications of background colonies in subsequent testing.

IHA Bacteriological Sample results for Village of Silverton.

Sample Number	Sample Site	Collection Date	Parameter	Value	Unit	Interpretation
H3354324	Camp Cafe	1/10/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3354428	Well 1	1/10/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3354128	Well 2	1/10/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3374747	Camp Cafe	1/17/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3374737	Well 2	1/17/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3370466	Well 1	1/17/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3384895	Camp Cafe	1/24/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3384904	Well 1	1/24/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3384908	Well 2	1/24/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3400115	Camp Cafe	1/31/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3400140	Well 2	1/31/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3400128	Well 1	1/31/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3420979	Village Office	2/7/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3419146	Well 1	2/7/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3421062	Well 2	2/7/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3441424	Camp Cafe	2/14/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3441422	Well 1	2/14/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3436935	Well 2	2/14/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3457362	Village Office	2/21/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3457310	Well 2	2/21/2024	E. coli	<1	CFU	Acceptable

			Total Coliform	<1	CFU	Acceptable
H3457308	Well 1	2/21/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3485234	Camp Cafe	3/6/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3485255	Well 2	3/6/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3485179	Well 1	3/6/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3500764	Village Office	3/13/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3500775	Well 2	3/13/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3500786	Well 1	3/13/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3517486	Campground 521	3/20/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3517288	Well 2	3/20/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3517316	Well 1	3/20/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3550431	Village Office	4/3/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3550444	Well 2	4/3/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3550032	Well 1	4/3/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3583178	Village Office	4/17/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3582957	Well 2	4/17/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3583235	Well 1	4/17/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3599375	Campground	4/24/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3599438	Well 2	4/24/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3599344	Well 1	4/24/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3615584	Camp Cafe	5/1/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3615797	Well 2	5/1/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable

H3615820	Well 1	5/1/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3634766	Lakeside Campground	5/8/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3634746	Well 2	5/8/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3634730	Well 1	5/8/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3652736	Camp Cafe	5/15/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3652048	Well 1	5/15/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
H3651975	Well 2	5/15/2024	E. coli	<1	CFU	Acceptable
			Total Coliform	<1	CFU	Acceptable
F3510393 VR	Well 2	6/5/2024	E. coli	<1	CFU	Acceptable
			Too Long in Transit	Yes	100ml	None
			Total Coliform	<1	CFU	Acceptable
F3510202 VR	Well 1	6/5/2024	Background Growth > 200		CFU	None
			E. coli	<1	CFU	Acceptable
			Too Long in Transit	Yes	100ml	None
			Total Coliform	<1	CFU	Acceptable
F3510074 VR	Municipal Campground	6/5/2024	E. coli	<1	CFU	Acceptable
			Too Long in Transit	Yes	100ml	None
			Total Coliform	<1	CFU	Acceptable

PASSMORE LABS WATER QUALITY TESTING 2025

Test Date	Report #	Analysis Performed	Result	Test Date	Report #	Analysis Performed	Result
6/17/2024	6916	Total Coliforms, E. coli	Less than 1 CFU/100mL	10/21/2024	7360	Total Coliforms, E. coli	Less than 1 CFU/100mL
7/8/2024	6988	Total Coliforms, E. coli	Less than 1 CFU/100mL	10/28/2024	7386	Total Coliforms, E. coli	Less than 1 CFU/100mL
8/8/2024	7102	Total Coliforms, E. coli	Less than 1 CFU/100mL	11/4/2024	7407	Total Coliforms, E. coli	Less than 1 CFU/100mL
8/12/2024	7109	Total Coliforms, E. coli	Less than 1 CFU/100mL	11/13/2024	7450	Total Coliforms, E. coli	Less than 1 CFU/100mL
8/19/2024	7131	Total Coliforms, E. coli	Less than 1 CFU/100mL	11/18/2024	7461	Total Coliforms, E. coli	Less than 1 CFU/100mL
9/4/2024	7207	Total Coliforms, E. coli	Less than 1 CFU/100mL	11/25/2024	7487	Total Coliforms, E. coli	Less than 1 CFU/100mL
9/9/2024	7217	Total Coliforms, E. coli	Less than 1 CFU/100mL	12/2/2024	7506	Total Coliforms, E. coli	Less than 1 CFU/100mL
9/16/2024	7241	Total Coliforms, E. coli	Less than 1 CFU/100mL	12/9/2024	7531	Total Coliforms, E. coli	Less than 1 CFU/100mL
9/23/2024	7268	Total Coliforms, E. coli	Less than 1 CFU/100mL	12/16/2024	7554	Total Coliforms, E. coli	Less than 1 CFU/100mL
10/2/2024	7307	Total Coliforms, E. coli	Less than 1 CFU/100mL	12/23/2024	7572	Total Coliforms, E. coli	Less than 1 CFU/100mL
10/7/2024	7317	Total Coliforms, E. coli	Less than 1 CFU/100mL	12/30/2024	7587	Total Coliforms, E. coli	Less than 1 CFU/100mL
10/16/2024	7358	Total Coliforms, E. coli	Less than 1 CFU/100mL				

2024 IMPROVEMENTS

Pumphouse

- Intrusion detection installed
- Flood sensors installed
- Smoke Detection installed
- Internal Temperature monitor installed
- Power Failure and Reservoir communication alarms configured

Reservoir

- Reservoir #1 level sensor installed and calibrated
- New Radio communication devices installed between Pumphouse and Reservoirs
- Abandoned electrical cables remove from both reservoirs
- 2 existing and dated 100-watt solar panels replaced by 1 - 400-watt solar panel

2025 PROJECTS

- Pump and Motor replacement in Well # 1 with Isolation Transformer
- Pump alternating programming
- Valve Exercise Maintenance
- Hydrant Inspections and Maintenance
- Water service locates cards updated for accuracy

FUTURE CONSIDERATIONS

- SCADA control with remote access
- New PLC and HMI installed at Village office – redundancy and backup to current aging system at the pumphouse