

# CITY OF CROSWELL NEWSLETTER

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By Ed Carstens  
Wastewater Treatment Plant  
Superintendent

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- ✓ Operating the City of Crosswell Wastewater Treatment Plant more efficiently with the new Sludge Press.



The City of Crosswell has a unique Wastewater Treatment plant and a talented staff, located at 5580 Lancaster. The original plant was built in 1955 as a combined sewer system to treat sanitary waste and storm water.

In 1972, Congress passed the Clean Water Act (CWA) establishing the basic structure for regulating pollutant discharges into the waters of the United States. This treatment plant has gone through several upgrades to keep up with the ever-changing state and federal standards so we can enjoy this great state's lakes & rivers for recreation.

The treatment plant has three operators and a plant superintendent providing staffing 7 days a week – 8 hour per day Monday through Friday and three hours on the weekends and five hours on all holidays. The plant operates in an automatic mode, with the operators making minor adjustments to the plant as needed to produce the cleanest water possible to be discharged to the Black River.

The plant treats an average of 338,000 gallons of sewage a day with a maximum of 1,000,000 gallons per day.

During the treatment process, treated water goes through a “polishing” pond for chlorine removal. Over the years, geese have found this pond as an ideal

hangout. At times, over 100 geese would be in the pond, on the shore, walking around the plant grounds, leaving “droppings” for all of us to step around.

It got to be a real problem. Last year we bought decoys – two crocodiles and two Muted swans – and placed them in the pond in the springtime. The decoys were tethered to a weight with fishing line so they could be blown around in a 40-foot circle. It was hilarious to watch some of the migratory ducks swim behind the crocodile decoy and taunt it by diving under it and popping up in front of it and quickly diving back down and coming up behind it.

The migratory geese were not as daring as the ducks, they just kept their distance. As the winds changed and the crocodile decoys moved closer to the shore, the geese got out of the pond assuring themselves of a quick getaway if needed.



The geese reacted the same to the Muted swan decoys, knowing swans are very territorial and attack the geese in the wild. What was very interesting while watching all of this, you could tell the non-migratory geese from the migratory ones by the way they responded to the crocodiles. The non-migratory geese stood on top of the crocodile decoys because they had no idea what they were.



These decoys looked so real that we had people stopping by to see the swans until we informed them they were just decoys. The decoys were so effective that after a week or so the geese had found a safer place to hang out and haven't been seen from since.

Over the years, there have been many challenges operating the wastewater treatment plant from bad stuff being flushed down toilets to rain events to just sure volume of solids the plant generated during the treatment process.

The treatment plant is currently generating approximately 158 dry tons of biosolids a year. A year ago, these solids were sun dried by using six drying beds, but when Mother Nature threw down a wet blanket, it was nearly impossible to dry all the solids.

The City this year approved the purchase of a sludge press, a fully-automated machine that can produce dried sludge no matter what the weather. It's been a 'Life Saver.' We have stayed ahead of the solids and see no issues for the winter months. That means the less sludge held in the Imhoff Tank, the more efficient the treatment plant operates.

The dried solids, which are a very good source of fertilizer, are put down on farm fields. This process is controlled and monitored by the Michigan Department of Environmental Quality and the federal Environmental Protection Agency (EPA).

The sludge press not only eliminated the City's need to build another million-dollar sludge bed, it was the most cost-effective way for to dewater the sludge. Our treatment plant staff also played a major role in building the sludge press in one of the facility's storage units, he added. Total cost of the project was under \$400,000. Consultant Fleis & VandenBrink was hired to design and build the sludge press.

The press takes a liquid milkshake-like substance and

compresses a lot of the water out of it. The sludge comes out like a chocolate brownie or cookie dough and then put in storage. In the first two weeks of operating the press, the City saved two or three months of drying time on the sludge beds.

"I don't know of one community the small size of Croswell that has a sludge press," said consultant Gary Bartow, co-manager of F&V's East Michigan Services Group. said. "You usually see them in bigger communities. But ultimately the press saves the

community money and storage room.

"This is out-of-the box thinking for people who experience issues but have no more room for drying beds."

Plant operator Tom Fockler, who suggested the press idea a few years back, and wastewater operator Dan Kelly, were instrumental in setting up the press installation.

"Because of all the skill sets the staff has, we got to design and build what we wanted. We did all the demo and building prep work for the contractors and it saved us a ton of money," Kelly said. "A real key was that our Superintendent and City Administrator Sam Moore were willing to think outside of the norm and we were able to build what we wanted."



The fact that our consultant convinced the City Council to go to a design/build concept was not only a big savings because there was no nickel and diming on change order, we got the job done quicker and with contractors we knew.

By the way, if you are looking for a job that is fun, challenging and rewarding, try a career in the wastewater or water treatment field. It offers opportunities anywhere in the world where people are concerned about the water quality and health and the welfare of their people. And remember, because of treatment plants we can enjoy a fresh cup of drinking water or have an opportunity to go swimming in a nearby clean lake or stream.