

## **Water and Wastewater Items to be Repaired or Replaced**

**As of 11/28/23**

Completed items have been moved to the bottom of the list. Items that have changes since last update are highlighted in green.

### **Water:**

Tom Allen is waiting on parts and will work us into his schedule as soon as he can.

- Wire and calibrate PH Meter at water house.
  - The PH Meter will be contacted for guidance on calibrating the PH Meter.
- Update operators manual at water house.
  - Project is ongoing. Paula Jackson from Vermont Rural Water is assisting on this project
- Common alarm at water house is malfunctioning.
  - The issue had been that the alarm at the water pumphouse was going into alarm several times per day indicating that the water level at the water tank was too high. These were false alarms. The meter at the water tank sends the water lever in the tank to the receiver at the water pump house and to the receiver for SCADA. The communication for water tank level between the receiver at the water pumphouse and SCADA has been disconnected and this has stopped the false alarms. The communication for water tank level between the water tank and SCADA is still connected and will send an alarm if the water level is too high.
  - Currently the common alarm sends the same alarm for any issue at the wastewater pump station and the water house. Tom Allen is working on separating these two alarm systems so staff can tell if the alarm is coming from the wastewater pump station or the water house. There is also a malfunction that continues to send an alarm which Tom is looking into.
- Water Meter Replacement
  - We have reached a verbal agreement with Zenner and are finalizing the paperwork to proceed with the purchase.
  - We are working on an RFP for the installation of the meters and hope to have that issued by December 4.
- Computer upgrades
  - Two new computers to replace the aging desktops have been ordered.

### **Wastewater:**

- Water Leak
  - It has been identified that the water usage at the WWTF is triple the normal use which indicates there is a leak somewhere. Staff is working on figuring out where the leak is to be able to repair it.
  - Staff has been systematically going through the WWTF and replacing solenoid water valves which are older and have been leaking. They are also checking other areas such as garden hose connections for leaks. These efforts have reduced the flow of water somewhat but not to the level that would be expected with no leaks. Staff continues to investigate.

- The Dewatering Press has not been operating correctly since just after Labor Day
  - Parts for an emergency repair for the press have been ordered. The mechanical parts are expected to arrive at the end of January. The control panel is expected to arrive in Spring 2024.
  - Staff has disassembled 75% of the non-functioning channel of the press.
- The dialer to the pager from the alarm system needs to have installation finished.
  - The dialer has been installed. In this process it was found that the phone line was inactive. Staff is working on activating the phone line.
- Repair check valve on older pump in the pump station.
  - This work is being scheduled with Phil Laramie.
- Replace auger liner.
  - The liner and the screw were both replaced in Spring of 2022.
  - The screw broke in December 2022. During this repair staff observed that the liner needed to be changed.
  - Need to schedule Phil Laramie to conduct this repair. This is a two-day repair where we cannot accept septage.
- Air valve on dewatering press needs to be replaced
  - This will be addressed when the new mechanical parts for the dewatering press are installed later this winter.
- Repair hazardous gas alarm.
  - Phill Laramie will provide an estimate of cost. Once this is in place quotes will be obtained for the repair.
- Repair UV meter.
  - A \$1,500 UV meter has been purchased and is on site.
  - Installation involves a calibration based on the intensity of the UV lights. Staff is reaching out to the manufacture for information on how the calibrate the UV lights.
- Clean and repair aeration tanks.
  - Tank 1 been drained and cleaned. The valve in the tank is operational. The diffusers are operational. The next step is to fill the tank and put it online so tank 2 can be drained and cleaned. The tank has been filled with effluent to protect it from freezing over the winter. It will be put back online in the Spring when Tank 2 is drained and cleaned.
  - Tank 1 had been delayed in getting back online due to being used for overflow during the flood. The tank has now been drained and is ready to be placed online. This is an involved process and staff will schedule a time to do this.
- Clean solids out of all holding tanks.
  - Staff worked with P&P Septic to clean the aerated holding basins which are the tanks where septage is placed when it is first received. P&P pumped out the solids out of both tanks. One load was taken to Middlebury to be dried and disposed of at a cost of \$1,455. Middlebury could only handle the one load, so the second load was taken to Winooski at a cost of \$3,230. One holding tank has a large rag ball that still needs to be cut out. The rag ball is not currently clogging any pipes. There are also a couple broken pipes for the aeration in this tank that need to be repaired.
  - Going forward Cote recognizes that Richmond used to dry its own sludge and the drying beds are still located next to the Dewatering Building. Cote examined the beds with our licensed operator Nate Fredericks and determined that the beds could be used to dry

the solids from other tanks. This would eliminate the need to outsource the drying to other facilities. An approval is needed by the State prior to commencing with this plan but Fredericks expects that to not be an issue. This will save the Town significant money over the initial cost estimates.

- Obtain quotes on meter for septage receiving.
  - A quote of \$68K has been obtained. During the walkthrough for the 20 year evaluation the engineers noted that other parts of the septage receiving system need to be replaced and it may make sense to bid all of the work at once. This pushes the meter purchase off for a few months but that may be the best option for planning purposes.
  - Steve is following up with Hoyle Tanner to see if there is a full meter system which would fit with any style of other septage receiving equipment which needs to be replaced in the future. If so, we may be able to purchase and install the system prior to making a decision on replacement equipment for the rest of the system.
- Install screen prior to influent pumps
  - This is a pretty involved project which will be best addressed in the 20 year study
- Ongoing work on identifying and disconnecting storm water connections from wastewater system.
- Rewire fan in Wastewater Treatment Facility so the fan and the sump pump can operate at the same time
- Unclog pipe from digester to dewatering
  - This work needs to be performed when temperatures are above freezing. Cote is scheduling this for a two-day period when temps will be above freezing.

#### **On Hold Items**

- Improve ventilation in the dewatering building
  - Avonda Air assessed the current situation and estimated a cost of \$210,000 to correct the ventilation. This may be best addressed along with all WWTF ventilation in the 20 Year Study.

#### **Completed Water Items**

- Screens on reservoir tank needs to be replaced
  - This task has been completed.
- Water Meter Bids
  - Moving forward with Zenner as of 6/20/23
- Replaced failed water tank mixer that is not working.
  - Mixer was installed on Nov. 14. A tank inspection and cleaning were completed at this time as well.

#### **Completed Wastewater Items**

- Replace the second influent pump.
  - The pump from Phil Laramie has been installed.
- Repair the septage pump.
  - This task has been completed.
- Repair nonfunctioning pump in the pump station.

- Phil Laramie has repaired the non-functioning pump and replaced the two solenoids.
- Install outdoor control for overhead doors at dewatering
  - This has been completed
- Build steps to the digester.
  - This has been completed.
- Install check valves for the influent pumps
  - This has been completed as of 5/4/23
- Repair meters that measure hours of operation for each pump
  - Dan Pratt has completed this as of 5/4/23
- The auger gear box for the dewatering press broke on the weekend of May 27 – 28.
  - This has been repaired as of June 1, 2023
- The gear box on the horizontal conveyor failed on the weekend of June 10
  - This has been repaired as of 6/19/23
- Calibrate the sensor on the polymer tank and discuss potential corrections to occasional tank overflows.
  - This has been completed as of 6/12/23
- The dewatering press is overdue to be cleaned. It should be cleaned every six months.
  - This was been completely cleaned in mid-July
- Anoxic chamber mixer
  - This was installed the week of July 5<sup>th</sup>.
- Repair to non-essential items in wastewater pump station
  - This involved correcting an issue with the float that sounds the alarm if the pump station is filling up with water. This has been corrected.
- Repair aeration in the aerated holding basin
  - This has been completed.
- Repair generator transfer switch.
  - This was completed the week of July 31 – August 4
- Return tank levels to pre-flood stages
  - This has been completed the week of August 7 – 11
- Finish creating checklist for post power outage procedures.
  - This has been completed as of Sept. 14.
- Repair one backwash pump. Replace one Backwash pump.
  - This has been completed as of Oct.
- Assess why the recently installed grit motor is not functioning properly.
  - It is now feeding data correctly to SCADA
  - Cote is satisfied that the current equipment is operating as best that it can be expected to given its age and condition, but the grit motor will need to be addressed in the 20 year study.
- Clean wastewater lines that were submerged in the flood.
  - The State paid for cleaning of wastewater lines that were submerged in the flood. This work was performed the week of Nov. 13 – 17. The Town will pay for disposal of the grit but this will be covered by FEMA. Cote estimates that cleaning work would have been \$20K if we had to pay for it.