



Southern Clinton County Municipal Utilities Authority

3671 W. Herbison Rd • DeWitt, Michigan • 48820 •

Phone: 517-669-8311 Fax: 517-669-9335

Bath Township 2018 Annual Report

Background

The relationship between SCCMUA and its constituents is unique but not unheard of. SCCMUA is an Authority that operates the Clean Water Facility located in DeWitt Township and is owned by four municipalities. Bath Township owns 16.7273% of the available capacity at the plant. This ownership equals 836,365 gallons per day and in 2017 flows from Bath equated to 784,109 gallons per day.

The collection systems are operated in a different manner. Each municipality owns their respective systems and contracts with SCCMUA to provide maintenance services. This encompasses various maintenance activities including underground pipe and lift station maintenance. Maintenance is performed on a weekly basis at the lift stations to identify and repair mechanical issues. SCCMUA helps the municipalities with planning, by completing site plan reviews. SCCMUA also inspects all sanitary sewer work including new construction or existing system repairs. SCCMUA staff meet regularly with the Township to discuss past work activities and future plans for the collection system, but in the end all decisions are up to the municipalities to implement and finance. SCCMUA views itself as a partner with the municipalities and shares information to help assist in the decisions that need to be made.

A Look Back at 2017

In 2017, the largest and most costly repairs came with the sewer collapse on Ann Drive which took nearly a month to repair. This was due to the depth of excavation, the soil conditions, and elevated ground water because of seasonal precipitations. The pipe had been severely corroded by hydrogen sulfide that degraded the concrete pipe beyond structural integrity. The repair was isolated to the failure point and a full reach liner was installed after the excavation site was rehabbed.

The failure on Ann Drive spurred a larger lining project that would isolate the interior of the interceptor from the damaging effects of hydrogen sulfides. This project started in 2017 and stretched into the beginning of 2018.

SCCMUA has worked hard to be a better partner to all the constituents with efforts to make every dollar count. A good example of this was the Dutch Hills 206 lift station rehab. This station was in very poor shape and unfortunately, due to the original design, it was nearly impossible to access the pumps for repair. The top section of the wetwell was crumbling due to

poor construction materials. SCCMUA solicited quotes to rehab the station utilizing the existing wetwell and valve chamber. The quotes came in as high as \$140,000. Staff chose to take a different approach and looked at what we could do in house and what specific items we could contract out. This totaled approximately \$40,000 and with the Township's consent, SCCMUA took on this challenge and the result was a success. This project will help prolong the Townships funds and provide adequate service to the Dutch Hills community for many years to come.

Pre Rehab



Post Rehab



As you can see from the pictures, this rehab was a huge achievement, utilizing stainless steel hardware, aluminum hatches, and vented trays to allow fresh air to circulate to maximize corrosion resistances.

Other lift stations in the system benefited from replacements as well. In conjunction with the Township, SCCMUA replaced/rebuilt many pumps. A total of six pumps were replaced this year equating to nearly 15% of all the pumps in the Township, thus bolstering the reliability of the system.

Pumps Replacements

Station 204 (Park Lake Rd) will have a new panel and pump installed and will be finished early in 2018.

Station 206 (Dutch Hill) was highlighted above.

Station 210 (Thorngate) had a new pump installed due to catastrophic failure of the previous pump.

Station 212 (Chandler Rd) had a new pump installed. The pump had failed beyond repair.

Station 217 (Coleman Rd) had a new pump installed. This pump was operating off the curve and failed beyond repair.

Plant Work at SCCMUA

In 2017, SCCMUA continued the RBC heavy maintenance project utilizing SCCMUA staff. This project was scheduled to take 6 years as the ability to take an RBC train down is limited to certain times of the year. This project included the resurfacing of the bearing surfaces, new bearings, and new air valves, and new air diffusers. Last year, the Board approved the purchase of a portable lathe to resurface the bearing ends. This will save at least \$30,000 over the life of the project. Continued work in the RBC room include the replacement of the rails surrounding the tanks. The original rails were severely corroded causing failure to the railing system. New stainless-steel rails have been installed to provide adequate tank concealment.

The plants main pumping location (Sandhill) had work done as well to insure longevity to the system and gaining energy efficiency. One of the three influent pumps was rebuilt along with a new VFD to reduce energy cost.

To keep things operating, a new SCADA (Supervisory Control and Data Acquisition) system was installed throughout the plant. This control system monitors and controls all mechanical functions inside the plant. This gained redundancy in crucial plant operations helping ensure things keep operating upon a failure.

2018 Goals

In 2018, we will work with the Township and the engineers to get the station 203 project completed. This project is intended to include equalization for flow retention in the system to

help alleviate overflows in the downstream systems. Other needs in the collection system have been identified; these needs are identified below:

- Station 208 rehab with in kind components. This is recommended to be a top priority for the Township as this is a critical station in the system and has been identified as a project for many years.
- With the completion of station 203, lift station 216 will be eliminated. Lift station 205 can then be rehabbed with the components from 216.
- Radio system upgrades including elevated tower height increase.
- Continued corrosion mitigation via chemical control of sulfides and continued investigation into other effective methods.
- Work with the Township to identify a long-term plan addressing SAW grant finding.
- TV and Clean 18,000 feet of sewer in the Township for 2018.

SCCMUA Plant Goals

In 2018, no major projects are planned. We will be continuing with the RBC rehab as proposed. We are planning to rebuild an influent pump to maximize the life of this asset. SCCMUA will continue to monitor the assets at the plant to gain as many efficiencies as possible within reason.

SCCMUA staff of 1-part time support staff member, 10 operators, four supervisors and a Director are all dedicated to providing the best service for every dollar spent. The operators and Supervisors are dedicated professionals with many being DEQ certified in waste water treatment

Conclusion

2017 was a very active year in the Township and 2018 promises to be the same. SCCMUA will continue to work with the Township and provide recommendations for proper rehabs and maintenance to be more proactive and less reactive. This team or partner approach will help to ensure a stable and effective sewer system for the Township for many years to come.