

THE CITY OF
COLUMBUS

ANDREW J. GINTHER, MAYOR

DEPARTMENT OF
PUBLIC UTILITIES



2022

**Annual
Report**

THE CITY OF COLUMBUS

ANDREW J. GINTHER, MAYOR

DEPARTMENT OF PUBLIC UTILITIES



Andrew J. Ginther,
Mayor



Kristen Atha,
Director



2022 COLUMBUS CITY
COUNCIL

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- Rob Priestas, P.E., Administrator, Division of Sewerage and Drainage
- John Newsome, P.E., Administrator, Division of Water

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- Lourdes Barroso de Padilla
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- Rob Dorans, Public Utilities Committee Chair



FROM THE DIRECTOR

Each year brings significant change to our region, our department, and our customers. Federal and state regulators constantly modify their requirements, and – particularly in central Ohio – growth creates additional challenges. Adjusting to this landscape, with an eye toward both maintaining our high levels of service and keeping them affordable, requires constant attention from everyone in our department.

When I arrived at the Department of Public Utilities in May of 2022, a number of key initiatives were already in motion, such as our Enhanced Meter Project, or EMP, which will replace all residential and commercial water meters in our entire distribution system (almost 300,000) and all Division of Power electricity meters (approximately 17,000). Not only will these new meters provide additional accuracy, once the entire system is in place, there will be additional tools for our customers to help them manage water usage and save money. The EMP pilot phase launched in '22, with installations to homes and businesses scheduled to begin in early '23. Another crucial project is the Lower Olentangy Tunnel, or LOT, which will increase sanitary sewer capacity to a large area north and northwest of downtown. In conjunction with Blueprint Columbus, LOT is addressing consent order requirements to update our sanitary system and mitigate sewer overflows in the older neighborhoods of our city.

Other long-term plans have been accelerated by external developments, such as our fourth drinking water treatment plant. Due to responsible forecasting by an earlier generation of Division of Water staff, preliminary planning – including purchase of land last decade along O'Shaughnessy Reservoir in Delaware County – meant a new treatment plant originally envisioned to begin construction several years down the road could be accelerated to accommodate the intense commercial and residential growth predicted for central Ohio.

The Division of Power's Smart Lighting project to upgrade all city streetlights to energy-saving light-emitting diode (LED) is progressing, and Sustainable Columbus is trailblazing both on its own and in conjunction with our divisions – a first in our region was a partnership between our Division of Water, American Electric Power, and Sustainable Columbus which brought solar powered backup pumps to one of our drinking water booster stations, meaning safe water will continue flowing to residents even in the event of an extended power outage.

These are just some of the many good things you'll read about in this report. Our team is also excited about our department-wide Operational Review and Strategic Plan, which began at the end of 2022 and will wrap up at the end of 2023. This plan will provide the roadmap for internal alignment and help to create teams and systems that will improve our efficiency and culture. At a time when it is challenging to hire across all of the sectors that we reach in a tough labor market, we are seeking to be an employer of choice for people who are passionate about the future of water, the environment and sustainability in our region. Because what we do is critically important to the region, we are always looking for ways to improve how we communicate, and this plan, based on the input of internal and external stakeholders, is a great start in our quest to that continued improvement.

Overall, change for the sake of change is not the idea – change when necessary with an eye toward working together to create an organization that sets the standard for best-in-class utilities, because the element that won't change is our community's reliance on the clean water, electricity, streetlights, sanitary sewer and stormwater services – and leadership – we provide.

(Left to Right) Director Kristen Atha, Councilmember Rob Dorans, DOSD Administrator Rob Priestas, DOSD section manager Fang Cheng



PROTECTING THE ENVIRONMENT

SUSTAINABLE COLUMBUS

Sustainable Columbus is the city's sustainability initiative that is housed within the Department of Public Utilities. The goals are to impart equity and environmental justice through bold climate action, guided by the Columbus Climate Action Plan, which commits our community to carbon neutrality by 2050 and a 45% reduction in emissions by 2030.

This past year saw continued growth with increased staffing and new investment in innovative programming that supports not only the Climate Action Plan, but key mayoral priorities such as workforce development and affordable housing. Initiatives the newly expanded staff were involved in during 2022 included a partnership with IMPACT Community Action called Empowered, a clean energy and construction jobs training program, and other programs like supporting residential energy efficiency and efficient appliance replacement. A solar co-op partnership with non-profit Solar United Neighbors promoted the benefits of solar power for electricity customers in the greater Columbus area.



REGULATORY COMPLIANCE

The department, our customers, and the community at large continue to benefit from improvements to our environmental programs made through the ongoing implementation of the Environmental Management System (EMS). As a fundamental component of the department's overall sustainability efforts, the program facilitates compliance with environmental regulatory obligations, such as the Safe Drinking Water Act, Clean Air Act, and permits with Ohio Environmental Protection Agency (OEPA), as well as achievement of environmental objectives and protection of natural resources. Maintaining

high-level environmental performance requires the awareness and active participation of all department staff and our business partners.

The effectiveness of the department's efforts to continually improve environmental performance is assessed annually through internal auditing of compliance with our environmental regulatory obligations, as well as auditing our self-declared conformance of the EMS to the rigorous International Organization for Standardization (ISO) 14001:2015 EMS standard.

The Division of Sewerage and Drainage (DOSD) oversees non-point source stormwater pollution by administering a Municipal Separate Storm Sewer System National Pollutant Discharge Elimination System permit. In 2022, the following was done to protect local waterways: 4,695 inspections of active construction sites, 410 inspections of post-construction best management practices, field screens of 671 storm sewer outfalls, and investigations of 239 reported spills or suspected illicit discharges to the storm sewer system. Inspections were made at 80 businesses for compliance with the OEPA Multi-Sector General Permit for stormwater discharge. Fines totaling \$37,000 were issued for notices of violation.

The Industrial Wastewater Pretreatment group in DOSD monitors discharges from permitted industries into the Columbus sewer system to ensure compliance with clean water goals. Through a partnership with Columbus Public Health, food sanitarians performed 3,066 restaurant inspections on behalf of the pretreatment program. Pretreatment staff investigated five grease incidents, met with five food service establishments as part of the Fats, Oils and Grease Best Management Program, and distributed 475 door hangers in neighborhoods. There were no cost recoveries or notices of violation issued related to the Fats, Oils, and Grease Best Management Program in 2022.



PUBLIC EDUCATION, OUTREACH AND PARTNERSHIPS

The GreenSpot program was created in 2008 as a way for people to learn about living and working in a more environmentally-friendly way. Growth in 2022 saw membership rise to 24,809 overall, including 23,378 households, 1,285 businesses, and 146 community groups. Three businesses graduated from the GreenSpot Sustainable Business Course. Annual GreenSpotLight award winners were Hikma Pharmaceuticals, King Business Interiors, and MAD Scientist Associates. More than 1,500 residents participated in the GreenSpot Backyard Conservation program to learn about stormwater, rain barrels, and native plants.

During 2022, GreenSpot teamed up with partners to coordinate an urban heat island map, contributed to 80 lawn mower exchange rebates for electric mowers, and had a booth or presented at 36 events and engagements.

Watershed Management, a section of the Division of Water (DOW), continues to protect water supplies and enhance water conservation education in the greater Columbus area.

The annual fall litter cleanup at Hoover Reservoir was attended by over 100 volunteers including scouting troops, recreational clubs and community members. Watershed staff was active in educating over 300 students about water quality and watershed management through classroom presentations and tours. Campers participating in a Columbus summer camp experience learned about water quality monitoring and invasive plants, as well as water-related career exploration. Additional tours were provided to conservation and emergency response professionals interested in Columbus' source water protection efforts. Guided tours of the green infrastructure installations and vegetated shoreline buffers located around the reservoirs showcased the beauty and importance of native plants and trees.

The Watershed staff also maintains 26 recycling containers at the Griggs, Hoover and O'Shaughnessy reservoir parks. These containers serve the recycling needs of the thousands of visitors who enjoy the park areas year-round. Specialized receptacles are also available for anglers to properly dispose of tangled fishing line, keeping this hazard away from the waterways where it could endanger wildlife. Through its agreement with the City of Columbus, the Franklin Soil and Water Conservation District (FSWCD)

implements several stormwater education programs for Columbus residents. More than 6,400 Columbus residents were reached in the "Get Grassy!" lawn care education campaign with 98 residents committing to stormwater-friendly practices. Through the GreenSpot Backyards program 1,575 residents participated in an educational workshop with 694 rebates provided for rain barrels or native plants to participants. Additionally, 3,249 Columbus students learned about stormwater pollution, water quality, soils, and soil erosion. Twelve Columbus residents participated in the Master Rain Gardener program, which is an in-depth five-class series about rain gardens. These students learned about rain garden planning, design, stormwater management, plant selection, and maintenance. They also designed their own rain gardens and received feedback from instructors. Three Columbus residents received technical assistance and education regarding rain gardens at their homes. Over 3,723 businesses received targeted education regarding how to properly dispose of paints and concrete materials to prevent storm water pollution.

In 2022, Franklin Soil and Water Conservation District began collaborating with Sustainable Columbus and IMPACT Community Action. Staff at FSWCD began providing stormwater education to community advocates and students in the Empowered program.

The PUP (Pick Up Poop) program encourages pet owners to clean up after their pets, which helps protect stormwater quality. In 2022, the PUP program was present at various community events, capping off the year at WAGfest. The program gained 397 new pledges in 2022, bringing the new PUP pledge total to 7,411 pet owners.



CAPITAL REINVESTMENT

DIVISION OF POWER

The Division of Power (DOP) continued its commitment to Mayor Ginther's sustainability goals by working with Sustainable Columbus on the Climate Action Plan strategies. For the year, over 32% of the division's energy came from renewable resources, including a 20% green component through power purchase contracts and the Eco-Smart Choice opt-in program, which offset 102 million kilowatt-hours of energy with zero-emission renewable energy credits. The department signed purchase power contracts for two onsite, utility-scale solar installations to bring renewable generation capacity to the Columbus region.

The division grew its municipal power customer base by over 720 new accounts. Some of the significant customer projects included Gravity 2, Scioto Peninsula, Liberty Park, and Warner Junction. The division continued to install advanced meter infrastructure to prepare for the department's Enhanced Meter Project, launching in 2023.

The Power Payment Relief program, funded through grant dollars, continued to assist city electric customers having difficulty paying their bills. In 2022, 221 families were supported with \$67,595 in funds. To date, 1,227 families have been assisted with \$332,995 in funds.

Progress on the Smart Lighting project continued. The pilot phase construction to convert 2,550 lights in the Linden area was approximately 95% complete. The design plan for Hilltop's 3,794 street light conversion project was 100% complete, and construction was expected to start in spring 2023. Design for Phase 2, located on the south side, began. City standards require all new streetlights to be light-emitting diode (LED) and, as existing lights fail, they are replaced with LED. The Smart Lighting project will convert all existing high-pressure sodium (HPS) lights to LED as the project progresses. Approximately 6,100 streetlights were now converted to LED.

Construction at the O'Shaughnessy Hydro Turbine Facility Improvements project continued in 2022 and is now 40% complete. Work will continue in 2023, with all new switchgear and controls being installed, the

turbines reassembled, and substantial completion before the end of the year. (See photos).

A Reliability Improvements project was completed in 2022, with three miles of new circuit and 100 new poles installed, along with new switches, reclosers, and fault indicators. The switches and reclosers will provide the additional sectionalizing capability to reduce the number of customers without power during an outage. Fault indicators will provide visual cues to crews to help pinpoint the cause of the outage to minimize the duration.



DIVISION OF SEWERAGE AND DRAINAGE

Sewer System Engineering

Lower Olentangy Tunnel

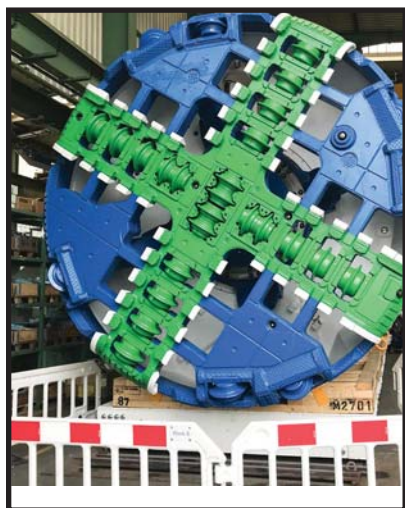
As part of the consent order requirements with the state in the Integrated Plan and the 2015 Wet Weather Management Plan update, a 17,000 linear foot, 12-foot diameter sanitary relief tunnel is being constructed. Known as LOT, this is from the upstream end of the previously constructed OARS (Olentangy-Scioto-



Interceptor-Sewer Augmentation Relief Sewer) tunnel at Vine Street to Tuttle Park, north of Lane Avenue. From there it will relieve flow from three existing sewers: the Franklin Main, the Olentangy Main, and the OSIS (Olentangy-Scioto

Interceptor Sewer). A 90-inch diameter micro-tunnel will also be constructed for the OSIS near Second Avenue as well as a 36-inch sewer for a Designed Sewer Relief on Third Avenue.

The construction made substantial advancement in 2022. The contractor, Granite, continued work at the Gowdy Field and Vine Street shaft sites as well as beginning work at several other new locations. In the fall of 2022 the last pieces of the tunnel boring machine were delivered from the Herrenknecht factory in Schwanaau, Germany (see photos). Site preparation for the future shafts began at the Tuttle Park



and the 2nd Avenue sites. The contractor also completed several underground protection zones, or safe havens, along the alignment and a river-crossing causeway (see photo next page).

Blueprint North Linden 1 Green Infrastructure/Storm Sewer Improvements

Three Blueprint Columbus projects were completed in the North Linden 1 project area in 2022. These projects constructed bio-retention basins within the right-of-way and on vacant city-owned parcels. These basins will capture pollutant-laden storm water runoff and provide treatment prior to discharge to the receiving stream. Storm sewer and inlet improvements constructed in conjunction with these basins will improve drainage and reduce street flooding. Forty five rain gardens and bump-out bio-retention basins, and 11 large regional bio-retention basins, were built. Following contractor maintenance and inspections in 2023, the Division of Sewerage and Drainage will assume maintenance and inspection responsibilities.



Blueprint Columbus is the alternative to portions of the Wet Weather Management Plan, submitted to the OEPA in 2005, to address sewer overflows and the 2002 and 2004 consent orders with the state. The final Blueprint Columbus integrated plan was approved by the agency in 2015. The plan utilizes greener alternatives and residential infrastructure improvements to solve wet weather problems, instead of building more costly sewer tunnels or “gray solutions.” The four main strategies, or pillars, of the plan include: residential home sewer lateral lining, roof water redirection, sump pumps, and green infrastructure.

For more information please call 614-645-1253 or visit columbus.gov/Blueprint.



CAPITAL REINVESTMENT

DIVISION OF SEWERAGE AND DRAINAGE CONT.

Second Barrel Interconnector Augmentation

This project constructed 2,300 feet of 104" sanitary sewer west of the Influent Junction Chamber at Southerly Wastewater Treatment Plant. This project increased the conveyance capacity of the Interconnector Sewer between the Jackson Pike and Southerly plants, and is part of the solution to mitigate the Designed Sanitary Relief 95 off Sullivant Avenue.

Lehnert Farms/Bolton Field Stormwater System

The Lehnert Farms/Bolton Field Stormwater System Improvements project included over 1,600 feet of new 36" and 42" storm sewer installed along Norton and Georgesville roads to function as secondary overflow for the existing public stormwater basin and expanded the basin's detention volume to improve flood control for this area. The basin was also converted to a constructed wetland with shallow water emergent plants to improve water quality. Construction was completed in 2022.

Barnett/Deshler HSTS Elimination

The Barnett/Deshler HSTS Elimination Project extended approximately 2,250 feet of new 8-inch sanitary sewer main to serve 15-plus existing homes in a developed area currently served by home sewage treatment systems (HSTS). The sewers extend along portions of Barnett Road, E. Deshler Avenue and Bexvie Avenue. This project is being completed as part of the HSTS Elimination Program in order to remove the potential of a pollution hazard to the surface runoff and ground water. Construction was substantially completed in 2022.



Lot River causeway

Wastewater Treatment Plants

Jackson Pike Wastewater Treatment Plant

Screening improvements will upgrade the current mechanical screen dewatering and disposal systems and increase process reliability during wet weather events. This project was in detailed design and expected to start construction in 2024.

The Digester Improvements Project will upgrade a 30-year-old facility. It will provide an economical means to reduce the plant's sludge volume and produce methane fuel for boilers and electrical generation. It went into preliminary design with an expected start in 2024.

The Cogeneration Facility Project installs generators and other equipment to provide beneficial reuse of digester biogas, which will produce about half of the total electricity used at the plant and large amounts of boiler heat for the treatment process and buildings. Construction began at the end of 2021, continued in 2022, and is expected to go on line in 2024.

Southerly Wastewater Treatment Plant

The Digestion Process Expansion began construction in 2022. The project also includes rehabilitation of the six existing digesters. Construction is scheduled to be completed in 2024. (See photos next page.)

The Digestion Process Expansion Phase II project went into preliminary design. This improvement will rehabilitate the acid phase digesters, add operational efficiencies to the mixing pumps, and will investigate process intensification. Construction is anticipated to begin in 2024.

The Main Drain Alternative Pipe Route improvement will provide gate control to control flow entering the plant and will provide a means to restrict flow back-ups into the plant's main drain system. This project is key to safeguarding the plant's processes, structures, and buildings from flood damage. It went into design and was expected to start construction at the end of 2023.

DIVISION OF SEWERAGE AND DRAINAGE CONT.

Other Improvements

The Facilities and Equipment Upgrades at the Whittier Storm Tanks achieved substantial completion. The project updated the 1930's facility equipment and instrumentation, which had not seen significant updates since 1986.

The Real-Time Control project to provide sewer collection system visualization with flow meters integrated into SCADA, which began in 2018, created a working dashboard that displays the live sewer flow conditions. Predictive tools were developed to use when there is likelihood that the Chemically Enhanced Primary Treatment process will be needed and provide advanced warning to staff.



The Small Capital Project Program was utilized in 2022 to upgrade the Southerly service building boiler train, remove underground storage tanks and replace building heat boilers. The raw sewage pump cone valve actuators and the digester piping were replaced at Jackson Pike.

The HVAC and Air Purification Program was funded to address the needs of the Jackson Pike and Southerly plants, the Sewer Maintenance Operations Center (SMOC), and Compost facilities. Five HVAC contracts

were under construction in 2022, totaling 11 units upgraded since the program began.

The DOSD Electrical Upgrades Program was developed to evaluate infrastructure at division facilities, prioritize needs, and provide preliminary design services. This project will identify electrical equipment that is no longer supported with commercially available parts and will improve the overall arrangement of the systems.

The Facilities Equipment Maintenance Program consists of nine department wide maintenance service contracts that utilize operating funds and maintain, test, repair and/ or replace support facility and building components, process and ancillary equipment, and infrastructure. These maintenance contracts are highly effective because funding for critical repairs is established, resulting in timely response to emergencies and scheduled maintenance.

The DOSD Stormwater/Sanitary Pump Stations Evaluation and Upgrade Programs identify, and prioritize the needs of the stormwater/sanitary pump stations to ensure that they remain an integral part of the collection system. The result of these programs will be a list of maintenance and construction projects that will be implemented in the near future to renovate these pump stations and ensure uninterrupted operation.

The Roofing Replacement program was created to address roofs that are approaching the end of their useful lives at various DOSD facilities. The program started in 2014 and will continue through 2030. In 2022 three additional roofs were replaced at the Jackson Pike and Southerly plants as well as the SMOC facility at Fairwood Avenue.



CAPITAL REINVESTMENT

DIVISION OF WATER

The Division of Water operates and maintains an extensive water supply system consisting of our watersheds, reservoirs, dams, three water treatment plants and a water distribution system. Over the past year, the division made significant capital investments in these assets to maintain a safe and reliable water supply and to prepare for our future needs. Some of the major activities and accomplishments for 2022 are summarized below.

Water Distribution

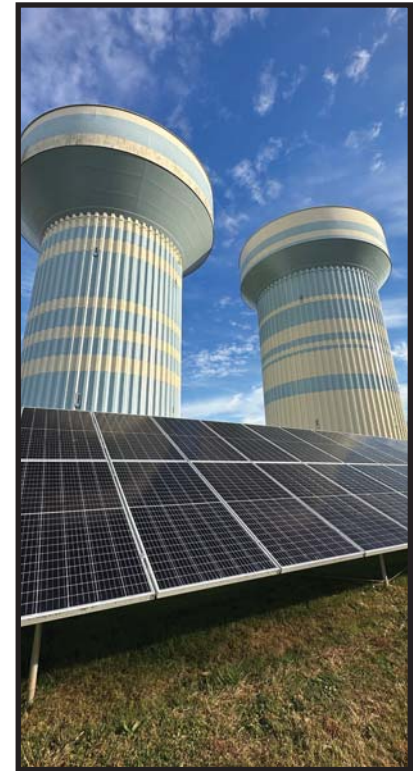
In 2022, the Division of Water legislated over \$19 million in existing distribution infrastructure improvements through its Replacement and Rehabilitation (R&R) Program. This program annually prioritizes replacement of water mains that require repeated maintenance due to breakage and the need to improve flow to service areas. Major R&R water line improvement projects included:

- **Ziegler Avenue Area** project, which included approximately 13,000 linear feet of new mains ranging in size between 6" and 12" diameter.
- **Old Beechwood Area** which included approximately 10,000 linear feet of new mains ranging in size between 6" and 8" diameter.
- **Mock Road Area** project, which included approximately 9,200 linear feet of new mains ranging in size between 6" and 12" diameter.
- **Chestershire Road Area** project, which included approximately 8,800 linear feet of new mains ranging in size between 6" and 8" diameter.

Tussing Booster Station Microgrid

Columbus' Climate Action Plan (CAP) commits the city to carbon neutrality by 2050 and a 45% reduction in emissions by 2030. In pursuit of those goals, the City of Columbus partnered with AEP Ohio to complete a pilot project to establish a solar powered microgrid for its Tussing water booster station.

The microgrid provides community resiliency by acting as clean-energy-supplied backup power during times of climate crisis or power outages to ensure the flow of safe, clean drinking water to residents. This project supports specific CAP strategies and actions by reducing emissions through the use of clean energy, providing resiliency through use of a microgrid, and imparting equity by ensuring access to safe, clean drinking water for residents during an emergency (see photo).



Large Diameter Valve Replacements, Part 2

The goal of this project was to replace valves, ranging in size from 20-inch diameter to 36-inch diameter, on critical mains to improve the reliability of the water distribution system. This was the second project as part of the division's large diameter valve replacement program.

Smoky Row Booster Station Roof Replacement

This project replaced the roof on this 50-year old booster pump station building. The existing flat roof had reached the end of its useful life and needed to be completely replaced. A new low-maintenance standing seam metal hip roof was installed. Other improvements included HVAC modifications and a new freestanding communications tower.

Watersheds and Water Plants



O'Shaughnessy Dam

Construction continued on the Hydroelectric Facility Improvements, including demolition work, rehabilitation of the turbines, rehabilitation of the generators, installation of a new trash rack, and installation of new stop logs (see photo above).

Hoover Reservoir and Dam

Construction on the Hoover Dam Improvements Part 1 Project was completed and the dam returned to normal operation. Major components replaced under this project included bunker valves, isolation gates, electrical power systems, and control systems. Parking lot and roadway pavement was rehabilitated at the Red Bank Road Marina. A consultant was selected to provide engineering design services for the Hoover Dam Improvements Part 2 Project.

Watershed Facility Improvements

Construction continued at the Hoover and Griggs reservoir facilities, including installation of a new sanitary pump station, renovation of interior work spaces, and installation of a new materials storage bin.

Dana G. "Buck" Rinehart Utilities Complex (Dublin Road)

Construction was completed on the Office Renovation Project and the Security Enhancements Project. Construction was started on the Water Quality Assurance Laboratory Renovation Project, including installation of temporary lab facilities.

Dublin Road Water Plant

Construction of the Ultraviolet Disinfection Improvements Project and rehabilitation of raw water screen #3 were finished (see photo on right).

Construction on the Clarifier Replacement Project continued. Design work continued on the Caustic Feed improvements.

Hap Cremean Water Plant

Construction continued on the Intake and Low Head Dam Improvements and the Basin Concrete Rehabilitation Part 2 projects, both of which help address age and weather related deterioration of the plant's concrete structures. Bids were received for construction of the Hypochlorite Disinfection Improvements. Design work continued on the Plant Drains and Water System Improvements and the Door and Lock Improvements projects. An energy efficiency audit of the facility was conducted.

Parsons Avenue Water Plant

Construction was completed on the HVAC Improvements Project and construction continued on the Well Pump Replacement Project. Construction started on the Lockbourne Road Quarry Embankment Improvements. Design work was completed on the Lime Slaker Replacement, and design work continued on the Hypochlorite Disinfection Improvements and the Control Room Renovation projects.

Residuals Management

Scope development for the Residuals Turnkey Services project continued and regulatory planning work continued on the PAWP Residuals Improvements Project.



CUSTOMER SERVICE & COMMUNITY RELATIONS

Customer service provided by department staff includes support for Columbus water, sewer, stormwater and electricity accounts, and for the city's contracting water and sewer suburban communities. A 50-person call center answers billing questions, schedules service calls, and helps resolve issues, normally 55 hours per week. Customers can

pay their bills online, over the phone, by mail and in person at various locations.



The customer portal, originally rolled out in 2017, finished off the year with 188,185 active enrolled customers, a 27% increase over the prior year. The portal provides ways for cus-

tomers to sign up for paperless e-bills, to pay online, enroll in autopay, and other features.

Utility Permits includes six office staff who processed 4,415 water/sewer connection/repair permits and 1,048 hydrant permits in 2022. This section also includes seven inspectors who performed 6,346 field inspections.

Multiple programs were available to assist customers paying account balances in 2022. Many of these programs have historically been accessible, while some were put in place in response to the COVID-19 pandemic:

- Low Income Water/Sewer Discount Program
- Low Income Water/Sewer Discount for Multi-Unit/Master Metered Properties
- Senior Water and Sewer Discount Program
- Senior Citizen Electricity Discount Program
- Pandemic Power Payment Relief Program
- CARES Act Utility Bill Assistance Program
- Small Business Utility Bill Assistance Program

Customer Service Highlights	2022	2021	2020
Total customer calls	341,971	281,668	260,543
Total field/meter related service calls	85,640	64,562	51,696
Low income water/sewer discount participants	5,788	5,760	5,891
Senior water/sewer discount participants	3,557	3,534	3,561
Senior power discount participants	206	193	204
Customer Accounts Billed			
Water (includes contracted communities)	281,983	280,742	279,746
Sewer (includes contracted communities)	279,192	277,978	276,935
Stormwater	199,629	199,332	198,653
Power	17,264	16,605	15,900

Plans for the long-awaited rollout of the Enhanced Meter Project to replace all of the city's aging water and power meters moved forward, with a rollout set for early 2023, following infrastructure preparation work and a pilot installation phase in 2022. This work had been delayed by a few years due to a worldwide microchip supply chain shortage, and once begun will take a few years to complete.



The upgrades will bring many benefits like increased meter accuracy, enhanced customer service, and improved operational efficiency. Once a customer portal that is being designed is completed, users will have new options like setting up alert notifications for leaks. For more information, please visit columbusemp.org.

Residents continued to benefit from the Project Dry Basement sewer backup prevention program, which began in 2004. An additional 206 backflow valves were installed, bringing the total installations to 1,715.

The Communications Office coordinated media and public records requests, printed materials and reports, and OEPA and other regulatory-required publications. Staff provided residents information at the city's RiseUp Columbus resource fairs (see photos: Mayor Ginther talks to residents and staff; CDPU staffer Dave Celebrezze shows the reusable water bottles residents received by joining the GreenSpot program).

The Sustainability Office coordinated various outreach related to the Blueprint Columbus program and other sustainability initiatives.



Facebook and Twitter social media followers continued to grow. The department began using LinkedIn to help promote job postings for Human Resources.

The Division of Power maintained their Reliable Public Power Provider status.



MAINTAINING OUR SYSTEMS

Power Distribution System



The Division of Power maintains 471 miles of distribution circuits, substations, and street lighting circuits throughout Columbus. A total of 17,264 customers enjoyed reliable city power in 2022. The revenue from selling municipal power allows the division to maintain and energize around 57,000 streetlights throughout Columbus.

The division is also responsible for maintaining the Ohio Department of Transportation's freeway lights on major highways within the city and the Division of Water's O'Shaughnessy Reservoir dam's hydroelectric unit. DOP updates one underground and one overhead circuit annually to improve overall reliability. In 2022, crews replaced or repaired over 120,000 feet of wire/cable, 1,787 streetlight luminaires, and 5,210 streetlight lamps.

The Division of Power provides a reliable and cost competitive alternative. For more information, please call 614-645-7216 or visit columbus.gov/utilities.

Power Maintenance	2022	2021	2020
Wire/cable repaired (feet)	120,971	68,199	110,279
Transformer kVA installed/ removed	2,888	6,483	6,226
Luminaires repaired	1,787	1,238	1,423
Lamps repaired	5,210	4,722	5,744
Wooden poles replaced	268	206	189
Standard poles replaced	209	110	151
Total work orders	14,612	16,589	14,328

Sewer Collection System

The 4,599 miles of city-owned sewers are maintained by the Sewer Maintenance Operations Center, the largest staffed section of the Division of Sewerage and Drainage. This responsibility includes 2,619 miles of sanitary sewers, 1,824 miles of storm sewers and 156 miles of combined sewers. An additional 44 miles of county-owned sewers are maintained under contract.

Other responsibilities include the inspection and maintenance of the Franklinton Floodwall gates and 14 gate wells, 20 regulators, 15 siphons, 34 sluice gates, the Alum Creek Storm Tank, 16 sanitary and 15 storm pump stations monitored by a SCADA system, along with numerous stormwater control facilities, catch basins, inlets, ditches, flap gates and manholes.

Sewer Maintenance	2022	2021	2020
Repairs	1,258	1,298	908
Catch basins/inlets inspected	8,138	11,394	14,730
Catch basins, inlets, manholes cleaned	6,805	8,376	5,867
Miles power cleaned	164	164	105
Miles closed circuit tele-vised	52	57	49
Total work orders	8,954	8,730	8,382

Water Distribution System

Water Distribution Maintenance crews maintain 3,578 miles of waterline, which includes 2,535 miles in Columbus and 1,043 miles in contracted suburban service areas. Included in the waterline repair totals are leaks discovered by pitometer survey crews, who perform proactive testing to locate underground system leaks that do not surface.

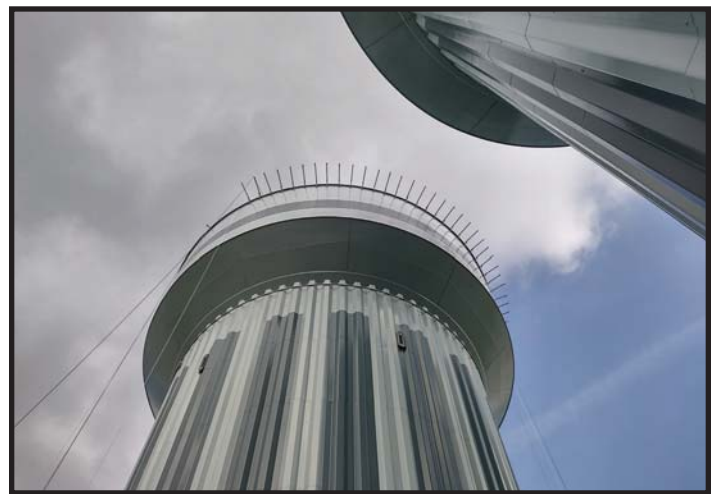
Other maintenance responsibilities include: 38 water tanks (26 Columbus, 12 suburban contracted areas); 27 booster stations (15 Columbus, 12 suburban); three in-stream reservoirs (Hoover, Griggs and O'Shaughnessy) and one upground reservoir (John R. Douth); a facility on Alum Creek Reservoir (owned by the U.S. Army Corps of Engineers) where additional water can be pumped over to supplement Hoover; about 26,000 Columbus fire hydrants in partnership with the Division of Fire; and various valves throughout the system.

The Division of Water also maintains meters and curb boxes for over 280,000 accounts in the Columbus metropolitan area (see Customer Service page for more details).

Water Maintenance	2022	2021	2020
Main Line Leak Repairs			
Columbus	322	343	292
Suburban contracted	210	228	183
Total	532	571	475
Taps/Service Lines			
Repaired	207	212	160
Replaced	1,966	1,662	1,587
Cut-off at main	47	52	49
Put in-shapes	226	137	172
New taps main line	57	28	39
Valves			
Repaired	72	68	53
Replaced	110	167	153
Hydrants			
Repaired	1,180	1,186	1,072
Replaced	19	27	42
Total work orders	4,083	3,766	3,263



Dublin Road Water Plant main building



North District Tank Painting Project

WATER TREATMENT

The water treatment staff, supported by the Water Quality Assurance Laboratory, ensure that the water delivered to your tap meets or exceeds all requirements of the Safe Water Drinking Act. Columbus' water plants use a complex multi-barrier treatment process to assure safe drinking water is delivered to over 1.3 million consumers in Columbus and 23 contracting suburban communities.

Sources of Columbus' drinking water include rivers, creeks, reservoirs and wells. Columbus water customers receive water from one of the following three plants, which have undergone many upgrades and expansions since being put into service to keep pace with Ohio EPA regulations and population growth:

- **The Dublin Road Water Plant** serves downtown Columbus and the western and southwestern portions of Franklin County, using water from the Griggs and O'Shaughnessy reservoirs on the Scioto River and the John R. Douitt Upground Reservoir in Delaware County. Put into service in 1975, the current water plant replaced a 1908 plant, which had replaced the first water treatment works from 1871. This plant provided 39.1% of the water in the service area in 2022 and has a capacity of 80 MGD.



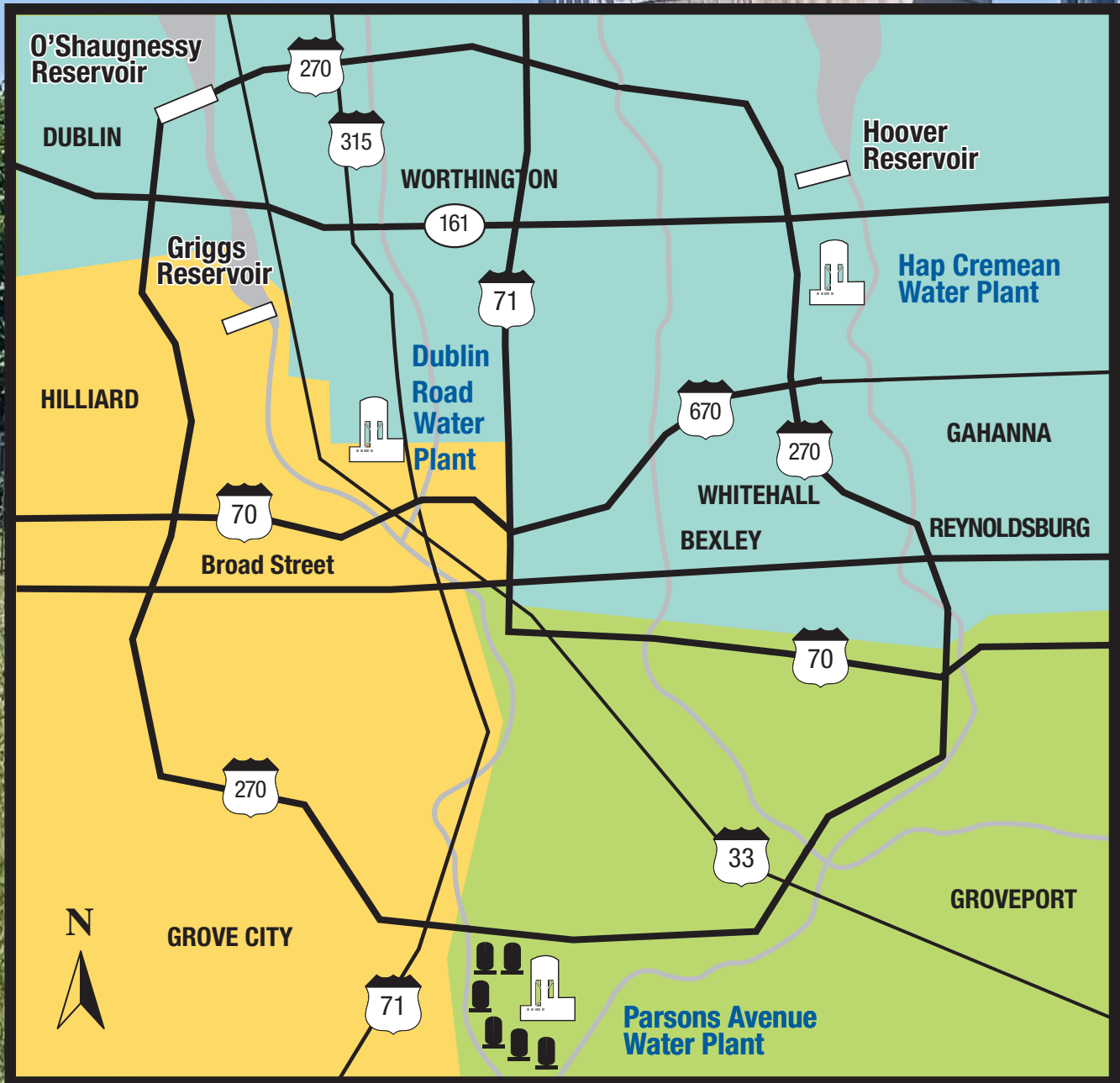
The Dublin Road Water Plant's new ultraviolet treatment facility

- **The Hap Creman Water Plant** on Morse Road, opened in 1956, serves the largest area, including northern and northeastern Franklin County and The Ohio State University. The water source is Hoover Reservoir on Big Walnut Creek, and supplemental water is pumped from the Alum Creek Reservoir (not Columbus owned) during dry periods as needed. The Hap Creman plant provided 44.5% of water in the service area and has a 125 MGD capacity.
- **The Parsons Avenue Water Plant**, which went into service in 1984, draws water from wells and serves southeastern Franklin County. This plant provided 16.4% of the water in the service area and can treat up to 50 MGD.

A report on drinking water quality is released to the public annually, known as the Drinking Water Consumer Confidence Report. Please visit columbus.gov/drinkingwater/ to view the current report or request a copy by contacting Customer Service at 614-645-8276 or UtilityLeadRep@columbus.gov. For water quality questions, please call the Water Quality Assurance Lab at 614-645-7691.

Finished Drinking Water Summary	2022	2021	2020
Total billion gallons	53.0	51.8	51.5
Average million gallons per day	145.1	141.9	140.73
Estimated service population	1,366,092	1,257,866	1,252,394
Average per capita consumption gallons per day (includes industry and business usage, total pumped divided by the estimated population)	106	113	112
Central Ohio precipitation	45"	40"	50"

WATER SERVICE AREA MAP



WASTEWATER TREATMENT

The Division of Sewerage and Drainage operates two 24-hour, award-winning wastewater treatment plants serving the city and 25 contracting suburban communities.

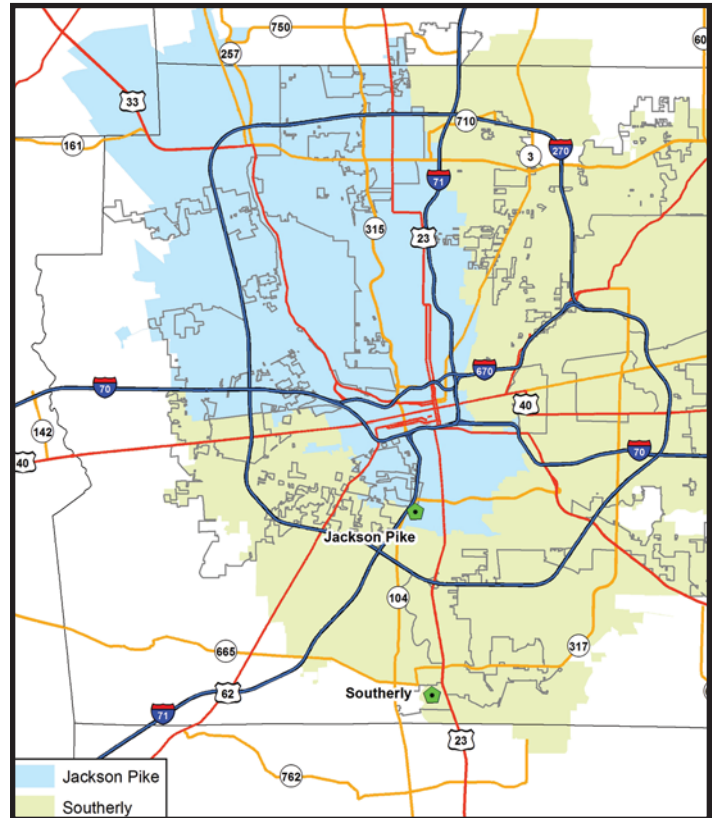
The Jackson Pike Wastewater Treatment Plant, located just south of downtown along I-71, was built in 1935 and has a design capacity of 68 MGD, with a peak treatment capacity of approximately 150 MGD. It serves the central and western half of Franklin County.

The Southerly Wastewater Treatment Plant, on the south side near Lockbourne, was built in 1967 and serves eastern Franklin County. Average daily design flow is 114 MGD with a peak capacity of 330 MGD.

Both plants discharge treated water into the Scioto River and have undergone numerous upgrades in recent years to keep pace with central Ohio's growth and Ohio EPA regulatory requirements.

Tours of the plants are available to the public by appointment. If interested, please contact the plants directly: Jackson Pike at 614-645-3138 or Southerly at 614-645-3248.

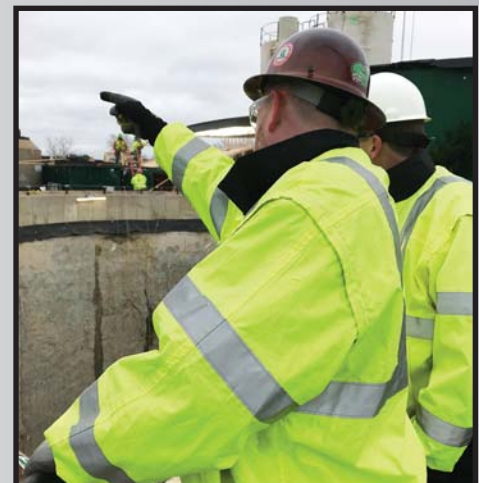
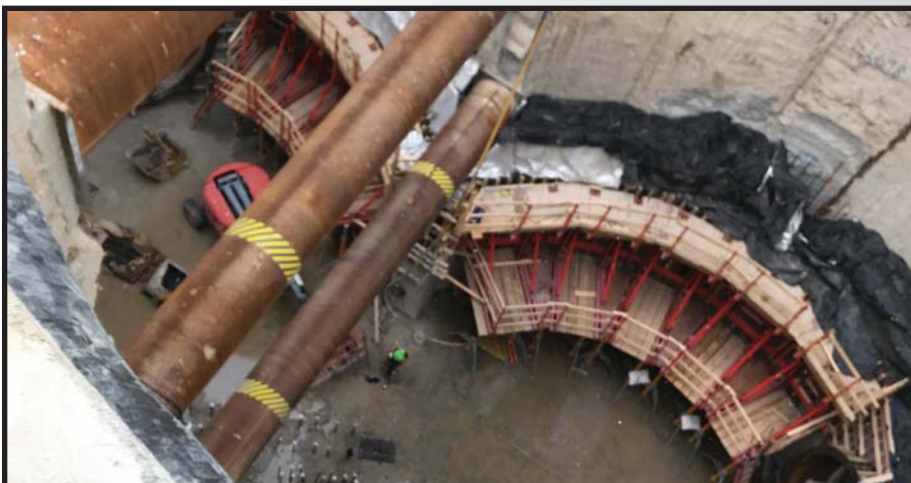
The Division of Sewerage and Drainage also operates a Compost Facility, which was built in 1980 as an environmentally friendly alternative to dispose of wastewater residuals. The bio-solids are made into a popular organic mulch and soil enrichment product known as Com-Til, which is available to the public. For more information please visit columbus.gov/comtil or call 614-645-3153.



Tunnel boring machine for Lower Olentangy Tunnel at Gowdy Field



Wastewater Treatment Summary	2022	2021	2020
Total billion gallons	70	68	70
Average millions gallons per day	191	181	190
Carbonaceous Biological Oxygen demand removed	98%	98%	98%
Suspended solids removed	98%	98%	98%
Central Ohio precipitation	45"	40"	50"
Dry Tons Bio-solids Handled			
To compost	10,337	9,997	9,457
To beneficial reuse	12,021	13,837	13,726
Dry tons to energy (gas)	20,771	20,247	17,888
Total	43,129	44,082	41,071
Compost Facility Production			
Incoming sludge (wet tons)	53,021	51,653	46,628
Incoming sludge (dry tons)	10,337	9,997	9,457
Average percent dry solids	19.7%	19%	20%
Com-Til solid/donated (cubic yards)	64,862	42,623	42,743
Total yard waste received (wet tons)	13,615	21,115	26,408
Total Com - Til revenue	\$786,520	\$486,972	\$510,058



REVENUES AND EXPENDITURES

DIVISION OF SEWERAGE AND DRAINAGE

Sanitary Enterprise Fund	2022	2021	2020
Revenue			
Beginning Cash Balance	\$189,063,724	\$182,920,064	\$150,331,803
Sewer Service Charges	\$253,107,178	\$237,151,482	\$229,482,255
Wet Weather Fees	\$45,281,478	\$42,594,596	\$40,792,447
Investment Earnings	\$4,155,990	\$3,656,462	\$7,248,140
System Capacity Charges	\$8,700,565	\$8,451,144	\$7,889,516
Storm Sewer Reimbursements	\$10,642,976	\$7,007,232	\$7,899,551
Other	\$1,693,131	\$2,420,813	\$5,581,950
Debt Refinancing	-	-	-
Adjustments	-	-	-
Total Revenue	\$323,581,318	\$301,281,729	\$298,893,860
Expenditures			
Personnel	\$38,035,129	\$40,247,538	\$42,570,328
Supplies and Materials	\$11,271,261	\$9,354,071	\$8,620,931
Services	\$39,421,010	\$35,706,456	\$35,143,585
Pro-Rata	\$13,968,868	\$12,763,525	\$12,333,921
Other	\$30,476	\$77,427	\$320,275
Capital Equipment	\$1,294,491	\$1,664,025	\$3,699,293
Debt Service	\$165,757,944	\$164,580,427	\$151,963,239
Sewer Share of DPU	\$11,356,826	\$11,498,519	\$11,654,056
Transfers	\$25,051,046	\$19,246,082	-
Total Expenditures	\$306,187,051	\$295,138,070	\$266,305,629
Ending Cash Balance	\$206,457,992	\$189,063,724	\$182,920,034



Stormwater Enterprise Fund	2022	2021	2020
Revenue			
Beginning Cash Balance	\$29,687,937	\$23,991,068	\$18,152,174
Storm Sewer Charges	\$45,653,450	\$44,373,502	\$43,002,869
Investment Earnings	\$605,213	\$516,385	\$1,053,131
Storm Penalties	\$509,310	\$104,258	\$187,235
Other	\$16,124	\$245,463	\$433,329
Debt Refinancing	-	-	-
Adjustments	(\$8,321)	\$146,402	(\$69,550)
Total Revenue	\$46,775,776	\$45,386,010	\$44,607,014
Expenditures			
Personnel	\$2,090,075	\$2,013,378	\$2,355,304
Supplies and Materials	\$59,325	\$29,506	\$129,294
Services	\$873,853	\$702,047	\$1,339,028
Pro-Rata	\$2,100,859	\$1,957,727	\$2,190,803
Capital Equipment	-	\$27,958	\$68,825
Other	-	\$75,000	-
Debt Service	\$13,132,840	\$12,362,758	\$11,773,369
Reimbursement to Sanitary	\$10,642,976	\$7,007,232	\$7,899,551
Storm share of DPU	\$3,034,122	\$3,060,407	\$2,276,643
Department of Technology Allocation	\$1,454,822	\$1,621,817	\$1,768,355
Street Cleaning	\$9,517,006	\$9,171,726	\$8,966,948
Transfers	-	\$1,659,585	-
Total Expenditures	\$42,905,878	\$39,689,141	\$36,768,120
Ending Cash Balance	\$33,557,835	\$29,687,937	\$23,991,068

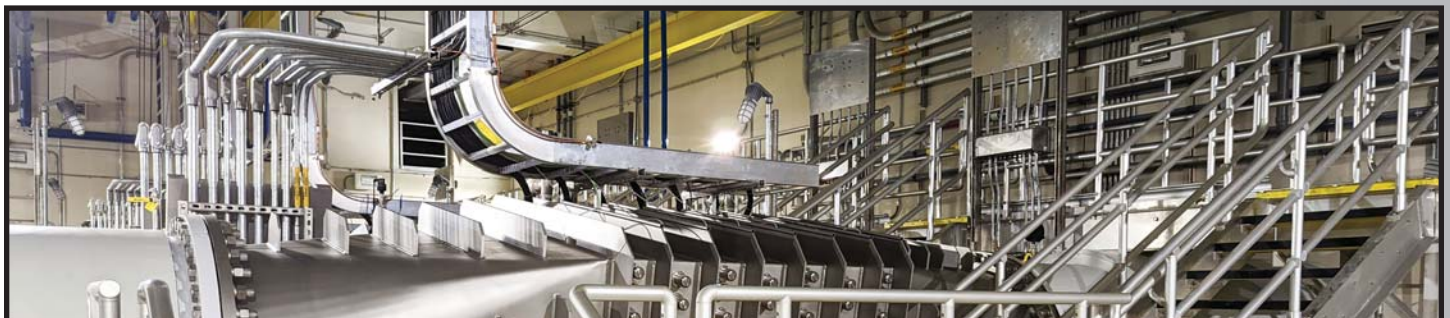
REVENUES AND EXPENDITURES

DIVISION OF POWER

Power Enterprise Fund	2022	2021	2020
Revenue			
Beginning Cash Balance	\$29,687,582	\$29,186,224	\$32,633,055
Commercial	\$69,488,502	\$67,917,163	\$67,302,808
Residential	\$9,813,262	\$9,684,621	\$8,399,516
Investment Earnings	(\$195,849)	\$1,096,913	\$902,734
Kilowatt Hour Tax Reduction	(\$3,358,596)	(\$3,312,758)	\$3,192,372
Other	\$566,337	\$3,417,631	\$2,719,868
PCRA (Power Cost Reserve Adjustment)	\$8,335,493	\$7,538,338	\$6,962,477
Debt Refinancing	\$15,317	-	-
Adjustments	-	-	-
Transfer In	\$670,000	-	-
Total Revenue	\$85,334,467	\$86,341,909	\$83,095,032
Expenditures			
Personnel	\$9,383,762	\$9,602,060	\$10,457,539
Purchase Power	\$58,032,854	\$56,096,092	\$56,473,163
Supplies and Materials	\$2,786,864	\$2,558,117	\$2,598,637
Services	\$8,606,241	\$8,004,967	\$7,230,023
Pro-Rata	\$3,837,883	\$3,767,405	\$3,639,100
Other	\$877	\$20,000	\$506
Capital Equipment	\$2,875,168	\$3,155,449	\$3,999,340
Debt Service	\$1,384,161	\$888,925	\$554,007
Power Share of DPU	\$2,087,004	\$1,747,536	\$1,589,548
Total Expenditures	\$88,994,814	\$85,840,551	\$86,541,863
Ending Cash Balance	\$26,027,235	\$29,687,582	\$29,186,224

DIVISION OF WATER

Water Enterprise Fund	2022	2021	2020
Revenue			
Beginning Cash Balance	\$143,287,139	\$127,677,442	\$100,391,034
Water Charges	\$206,023,733	\$205,433,741	\$193,273,710
Water Billing Penalties	\$2,654,655	\$652,912	\$1,078,318
Investment Earnings	\$2,805,358	\$2,550,384	\$4,786,313
System Capacity	\$6,549,597	\$7,054,852	\$6,672,970
Sewer Billing Charges	\$5,063,940	\$2,311,606	\$2,172,740
Meter Service Fees	\$856,391	\$919,750	\$688,598
Other Revenue	\$1,851,511	\$2,725,469	\$1,088,085
Debt Refinancing	\$215,155	-	\$5,025,517
Adjustments	-	-	-
Total Revenue	\$226,020,340	\$221,648,715	\$214,786,552
Expenditures			
Personnel	\$39,235,625	\$40,320,105	\$43,480,790
Supplies and Materials	\$24,289,767	\$19,493,772	\$18,288,180
Services	\$27,496,439	\$26,852,144	\$26,371,572
Pro-Rata	\$9,871,158	\$9,447,406	\$8,909,094
Other	\$29,558	\$18,686	\$3,611
Capital Equipment	\$599,564	\$1,545,547	\$2,005,937
Debt Service	\$102,620,019	\$78,448,311	\$77,955,019
Water Share of DPU	\$10,297,435	\$10,407,765	\$10,485,940
Transfers	-	\$19,505,281	-
Total Expenditures	\$214,439,565	\$206,039,018	\$187,500,144
Ending Cash Balance	\$154,867,914	\$143,287,139	\$127,677,442





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