

Hardwick WPCF Superintendents Report April 09, 2018

Completed:

-Matt Provencal has started full time and is performing daily testing, rounds, and weekend rotation work as well as assisting with alarm calls, maintenance, repairs, etc.

-Had new crank handle made (EERS) for hoist at Gilbertville Pump Station; has been broken for years and staff was dangerously using a pipe wrench. Also had trigger welded to release mechanism to eliminate the need to get fingers so close to ratchet gears.

-Found exact location of 'missing' manhole (that engineers say "doesn't exist") we had roughly located by Fletcher in January. It is under the stone wall near the railroad tracks in back of Rose32. The wall 'bridges' over it with a large rock. We were able to unearth it and pop the cover; this is one of the primary lines to the Gilbertville Pumping Station and has 3 fairly large lines entering it. Unfortunately, because of its bizarre location under a retaining wall up a steep incline from tight railroad tracks, it is nearly inaccessible for a jetter if the need arose.

-D.O. probes in Wheelwright WWTP SBR's were unmaintained and turned off for a long time (years?). I was told they were functionally inoperable. Turned on both in March; #2 immediately showed some life and took an initial calibration, started controlling RAS pump speed and air inlet valves to ejectors. In cooler weather, this will save a lot of electricity due to slower pump speed and less air being sucked from an electrically heated building. #1 seemed fairly dead but ordered and installed a new membrane and electrolyte and cleaned platinum electrode 4/3/18. #1 started responding and calibrated same. The WWTP shows operational improvement also with the steadier D.O. levels. Will continue to monitor; the system is expected to again be oxygen starved once warmer weather comes.

-4/5/18 Received certified letters from EPA for both WWTP's stating they have reviewed our permit applications and will be forwarding draft permits to us upon opening of the public comment period.

Alarm/Call-In log:

3/16/18 5am High level alarm, Wheelwright Pumping Station. Pot not firing despite being full. Tested trigger float and found to be bad, replaced with new.

3/16/18 9pm Call from dispatch of sewage flowing out of manhole at 92 Pine St.; Called in Matt to assist and manhole was down on arrival. Popped every manhole between trouble location and WWTP to find all flowing nicely. Removed mass of grease and rags from manhole at corner of Maple and Pine, assumed to be part of previous blockage. Also found mass of rags at WWTP influent channel and removed. Disinfected area on Pine Street where sewage overflowed onto as a precaution even though disinfection likely took place from freezing. Returned the following morning to find flow running slow; called in Ware to jet line after failing to break through with our jetting trailer. Ware could not break through until running up line with cutter. Hardwick FD assisted with water tanker. Filed report w/ DEP.

3/19/19 7:00 am Eagle Hill Pump Station High Level; station at 9.0 feet on arrival, quickly rose to 13 feet while awaiting Alm septic with vacuum truck. Alm pumped down well before any backup into street. Located area of blockage between Ruggles Hill and Butlers garage and called in Fletcher with a jetter to assist us and Alm in clearing same. Flow restored to line around 8pm.

3/19/18 7:02 am; High Level Wheelwright Pump Station; arrived to find float stuck with sticky grease and cleaned same. Rechecked gravity line after station discharge; it is still freely flowing. Rechecked 3/20/18 and cleaned again. Noted inlet

check valve was sticking from possible grease/rags and exercised same until it felt free. Added some "floating degreaser" powder to manhole before station.

3/23/18 7:30am; High level alarm, Wheelwright Pumping Station. Cleaned float and station operated again, seemed as if 3-way valve was stuck in 'vent' on arrival though. Changed out MAC 3-way valve w/ new spare as well as controlling solenoid for same. Had difficulty getting piping to seal back up, will gather some pipe nipples and unions for next time as well as new 3-way valve to replace spare.

4/4/18 6PM Theresa called to relay message that Sergeant Landine noticed sewage backing up into Police Station bathroom. Checked main lines and all are flowing well after first manhole which is on private property and was inaccessible due to thick landscaping growth that needed to be cut away. Contacted Fletcher Sewer and Drain and scheduled them for 8am 4/5/18; Fletcher showed up at 8am and ran camera up line to under foundation trap. Line is running very well at this time; plumber believes it cleared itself but we will run our jetter up line once we have it back for preventative measures. Chief Ayotte called the following day to report that the Food Pantry was also flooded. This is from the same incident, prior day. In the interest of getting it cleaned in a timely manner, WWTP staff vacuumed up mess and disinfected floor of Food Pantry. Tightened up 4 loose drain plugs in floor.

4/5/18 1AM Alarms at eagle Hill, Gilbertville WWTP and Wheelwright WWTP. Potter responded and checked all Stations and Plants; called in Provencal at 2am to assist. Wheelwright WWTP #2SBR was not running; apparently control program lost memory and it started cycling from beginning as if new; #2 SBR started up 3 hours later (5:45am) after #1 cycled. Both RAS pump VFD's at Gilbertville failed to restart; started same. VFD's at Eagle Hill failed to restart; cut power to PLC then restarted and station ran fine. Power restored by 2:30 AM and fortunately didn't need to address Wheelwright Station lack of back-up power. Removed downed tree from Mill Rd in order to gain access.

4/6/18 2pm Power Outage Alarm, Wheelwright WWTP. Power restored on arrival, all systems restarted fine.

4/9/18 4:45am Wheelwright pump station high level alarm. Potter and Provencal responded. Cleaned stuck float and restarted, monitored. Checked downstream manhole at location of 3/16 overflow to see how it handles the post-high level flow. Appears to be partially surcharged but handling high flow. **May call in Ware to run larger root cutter down/up line.**

Ongoing:

- #1 SBR in Wheelwright Motor arrived 2/12/18 and will schedule install.

-Eagle Hill Pump #2 Seal failure came back in February after just having seal replaced; swapped relay with relay on #1 per service dept on 2/9/18 to insure problem stays with pump not relay, problem stayed with pump. Xylem in Woburn (who just replaced seal) recommends we bring it in again and they can likely fix "while we wait".

-Stating in February 2019, Massachusetts municipalities will be covered by OSHA.

-Our small jetting trailer is at Highway undergoing electrical repairs. Despite past reports that it never worked well, I believe it could be valuable in clearing certain blockages throughout town while providing quicker response time and savings.

Proposals:

3 of the cooling systems on our 4 composite samplers will need replacement by warm weather. \$3100 for the 3, \$500 for installation, plus \$750 (!) shipping. New outdoor rated composite samplers are \$5200-\$7000 each depending on brand. Negotiated complete price of 3 cooling systems down to **\$3294.50** after a few attempts; recommend we proceed

with this but it won't be too many years before we will need new units. Recommend we proceed with warmer weather coming. Effluent sampler at Wheelwright is critical; cannot hold temperature within prescribed range set by DEP; this will also adversely affect the sample making the plant look like it runs worse than it actually does.

After replacing #2 Influent pump in Gilbertville w/ only spare, we received quote to rebuild old unit \$4,086.25. New unit is \$6885. Disassembly costs already approaching \$1000 even if we elect to scrap the old pump. I recommend having this pump rebuilt but going with a new pump in the future if another should fail.