

THE CITY OF
COLUMBUS
MICHAEL B. COLEMAN, MAYOR

DEPARTMENT OF
PUBLIC UTILITIES

A vibrant photograph of a butterfly perched on a green seed head of a flower. The butterfly is black with yellow spots and markings. The background is a bright blue sky with white clouds. In the foreground, there are several pink flowers with red centers and green seed heads. A small duck is visible in the background near the water.

2013 Annual Report



**Michael B. Coleman,
Mayor**



**Greg Davies,
Director**



**Dax Blake, P.E.
Administrator
Division of Sewerage
and Drainage**



**Herb Johanson
Administrator
Division of Power**



**Rick Westerfield, P.E., PhD
Administrator
Division of Water**

Mission:

***To enhance the quality of life, now and into the future,
for people living, working and raising families in central Ohio
through the economic, efficient and environmentally
responsible stewardship of superior public utilities.***

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Columbus, OH 43215
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year in review

FROM THE DIRECTOR

Providing reliable and affordable utilities remains our highest priority and our biggest challenge in the face of evolving regulations and the continued growth in central Ohio. How we are responding to the changing landscape is detailed in this report through facilities improvements like our water treatment plant upgrades and the new underground reservoir, as well as pilot projects that are part of the unique Blueprint Columbus plan to address sanitary sewer overflows and improve the quality of stormwater that flows into our rivers. Progress continues on the city's largest ever capital project – the OARS tunnel to address combined sewer overflows downtown – and we are emphasizing stewardship internally by pursuing accreditation for our Environmental Management System, which addresses awareness of how every employee can help protect the environment.

Our facilities at 910 and 940 Dublin Road, under construction to accommodate water plant expansions, were re-dedicated September 9, 2013 as the Dana "Buck" Rinehart Public Utilities Complex. Over 300 people attended, including former mayors Rinehart and Gregory Lashutka.

As a sign of our commitment to quality municipal electricity service, we re-established the Division of Power (previously sharing a division with Water) and named Herb Johanson, P.E., as its Administrator. We are looking at everything we can do to keep our electricity rates competitive while adding a green component that would stipulate at least 20 percent of the power we distribute is generated from renewable resources.



Other accomplishments during the past year include:

- Columbus was one of only six cities to receive the coveted Association of Metropolitan Water Agencies Platinum Award for Utility Excellence
- Ohio Concrete Project of the Year Award was presented to CH2M Hill for the parking lot at 910 Dublin Road
- Our Asset Management program, which evaluates all equipment department-wide for reliability, was one of four utilities recognized in a McGraw-Hill Construction and CH2M Hill study
- Three of our work groups were recognized by the Ohio Water Environment Association for safety procedures and results
- Five employees received Mayor's Awards of Excellence and one received the Mary Funk Humanitarian Award
- Our two wastewater treatment plants, Jackson Pike, and Southerly, maintained their award-winning status from the National Association of Clean Water Agencies
- Columbus placed in the top 10 (#7) in online voting at the Wyland Foundation's Water Conservation Challenge

Other efforts initiated in 2013 include our watershed master planning process, which began with a meeting between the department and residents along our three water supply reservoirs (Hoover, Griggs and O'Shaughnessy). Policies developed as part of this process will emphasize maintaining the best possible source water that is consumed by our 1.1 million customers. The department's Diversity and Inclusiveness program to improve workplace awareness finalized a strategic plan, and a mentoring program – for experienced employees to share their knowledge with workers interested in advancement – was launched to positive reviews from everyone involved.



**BLUE
PRINT**
COLUMBUS
Clean streams.
Strong neighborhoods.

COLUMBUSGREENSPOT.ORG • CITY OF COLUMBUS • MICHAEL B. COLEMAN, MAYOR

**GREEN
SPOT**

environment

PROTECTING OUR ENVIRONMENT

The department continued to be a major partner in the city's Get Green Columbus initiative. DPU is active in the effort in various ways, including being home to Columbus' GreenSpot program. GreenSpot, announced by Mayor Coleman during his 2008 State of the City address, saw continued growth with a total of 6,915 homes, businesses and community groups enrolled by the end of 2013, each committing to a series of behaviors promoting responsible stewardship of the environment.

The department's Environmental Management System, which began in 2008, conducted targeted environmental internal audits in preparation for an ISO 14001 external audit certification application in 2014.

The pilot project for Blueprint Columbus continued to explore integrated planning alternatives to the department's Wet Weather Management Plan. In this case, tunnels vs. green infrastructure to remove excess water from the sanitary sewer system.

Educational materials and resources were provided to residents at four Neighborhood Pride events. The department's model green home demonstrates over 40 energy and money saving tips that can be implemented in homes, and conservation items are distributed through the booth.

The Division of Power completed its final year in the Efficiency Smart Program, in partnership with American Municipal Power. The program provided grant money to businesses to reduce their energy consumption.

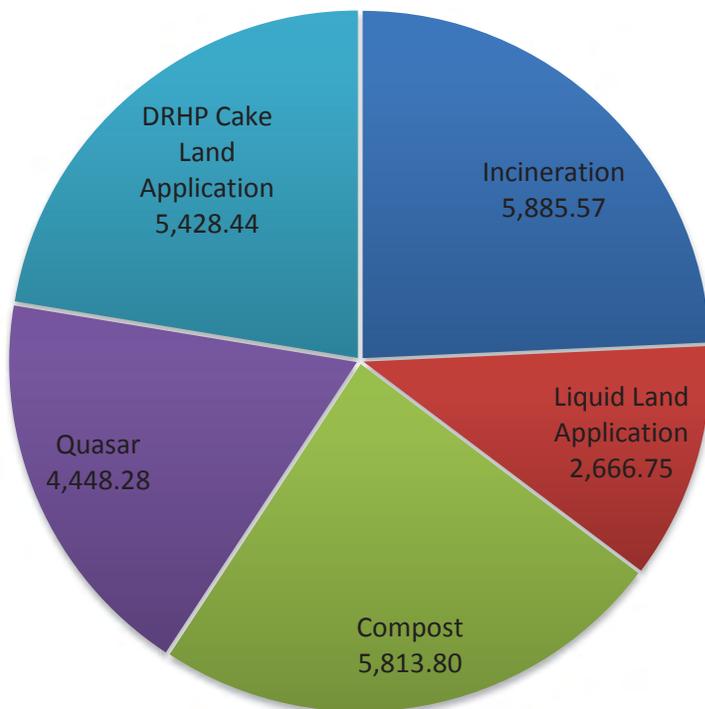
The department has many partnerships with other governmental agencies, environmental and neighborhood groups to help promote a sustainable community. Activities in 2013 included:

- 831 households received rain barrels through the GreenSpot Backyard Conservation cost share program, managed by the Franklin Soil and Water Conservation District.
- With Mayor Coleman's Office of Environmental Stewardship and the Ohio Environmental Education Fund, the GreenSpot Kids program, implemented in 2012, continued. The program provides materials to support first grade curriculum in Columbus City Schools.
- In recognition of National Drinking Water Week, the sixth annual Central Ohio Children's Water Festival hosted 670 fifth-grade students and their teachers for a day of fun and learning. The event, held at the Ohio Department of Natural Resources' Ohio Expo Center, was created to promote environmental awareness about our valuable water resources to elementary students through interactive displays and hands-on activities.
- Staff provided expertise to the Central Ohio Rain Garden Initiative's steering committee. The Franklin Soil and Water Conservation District provides planning and technical assistance for rain gardens.



Notice of Violation Category	Quantity and Type	Fines
Industrial Wastewater, Pre-Treatment/Trucked Waste, Fats/Oils and Grease (FOG)	4 Program, 17 Technical, 10 FOG	\$11,500
Stormwater and Regulatory Management	26 Illicit Discharge, 2 Sediment/Erosion Control	750 500
		\$12,750

Columbus Biosolids Distribution 2013, Dry Tons



The Surveillance Laboratory assists the wastewater treatment plants by analyzing samples associated with the plants. A total of 6,895 parameters were analyzed from 1,275 plant samples. The lab also assists the Industrial Wastewater Pretreatment Program by testing samples of the city's industrial customers. This program resulted in 26,935 compliance parameters (allowable limits of monitored substances) for analysis from 6,033 samples. The pretreatment group is also charged with monitoring background levels of pollutants within the sewer system. To achieve this, the lab analyzed 699 parameters from 64 samples. The city's stormwater program staff collect samples during high-flow periods generated by heavy rainfall. This program sent 425 samples to the Surveillance Lab last year for analysis of 1,792 parameters.

The Industrial Wastewater Pretreatment Group monitors discharges from permitted industries into the sanitary sewer system to ensure compliance with clean water goals. During 2013, staff performed 264 inspections, investigated 10 grease incidents, met with 22 food service establishments as part of the Fats, Oils and Grease Best Management Program, and distributed 2,088 educational door hangers. There was one cost recovery performed due to blockages caused by grease.

The Stormwater and Regulatory Management Section personnel performed 4,330 site inspections on active construction sites for pollution control, field screened 1,279 storm sewer outfalls and investigated 78 reports of spills or suspected illicit discharge to the storm sewer system. Inspections were made at 78 businesses for compliance with OEPA Industrial General Permits for stormwater discharge.

The City of Columbus' Compost Facility, located on Jackson Pike south of the Jackson Pike Wastewater Treatment Plant, was established in 1980 as an environmentally friendly alternative to treat wastewater residuals. Wastewater biosolids are recycled through the composting process and converted into Com-Til, an organic mulch and soil amendment. Composting reduces the amount of biosolids that would otherwise be disposed of in a landfill or incinerated. Com-Til is available for sale at many retail outlets around central Ohio or by wholesale purchase at the Compost Facility.



In 2013, the Compost Facility completed a stormwater diversion swale around the perimeter of the facility to help divert stormwater runoff from entering the on-site stormwater collection system, which will help prevent overflows into the facility's lagoon. The facility also began applying Com-Til to strip-mined soil as a nutrient source to help reclaim the mined soils. This allows trees to be planted, and later harvested for mulch once they are mature.

Com-Til employees were involved in several community events such as the Central Ohio Home and Garden Show, the Central Ohio Nursery and Landscape Trade Show, and the Chadwick Arboretum spring plant sale.

Compost Facility Production	2013	2012	2011
Incoming Sludge:			
Wet Tons	31,300	41,337	32,562
Average Dry Solids	18.8%	20%	19%
Dry Tons	5,814	8,036	6,267
Com-Til Sold (cubic yards)	27,849	38,061	44,407
Total Yard Waste Received (wet tons)	10,044	8,656	9,440
Revenue	\$366,597	\$549,775	\$311,400
Total Expenditures	\$3,310,698	\$2,802,233	\$2,499,613

communities



Third Avenue / Olentangy River Road



Lincoln Theater District

CAPITAL REINVESTMENT

Division of Power

The engineering section at DOP was responsible for overseeing the design, construction, and coordination activities for many projects throughout the year. These activities included working with many new customers desiring reliable municipal power, as well as working with many projects sponsored by other city departments that involved the installation and/or relocation of infrastructure and the installation of new street lighting.

DOP's distribution engineering section was responsible for maintaining DOP's substations and transmission and distribution network. Some of the major activities included:

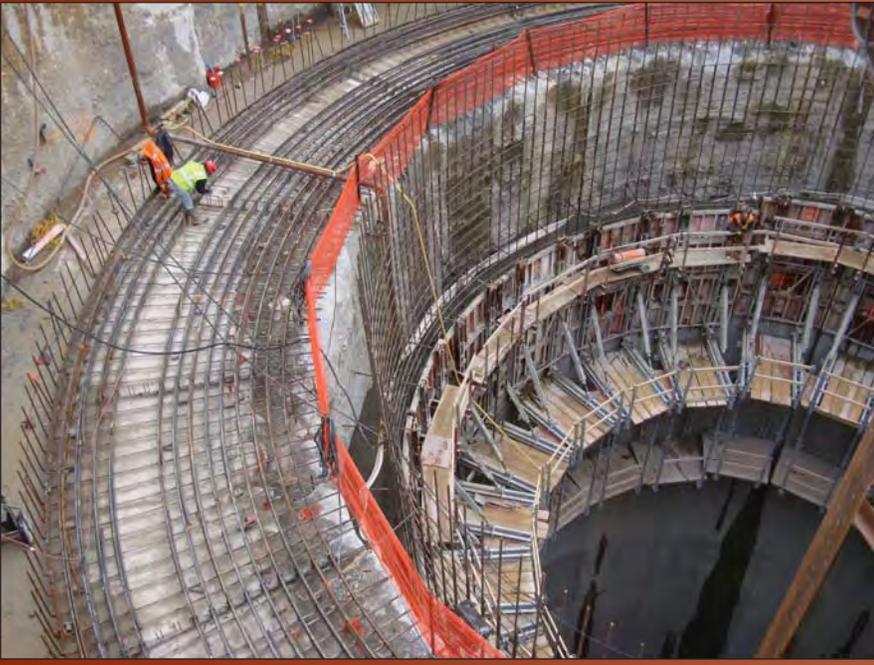
- Design and construction bid for a new Dublin Road substation control and switchgear building.
- Initiated and awarded bids for five replacement breakers for substation improvements.
- Relocation of approximately 15 poles and the 14.4kV feed for a county road improvement project on Fisher Road.
- Relocation of approximately 50 poles along Alum Creek Drive for a city road improvement project.
- Relocation of 12 poles and relocation of the underground 14.4kV feed on West Third Avenue for a city street improvement project.

In 2013, the streetlight engineering section added 286 street lights to the system including 31 new LED streetlights. A large maintenance project which repaired and updated 32 of the worst performing streetlight circuits was completed. The division also worked on various other capital projects including:

- Completed construction of two streetlight projects using new LED (light emitting diode) streetlights. On Agler Road, 24 "cobra head" style overhead LED lights were installed. Northridge Road received seven post-top style LED lights. DOP also used samples of LED post top conversion kits to experiment on future repair of existing high pressure sodium lights and conversion to more efficient LED's.
- DOP has completed its plans to convert streetlights to a three-wire system following a lengthy engineering study. New projects began using the new 3 wire MIS specifications in 2013 and this is now DOP's standard for new underground street lighting projects.
- Continued engineering work for upcoming streetlight projects to light neighborhoods in need of lighting.
- Worked with DPU Asset Management using GIS techniques to develop a prioritization tool to help prioritize streetlight projects based on citizens' requests, public safety, and public activity factors.

The following street light projects were added into our streetlight grid: Gender Road, Hayden Farms (section 5, part 2), Nationwide Blvd, City Hall, Clime Road (Part 1), Broad Meadows, Hilliard Rome Road, Lincoln Theatre (Phase 2), Warner Road, and Third Avenue/Olentangy River Road.

communities



CAPITAL REINVESTMENT

Division of Sewerage and Drainage

Progress continued on the division's 40-year Wet Weather Management Plan, which began in 2005. The large diameter OARS tunnel continued construction, both Phase 1 and 2. The model update continued to be refined to better predict collection system operation and assist with the Blueprint Columbus optimization. Blueprint Columbus was launched in 2013, including pilot projects in Clintonville, Linden and the Barthman/Parsons area.

Cherry Street/Fourth Street and Town Street/Fourth Street Inflow Redirection

Construction of the Cherry Street/Fourth Street Inflow Redirection and Town Street/Fourth Street Inflow Redirection Combined Sewer Overflow (CSO) consent order projects began. These projects will reduce CSOs to the Scioto River by capturing sewer flow and sending it to the Jackson Pike Wastewater Treatment Plant. This was accomplished by replacing two CSO manholes with new structures.

Lower Olentangy River Ecosystem Restoration, Fifth Avenue Dam Removal

The Fifth Avenue Dam was removed in 2012 and construction of the river channel and overbank areas was completed in winter 2013. The majority of plant materials were installed along the project corridor, with some work to be completed spring 2014. The project limits are the Fifth Avenue bridge to the Lane Avenue bridge.

First Avenue Inflow Redirection

This project completed construction. It installed separate stormwater systems in 1st and 2nd Avenues near the Harrison Park development to divert the roadway inlets and catch basins from the existing combined sewer in order to reduce CSO overflow volumes at the 1st Ave Regulator.

Richards/Granden/Torrence Sanitary Sewer Relief Sewer

This project installed a 12" relief sanitary sewer near Richards Road and Granden Avenue in order to reduce Sanitary Sewer Overflow (SSO) activations.

Olentangy Scioto Interceptor Sewer Augmentation and Relief Sewer (OARS)

Work continues on this 20-foot diameter, 190 foot deep, nearly 4.5 mile long sewer tunnel project that will reduce CSOs on the Scioto River. The OARS tunnel will intercept high wet weather combined sewage flows from the downtown area that are sometimes discharged to the river and convey them to the treatment plant. The \$265 million OARS Phase 1 is currently under construction. The \$77 million OARS Phase 2 project began construction in 2011. Phase 2 includes the Pump Station Campus of the OARS project in addition to the intermediate shafts which will receive flows to the OARS tunnel.



Blueprint Columbus to utilize green infrastructure



Cured-in-place lining project

The Sewer System Capacity Model continues to play a vital role in wet weather planning by evaluating capacity deficiencies and devising economical solutions to address those deficiencies. The model aids in ensuring continued compliance with the SSO and CSO Consent Orders and support of private development proposals.

DOSD continues its efforts to optimize the performance of the collection system via fine tuning the operation of major controls within the system. This process is known as Real Time Control (RTC) and continues to evolve in scope and complexity. The Whittier Street Storm Tank regulator gates are now controlled via a RTC protocol, which has significantly reduced overflows at a nearby sewer overflow structure.

Sewer Rehabilitation

Various large and small scale cured-in-place lining projects were performed again across the city. Where conditions are appropriate, this construction technology enables the city to renew sewer pipes without significantly disturbing the ground and at a lower cost to the ratepayer compared to pipe replacement. Sewer lining occurred in the Livingston/James Inflow/Infiltration (I/I) area, OSU campus, and in Clintonville. Additional sewer sections that were identified by SMOC crews for rehabilitation were also lined citywide. Large diameter sewers, ranging from 3 to 10 feet in diameter, serve the largest portions of the city's population. The assessment of the Alum Creek Trunk Sewer (Middle Section) was completed in 2013, and assessment of the Alum Creek Trunk Sewer (South Section) began in 2013. Requests for proposals for the Big Walnut Trunk, Big Walnut Outfall and Rocky Fork Subtrunk assessment were received in December of 2013 and work will begin in 2014.

Blueprint Columbus

Blueprint Clintonville includes the use of green infrastructure, such as rain gardens and pervious sidewalks, and aggressive public and private source I/I remediation to not only eliminate SSOs within the Clintonville area, but to improve overall water quality within the watershed as well. Field investigations were conducted, and the city is evaluating the most cost effective method to achieve the project goals. Design investigation began in the two target areas (Southern Orchards and Reeb/Hosack) of the Barthman/Parsons area. Following preliminary design evaluations, detailed design is expected to begin in 2014. Four areas in Linden were chosen to continue the Blueprint Columbus process in the heart of the Northwest Alum Creek I/I Study area, with design investigation and mainline lining to begin in 2014.

Household Sewer Treatment System Elimination Program (STEP)

Sanitary sewer installation for the Skyline Sanitary Sewer was completed in December 2013. Following sewer acceptance by the city, letters directing eligible owners to proceed with connection will be mailed.

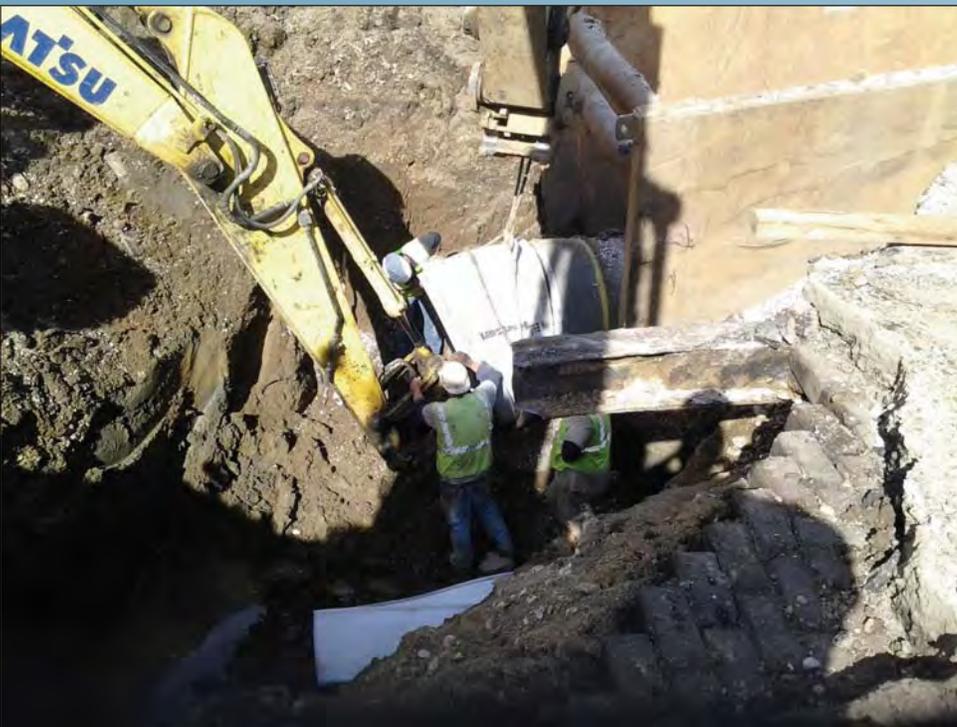
Neighborhood Stormwater Improvements

Neighborhood Stormwater System Improvements continued citywide. These projects involve the design and construction of various improvements to the existing stormwater conveyance system to mitigate street and yard flooding. Examples include:

- Design continued on the Holt-Somersworth project. It will provide flooding relief to the neighborhood bounded by Holt Avenue, Sunbury Road, Somersworth Drive and Brentnell Avenue.
- The Oakwood Avenue project will study, make recommendations and design a new storm water system to eliminate street and yard flooding on Oakwood Avenue south of East Markison Avenue to Smith Road.
- The Rathbone Avenue project will study, make recommendations and design a new storm water system to eliminate street and yard flooding on Rathbone Avenue from North High west to the Olentangy River.
- The Fairwood Avenue Stormwater project will construct new storm sewers south along Fairwood Avenue from Watkins Road to Southfield Drive, and construct storm sewers west along Southfield Drive from Fairwood to Woodway Drive.



Hines Road water storage tank construction project



Nationwide Boulevard Transmission Main Improvements project

communities

CAPITAL REINVESTMENT

Division of Water

Water Distribution

The Little Avenue Area Water Line Improvements project was completed in 2013 as part of the division's Replacement and Rehabilitation (R&R) Program. The purpose of the project was to replace and rehabilitate water mains that required repeated regular maintenance due to breakage and to improve flow to the area. The project included installation of six and eight inch water lines, with approximately 3,200 feet of open cut trenching and 12,700 feet of water main cleaning and cured-in-place pipe (CIPP) rehabilitation. The project also included the abandonment of existing water mains, transfer of water services, and the replacement of fire hydrants on 13 residential streets in the area.

The CIPP rehabilitation technology is mainly used to rehabilitate sections of water lines that would have been difficult to replace using conventional open cut methods. The existing water mains are cleaned using approved methods and then have a structural liner inserted into them. Not only does the new liner seal any leaks that were present in the original pipe, but it also extends the life of the water main by reinforcing its structure. The structural liner will improve water quality and hydraulic capacity of the distribution system in the area. Because this method of installation eliminates the need to dig up and replace the existing water main, it saves ratepayer money and provides less disruption to the neighborhood.

The Nationwide Boulevard Transmission Main Improvements project, designed to replace the 100-year-old infrastructure, began construction in May of 2013 with completion scheduled for spring 2014. The new mains have a life expectancy of 100 years, reducing the amount of maintenance costs over the life of the pipe. This project involved replacement of a portion of the existing twin 36" water transmission mains located on Nationwide Boulevard just east of the Olentangy River and extending to just east of the railroad overpass east of Hocking Street. These mains play a critical role in providing water distribution to the downtown area of Columbus. A new 48" main was installed on Nationwide Boulevard to replace the existing 36" mains, and a new 30" main was also installed on Hocking Street. The project consisted of the installation of approximately 2,200 total linear feet of water pipe, ranging from 12" to 48" in diameter, abandoning existing water mains, transferring water services, and replacing fire hydrants. Due to the amount of utilities present in the area, some existing utility poles and underground electrical facilities were relocated to allow for the water main installation.

The Hines Road elevated storage tank was the second constructed at this location. This two million gallon tank provides the additional storage needed for the expanding Parsons Water District. It also enhances the district's ability to provide for emergency and fire flows. The project began in 2012; the tank was put into service in November 2013.



Little Avenue Project



Upground Reservoir at sunset



Upground Reservoir



Dublin Road Water Plant Project - Ozone Facility

Right: O'Shaughnessy Dam

Water Supply

Construction was completed and the Division of Water began to fill the city's first upground reservoir with water from the newly constructed raw water pump station and pipeline, located off the Scioto River north of the O'Shaughnessy Dam. This 850-acre, nine billion gallon reservoir will produce additional safe yield water supply as recommended in the Water Beyond 2000 study for the Dublin Road Water Plant. Total cost for this phase was \$123 million.

Construction was initiated and progressed on Contracts 1, 2 and 3 for the Dublin Road Water Plant Capacity Increase project. The plant improvements being constructed will provide for new processes to meet water quality regulations, future capacity demands and plant reliability. Construction will continue through 2017 and the total cost for all contracts is estimated at \$200 million. Construction work was bid on Contract 5 and construction will begin on this part of the project in 2014. As part of this project, new parking lots were constructed utilizing pervious pavement. This installation won a 2013 Project of the Year award from the Ohio Concrete Association in the central/southeast region.

Construction was completed on an additional well site for the South Wellfield and a raw waterline to transfer the water from the new well to the Parsons Avenue Water Plant. Following the recommendations of the Water Beyond 2000 study, this project is progressing toward the development of additional supplies of high quality water to the Parsons Avenue Water Plant.

Construction continued for treatment improvements to the Hap Cremean Water Plant. The \$68 million improvements will allow the treatment plant to meet new Ohio EPA Water Quality Regulations of the Safe Drinking Water Act. Other supply improvements under construction in 2013 included the HCWP Roof Restoration, HCWP Lagoon #3 Sludge Removal and Abandonment, and the Hoover Dam Security Improvements.

Completed in 2013 were the Dublin Road Water Plant Low Service Pump Replacement Phase 1, the Parsons Avenue Water Plant Roof Restoration, Energy Efficient Lighting Upgrades at multiple water facilities and the Hap Cremean Water Plant Automation Upgrade.

Improvements under design in 2013 included the Parsons Avenue Treatment Upgrade, the Watershed Roadway Improvements project, the Alum Creek Pump Station Improvements, the Hoover Erosion Control project, the Upground Reservoir Borrow Pit Restoration project and the Hap Cremean Water Plant Lime Slurry Disposal Line Improvements. In addition, a Professional Construction Management program continued to be utilized with a consultant team.



Service



Top left, bottom right: Children's Water Festival. Top right: Engineer-for-a-Day Program tours the water quality laboratory. Bottom left: Water reservoir litter cleanup.

Customer Service Highlights	2013	2012	2011
Meter service calls (installations, replacement, inspection, service renewal and termination)	59,342	51,335	55,624
Delinquent account service calls (door tags, service terminated)	16,846	18,189	18,746
Residential meter readings (recheck readings, inspect reading problems)	13,914	12,655	16,724
Commercial meters (test meters, investigate billing concerns)	2,030	1,943	1,792
Total final service calls	28,007	27,412	27,232
Total customer calls	452,196	412,436	359,135
Low Income Water/Sewer Discount participants (single and multi-family properties)	6,003	5,719	5,943
Senior Water Discount participants	2,845	2,642	2,498
Senior Power Discount participants	183	168	158
Total customers billed:			
Water	280,094	279,803	277,413
Sewer	271,393	270,868	268,767
Stormwater	197,410	197,022	195,535
Power	12,202	12,603	12,545

CUSTOMER SERVICE

Call Center

A major part of what the Department of Public Utilities provides is support for the water, sewer, stormwater and electricity services it provides to its customers and, in the case of water and sewer, also to its contracting communities. A dedicated call center of about 50 staff members answer billing questions, schedule service calls and assist with resolving issues. Customers can pay their bills on-line, over the phone, by mail or in person. A vendor was selected this year to expand billing services to include e-billing, with a planned rollout in 2014. The Division of Water continued a meter replacement program to ensure improved accuracy in meter reading and billing. A 20% discount for water and sewer consumption charges continued to be offered for qualifying low-income residents. 4,517 single-family homes and 1,486 multi-unit families received this discount in 2013. 2,845 senior households in the Columbus water service area also received an additional discount on their bill, having their water service charge waived. 183 Columbus power customers who are seniors enjoyed a 10% consumption discount on their bills.

Project Dry Basement

Residents continued to benefit from the Project Dry Basement sewer backup prevention program, which began in 2004. During its ninth full year of the program, 14 new valves were installed, bringing the total to 739 homes in the program.

Watershed Management

The Watershed Management section provided 250 boat safety inspections, 553 hours of reservoir boat patrol and participated in the following events: Hoover Fishing Seminar, Columbus Sports Vacation and Travel Show, an Earth Day event at the Columbus Zoo, and the Children's Water Festival. They also organized litter cleanups at both Griggs and Hoover reservoirs.

Special Events

The department participates annually in a joint event with the Department of Public Service, known as Engineer-for-a-Day. High school students considering engineering as a career choice can participate in this day-long event to learn more about the field and opportunities at the City of Columbus. Public Utilities hosted 13 students in 2013. The day also includes recognition of the city's Engineer of the Year award. Another opportunity is geared for college students. The Ohio State University Capstone program allows civil engineering students to partner with Public Utilities to develop engineering improvement presentations. Staff engineers help mentor the students on the project.

The Division of Power provided electric service for 11 city festivals in 2013.

City Power Customer Development

The customer development section of the Division of Power handled many customer requests for new services, private area lights, service increases and upgrades, and data requests to assist in internal reporting. 204 new customers were added to the city's grid in 2013. This was a 290% increase compared to 2012. Some of the large services designed and installed for our customers included: City of Columbus Print Shop, the Southside Health Center, CMHA's Franklin Station, and Mo's Southern Grill (OSU area).

Communications Office

The Communications Office coordinates public meetings, public records requests from the media and the public, produces and distributes news releases, brochures, newsletters, reports, water quality protection and conservation information, and other notifications required by the Ohio EPA. The department's Web site continued to evolve to better meet customer needs. The department's Facebook and Twitter followers continued to grow.



Sewer Maintenance Activity	2013	2012	2011
Repairs (manholes, catch basins, etc)	1,703	1,945	1,836
Catch basins inspected	12,651	30,597	24,783
Catch basins, inlets, manholes cleaned	17,841	15,071	14,152
Miles of sewer power cleaned	499	386	366
Miles of sewer closed circuit televised	119	134	136
Total	11,235	10,974	12,304

Water Maintenance Activity	2013	2012	2011
Main Line Leak Repairs	762	547	572
Taps/Service Line:			
Repaired	115	71	120
Replaced	652	561	385
Cut-Off at Main	79	49	42
Put-in-Shapes	302	360	378
New Taps Main Line	29	8	7
Valves:			
Repaired	76	97	54
Installed/Replaced	158	121	95
Hydrants:			
Repaired	945	1,234	1,476
Replaced	59	72	57
Total	3,177	3,120	3,186

MAINTAINING OUR SYSTEMS

Sewer Maintenance Operations Center

The maintenance of 4,447 miles of sewers is performed by the Sewer Maintenance Operations Center (SMOC), the largest staffed section of the Division of Sewerage and Drainage. This responsibility includes 2,481 miles of sanitary sewers, 1,757 miles of storm sewers and 156 miles of combined sewers. An additional 53 miles of county sewers are maintained under contract.

Maintenance responsibilities also include 10 sanitary and 16 storm pump stations monitored by a Supervisory Control Data and Acquisition system, 17 regulators, 27 detention/retention basins, 15 siphons, six sluice gates, five bio-filters, the Alum Creek Storm Tank, numerous catch basins, ditches, flapgates, inlets and manholes, as well as the maintenance of the Franklinton Floodwall gates and 14 gate wells.

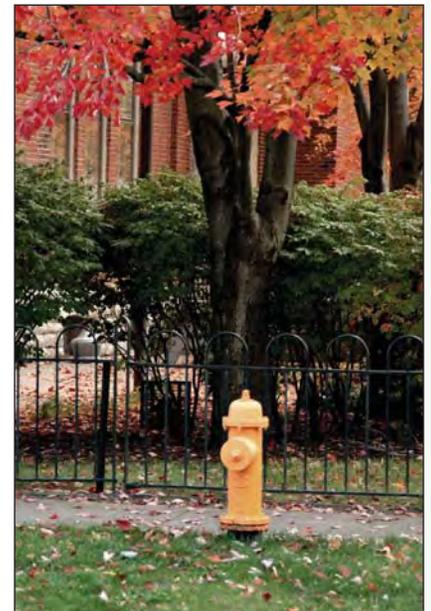
A summary of repairs made in 2013 are in the chart to the top left.

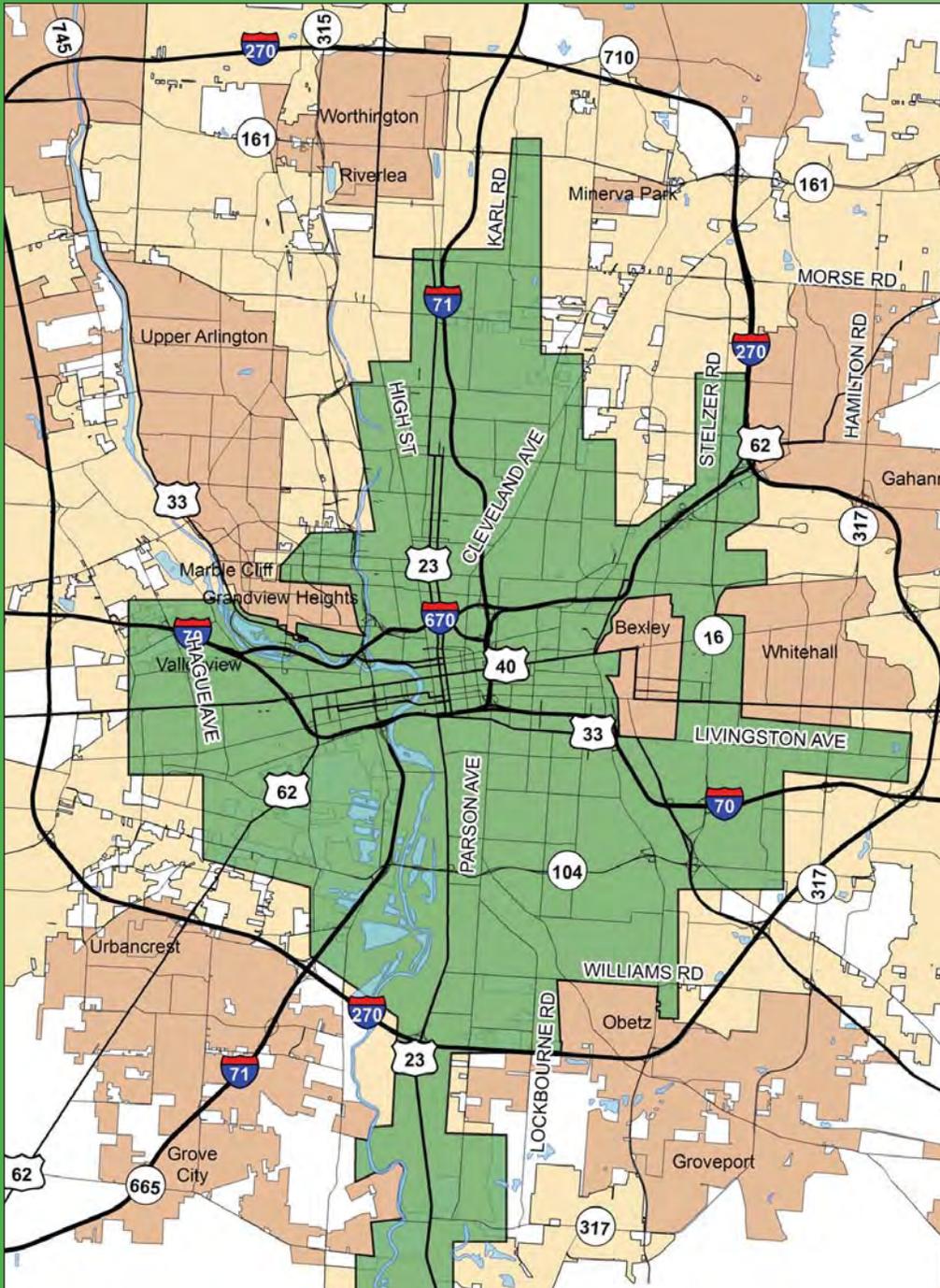
Water Distribution System Maintenance

Water Distribution Maintenance crews maintain 3,519 miles of waterline, which includes 2,522 miles in Columbus and 997 miles in contracted suburban service areas. A summary of the repairs made in 2013 are in the chart to the bottom left.

Included in the repairs were 60 leaks discovered by the Pitometer Survey Crew, which performed testing on about 1,642 miles of pipe to locate system leaks that do not surface, better known as unreported leaks. Subsequent repair of these unreported leaks reduced water loss by an estimated two million gallons each day.

The Cross-Connection Control and Backflow Prevention Program continues to conduct water use surveys and inspections to ensure compliance with the initiative. Records now exist on 36,165 backflow prevention devices in the Columbus water system. Owner information on the backflow devices, along with installation records and the required maintenance schedule, are maintained in our backflow database which allows us to better administer the program. Also maintained are certification information and equipment testing data on the certified backflow testers pre-qualified to perform annual testing. In 2013, a total of 10,783 inspections were performed by the Backflow group relative to service line installation, meter settings, installation of backflow devices for new construction and backflow test enforcement. Backflow requirements relative to the temporary water set-ups and permitted use of hydrants were also improved. More field inspections were done on hydrants permitted for temporary use to ensure proper system protection and best business practices.





Columbus Power Service Area

The City of Columbus provides reliable, cost competitive electricity to customers in the service area shown in green. For more information, please call 645-7216.

maintenance

Power Distribution System

The Division of Power maintains a network of substations, transmission lines, distribution and street lighting circuits throughout Columbus. 12,250 business and residential accounts enjoy reliable city power, which allows the city to provide the necessary maintenance and energy to 52,226 streetlights in Columbus. The division is also responsible for providing maintenance of the O'Shaughnessy hydroelectric unit and ODOT's freeway lights on major highways within city limits.

Due to favorable power market conditions, the division requested proposals for wholesale power supply in 2013. As a result, The Division of Power extended an existing agreement with its power supplier which secures our power sources through November 2019. In addition to our main contracted supply, a small amount of energy was also purchased from BIO Gas Generation during the year. This facility converts sewage sludge, restaurant, and other wastes into synthetic natural gas and is used to generate electric power.

The hydroelectric unit at O'Shaughnessy Reservoir also saw improved operation during the year and produced an output of approximately 8,775,000 kilowatt-hours of electricity.

DOP's distribution section is responsible for maintenance activities to ensure the city's grid stays operational and a high level of service is maintained for our customers. Below is a summary of materials used in performing this necessary function.

Power Maintenance Activity	2013	2012	2011
Wire/Cable Repaired (feet)	88,862	91,852	39,297
Tranformer KVA	5,112	9,303	8,248
Luminaires	1,367	1,526	2,599
Lamps	6,440	4,971	8,602
Wooden Poles	212	212	300
Standard Poles	152	130	379
Total Service Requests	10,262	9,774	9,557





treatment

WATER TREATMENT

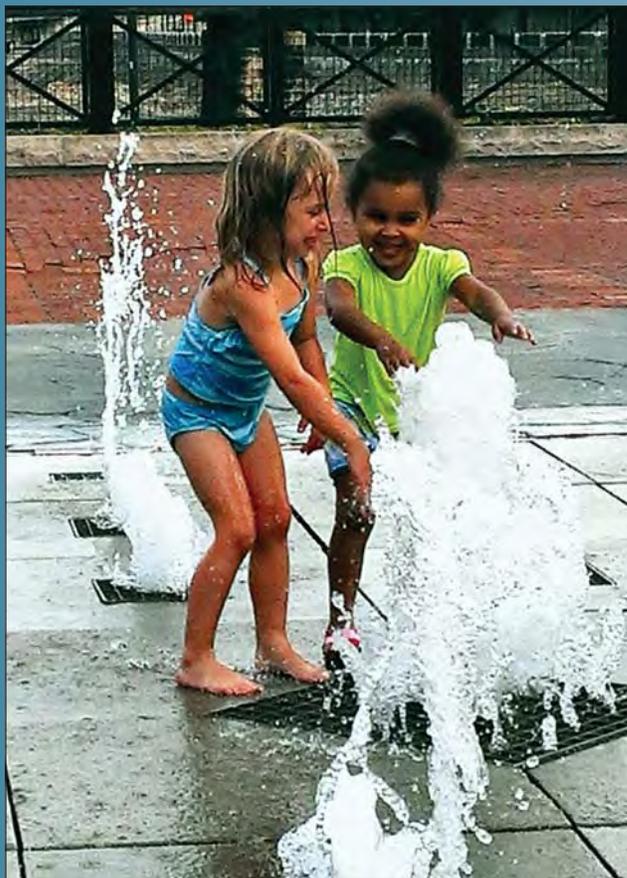
The water treatment staff, supported by the Water Quality Assurance Laboratory, work hard to ensure that the water delivered to your tap meets all requirements of the Safe Water Drinking Act. Our plants use a complex multi-barrier treatment process to assure safe drinking water is delivered to an estimated 1.1 million people in Columbus and in 20 contracting communities.

The source of Columbus' drinking water includes rivers, creeks, reservoirs and wells. Greater Columbus water customers receive water from one of the following three plants:

- The Dublin Road Water Plant serves downtown Columbus, western and southwestern residents using water from Griggs and O'Shaughnessy reservoirs on the Scioto River. This plant provided 35% of the water in the service area and has a capacity of 65 million gallons per day (MGD).
- The Hap Cremean Water Plant, located on Morse Road on the north side, 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. This plant provided 50% of water in the service area and has a 125 MGD capacity.
- The Parsons Avenue Water Plant, located on the south side, draws water from wells and serves residents in the southeastern Franklin County area. The Parsons Avenue plant provided 15% of the water in the service area and can treat up to 50 MGD.

For water quality information, please request a copy of Columbus' current Drinking Water Consumer Confidence Report by calling Customer Service at (614) 645-8276 or visit our publications page at utilities.columbus.gov.

Water Pumpage Summary	2013	2012	2011
Finished Water:			
Total (billion gallons)	50.2	51.2	50.3
Average (million gallons per day)	137.6	139.9	137.8
Estimated Service Population	1,146,169	1,139,345	1,132,500
Average Per Capita Consumption (gallons per day)	120	123	122



treatment



*The Columbus Department of Public Utilities
is regulated by the Ohio
Environmental Protection Agency.*

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 on Jackson Pike 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 roughly the central and western half of Franklin County.

The Southerly Wastewater Treatment Plant, located on South High Street just south of the Scioto Downs racetrack, was built in 1967 and serves roughly the eastern half of the county. Average daily design flow is 114 MGD with a peak flow of 330 MGD.

Both plants discharge treated water into the Scioto River. Numerous upgrades have been done to them in recent years. Tours of the plants are available to the public by appointment.

Wastewater Treatment Summary	2013	2012	2011
Wastewater Treated:			
Total (million gallons)	63,516.54	56,139.59	76,234.60
Average (million gallons per day)	174.01	153.62	208.86
Carbonaceous Biological Oxygen Demand Removed	98%	97.92%	97.6%
Suspended Solids Removed	97.15%	97.08%	97.3%
Dry Tons Bio-Solids Handled:	40,953	43,889	40,840
Composted	6,219	14,301	6,279
Land Filled	0	0	150
Land Applied	2,666	2,497	1,585
Incinerated	6,200	8,738	14,656
Solids to Energy	15,906	14,258	14,897
To Quasar (private facility that converts biosolids/ food waste to electricity)	4,507	4,095	3,273
To Ohio Mulch	5,455	-	-
Central Ohio Precipitation	40.87"	37.27"	54.96"



Sanitary Enterprise Fund	2013	2012	2011
Revenue			
Beginning Cash Balance	\$108,576,301	\$99,335,964	\$84,960,407
Sewer Service Charges	\$190,692,377	\$195,127,124	\$213,853,831
Wet Weather Fees	\$31,125,466	\$30,093,503	-
Investment Earnings	\$1,073,981	\$1,161,039	\$1,614,814
System Capacity Charges	\$4,990,726	\$3,799,556	\$4,326,943
Storm Sewer Reimbursements	\$8,072,050	\$7,526,542	\$7,794,381
Other	\$2,831,058	\$2,777,582	\$4,733,296
Revenues Before Transfers	\$238,785,659	\$240,485,346	\$232,323,265
Refunding Bonds	-	\$1,756,918	-
Revenues After Transfers	\$238,785,659	\$242,242,264	\$232,323,265
Expenditures			
Personnel	\$42,456,998	\$41,850,416	\$41,782,604
Supplies and Materials	\$7,045,367	\$6,300,640	\$6,428,760
Services	\$26,517,766	\$24,249,763	\$23,719,379
Pro-Rata	\$10,481,662	\$10,800,825	\$10,331,710
Electricity	\$8,928,725	\$9,339,268	\$9,525,662
Capital Equipment	\$3,826,094	\$2,246,554	\$1,398,271
Other	\$257,154	\$10,455,555	\$840,280
Debt Service	\$123,316,776	\$123,191,890	\$119,715,740
Sewer Share of DPU	\$4,920,862	\$4,567,018	\$4,205,303
Total Expenditures	\$227,751,403	\$233,001,928	\$217,947,708
Ending Cash Balance	\$119,610,557	\$108,576,300	\$99,335,964

REVENUES AND EXPENDITURES

Stormwater Enterprise Fund	2013	2012	2011
Revenue			
Beginning Cash Balance	\$9,380,951	\$8,198,170	\$5,589,535
Storm Sewer Charges	\$35,974,336	\$36,607,096	\$37,914,392
Investment Earnings	\$25,908	\$212,251	\$212,251
Storm Penalties	\$432,433	-	-
Other	\$289,973	-	-
Revenues Before Transfers	\$36,822,650	\$36,819,347	\$38,126,643
Refunding Bonds	-	\$732,974	-
Revenues After Transfers	\$36,822,650	\$37,552,321	\$38,126,643
Expenditures			
Personnel	\$1,292,560	\$1,320,055	\$1,395,932
Supplies and Materials	\$18,989	\$13,413	\$11,130
Services	\$5,443,296	\$16,559,786	\$16,482,126
Pro-Rata	\$13,638,205	\$1,653,798	\$1,681,270
Capital Equipment	\$43,550	\$75,962	\$22,508
Other	\$53,076	\$81,475	\$224,285
Debt Service	\$14,119,349	\$15,501,484	\$14,705,010
Storm Share of DPU	\$1,271,353	\$1,163,567	\$995,747
Total Expenditures	\$35,880,376	\$36,369,540	\$35,518,007
Ending Cash Balance	\$10,323,225	\$9,380,951	\$8,198,171



Division of Power

Power Enterprise Fund	2013	2012	2011
Revenue			
Beginning Cash Balance	\$5,406,906	\$2,338,474	\$938
Commercial Service	\$65,384,730	\$65,405,147	\$67,288,837
Residential	\$6,152,339	\$6,472,479	\$6,845,225
Investment Earnings	\$79,034	\$66,889	\$56,802
Kilowatt Hour Tax Reduction	(\$1,689,077)	(\$1,684,756)	(\$1,582,944)
Other	\$4,017,275	\$3,630,142	\$3,472,323
Power Cost Reserve Adjustment (PCRA)	\$14,300,074	\$15,954,168	\$13,928,729
Revenues Before Transfers	\$88,244,376	\$89,844,069	\$90,008,972
Refunding Bonds	-	\$54,404	-
Revenues After Transfers	\$88,244,376	\$89,898,473	\$90,008,972
Expenditures			
Personnel	\$8,391,374	\$7,530,972	\$7,927,958
Purchase Power	\$58,512,595	\$63,858,428	\$62,789,471
Supplies and Materials	\$1,144,226	\$818,922	\$696,133
Services	\$4,274,870	\$4,708,519	\$4,311,930
Pro-Rata	\$3,924,778	\$4,033,310	\$4,033,591
Other	\$32,623	\$3,848	\$126,640
Capital Equipment	\$1,274,855	\$605,815	\$474,343
Debt Service	\$4,057,667	\$4,657,508	\$5,297,227
Transfer Fund	-	-	\$1,481,000
Power Share of DPU	\$688,280	\$612,718	\$533,141
Total Expenditures	\$82,301,268	\$86,830,040	\$87,671,434
Ending Cash Balance	\$11,350,015	\$5,406,907	\$2,338,476



Division of Water

Water Enterprise Fund	2013	2012	2011
Revenue			
Beginning Cash Balance	\$32,331,179	\$14,695,935	\$6,707,105
Water Charges	\$158,672,628	\$161,821,636	\$142,640,540
Water Billing Penalties	\$2,063,531	\$2,044,188	\$1,862,358
Investment Earnings	\$1,241,051	\$1,064,763	\$1,004,973
System Capacity	\$4,763,123	\$3,867,888	\$3,372,935
Sewer Billing Charges	\$6,355,055	\$6,730,001	\$6,948,770
Meter Service Fees	\$582,490	\$503,401	\$570,974
Other Revenue	\$9,950,068	\$4,847,436	\$7,960,536
Revenues Before Transfers	\$183,627,946	\$180,879,313	\$164,361,085
Refunding Bonds	-	\$3,621,455	-
Revenues After Transfers	\$183,627,946	\$184,500,768	\$164,361,085
Expenditures			
Personnel	\$44,844,666	\$44,695,149	\$44,813,803
Supplies and Materials	\$3,655,604	\$3,301,654	\$3,415,579
Chemicals	\$15,942,539	\$16,223,132	\$14,965,624
Services	\$14,479,983	\$14,168,699	\$13,792,285
Pro-Rata	\$8,014,611	\$7,868,493	\$6,492,482
Electricity	\$8,287,932	\$8,678,878	\$9,315,127
Other	\$306,606	\$1,291,391	\$850,895
Capital Equipment	\$973,233	\$834,934	\$759,773
Debt Service	\$71,244,520	\$65,997,292	\$58,472,005
Water Share of DPU	\$4,212,027	\$3,805,902	\$3,494,682
Total Expenditures	\$171,961,720	\$166,865,524	\$156,372,255
Ending Cash Balance	\$43,997,405	\$32,331,179	\$14,695,935

SEWER AND WATER ADVISORY BOARD

The City of Columbus formed the Sewer and Water Advisory Board in 1984 to oversee the rates and major policy changes for sewer and water services in Columbus. The board, comprised of city officials and area residents who represent different constituencies—such as senior citizens, low income and the business community—meets several times each year. Revenue and operational needs for the following year are reviewed, along with any rate increase proposals. The board forwards any rate adjustment recommendations to Columbus City Council, who then review and vote to set rates or change fundamental policy.

2013 Sewer and Water Advisory Board Members:

Wallace Giffen, Chair

Jackie Gutter

Robert Patterson

Steve Gladman

James Bowman

Hugh Dorrian, City Auditor

Greg Davies, Department of Public Utilities Director

Paul Rakosky, Department of Finance and Management Director

The Sewer and Water Advisory Board meetings are open to the public. Call (614) 645-3956 for a schedule of meeting times and dates.

COLUMBUS CITY COUNCIL

Andrew Ginther, President

Hearcel Craig, President Pro-Tem

Eileen Y. Paley, Public Utilities Committee Chair

Zachary Klein

Michelle Mills

A. Troy Miller

Priscilla Tyson