Village of Clinton

2018 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 summited to Interior Health and be posted on the Village web site. www.village.clinton.bc.ca

Clinton Distribution System

The Clinton water distribution system consists of two raw water reservoirs, one located approximately 8 kms west of Clinton and has a storage capacity of approximately 45,000 m3, the second is located just above the water treatment plant and it has a storage capacity of approximately 9500 m3. It also consists of a water treatment building, a chlorination building, a metering building, a treated water reservoir with an 1800 m3 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, then it's piped to the chlorination building. The water is treated with Sodium Hypochlorite then moves into the 1800m3 treated storage tank. From the storage tank the treated water is piped through to metering building then down the hill to the new pressure reducing station on Robertson Lane, the pressure coming into the station is 135 psi and it leaves the station at 73 psi. Depending where you live in town the pressure can be anywhere from 60 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 0f 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 80 years to 1 year old. Life expectancy of the in-ground pipes is 80 years for polyvinyl chloride pipe, 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 2018 the residents of Clinton consumed 244,114 m3 or 244,114,000 liters of water. Below is a month by month summery of water usage.

January……17,228 m3 or 17,228,000 liters

February…….16,733 m3 or 16,733,000 liters

March……18,895 m3 or 18,895,000 liters

April……17,110 m3 or 17,110,000 liters

May……28,481 m3 or 28,481,000 liters

June……25,822 m3 or 25,822,000 liters

July……30,416 m3 or 30,416,000 liters

August……25,660 m3 or 25,660,000 liters

September……..20,411 m3 or 20,411,000 liters

October……15,465 m3 or 15,465,000 liters

November……13,662 m3 or 13,662,000 liters

December……14,171 m3 or 14,171,000 liters

Water usage is down from 2017 by 27,357 m3 or 27,357,000 liters.

Below are the previous 5 years usages:

2017……271,471 m3 or 271,471,000 liters

2016……225,761 m3 or225,761,000 liters

2015……..232,531 m3 or 232,531,000 liters

2014……214,230 m3 or 214,230,000 liters

2013……237,127 m3 or 237,127,000 liters

Maintenance:

Regular maintenance in 2018 consisted of the annual tear down and acid washing of the sodium hypochlorite cell, tear down and cleaning of the coagulant pump and piping in the water treatment plant. There were two service repairs, one new service installed, and five valve boxes replaced.

2018 Capital Projects:

The only capital water project in 2018 was the watermain replacement from the water treatment plant to the new Pressure reducing station on Robertson Lane (approx. 1000 meters). The new above ground PRV station replaced the old existing under ground PRV station in McDonald Avenue. The old station was nearing it life expectancy (installed 1985) and by installing the new one above ground we eliminated the dangers of confined spaces and we also eliminated any dangers of flooding inside the chamber. The old 8-inch ac pipe was replaced with a 10-inch HDPE pipe. The HDPE pipe is welded together so there are no push together joints and this pipe is thicker than PVC. The HDPE pipe has a life expectancy of 70-100 years. The 8-inch ac pipe was converted to a sanitary sewer line to take the waste water from the treatment plant to the sewer lagoon. The waste water from the treatment plant prior to this went into a pond which was originally built for this purpose on the treatment plant site. As well approx. 250 meters of 2-inch galvanized line was decommissioned from Robertson Lane to Station Road. We also upgraded the fire hydrant on Robertson Lane. As this project was winding down we were well under budget and instead of giving money back we replaced 60 meters of 4-inch pipe to 6-inch pipe in the easement behind the Chinese food restaurant to the public washrooms. The reason this area was picked was because of the short distance and it was originally thought it was a 2-inch galvanized main. During both projects we ran into a lot of unknowns in the ground because of poor records, a lot of these were eliminated and now we will have updated as-builts so hopefully that won't be the case in the future.

Water Sampling and Quality:

In 2018 the Village took samples every week from 7 different locations around town for a total of 200 bacterial samples. This is another requirement of our operating permit. The following are locations of sample areas and results.

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

David Stoddard School……35 samples…….no positive results

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

Memorial Hall……..48 samples…….no positive results

Teal St……11 samples…….no positive results

Raw……3 samples…….no positive results

Kelly Lake Rd……..2 samples…….no positive results

Reg Conn……..1 samples…….no positive results

There were no water advisories or boil water notices issued in 2018. A full list of sample results for bacteriological and chemical analysis can be viewed at the Village office.

Cross Connection Program:

The Village will be developing a Cross Connection Program over the next couple of years 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.

Water Conservation Plan:

The Village updated the water conservation plan and council adopted it in 2016. The plan is available on the village website for viewing.

Emergency Response Plan:

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 the emergency. 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.