Wastewater & Public Works Newsletter

2020 Recap & Spring 2021

RENAMING OF THE WASTEWATER

We now have a new name for our 11,000-acre facility: **The Muskegon County Resource Recovery Center**. This new name better reflects what we do: recover valuable resources from waste products. We recover clean water from sewage, and recover nitrogen and phosphorus from sewage which we then use to grow crops. Another part of the Resource Recovery Center (Solid Waste) takes people's trash and recovers methane gas, which is used by some of our local industries. Someday we hope that our acreage south of Apple Avenue will recover energy from the sun's rays to be used by Muskegon County residents. New signs will be installed in the coming months.

COVID-19

Since the closure of county offices in March, the Wastewater has worked to comply with the orders of the CDC and Governor Whitmer which designated Wastewater and Public Works as essential work. We had to get creative with shutdowns, furloughs and social distancing in order to follow all guidelines and still complete our work. It has been challenging to say the least, but our employees have shown determination and teamwork to rise to the challenges.

CSET EPIDEMIOLOGY STUDY

During the summer of 2020, Rick Rediske of GVSU reached out to MCWMS and asked if we would like to participate in a Covid-19 sewer epidemiology study. The goal of this investigation is to predict Covid-19 outbreaks before they would be discovered through the normal path of clinical testing. Genetic material in stool is said to be found about 2-7 days before a person becomes symptomatic, if they become symptomatic at all. MCWMS staff and GVSU's Annis Water Research Institute staff came together to create CSET (Covid Sewer Epidemiology Team). After applying and receiving governmental grant funding, GVSU was able to pay for every aspect of this study, including new equipment to add to their lab. The new equipment was able to perform ddPCR (Droplet Digital Polymerase Chain Reaction) which looked for RNA markers specific to the Covid-19 virus. The sampling team consisted of 7 members from the Wastewater's lab and IPP staff. The Wastewater's influent, 2 prison outfall points, Maple Island Estates outfall, and 4 other locations in the sanitary sewer system were each sampled twice a week for a total of 7 weeks. AWRI has finished processing the samples and has made the data available.

FARMING AND HARVEST

An updated seed metering system has increased seeding precision greatly and the farmers are very happy with this new tool. In July one of our rig trucks caught fire. Dry grass ignited under the truck while a rig tech was changing a flat tire on a spray rig. Neither the rig tech nor the spray rig were harmed but the truck was a total loss. The weather was perfect for harvesting and the grain quality was good. Two new articulated tractors with crawler tracks joined the fleet in 2020 and they have aided the farmers in traversing the fields no matter the conditions, and the farmers appreciate the smoother ride.

WILDLIFE

The Wastewater received a 2-year recertification from the Wildlife Habitat Council based on our nest box monitoring program, nature trail, timber stand improvement program, pollinator plot and Christmas bird count. Our nesting box monitoring program was the recipient of the 2020 Avian Project Award.

The colony of ring-billed gulls on the center dike road failed to produce even one surviving chick in 2020. Most of the eggs never hatched and those that did hatch didn't survive. It is believed that a spike in bird watching activity due to Covid-19 lockdown restrictions along

with a lack of barricades on the center dike road played the biggest roll in this.

The Annual Nest Box Clean Out Day is March 27, 2021 from 9am – noon. Volunteers come together to clean and prepare over 300 nest boxes for the upcoming nesting season. Volunteers should contact Anita Friend prior to Clean Out Day. Volunteer opportunities are also available during the nesting season (May-July).

SWANSON ROAD PAVED

A much welcomed change has been the paving of Swanson Road between Apple Avenue and the Fleet/Ops Buildings. This project added concrete approaches to the Fleet/Operations Maintenance building, gave the grain center a concrete driveway, connected the Farm to the natural gas pipeline, and moved overhead power lines across the road which reduced the risk of electrocution for crane operators and farming equipment operators. All in all, this paving project created a safer, cleaner and more pleasant path to the buildings for workers and visitors.

ADMINISTRATION & LABORATORY RENOVATIONS

We had a complete repaving of the parking lot, replacement of broken sidewalk sections, added speed humps to the driveway, added a concrete ramp to the lab loading dock and the front entrance brick walkway has been replaced with stamped concrete.

In April we were finally able to fully move into the newly renovated lab. Not only is the lab brighter and cleaner, it is also more efficient for work flow and safer for our lab techs. The new HVAC system and hoods provide top notch air quality for our laboratory workers.

TIMBER MANAGEMENT

Two timber harvest contracts started in February 2020. One involving 942 oak trees in 110 acres of forest and the other involving a 40-acre tract containing pockets of red pine that were clear cut and other areas cut as a shelter wood harvest. Red pines are not native to our area and the warmer temperatures are a stressor to the trees which makes them subject to diseases.

FLUME BAR SCREEN

Wastewater employees offered and implemented a creative approach for dealing with the problem of the widely variable rate of grease and debris accumulation and being at the mercy of the dumpster company for timely pickups. We discontinued the dumpster service and built our own three sided dumpster which allows a telehandler bucket to get in and scoop out the screenings and haul them to one of our nearby sludge drying beds. Since installing the new dumpster, we've never had to shut down the bar screen due to an over-full dumpster, and we've cut expenses by discontinuing the dumpster pickup service. This screen system keeps debris out of the aeration cells which saves the aerators from plugging and saves our mechanics loads of work needed to clean a plugged aerator.

C STATION ODOR CONTROL SYSTEM

The odor control system had to be repaired this past fall as the epoxy coating had peeled off the concrete support grating which caused the concrete to degrade. Concrete grating supports a layer of lava rocks. On top of the lava rocks is a layer of wood chips that are kept moist. A bacterial slime grows on the wood chips. Foul air from the lift stations two wet wells is pushed up through the layers. As the air flows up through the wood chips, the bacteria on the wood chips "eat" the odor-causing chemicals. The fact that this filter system contains living microorganisms is why we refer to it as a Biofilter.