

Wastewater collection lagoons get a new life

FALL RIVER PROJECT IS FAVORABLE FOR NATURE WALKS AND WATERFOWL.

A variety of waterfowl have settled in at the project site, formerly wastewater retention ponds.

Story by Jessica Montez and photos by Natasha Kassulke

Nestled between Beaver Dam and Madison, the far-from-sleepy village of Fall River recently converted its wastewater treatment system from settling ponds to a connection with the city of Columbus wastewater system, and restored the abandoned collection ponds into a natural area, welcoming both residents and wildlife alike.

Fall River, not to be confused with Fall River, Mass., was in fact named after the infamous town, when New Englander Alfred A. Brayton decided to call the new territory his home in 1845. The village of Fall River was founded near two small creeks that meet to form the Crawfish River, a small tributary to the larger Rock River flowing through south central Wisconsin. Lazy Lake Dam located on the east end of the village was constructed as a water-power source and a means for continued development of the village.

Over a century later, in 1967, the treatment lagoon system was constructed to pump local wastewater to collection ponds just outside of town. As the village grew, the need for a better system was imminent. Due to its geographical location, flooding became a seasonal struggle. With heavy snow and rainfalls producing disastrous floods in the spring, the village of Fall River began to assess the outdated pump system and quickly realized changes needed to be made.

"It wasn't pumping efficiently during

flooding in the spring and there would be water in the system for days," recalls Fall River Director of Public Works Craig Schultz.

Although the proposal was made in 2007, the wastewater project was not fully completed until recently. For initial funding of the project, the village applied grants they received from the United States Department of Agriculture and the Federal Emergency Management Agency for the 2008 Midwest flooding.

Schultz oversaw most of the wastewater project, which meant contracting professional services for assessment and construction bids, negotiations with the city of Columbus and preparation of a wastewater facility plan for the village. In addition to facilitating the conversion, it was necessary for the village to implement legal cleanup procedures of the abandoned sewer lagoons.

By state law, any plans for wastewater treatment facilities must be reviewed and approved by the Department of Natural Resources. The department regulates wastewater discharges into groundwater and surface water, so Doris Thiele, the DNR's regional wastewater engineer was consulted for the project. Schultz had some concerns with meeting the conversion criteria, such as making sure the metal, nutrient, pollutant and contaminant levels remaining in the lagoons were low enough to enable them to safely remove the sludge for land applications.

"Some of the challenges were getting all the numbers, data and other preliminary information before beginning the project, otherwise the actual conversion went pretty smooth," Schultz recalls.

After a facility plan was prepared, the project was proposed to village members, with mostly positive responses.

"A lot of people recognized the need for an updated system but with some negative feedback at the cost of the project," Schultz says.



Charlie Pritchard lives nearby and enjoys walking his dog, Murphy, a 1-year-old Bouvier des Flandres, around the ponds.



The site is considered a model for wetland mitigation and restoration and offers a place to hike, picnic and watch wildlife.



If the gate is open, visitors can drive near the ponds. When the gate is closed, however, there is a bit of a hike from the road to the site.

Two main projects were proposed and prepared. The first was to regionalize the Fall River sewer system by shutting off the old lift station to the lagoons and turning on the new lift station that would begin pumping to the Columbus collection system. The second was to replace the sewer main laterals located on the lower side of Main Street on the east side of town that were running to the village park on the west side. The lateral project would prevent unwanted infiltration of groundwater and surface water from being pumped to Columbus. Construction of both projects began in 2011 and was completed in 2012 with the help of a mild winter.

After Thiele assessed the lagoons, she saw the potential for yet another conversion — restoring the collection lagoons into a natural area. Thiele consulted Eric Lobner, a DNR wildlife biologist and Fall

River resident, to discuss the possibilities.

“To be honest, this is the first time I was ever aware of it [conversion of a wastewater lagoon into a habitat area for wildlife],” explains Lobner. “Historically, the area where the lagoons are located was a wetland.”

It was such a natural fit that Thiele and Lobner met with Schultz and other members of the village board to further discuss the idea.

Lobner noticed large concentrations of waterfowl, such as Canada geese, sandhill cranes, coots and a variety of ducks using the ponds especially during migration. The birds were attracted to the available vegetation, such as bidens, arrowhead and smartweed. These plants are good wetland indicator species and are highly sought after by waterfowl due to the seeds they produce — a preferred food source for migrating birds.

Of the three collection ponds (or cells), two contained a good mix of vegetation and required minimal work to restore.

Lobner suggested some changes to the third cell that would increase waterfowl usage.

“Previously, the third cell was flat, almost like a bathtub,” he says. “Waterfowl prefer wetland habitat that contains a 50/50 mix of open water and emergent vegetation. As a result, there was a need to make some significant changes to the topography in order to create areas with shallow water that would promote the growth of the plant species that were present in the other two cells. That’s kind of standard in wildlife management. If we could create that condition, it would work out perfect.”

But there is more work ahead, as the site will require regular maintenance. Schultz and Lobner agreed that incorporating hiking trails and an easement would make it more accessible to residents and the general public. Developing an aesthetic, yet strategic theme, to entice certain species of waterfowl would be necessary to prevent high concentrations of birds that could be a nuisance to the community.

Ponds that do not have a mix of emergent vegetation and are primarily open water can have a tendency to attract high concentrations of geese that can become a nuisance within a community if not managed properly. Lobner made suggestions for continued management of the wildlife area, such as revegetation of food sources made available throughout the year to help maintain birds.

“Trying to provide different elements of the entire life cycle on an annual basis, ultimately will be great for these birds during migration as well as during the nesting season,” Lobner says.

Schultz and Lobner are enthusiastic about the prospect of further developing the wildlife area and providing residents with an opportunity to get outside and enjoy and appreciate wildlife almost right in their backyard.

Fall River is a model for wetland mitigation, restoration and preservation.

“It’s taking a site and repurposing it for a positive result and I don’t think we really even started to see the benefits yet,” Lobner says. “Certainly it’s a great opportunity for residents.”

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