

Piers Island Improvement District
Piers Island Water System – AGM Trustee Report
June 22, 2024

It has been an honour to serve as a Trustee of the Piers Island Improvement District (PIID). I consider it a privilege to work with Gary Cooney, the Piers Island Water System Manager, and his team of volunteers.

As Trustees, we believe open, direct, and respectful dialogue is one of the cornerstones that anchors every successful organization. To that end, Gary and I endeavour to communicate in person, generally on site if possible or by phone. Discussion around historical protocols and procedures, our current status, and at the same time preparing for the future needs forms the majority of our discussions.

Areas worked on are:

1. Forecasting and budgeting.
2. General maintenance and upgrading.
3. Need for and installing a new chlorination system.
4. How to meet the growing complexity of Piers as it moves to more 'full time' members.
5. Writing new operational procedures as changes are made and in response to the new training standards and programs mandated by various government agencies.
6. Identifying, planning and budgeting for long-range future needs.
7. The reality of changing demographics generally in our country and Piers relating to volunteerism.

What follows is a review of team members and associate support, their duties and responsibilities, governmental reporting procedures, development of operational procedures, what the team responded to and accomplished in the past twelve months, and future needs.

Water System Team

System Manager: Gary Cooney

Team Members

Certified Operators: Philippa White, Katie Steenman, Velvet Warrior, Ming Huey Chang.

Water System Support: Cara Hogan, Garth Irvine, Barb Miodonski, Rick Schnurr, Gary Peacock, Andrew Wynn-Edwards.

Associate Support: Alan Warrior, Brian Warrior, Steve Thornton, Mark Fedje, Barry Tait.

Duties

Record daily water consumption from North Saanich and Powerhouse to Pumphouse 1. (PH1).

Take water samples at PH1, Pumphouse 2 (PH2), & 4 other areas on the island.

Visually inspect PH1 & 2 and check chlorine tank water level.

Purchase chlorine at Acme Supplies.

Water sampling at PH2 from top of tank and tap.

Arrange VIHA Drinking Water site Inspection.

Clean chlorine tank.

Take metal scan samples.

Take Coliform samples at PH1, PH2, & Residence and deliver to MBLabs.

Take THM samples at PH1, PH2, & Residence and deliver to MBLabs.

Review MB Lab results, raise alert as appropriate.

Replace eyewash solution (MCOM and small eyewash bottles).

Service chlorination system.

Clean water tank (every 5 years).

Flush undersea water lines in coordination with North Saanich water main flushing.

Flush Piers Island water main.
Record property owners water consumption.
Check undersea line for leaks at Piers Rd vault observation port.
Test pressure reduction valve.
Water System Maintenance as required.
Operate generators.
Clean pump houses.
Review/update key documents (Emergency Response Plan, Playbook, System Details, Sampling Procedures).
Maintain an inventory of all supplies.
Update operation binders and maintain an electronic version in SYNC.
Maintain golf cart (clean, tires, batteries).

Annual Reports

Service connections and daily log reports.
Disinfection By-Product Report (THMs).
VIHA Annual Report to DWO.
Water Sample Log Report.
Meter Reading Analysis Report.
Water System Report

Quick Review of Past Twelve Months

June 2023

- Annual Watermain Flushing: North Saanich completed their Piers Road watermain flush after which our undersea water lines, and then our watermain are flushed. Eight team members assisted.
- Detected undersea water line flush gate valve leaking.
- One gate valve replaced at PH1 used for undersea line flushing. Three team members assisted and one associate.

July 2023

- R123 reported a significant water leak that was repaired.
- Ongoing work on the Emergency Response Plan.

August 2023

- Incorporated edits on the Emergency Response Plan.

September 2023

- Lighting struck a tree at R10 compromising several residents and Pump House (PH1) where a number of electrical components were compromised. This incident, not previously experienced, presented unique electrical and procedural challenges that requires a new SOG to be added to the Emergency Response Plan and new operating procedures to be developed.

Review/Develop Procedures For

Opening North Shore vault bypass.
Curb stop new installation and replacement.
Annual reading of service connection water meters.
Flushing water main.
Flushing under sea water lines.
Chlorination system inspection and cleaning.
Water tank access procedures.
Decommission/recommission chlorination system.
Decommission/recommission undersea water lines.
Decommission, disinfect and recommission water tank.
Piers Vault service connection detail per Bylaw 61.
Air valve test and replacement.
Sample alert notification process.
Supplier list contacts.

- The lightning strike caused a power surge/spike that compromised 3 power poles and 2 transformers resulting in a power outage at PH1. Until power was back on two team members used the bypass valve at PH1 to manually fill the water tank. Once power was restored it was determined that the tank float control system was compromised. With the assistance of two associates, a certified electrician, and two team members the compromised components were located, repairs and new components related to the tank float control panels in PH1 and PH2 were replaced. Lightning strike repairs and new components replaced. PH1 - transformer and diode, PH 2 - cube relay switch and UPS fuse.
- The repair took about one week to complete as some parts had to be sourced. Within the first day team members became aware that the water tank level had become low as the automatic system at PH1 had been disabled due to the strike. The bypass valve was used to allow the tank to be filled and replenished with fresh water from North Saanich.
 - The system was operated manually until such time the repairs allowed it to revert to its automated status.
 - A new SOG will be added to the Emergency Response Plan and new operating procedures will be written to ensure the tank is filled in increments when a low water level is detected.

October 2023

- Annual water meter readings completed by eight team members. Properties were identified that had higher water consumption than the previous year and owners notified.
- Surge protector options for PH1 and PH2 were reviewed. Surge protectors ordered/installed.
- UPS battery backup system batteries ordered
- Water Team meeting held on October 17.
- Review of the Chlorination System in PH2 was undertaken:
- Determine that upgrading the chlorination system would be prudent as system is 15 years old and D1C analyzer is no longer available. The ability to log and analyse data from the D1C analyser is no longer possible.

November 2023

- Team Meeting Nov 7.
- Emergency Response Plan - completed and reviewed by team members and Water Trustee.
- Capital Asset list updated for 2024, 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.
- Curb stop at Lot 113 was replaced due to a significant leak. This was carried out by 9 Water Team members.
- Review of 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 from PH1.

December 2023

- Placed the order for the Chlorination System with Smith Cameron, expect delivery in January.
- Curb stop at 113 replaced.
- Curb stops and tee connector at 137 and 139 replaced. These two properties share a water line from the water main to a tee connection.

- Water Team meeting held on Dec 11.

January 2024

- Chlorination system upgrade delivered. Installation and commissioning are scheduled for February, date to be confirmed. Alex Wigzell of Smith Cameron, senior technician, will be performing this work. The existing operational procedures will be updated.
- Emergency Response Plan – Final Version completed, reviewed by team members and Water Trustee. Will now go into an annual update cycle.
- The water team managed PH1 and PH2 during the freezing temperatures by running and monitoring the bypass valve and heaters.
- Due to freezing temperatures the air release valve between R41 and R43 blew out, the water running to it was turned off. A new air release valve has been ordered.
- One property had a water leak in their water line due to freezing, water not turned off at their road service connection. The cost of water to the owner was significant.

February 2024

- Due to the Artic cold front the scheduled installation of the chlorination system had to be postponed. A new date was set.
- Planning started for the installation and commissioning of the chlorination system with Alex Wigzell, Senior Technician of Smith Cameron, who will do the installation.

March 2024

- PIID re-joined the Coastal Water Suppliers Association.
- Lean-To at PH2 has been insulated and the drywall installed.
- In coordination with North Saanich the undersea water lines were flushed.

April 2024

- The new Chlorination System was installed on April 11, 2024.
 - Updating the DCAB Analyzer procedures with the Water team has begun.
 - Our system now has the capability to be modified and enhanced easily when future technological advances and regulatory requirements are presented.
- A Water Team meeting was held on April 17th.
- In support of the Fire Department planning has started for the installation of a standpipe at the water tower. This will add to their ability to fight any fire in the area of the water tower.
- The flow meter for the chlorination system needs replacing and has been purchased to be installed in mid-May.
- Organizing to power wash and paint PH2 has started.
- Removed a damaged air release valve near the old fire hall and installed a new one. Many thanks to Allan Warrior for his assistance.

May 2024

- The average daily consumption of water in April was 5800 Imperial gallons (IG)
- A successful water system flush took place on May 1st. Approximately 7000 gallons of water used to flush the system.
- The flow meter for the chlorination system was replaced. This required cutting lines and reinstalling part of the system. Many thanks to Ander who completed the job.

Upcoming 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 prior to reaching the Water Tank.

- An open to the public information session and tour of our water system. This will provide an opportunity for the community to get an overview of our system, how water gets to your tap, our tank and pipeline, our water source, where the lines enter the sea and where it lands on our shores, what will need upgrading, repair, or modification in the future, how we can do our part to conserve water, and how we can protect this service, the envy of all of the islands within the Island Trust group, and that we solely manage and control.

Finally, a huge thank-you to Gary and our group of volunteers whose commitment to our community is unparalleled. The Piers Island community can rest well in the knowledge that our well being is being looked after throughout the year.

Respectfully submitted.

A handwritten signature in blue ink, appearing to read 'John de Jong', with a long horizontal flourish extending to the right.

John de Jong
PIID Trustee