Beaver Falls Waterworks District

2024 Annual Water Report

Contents

Introduction:
This report is required by Interior Health Authority as part of the Beaver Falls Waterworks District Operating Permit. The Report provides an overview of the water system including water test results, maintenance, and improvements.

Beaver Falls Distribution System:
IHA Facility Number - 0210637
Water System Classification: Level II EOCP Class II-certificate #1187
EOCP Certification Level of Operator – Level 2, certificate #7046

The community of Beaver Falls lies within the Regional District of Kootenay Boundary (RDKB) in BC and forms a part of the RDKB Electoral Area "A". Beaver Falls is primarily a residential community with minimal commercial. The population is approximately 600 people, with a total land area of about 7.5 km in length and less than 2km in width
The Beaver Falls District (BFWD) originated in 1959 under the provincial Letters Patent developed at that time. The water system was originally developed to be fed from Bath Creek via gravity fed system, however is now sourced from groundwater extracted from one (1) production well. The water supply distribution system includes one production well, 16 fire hydrants, one 67,000 Imp gal above ground steel reservoir and a 110,000 Imp gallon above ground steel reservoir and approximately 12 km of looped PVC and asbestos concrete watermains. Pipe sizes range from 35mm to 150mm. The BFWD consists of 200 parcels with 197 active connections. Other private domestic water wells also exist in Beaver Falls. Runoff and drainage is directed towards the Beaver Creek. Sewage disposal for all properties in Beaver Falls are serviced by individual septic systems.

SCADA (Supervisory Control and Data Acquisition)
The SCADA system is used to monitor and control the wells and reservoir.
SCADA is serviced by Mountain Logic of Rossland BC.
May 2024, SCADA working satisfactory with no major updates

Well #2
Well #2 is located inside a locked and secure masonry pump house with a concrete slab around the well. The well casing is approx. .33m above the pumphouse floor. The well was drilled in 1985 with a 10" casing with a 4" discharge pipe it produces clean drinking water pumping aprox 275GPM. This well was redeveloped in 2023 and new discharge pipe submersible pump and motor were installed.. Well 2 is located approx. 17 meter NW of Beaver Creek.

Well #4
Well 4 was drilled in 2023 and is non useable due to non-chlorination system in the Beaver Falls Waterworks District
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Reservoir I
The 67,000 Imp gallon above ground steel reservoir is located on the west side of Highway 3B on Deer Rd, on the hillside. It is situated on property of the Beaver Falls Waterworks . and is connected to the BFWD system by a 150 mm water main running down Deer Rd
Reservoir II
The 110,000 Imp gallon above ground steel reservoir is located on the west side of Highway 3B, on the hillside It is situated on owned property of the Beaver Falls Waterworks . and is connected to the BFWD system by a 150 mm water main running down Deer Rd
Bath Creek
Bath Creek is a small watershed which at one time was the supplier of water to the Beaver Falls Waterworks. Recorded data shows the majority of runoff occurs during spring freshet. The average flow in the creek during low flow times is in the range of 63L/s. The BFWD holds water licenses on Bath Creek.

Routine Maintenance Program:
Fire Hydrants are maintained and inspected when necessary. And every 5 years service as advised by the manufacturer. Easy access to hydrants is maintained throughout the year; during winter months, hydrants are cleared of snow and during summer months, grass is cut.
Chlorination at the reservoir and system flush is completed twice per year, once in the spring and once in the fall.
Inventory and equipment count is done yearly at the beginning of January for the previous year.

A water meter located on well 2 discharge pipe shows the data, this is collected by the operator to make an average of water consumption to report to Interior Health
Update mapping to show all, water lines, main valves etc.
Valve exercising to ensure valves are in proper working condition.

Water Quality Complaints:
A few bad samples in 2024 due to high coliform count put a water quality advisory on the system, after more testing it came to the conclusion is was due to a growth of Bio Film in the system, at that point Montrose became the provider for water for a 2 week period to chlorinate, then with a major flush of the system, were returned to BFWD water with <1 coliform counts in the samples.

Cross Connection Program:
The BFWD Water System Operator completed Cross Connection Course through BCWWA. And is aware of cross connection issues can cause so does their due diligence to make sure that BFWD drinking water is safe from cross contamination

Water Consumption:
In 2024 the BFWD total water consumption was hard to complete due to time spent on Montrose water and were not collecting much data as this was not required till 2025 upon request from IHA. The consumption for December of 2024 is 7966 cubic meters / day which equals out to 287 gal/day/hh or 1.3 cubic meters

Operational Costs:

	2024
Administration	
Operating Costs	
Total Expense	

In 2024 the cost to deliver water was $ per cubic meter

Water Sampling and Testing:

As required by the Interior Health Authority (IHA), the BFWD Water System Operator takes water samples for the purpose of testing for Total Coliforms and e-Coli. The samples are sent to Passmore Laboratory in Winlaw, results are emailed back to BFWD and Interior Health usually within 2 – 3 days then a monthly report from the Water Operator is emailed to IHA. Two samples are taken at different points within the system the 1st and 3rd Tuesdays of the month. In 2024 BFWD installed and sampling station on the HWY 3B and a yard hydrant at the Number 1 pumphouse this is insure that they are clear of any bacteria that could be on taps from other locations i.e. residential taps inside or out, a complete chemical analysis of Well 2 was completed in 2024 and it is requested by IHA that one be done every year going forward, these samples are shipped to Caro Analytical Services. These tests are requirements from IHA. You can view the results of these test on our website or a copy can be picked up at the office.

Emergency Response Plan:

The BFWD has an Emergency Response Plan in place. The Plan identifies potential emergencies and action plans. This ERP is available on our website and is updated each year, with any new contacts and other information important to any issues that could arise on the system.

Water Sample Reports for 2024

Site: Sample Station Hwy 3B

Date	# of Samples	Total Coliform Results	E.Coli Results
January	0	<1	<1
February	0	<1	<1
March	0	<1	<1
April	0	<1	<1
May	0	<1	<1
June	0	<1	<1
July	0		
August	0	<1	<1
September	0	<1	<1
October	0	<1	<1
November	1	<1	<1
December	1	<1	<1

Site: Well 2

Date	# of Samples	Total Coliform Results	E.Coli Results
January	2	<1	<1
February	2	<1	<1
March	2	<1	<1
April	2	<1	<1
May	2	<1	<1
June	2	<1	<1
July	2	<1	<1
August	2 Aug 6	3	<1
September	2	<1	<1
October	2	<1	<1
November	2	<1	<1
December	2	<1	<1
Site: Other			

Date	# of Samples	Total Coliform Results	E.Coli Results
January Hydrant 16	1	<1	<1
Jan 1041 Christie Rd	1	<1	<1
Feb Hydrant 16	1	<1	<1
Mar Hydrant 16	1	<1	<1
Mar 1664 Stang Rd	1	<1	<1
Apr Hydrant 16	1	<1	<1
Apr 1041 Christie Rd	1	<1	<1
May Hydrant 16	1	<1	<1
May 1041 Christie Rd	1	<1	<1
June Hydrant 16	1	<1	<1
June 1664 Stang Rd	1	<1	<1
July 1041 Christie Rd	1	<1	<1
July 1041 Christie Rd	1	<1	<1
Aug 1041 Christie Rd	1	18	<1
Aug 1041 Christie Rd	1	<1	<1
Aug Hydrant 16	1	2	<1
Sept 1041 Christie Rd	1	<1	<1
Sept Hydrant 13	1	<1	<1
Oct 1041 Christie Rd	1	2	<1
Oct 1041 Christie Rd	1	5	<1
Oct Res 1	1	<1	<1
Oct Res 2	1	1	<1

Counts in the Water

August 6 Well 2 count of 3
August 6 1041 Christie Rd count of 18 Coliform
August 20 Hydrant 16 had a count of 2 Coliform
October 1 1041 Christie Rd had a count of 2 Coliform
October 8 1041 Christie Rd had a count of 5 Coliform
October 15 Reservoir 2 had a count of 1Coliform

These counts were high enough that a boil water advisory was put in place, with a chlorine flush of the system, after the flush and more testing it was resolved for a short time but the counts were back so it was directed by Interior health BFWD was to go on 2 week chlorination, this meant tying into Montrose's water, after the 2 weeks were up a major flush of the system was completed the counts were down. These counts could have been a biofilm that grows in the lines as the temperatures rise and when sampling from a hydrant it disrupts the film and sends it out into the water this is becoming more likely to happen as our ground temperatures rise