

Director's Report

Maintenance—Keeping Things Humming

Over a significant amount of time of average flows, some of the heavier items have a tendency to settle in pipes, man-holes, and stations. With high flows, these heavy items get washed to the stations, if they are not already there. The flow in the station works like a washing machine and small items become large twisted masses. These large masses are detrimental to pump operations as they can weigh hundreds of pounds. The fine stringy material can also wrap into the impellers and around the drive shafts and potentially damage seals. This is just a by-product of the work we do.

Annual service on our vector has been completed. This is a two day project with all of the components that need to be maintained. No major repairs were identified in the inspection and maintenance process.

With the hope of having more options for pump placements in emergency situations, we have had a few adaptor plates machined. This will allow us to adapt to various discharge sizes. By having this ability, we will have the option to move pumps to other crucial stations adapting

the base in that particular station as bases are pump specific.

In the secondary process, solids are settled out as the velocity of the incoming water is slowed. These solids are pumped out and sent back to the primary system to collect the phosphorous that had been bound by the addition of ferric chloride. We run this pump continually as it's a small centrifugal pump. In the last month, we performed maintenance which included a new seal due to the extensive run times.

A soft start was added to RBC blower #1 to help eliminate the intense draw when starting the blower. These blowers are 125 hp, electrically driven motors with large heavy fan wheels. The soft start will take the strain off all the components by slowly ramping the power up on startup.

This is a rag ball covering a pump at LS 504. →

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Administration

Staff has been working on the 2019 budget including the long term capital improvement projects with a focus on short-term capital improvement projects. Staff verifies cost projections for items in the five year CIP. Updated quotes are obtained for items that need to be purchased and a cost for labor was estimated if outside contractors will be needed for completion of the project. Long term CIP cost are done similarly, but it takes a lot of information to try to make a plan to project out 30 years. This is done by life cycle tables and past knowledge of failure rates of a particular asset. All of this is compiled into a spread sheet to work with committees and the board.

This year, SCCMUA will be returning to the Community Showcase in DeWitt. This event is outstanding and allows for contact with many of our system users in one stop. We pass out educational literature, display examples of what not to flush, and proper disposal of common household items. We look forward to this event every year as it continues to grow.

Process—Making it Clean

All parameters of the NPDES permit were met.

This past month was one for the record books with historical flow numbers recorded at the SCCMUA plant. Good old mother nature hit a home run with a blend of the perfect ingredients for major flooding. With a brief but intense warm up, the significant amount of snow that was left had melted quickly. This was compounded with an additional 3 plus inches of rain that fell over a 48 hour stretch. The still frozen ground offered little to no absorption properties wreaking havoc on low-lying areas which include sanitary manholes and pump stations. Most of the SCCMUA collection system was taxed to the brink with the significant amount of inflow but the SSO'S (sanitary sewer overflows) were limited to the southern portions of the service areas. With the increase in pumping capacity at station 102 in DeWitt Twp, we were able to

move and treat nearly 1.1 million gallons more than what was achievable prior to the rebuild. This increase also increased flows at station 501 on Herbison Rd and the plant by those same rates. This is why we saw such high sustained flows at the plant of 8.7 mgd and a peak of nearly 11 mgd.

With each significant weather event (precipitation), we are able to learn and make adjustments with the hope of minimizing SSO's and backups into homes.

The bio solids transfer pump has been installed in the Digester. This was no easy feat and staff did an outstanding job working through the installation. This process was time consuming. Some piping modifications were needed and the difference in layout with the new pump versus the old required a few modifications to surrounding pump supports.

The east secondary clarifier was drained and cleaned as it is not necessary to have both online during normal flow conditions. By having the tank empty, it also provides a bit of buffering capacity for the next high flow event as we open the tank when flows increase. This slows the flow through the plant and allows for better removal rates.

The filter surface wash valves were found to be defective a while ago. The process to get them to our facility took many months as they are a fairly specific item in size and material. This is not uncommon with certain processes in the plant as many items are industry specific and are not mass produced due to the limited applications available. When we become aware of such items, we take steps to ensure we have redundancy's in place to avoid possible process issues until parts are on site.

Inspections—The Scoop on the Poop

Over the past month, SCCMUA staff have performed 14 inspections on both new construction and sanitary sewer repairs.

The Oaks phase IV is still waiting to perform testing on the sanitary sewer install located in the City of DeWitt.

SCCMUA has received plans to review the next phase in Wildflower Meadows in the City of DeWitt. These plans are currently being reviewed.

In DeWitt Twp. the Quarry development

is not doing any work at this time. This will change as soon as the weather breaks.

Also, Crouner Farms in DeWitt Twp. is on hold until the weather breaks. Site plans for the next phase have been received and the review is underway.

At Lakeside Preserve, the engineers are working on record drawings from the previously completed phases.

In Bath Twp, the Chandler Rd. project is currently being reviewed. Data is being

gathered for Prein & Newhof to look at solutions to service this area more effectively.



**Southern Clinton County
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