

2020

ANNUAL REPORT

THE CITY OF
COLUMBUS
ANDREW J. GINTHER, MAYOR

DEPARTMENT OF
PUBLIC UTILITIES

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PUBLIC UTILITIES



Andrew J. Ginther
Mayor



Tracie Davies
Director

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COLUMBUS CITY COUNCIL

From left: Rob Dorans, Public Utilities Committee Chair; Shayla Favor; Emmanuel Remy; Shannon Hardin, President; Priscilla Tyson; Mitchell Brown; and Elizabeth Brown, President Pro Tempore.



YEAR IN REVIEW

Normally in this space, I look back at department milestones achieved over the previous 12 months and preview a few anticipated highlights for the coming year. I will mention a few of those again here; however, 2020 was anything but normal – so this year's column will focus mainly on the extraordinary efforts our employees invested toward maintaining essential services for our community.

In mid-March, we and other City of Columbus departments were notified by Mayor Andrew J. Ginther that many operations would continue remotely in an effort to protect workers and slow the spread of COVID-19. With extraordinary assistance from the Department of Technology, some of our employees were able to continue their duties away from the office. However, drinking water and wastewater treatment plants operate 24/7 and cannot be maintained remotely, nor can inoperative streetlights, power outages, or water line breaks be repaired from home. Our personnel adapted to a new normal and continued the progress of this department without skipping a beat, serving our ratepayers seamlessly and allowing them to focus on getting their families through the pandemic. Deserving of special mention: almost everyone in our Sewer Maintenance Operations Center, including support staff, responded in May to activate the Franklinton Floodwall during one of the heaviest wet weather events in recent memory.

None of this was easy, but if there is a silver lining to any of these enormous challenges it's that our department may be better prepared for the future. The pandemic forced us to adapt in ways that could apply to other scenarios, and our Emergency Preparedness team has continued to coordinate exercises while updating the department's Emergency Action Plan.

All the while, several initiatives aimed at improving reliability, increasing efficiency, meeting regulatory guidelines, and enhancing customer service advanced during 2020. Some strategies will accomplish more than one goal, including these projects:

- The Division of Power's Smart Lighting Project, which will convert the city's streetlight system to light-emitting diode (LED) technology, will improve efficiency and reliability throughout the system. In the planning stages for several years, 2020 saw an implementation plan developed and the control system contract awarded. While division crews have been upgrading current lights to the new LED standard during repair calls, 2021 will bring a pilot project to up-

grade approximately 2,500 streetlights in the Linden area.

- The Lower Olentangy Tunnel (LOT), by the Division of Sewerage and Drainage, will be the city's second largest capital project ever (behind only the Olentangy-Scioto-Interceptor-Sewer/Augmentation and Relief Sewer, or OARS Tunnel). Groundbreaking is expected in 2021; when completed five years later, LOT will add capacity to the sanitary sewer system, significantly reducing overflows between the Arena District and the Tuttle Park area just north of The Ohio State University campus area.
- Upgrades at all three drinking water treatment plants, including installation of standby power generators at the two largest plants, which will improve the city's ability to provide water during extended power outages. Installation and testing was completed at the Dublin Road facility, while final installation of equipment and testing at Hap Cremean is planned for 2021.

In addition to these capital projects, members of this department worked with Mayor Ginther on several initiatives aimed at promoting energy sustainability within our commercial and residential customer bases, including:

- Unanimous passage by Columbus City Council of an energy benchmarking ordinance, under which owners and operators of large buildings are required to track and report their building's energy and water usage.
- Surpassing 30,000 residential home energy audits within two years. These audits identify opportunities for efficiency in homes and ultimately save residents energy and money.
- In November, Columbus voters overwhelmingly passed a ballot issue to allow the city to take part in community-choice aggregation, allowing residents and business owners to join together in purchasing clean electricity at bulk rates and increasing the city's use of wind and solar energy.

The list of accomplishments during pandemic conditions is long, though none as important as maintaining uninterrupted utility services. There will be further adjustments as more "normal" conditions return, but based on what our employees were able to achieve during the most challenging of times, I'm confident we will continue providing the excellent utilities on which our neighborhoods depend.

Director Tracie Davies

PROTECTING THE ENVIRONMENT

Regulatory Compliance

The department received recertification of its Environmental Management System (EMS) to the environmental standards established by the Organization of International Standards (ISO 14001:2015). First received in 2014, this commitment involves a robust regulatory compliance program. The City of Columbus is one of very few public utilities in the country known to have a fully operational ISO-certified EMS. 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 Division of Water and Division of Sewerage and Drainage facilities regularly test raw water, finished drinking water and influent and effluent wastewater.

The Stormwater and Regulatory Management Section in the Division of Sewerage and Drainage (DOSD) oversees non-point source stormwater pollution by administering a Municipal Separate Storm Sewer System NPDES permit. In 2020, the following was done to protect local waterways: 4,121 site inspections on active construction sites, 411 inspections of post-construction best management practices, field screens of 553 storm sewer outfalls, and investigations of 120 reported spills or suspected illicit discharges to the storm sewer system. Inspections were made at 114 businesses for compliance with the Ohio EPA Multi-Sector General Permit for stormwater discharge. Fines totaling \$27,750 were issued for notices of violation. In coordination with Columbus Public Health, the Septic Tank Elimination Program connected 14 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 3,669 restaurant inspections on

behalf of the pretreatment program. Pretreatment staff investigated two grease incidents, met with four food service establishments as part of the Fats, Oils and Grease Best Management Program, and distributed 52 door hangers in neighborhoods. This section recovered \$11,737 in costs from four sewer users associated with removing sewer blockages. \$2,750 in fines were issued for various violations.

The Backflow Compliance Office, under the Division of Water (DOW), protects the water distribution system from contamination that could originate at customer premises through backflow. The office oversees and tracks installation and annual testing for over 23,000 accounts with backflow prevention devices throughout the service area. About 8,400 of those are non-residential and nearly 14,900 are residential.

EcoSmart Choice Program and Green Power

In addition to the 20% green purchase power component, the Division of Power (DOP) continued to offer the EcoSmart Choice opt-in program. Participants purchased 97,917,430 kWh of zero-emissions energy through renewable energy certificates (REC). These RECs 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 facilities served by the division have been enrolled in the program at a 50% participation level, which includes the water and wastewater treatment plants.



Public Education, Outreach and Partnerships

GreenSpot was created in 2008 as a way for people to learn about living and working greener. 2020 saw membership growth, which now totals 21,880.



This includes 20,440 household members, 1,294 business members, and 146 community groups. Additionally, three businesses graduated from the GreenSpot Sustainable Business Course. GreenSpotLight award winners were OhioHealth, E.P. Ferris, and MAD Scientist Associates. Indianola Informal K-8 was designated as the first Columbus City School GreenSpot School. The program held several webinars and created several videos covering sustainability topics for children and

adults. More than 1,700 households participated in the GreenSpot Backyard Conservation cost share program to receive either a rain barrel or native plants.

Watershed Management coordinated a self-guided reservoir litter cleanup, allowing volunteers to select their favorite reservoir and perform cleanup activities while observing social distancing. The event spanned several weeks, during which time 129 volunteers collected 90 bags of litter from Hoover and Griggs reservoirs. The event was sponsored in part by the Franklin County Soil and Water Conservation District and Keep Delaware County Beautiful. Watershed also entered into a pilot project to bring recycling to public park areas at Hoover and Griggs reservoirs, working with Keep Columbus Beautiful and the Department of Public Service. 26 recycling containers were set out and now offer park visitors the opportunity to beverage containers. The project is part of a Keurig/Dr. Pepper grant from Keep America Beautiful designed to bring recycling opportunities to waterways. Additionally, this section of the Division of Water developed and presented virtual training to assist farmers in developing leadership skills called "Tap Your Potential: A Training to Grow Farmer Leadership in Watershed Management."

Through its agreement with the City of Columbus, Franklin Soil and Water Conservation District implements several stormwater education programs for Columbus residents. Despite the challenges in 2020 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. 2,030 Columbus residents participated in the "Get Grassy!" lawncare education campaign and the GreenSpot Community Backyards program (a 37% increase from last year), which provided 735 rebates for rain barrels or native plants. Additionally, 3,186 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 2,174 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 296 new pledges in 2020, bringing the new PUP pledge total to 6,636.



CAPITAL REINVESTMENT

Division of Power

In 2020, DOP accomplished several major goals. The division continued to grow its customer base, adding 1,200 new accounts. A vegetation management plan was developed to provide better processes for tree services. Staff worked with the Ohio Department of Transportation (ODOT) to relocate a pair of 69-kV and 138-kV transmission lines that run along the east side of I-71 heading into downtown from the south. The \$6 million ODOT-funded project clears the way for the next phase of the Columbus Crossroads interchange improvement at I-70 and I-71. The new transmission structures are among the tallest in the system and will allow for the construction of ODOT's future flyover ramps. See photo below.

Commitment to Mayor Ginther's sustainability goals continued; over 32% of the division's energy came from renewable resources, and the EcoChoice Program continued (see page 2).



The Smart Lighting control system project was awarded to the Panic Lighting and Dimonoff team, and an Implementation Plan was developed with consultant HNTB, with a pilot phase of 2,550 lights in the Linden area. Current standards for the City of Columbus require all new streetlights to be light-emitting diode (LED). Also, as existing lights fail they are replaced with LED. Additionally, the Smart Lighting project will convert all existing high-pressure sodium (HPS) lights to



LED as this project moves forward. Approximately 2,800 street lights are now LED.

The construction project for the city's five-megawatt hydroelectric plant in the O'Shaughnessy Dam was bid out and awarded. Notice to proceed is anticipated in 2021 with completion in 2023.

To improve overall reliability, staff continued the plan to update one underground and one overhead circuit annually. The division replaced an aging substation transformer at the Dublin Road Substation (see photo). Construction began on one of the division's lowest-performing overhead and underground circuits. The underground crews refurbished 28 street light circuits with LED and three wire conversions.

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.



Cleaner streams.
Stronger neighborhoods.

Clintonville 1, the first of 21 Blueprint project areas, broke ground in 2017 and constructed 423 rain gardens (see photo of example installed in 2020) and a wetland feature in Whetstone Park. In 2019 the project began the second phase of implementation: lining individual home sewer laterals, and assessing and implementing solutions for roof water redirection. By the end of 2020, 2,130 sewer laterals had been lined and 1,270 homes had some or all downspouts redirected. All four pillars of Blueprint will be completed for the Clintonville 1 project area in 2021.

Initial construction in the North Linden 1 project area began in 2020. The project will first install over 200 green infrastructure features, and then begin lateral lining and roofwater redirection in 2022.

Engagement with residents in the green infrastructure design process began or continued in the Hilltop and Miller Kelton project areas.

In 2020 Blueprint Columbus installed 444 sump pumps in the Clintonville 1, North Linden 1, Hilltop 1, and Miller Kelton project areas. Blueprint sump pump installations began in 2017, and has installed a total of 1,090 sump pumps in qualifying residential homes.

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



CAPITAL REINVESTMENT

Division of Sewerage and Drainage (continued)

Sewer System Engineering Capital Improvements

West Franklinton Sanitary Sewer and Storm Sewer Improvements Project

An existing 10" diameter sanitary sewer was replaced with a new 15" sanitary sewer, and a new 42" storm sewer was installed at the Central Avenue underpass at I-70. This project relieves bottlenecks in both the sanitary and storm sewer systems which used to cause sewer backups, water in basements, and flooding of the freeway and railroad underpasses. This project was recommended in the city's Integrated Plan as one of the "gray" infrastructure improvements for the West Franklinton Blueprint study area. Construction was substantially completed in December 2020. (See photo).



Annual Sewer Lining

This program invests approximately \$5 million per year rehabilitating small diameter sanitary sewers. Sewers are rehabilitated by trenchless methods, inserting a resin-impregnated felt liner through manholes, inflating and heat curing the liner once in place, resulting in a structurally sound pipe within a pipe. Rehabilitation candidates are identified by routine closed circuit television inspection. The sewer lining program is part of the division's ongoing efforts to maintain the integrity of the aging portions of the collection system. This program is in addition to sewer lining also being performed as part of Blueprint Columbus.

Woodward/Wildwood/Woodnell Storm Sewer Improvements

This project combined a new sanitary sewer project with a storm drainage improvement project in the Woodward, Wildwood and Woodnell avenues area. The sanitary sewer replaced failing onsite septic systems in a previously unsewered area on Woodward Avenue. The storm sewers improve drainage and reduce street, yard and structural flooding. Major construction was completed in 2020 (second photo).



Hayden Run Aerial Sewer Improvements

This project replaced a deteriorated aerial sewer which spans a wooded ravine with new 42" fiber-reinforced pipe. The contractor had to deal with tight easements and difficult access to this off road site. The project was completed in June 2020.

Wastewater Treatment Plant Capital Improvements

The Chemically Enhanced Primary Treatment (CEPT) project provides Southerly Wastewater Treatment Plant (SWWTP) 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 improvements include additional raw sewage pumping, screening, primary clarification, disinfection, de-chlorination, and gravity thickening. Split into four construction contracts - Site Preparation, Preliminary Treatment, Clarification, and Disinfection - the first was completed

in 2017, clarification and disinfection were substantially completed in 2020, and primary treatment is scheduled for substantial completion in 2021.

The Jackson Pike Wastewater Treatment Plant (JPWWTP) Biosolids Land Application Improvements project will increase the plant's capacity to store biosolids and facilitate maximum beneficial agricultural use of biosolids. Four existing biosolids land application storage tanks will be rehabilitated, and will involve pumping systems and a new loadout facility. Construction began in 2019 and continued in 2020.

The JPWWTP Cogeneration Facility project will install equipment to provide beneficial reuse of digester biogas, which will produce about half the total electricity used at the plant, and will provide large amounts of boiler heat for the treatment processes and buildings. Detailed design was completed at the end of 2020, with construction set to bid in early 2021.

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. After detailed design was completed, construction is scheduled for 2021-2022.

Facilities and Equipment Upgrade for Whittier Street Storm Tanks: located on the Whittier Peninsula, adjacent to the Greenlawn Dam, the facility was built in the 1930s and has not seen significant upgrades since 1986. The equipment and instrumentation is nearing the end of its useful life, and requires upgrades in order to remain operational. After installation of the OARS (Olentangy-Scioto-Interceptor-Sewer Augmentation Relief Sewer) tunnel the storm standby tanks are no longer needed. However, full rehabilitation of the gatehouse is needed to ensure continued operation of the sewer system. Construction was set to kick off in early 2021 and expected to last for two years.

Real Time Control Sewer Optimization: sewer collection system visualization with flow meters integrated into Supervisory Control and Data Acquisition (SCADA) began in 2018 and system-wide real time control implementation continued. The system allows operators to see and consider flows coming from further upstream in the sewer system before the flows arrive at the plants. Additional predictive tools were developed to alert staff when there is likelihood that the CEPT process will be needed.

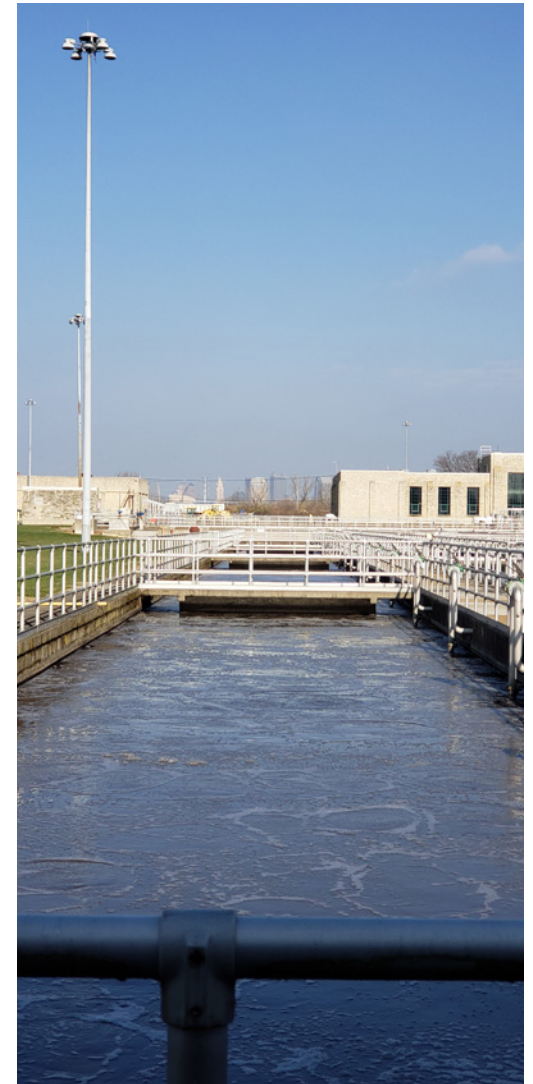
The Small Capital Projects program was utilized in 2020 to replace digester gas piping and valves, determine the repairs needed for the sludge concentration

tank and incinerator buildings, and design a new valve actuator system for the raw sewage pumps at Jackson Pike. The program was also utilized to provide Southerly's south entrance with lights and a new turn lane off of US 23, a methane detection system replacement for the Fairwood garage, a pedestrian bridge, and hand railing rehabilitation.

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. In 2020 three roofs were replaced at the Fairwood Avenue, Jackson Pike, and Southerly facilities.

The HVAC and Air Purification program was funded to address the Jackson Pike and Southerly wastewater treatment plants, Sewer Maintenance Operation Center, and Compost facilities. Five HVAC construction contracts were under construction in 2020.

The Facilities Equipment Maintenance program consists of approximately 11 department-wide maintenance contracts that utilize operating funds and maintain, test, repair and/ or replace support facility components, process and ancillary equipment, infrastructure, and building components. These maintenance contracts are highly effective because funding for repairs is established, resulting in timely response to emergencies.



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 2020 are summarized below.

Water Distribution

In 2020, the Division of Water legislated over \$9 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 projects in 2020 included:

- South Broadleigh Road Area Water Line Improvements project, which included approximately 17,000 linear feet of new mains ranging in size between 6” and 8”
- East Gates Street Area Water Line Improvements project, which included approximately 11,000 linear feet of new mains ranging in size between 6” and 8”
- Valleyview Drive Area Water Line Improvements project, which included approximately 11,000 linear feet of new mains ranging in size between 6” and 8”

Annual Water Storage Tank Painting

The division maintains 25 water storage tanks. An annual tank painting program keeps these tanks in optimal condition. Approximately \$2 million was legislated in 2020 for painting projects at the Westgate West tank and the Summitview tank (see photo).

Rinehart Public Utilities Complex Water Service Improvements

This project provided a master water meter and backflow prevention to serve all of the buildings at the Rinehart Public Utilities Complex. The \$341,000 improvement was completed to comply with regulatory requirements.

Watersheds and Water Plants

Highlights for 2020:

- Completed design for the O’Shaughnessy Dam Hydroelectric Facility improvements and received bids for the construction work.
- Completed design for Part 1 of the Hoover Dam Improvements and started construction, which will replace aging gates, valves, and other equipment inside the dam.
- Continued work on the Land Stewardship Update project.
- Completed design of boat launch improvements at the Griggs Reservoir and awarded a contract for construction of the improvements.
- Completed demolition of abandoned buildings and utilities at the Home Road property to prepare the site for a future fourth water plant.





- Completed the Independent Consultant Review of the O'Shaughnessy Dam as required by the Federal Energy Regulatory Commission.
- At the Dublin Road Water Plant, construction continued on the Ultraviolet (UV) Disinfection Improvements project. This included installation of major site utilities, getting the UV building up and under roof, and starting interior work on major process piping, electrical systems, and building mechanical systems. Installation and testing of the Standby Power Generators was completed and system made available for operation, which will improve the division's ability to provide water during extended electrical utility power outages. Detailed design for the Clarifier Replacement project was completed and a contract awarded for the construction work.
- At the Hap Cremean Water Plant, installation of all UV reactors (see photo) was completed and new lime slaking equipment was installed, tested, and placed into

operation. Construction continued on the Standby Power Generators (see second photo), with all major equipment installed and the system made ready for testing work to follow in early 2021. Construction continued on the Basin Concrete Rehabilitation project, which addresses age and weather related deterioration of the plant's treatment basins. Design work was completed and construction started on the Sludge Line Replacement project. Design work continued on the Hypochlorite Conversion, the Lime Dust Collection Improvements, and Part 2 of the Basin Concrete Rehabilitation projects.

- At the Parsons Avenue Water Plant, design was completed and construction started on the Well Pump Replacement and the HVAC Improvements projects. Design work continued on the Lime Slaker Replacement and the

Hypochlorite Conversion projects. Design work was started on the Control Room Renovation project and work continued on the SCADA Upgrade project, which will upgrade the computer hardware and software used to monitor and control the treatment process.

- Work on Part 1 of the Residuals Management Plan Update was completed and subsequent work to develop a Request for Proposal for a Turnkey Residuals Handling contract began.
- At the Rinehart Utilities Complex, Phase 1 and Phase 2 construction work was completed for office renovations, while designs were completed and construction contracts were awarded for security enhancements and the Standby Power Improvements project.



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, normally 55 hours per week. Customers can pay their bills online, over the phone, by mail and in person at various locations.

Operations were of course impacted by the COVID-19 pandemic in 2020 as agencies everywhere had to figure out how 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, but staff still assisted customers over the phone and by email, and bill payment drop boxes were still available. The Call Center had to limit hours for several weeks to allow social distancing of staff until safety measures could be implemented. Water turn offs due to non-payment were put on hold in March and remained that way through the end of the year.

A 20% discount for water and sewer consumption charges continued to be offered for qualifying low-income residents in single and multi-family homes.



Customer Service Highlights	2020	2019	2018
Total customer calls	260,543	438,245	409,810
Total field/meter related service calls	51,696	93,350	96,316
Low income water/sewer discount participants	5,891	5,679	5,459
Senior water discount participants	3,561	3,505	3,482
Senior power discount participants	204	205	197
Customer Accounts Billed			
Water (includes contracted communities)	279,746	278,582	278,139
Sewer (includes contracted communities)	276,935	275,535	274,872
Stormwater	198,653	198,176	197,831
Power	15,900	15,895	14,950

Qualifying senior households also received an additional discount on their water bill. Senior power customers eligible for that program enjoyed a 10% consumption discount. New in 2020, the ability to apply for the discounts online was added to the department's web site.

Due to higher utility bill delinquencies related to higher unemployment caused by the economic downturn and pandemic, a program was created to help customers struggling to pay their bills. Using federal Coronavirus Relief and Economic Security (CARES) Act dollars, the department created a program that allowed qualifying Columbus customers the opportunity to receive up to \$750 assistance toward a water/sewer bill and up to \$500 toward a city power bill. 968 households were approved for assistance from that program by the end of the year, which included 906 water/sewer and 62 power accounts. Setting up payment plans was encouraged for anyone with remaining balances.

The customer portal, originally rolled out in 2017, finished off the year with 120,774 customers signed up to use the portal. The portal provides ways for customers to sign up for paperless e-bills, to pay online, enroll in autopay and other features.

The Division of Power was notified in 2020 that they had earned 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.

The Communications Office coordinated media and public records requests, printed materials and reports, and OEPA-required customer notifications. The Sustainability Office coordinated various outreach related to the Columbus Blueprint program and other sustainability initiatives. Facebook and Twitter social media followers grew rapidly with so many residents spending more time on-line during pandemic stay-at-home orders issued by the state.

Residents continued to benefit from the Project Dry Basement sewer backup prevention program, which began in 2004. 143 additional homes received backflow valves in 2020, bringing the total homes in the program to 1,188.

To learn more about these programs, please visit columbus.gov/utilities.

Many events were of course cancelled due to the COVID-19 pandemic and those that continued went to a different virtual or self-guided format.

The annual Columbus Race for Global Water 5k, which has been held at Hoover Reservoir, adapted into a virtual 5k that collaborated with the Cincinnati and Cleveland races for an epic 5K event spanning across Ohio in October. In light of the challenges that the past year presented, the race not only made a difference for clean water and sanitation awareness, but also to many local communities by allotting some of the proceeds to also benefit the Ohio Association of Foodbanks. This combined effort managed to raise \$20,000 through the virtual race platform with strong support from the communities and the water industry.

Watershed Management participated in the Hoover Fishing Seminar in February with an educational display.

The department participates annually in an Engineer for a Day event with the Department of Public Service, which occurred in February before the pandemic began. 28 high school students considering engineering as a career choice participated to learn more about engineering and opportunities with the City of Columbus. The day also includes recognition of the city's Engineer of the Year and Young Engineer of the Year awards.



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. Approximately 16,000 customers enjoy reliable city power. The revenue from power sales allows the division to maintain and energize almost 57,000 streetlights within the Columbus limits. The division is also responsible for maintaining the Ohio Department of Transportation's freeway lights on major highways within city limits, and the Division of Water's O'Shaughnessy Reservoir dam's hydroelectric unit.

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



Sewer Collection System

4,540 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 2,577 miles of sanitary sewers, 1,807 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) 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, and numerous stormwater control facilities, catch basins and inlets, ditches, flap gates and manholes.

Power Maintenance	2020	2019	2018
Wire/cable repaired (feet)	110,279	119,348	105,693
Transformer kVA installed/removed	6,226	10,125	15,242
Luminaires repaired	1,423	1,334	1,600
Lamps repaired	5,744	7,389	6,212
Wooden poles replaced	189	251	245
Standard poles replaced	151	190	174
Total work orders	14,328	14,790	13,242

Sewer Maintenance	2020	2019	2018
Repairs	908	1,419	1,558
Catch basins/inlets inspected	14,730	7,092	10,669
Catch basins, inlets, manholes cleaned	5,867	8,830	10,436
Miles power cleaned	105	166	223
Miles closed circuit televised	49	57	73
Total work orders	8,382	7,437	8,149

Water Distribution System

Water Distribution Maintenance crews maintain 3,561 miles of waterline, which includes 2,531 miles in Columbus and 1,030 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. In 2020, the pitometer leak group investigated 503 miles of water main and pinpointed 77 leaks for repair, which addressed an estimated leak volume of 3 million gallons per day.

Other maintenance responsibilities include: 38 water tanks (26 Columbus, 12

suburban contracted areas); 26 booster stations (15 Columbus, 11 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 metro area. (Please see the Customer Service page for totals on those field service calls.)



Water Maintenance	2020	2019	2018
Main Line Leak Repairs			
Columbus	292	353	364
Suburban contracted	183	205	148
Total	475	558	512
Taps/Service Lines			
Repaired	160	224	270
Replaced	1,587	1,996	2,005
Cut-off at main	49	65	106
Put-in-shapes	172	204	202
New taps main line	39	63	27
Valves			
Repaired	53	75	55
Replaced	153	303	308
Hydrants			
Repaired	1,072	1,383	1,208
Replaced	42	61	81
Total work orders	3,263	4,176	4,384

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 in 22 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 37.3% of the water in the service area in 2020 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

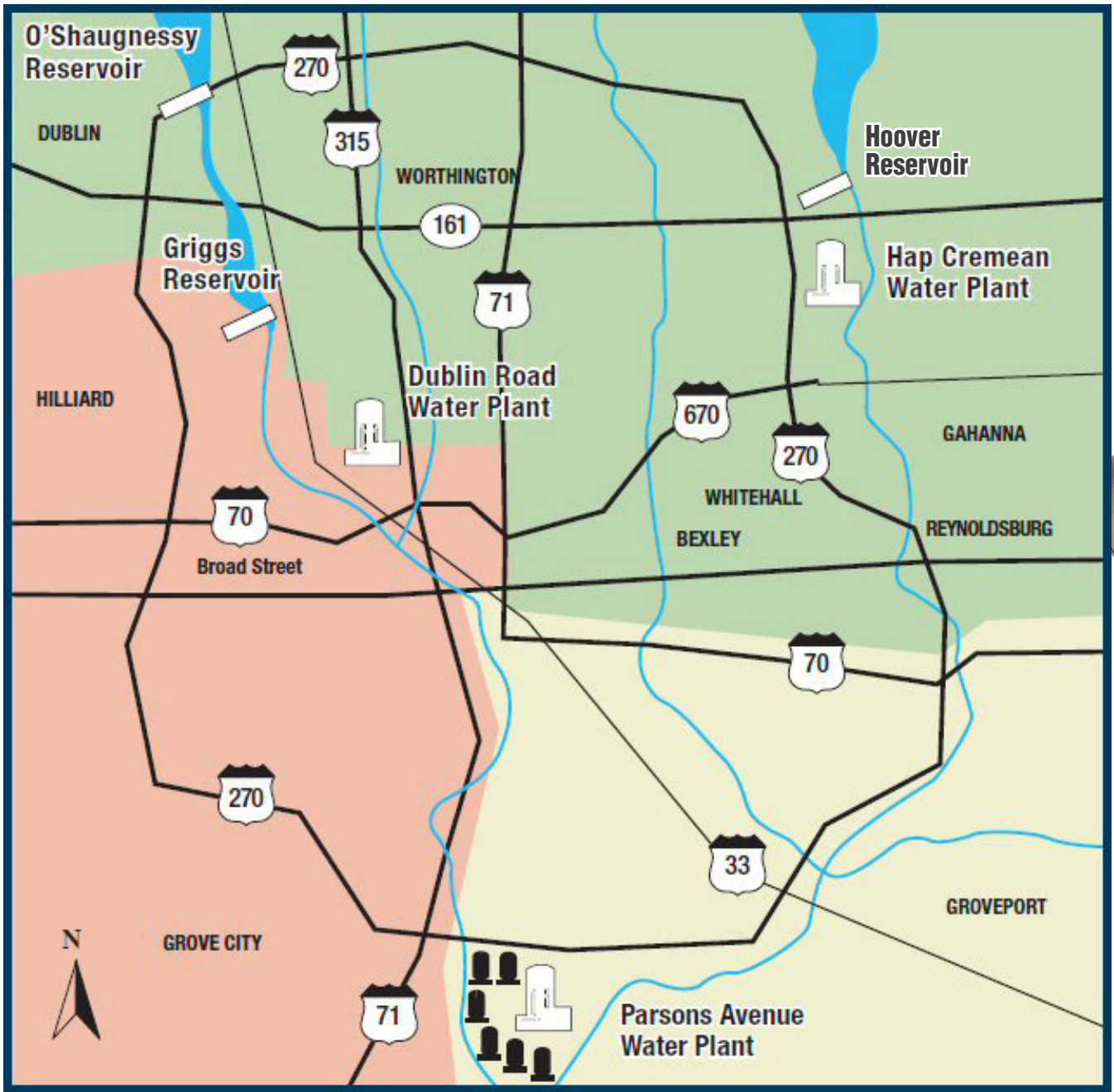
Big Walnut Creek, and supplemental water is pumped in from the Alum Creek Reservoir during dry periods as needed. This plant provided 45.2% of water in the service area and has a 125 MGD capacity.

- 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 17.5% 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.

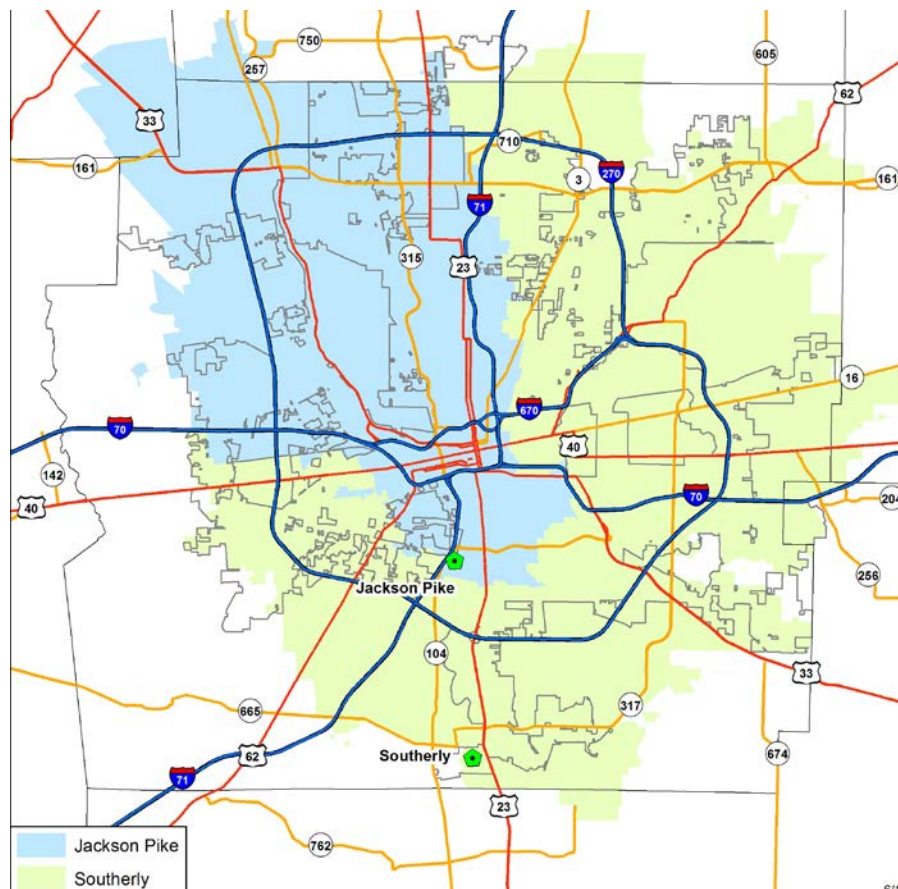
Finished Drinking Water Summary	2020	2019	2018
Total billion gallons	51.5	50.6	48.8
Average million gallons per day	140.73	138.51	133.7
Estimated service population	1,252,394	1,233,879	1,215,363
Average per capita consumption gallons per day (Includes industry and business usage, total pumped divided by estimated population)	112	112	110
Central Ohio precipitation	50"	44"	55"



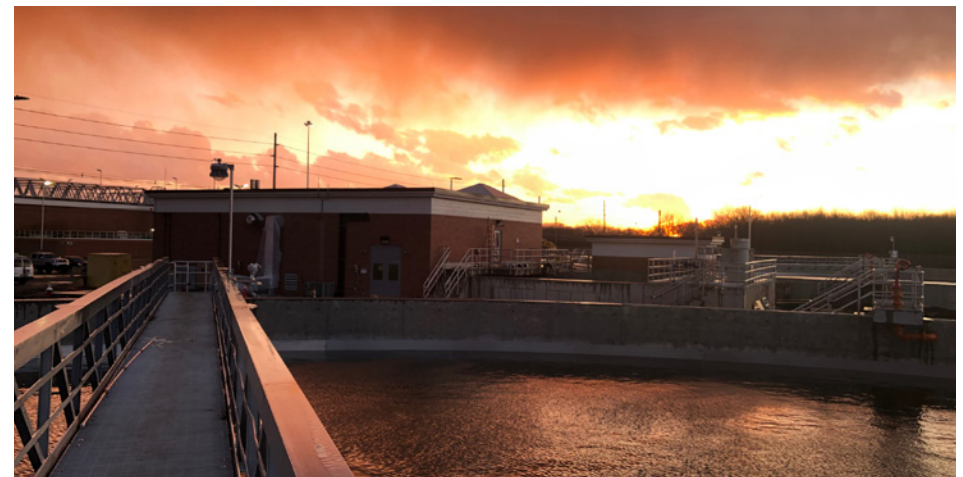
WASTEWATER TREATMENT

The City of Columbus 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 (Jackson Pike 614-645-3138 or Southerly 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.



Southerly Wastewater Treatment Plant at sunset

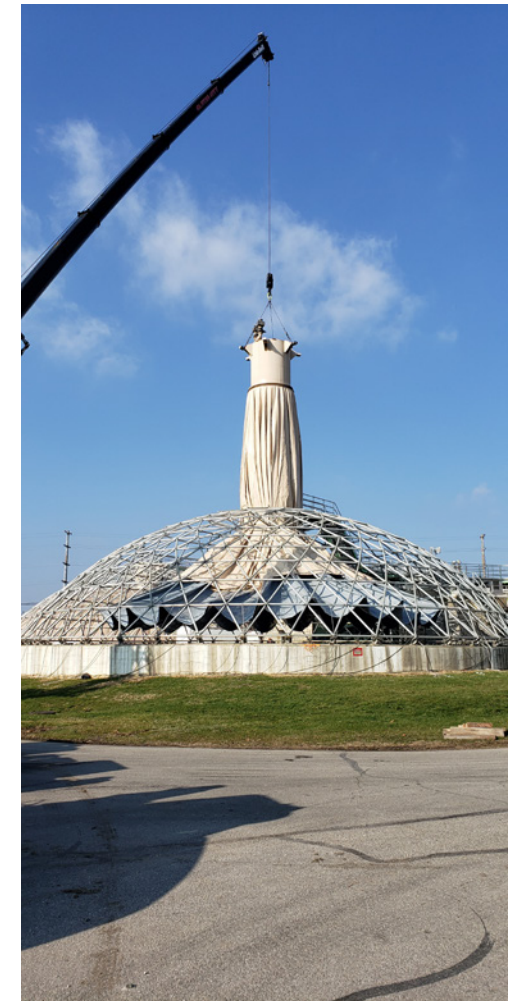
Wastewater Treatment Summary	2020	2019	2018
Total billion gallons	70	69	78
Average million gallons per day	190	188	212
Carbonaceous biological oxygen demand removed	98%	98%	98%
Suspended solids removed	98%	98%	98%
Central Ohio precipitation	50"	44"	55"
Dry Tons Biosolids Handled:			
To compost	9,457	9,811	8,116
To beneficial reuse	13,726	15,084	16,594
Dry tons to energy (gas)	17,888	19,377	18,382
Total	41,071	44,272	43,092
Compost Facility Production			
Incoming sludge (wet tons)	46,628	48,597	43,993
Incoming sludge (dry tons)	9,457	9,811	8,116
Average percent dry solids	20%	19%	19%
Com-Til sold/donated (cubic yards)	42,743	45,222	39,470
Total yard waste received (wet tons)	26,408	10,092	9,041
Total Com-Til revenue	\$510,058	\$485,680	\$410,110



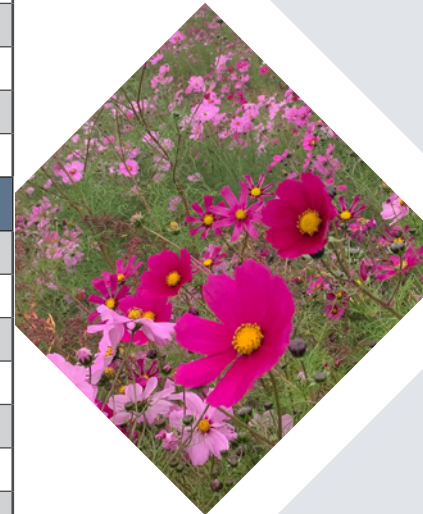
REVENUES AND EXPENDITURES

Division of Sewerage and Drainage

Sanitary Enterprise Fund	2020	2019	2018
Revenue			
Beginning cash balance	\$150,331,803	\$133,536,335	\$121,566,039
Sewer service charges	\$229,482,255	\$219,059,242	\$219,020,009
Wet weather fees	\$40,792,447	\$38,343,891	\$37,515,626
Investment earnings	\$7,248,140	\$8,772,871	\$5,156,888
System capacity charges	\$7,889,516	\$8,821,484	\$7,334,835
Storm sewer reimbursements	\$7,899,551	\$8,706,623	\$7,956,033
Other	\$5,581,950	\$2,203,665	\$2,023,160
Debt refinancing	-	-	-
Adjustments	-	-	-
Total revenue	\$298,893,860	\$285,907,777	\$279,006,552
Expenditures			
Personnel	\$42,570,328	\$43,004,066	\$45,543,167
Supplies and materials	\$8,620,931	\$9,001,555	\$7,194,613
Services	\$35,143,585	\$33,564,350	\$33,187,201
Pro-rata	\$12,333,921	\$12,285,284	\$11,740,743
Other	\$320,275	\$254,728	\$130,263
Capital equipment	\$3,699,293	\$4,552,769	\$2,789,329
Debt service	\$151,963,239	\$154,145,816	\$156,266,048
Sewer share of DPU	\$11,654,056	\$12,303,740	\$10,184,891
Total expenditures	\$266,305,629	\$269,112,309	\$267,036,256
Ending cash balance	\$182,920,034	\$150,331,803	\$133,536,335



Stormwater Enterprise Fund	2020	2019	2018
Revenue			
Beginning cash balance	\$18,152,174	\$18,135,026	\$16,192,110
Storm sewer charges	\$43,002,869	\$41,575,640	\$41,075,693
Investment earnings	\$1,053,131	\$1,255,397	\$853,926
Storm penalties	\$187,235	\$397,433	\$407,529
Other	\$433,329	\$64,301	\$77,762
Debt refinancing	-	-	-
Adjustments	(\$69,550)	\$35,844	\$97,386
Total revenue	\$44,607,014	\$43,328,615	\$42,512,296
Expenditures			
Personnel	\$2,355,304	\$2,367,978	\$1,844,017
Supplies and materials	\$58,850	\$49,736	\$32,523
Services	\$908,536	\$871,451	\$1,023,027
Pro-rata	\$1,924,755	\$1,918,475	\$1,841,607
Capital equipment	\$40,825	\$90,233	-
Other	-	-	\$100,000
Debt service	\$11,773,369	\$14,897,029	\$14,194,892
Reimbursement to sanitary	\$7,899,551	\$8,706,623	\$7,956,033
Storm share of DPU	\$2,705,432	\$3,209,552	\$2,704,119
Department of Technology allocation	\$1,768,355	\$1,354,032	\$1,241,782
Street cleaning	\$8,966,948	\$9,846,358	\$9,631,381
Total expenditures	\$38,401,925	\$43,311,467	\$40,569,381
Ending cash balance	\$24,357,263	\$18,152,174	\$18,135,025



REVENUES AND EXPENDITURES

Division of Power

Power Enterprise Fund	2020	2019	2018
Revenue			
Beginning cash balance	\$32,633,055	\$26,644,261	\$24,828,231
Commercial	\$67,302,808	\$71,152,581	\$70,640,364
Residential	\$8,399,516	\$8,787,722	\$8,216,297
Investment earnings	\$902,734	\$1,069,554	\$676,213
Kilowatt hour tax reduction	(\$3,192,372)	(\$3,369,256)	(\$3,320,402)
Other	\$2,719,868	\$2,792,041	\$2,182,208
Power Cost Reserve Adjustment (PCRA)	\$2,719,868	\$6,347,455	\$8,279,789
Debt refinancing	-	-	-
Adjustments	-	-	-
Transfer in	-	-	-
Total revenue	\$83,095,032	\$86,780,098	\$86,674,470
Expenditures			
Personnel	\$10,457,539	\$10,455,132	\$10,338,536
Purchase power	\$56,473,163	\$52,838,931	\$56,703,554
Supplies and materials	\$2,598,637	\$1,320,421	\$1,845,916
Services	\$7,230,023	\$6,005,781	\$6,220,639
Pro-rata	\$3,639,100	\$3,852,824	\$3,779,225
Other	\$506	\$6,854	-
Capital equipment	\$3,999,340	\$4,176,267	\$3,429,664
Debt service	\$554,007	\$419,089	\$1,159,466
Power share of DPU	\$1,589,548	\$1,716,001	\$1,381,440
Total expenditures	\$86,541,863	\$80,791,300	\$84,858,440
Ending cash balance	\$29,186,224	\$32,633,059	\$26,644,261

Division of Water

Water Enterprise Fund	2020	2019	2018
Revenue			
Beginning cash balance	\$100,391,034	\$83,093,704	\$70,950,155
Water charges	\$193,273,710	\$184,540,332	\$182,698,556
Water billing penalties	\$1,078,318	\$2,202,372	\$2,322,769
Investment earnings	\$4,786,313	\$5,450,284	\$3,079,718
System capacity	\$6,672,970	\$8,036,559	\$5,793,870
Sewer billing charges	\$2,172,740	\$1,870,856	\$1,579,911
Meter service fees	\$688,598	\$808,326	\$800,133
Other revenue	\$1,088,085	\$2,637,003	\$2,706,906
Debt refinancing	\$5,025,517	-	-
Adjustments	-	-	-
Total revenue	\$214,786,552	\$205,545,733	\$198,981,864
Expenditures			
Personnel	\$43,480,790	\$44,973,167	\$46,209,375
Supplies and materials	\$18,288,180	\$18,470,634	\$17,735,996
Services	\$26,371,572	\$24,956,400	\$24,069,700
Pro-rata	\$8,909,094	\$8,941,206	\$8,537,771
Other	\$3,611	\$23,080	\$669,026
Capital equipment	\$2,005,937	\$1,084,492	\$1,110,294
Debt service	\$77,955,019	\$79,057,864	\$79,577,678
Water share of DPU	\$10,485,940	\$10,741,559	\$8,928,474
Transfers	-	-	-
Total expenditures	\$187,500,144	\$188,248,403	\$186,838,515
Ending cash balance	\$127,677,442	\$100,391,034	\$83,093,704





Prairie at the Division of Water's Home Road property in Delaware County, future site of Columbus' 4th water plant