

Pipelines

SUMMER 2023



Northwest Water Treatment Plant Expansion Update

Since 2020, GCSED has been working on an update and expansion to the Northwest Regional Water Treatment Plant that will add reverse osmosis (RO) membrane treatment for softening and increase the treatment plant capacity to 12 million gallons per day. The project began with the development of a concept design in the fall of 2020 which was followed by the hiring of a design build firm to further the design and initiate construction. A groundbreaking ceremony was held on July 7th, 2021 and construction completion is anticipated by the fall of 2024. The project is now entering month 11 of construction and is on-target for meeting both budget and schedule goals. The total cost of the project is approximately \$46 million (financed through a 30 year low interest loan).

The expanded facility will include a 20,000 square foot building that will increase plant capacity from 9.5 to 12 MGD and lay the footprint for increased capacity up to 16 MGD in the future. The new building will also house the membrane and reverse osmosis system which will reduce water hardness from 27 grains to 9 grains. Softening will be accomplished using nanofiltration (NF) membranes. The NF membranes physically capture and remove small molecules and polyvalent ions including calcium and

magnesium ion that are the main components of hardness. No salt will be added to the water, as the process does not utilize the ion exchange method (used by many home water softening systems) to reduce the hardness of the water. Softened water requires less soap for the same cleaning effort and also extends the lifetime of plumbing by reducing or eliminating scale build-up in pipes and fittings.

In preparation for the introduction of softened water into the distribution system, GCSED has begun implementing a unidirectional flushing program. Unidirectional flushing (UDF) is a standard industry maintenance practice used to scour, clean, and improve the carrying capacity of a water distribution system. Unidirectional refers to the fact that during the cleaning, water is only flowing in one direction. When performing unidirectional flushing, GCSED's crew will open and close pre-determined valves to isolate a specific section of the water main. They then open a specific fire hydrant to draw water through and flush the now-isolated section of the water main. The speed of the water flowing through the isolated section of the main is greatly increased, producing a scouring effect. The scouring effect removes any potential sediment buildup and cleans the water main. Customers in the immediate vicinity of where flushing is taking place may experience a temporary drop in water

pressure. If this does occur, please be aware that GCSED staff is diligently working to minimize any inconvenience caused to you by our flushing process. Flushing typically occurs Monday through Friday between the hours of 8 am and 3 pm. Maps of the areas that will be flushed each week are posted to the GCSED Facebook page.

The Northwest Regional Water Treatment Plant serves over 20,000 customers in the Beavercreek Community, and extends into Xenia Township, parts of Kettering, Sugarcreek, Bath Township, Cedarville, Shawnee Lake and Wilberforce communities. It obtains water from wells located in three (3) well fields, which all draw water from the Little Miami River Buried Valley Aquifer. The aquifer contains sand and gravel deposits which are saturated with water, with the deposits providing natural filtration of the ground water. Water produced from the aquifer is high quality that is filtered to remove iron and magnesium particles followed by the addition of fluoride and chlorine.

GCSED regularly tests samples for bacteria, nitrate, copper, lead, and disinfection by-products to ensure the community is being provided with the highest quality safe drinking water. For additional information please see the Consumer Confidence Reports available on our website. www.greencountyohio.gov/317/Sanitary-Engineering



Taking Action to Safeguard Our Water

Source water, the origin of our drinking water, is vital for human survival and environmental well-being. It is crucial that we take proactive measures to protect this precious resource. Source water protection entails safeguarding the quality and quantity of water at its source, such as rivers, lakes, and underground aquifers. By protecting water sources from contamination and depletion, we ensure a sustainable supply of clean drinking water for both present and future generations. Source water can become contaminated through various means, leading to potential health and environmental risks. Contamination can occur through industrial discharge, agricultural runoff carrying pesticides and fertilizers, improper waste disposal, sewage leaks, and even natural

processes like erosion or animal waste. Human activities such as mining, fracking, and chemical spills can also introduce pollutants into water sources. Protecting source water from contamination requires proactive measures to control pollution sources, promote responsible waste management, and implement effective water treatment processes. The timeline for aquifer contamination can be influenced by various factors, including the nature of the contaminants and the hydrogeological characteristics of the aquifer. In one year, localized contamination may begin to affect shallow portions of the aquifer, primarily near the contamination source. After five years, the contamination can potentially

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spread further into the aquifer, reaching greater depths and expanding the affected area. By the ten-year mark, if contamination sources persist, there is a higher risk of widespread contamination throughout the aquifer, impacting larger volumes of water and posing significant challenges for remediation. It is important to address contamination sources promptly to prevent long-term damage to aquifers and ensure a sustainable water supply. What can you do to help protect our source water?

1. Reducing Chemical Usage: Minimize the use of pesticides, herbicides, and fertilizers in your gardens and lawns. These chemicals can seep into the soil and find their way into water sources. Opt for natural alternatives or follow recommended application rates.
2. Conservation Practices: Conserve water by fixing leaks, using efficient appliances, and employing water-saving techniques such as collecting rainwater for gardening purposes. Reducing overall water consumption helps maintain source water levels and reduces the strain on natural systems.
3. Proper Waste Disposal: Dispose of household

chemicals, pharmaceuticals, and other hazardous materials responsibly. Proper recycling keeps harmful substances out of landfills, preventing potential contamination of soil and groundwater. Utilize designated collection points or recycling facilities such as Greene County Environmental Services. Environmental Services has special event dates where they will accept certain household hazardous waste from residents for FREE disposal. See sidebar for dates and times of HHW events.

Source water protection necessitates collective action, and every individual can contribute to preserving these vital resources. By following responsible waste disposal practices, minimizing chemical usage, conserving water, and supporting recycling initiatives, we can make a tangible impact on protecting our source waters.

Embracing these actions will not only ensure a sustainable supply of clean drinking water but also promotes the well-being of our environment and future generations.

Greene County Environmental Services

Household Hazardous Waste

Accepted :

- Acids & Cleaners
- Aerosol Spray Cans
- Antifreeze
- < 5 Gallons of Fuel - Gasoline & Kerosene
- Herbicides & Pesticides
- Putty & Adhesives
- Stains, Varnishes & Paint Thinner
- Oil Based Paints

Not Accepted :

- Motor Oil
- Electronics
- Small Household Appliances
- Computers & Accessories
- Televisions
- Pharmaceuticals
- Ammunition
- Explosives



Household Hazardous Waste Drop off Dates/Times:

Saturday, July 15th - 9:00 am to 12:00 pm
 Tuesday, July 25th - 12:30 pm to 2:30 pm
 Saturday, August 12th - 9:00 am to 12:00 pm
 Tuesday, August 22nd - 12:30 pm to 2:30 pm
 Saturday, September 10th - 9:00 am to 12:00 pm
 Tuesday, September 26th - 12:30 pm to 2:30 pm

GCSED Spotlight

In the bustling operations of a water and sewer utility, our billing group plays a crucial role that often goes unnoticed. With a dedicated team of friendly staff members, they ensure that the financial aspects of delivering water and sewer services are handled smoothly and efficiently.

The primary responsibility of our billing group is to manage customer accounts. This involves setting up new accounts, updating existing customer information, and addressing any changes in billing preferences. They are the first point of contact for customers regarding billing inquiries, ensuring accurate and timely responses to address concerns and resolve issues.

To generate accurate bills, our billing group relies on the data provided by our new Advanced Metering Infrastructure program, which wirelessly communicates water usage directly to the group. They then process this information to calculate usage and generate invoices based on the consumption. By meticulously analyzing usage patterns, they can help customers identify potential leaks or anomalies that may impact their bills.

Once the meter readings are received, our billing group applies the appropriate rates and fees to calculate the charges for water and sewer services. They generate and distribute invoices to customers, either through traditional mail or electronic means, depending on the customer's preference. This process requires attention to detail and accuracy to ensure that customers receive accurate bills



and can make timely payments.

Our billing group serves as an interface between the water and sewer utility and its customers. Friendly staff members are well-trained to address a wide range of customer inquiries, including billing discrepancies, account adjustments, and general questions about water and sewer services. They strive to provide exceptional customer service, demonstrating patience, empathy, and a willingness to assist customers in finding solutions to their concerns.

They play a vital role in managing the financial aspects of delivering essential services to customers. With our friendly and dedicated staff, they provide outstanding customer service, manage customer accounts, generating accurate usage and addressing inquiries with professionalism and efficiency.

The contributions of our billing group are instrumental in maintaining the smooth operation of the utility and fostering positive relationships with customers, ultimately ensuring the provision of reliable water and sewer services.

Ways to pay your bill

Online: greencountyohio.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

greencountyohio.gov

