VILLAGE OF CLINTON

2024 ANNUAL WATER REPORT

Introduction:

The Village of Clinton is required under it's operating permit to provide an Annual Report to the users of the water system. This report will provide an overview of the maintenance and improvements made to the system over the past year, including a summary of water test results.

This report will be submitted to Interior Health and posted on the Village website. www.village.clinton.bc.ca

Clinton Distribution System

The Clinton water distribution system consists of two raw water reservoirs. One is located approximately 8 kms west of Clinton and has a storage capacity of approximately 45,000 m^3. The second is located just above the water treatment plant and has a storage capacity of approximately 9500 m^3. The system also includes a floating intake, water treatment building, a chlorination building, a metering building, a treated water reservoir with a 1400 m^3 capacity, a pressure reducing station and approximately 9 kilometers of pipe and 50 fire hydrants. Water is fed from the upper reservoir to the lower reservoir via Clinton Creek. Once it reaches the lower reservoir the water is piped into the water treatment plant where it is treated. It is then piped to the chlorination building. The water is treated with Sodium Hypochlorite, then moves into the 1400m^3 treated storage tank. From the storage tank the treated water is piped through to the metering building then down the hill to the pressure reducing station on Robertson Lane. The pressure coming into the station is 135 psi and it leaves the station at 73 psi. Depending on where you live in town the pressure can be anywhere from 50 psi to 100 psi by the time it reaches your home. Of the approximately 9 kilometers of water pipe, 1100 meters is 10-inch HDPE pipe, 560 meters of 8-inch asbestos cement (ac) pipe, 1632 meters of 6-inch PVC pipe, 5100 meters of 6-inch ac pipe, 175 meters of 4-inch PVC pipe, 703 meters of 4- inch ac pipe and 300 meters of 2- inch galvanized iron pipe. The age of these pipes ranges from 86 years to 6 years old. Life expectancy of the in-ground pipes is 80 years for polyvinyl chloride pipe (PVC), up to 100 years for high density polyethylene (HDPE) pipe, 40 years for galvanized pipe and 50 years for asbestos cement pipe.

Water Consumption:

In 2024 the residents of Clinton consumed 202,086 m^3 or 202,086,000 liters of water. Below is a month-by-month summary of water usage.

January.....17,032m^3 or 17,032,000 liters

February.....16,355 m^3 or 16,355,000 liters

March.....13,900 m^3 or 13,900,000 liters

April.....12,352 m^3 or 12,352,000 liters

May.....14,556 m^3or 14,556,000 liters

June.....19,632 m^3 or 19,632,000 liters

July.....26,003 m^3or 26,003,000 liters

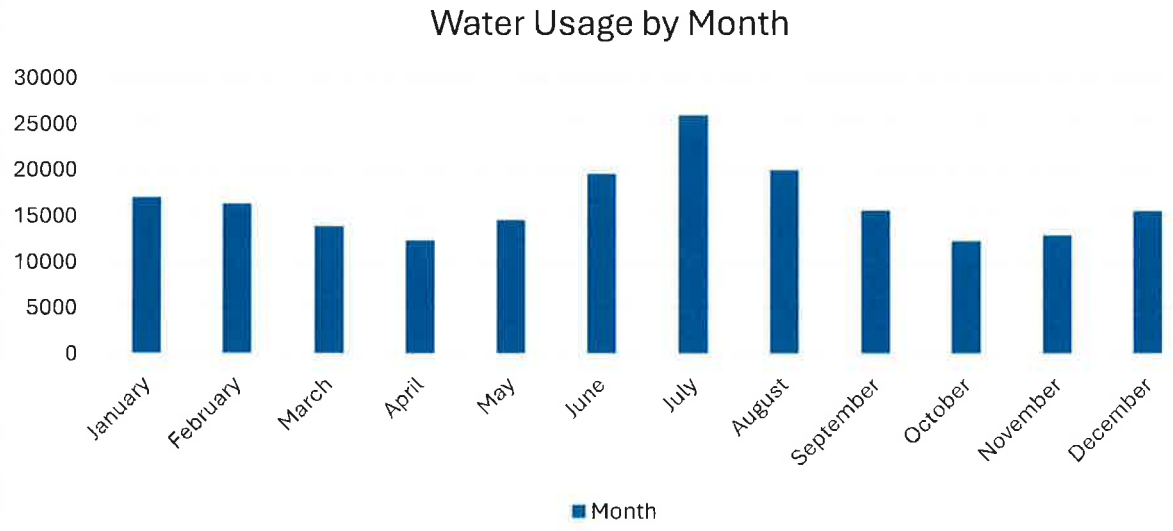
August.....19,989 m^3 or 19,989,000 liters

September.....15,617 m^3or 15,617,000 liters

October.....12,312 m^3 or 12,312,000 liters

November.....12,924 m^3or 12,924,000 liters

December.....15,540 m^3 or 15,540,000 liters



Water usage is up from 2023 by 318 m^3 or 318,000 liters.

Below are the previous 5 years usages:

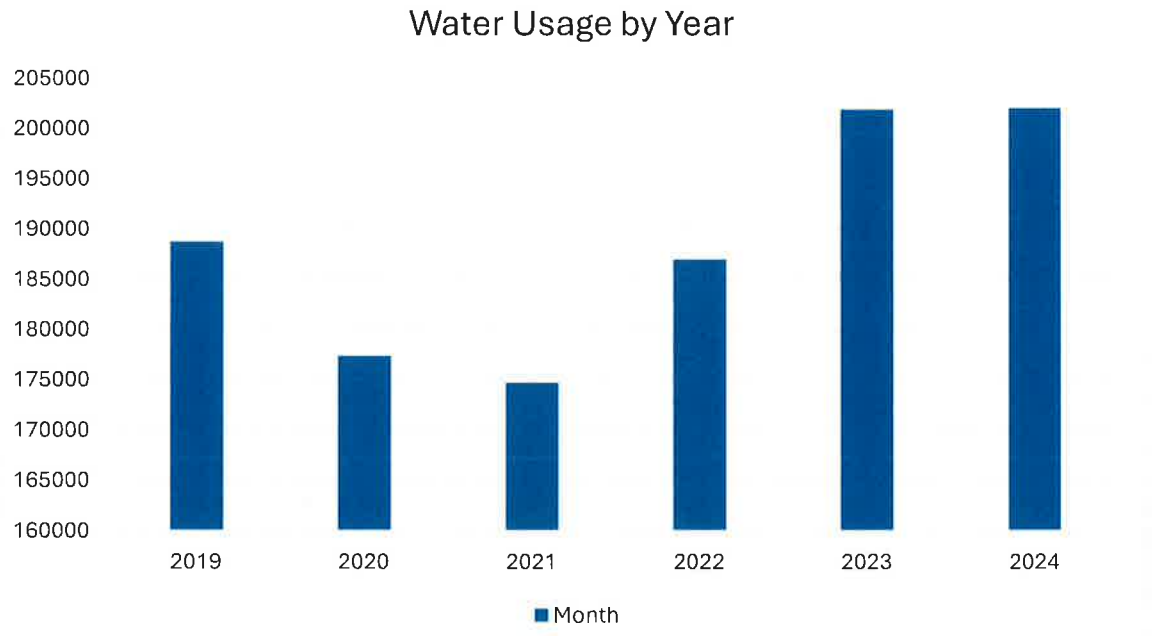
2023.....201,972 m3 or 201,972,000 liters

2022.....186,999 m3 or 186,999,000 liters

2021.....174,732 m3 or 174,732,000 liters

2020.....177,375 m^3 or 177,746,000 liters

2019.....188,756 m^3or 188,746,000 liters



Maintenance:

Regular maintenance in 2024 consisted of the annual tear down and acid washing of the sodium hypochlorite cell, as well as tear down and cleaning of the coagulant pump and piping in the water treatment plant. Also, at the WTP one of the 8-inch meters were replaced, as the old one was 20 years old. The upper reservoir regular maintenance included weed eating and removal of trees on both berms. In addition to this, the bypass was exercised to make sure it is still functional if needed. The inspections of the reservoirs are all requirements of the province. There were two service repairs, and seventeen service calls for water turn on/off. We also replaced 9 service boxes for water services that were in the sidewalk during the sidewalk replacement project. One hydrant repair as well as hydrant flushing also occurred.

2024 Capital Projects:

In October we started our 10-year Dam Safety Review. This review is quite extensive compared to the one that was completed in 2014. Some of the things involved are a Consequence Classification review, a Dam Safety Analysis, a Field Review, Dam safety Management System which reviews all our documents, safety plans, operation, maintenance and surveillance plan, and then all the reporting to the province. Another thing added to this review is an Invasive Investigation of the main dam which involves drilling 3 holes at various locations along the dam. These samples will then be sent out for testing. The bulk of the testing will be completed in 2025. The cost of this project is $79,177.00 for which 50% will be paid by a grant and our portion was budgeted in the 2024 and 2025 water budget.

Water Sampling and Quality:

In 2024 the Village took samples every week from nine different locations around town for a total of 199 bacterial samples. This is another requirement of the operating permit. The following are locations of sample areas and results.

Water Treatment Plant.....50 samples.....no positive results

Village Office.....50 samples.....no positive results

Memorial Hall.....50 samples.....no positive results

Public Works Yard.....49 samples.....no positive results

There were no water advisories or boil water notices issued in 2024. A full list of sample results for bacteriological and chemical analysis can be viewed at the Village office.

2024 OPERTION and MAINTANENCE COST:

The following are some of the costs with the operation of our water system.

1. Wages: $44,576.98
2. Admin costs: $6,000.00
3. Permits and Licences: $1666.34
4. Water Treatment plant R&M: $5,896.73
5. Water Treatment Plant Chemicals: $13,500.70
6. Water lines R&M: $6,526.23
7. WTP Equipment Repair and Replacement: $4,309.47

8. Water sampling: $9,968.47
9. Evaluations/Assessments (Dam Safety Review): $9,319.00
10. Hydro/Telus/Internet: $24,655.74
11. Insurance: $3,388.00
12. Training: $ 3,776.21

Water Conservation Plan:

Council adopted an updated Water Conservation Plan in 2016. The plan is available on the Village website for viewing.

Cross Connection Program:

The Village has developed a Cross Connection Bylaw and Program to address the potential for the water system to be compromised by high-risk service connections which could introduce contaminated water into the Village's water system. There will be letters sent out to the high-risk users as well as meeting with them to explain how the program will operate. There will also be information pamphlets mailed out explaining what a cross connection is, and what steps can be taken to avoid them.

Emergency Response Plans:

The Village has an Emergency Response Plan that pertains to the water system. The plan identifies potential problems that could affect the Village's ability to provide safe and reliable drinking water. These problems range from water main breaks to natural disasters. The plan provides a systematic approach for dealing with these emergencies. The plan has been updated with the addition of the

treatment plant and reservoir to the system. The current Emergency Response Plan is available on the Village of Clinton web site.

The Village also has a Dam Emergency Plan (DEP) which identifies potential issues that could arise if there was a breach of the dam and what to do in each situation. Again, this is a requirement by the Provincial Government under our licence.