

THE CITY OF
COLUMBUS
MICHAEL B. COLEMAN, MAYOR

DEPARTMENT OF
PUBLIC UTILITIES

2014 Annual Report





**Michael B. Coleman,
Mayor**



**Greg Davies,
Director**



**Herb Johanson, P.E.
Administrator
Division of Power**



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



**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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year in review

FROM THE DIRECTOR

Providing quality utilities to a growing population while meeting ever-changing regulatory requirements – and keeping it all affordable – is a challenge we embrace. It's not easy, but we are proud of our role in accommodating the economic and residential expansion that makes Columbus one of the very few cities outside the South and West that is consistently gaining in both categories.

To meet future water needs, in September we dedicated the John R. Douth Upground Reservoir in Delaware County. A project first envisioned more than 20 years ago, this reservoir – named for our well-respected former director – can now provide an additional nine billion gallons of raw water during extended dry periods. Treatment and capacity improvements, all funded through ratepayer dollars, continued at all three drinking water facilities.

We have quadrupled our investment into the distribution system that delivers drinking water from those facilities to your tap, replacing leak-prone water lines. Occasionally, however, conditions conspire to create a situation that can be not only challenging but dangerous. This occurred the evening of January 6, 2014, when a large water main downtown broke during a polar vortex, flooding streets during rush hour traffic in sub-zero temperatures. Our Distribution Maintenance crews responded immediately and tirelessly, working overnight to restore service downtown by the next day. Five months later, Division of Water staff again assisted to restore service: this time in the Ohio River community of Gallipolis, where crews were initially unable to find the source a large leak that kept the town almost without water. When requested, several crew members immediately drove to Gallipolis – after a full day on the job here – and worked the entire weekend to help restore their service.

In the Division of Sewerage and Drainage, our two wastewater treatment facilities both completed the year with zero violations, a regular achievement for each

but always worth noting. Work continued on the city's largest-ever capital project: a 4.5 mile long, 20 foot diameter tunnel almost 200 feet underground which, when completed, will greatly reduce combined sewer overflows from the oldest parts of the city's system. Unfortunately, complications and delays resulted in a contract modification that added \$29.5 million to the final cost of the project known as OARS, now anticipated to finish in 2017. We agree with the *Columbus Dispatch*, which noted in an editorial, "The cost overruns are painful but unavoidable in a project necessary to protect this region's environment and public health." In part because such complications are a risk in tunneling, we continue to develop the Blueprint Columbus initiative to solve sewer overflows through a combination of improving existing pipes and adding green infrastructure, instead of solely traditional "gray" infrastructure. We are encouraged by the early results and will be presenting the entire proposal to the Ohio Environmental Protection Agency in late summer 2015 in hopes of implementing a more environmentally sustainable solution to a long-term problem.

Our Division of Power is comparatively small but growing, and continues to deliver the benefit of maintaining streetlights citywide at no cost to taxpayers. We are implementing growth strategies to attract new power customers (who enjoy our reliability) and, with the additional funding generated, are once again adding streetlights to currently unlit neighborhoods that want them.

Besides providing the best possible service, we want to model responsible environmental stewardship and are proud to have completed a third-party audit of our Environmental Management System, obtaining international certification and successfully completing compliance audits at our ten facilities.

Our employees annually receive awards for accomplishment, design, safety and service at the local, state, and national levels and 2014 was no different. Their efforts help keep our community vibrant and thriving through delivering reliable utilities at affordable rates.



Litter cleanup events, the PUP wagon, and children perform in "Momentum."

environment

PROTECTING OUR ENVIRONMENT

The department began developing its Environmental Management System (EMS) in 2007 to support its compliance program and identify ways to reduce its environmental impacts. Patterned off the Organization of International Standards (ISO), an internationally known gold standard for entities that value environmental stewardship, the department obtained its EMS ISO 14001:2004 certification in 2014. Less than 1% of those holding this certification in the country are known to be government or public entities, and Columbus is the first public utility in Ohio to achieve this certification.



GreenSpot has inspired more than 10,000 households, businesses and community groups since 2008 to conserve and protect water, conserve energy, and reduce, reuse and recycle. Mayor Coleman presented GreenSpotLight awards to three businesses in 2014 for their exemplary sustainability efforts: Abbott Nutrition, The Crest Gastro-pub and Indianola Children's Center. The GreenSpot Sustainability Initiative provided Budros, Ruhlin & Roe, Chase Bank, Whole Foods, Franklin University, and the Ohio Department of Rehabilitation and Corrections with interactive workshops on ways large businesses can conserve and protect water. The GreenSpot Kids program reached 39 classes at 24 schools. Through hands-on activities, first graders learned how to incorporate sustainability into everyday life. The Discovery District became the first GreenSpot Neighborhood. Community members developed a plan to engage neighboring residents and businesses, conserve and protect water, reduce energy and waste and use alternative forms of transportation.

The Pick Up Poop (PUP) campaign brought more than 2,000 residents to columbus.gov/pup to pledge to pick up after their pup on a walk or in their back yard. Picking up pet waste, bagging it and placing it in the trash prevents bacteria from washing into our waterways when rain falls or snow melts.

Through a partnership with Franklin Soil and Water and local watershed organizations, 759 area residents were introduced to practices they can incorporate in their own backyards to conserve water and protect the quality of our waterways. Residents received a rain barrel at a reduced cost to help implement these practices.

The City of Columbus continued its exciting new way of eliminating sanitary sewer overflows while also investing in neighborhoods and the local economy. This innovative Blueprint Columbus pilot project was on track for its Ohio EPA deadline in 2015. Through community engagement efforts, residents and professionals received information on the cause of and possible solutions to sanitary sewer overflows. Nearly 50,000 Columbus residents were engaged one-on-one or through presentations at civic associations and area commissions, demonstrations at community events and printed materials. Preparation began for a course at Columbus State Community College to teach participants how to construct and maintain green infrastructure. The first Green Workforce Development course will be open to the public and the Columbus Urban League will help identify students to participate.

The Low-Mow demonstration project improved eight vacant lots located in areas of the older city owned by the Columbus Land Bank. The sites will be enhanced to retain stormwater, require less mowing and maintenance once the grasses are established, and will help to beautify the neighborhood.



Notice of Violation Category	Quantity and Type	Fines
Industrial Wastewater, Pre-Treatment/Trucked Waste, Fats/Oils and Grease (FOG)	6 Program 19 Technical 140 FOG	\$4,750
Stormwater and Regulatory Management	11 Illicit Discharge 8 Sediment/Erosion Control	\$5,500
Total		\$10,250

Top: "Momentum" Middle: Grange Audubon Center.

environment

The department began a partnership with Grange Insurance Audubon Center and Metro Parks to create an interactive stormwater demonstration site to feature green infrastructure at the Audubon Center. It will be open to the public and include educational activities to engage Columbus City Schools students and support their curriculum.

A project to develop an updated Watershed Master Plan was successfully bid by the Division of Water and awarded to CDM Smith as the primary consultant. The project started in mid-summer with a planned completion date of December 2015. Significant accomplishments included wetlands identification, inventory of existing water quality data sources, and major strides towards watershed characterization and existing program review.

Over 850 4th and 5th grade students from Columbus Public Schools spent a year learning about the importance of clean water through their participation in “Momentum,” an innovative performing arts program affiliated with BalletMet. A DOW staff member worked closely with the dance program directors, providing science content and guiding the storyline to incorporate key water issues and learning objectives.

Litter cleanup events were held at the Griggs, O’Shaughnessy and Hoover reservoirs, with approximately 200 volunteers participating. Central Ohio River Pride, held in June, included three cleanups in two watersheds for its 14th annual year. The department continued to offer supplies to community volunteers to mark storm drains with “No Dumping, Drains to Rivers” curb inlet markers.

The Surveillance Laboratory provides support to several groups under the Division of Sewerage and Drainage including the Jackson Pike and Southerly Wastewater Treatment Plants, the Compost Facility, the Industrial Wastewater Pretreatment Program, and the Stormwater and Regulatory Management Section. In 2014, the lab also began offering toxicity characteristic leaching procedure to both the Division of Water and Fleet Management. The laboratory assists the wastewater treatment plants by analyzing samples associated with the plants. A total of 19,215 parameters were analyzed from 996 plant samples. The lab assists the pre-treatment program by testing samples of the city’s industrial customers for compliance, field quality assurance/quality control and determining background levels of pollutants. This resulted in a total of 25,208 parameters being analyzed on 1,571 samples. The stormwater program collects samples during high-flow periods generated by heavy rainfall. This resulted in 4,259 parameters being analyzed on 451 samples.

The Industrial Wastewater Pretreatment Group monitors discharges from permitted industries into the sanitary sewer system to ensure compliance with clean water goals. During 2014, Public Utilities and Columbus Public Health staff performed 685 inspections, investigated 17 grease incidents, met with 140 food service establishments as part of the Fats, Oils and Grease Best Management Program, and distributed 1,395 educational door hangers. There was one cost recovery performed in 2014 due to blockages caused by grease.

The Stormwater and Regulatory Management Section personnel performed 4,607 site inspections on active construction sites for pollution control, field screened 1,048 storm sewer outfalls and investigated 72 reports of spills or suspected illicit discharge to the storm sewer system. Inspections were made at 329 businesses for compliance with OEPA Industrial General Permits for stormwater discharge.

Columbus’ Compost Facility 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 or incinerated. Com-Til is available for sale at many retail outlets around central Ohio or by wholesale at the Compost Facility. Compost staff participate in numerous community events such as the Central Ohio Home and Garden Show, the Central Ohio Nursery and Landscape Trade Show, and the Chadwick Arboretum plant sale.



communities



Decorative streetlight, Dennison and Starr

CAPITAL REINVESTMENT

Division of Power

Distribution Engineering

DOP's Distribution Engineering Section is responsible for maintaining substations and transmission and distribution infrastructure. Some of the major activities for the section in 2014 included the following:

- Design and bid construction for the Dublin Substation site work and the demolition of the Dublin Avenue Power building to prepare for delivery of the new switchgear/control building.
- Design and bid for construction a package for relocating overhead facilities to a new underground man-hole and duct system along Nationwide Boulevard.
- Developed a project scope and negotiated a professional services agreement for the O'Shaughnessy Hydro Turbine Improvements Project.
- Initiated a material bid package; awarded bids for replacement breakers for substation improvements.
- Designed, bid and awarded two construction contracts for the conversion of various circuits to 14.4kV operation to improve service reliability to existing customers and reduce distribution line losses.
- Designed the conversion of a circuit along Henderson Road from 7.2kV operation to 14.4kV for the purpose of serving a Division of Water Pump Station.

Street Lighting and CIP Projects

In 2014, the division's Streetlight Engineering Section added 253 street lights to the city's system. The section also initiated the engineering and design work for several new street lighting projects around the city which will employ the use of new energy efficient LED lighting. Division staff also worked on various other CIP projects including:

- DOP completed its first pilot two-wire to three-wire conversion project. This effort converted eight existing two-wire street lighting circuits to a three-wire system using new specifications developed in 2013.
- The Street Lighting Prioritization Plan was implemented in 2014. This plan was developed with the help of asset management using GIS techniques, and will be used to prioritize street lighting projects based on citizens' requests, public safety considerations, and public activity factors.
- Project scopes were developed and preliminary engineering was initiated for the highest ranking street lighting projects to pursue in the future.

The following streetlight projects were added into the city's streetlight grid in 2014:

- Cedar Run Subdivision, OSU (North High Street from Woodruff to 17th Avenue), Olentangy Meadows Subdivision, Chelsea Glen Subdivision, Livingston to Lockbourne Road, Summerlyn Subdivision, Neil and Vine Street, Hilliard Woods Subdivision, Alum Creek Road from Williams to Route 104, Dennison and Starr Avenue, Tech Center Drive, Reynolds Crossing Subdivision, Great Oaks Subdivision, Eagle River Subdivision, and numerous streets impacted by the ODOT Interstate 70/71 Project.

BLUE PRINT COLUMBUS

Clean streams.
Strong neighborhoods.

Blueprint Columbus pilot projects continued in the Clintonville, Barthman/Parsons, Linden, Hilltop and Miller/Kelton neighborhoods. Improvements include rain gardens, pervious sidewalks and aggressive public and private source inflow and infiltration remediation to not only eliminate sanitary sewer overflows, but also improve overall water quality within the watersheds.

2014 highlights include:

- Field investigations were completed and preliminary recommendations for the sizes and locations of new storm sewers; green infrastructure facilities were developed for areas of Clintonville.
- City departments, community associations and Southern Orchards and Reeb/Hosack area commissions approved green infrastructure applications in the Barthman/Parsons area.
- Field investigations began in October and four areas have been chosen to continue with a pilot project in the heart of the most excessive inflow and infiltration-prone sections of Linden.



CAPITAL REINVESTMENT

Division of Sewerage and Drainage

Lower Olentangy River Ecosystem Restoration, Fifth Avenue Dam Removal

Construction was completed in 2014. The project limits extend from the Fifth Avenue bridge upstream to the Lane Avenue bridge.

Olentangy-Scioto-Interceptor-Sewer Augmentation and Relief Sewer (OARS)

This 20-foot diameter, 190 foot deep, nearly 4.5 mile long sewer tunnel project will reduce combined sewer overflows on the Scioto River. The OARS tunnel, a major piece of the division's Wet Weather Management Plan, will intercept high wet weather combined sewer flows from the downtown area that are sometimes discharged to the river and instead convey them to the Jackson Pike Wastewater Treatment Plant. The OARS project continued mining operations with less than one mile of tunneling remaining of the total tunnel length of 4.5 miles at the end of 2014. The project is expected to be substantially completed in 2017, with the tunneling portion done in 2015. Phase 2 began in 2011, includes the pump station in addition to intermediate shafts and is expected to be completed at the end of 2016.

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

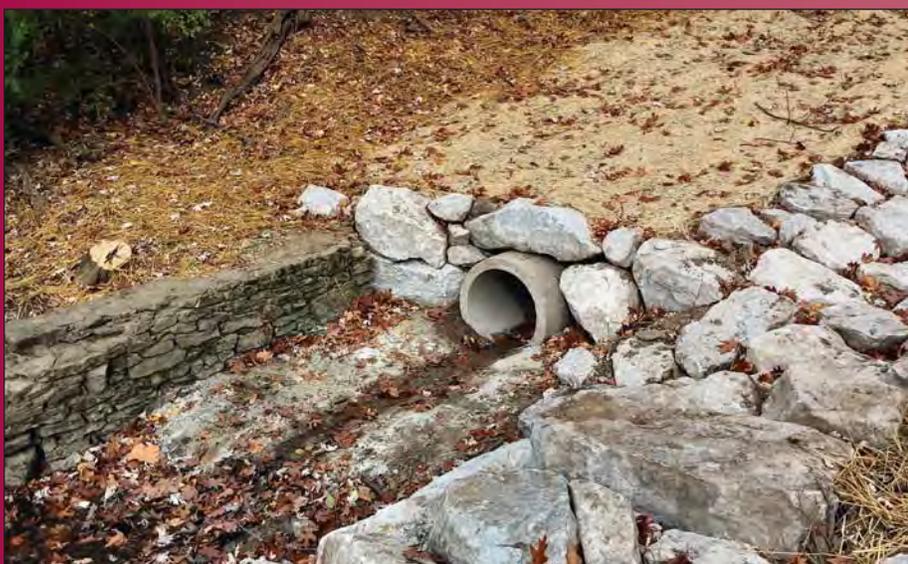
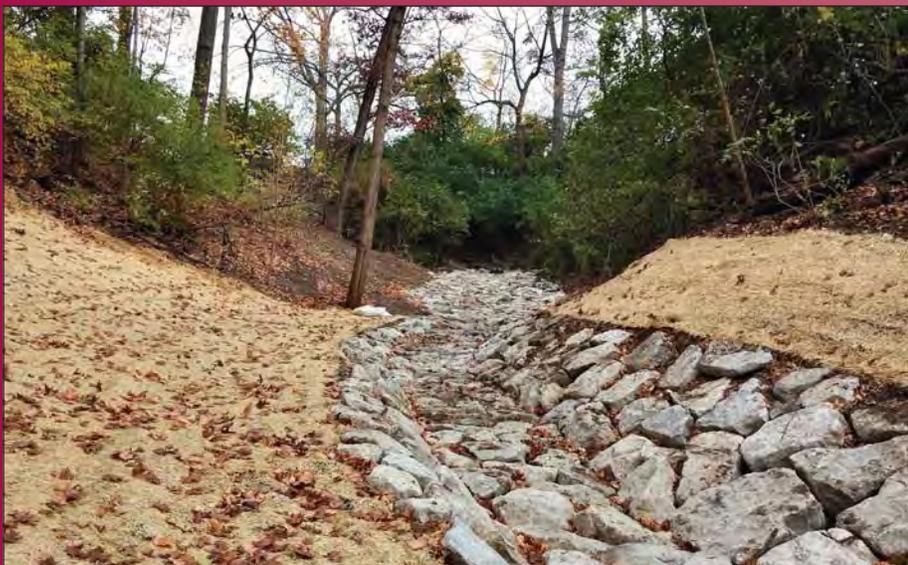
This project was completed in 2014.

Wet Weather Planning

The Sewer System Capacity Model continues to play a vital role in 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. During 2014 the capacity model supported the Blueprint Columbus projects in Clintonville. It also developed a highly detailed model of the entire collection system, including suburbs, to enable the development of the Blueprint Columbus plan citywide. Construction of the existing conditions model was completed in 2014 and alternatives development began.

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 overflow at a nearby sewer overflow structure (DSR 83). The RTC effort continued in 2014 with three consultants working to help DOSD optimize the collection system incrementally. Future scenarios of the collection system (i.e. with OARS in service) will continue to be evaluated in 2015.

communities



Designed Sanitary Relief 83

The modification of DSR83 and the construction of a sanitary sewer pump station on the Greenlawn Avenue sanitary sewer will allow additional flow to be conveyed to the treatment plants during wet weather by surcharging the OSIS trunk sewer. Modifications to the relief point were completed in 2014 to replace the existing wood stop log structure with concrete. Analysis will be performed to evaluate whether additional modifications will allow for increased storage.

Sewer Rehabilitation

Various large and small scale cured-in-place lining projects were performed across the city. Where conditions are appropriate, this 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. In 2014, areas that were rehabilitated included Livingston/James and Clintonville, and work began in Linden.

Large Diameter Sewer Rehabilitation

Large diameter sewers, ranging in size from 3' to 10' in diameter, serve the largest portions of the city's population. The assessment of the Alum Creek Trunk Sewer (south section) was completed in 2014. Construction drawings were completed for Phase A of the rehabilitation of the Alum Creek Trunk Sewer (middle section). Assessment of the Big Walnut Trunk began in late 2014. Proposals for the assessment of the Blacklick Creek Main Trunk were received.

Household Sewer Treatment System Elimination Program

The STEP program continued to construct new sanitary sewers to eliminate home sewage treatment systems. Work was completed in the Skyline Drive area. Work was bid for the Merwin Hill project, and design consultants were selected for the Meeklyn and Woodward Sanitary Sewers projects.

Neighborhood Stormwater Improvements

Various stormwater projects continued city-wide, involving the design and construction of improvements to the existing stormwater conveyance system to mitigate street and yard flooding, and reduce roadside drainage problems. Improvements were in various stages of planning, design and construction in areas including Oakwood Avenue, Olde Beechwood, Clintonville, Rathbone Avenue, Terrace/Broad, Northeast, Eastside, Linden, Fountain Square, Cooper Park.

The department also partners on projects with other city departments, like the Public Service Department. Design and construction began in 2014 on various improvements in the Marion Road area to include new storm sewers.

Detailed design began in 2014 on the Briggs Road Detention Basin Improvement which will modify the existing basin to include water quality features and reduce maintenance.





communities

CAPITAL REINVESTMENT

Division of Water

Water Distribution

Brentnell Avenue Area Water Line Improvements

This \$2.3 million project was completed in 2014 as part of the Division of Water's Replacement and Rehabilitation Program. The purpose of the project was to replace water mains that required repeated regular maintenance due to breakage and to improve flow to the area. This improvement included the installation of 6" and 8" water lines, with approximately 13,400' of open cut trenching and 250' of horizontal directional drilling. The drilling was required due to an existing culvert crossing on Holt Avenue. The project also included the abandonment of the existing water mains, transfer of water services, and the replacement of fire hydrants on seven residential streets near the Brentnell Avenue area.

Sexton Drive Area Water Line Improvements

This \$2.1 million improvement was completed, another replacement and rehabilitation project, located in the Hilltop area. Also to replace water mains with a break history and improve fire flow, it included the open-cut installation of approximately 12,000' of 6" and 8" water lines. The project also involved the abandonment of the existing water mains, transfer of water services, and the replacement of fire hydrants on 13 residential streets in the project area.

Old Roberts Road Water Main

This project (top photo) installed approximately 2,170 linear feet of 20" water main connecting two existing transmission mains in the distribution system. The project was located in the west Columbus area. The project was installed by open cut methods and was completed with a total construction cost of \$602,251.

Morse Road South Storage Tank Structural Repairs

The Morse Road South tank (middle and bottom photos) required structural repairs to be completed prior to painting the interior of the 10 million gallon ground storage facility in May, and the repair work was completed in April. These tank repairs consisted of replacing center roof rafters, roof vents, drain sump and installing a new overflow pipe and tank mixing system. Total construction cost was \$240,450.



communities

Water Supply

The upground reservoir (below), which began construction in 2011, was filled and the facility was dedicated as the John R. Douth Upground Reservoir in honor of the former Department of Public Utilities Director and Division of Water Administrator. The reservoir was officially placed into service to provide more than nine billion gallons of additional water supply for central Ohio's drinking water needs. The reservoir, which occupies around 850 acres and is one of the nation's largest synthetic lined upground reservoirs, is located off the Scioto River north of the O'Shaughnessy Dam in the northwestern Delaware County area.

Construction continued on Contracts 1, 2, 3, and 5 of the Dublin Road Water Plant (DRWP) Capacity Increase Project. A portion of Contract 1, the new employee/visitor parking complex (top photo), was placed into service with multiple green infrastructure features to reduce storm water runoff and improve water quality. When completed in 2017, these improvements will increase plant capacity to 80 MGD, provide new treatment processes to enhance water quality, and increase treatment reliability. The total construction cost for all contracts is estimated at \$200 million.

At the Hap Cremean Water Plant (HCWP), construction continued on the \$70 million Treatment Improvements Project, which will add new treatment processes to enhance water quality and improve process control. Other work completed at the HCWP in 2014 includes the Chemical Building Roof Restoration Project and the Lagoon #3 Sludge Removal and Abandonment Project.

At the Parsons Avenue Water Plant (PAWP), construction was completed on the Fiber Optic Upgrade Project and the Well 103 Bank Stabilization Project.

Improvements at the city's watershed management/reservoir facilities continued with completion of the Hoover Dam Security Improvements Project, the Smothers Road Stabilization project (middle photo), and Energy Efficient Lighting Upgrades at the Bellpoint, Griggs and Hoover Reservoir facilities.

Design work completed in 2014 included the DRWP Capacity Increase - Contract 4 project, Watershed Roadway Improvements - Part 1, Watershed Roadway Improvements Part 2, HCWP Roof Replacement - Part 4, the PAWP Treatment Upgrades project, the Ottawa Creek Preserve project, and the Hoover Nature Preserve Parking Lot Improvements (where construction is being partially funded by a grant from the Ohio EPA due to its use of green infrastructure features). Construction of these projects is anticipated to begin in 2015. Design work continued on the Alum Creek Pump Station Improvements project, the South Wellfield Raw Water Line Relocation project, the HCWP Lime Slurry Disposal Line Improvements project, the Collector Well 103 Pump Replacement project, and the 910 Security Enhancements Project.

Other notable water supply efforts included ongoing activities focused on dam safety and reliability, which involved updating emergency action plans, conducting a multi-agency tabletop emergency response exercise, implementing an independent consultant review project to inspect the condition of the Griggs and Hoover dams, and initiating design phase work to rehabilitate the hydroelectric facility at the O'Shaughnessy Dam. The Program Construction Management team continued its efforts to assist the City with Management of the extensive water supply projects currently underway.



Service



Top: Children's Water Festival. Bottom left: Engineering Students visit Hoover Reservoir. Bottom right: students tour the Water Quality Assurance Lab during Engineer for a Day.

Customer Service Highlights	2014	2013	2012
Meter service calls (installations, replacement, inspection, service renewal and termination)	57,782	59,342	51,335
Delinquent account service calls (door tags, service terminated)	18,024	16,846	18,189
Residential meter readings (recheck readings, inspect reading problems)	12,674	13,914	12,655
Commercial meters (test meters, investigate billing concerns)	1,838	2,030	1,943
Total final service calls	26,001	28,007	27,412
Total customer calls	459,719	452,196	412,436
Low Income Water/Sewer Discount participants (single and multi-family properties)	5,868	6,003	5,719
Senior Water Discount participants	3,068	2,845	2,642
Senior Power Discount participants	185	183	168
Total customer accounts billed:			
Water	281,278	280,094	279,803
Sewer	271,947	271,393	270,868
Stormwater	197,571	197,410	197,022
Power	12,151	12,202	12,603

CUSTOMER SERVICE

Call Center

Services provided include customer support for the water, sewer and stormwater and electricity accounts and, in the case of water and sewer services, also to its contracting communities. A dedicated call center of about 50 staff members answers billing questions, schedules service calls and assists with resolving issues. There is also a walk-in office where customers can speak in person with a representative to have issues or concerns resolved. Customers can pay their bills on-line, over the phone, by mail or in person. In 2014, the utility bills were redesigned, giving customers the ability to compare consumption from the previous quarter and from the same time the year before, allowing customers to better understand their utility usage. A 20% discount for water and sewer consumption charges continued to be offered for qualifying low-income residents. Senior households in the Columbus water service area also received an additional discount on their water bill, having their water service charges waived. Senior power customers enjoyed a 10% consumption discount on their bills. Participation rates are to the left.

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 to learn more about the field and opportunities with the City of Columbus. The day also includes recognition of the city's Engineer of the Year award. Columbus Public Utilities continues to also be a major partner in the Children's Water Festival event, an event designed to educate elementary school children about the importance of protecting our water supplies.

Watershed Management

The Watershed Management section provided 259 boat safety inspections, 484 hours of reservoir boat patrol and participated in the following events: Hoover Fishing Seminar, Genoa Township Safety Day, the Children's Water Festival, and provided educational group tours for engineering programs through OSU and St. Stephen's.

City Power Customer Development

The Division of Power Customer Development Section handles many requests from our customers including for new service, private area lighting, service increases and upgrades, the Demand Response program and data requests. The section brought 62 new customers onto the city's grid in 2014 which created sales of \$655,483 and added consumption of 5,299,277 KWH. Large services designed and installed included:

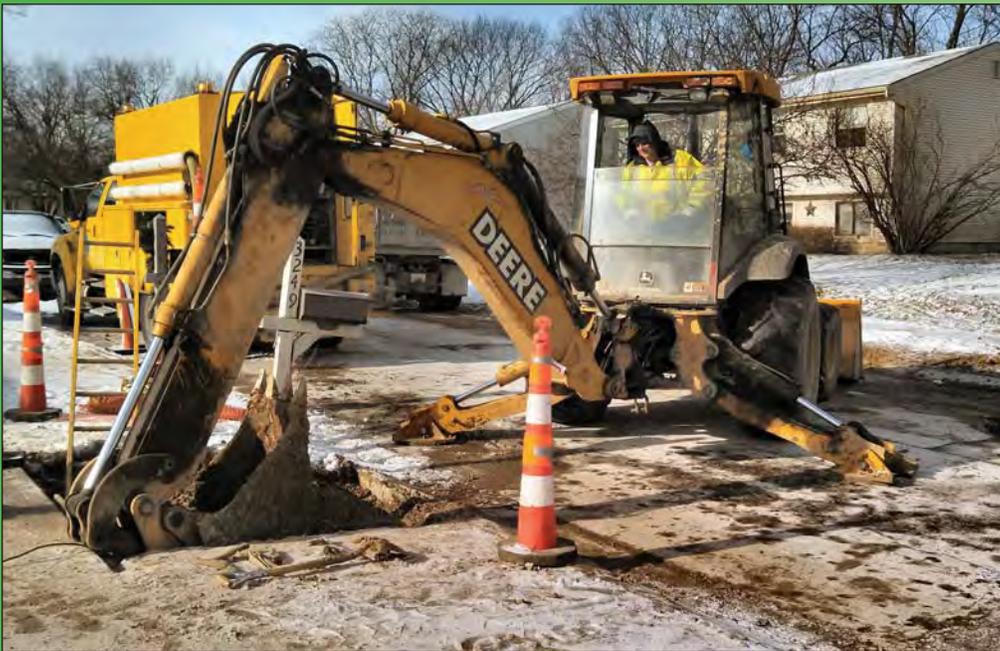
- New Services for a Pizzuti Project art gallery and hotel
- New Service for NHL outdoor skate park and future festivals at McFerson Park
- Office building at 625 Parsons Avenue
- Upgraded existing service at Liberty Tire on Jackson Pike
- Upgraded service at Yenkin Majestic Paints
- New service for Crimson Cup Roasting Plant
- Service upgrade at Stewart Elementary School
- New service for KGG Sorority House, University District
- St. Stephen's Community House Fish Farm and Community House

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, 81 new valves were installed, bringing the total to 829 homes in the program.

Communications Office

The Communications Office coordinates public meetings, public records requests, printed materials and reports, 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. An announcement in January that an aesthetic drinking water taste and odor event due to a non-toxic algal bloom had ended attracted over 14,000 views on Facebook, confirming what we already knew: Columbus has come to expect great tasting water.



Sewer Maintenance Activity	2014	2013	2012
Repairs (manholes, catch basins, etc)	1,826	1,703	1,945
Catch basins inspected	14,161	12,651	30,597
Catch basins, inlets, manholes cleaned	13,644	17,841	15,071
Miles of sewer power cleaned	340	499	386
Miles of sewer closed circuit televised	73	119	134
Total work orders completed	9,530	11,235	10,974

Water Maintenance Activity	2014	2013	2012
Main Line Leak Repairs:			
Columbus	475	532	411
Suburban Contracted Areas	239	229	170
Total	714	761	581
Taps/Service Lines:			
Repaired	116	115	71
Replaced	664	652	561
Cut-Off at Main	95	79	49
Put-in-Shapes	402	302	360
New Taps Main Line	11	29	8
Valves:			
Repaired	78	76	97
Installed/Replaced	132	158	121
Hydrants:			
Repaired	1,184	945	1,234
Replaced	55	59	72
Total work orders completed	3,461	3,177	3,120

MAINTAINING OUR SYSTEMS

Sewer Maintenance Operations Center

The maintenance of 4,469 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 2,496 miles of sanitary sewers, 1,765 miles of storm sewers and 156 miles of combined sewers. An additional 52 miles of county sewers are maintained under contract.

Maintenance responsibilities also include 12 sanitary and 15 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 2014 are in the chart to the left, top.

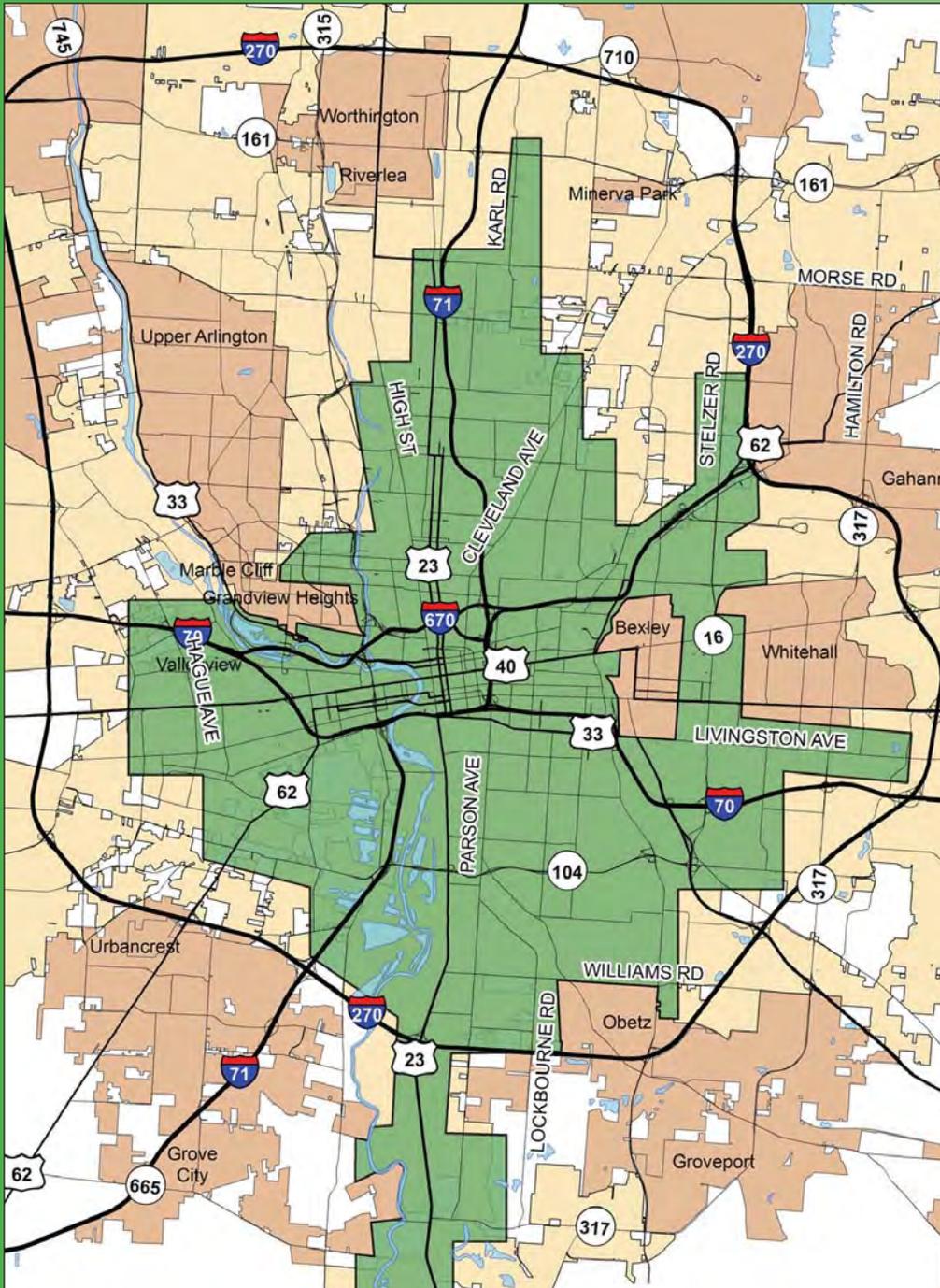
Water Distribution System Maintenance

Water Distribution Maintenance crews maintain 3,518 miles of waterline, which includes 2,517 miles in Columbus and 1,001 miles in contracted suburban service areas. A summary of the repairs made in 2014 are in the chart to the left, bottom.

Included in the waterline repairs to the left were 29 leaks discovered by the Pitometer Survey Crew, which performed testing on 2,043 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 one million gallons each day.

The Cross-Connection Control and Backflow Compliance Office oversees the protection of the water distribution system from potential sources of contamination. The team tracks and enforces annual testing requirements for backflow prevention devices throughout the service area. Additionally, the section continues to conduct water use surveys and inspections to ensure the compliance with the initiative. Staff continue to improve the quality of the backflow database, and records now exist on 34,969 backflow prevention devices in the Columbus water system. The group has started working on implementing a paperless data entry system, for input of backflow test reports. This is expected to greatly reduce the time required to process the reports which is expected to improve service to our customers, and be more environmentally friendly.

In 2014, a total of 6,928 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. More field inspections were performed 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. Over 12,000 business and residential accounts enjoy reliable city power, which allows the city to provide the necessary maintenance and energy to over 55,000 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.

Wholesale power market prices edged higher in 2014 due to power plant operating challenges related to the extreme cold weather experienced in the eastern U.S. in January. The Division monitored market prices for improvement, and requested proposals for wholesale power supply late in the year. After a bidding process, an additional year of supply was added to an existing agreement. Green energy credits were obtained for 20% of this power. As a result, the supply has been secured through the end of 2020. In addition to our main contracted supply, a small amount of energy was also purchased from Central Ohio BioEnergy LLC during the year. This facility converts sewage sludge, restaurant, and other wastes into end products of synthetic natural gas and electric power.

The hydroelectric unit at O'Shaughnessy Reservoir operated during nine months of the year to produce a \$326,000 financial credit, which benefited our customers.

Power Maintenance Activity	2014	2013	2012
Wire/Cable Repaired (feet)	107,562	88,862	91,852
Transformer KVA	10,899	5,112	9,303
Luminaires	1,304	1,367	1,526
Lamps	5,682	6,440	4,971
Wooden Poles	237	212	212
Standard Poles	137	152	130
Total Service Requests	10,607	10,262	9,774





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:

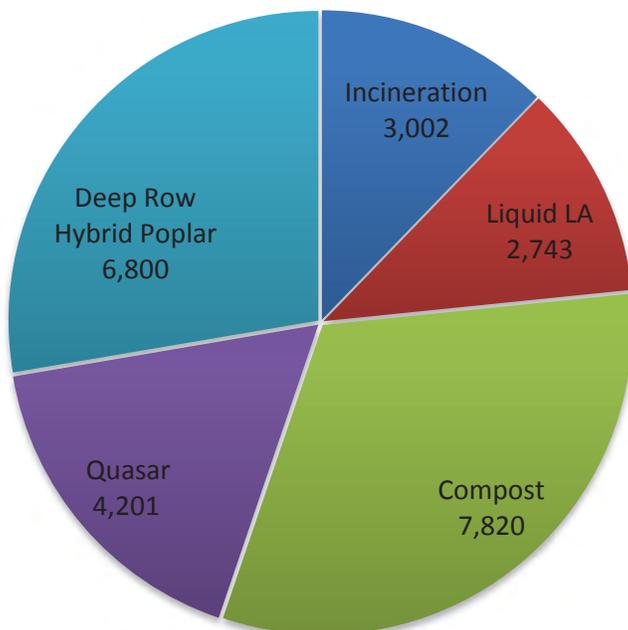
- The Dublin Road Water Plant serves downtown Columbus and the western and southwestern portions of Franklin County residents using water from the Griggs and O'Shaughnessy reservoirs on the Scioto River and the John R. Douth Upground Reservoir in northwestern Delaware County. This plant provided 34% of the water in the service area in 2014 and has a capacity of 65 million gallons per day (MGD).
- The Hap Cremean Water Plant, located on Morse Road, 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 supplies are pumped in from the Alum Creek Reservoir during dry periods as needed. This plant provided 49% 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 southeastern Franklin County. The Parsons Avenue plant provided 17% 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 Document Library at www.utilities.columbus.gov.

Water Pumpage Summary	2014	2013	2012
Finished Water:			
Total (billion gallons)	49.4	50.2	51.2
Average (million gallons per day, MGD)	135.3	137.6	139.9
Estimated Service Population	1,152,993	1,146,169	1,139,345
Average Per Capita Consumption (gallons per day)	117	120	123



Columbus Biosolids Distribution 2014, Dry Tons



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

treatment

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 racino, 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. In 2014, Jackson Pike and Southerly beneficially reused 88% of the biosolids that were produced, to reduce the environmental impact.

Both plants discharge treated water into the Scioto River and have undergone numerous upgrades in recent years. Tours of the plants are available to the public by appointment.

Wastewater Treatment Summary	2014	2013	2012
Wastewater Treated:			
Total (billion gallons)	63.5	63.5	56.1
Average (million gallons per day, MGD)	184.02	174.01	153.62
Carbonaceous Biological Oxygen Demand Removed	97.9%	98%	97.92%
Suspended Solids Removed	96.8%	97.2%	97.1%
Dry Tons Bio-Solids Handled:	31,962	40,953	43,889
Composted	7,820	6,219	14,301
Land Applied	2,743	2,666	2,497
Incinerated	3,002	6,200	8,738
Solids to Energy	16,173	15,906	14,258
Quasar (converts biosolids/food waste to electricity)	4,201	4,507	4,095
To mulch (deep row hybrid poplar)	6,800	5,455	-
Central Ohio Precipitation	38.12"	40.87"	37.27"
Compost Facility Production			
Incoming Sludge: Wet Tons	41,339	31,300	41,337
Incoming Sludge: Dry Tons	7,820	5,814	8,036
Average Percent Dry Solids	19.3%	18.8%	20%
Com-Til Sold (cubic yards)	29,237	27,849	38,061
Total Yard Waste Received (wet tons)	8,868	10,044	8,656
Total Com-Til Revenue	\$376,327	\$366,597	\$549,775
Total Com-Til Expenditures	\$2,484,127	\$3,310,698	\$2,802,233



Sanitary Enterprise Fund	2014	2013	2012
Revenue			
Beginning Cash Balance	\$119,610,557	\$108,576,301	\$99,335,964
Sewer Service Charges	\$193,162,978	\$190,692,377	\$195,127,124
Wet Weather Fees	\$32,587,890	\$31,125,466	\$30,093,503
Investment Earnings	\$1,654,336	\$1,073,981	\$1,161,039
System Capacity Charges	\$5,971,738	\$4,990,726	\$3,799,556
Storm Sewer Reimbursements	\$8,307,135	\$8,072,050	\$7,526,542
Other	\$2,761,579	\$2,831,058	\$2,777,582
Revenues Before Transfers	\$244,445,656	\$238,785,659	\$240,485,346
Refunding Bonds	-	-	\$1,756,918
Revenues After Transfers	\$244,445,656	\$238,785,659	\$242,242,264
Expenditures			
Personnel	\$43,238,791	\$42,456,998	\$41,850,416
Supplies and Materials	\$6,292,346	\$7,045,367	\$6,300,640
Services	\$26,245,535	\$26,517,766	\$24,249,763
Pro-Rata	\$10,908,572	\$10,481,662	\$10,800,825
Electricity	\$8,485,487	\$8,928,725	\$9,339,268
Capital Equipment	\$2,349,448	\$3,826,094	\$2,246,554
Other	\$762,748	\$257,154	\$10,455,555
Debt Service	\$123,552,630	\$123,316,776	\$123,191,890
Sewer Share of DPU	\$39,487,716	\$4,920,862	\$4,567,018
Total Expenditures	\$261,323,273	\$227,751,403	\$233,001,928
Ending Cash Balance	\$102,732,941	\$119,610,557	\$108,576,300

REVENUES AND EXPENDITURES

Stormwater Enterprise Fund	2014	2013	2012
Revenue			
Beginning Cash Balance	\$10,323,225	\$9,380,951	\$8,198,170
Storm Sewer Charges	\$37,877,002	\$35,974,336	\$36,607,096
Investment Earnings	\$206,570	\$25,908	\$212,251
Storm Penalties	\$458,843	\$432,433	-
Other	\$40,742	\$289,973	-
Revenues Before Transfers	\$38,583,158	\$36,822,650	\$36,819,347
Refunding Bonds	-	-	\$732,974
Revenues After Transfers	\$38,583,158	\$36,822,650	\$37,552,321
Expenditures			
Personnel	\$1,391,740	\$1,292,560	\$1,320,055
Supplies and Materials	\$11,317	\$18,989	\$13,413
Services	\$19,015,839	\$5,443,296	\$16,559,786
Pro-Rata	\$1,702,369	\$13,638,205	\$1,653,798
Capital Equipment	\$28,775	\$43,550	\$75,962
Other	\$230,526	\$53,076	\$81,475
Debt Service	\$13,971,135	\$14,119,349	\$15,501,484
Storm Share of DPU	\$1,382,139	\$1,271,353	\$1,163,567
Total Expenditures	\$37,733,840	\$35,880,376	\$36,369,540
Ending Cash Balance	\$11,172,543	\$10,323,225	\$9,380,951



Division of Power

Power Enterprise Fund	2014	2013	2012
Revenue			
Beginning Cash Balance	\$11,350,015	\$5,406,906	\$2,338,474
Commercial Service	\$65,340,363	\$65,384,730	\$65,405,147
Residential	\$6,152,089	\$6,152,339	\$6,472,479
Investment Earnings	\$155,732	\$79,034	\$66,889
Kilowatt Hour Tax Reduction	(\$1,578,866)	(\$1,689,077)	(\$1,684,756)
Other	\$3,921,499	\$4,017,275	\$3,630,142
Power Cost Reserve Adjustment (PCRA)	\$10,261,220	\$14,300,074	\$15,954,168
Revenues Before Transfers	\$84,252,037	\$88,244,376	\$89,844,069
Refunding Bonds	-	-	\$54,404
Revenues After Transfers	\$84,252,037	\$88,244,376	\$89,898,473
Expenditures			
Personnel	\$9,303,940	\$8,391,374	\$7,530,972
Purchase Power	\$54,297,039	\$58,512,595	\$63,858,428
Supplies and Materials	\$1,045,345	\$1,144,226	\$818,922
Services	\$4,536,732	\$4,274,870	\$4,708,519
Pro-Rata	\$3,734,812	\$3,924,778	\$4,033,310
Other	\$258,239	\$32,623	\$3,848
Capital Equipment	\$1,445,493	\$1,274,855	\$605,815
Debt Service	\$3,469,139	\$4,057,667	\$4,657,508
Transfer Fund	-	-	-
Power Share of DPU	\$734,156	\$688,280	\$612,718
Total Expenditures	\$78,824,895	\$82,301,268	\$86,830,040
Ending Cash Balance	\$16,777,156	\$11,350,015	\$5,406,907



Division of Water

Water Enterprise Fund	2014	2013	2012
Revenue			
Beginning Cash Balance	\$43,997,405	\$32,331,179	\$14,695,935
Water Charges	\$159,410,225	\$158,672,628	\$161,821,636
Water Billing Penalties	\$2,196,140	\$2,063,531	\$2,044,188
Investment Earnings	\$1,450,541	\$1,241,051	\$1,064,763
System Capacity	\$4,947,609	\$4,763,123	\$3,867,888
Sewer Billing Charges	\$6,301,390	\$6,355,055	\$6,730,001
Meter Service Fees	\$941,984	\$582,490	\$503,401
Other Revenue	\$5,603,011	\$9,950,068	\$4,847,436
Revenues Before Transfers	\$180,850,900	\$183,627,946	\$180,879,313
Refunding Bonds	-	-	\$3,621,455
Revenues After Transfers	\$180,850,900	\$183,627,946	\$184,500,768
Expenditures			
Personnel	\$45,740,910	\$44,844,666	\$44,695,149
Supplies and Materials	\$4,075,067	\$3,655,604	\$3,301,654
Chemicals	\$16,812,883	\$15,942,539	\$16,223,132
Services	\$15,036,637	\$14,479,983	\$14,168,699
Pro-Rata	\$8,049,951	\$8,014,611	\$7,868,493
Electricity	\$8,049,514	\$8,287,932	\$8,678,878
Other	\$1,052,443	\$306,606	\$1,291,391
Capital Equipment	\$1,912,640	\$973,233	\$834,934
Debt Service	\$78,472,631	\$71,244,520	\$65,997,292
Water Share of DPU	\$4,608,021	\$4,212,027	\$3,805,902
Total Expenditures	\$183,810,699	\$171,961,720	\$166,865,524
Ending Cash Balance	\$41,037,606	\$43,997,405	\$32,331,179

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.

2014 Sewer and Water Advisory Board Members:

Wallace Giffen, Chair

Hugh Dorrian, City Auditor

Greg Davies, Department of Public Utilities Director

Paul Rakosky, Department of Finance and Management Director

James Bowman

Steve Gladman

Jackie Gutter

Danielle Maignan

Robert Patterson

The Columbus 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

2014 City Council Members:

Andrew Ginther, President

Hearcel Craig, President Pro-Tem

Zachary Klein, Public Utilities Committee Chair

Shannon Hardin

Michelle Mills

Eileen Paley

Priscilla Tyson