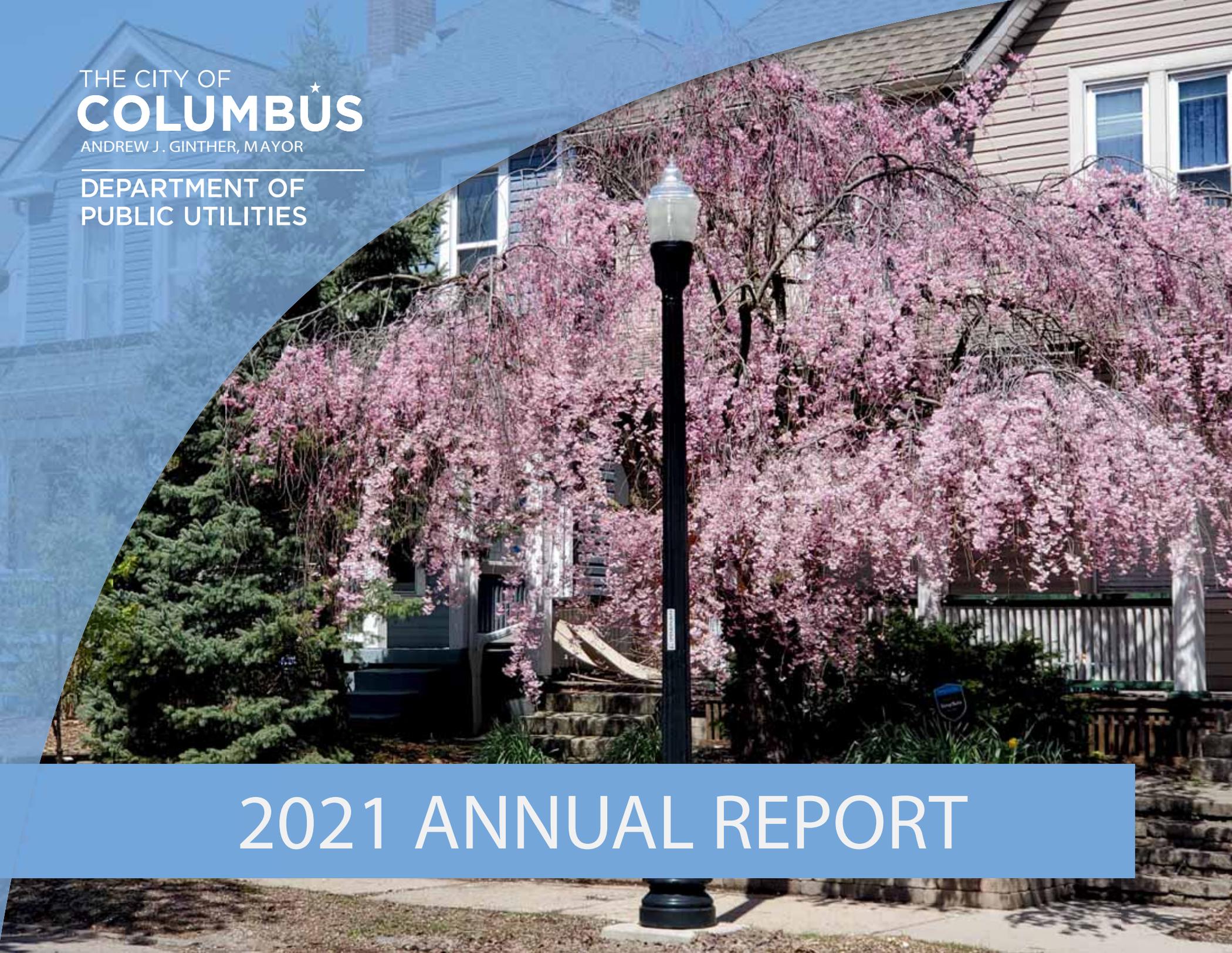


THE CITY OF
COLUMBUS

ANDREW J. GINTHER, MAYOR

DEPARTMENT OF
PUBLIC UTILITIES



2021 ANNUAL REPORT

DEPARTMENT OF
PUBLIC UTILITIES



Andrew J. Ginther,
Mayor

DEPARTMENT OF PUBLIC UTILITIES

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Patti Austin, P.E., Administrator, Division of Power
John Newsome, P.E., Administrator, Division of Sewerage & Drainage
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2021 COLUMBUS CITY COUNCIL

From left:
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YEAR IN REVIEW

Any review of 2021 has to start with the COVID-19 pandemic, because it played such a significant role in many Columbus Department of Public Utilities operations. The one thing we could not allow it to do was impact how we serve the families and businesses that depend on reliable power, water, and sanitary services – and in that, we were successful.

A moratorium on turnoffs for delinquent city power and water accounts, implemented by Mayor Andrew J. Ginther in March 2020, continued into the new year – but, as we periodically reminded customers, all bills come due eventually. Rather than simply start turning off service to customers with past-due bills once the moratorium was lifted, steps were taken to provide those customers with several months of advance notice and information about payment assistance programs. The department's own Coronavirus Aid, Relief, and Economic Security Act – or CARES Act – program, started in late 2020 for customers directly impacted by the pandemic, continued into '21 and was joined by a new Small Business Utility Bill Assistance program. By the end of the year, over \$1.5 million was approved for more than 3,800 qualifying residential and small business accounts. Both initiatives, along with expanded payment plan options and several existing discount programs, continued into 2022.

The day-to-day business of maintaining services continued, and on the following pages you will read about numerous capital improvements projects dedicated to updating and enhancing vital infrastructure. Examples of these improvements include Blueprint Columbus (Division of Sewerage and Drainage or DOSD), a groundbreaking combination of projects to address both sanitary sewer overflows and stormwater quality; the Smart Lighting project (Division of Power or DOP) to upgrade and convert the city's entire streetlight system to energy efficient light emitting diode technology; and the Replacement and Rehabilitation Program (Division of Water or DOW) which prioritizes replacement of leak-prone water mains to improve service and reduce maintenance.

Progress on those projects, as well as planning for new improvements, was sustained through the pandemic and also through the departure of Director Tracie Davies in November. Appointed in 2016, Director Davies oversaw some of the most significant capital projects in Columbus history. As of the end of 2021, the search for

a new director was ongoing, while Deputy Director Ann Aubry, P.E., was appointed interim director.

A bold new concept, the city's Climate Action Plan, was unveiled by Mayor Ginther in September. Led by the citywide Sustainable Columbus initiative located in the department, the Climate Action Plan is a citywide strategy that focuses on optimizing internal city operations and working with external stakeholders to enhance and promote environmentally beneficial policies throughout our community. Mayor Ginther and plan architects are committed to ambitious goals to ensure Columbus is doing its fair share to combat global climate change. One key element of the plan will be a new solar energy farm, to be built on the remnants of Franklin County's sanitary landfill near interstates 71 and 270 on the south side. The 49.5 megawatt solar park will put current brownfield property back into productive use, provide Columbus residents with cleaner energy and healthier air, and support more than 200 jobs through construction and maintenance of the facility. Additionally, the project will eventually help power Clean Energy Columbus, the city's 100% clean-energy electricity aggregation program.

Almost, but not quite, lost in the bustle of activity was recognition of the DOW's sesquicentennial. It was in 1871 that Columbus established the Westside Pumping Station and well at the confluence of the Olentangy and Scioto rivers. At that time, the water supply system consisted of a steam-powered pump house, a 20-foot diameter well, and a 256-foot filter gallery built to treat raw water. Around this time, the city also began laying water mains and sewer lines to serve the community. 150 years later, Columbus is recognized as a pioneer in both drinking water and wastewater treatment; methods developed here are still being utilized around the world today.

The year 2021 closed with many lasting impacts from the pandemic, losses endured by our community, and uncertainties moving forward. One silver lining from these challenges is that our department is better prepared to deal with future adversity, and we are also well positioned to accommodate the continued growth anticipated for our region. We look forward to providing our current, and future, residential and business customers with reliable utility services for years to come.

PROTECTING THE ENVIRONMENT



Sustainable Columbus

The Sustainable Columbus program is housed at the Dana G. “Buck” Rinehart Utilities Complex and the department is an active partner in the program. In late 2021, Mayor Ginther joined business, environmental and community leaders (see photo above) to unveil the city’s first ever Climate Action Plan. This roadmap will strive to achieve a 45% reduction of greenhouse gas emissions by 2030, carbon neutrality by 2050, and promote equity and environmental justice. To learn more about the plan, please visit www.columbus.gov/sustainable/cap.

Regulatory Compliance

The department successfully completed its first full year of self-declaration of its Environmental Management System (EMS) to the environmental standards

established by the Organization of International Standards (ISO 14001:2015). A key component of the EMS is a robust regulatory compliance program that includes continual auditing and follow-up actions based on audit findings. Other regulatory compliance functions of the department include adhering to the Safe Drinking Water Act, Clean Water Act and Clear Air Act requirements, including multiple National Pollutant Discharge Elimination System (NPDES) permits and Title V air permits issued by Ohio EPA. Several laboratories located in DOSD and DOW facilities regularly test raw water, finished drinking water, and influent/effluent wastewater.

The Stormwater and Regulatory Management Section in DOSD oversees non-point source stormwater pollution by administering a Municipal Separate Storm Sewer System NPDES permit. In 2021, the following was done to protect local waterways: 4,548 site inspections on active construction sites, 405 inspections of post-construction best management practices, field screens of 704 storm sewer outfalls, and investigations of 162 reported spills or suspected illicit discharges to the storm sewer system. Inspections were made at 75 businesses for compliance with the Ohio EPA Multi-Sector General Permit for stormwater discharge. Fines totaling \$29,750 were issued for notices of violation. In coordination with Columbus Public Health, the Septic Tank Elimination Program connected 10 properties to the sanitary sewer system.

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 3,053 restaurant inspections on behalf of the pretreatment program. Pretreatment staff investigated 13 grease incidents, met with 22 food service establishments as part of the Fats, Oils and Grease Best Management Program, and distributed 65 door hangers in impacted neighborhoods. This section recovered \$11,983 in costs from nine sewer users associated with removing sewer blockages. There were \$1,250 in fines issued for various violations.

EcoSmart Choice Program and Green Power

In addition to the 20% green purchase power component, the DOP continued to offer the EcoSmart Choice opt-in program. Participants have the opportunity to purchase kilowatts of zero-emissions energy through renewable energy certificates. These are the legal instruments used in renewable electricity markets to account for renewable electricity and its attributes, whether that renewable electricity is installed on the organization's facility or purchased from elsewhere. All city-owned facilities served by municipal power have been enrolled in the program, which includes the department's water and wastewater treatment plants. In 2021, a total of 210 Columbus power accounts had opted into the program.

Public Education, Outreach and Partnerships

GreenSpot was created in 2008 as a way for people to learn about living and working greener. Growth in 2021 saw membership rise to 23,185, including 21,766 household members, 1,272 business members, and 147 community groups. Four businesses graduated from the GreenSpot Sustainable Business Course. GreenSpotLight Award winners were DLZ, Accurate IT, and CeraNet. GreenSpot teamed up with Green Columbus to give away 350 trees in Opportunity Neighborhoods. Nineteen GreenSpot



Conversations were held covering a range of sustainability topics, along with several webinars and videos for adults and children. More than 1,482 households participated in the GreenSpot Backyard Conservation program to learn about stormwater, rain barrels and native plants.

Watershed Management, a section of DOW, continues to protect water supplies and enhance water conservation education in the greater Columbus area. They hosted a litter cleanup at Hoover Reservoir which was attended by many scouting troop and community members. The event safely accommodated COVID-19 guidelines while providing an opportunity for volunteers to work together in clearing litter



from Hoover's shorelines. For those who could not attend the fall event, bags and other supplies were made available to groups interested in independent cleanups. Watershed staff also planted 400 new trees and shrubs at five sites on Hoover in 2021, one of the largest efforts without the help of a landscape contractor. Staff also teamed up with the department's sustainability section to present educational water information to a 7th grade class focused on a water-themed project. Throughout the year, the section staff maintains 26 recycling containers at the reservoirs. These containers serve the recycling needs of the thousands of visitors who enjoy the reservoir park areas each year. 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 implements several stormwater education programs for Columbus residents. Despite the continuing challenges in 2021 forcing nearly all education exclusively online, these programs experienced an increase in participation as Columbus residents turned their attention to stormwater conservation strategies they could implement in their own yards. More than 3,341 Columbus residents were reached in the "Get Grassy!" lawncare education campaign with 81 residents committing to stormwater-friendly practices. Through the GreenSpot Community Backyards program, 1,548 residents participated in an educational workshop with 699 rebates provided for rain barrels or native plants to participants. Additionally, 3,341 Columbus students learned about stormwater pollution, water quality, soils, and soil erosion via online lectures and home-based activities they could perform with their family; and 1,260 Columbus contractors received targeted education regarding how to properly dispose of paint and concrete materials to prevent stormwater pollution.

The PUP (Pick Up Poop) program encourages pet owners to clean up after their pets, which helps protect stormwater quality. The program gained 378 new pledges in 2021, bringing the new PUP pledge total to 7,014.

CAPITAL REINVESTMENT

Division of Power

In 2021, DOP accomplished many goals. Commitment to Mayor Ginther's sustainability goals continued, and the division worked with the the department's Sustainability Office to negotiate power purchasing and interconnection agreements for several major utility-scale solar projects. These solar installations will bring over 100 megawatts of renewable energy to the Columbus region. The division also continued to supply customers with over 31% of energy from renewable resources.

The project was completed to relocate a pair of 69 kilovolt (kV) and 138kV transmission lines near I-71 for ODOT.



Standards for the City of Columbus now 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 moves forward. Approximately 3,100 street lights are now LED.

The Smart Lighting pilot phase project to convert 2,550 lights in the Linden area was approximately 20% complete.

The design plan for the Hilltop's 3,794 street light conversion project was 100% complete and undergoing citywide review.

At the O'Shaughnessy Reservoir dam (see photo left), the main construction activity to demolish existing equipment in the power house and west gatehouse was completed. These items include the switchgear, other electrical components, bearing oil tanks and hydraulic pressure units. Also, generators were removed from the powerhouse and shipped to the original equipment manufacturer for inspection and cleanup.

Staff continued its annual plan to update an underground and an overhead circuit to improve overall reliability. Construction continued on one of the division's lowest-performing overhead and underground circuits.



Division of Sewerage and Drainage

Blueprint Columbus

Blueprint Columbus is the alternative to portions of the Wet Weather Management Plan, submitted to the Ohio Environmental Protection Agency in 2005, to address sewer overflows and consent orders with the state in 2002 and 2004. 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 about Blueprint Columbus please call 614-645-1253 or visit www.columbus.gov/Blueprint.

Blueprint North Linden 1 Green Infrastructure and Storm Sewer Improvements

Five Blueprint Columbus capital improvement projects began construction or were awarded in the North Linden 1 project area in 2021. These projects were recommended in the City of Columbus Integrated Plan, and will construct bioretention basins within the right-of-way and on vacant parcels owned by Columbus. These basins will capture pollutant-laden stormwater 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.

Sewer System Engineering Capital Improvements

Lower Olentangy Tunnel (LOT)

As part of the city’s plan for achieving the requirements of the consent decrees described in the Integrated Plan and 2015 Wet Weather Management Plan Updated Report, a new, 12’ diameter sanitary overflow tunnel is being constructed from the upstream end of the previously constructed OARS tunnel at Vine Street to Tuttle Park. There it will connect with three existing sewers, the Franklin Main, the Olentangy Main and the Olentangy-Scioto Interceptor Sewer (OSIS).



The LOT main tunnel will consist of approximately 17,000 feet of 12’ diameter tunnel at an average depth of 50 feet. This portion will be mined with a tunnel boring machine and constructed of precast concrete segments. There are three main shafts along LOT: at Tuttle Park north of Lane Avenue, at Gowdy Field near Third Avenue and Olentangy River Road, and at Vine Street. A 90” diameter microtunnel will also be constructed to relieve the OSIS near Second Avenue. The microtunnel will begin at the 2nd Avenue and Perry Street intersection and flow west into LOT at the Gowdy Field Shaft (see photo above). A 36” relief sewer will also be constructed to relieve a sewer overflow in Third Avenue and direct it to LOT. Construction began in March 2021 and is expected to be completed in late 2026.

Williams/Behm Home Sewage Treatment System Elimination Project

This improvement will extend approximately 9,000 feet of new 8” to 18” sanitary sewer main to serve 50+ existing homes in a developed area that is currently served by home sewage treatment systems (HSTS). The sewers extend along portions of Alum Creek Drive, Williams Road, Strack Road and Behm Road. This project is being completed as part of the city’s HSTS Elimination Program in order to eliminate its potential to create a pollution hazard to the surface runoff and ground water. Construction notice-to-proceed was issued in July 2021 and construction is expected to be completed in July 2022 (see photo right).



CAPITAL REINVESTMENT

Division of Sewerage and Drainage (continued)

The Holton Park and Eureka Avenue Green Infrastructure Project

This project was completed in May 2021 in the North Hilltop neighborhood. It includes a shallow-depth bioretention basin landscaped with native plants and a tiered decorative concrete block retaining wall. The basin occupies an underutilized corner of the park and will improve water quality in Dry Run (a tributary to the Scioto River) by capturing sediment and contaminants from area stormwater runoff. It will also fulfill the stormwater best management practice requirements of the previously constructed Terrace/Broad Stormwater System Improvements. The use of native plants supports native wildlife (e.g. birds, butterflies) and minimizes the maintenance needed for the landscaping (see photo).



Center Large Diameter Rehabilitation

This project is part of the DOSD's systematic inspection and rehabilitation of its large diameter sewer infrastructure. This project will rehabilitate over 6,500 feet of existing large diameter sewers in downtown Columbus in order to restore structural integrity to extend the assets' remaining useful life. It will also reduce inflow and infiltration to the combined and sanitary sewer system and aid in the mitigation of sewer overflows and sewer backups into basements. Construction began May 2021 and completion is expected in November 2022.

Wastewater Treatment Plant Capital Improvements

Jackson Pike Wastewater Treatment Plant (JPWWTP)

The JPWWTP Biosolids Land Application Improvements will increase the plant's capacity to store biosolids and will facilitate maximum beneficial agricultural use of them. Six existing land application storage tanks will be rehabilitated, the pumping system will be replaced, and a new two-bay truck load-out station will be constructed. Construction began in 2019 and is expected to be completed during the second quarter of 2022. (See picture to right).

Screening improvements at JPWWTP will upgrade the current mechanical screen dewatering and disposal systems, increase process reliability during wet weather events, and provide improvements to the existing screen building to ensure a safe working environment. This project was in design and is expected to start construction in 2023.

The JPWWTP Digester Improvements will upgrade a 30+ year-old facility. This project provides an economical means to reduce the plant's sludge volume and produces methane fuel for boilers and electrical generation. The project was in design and is expected to start construction in 2023.

The JPWWTP Cogeneration Facility project is installing 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 and will continue through 2023, with the system expected to come on line in 2023.

Southerly Wastewater Treatment Plant (SWWTP)

The Chemically Enhanced Primary Treatment (CEPT) project provides the plant with the ability to treat additional wet weather flows, and will increase total wet weather treatment capacity to 440 million gallons per day (MGD). The project was split into four construction contracts and the last was substantially completed in 2021.

The SWWTP Digestion Process Expansion will increase the digestion train by adding a seventh digester. The project also includes rehabilitation of the six existing digesters. Design was completed in 2021; construction is set to kick off in early 2022 and is expected to last for three years.

Other Improvements

The Facilities and Equipment Upgrade for Whittier Street Storm Tanks project will update a 1930s facility that has not had significant upgrades since 1986. The equipment and instrumentation are nearing the end of their useful life and require upgrades in order to remain operational. This project was bid for construction in 2021. Despite some material and supply chain issues, the contractor made great strides and was on schedule to complete the work in early 2023.

The Real Time Control project provides sewer collection system visualization with flow meters integrated into SCADA (Supervisory Control and Data Acquisition) since 2018 and system-wide implementation continued. It has created a working dashboard that displays live sewer flow conditions and built upon previous work to develop predictive tools to help operators balance flows between the two plants. The system allows operators to see and consider flows coming from further upstream in the sewer system and act before the flows arrive at the plant. Additional predictive tools were developed to alert staff when there is likelihood that the CEPT process will be needed, providing advanced warning to staff so they can mobilize. Continual improvements are being made and staff continue to monitor and evaluate it for potential future automation.

The Small Capital Project program was utilized in 2021 to repair the pedestrian bridge and replace the garage natural gas monitoring system at the Fairwood Avenue facility, remove underground storage tanks, rehabilitate boilers in the aeration control and service buildings at the SWWTP, provide a fiber optic connection to JPWWTP and replace raw sewage pump valve actuators at JPWWTP.

The Roofing Replacement program was funded 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.

The HVAC and Air Purification program was funded to address the Jackson Pike and Southerly wastewater treatment plants, Sewer Maintenance Operation Center, and Compost Facility. Five contracts were under construction in 2021.

The DOSD Electrical Upgrades program was developed to evaluate infrastructure at DOSD 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. Due to the sheer volume of this kind of equipment at these facilities DOSD requires a programmatic approach to these issues.

The Facilities Equipment Maintenance program consists of approximately 10 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 is performed to lessen critical breakdowns.



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 future needs. Some of the major activities and accomplishments for 2021 are summarized below.

Water Distribution

In 2021, the Division of Water legislated over \$28 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 to improve flow to service areas. Major R&R projects in 2021 included:



Harrington Court Area Water Line Improvements

This project included approximately 8,400 linear feet of new mains ranging in size between 6" and 12" diameter.

Thomas Lane Area Water Line Improvements Phase 2

This project included approximately 10,000 linear feet of new mains ranging in size between 6" and 8" diameter.

Woodland Avenue Area Water Line Improvements

This project included approximately 11,700 linear feet of new mains ranging in size between 6" and 8" diameter (see photo left).

Olentangy River Road 24-Inch Water Main Phase 2

The goal of this project was to replace an existing 20" water main in Olentangy River Road that had a high break frequency, featuring approximately 5,500 linear feet of new 24" diameter main (see photo right).



Watersheds and Water Plants

O'Shaughnessy Dam Hydroelectric Facility Improvements

At the DOW watershed properties, construction began on this improvement, including demolition of electrical systems; also two generators were removed and shipped out for refurbishment.

Hoover Dam Improvements Part 1

Construction continued on this project which began in 2020, including installation of temporary jet gates, new piping/gates/flow meter on the east train, and replacement of the shelter house roofs (see photo on the next page).

Watershed Facility Improvements

Construction began at the Hoover and Griggs reservoir facilities.

Dublin Road Water Plant

Construction continued on the Ultraviolet Disinfection Improvements (see last photo right), where installation of major process piping, electrical systems, and building mechanical systems was completed and start-up testing of the reactors began. Rehabilitation of raw water screen #2 was completed and construction



of the Clarifier Replacement project was started. Design work continued on the Caustic Feed Improvements.

Hap Cremean Water Plant

Construction was completed on the Ultraviolet Disinfection Improvements, Standby Power Generator, Sludge Line Improvements and Basin Concrete Rehabilitation Part 1 projects. Construction on the Basin Concrete Rehabilitation Part 2 project was started, which continues the effort to address age and weather related deterioration of the plant's treatment basins. Construction of the Intake Improvements began, which will make debris removal safer and more efficient. Design of the Hypochlorite Disinfection Improvements was completed and the project was advertised for construction bids. Design work continued on the Lime Dust Collection Improvements.

Parsons Avenue Water Plant

Construction continued on the Well Pump Replacement, HVAC Improvements, and Automation Upgrade projects. Design work continued on the Lime Slaker Replacement, Hypochlorite Conversion, Control Room Renovation, and Lockbourne Road Quarry Embankment Improvements projects.

Residuals Management

Planning continued and a request for proposals was issued for turnkey dewatering services.

Dana G. "Buck" Rinehart Utilities Complex

Phase 3 of the Office Renovations project was completed and work started on the final phase. Construction began on the Security Enhancements and the Standby Power Improvements.



CUSTOMER SERVICE & COMMUNITY RELATIONS

Customer services provided by department staff include support for Columbus water, sewer, stormwater and electricity accounts, and for the city's contracting water and sewer suburban communities. A 40-person call center answers billing questions, schedules service calls, and helps resolve issues, 55 hours per week. Customers can pay their bills online, over the phone, by mail and in person at various locations.

Operations continued to be impacted by the COVID-19 pandemic as we worked to continue to keep employees and customers safe. The 111 North Front Street public offices for bill payment and permits closed for walk-in traffic in March 2020 and reopened in July 2021. Water turn-offs due to non-payment were put on hold in March 2020 and resumed in October 2021.

Multiple programs were available to assist customers with balances and future charges. Many of these programs have historically been accessible but the first three were put in place in response to the COVID-19 pandemic:

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

The customer portal, originally rolled out in 2017, finished off the year with 147,248 customers signed up to use the portal, a 22% increase over the prior year. The portal provides ways for customers to sign up for paperless e-bills, to pay online, enroll in autopay, and many other features.

The Utility Permits Office processed 5,231 water/sewer connection/repair permits, 1,207 hydrant permits, and 6,819 field inspections.

In early 2021 the Division of Power received the coveted Reliable Public Power

designation from the American Public Power Association. The RP3 program recognizes utilities that demonstrate high proficiency in reliability, safety, workforce development, and system improvement.



American Public Power Association

City power customers grew by over 700 new accounts in 2021.

The Communications Office coordinated media and public records requests, printed materials and reports, and OEPA and other regulatory-required customer notifications. The Sustainability Office coordinated various outreach efforts related to the Columbus Blueprint program and other sustainability initiatives. Facebook and Twitter social media followers continued to grow.



Residents continued to benefit from the Project Dry Basement sewer backup prevention program, which began in 2004. An additional 231 backflow valves were installed, bringing the total installations to 1,520.

Many events continued to be on hold due to the COVID-19 pandemic, while others were reinvented to suit the times. The department participated in the revamped Neighborhood Pride event, We Love Columbus, in three neighborhoods in the fall: Northeast, Highland West and Marion Franklin. Neighborhood leaders were invited to a socially-distanced event where Mayor Ginther and department directors spoke, took questions, and departments staffed tables where participants could pick up information and talk to department staff members (see photo left).

This was the seventh year for the Columbus Race for Global Water 5k. Historically held at Hoover Reservoir, the venue was changed to Alum Creek State Park due to ongoing construction at Hoover Dam. Alum Creek State Park includes Alum Creek Reservoir which is not only recreational water but also a source for drinking water, supplying three area utilities: Del-Co Water and the cities of Westerville and Columbus. The race continues to bring awareness about global clean water and sanitation issues. The race again had strong support from the community and water industry with 163 registrants, raising \$15,000 for the non-profit Water for People.



Customer Service Highlights	2021	2020	2019
Total customer calls	281,668	260,543	438,245
Total field/meter related service calls	64,562	51,696	93,350
Low income water/sewer discount participants	5,760	5,891	5,679
Senior water discount participants	3,534	3,561	3,505
Senior power discount participants	193	204	205
Customer Accounts Billed			
Water (includes contracted communities)	280,742	279,746	278,582
Sewer (includes contracted communities)	277,978	276,935	275,535
Stormwater	199,332	198,653	198,176
Power	16,605	15,900	15,895

MAINTAINING OUR SYSTEMS

Power Distribution System

The Division of Power maintains a robust network of substations, transmission and distribution lines, and street lighting circuits throughout Columbus. A total of 16,605 customers enjoyed reliable city power in 2021. The revenue provided 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.

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

Power Maintenance	2021	2020	2019
Wire/cable repaired (feet)	68,199	110,279	119,348
Transformer kVA installed/removed	6,483	6,226	10,125
Luminaires repaired	1,238	1,423	1,334
Lamps repaired	4,722	5,744	7,389
Wooden poles replaced	206	189	251
Standard poles replaced	110	151	190
Total work orders	16,589	14,328	14,790

Sewer Collection System

The 4,584 miles of city-owned sewers are maintained by the Sewer Maintenance Operations Center (SMOC), the largest staffed section of the Division of Sewerage and Drainage. This responsibility includes 2,608 miles of sanitary sewers, 1,820 miles of storm sewers and 156 miles of combined sewers. An additional 44 miles of county-owned sewers are maintained under contract.

Other SMOC responsibilities include the inspection and maintenance of the Franklinton Floodwall gates (see photo next page) 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	2021	2020	2019
Repairs	1,298	908	1,419
Catch basins/inlets inspected	11,394	14,730	7,092
Catch basins, inlets, manholes cleaned	8,376	5,867	8,830
Miles power cleaned	164	105	166
Miles closed circuit televised	57	49	57
Total work orders	8,730	8,382	7,437



Water Distribution System

Water Distribution Maintenance crews maintain 3,572 miles of waterline, which includes 2,535 miles in Columbus and 1,037 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 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 nearly 280,000 accounts in the Columbus metropolitan area (see Customer Service page for more details).



Water Maintenance	2021	2020	2019
Main Line Leak Repairs			
Columbus	343	292	353
Suburban contracted	228	183	205
Total	571	475	558
Taps/Service Lines			
Repaired	212	160	224
Replaced	1,662	1,587	1,996
Cut-off at main	52	49	65
Put-in-shapes	137	172	204
New taps main line	28	39	63
Valves			
Repaired	68	53	75
Replaced	167	153	303
Hydrants			
Repaired	1,186	1,072	1,383
Replaced	27	42	61
Total work orders	3,766	3,263	4,176

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 1.2 million consumers in Columbus and 23 contracting suburban communities.

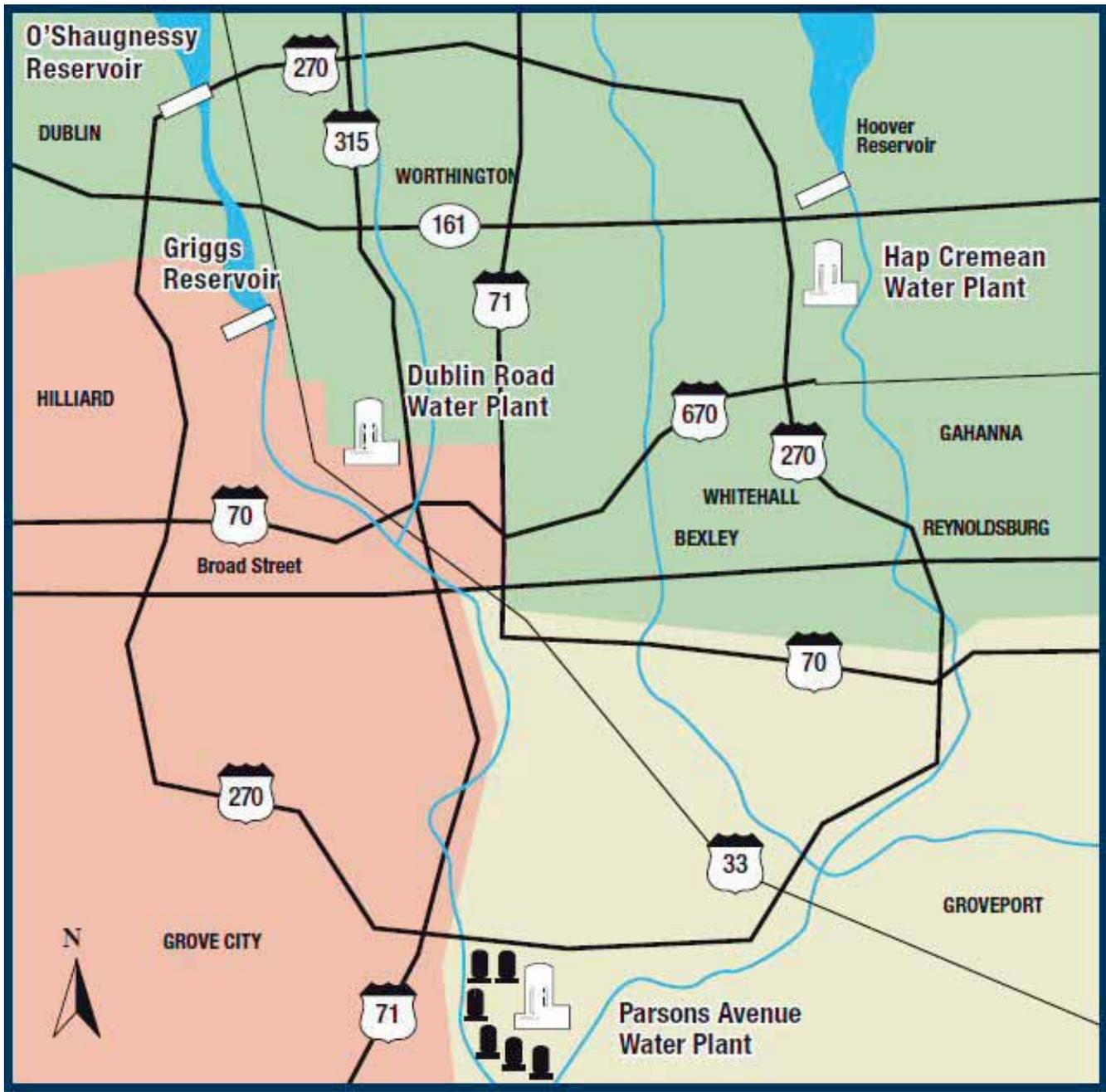
Sources of Columbus' drinking water include rivers, creeks, reservoirs and wells. Columbus water customers receive water from one of the following three plants, which have undergone many upgrades and expansions since being put into service to keep pace with Ohio EPA regulations and population growth:

- 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. Douth 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 38.4% of the water in the service area in 2021 and has a capacity of 80 MGD.

- The Hap Cremean Water Plant on Morse Road, opened in 1956, serves the largest area that includes 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 in from the Alum Creek Reservoir during dry periods as needed. This plant provided 44.9% 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. The Parsons Avenue plant provided 16.7% 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 Consumer Confidence Report. Please visit columbus.gov/drinkingwater/ to view the current report or request a copy by calling Customer Service at 614-645-8276. For water quality questions, please call the Water Quality Assurance Lab at 614-645-7691.

Finished Drinking Water Summary	2021	2020	2019
Total billion gallons	51.8	51.5	50.6
Average million gallons per day	141.9	140.73	138.51
Estimated service population	1,257,866	1,252,394	1,233,879
Average per capita consumption gallons per day <i>(Includes industry and business usage, total pumped divided by estimated population)</i>	113	112	112
Central Ohio precipitation	40"	50"	44"



Wastewater Treatment Summary	2021	2020	2019
Total billion gallons	68	70	69
Average million gallons per day	181	190	188
Carbonaceous biological oxygen demand removed	98%	98%	98%
Suspended solids removed	98%	98%	98%
Central Ohio precipitation	40"	50"	44"
Dry Tons Biosolids Handled:			
To compost	9,997	9,457	9,811
To beneficial reuse	13,837	13,726	15,084
Dry tons to energy (gas)	20,247	17,888	19,377
Total	44,082	41,071	44,272
Compost Facility Production			
Incoming sludge (wet tons)	51,653	46,628	48,597
Incoming sludge (dry tons)	9,997	9,457	9,811
Average percent dry solids	19%	20%	19%
Com-Til sold/donated (cubic yards)	42,623	42,743	45,222
Total yard waste received (wet tons)	21,115	26,408	10,092
Total Com-Til revenue	\$486,972	\$510,058	\$485,680



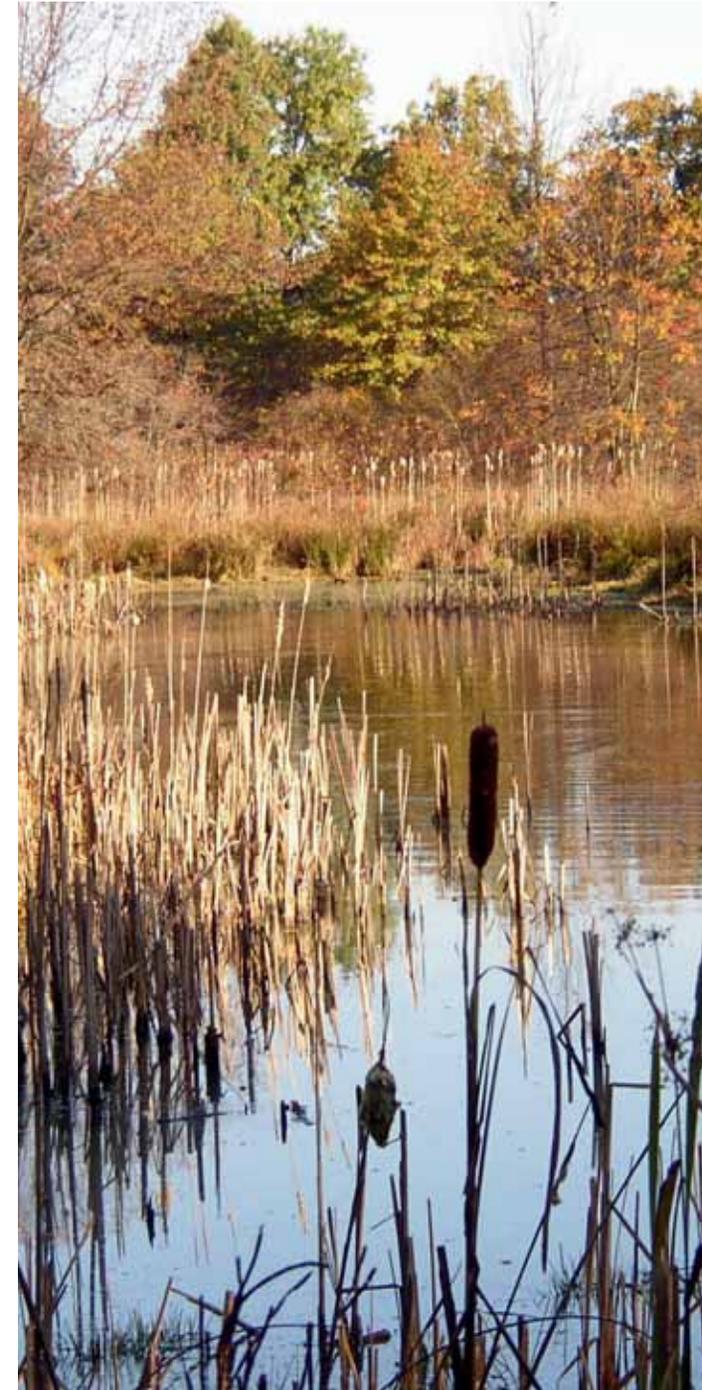
REVENUES AND EXPENDITURES

Division of Sewerage and Drainage

Sanitary Enterprise Fund	2021	2020	2019
Revenue			
Beginning cash balance	\$182,920,064	\$150,331,803	\$133,536,335
Sewer service charges	\$237,151,482	\$229,482,255	\$219,059,242
Wet weather fees	\$42,594,596	\$40,792,447	\$38,343,891
Investment earnings	\$3,656,462	\$7,248,140	\$8,772,871
System capacity charges	\$8,451,144	\$7,889,516	\$8,821,484
Storm sewer reimbursements	\$7,007,232	\$7,899,551	\$8,706,623
Other	\$2,420,813	\$5,581,950	\$2,203,665
Debt refinancing	-	-	-
Adjustments	-	-	-
Total revenue	\$301,281,729	\$298,893,860	\$285,907,777
Expenditures			
Personnel	\$40,247,538	\$42,570,328	\$43,004,066
Supplies and materials	\$9,354,071	\$8,620,931	\$9,001,555
Services	\$35,706,456	\$35,143,585	\$33,564,350
Pro-rata	\$12,763,525	\$12,333,921	\$12,285,284
Other	\$77,427	\$320,275	\$254,728
Capital equipment	\$1,664,025	\$3,699,293	\$4,552,769
Debt service	\$164,580,427	\$151,963,239	\$154,145,816
Sewer share of DPU	\$11,498,519	\$11,654,056	\$12,303,740
Transfers	\$19,246,082	-	-
Total expenditures	\$295,138,070	\$266,305,629	\$269,112,309
Ending cash balance	\$189,063,724	\$182,920,034	\$150,331,803



Stormwater Enterprise Fund	2021	2020	2019
Revenue			
Beginning cash balance	\$24,357,263	\$18,152,174	\$18,135,026
Storm sewer charges	\$44,373,502	\$43,002,869	\$41,575,640
Investment earnings	\$516,385	\$1,053,131	\$1,255,397
Storm penalties	\$104,528	\$187,235	\$397,433
Other	\$245,464	\$433,329	\$64,301
Debt refinancing	-	-	-
Adjustments	\$146,402	(\$69,550)	\$35,844
Total revenue	\$45,386,011	\$44,607,014	\$43,328,615
Expenditures			
Personnel	\$2,013,378	\$2,355,304	\$2,367,978
Supplies and materials	\$29,506	\$58,850	\$49,736
Services	\$139,898	\$908,536	\$871,451
Pro-rata	\$1,957,727	\$1,924,755	\$1,918,475
Capital equipment	\$27,958	\$40,825	\$90,233
Other	\$75,000	-	-
Debt service	\$12,362,758	\$11,773,369	\$14,897,029
Reimbursement to sanitary	\$6,939,962	\$7,899,551	\$8,706,623
Storm share of DPU	\$1,659,585	\$2,705,432	\$3,209,552
Department of Technology allocation	\$1,621,817	\$1,768,355	\$1,354,032
Street cleaning	\$9,171,726	\$8,966,948	\$9,846,358
Transfers	\$1,659,585	-	-
Total expenditures	\$37,658,901	\$38,401,925	\$43,311,467
Ending cash balance	\$32,084,373	\$24,357,263	\$18,152,174



REVENUES AND EXPENDITURES

Division of Power



Power Enterprise Fund	2021	2020	2019
Revenue			
Beginning cash balance	\$29,186,224	\$32,633,055	\$26,644,261
Commercial	\$67,917,163	\$67,302,808	\$71,152,581
Residential	\$9,684,621	\$8,399,516	\$8,787,722
Investment earnings	\$1,096,913	\$902,734	\$1,069,554
Kilowatt hour tax reduction	(\$3,312,758)	(\$3,192,372)	(\$3,369,256)
Other	\$3,417,631	\$2,719,868	\$2,792,041
Power Cost Reserve Adjustment (PCRA)	\$7,538,338	\$2,719,868	\$6,347,455
Debt refinancing	-	-	-
Adjustments	-	-	-
Transfer in	-	-	-
Total revenue	\$86,341,909	\$83,095,032	\$86,780,098
Expenditures			
Personnel	\$9,602,060	\$10,457,539	\$10,455,132
Purchase power	\$56,096,092	\$56,473,163	\$52,838,931
Supplies and materials	\$2,558,117	\$2,598,637	\$1,320,421
Services	\$8,004,967	\$7,230,023	\$6,005,781
Pro-rata	\$3,767,405	\$3,639,100	\$3,852,824
Other	\$20,000	\$506	\$6,854
Capital equipment	\$3,155,449	\$3,999,340	\$4,176,267
Debt service	\$888,925	\$554,007	\$419,089
Power share of DPU	\$1,747,536	\$1,589,548	\$1,716,001
Total expenditures	\$85,840,551	\$86,541,863	\$80,791,300
Ending cash balance	\$29,687,582	\$29,186,224	\$32,633,059

Division of Water

Water Enterprise Fund	2021	2020	2019
Revenue			
Beginning cash balance	\$127,677,442	\$100,391,034	\$83,093,704
Water charges	\$205,433,741	\$193,273,710	\$184,540,332
Water billing penalties	\$652,912	\$1,078,318	\$2,202,372
Investment earnings	\$2,550,384	\$4,786,313	\$5,450,284
System capacity	\$7,054,852	\$6,672,970	\$8,036,559
Sewer billing charges	\$2,311,606	\$2,172,740	\$1,870,856
Meter service fees	\$919,750	\$688,598	\$808,326
Other revenue	\$2,725,469	\$1,088,085	\$2,637,003
Debt refinancing	-	\$5,025,517	-
Adjustments	-	-	-
Total revenue	\$221,648,715	\$214,786,552	\$205,545,733
Expenditures			
Personnel	\$40,320,105	\$43,480,790	\$44,973,167
Supplies and materials	\$19,493,772	\$18,288,180	\$18,470,634
Services	\$26,852,144	\$26,371,572	\$24,956,400
Pro-rata	\$9,447,406	\$8,909,094	\$8,941,206
Other	\$18,686	\$3,611	\$23,080
Capital equipment	\$1,545,547	\$2,005,937	\$1,084,492
Debt service	\$78,448,311	\$77,955,019	\$79,057,864
Water share of DPU	\$10,407,765	\$10,485,940	\$10,741,559
Transfers	\$19,505,281	-	-
Total expenditures	\$206,039,018	\$187,500,144	\$188,248,403
Ending cash balance	\$143,287,139	\$127,677,442	\$100,391,034



THE CITY OF
COLUMBUS

columbus.gov/utilities/
614-645-8276

