Trustee Report Water Portfolio - November 28, 2023

Submitted by John de Jong - Trustee

The delivery of water on Piers to each household is overseen by a number of dedicated volunteers led by Gary Cooney as Water System Manager. Some of the many facets to this service include ensuring water purity by way of taking water samples, maintaining chlorination levels, pump house maintenance, repair of curb stops, shut off valves, water meter reading, responding to emergency situations, tank infrastructure, planning for possible failures in the system, emergency planning where structural damage has occurred by forces of nature, forecasting of future needs, coordination with the CRD, Health Departments, and District of North Saanich, continual research and record keeping, and overall system analysis.

You may ask what the reason is for providing this list. Well, since the last report submitted several months ago almost all of the above has been dealt with by the team led by Gary. On behalf of the Trustees and the Piers Island Community, I want to thank him and all of the water volunteers and outside helpers who responded.

Gary and I meet often in person, by way of phone, and digitally. I rely on him and the team to provide informed and professionally sourced information from both Piers resources and outside agencies. There are a number of potential enhancements that they are presently looking at, and I emphasize, 'looking at'. This includes determining need, timing, auxiliary additions, and associated costs.

As you will see from Gary's report a lot of work has been done to rectify the damage to the system caused by a lighting strike in few months ago and to install surge protectors. Additionally, a review of the Chlorination System resulted in a recommendation that as the current system is on its last legs it should be replaced. Written documentation and estimates were provided to the Trustees who approved writing a bylaw to expend the funds necessary.

The team has been working on a number of curb stop issues and repairs which were reported to the community at large via Gary's email on November 21, 2023.

It has been my pleasure to work with Gary and the Water Team and I encourage you to read his report that follows.

Respectfully submitted,

John de Jong Trustee

Water System Report – November 28, 2023

Submitted by Gary Cooney, Water System Manager

Monthly Activities:

- **September:**
- The Water Tank float switch at PH2 requires a team member to reset it after a power outage because the UPS backup batteries do not work properly. Resetting is necessary to ensure proper automated operation of the water tank floats. The two UPS backup batteries are dead. Attempts to recharge and resuscitate were not met with success.

- **October:**
  - Annual water meter readings were completed by eight team members. Properties were identified that had higher water consumption than the previous year.
    - these property owners were notified.
  - Surge protector options for PH1 and PH2 reviewed, two surge protectors were ordered.
  - Good progress regarding clarity of the problem with UPS battery backup and the automated water tank floats. New batteries were ordered. Steps identified for further testing/analysis.
  - Water Team meeting held on October 17.
  - Review of the Chlorination System in PH2 was undertaken:
    - This review determined that upgrading the chlorination system at this time would be prudent.
  - The following is a brief overview of the findings identified:
    - The chlorination system was installed in 2009 and is aging.
    - The D1C analyzer is no longer available:
      - we have lost the ability to log and analyze data from the D1C analyzer.
      - the D1C may stop functioning properly or just stop working, we cannot just replace it.
    - A new chlorination system will allow the water team to make more meaningful adjustments in a timely manner:
      - have a better understanding of the fill cycles and impacts on tank chlorine levels.
      - monitor, read and chlorinate based on free chlorine which is the disinfection method being used in the water tank.
      - has a sensor that identifies pH levels.
    - If a dedicated water line from PH1 to PH2 was installed:
      - this chlorination system configuration would be required.
      - having it ahead of time would provide valuable input into design considerations of a water system with a dedicated line.

- **November:**
  - Team Meeting Nov 7.
  - Emergency Response Plan - Version 1 completed, reviewed by team members and Water Trustee. Will now go into an annual update cycle.
  - Capital Asset list updated for 2023, with some new quotes by qualified contractors.
  - Team awareness of our water system regarding CRD chloraminated water and the chlorination process we undertake to ensure we have the best possible water quality includes consultation with VIHA and CRD staff.
  - Water Sample changes:
    - weekly water samples at PH1, PH2, operator residence continue.

- weekly water samples now taken at the Firehall.
- monthly water samples now taken for pH and conductivity.
  - pH required to properly calibrate the Free Sensor.
  - Conductivity used to know when the sensors require maintenance.
- monthly water samples taken from the top and bottom of the water tank.

- Curb stop at Lot 113 was replaced due to a significant leak. This was carried out by 9 Water Team members.

General Maintenance:

- Surge Protection was installed at PH1 and PH2.
- UPS tank float backup batteries were replaced at PH2:
  - After the last power outage on the west side of the island the water tank was filling, the UPS worked properly, the float switch did not require resetting.
  - Further monitoring is required to ensure proper operation.

Near Term Infrastructure Repairs

- Air valve at R100, Curb stops at R113 & R139 and Flow meter at PH2.

Planning for the Future - Infrastructure:

- Direct Water Line from PH1 to PH2:
  - Review the advantages and benefits of installing a direct waterline from PH1 to PH2. The team will be referencing a number of reports submitted over the years recommending that this line be installed. Presently water enters PH1, circulates around the island to reach the Water Tank.
  - Review a process to take samples on a quarterly basis from four locations around the watermain. This will determine the chlorine/chloramine interaction and how the chlorine is distributed throughout the system without a direct waterline to PH2.

Other items being worked on:

- Repair Kits: Inventory and replace spare parts as required.
  - We have spare curb stops, spare back flow preventors, spare air valve kit, spare parts for watermain break.