Pipelines

FALL 2021

GREENE COUNTY Sanitary Engineering

A Local Treasure Transformed: the Role of GCSED in the Comeback of the Little Miami River

The Little Miami River (LMR) has transferred trillions of gallons of water from the Southwest Ohio region to the Ohio River and ultimately the Gulf of Mexico via the Mississippi since the beginning of recorded time. It has seen this region move from exclusive Native American natural uses to the pioneer days, then the industrial booms and now into a mixed-use form that we see today. Over this time, its regulation and oversight have also evolved from a pristine state before development to a highly-threatened state during the industrial age before the Clean Water Act and institution of the Environmental Protection Agency to today's highly-coveted and protected natural treasure that it is!

"A river is more than an amenity, it is a treasure. It offers a necessity of life that must be rationed among those who have power over it."
- Oliver Wendell Holmes

The LMR Drains approximately 1,757 square miles across Clark, Montgomery, Madison, Greene, Warren, Butler, Clinton, Clermont, Brown, and Highland counties. Each day, the LMR discharges around 800 million gallons per day from this area to the Ohio River. After severe wet weather events, this rate can swell to over tens of billion gallons per day. The LMR's headwaters are located in South Charleston, Clark County, and the discharge is at the Ohio River located in California, a Cincinnati suburb. There is a 705-foot decrease in elevation from these headwaters to the mouth, which moves the flow along.

In the late 1960s, the LMR was targeted as a local treasure and garnered the attention of many area environmental stakeholders, including Glenn Thompson, Arthur Morgan, Corwin Fred, and many others. Later this culminated in the formation of Little Miami Incorporated (now the Little Miami Conservancy), an organization dedicated to the preservation of the LMR. In 1968, The LMR was named as Ohio's first National Wild and Scenic River, and the following year became the state's first Scenic River.

The LMR is host to at least 87 species of fish and many variations of snakes, turtles, birds, frogs, mammals, and invertebrates. It also boasts some of Ohio's most scenic trails and parks adjacent to its banks, including the Little Miami Scenic Trail that runs 78 miles across 5 counties. The LMR is also home to some of the best canoeing and fishing opportunities within this region.

In 1998, the Upper LMR was placed on Ohio's 303(d) list of impaired waterbodies due to nutrient enrichment, low instream dissolved oxygen, excessive sedimentation, and habitat degradation. If allowed to exist across time, these conditions can greatly affect the health of the stream and the inhabitants that call this environment home. As a result of this designation, the Ohio EPA developed a TMDL or Total Maximum Daily Load report. TMDLs carefully study a waterbody, including all its contributions and sources, to determine what needs to be done to get it back into shape.

In 2002, the Upper LMR TMDL was published, causing various agencies and stakeholders to take action. A series of corrective measures were implemented as a result of the TMDL, including better stormwater and septic system management, improvements in agriculture and riparian corridors, increased public education, and **most notably point source (wastewater treatment plant) improvements.**

Nutrient discharges (mainly Phosphorus in this region) from point sources tend to fuel algae growth (and eventual decomposition), strip dissolved oxygen from the water, and starves out oxygen from the fish and bugs especially during lower, summer flows. Conventional wastewater treatment processes do not include nutrient removal unless a receiving stream, like the LMR, warrants.

As a result of the TMDL, the major wastewater treatment plants (WWTPs) in the Upper LMR basin, including GCSED's Beavercreek, Cedarville, and Sugarcreek facilities, were required to install nutrient controls ahead of effluent discharge.

These improvements required significant investments at the WWTPs for engineering, construction, implementation, and annual operations / maintenance demands. In addition to the point source controls, GCSED participated in a number of habitat and restoration projects aimed at reducing the amount of runoff from local waterways. These improvements were and continue to be funded by GCSED's sewer rates. Since the 2002 TMDL report, agencies and stakeholders have continued to support the ongoing efforts towards improving and stabilizing the condition of the LMR. The Ohio EPA published a report in 2014 about the LMR stating,

"These reductions, owing in large part to phosphorus removal at six of the major WWTPs in the watershed, have aided in the full attainment of biological criteria at 53.23 miles of the upper Little Miami River mainstem. Only 19.89 miles were in full attainment in 1998."

The Ohio EPA sampled the Upper LMR again in 2020, but those results have yet to be published.

Needless to say, it is an honor and a privilege to play a role in the continued transformation of the LMR. We are excited to see the results of the 2020 data, and we will continue to work with local stakeholders and the Ohio EPA to improve the LMR and maintain this local treasure for generations to come!

Stay up-to-date with GCSED's projects in your neighborhood! Greene Forward website is launching in October! This website will host project details, status updates, and FAQs on work performed in your neighborhood. Quarterly public meetings will also be offered as the program takes shape. You will also have an option to subscribe for updates so you are always in the know! Stay tuned on the website launch date!

GREENE » FORWARD
Clean, soft, reliable water.

GCSED's Emergency Preparedness

Greene County Sanitary Engineering provides a drinking water and wastewater utility service that must remain fully operational at all times including in emergency situations created by severe weather, major equipment failure, or even by water main breaks and plugged sewers.

The Water and Wastewater facilities and appurtenances are required by regulatory agencies to be designed with redundant equipment and backup power alternatives to maintain a compliant status at all times in order to protect human health and the environment.

In addition to the facilities and equipment, Greene County employs experienced staff that is available around the clock to perform and follow emergency procedures and repairs as needed.

Greene County is required to revise and maintain a Risk and Resiliency Assessment and an Emergency Response Plan for the drinking water system updated periodically to ensure that all contingency plans are in order to maintain compliance in an emergency situation.

The Wastewater systems are regulated by their National Pollutant Discharge Elimination System permit, which regulates the requirement for emergency contingency plans. A good example of our emergency response plans in action was in May 2019 when the tornado passed through the area, causing catastrophic destruction to residential and commercial properties. With wide spread power outages and destruction, the Greene County Sanitary Engineering utilities remained in service and compliant throughout.

Don't Dump Grease—Recycle It for Free!

Cooking at home more often? Deep-frying a turkey for Thanksgiving? Crisping up some bacon for your brunch? All these mean lots of grease is produced. Please remember: **cooking oils and grease from frying pans and deep fryers are common enemies of sewage systems, so please don't dump them down the drain!**

Grease flows easily down your drain when it's hot, but reaching cooler temperatures in your sewer pipes, it turns hard and can adhere to your pipes. This grease buildup can cause stoppages and backups.

To prevent costly plumbing maintenance, dispose of grease and other cooking wastes by tossing them in your garbage.

You can also prevent pollution and promote the reuse of oil by recycling it.

Greene County Environmental Services accepts used cooking oils at no cost to you with the collection of Household Hazardous Waste. Cooking oil is not accepted during public access hours.

If you have any questions, please call **Environmental Services at 937-562-5925.**

Greene County Payment Methods

Payments can be made through the following features:

1. **Online bank "Bill Pay"** — Typically a free service offered by your bank

2. **GCSED ACH Draft** – Free application/ instructions at greenecountyohio.gov/sanitary under available forms

3. **Credit Card or eCheck** — Visit invoicecloud.com/GCSED (fees apply)

4. **Drop Box or In-Person** — 24 hr. night drop box and Cashier's office located at the Administration Building

5. **Pay by check** — Send with coupon via USPS

Ways to pay your bill

Online: greenecountyohio.gov/sanitary

By Phone: 855-925-1665 (24 Hr. Service)

By Mail:
Greene County Sanitary
Engineering Department
P.O. Box 340
Xenia, OH 45385-0340

Remember to update your GCSED online banking vendor address. Some banks send your payment via USPS rather than ACH transaction.

Greene County Sanitary Engineering

Administration Building
937-562-7450
Monday-Friday, 7:30 am to 4:30 pm
667 Dayton-Xenia Road
Xenia, OH 45385

After-Hours Emergencies
937-562-7450

Billing/Bill Payments
937-562-7457

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