Annual review

Agenda

01 Introduction

02 Results from last year by Community

Repairs, Modifications & Maintenance

04 What's next

05 Closing

Introduction

Water & wastewater facilities and infrastructure have been able to accomplish many items that had the potential of directly affecting the daily operations, the efficiency of the facilities and over all safety of staff.

These accomplishments were made possible through a team effort of the managers, maintenance teams and operations staff.

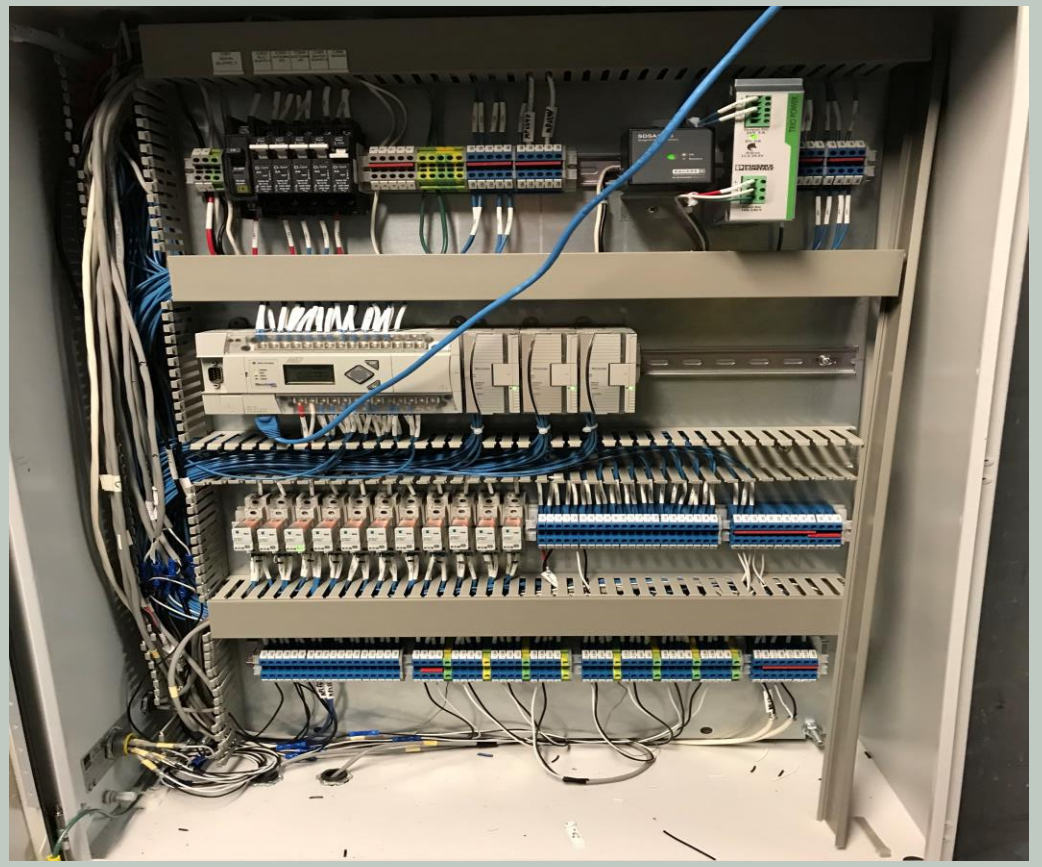
Mabou Water

- SCADA Controller pack replacement
  - Severe corrosion and actively failing without a back up
  - Replacement provides extra I/O to expand in the future
- Old Reservoir Decommissioning
  - Directive of NSE to prevent any cross contamination
- Facility Retrofit
  - New plumbing installed to allow water to be accepted from a hauling truck in the event there is an issue with the well.
- Production Well Maintenance
  - Pump was removed and casing inspected and cleaned
- VTS Program
  - Upgraded to most up to date version
- Wall Mounted Heated
  - Replacement completed
- Community Hydrant Inspections
  - Complete

Mabou Water

WTP Control Panel Before

WTP Control Panel After

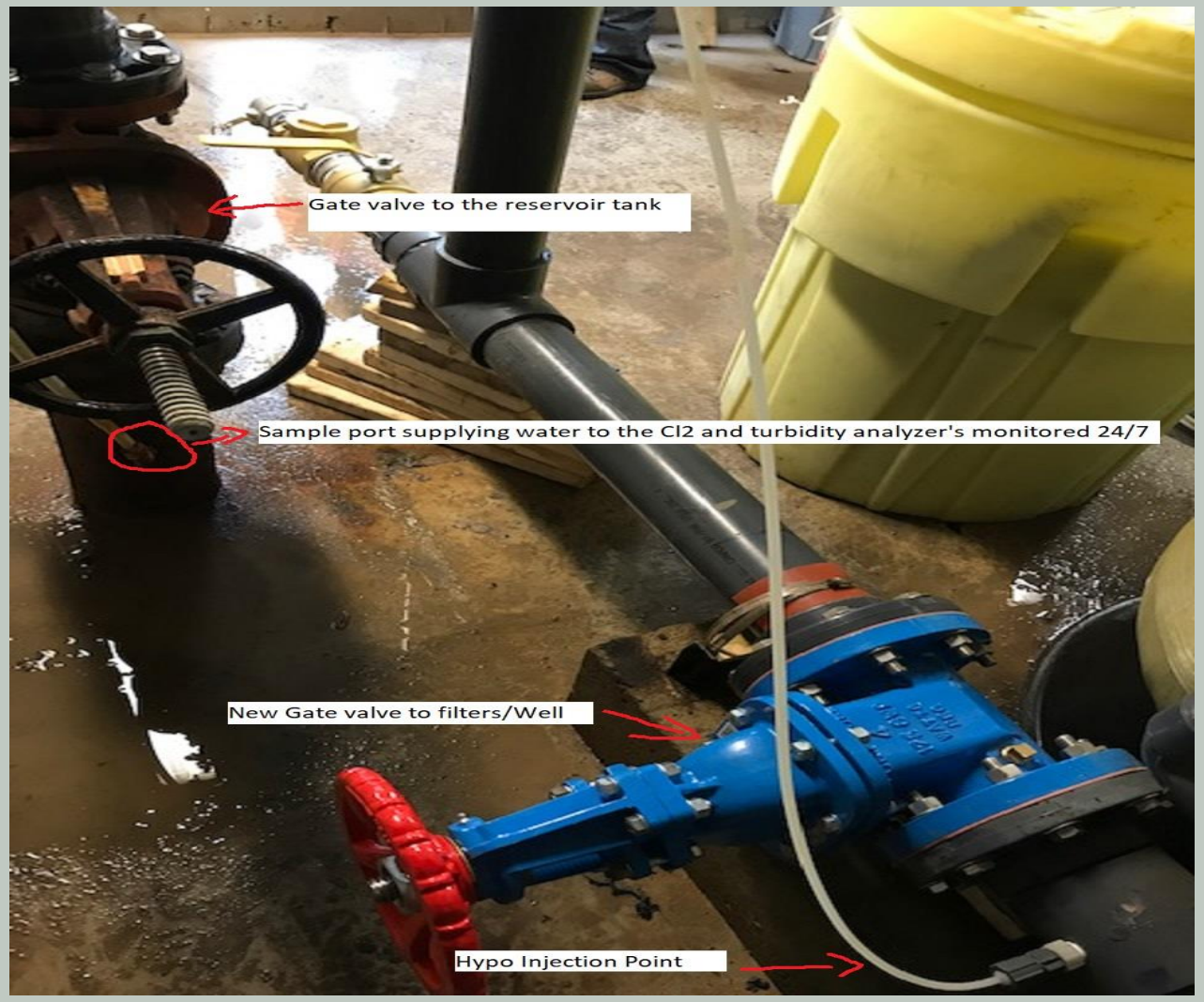


Mabou Water

Water Treatment Plant Control Panel before replacement. Note highlighted areas.

Mabou Water

WTP water transfer line.



Mabou Wastewater

- Lift Station #1
  - Electrical system upgrades completed. Equipment was falling off of the pole and the disconnect was rusted out posing a serious safety risk to Municipal Staff and residents.
- Lift Station #2
  - Upgrades include:
    - New Pump
    - New Check Valve
    - Shut off valve Installed
- VTS Program
  - Upgraded to the most up to date version

Mabou Wastewater

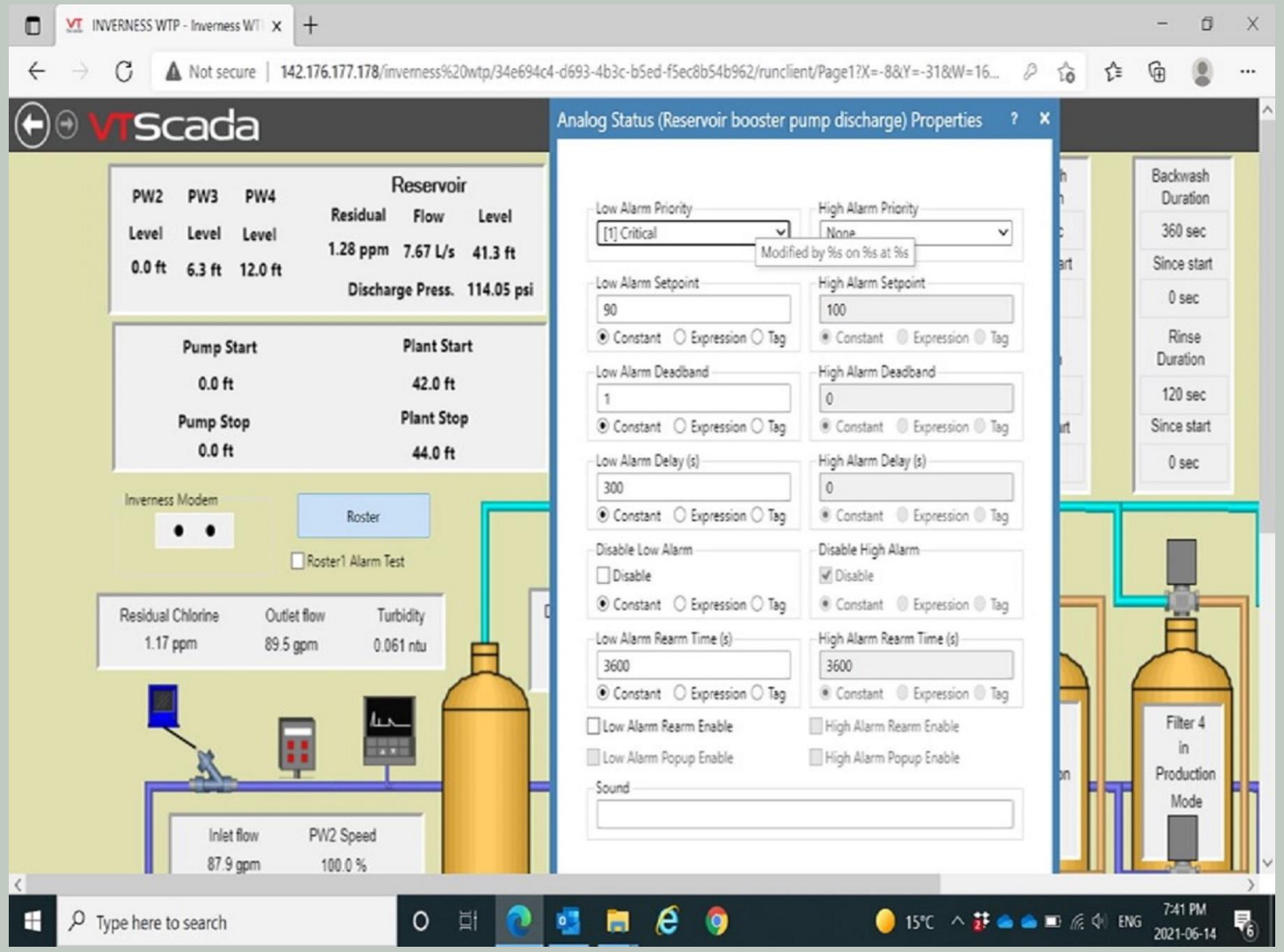
Lift Station #1 before the disconnect was replaced

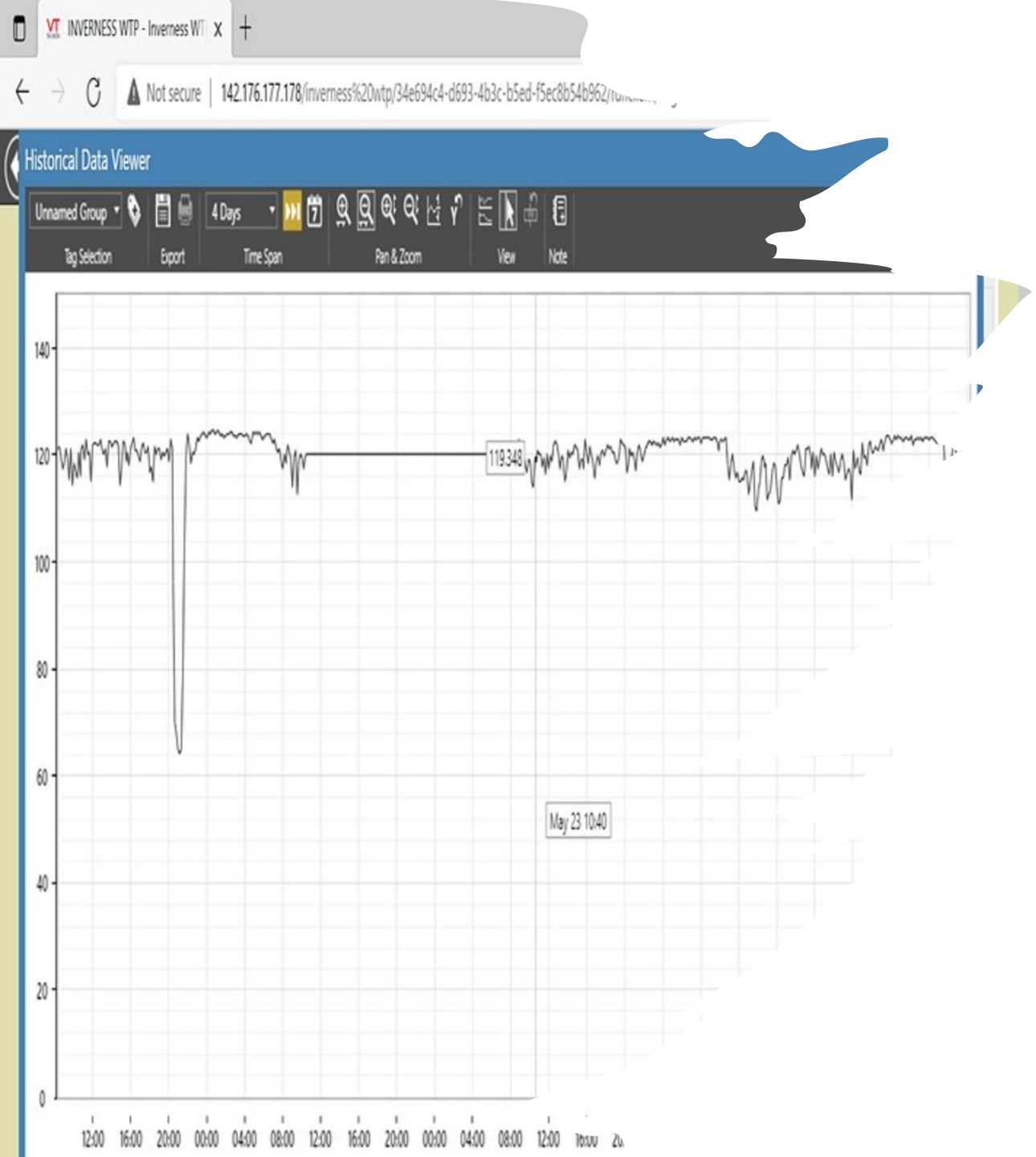
Inverness Water

- Strathlorne WTP
  - Filter #3 was disinfected and brought back online
  - New actuator installed and commissioned
- VTS Program
  - Upgraded to the most up to date versions
  - Upgrades completed to make the plants operate more efficiently.
  - Broad Cove Banks Road Booster Station was connected to Scada allowing a better response time to leaks or equipment failure
- Historical Broad Cove Banks Reservoir
  - Decommissioned as per NSE to prevent any cross contamination
- Flow Meter at production Well were programed into SCADA system as required by NSE
- Hot water heaters and sinks
  - Installed at both Water Treatment Plants
- Hydrants
  - Inspections and Flushing completed
  - ICMH out of service hydrant repaired

Inverness Water

Broad Cove Banks Booster Station





Inverness

- The benefits of having the booster station connected to the SCADA system. In May there was a power outage that affected residents water supply. We were able to respond to the situation , identify the issue and restore water to residents within an hour of receiving the alarm.

Inverness

Water Treatment Plant in Strathlorne

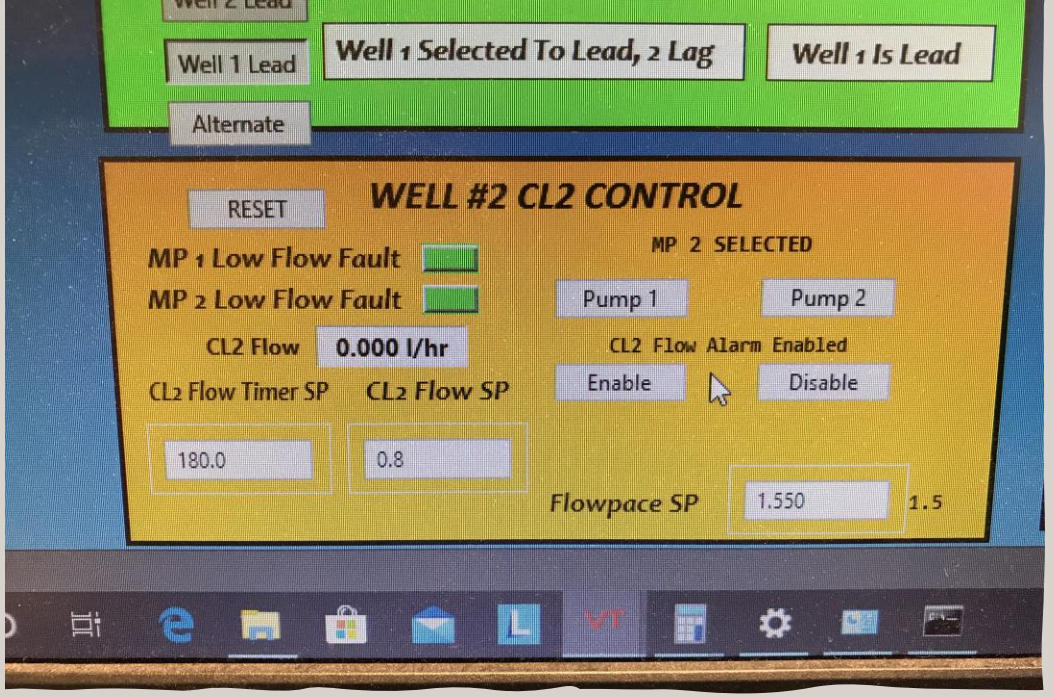
Inverness Wastewater

- Aeration Lines
  - Repairs Completed
  - Repairing the lines keeps the dissolved oxygen at a higher level that reduces the amount of odor at the facility.
- Wasting Pumps
  - Connected pumps to timers to improve efficiency
- Lift Stations
  - All cleaned by a VAC truck
- Hot water heater and sink Installed

Port Hood Water

- Convent Street WTP
  - Filter media replaced in filter #1 and #2
  - Adjustments made to the filtration programming, we separated each filter so they can run separately or together.
  - Backwash cycle was setup to engage on time or turbidity improve the efficiency
  - Replaced air compressor
  - 2nd turbidity meter installed on filter #1 after it was brought back online
- Dunmore WTP
  - Well pump replaced
  - Well casing inspected
  - Well probe installed
- Hydrant Inspections
  - Completed

Port Hood



- Water Treatment Plant on Convent St

Port Hood Wastewater

- New Lab Set up for testing MLSS (Mix Liquor Suspended Solids)
- Began work to bring SBR2 online.
- Replaced failing PC monitor
- Information session with Fluidyne and the operators.

Cheticamp Water

- Upgraded the VTS program to the most up to date version
- Well #3
  - Repaired flow Meters
- Hot water heater and sink Installed
- Hydrants
  - Inspection Completed

Cheticamp Wastewater

- Facility
  - Leaking roof repaired. Roof was leaking for over a year. The computer was covered by bags to protect it from water and the elements.
- Drying Beds
  - Years of non-operational drying beds were brought back online. They were cleaned and new sand added.
  - Drying beds reduce the overall operations cost by not having to truck waste offsite.
- VTS Program
  - Updated to the most up to date version
- Lift Stations
  - Repairs completed at all 6 Lift Stations
  - New guide rails and chains installed
  - New pumps installed and cleaned by a VAC truck
  - LS #6 had a building built over it to protect from the elements.
  - LS#6 had a new control panel built and is currently being installed
  - LS#4 had the overflow pipe repaired

Cheticamp Wastewater

- Drying Beds

Cheticamp Wastewater

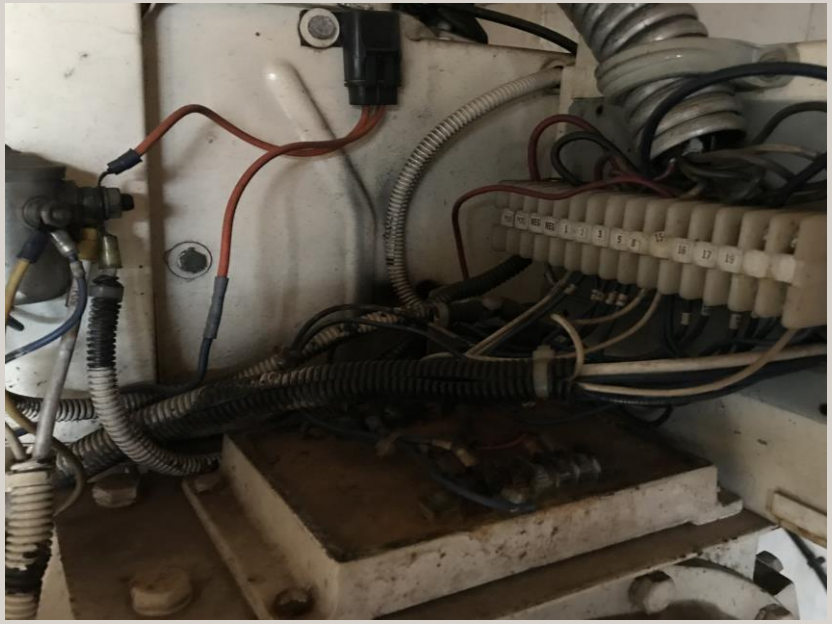
- Lift Station #6

Cheticamp Wastewater

New VFD's for Digester Blowers

Cheticamp Wastewater

- Lift Station #4



Whycocomagh Water

- Corrected programming issues with the cl2 dosing, before the changes there was no way of controlling the cl2 dosing remotely, operators had to go on-site and manually change the rate.
- The walls at the WTP were in bad shape, the drywall was replaced with plywood and a coat of paint was added.
- Installed a unit water heater and sink.
- Hydrant inspections.

Whycocomagh Water

- Water Treatment Building

Whycocomagh Water

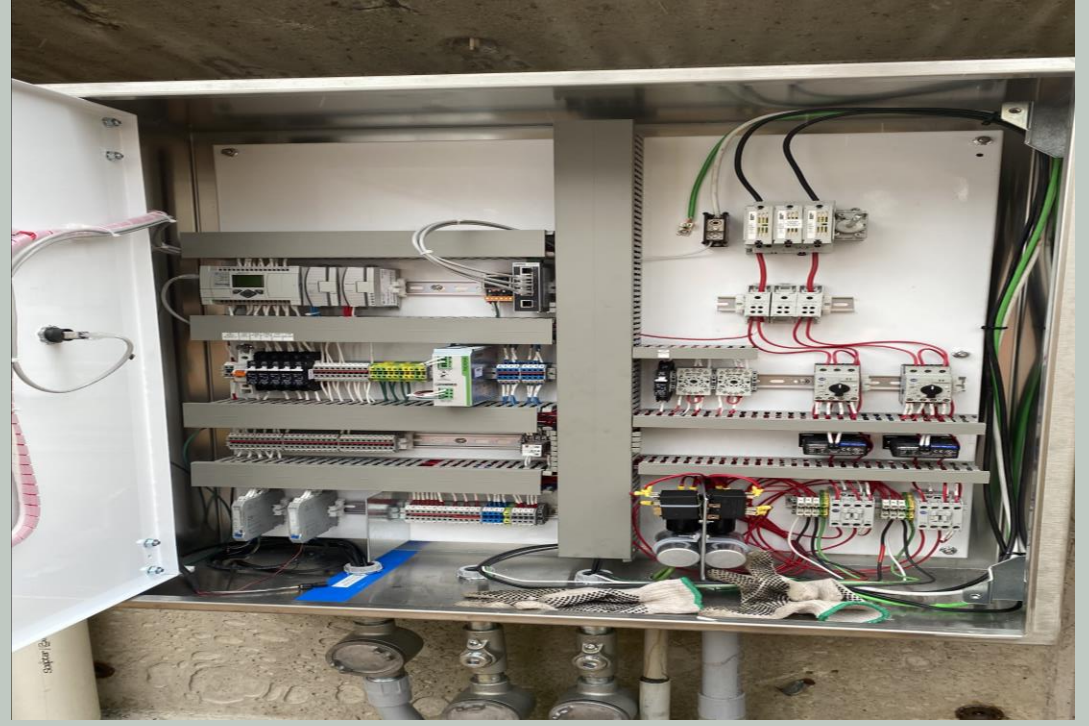
Water Treatment Building

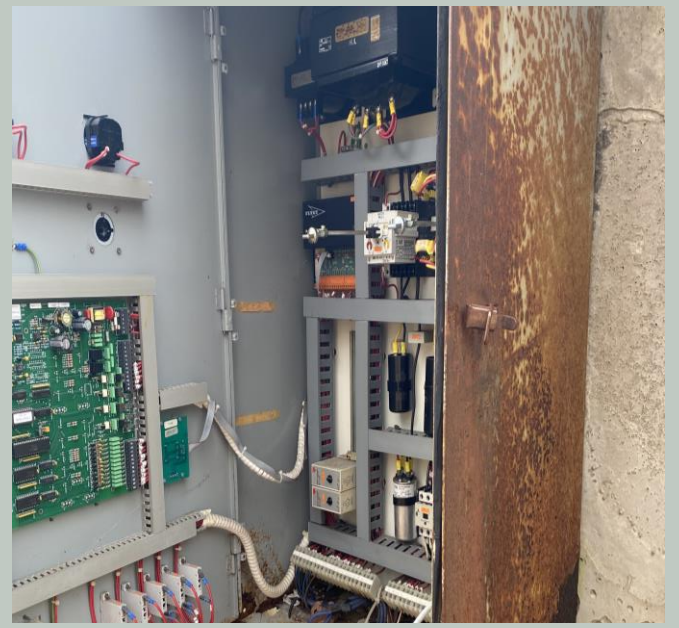
Whycocomagh Wastewater

- Installed a de-chlorination system at the STP, this was a directive from N.S.E.
- The covers on the chlorine contact chamber were replaced.
- Lift Station #4 control panel replacement.

Whycocomagh Wastewater

- Lift Station #4





Judique Water

- Corrected programming issues with the raw water and filter control valves.
- Balanced the plants flow rate by adding an extension to the beach plate on the DAF train.
- Replaced the air compressor.
- Installed new lighting on the DAF train.
- Upgraded the VTS program to the most current version.
- Cleaned out the building and removed old piping, also removed the old engine/fire pump.
- Had an inspection of the Dam’s intake line completed.
- Installed a unit water heater and sink.
- Hydrant inspections.

Judique Water

- Water Treatment Plant

Judique Wastewater

- Installed a de-chlorination system to meet regulations by Dec 31st.
- Installed a flow meter.
- Repaired the aerator unit and installed new chain.

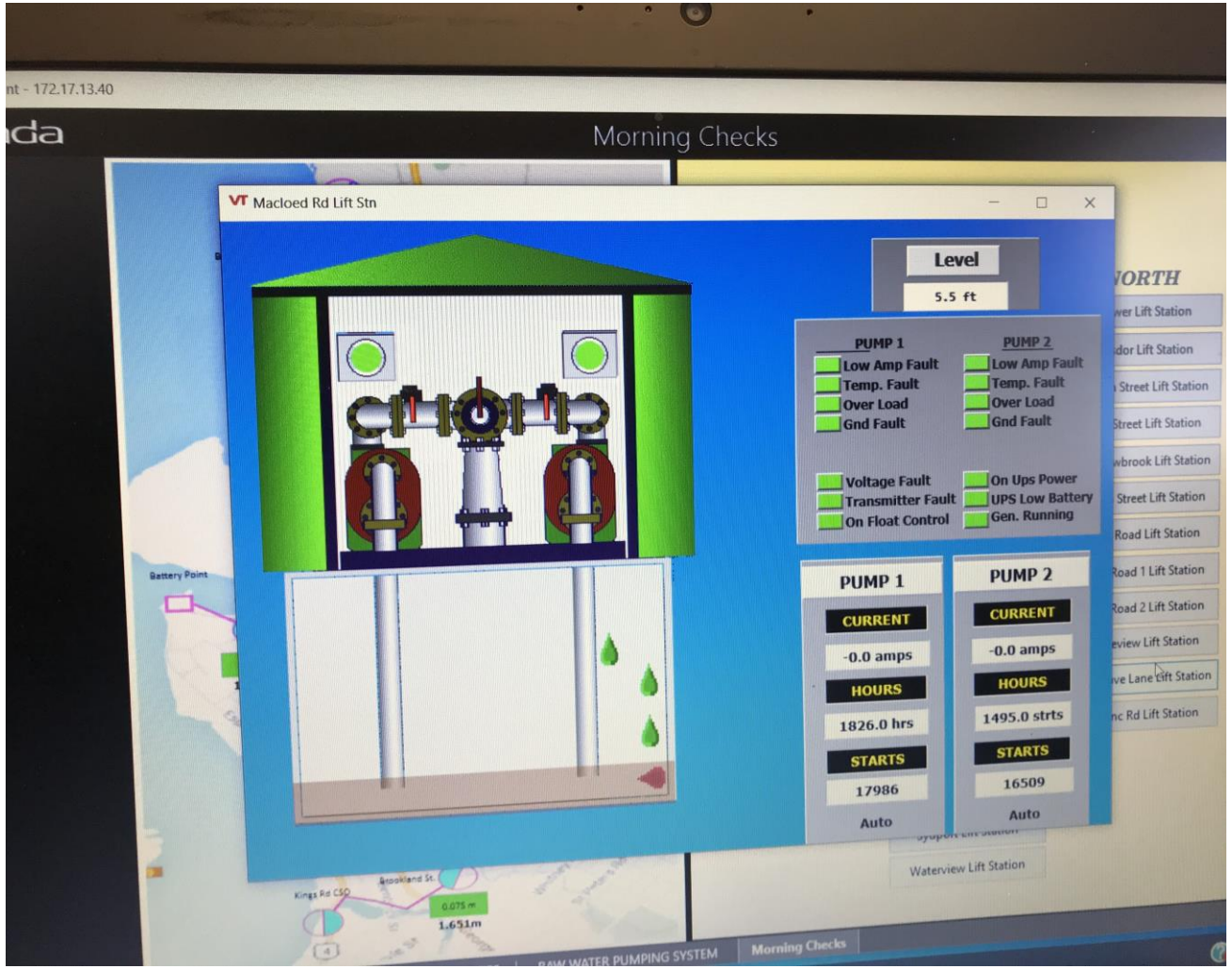
Port Hastings Water

- Upgraded the VTS program to the most current version.
- Hydrant inspections.

What’s next

Lift Station Maintenance Program

Lift Station panels are in the process of being upgraded which gives us the ability to link them to our SCADA System. A lift station page will be designed so maintenance crews can monitor their performance giving them the ability to know when maintenance is required reducing expensive equipment failure.



Hydrant Flushing Program

- A Flushing program will be completed each year in early spring and early Fall for each community. By completing this program each year, it will reduce dirty water events from occurring.

Closing

Thanks to your commitment and strong work ethic, we know next year will be even better than the last.

We look forward to working together.