

2023 Operator's Report

Completed Capitol Projects

Due to operational needs the planned replacement of two hydrants were not completed in 2023. Instead while emergent work that needed doing was being completed, two 4 inch valves were replaced. These valves were identified to need replacing due to their age and inoperability.

Two new water service lines and meter boxes at the request of property owners were installed in the fall of 2022 as well.

Re-Active Maintenance Completed

Two major re-active maintenance projects happened in the past year.

The first being the chlorination of the system in September of last year due to the 'boil water advisory' issued by the Vancouver Coastal Health Drinking Water Officer on August 31 after two concurrent samples from a sample station failed. The first failed sample showed 7 coliforms, and a follow-up sample in the same week showed an estimated count of 120 total coliforms with 4 E-Coli. The standard for drinking water in Canada is less than 1 part per million so these samples failed and the Drinking Water Officer for VCH mandated that SSID issue a Boil Water Advisory.

To rectify the issue, the system was investigated to identify potential areas of infiltration of E-Coli causing bacteria and action was taken to ensure areas of potential infiltration were sealed up and the system was Chlorinated to achieve a minimum of two parts per million Chlorine in the system to eliminate the bacteria. After Chlorination the system was flushed to ensure all parts of the system received the appropriate dosage of Chlorine.

Since completing the above work last September all samples monthly since then have shown no evidence of E-Coli and the Boil Water Advisory was lifted on September 10.

To ensure water quality standards remain high it was decided to clean and inspect the Lower Reservoir Tank to confirm that no avenues of infiltration still existed. After the tank was drained, to complete the cleaning and inspection, an industrial engineering firm measured the thickness of the tank and inspected the lining of the tank. The system was then Chlorinated again to ensure no contaminants made it into the system while work was being completed. Please note this is *best practice* when this type of work is completed.

The second major re-active work that was completed this year was that a major water leak on Brian's Way was identified in April of this year and then repaired in May. The leak was discovered while the tank mentioned previously was being cleaned and inspected. Unfortunately, due to the need to empty the water line of water before repairing the leak, a large amount of air became trapped in the system which caused air and pressure issues for residents. After much flushing of

water through the system to expel this air and then testing the pressure of the system from the Hydrants, the system is back to historical pressure readings.

Operation / Maintenance Projects and Programs Completed

Hydrant Maintenance Program

All 13 hydrants were serviced to ensure good working order in the Fall of 2022 and in June of this year. 4 have been re-painted as well.

Valve Exercising Program

Valves were exercised one or more times to confirm they were in good working order. All main line and hydrant isolation valves were exercised, including those in the valve chamber by the water tanks.

Generator Maintenance

Monthly checks were completed to confirm the operating condition of the generators. A partial service was completed in the Fall of 2022 by Lund Auto, and a full service was completed this May. Another full service is scheduled for this Fall. All maintenance is being documented after completion to ensure continuity of service.

Uni-Directional Water Flushing Program

Water flushing of all the water mains throughout the district was completed after the system tested positive for E.coli (1 ppm) last August from one of the sample stations. Further water flushing was completed this Spring after a major water leak was found and repaired

Air Valve Chambers

Servicing of the three air relief valves took place in the Fall of 2022. It was identified at the time that the replacement of these air relief valves due to their condition should be done soon.

Water Sampling Program

Water samples have continued to be taken monthly from 8 sample stations located through-out the system. These monthly samples were tested for E-Coli and Total Coliform and all samples with the exception of two samples taken in August of last year met and exceeded the *Guidelines for Canadian Drinking Water Quality*. Nitrates testing was completed every 3 months and showed no further increase. Full Spectrum analysis samples were taken twice in the past year and they also met and exceeded the *Guidelines for Canadian Drinking Water Quality*.

Upcoming Projects

The roof of the lower tank has lost its protective paint in some areas. Weather permitting, the roof will be repainted in September.

The 3 air valves mentioned previously need replacing. Budget permitting, this will be done sometime in 2023 or 2024.

General Comments and Observations

Since employed as Savary Shores Water Operator in the Fall of 2021, I have found that the water system is in reasonably good operating condition. Monitoring of the system for water consumption has been helpful in trouble shooting issues. Strongly recommend this continues. I further recommend that all current maintenance programs remain in place. These programs have proven to make systems and assets last longer and age slower. They also help to ensure that water quality stays high.

Kerby Fisher
Water Operator - Savary Shores Improvement District
EOCP certified Water and Wastewater Operator