

ANNUAL REPORT 2022



INSIDE THIS REPORT

Facility and Asset
Information4

Capital Improvement
Projects12

Customer Information ..18

2022 Operations20

Financial Data.....22

And More!

Prepared By:

Michael Eroshevich
Director of Sanitary Engineering
Jefferson County
Water and Sewer District
596 State Route 43
P.O. Box 2579
Wintersville, OH 43953-0579
www.jcwatersewer.com



Todd J. Roset, 50, of Dillonvale, OH, passed away unexpectedly Sunday, October 9, 2022. Todd was born Jan. 12, 1972, in Martins Ferry, OH, son of the late Andy and Diane (Klapka) Roset.

Todd was a hard-working and dedicated member of the Jefferson County Water and Sewer District. His contributions to the JCWSD were invaluable and greatly appreciated. In addition, Todd was the current Fire Chief and 36-year member of the Smithfield Vol. Fire Department. He was a huge asset to the department, providing exceptional service to Smithfield and many other surrounding towns.

We would like to take this opportunity to express our gratitude to Todd for his hard work and commitment to his community. He will be deeply missed by all who knew him.

In Memoriam

Todd Roset

JEFFERSON COUNTY WATER AND SEWER DISTRICT'S ANNUAL REPORT

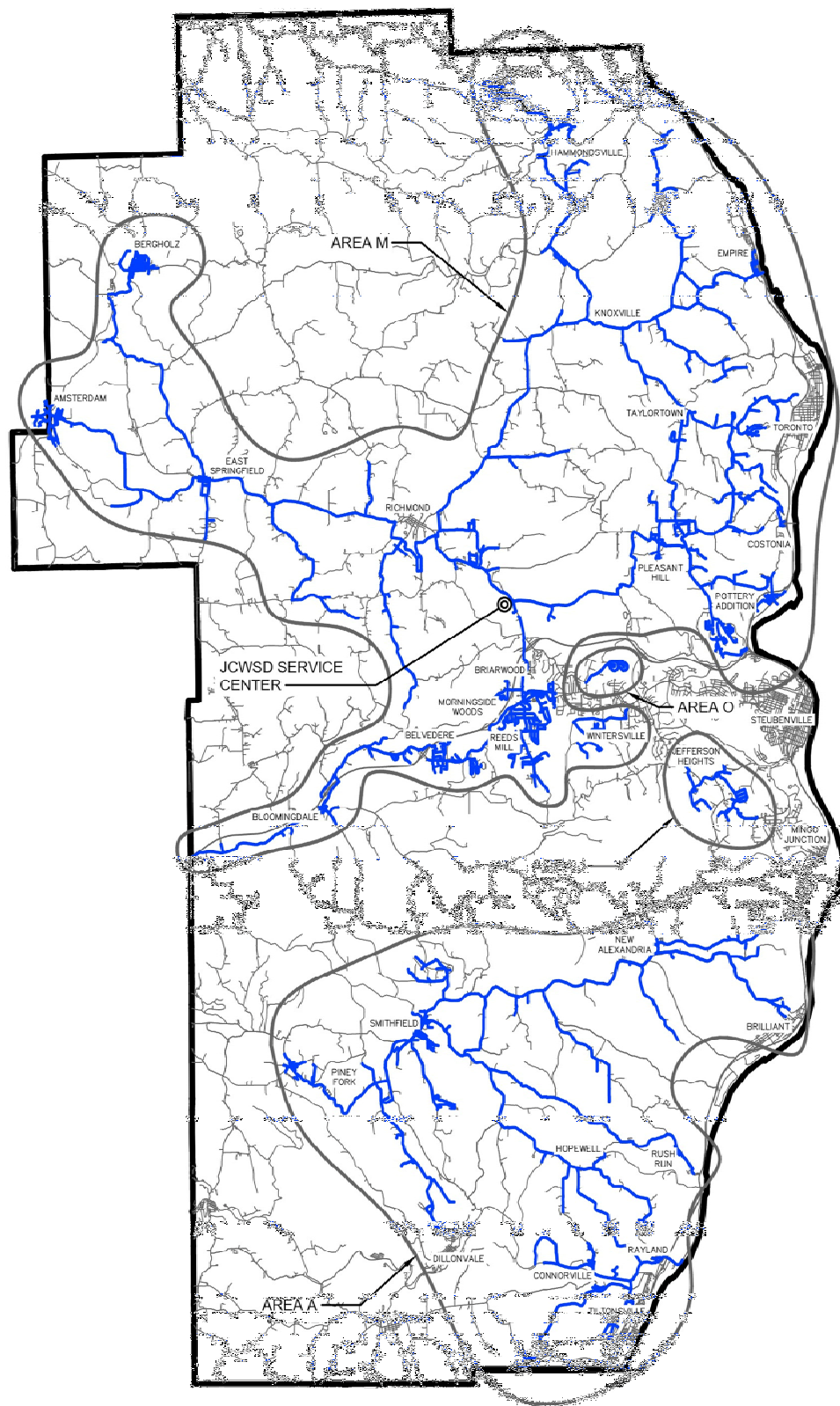
| | |
|-----------|--|
| 2 | In Memoriam |
| 3 | Table of Contents |
| 4 | FACILITY AND ASSET INFORMATION |
| 4 | Water Distribution System |
| 5 | Water Storage Facilities |
| 6 | Water Booster Stations |
| 7 | Water Disinfection |
| 8 | Wastewater Collection and Conveyance System |
| 9 | Wastewater Treatment Plants |
| 10 | SCADA and Telemetry |
| 11 | GIS Asset Digitalization and Drone Inspections |
| 12 | CAPITAL IMPROVEMENT PROJECTS |
| 12 | Norton Hill Water Storage Tank Rehabilitation Project |
| 13 | Reeds Mill Sewage Pump Station Rehabilitation Project |
| 14 | Ridgeland Sewage Treatment Plant Replacement Project |
| 15 | Smithfield Wastewater Treatment Plant and Pump Stations Rehabilitation Project |
| 16 | Smithfield Water Storage Tank Replacement Project |
| 17 | Amsterdam Area Sewer System and Wastewater Treatment Plant Project |
| 18 | CUSTOMER INFORMATION |
| 18 | Water and Sewer Rates Billing Guide |
| 19 | Everbridge Emergency Alert System |
| 20 | 2022 OPERATIONS |
| 20 | 2022 Operation and Maintenance Highlights |
| 21 | Rules and Regulations |
| 22 | FINANCIAL DATA |
| 22 | Water System Financial Summary |
| 23 | Sewer System Financial Summary |

JEFFERSON COUNTY WATER SYSTEM

The Jefferson County Water and Sewer District (JCWSD) is a purchased water system. It has connections to five unique suppliers within Jefferson County. The JCWSD's water distribution system extends to the far corners of Jefferson county. The JCWSD maintains approximately 300 miles of waterlines with 8,000 service connections. These water distribution system are broken down into four unique service areas, based on location and water supplier.

- Area M
 - Supplier: Toronto
 - Connections: 5,986
- Area A
 - Supplier: Brilliant and Tiltonsville
 - Connections: 1,575
- Area J
 - Supplier: Mingo Junction
 - Connections: 289
- Area O
 - Supplier: Toronto
 - Connections: 150

Jefferson County Water and Sewer District Water Distribution System



JCWSD Water System Service Area Map

Jefferson County Water and Sewer District Water Storage Facilities



Norton Hill Water Tank and the JCWSD Service Center (2023).

Features and Components

Water Storage Facilities require constant upkeep and preventative maintenance in order to ensure constant potable water delivery and fire flow capabilities. The useful life of these facilities is between 30 and 40 years. The JCWSD must design and plan rehabilitations to the water tanks in order to extend their useful life. In order to keep up with the repair/replacement schedule a tank is rehabilitated every two or three years. Any slip in this schedule can create liabilities and public health concern within the system. Some of the critical components of water storage facilities include:

- Internal linings to protect metal tank walls from rusting.
- External coatings to deflect sunlight and minimize internal temperature changes, and to protect the tank from the elements.
- Mixing systems to ensure minimal water age and reduced disinfection byproducts.
- Booster stations to pump water into and out of the tanks.
- SCADA and telemetry systems in order to remotely monitor and control elevations within the water tank.
- Cathodic protection systems on metal tanks.
- Site fencing, access, lighting, and security.

JEFFERSON COUNTY WATER SYSTEM

The Jefferson County Water and Sewer District maintains eighteen total water storage facilities. Twelve are located within the M System, five within the A System, and one within the Area J System. These water storage facilities consist of metal ground storage tanks, prestressed concrete ground storage tanks, elevated storage metal tanks, and an inground concrete water reservoir. Together, these eighteen structures has hold over four and a half million gallons of potable water. These tanks are crucial to the successful water delivery to residents of Jefferson County. These tanks are especially important to the County's fire fighting abilities due to the fire flow and pressure they provide. The JCWSD also tests and maintains over 1,400 fire hydrants throughout the distribution system. These hydrants and water tanks are a key asset in the County's fire fighting abilities.

JEFFERSON COUNTY WATER SYSTEM

The Jefferson County Water and Sewer District's Service Area covers approximately 20+ square miles of Jefferson County. The JCWSD's network of water booster stations keeps water flowing across the county. These stations vary in size and pumping capacity, ranging from stations that pump 30,000 gallons a day, to stations that pump over two million gallons a day. The JCWSD pumps just under one billion gallons of water annually through the distribution system—to water tanks, bulk purchasers, neighboring municipalities, and residential taps. Both preventative maintenance and routine maintenance are conducted at these stations in order to ensure peak performance of the pumps. Each station is equipped with SCADA and Telemetry Equipment, which allow the booster stations to communicate with the water tanks they fill.

Jefferson County Water and Sewer District Booster Stations



Belvedere Booster Station Internals (2023).

Features and Components

Water Booster Stations require routine visits and preventative maintenance in order to ensure constant potable water delivery and fire flow capabilities. The useful life of the pumps and other equipment inside these stations is between 15 and 25 years. The JCWSD must plan for station rehabilitations and pump replacements. Some of the critical components of booster stations include:

- Pumps, motors, valves, chemical dosing equipment.
- SCADA and telemetry systems in order to communicate with water tanks, and automatically fill them after the tanks are drawn down.
- Building envelope, access, and security

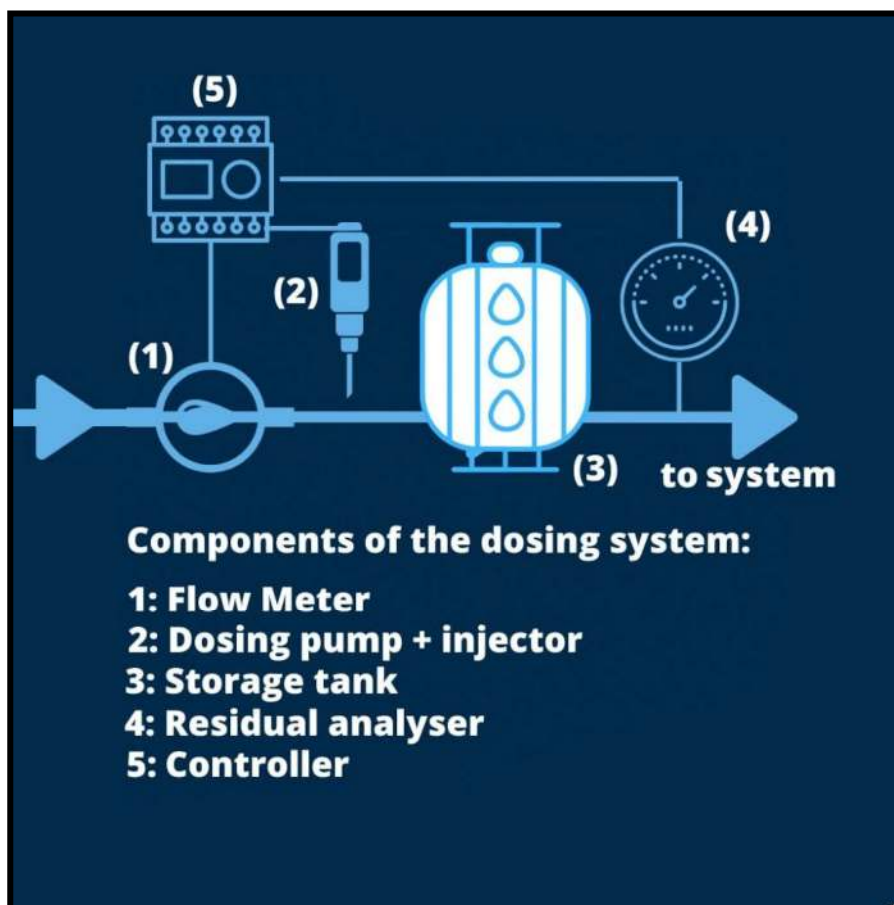
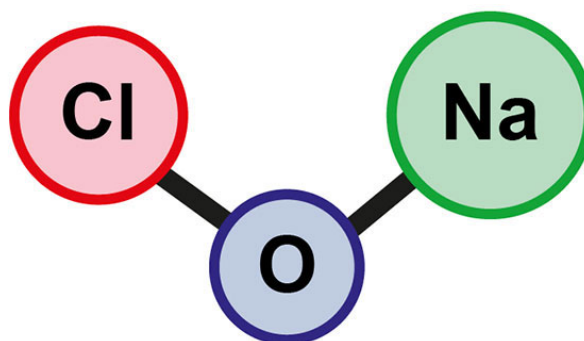
Electrical

Water Booster Stations pump motors require between 20¢ and 30¢ of electricity per 1,000 gallons of water pumped. Most booster stations are equipped with emergency generators in case of a power outage. Routine servicing of these generators and pump motors is vital to the continued success of the station.

JEFFERSON COUNTY WATER SYSTEM

Although the Jefferson County Water and Sewer District does not own any treatment plants, chlorine dosing is still required in some parts of the system in order to ensure an adequate chlorine residual concentration in the distribution system. Chlorine is used in drinking water to kill parasites, bacteria, and viruses. Chlorine exists as a highly toxic gas in its natural state, and intense chlorine detection equipment and warning signals are required where chlorine gas canisters are stored. For this reason, the JCWSD has switched to dosing chlorine in a liquid form, as Sodium Hypochlorite (NaClO). This dosing occurs at a few tanks and water booster stations throughout the distribution system. The JCWSD receives chlorinated water from its suppliers, and routinely takes samples for chlorine level analysis, to ensure the proper amount of additional chlorine dosing.

Jefferson County Water and Sewer District Water Disinfection

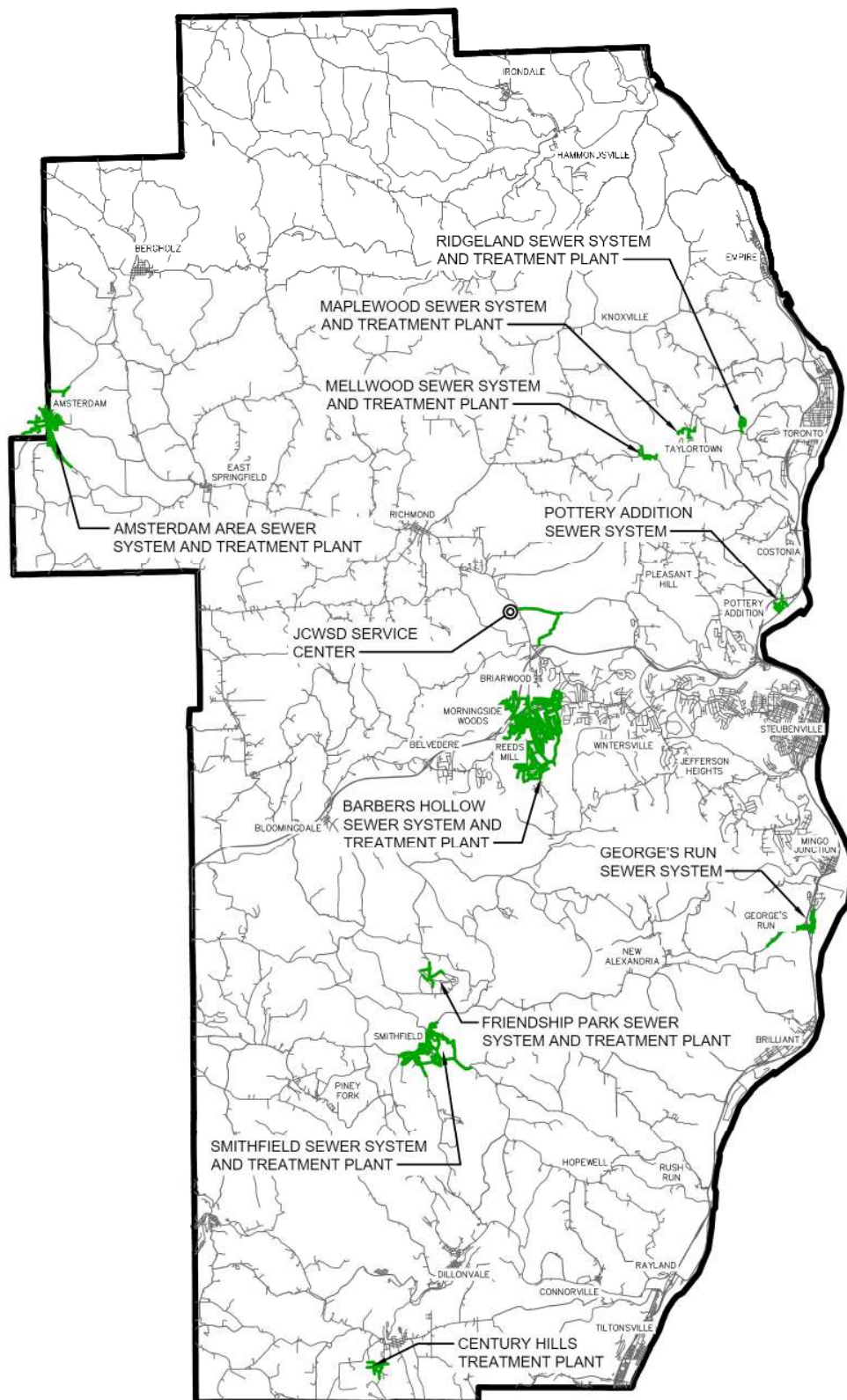


Sodium Hypochlorite Dosing Schematic.

JEFFERSON COUNTY SEWER SYSTEM

After wastewater is flushed out from the residents' home or business, it enters the Jefferson County Water and Sewer District's vast network of sanitary sewers. Wastewater flows from one manhole to another via 8" PVC gravity sewers. Eventually, it will end up at one of the many sewage lift stations within the county. These lift stations pump sewage through pressure pipes (known as force mains) to one of the seven JCWSD owned and operated wastewater treatment plants, or to treatment facilities owned and operated by neighboring municipalities. Homes and businesses that are too low to connect to a sanitary sewer system via gravity can connect via to the system via personal grinder pumps. The proper function of these stations is crucial to the conveyance of sewage away from populated areas and into wastewater treatment plants for treatment.

Jefferson County Water and Sewer District Wastewater Collection and Conveyance System



JCWSD Sewer System Service Area Map

JEFFERSON COUNTY SEWER SYSTEM

There are many different types of wastewater treatment options. Each option has various pros and cons to their operation, and the selection of the type and size of treatment plant depends on characteristics of the wastewater and the amount of incoming flows. The JCWSD currently utilizes the following wastewater treatment process types:

- Extended Aeration
- Aerobic Lagoons
- UV/Chlorine Disinfection
- Oxidation Ditches
- RAS Systems
- Grit and Debris Screening
- Settling Tanks
- Final Disinfection

Each wastewater treatment plant requires an Operator of Record, with a proper Wastewater Class License per the WWTP Size. These plants require daily visits, maintenance, and equipment checks in order to maintain allowable effluent levels.

Jefferson County Water and Sewer District Wastewater Treatment Plants

Extended Aeration

Extended Aeration is a very popular form of wastewater treatment. The extended aeration process treats wastewater by utilizing aeration to oxidize the material found in wastewater into inert gases, water, and sludge. Continued aeration of these concentrated solids, biological organisms grow into colonies inside the extended aeration treatment tanks. These organism “eat” the concentrated material, and break it down into clean water and sludge. The sludge is pumped out of the tanks, dried, and sent to landfills for disposal. The cleaned water will then go through final disinfection, before being discharged back into the environment. Additional tanks are also utilized within the treatment train to perform other treatment functions, such as trash screening, flow equalization, and solids settling.

Aerobic Lagoons

Aerobic Lagoons work in similar fashion to Extended Aeration, except the majority of treatment processes all occur within the a large earthen lagoon, instead of individual tanks.

UV Disinfection

Ultraviolet (UV) Light Disinfection is the newest top-of-the-line water treatment technology. Standard water treatment typically involves the addition of a chemical compound to the wastewater near the end of the treatment process, to reduce microbial contamination before the water is discharged into the environment. Before UV, the two most common compounds used near the end of the treatment cycle were Chlorine and Sodium Hypochlorite. There are a variety of operating costs associated with those chemicals, which are greatly decreased when using UV Disinfection instead. UV Disinfection offers cheaper O&M Costs and significantly less regulatory compliance and leak detection costs. As a result, UV Disinfection is much safer for the operator to use when compared to Chlorine and Sodium Hypochlorite, therefore making this incredibly technology a perfect fit in new wastewater facility construction.

JEFFERSON COUNTY WATER SYSTEM

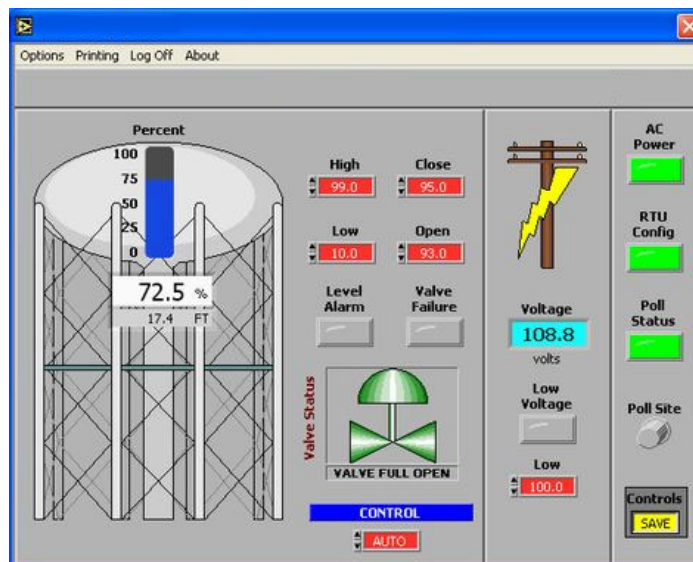
SCADA, which stands for Supervisory Control and Data Acquisition, is a complex system of computers, monitoring devices, and control panels that help all the various JCWSD infrastructure assets to communicate with each other. Telemetry is the process of recording and transmitting the readings of an instrument. These two systems work together to record current conditions of instruments and equipment and relate them back to corresponding equipment, as well as the JCWSD Service Center. SCADA and Telemetry provide the county with the ability to run their system automatically, ensuring consistently full water tanks and automatic water and sewage pumping when needed. These systems also allow for remote monitoring of the equipment and tank levels, which decreases the need for site visits and reduces the workload for JCWSD Operators.

Jefferson County Water and Sewer District SCADA and Telemetry

Example SCADA and Telemetry Setup - J Tank

The J Tank is a 100,000 Gallon Elevated Water Storage Tank in the Jefferson Heights Area. This tank is automatically filled via communications and readings from the SCADA and Telemetry System. Below is a breakdown of that process:

- A Barksdale Pressure Transducer, located at the base of the tank, records a water pressure reading from the water in the tank bowl, in pounds per square inch. This pressure is then converted to feet of water within the tank. One pound per square inch is equivalent to 2.3 vertical feet of water column.
- The Barksdale Pressure Transducer is located at the base of the water tank, at ground level. If the pressure reads 35 PSI, that means there is a 80ft vertical water column above the Barksdale.
- The bottom of the J Tank's Bowl is 70ft above ground level. A 35 PSI (80ft) vertical water column reading means that the J Tank has 10ft of water in its bowl (80ft—70ft).
- When the tank level is below 10ft in the bowl, the telemetry system sends a signal to the pump control panels at the Mingo Booster Station. The pumps at the booster station pump water into the J System, which then fills the J Tank. Once the Barksdale Pressure Transducer records a reading of 10+ft of water in the tank, the Telemetry system sends a signal to the Mingo Booster Station to stop pumping.



Example SCADA Display of a Water Tank

JEFFERSON COUNTY WATER SYSTEM

In conjunction with RCAP, the District uses GIS Equipment to map the water and sewer system. This special piece of equipment, specifically a Trimble GPS Unit, is a top-of-the-line technology capable of mapping assets down to the nearest centimeter of accuracy. This priceless resource allows the county to quickly isolate and shut off flow to leaking water pipes by following the pipe routing on the GIS map and locating the nearest shut off valves. It also allows the District to help protect public safety by understanding the exact location of the thousands of feet of buried assets within the county, which is vital to any emergency response program and the protection from security threats. Digitalizing the locations of all assets will ensure this information is all in one place and protected for the future.

Jefferson County Water and Sewer District GIS Asset Digitalization and Drone Inspections

The District utilizes a quadcopter drone equipped with both a regular camera and a thermal imaging camera. The regular camera, capable of taking high-definition photos and videos, is incredibly helpful for the inspection of elevated water tanks and the structural integrity of the tank's support structure. This task would previously have taken multiple days to be completed and requires personnel to climb the structure for inspection. The drone allows the inspection process to be completed in a day, along with an incredible increase in personnel safety by removing the need for personnel to be on the physical structure. The thermal imaging camera is used to detect water leaks quickly and effectively. The difference in temperature between the surrounding environment and the water escaping from a leak can be quickly spotted in the thermal image the drone produces. The previous method of finding a leak would require personnel to slowly walk on top of a buried water line and look for visual clues of a leak. As some transmission lines traverse hundreds of miles, walking these lines to detect leaks can take days or weeks, and require lots of personnel. As the drone is capable recording miles and miles of thermal imaging in one single flight, it is another priceless resource to the District in its mission to provide safe and reliable drinking water to the residents of Jefferson County.



The JCWSD Regularly Inspects all of their Water Storage Facilities, and pays special attention to the equipment mounted on top of the various elevated tanks throughout the county. Equipment mounted on top of these tanks includes the JCWSD's SCADA and Telemetry System Antennas, as well as cellular and radio antennas for local communication companies and service providers. Two photos from the 2022 inspection flights of the very top of two elevated water storage towers, with heights of 100ft and 130ft, are shown above (2022).

Jefferson County Water and Sewer District
Norton Hill Water Storage Tank Rehabilitation Project



Norton Hill Water Tank (post 2022 rehab.)

Norton Hill Tank Data

- Total Height: 47'-6"
- Container Height: 38'-0"
- Tank Diameter: 65'-0"
- Capacity: 1,000,000 Gallons
- Year Built: 1960
- Constructed By: DN Tanks
- Last Insp. and Refurb: 2021/2022
- Interior Sq. Ft.: Approx. 16,233
- Exterior Sq. Ft.: Approx. 12,914

JEFFERSON COUNTY WATER SYSTEM

The JCWSD had a comprehensive internal and external inspection done on the Norton Hill Water Tank on Route 43 next to the District Service Center. This one million gallon prestressed concrete ground storage tank is a major component of the District's water system. Its capacity is three times that of the next largest water tank in the system. The inspection determined that the tank was in need of structural repairs and painting to maintain its operational status for many years to come. A mixing system was also required to reduce water age and decrease disinfection byproducts. Design work on this tank was completed in the summer of 2021, and the project went to bid in the fall of 2021. DN Tanks, the company who originally built the tank in 1960, won the rehabilitation contract. Construction occurred through the summer and fall of 2022, and the tank was put back into service in October of 2022. The rehabilitation of this tank has extended its useful life by approximately 30 years.

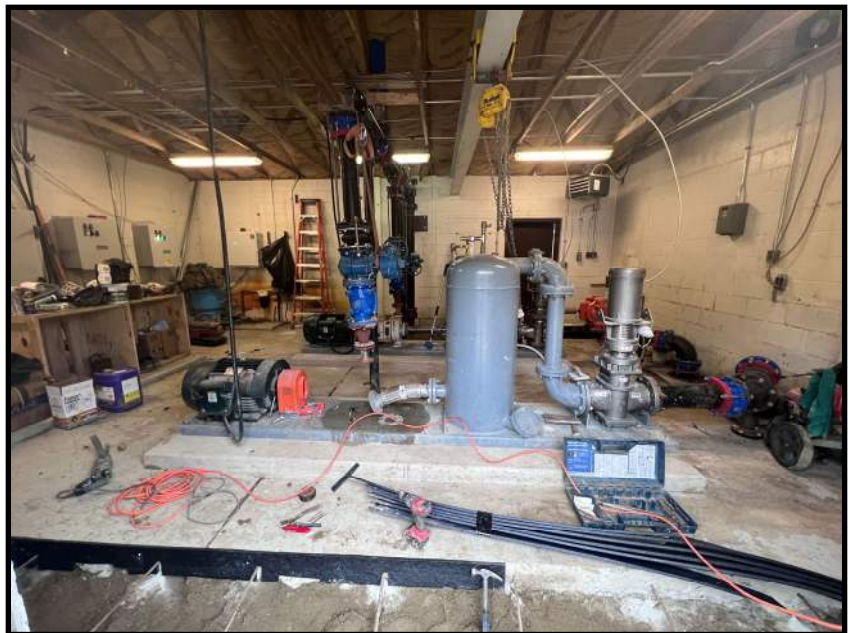
JEFFERSON COUNTY SEWER SYSTEM

The Reeds Mill Pump Station Design Work wrapped up in early 2020, and the project went to bid in the fall of 2020. Construction started in the summer of 2022. This project includes major equipment and electrical upgrades to the existing station, with construction of a new building to house the station's various complex electrical systems. Moving these systems out of the pump station itself and into its own space will help with safety regulations. The absence of wastewater and corrosion elements in the new electrical building will greatly extend the working life of the electrical equipment and reduce maintenance costs. As this is active pump station, the District focused on construction sequencing during the design phase to ensure that the station is operational during construction. The station serves the residents of the Reeds Mill, Belvedere, and Valley View areas in Wayne Township, and the Crestview area in Cross Creek Township. Once complete, this station will continue to convey wastewater to the Jefferson County Wastewater Treatment Plants for many years to come. The project is set to wrap up by the end of summer 2023.

Jefferson County Water and Sewer District Reeds Mill Sewage Pump Station Rehabilitation Project



The new prefabricated electrical building was lifted into place via crane onto the site (2022)



Most sewage pump stations like the Reeds Mill Pump Station consist of two pumps, which can be operated independently of each other. This design allows one pump to be taken out of service for repair/replacement while the other operates normally. In this photo, the pump train in the foreground is being worked on, while the pump train in the background is fully functioning (2022).

JEFFERSON COUNTY SEWER SYSTEM

The design work of the new 20,000 GPD Ridgeland STP was finalized in 2020, and the project went to bid in fall 2021. The new plant will include 10 tanks, including an eq. basin, clarifier, sludge holding tanks, multiple aeration tanks, and a UV Disinfection System. It was crucial that the existing STP stays online to treat sewage and discharge clean water while the new plant is being constructed. Construction on this project started in the summer of 2022. UV Light Disinfection is the newest water treatment technology, utilized to reduce the microbial contamination before the water is discharged into the environment. The new plant has a much larger footprint, and is able to treat a much higher volume of water. As the Ridgeland collection system ages, there are increased opportunities for Infiltration/Inflow (also known as I&I) of ground water into the sewer pipes. The treatment plant needs to be able to adjust and handle these I&I flows, as to not hydraulically overload the plant treatment functions, especially during the rainy season.

Jefferson County Water and Sewer District Ridgeland Sewage Treatment Plant Replacement Project



Ridgeland Sewage Treatment Plant (2023—Under Construction)

Red Dashed Outline: Existing Ridgeland STP

Green Dashed Outline: Newly Constructed Ridgeland STP

Ridgeland Sewage Treatment Plant Data

- Average Daily Hydraulic Flow: 20,000 gallons per day
- Peak Flow: 69.4 gallons per min
- BOD₅ Influent Concentration: 200 mg/l (max.)
- TSS Influent Concentration: 220 mg/l (max.)
- Ammonia Nitrogen Concentration: 35 mg/l
- BOD₅ Effluent Concentration: 10 mg/l (max.)
- SS Effluent Concentration: 12 mg/l (max.)
- Ammonia Nitrogen Concentration: 2.0 mg/l
- Dissolved Oxygen Concentration: 5.0 mg/l (min.)

JEFFERSON COUNTY SEWER SYSTEM

With the JCWSD concluding negotiations in early 2018 with the Village of Smithfield, Ohio EPA, and USDA, the District assumed official operation of the village sewer system, including the sewage treatment plant. The District is now under OEPA Findings and Orders to bring the system into compliance with environmental regulations after years of neglect. The Design engineering work for improvements to the existing STP and nine sewage pumping stations was completed in 2021, and the project was awarded to SET, Inc. In June of 2022.

Improvements to the wastewater treatment plant, including the addition of floating aerators to the lagoon and a UV disinfection tank, have been completed. Work is ongoing at the pump station sites throughout the village. The project is set to be fully complete by the end of summer 2023. The cost for this effort will be ~ \$4.2 million, with approximately 40% paid for through grants.

The JCWSD would like to thank the Village of Smithfield and its residents for their cooperation during this project.

Jefferson County Water and Sewer District Smithfield Wastewater Treatment Plant and Pump Station Rehabilitation Project



The dual Lagoon setup at the Smithfield WWTP, post rehabilitation in the summer of 2023. The upgraded WWTP includes floating aerators, baffling, dredged lagoons, and a UV disinfection tank (2023).



One of the nine pump station sites that has been rehabilitated as part of this project. The pump station construction included the installation of two brand new pumps, new pump control panels, valve vaults, and effluent force mains (2023).

Jefferson County Water and Sewer District
Smithfield Water Storage Tank Replacement Project



The new Smithfield Water Tank, painted with the official Jefferson County color scheme, towering over the Village of Smithfield (2022).



Demolition of the old Smithfield Water Tank took place in December of 2019 (2019).

**JEFFERSON COUNTY
WATER SYSTEM**

The Smithfield Water Tank serves the Village of Smithfield, Piney Fork, and Dillonvale Ridge. Construction of this new 200,000 gallon above ground spheroid tank was completed in the fall of 2020. The contractor for the project was McGuire Iron from Sioux Falls, South Dakota. The project work went very smoothly, despite the fact that most of the work occurred during the pandemic year of 2020. The new tank is located on a property procured by the County adjacent to the County's public works storage facility on Route 152. The tank has been sized to meet the demands of not only current customers, but also future service area expansions. The budget for construction was \$1.60 million dollars, and the project was completed under budget! This new tank provides the District with a crucial water delivery asset, and ensures that the residents of the Village of Smithfield receive clean and healthy water and their taps.

JEFFERSON COUNTY SEWER SYSTEM

Construction work on the new sewer system for the Village of Amsterdam in Springfield Township (Jefferson County) and Loudon Township (Carroll County) started in early 2020 after the bidding process was executed in late 2019. Approvals were obtained from the US Army Corps of Engineers, and the US Department of Agriculture. Low Bid Contractors for this projects include Workman's Industrial for the Sewage Treatment Plant (STP), Rudzik Excavating for all the sewers and pump stations in Jefferson County, and Alex Paris for the sewers in Carroll County. The project included:

- 200+ Manholes
- 8+ Miles of Sewers
- Two Sewage Lift Stations
- One 50,000 Gallon per Day Wastewater Treatment Plant
- Over 2,500,000 ft³ of Material Excavated

The plant is located on property purchased by the County, adjacent to the Village's Rogers Park. The cost of the project is in excess of 14 million dollars, with approximately 50% of this amount paid by various agencies.

Jefferson County Water and Sewer District Amsterdam Area Sewer System and Wastewater Treatment Plant Project



Amsterdam Area Sewage Treatment Plant (2022).

Despite all the challenges produced by the COVID-19 Pandemic in 2020, this complex construction continued along successfully. The Village of Amsterdam was flooded with construction workers and equipment, and at times there were nine different crews working at various places throughout the Village. This project could not have been completed during this difficult year without the support of the Jefferson County Commissioners, and the cooperation of the Mayor and residents of the Village of Amsterdam. The project was completed in 2021, and residential connections to the sewer system started in the fall of 2022.

The District is currently working to get all the residents of the village connected to the system. Special grant funding, administered through GLCAP, was made available for low income households to cover tap in related costs. The Jefferson County Commissioner's also made the decision to use local funds to cover the tap-in fees for all the residents of Amsterdam.

More information on the Amsterdam Project, including tap in procedures, can be found online at www.jcwatersewer.com/amsterdam-sewers

Jefferson County Water and Sewer District
Water and Sewer Rates Billing Guide

2022 Basic Water Bill = \$33.79 (2,000 gallons)

2022 Basic Sewer Bill = \$44.75 (2,000 gallons)

2022 Basic Water & Sewer = \$78.54 (2,000 gallons)

*2022 Overage: \$10.00 for Water per 1,000 gallons

*2022 Overage: \$7.50 for Sewer per 1,000 gallons

| 2022 Water Rates | | | |
|------------------|-----------|-------------|---------|
| Meter Size | Min. Bill | Allowance | Overage |
| 3/4" | \$33.79 | 2,000 Gal. | \$10.00 |
| 1" | \$56.77 | 5,000 Gal. | \$10.00 |
| 2" | \$142.59 | 12,000 Gal. | \$10.00 |
| 4" | \$287.22 | 24,000 Gal. | \$10.00 |
| 6" | \$577.13 | 48,000 Gal. | \$10.00 |

| 2022 Sewer Rates | | | |
|------------------|-----------|-------------|---------|
| Meter Size | Min. Bill | Allowance | Overage |
| 3/4" | \$44.75 | 2,000 Gal. | \$7.50 |
| 1" | \$59.75 | 4,500 Gal. | \$7.50 |
| 2" | \$110.75 | 9,600 Gal. | \$7.50 |
| 4" | \$476.75 | 46,200 Gal. | \$7.50 |
| 6" | \$707.75 | 69,300 Gal. | \$7.50 |
| Georges Run | \$21.75 | 9,000 Gal. | \$7.50 |
| Century Hills | \$41.75 | 9,000 Gal. | \$7.50 |

**JEFFERSON COUNTY
ACCOUNT MANAGEMENT**

Bills are mailed out the last working day of every month.

Payments are due by the 20th of every month.

A 10% late charge is added to the current bill if the account is not paid in FULL by the 20th of the month.

The JCWSD is not responsible for the mail delivery. If a bill is not received by the first of the month, you MUST contact the JCWSD office to obtain the amount which is owed.

Payments can be made:

- By mail (checks only)
- Inside the JCWSD Office (cash, check, credit, debit)
- In the drop box outside of the JCWSD Office (checks only)

For better service when making payments:

- Do not send cash.
- Sign your check.
- Include your account number on your check.
- Do not staple, paper clip or use tape.
- Enclose payment stub when mailing payment.

JEFFERSON COUNTY EMERGENCY ALERTS

The Everbridge Emergency Alert system is a state-of-the-art notification system. When we issue a notification about a potential safety hazard or concern, you will receive a message on the voice or text communication methods that you have registered. Alerts will only be sent to those in the effected area.

If requested for the notification, you can confirm that you have received the message and you will not be contacted by any subsequent methods regarding that particular notification. If you do not confirm, the system will continue to attempt to reach you at all of the contact paths that you have registered. You may register as few (min. one) or as many contact methods as you would like.

Once your Everbridge Account is created, you will be able to adjust your notification options and contact methods at any time.

Additional information and sign up instructions can be found on the JCWSD's website.



The **JCWSD** wants to make sure you know about water and sewer emergencies and incidents as they happen. By opting into the **JCWSD Emergency Alert Notification System** you'll be informed before, during, and after incidents that could impact your water or sewer service.

The **JCWSD Emergency Alert Notification System**, powered by Everbridge, will allow us to send you messages about situations as they happen across multiple devices, including your home phone, mobile device, email, and more – all based on your contact options and preferences. After signing up, we will be able to reach you in the event of an emergency (such as water outages and boil orders). This system will allow us to send pertinent emergency notifications to only those who are effected by the emergency.

HOW TO REGISTER:

Go To: www.jcwatersewer.com/emergency-alert/

Review the additional information and instructions

Click on the "Sign Up" button and add your information into the Emergency Alert Notification System



Jefferson County Water and Sewer District 2022 Operation and Maintenance Highlights

Water

During 2022, the District prioritized the delivery of clean water to each of their household and commercial connections. The District continued to inspect and paint fire hydrants in their four service areas, Area M, Area A, Area O, and Area J.

The District conducted over 2,800 daily, weekly, monthly, and quarterly test to ensure water quality. 23 water taps were installed for new customers. The District also conducted drone inspections of all the JCWSD's water storage structures.

The District repaired 91 water lines in 2022! That's one break every four days. The repairs are broken down by system as follows:

Area M: 54 Area A: 33 Area O: 4 Area J: 0

Sewer

In 2022, the Jefferson County Water and Sewer District continued to operate and maintain its seven wastewater treatment plants and planned for improvements at two of those treatment plants. The District also conducted over 1,000 laboratory tests of wastewater for EPA compliance and to ensure proper treatment. 78 new sewer taps were installed.

The District continued to perform routine infiltration and inflow investigative work on parts of its sewer system and performed important preventive maintenance on its sewage treatment plants, pump stations, and manholes on an as needed basis. The District's seven Wastewater Treatment Plants processed and treated over 360,000,000 gallons of sewage



The JCWSD Service Center, off of State Route 43, in Wintersville (2023).

JEFFERSON COUNTY OPERATIONS

The Water and Sewer District executes a comprehensive fire hydrant maintenance program to protect these valuable assets of the District and maximize each hydrant's ability to furnish water during times of need, especially during emergencies. This program ensures that hydrants are inspected twice a year, spring and fall.

As part of this program, all hydrants are flushed once per year, typically in the spring and fall. You will receive an Everbridge notification when hydrants are flushed in your area. Please see the previous page for more information on how to sign up for alerts.

The District is also proceeding with a program to paint all hydrants to make sure they are clearly visible from the roadway in times of need. Fully functioning hydrants are crucial to the safety of our customer and their property. This program is designed to make sure every fire hydrant is functioning to the fullest extent possible.

JEFFERSON COUNTY OPERATIONS

Are you a developer interested in building in Jefferson County, and want to know how to install water and sewer services? Look no further than the JCWSD Rule's and Regulations. The document includes developer related sections, such as:

- Water and Sewer Extension Plan Submissions
- Water Capacity Determination
- Pipe Size Formulas
- Allowable Materials
- Placement of Water Mains
- Water Meters
- Backflow Responsibilities
- Fire Service & Sprinkler Systems
- Testing and Disinfection

The document also includes printable copies of the JCWSD standard construction details with-in Appendix B (Water Details) and Appendix C (Sewer Details).

Jefferson County Water and Sewer District Rules and Regulations

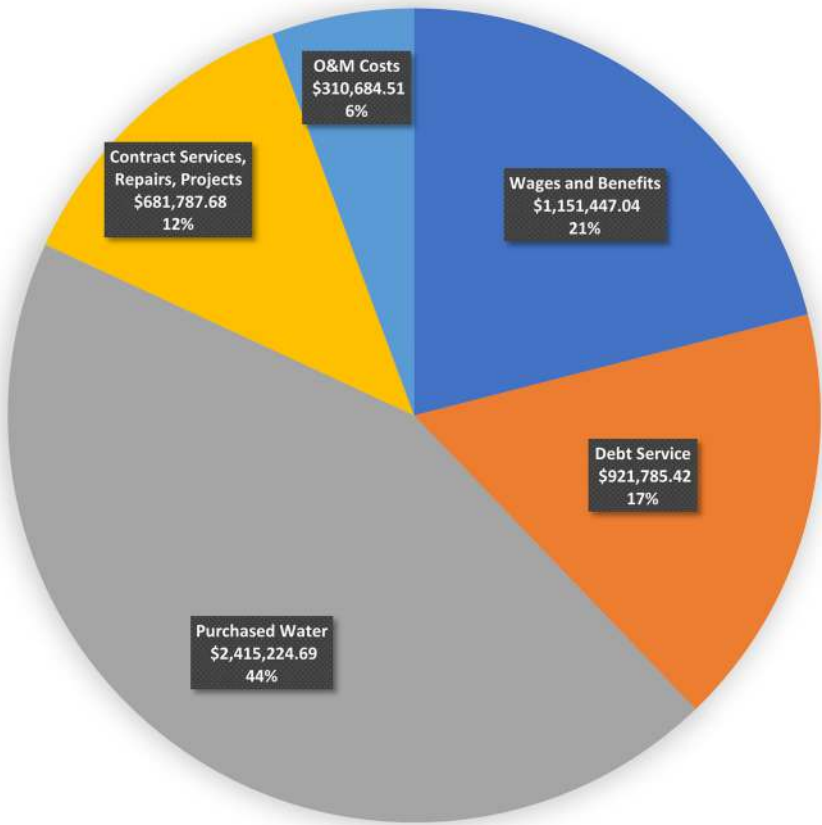
Did you know that the Jefferson County Water and Sewer District has a comprehensive set of Rules and Regulations for its water and sewer systems? These Rules and Regulations include industry standard details for the Water and Sewer division and include 807 sections with three Appendices equaling 140 pages. Why? Because it is the goal of the Water and Sewer District to protect you, the customer, and make certain that water and sewer rates stay as low as possible!

These regulations and standards govern all administrative and construction related activities of the District's water and sewer systems and set forth consistent standards to be followed by any party or parties doing business with the Water and Sewer District.

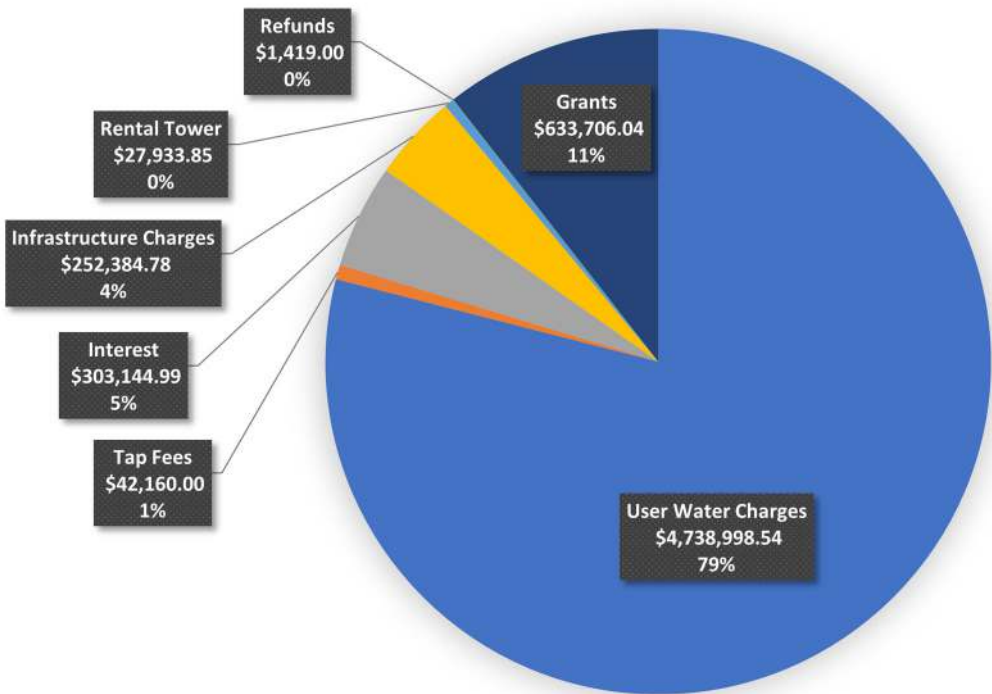
The standards were adopted by the Board of County Commissioners in 2017 and are available for viewing on the District's website (www.jcwatersewer.com/rules-and-regulations). This was a major administrative achievement for the District and puts it in the position of being at the forefront of water and sewer utilities in the State of Ohio.



2022 WATER SYSTEM EXPENSES



2022 WATER SYSTEM REVENUE

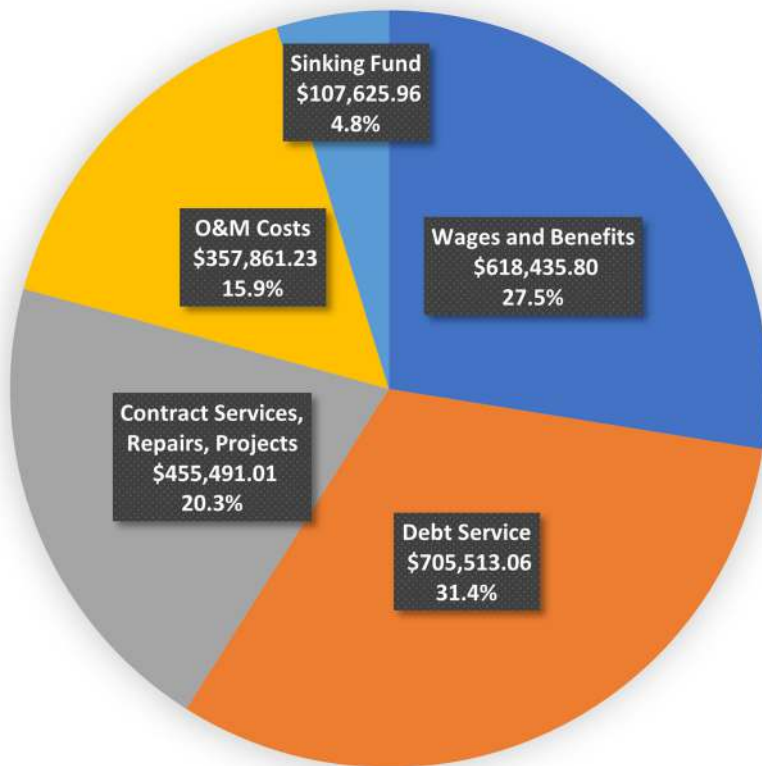


JEFFERSON COUNTY WATER SYSTEM

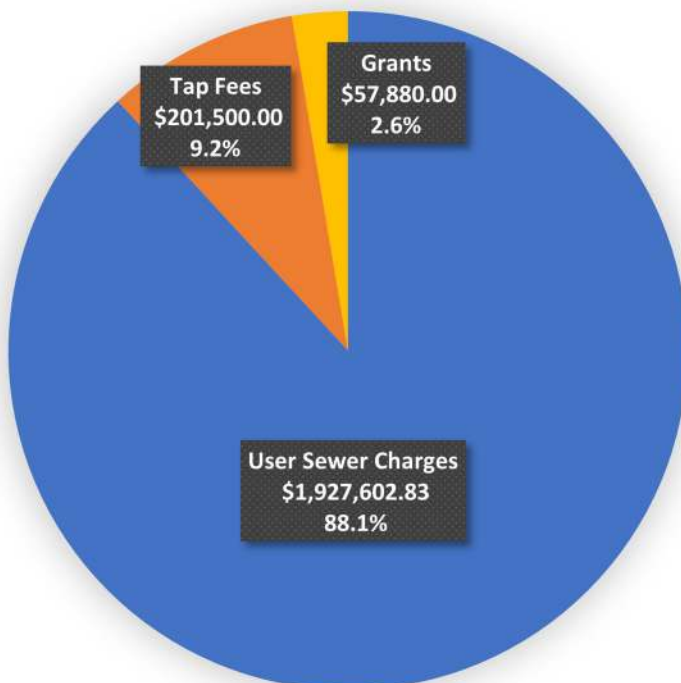
The District purchases its water from the City of Toronto, the Village of Mingo Junction, the Village of Brilliant, the City of Steubenville, and the Village of Tiltonsville and distributes that water to the customers throughout the County. As can be seen in the chart above, over 44% of the 2022 costs to operate and maintain its water system can be found in the costs to purchase water from these reliable sources. Only 21% of the costs to operate the system, including the purchase of water, are related to operating personnel wages and benefits.

The JCWSD realizes 83% of its water revenue from water usage charges and the infrastructure charge. The District also realizes modest amounts of income from account interest and cellular companies renting space on water towers for their transmitting and receiving devices.

2022 SEWER SYSTEM EXPENSES



2022 SEWER SYSTEM REVENUE



JEFFERSON COUNTY SEWER SYSTEM

The District operates and extensive sewer system. Only 28% of the costs to operate the system, including the treatment of sewage, are related to operating personnel wages and benefits.

The District also provided for depreciation in administering the sewer system so that funds can be accumulated to handle unanticipated repairs and aging equipment replacements.

Debt Service costs in 2022 for the JCWSD equaled about one-third of the total money spent in operating and administering the sewer system. These debt service payments cover active loans that are being used to repay previous wastewater related projects.

The JCWSD realizes 88% of its sewer revenue from sewer usage charges. The District also realizes income from tap fees from new customers. In 2022, the JCWSD realized an abnormally high amount of income from tap fees, due to the County's decision to pay all the tap fees for the new JCWSD Sewer Customers connecting to the newly constructed sewer system within the Village of Amsterdam.



Located at 596 State Route 43
in Wintersville, OH 43953-0579.

Proudly serving
8,026 water and 3,675 sewer
customers throughout Jefferson County.

Please visit our website at:

www.jcwatersewer.com

Prepared By:

Michael Eroshevich
Director of Sanitary Engineering
Jefferson County
Water and Sewer District
596 State Route 43
P.O. Box 2579
Wintersville, OH 43953-0579