

THE CITY OF  
**COLUMBUS**

MICHAEL B. COLEMAN, MAYOR

DEPARTMENT OF  
PUBLIC UTILITIES



**2012 Annual Report**



**Michael B. Coleman,  
Mayor**



**Greg Davies,  
Director**

*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.*



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



**Dax Blake, P.E.  
Administrator  
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message

# FROM THE DIRECTOR

The challenge of providing quality, affordable utilities while maintaining strong customer service is constant, and we in the Columbus Department of Public Utilities are always refining strategies toward that goal, in an ever-changing regulatory environment.

We were excited to welcome Mayor Michael B. Coleman at the kickoff of the Olentangy-Scioto-Interceptor-Sewer Augmentation and Relief Sewer (OARS) tunnel and the Olentangy River restoration project, which included removal of the Fifth Avenue dam. The Division of Sewerage and Drainage began working with the Ohio Environmental Protection Agency to update our Wet Weather Management Plan to include Integrated Planning, which will involve substantial use of green infrastructure to address sewer overflows. Other cities will be watching as we take a leading role in this area.

Following the approval of Columbus City Council and the Sewer and Water Advisory Board, we implemented a rates package that reflected an 8% increase for water, 3% increase for sanitary sewer and a 2% decrease in stormwater rates, resulting in an overall 4.7% increase, the smallest since 2002. To maximize ratepayer dollars, we continued implementation of our Asset Management program. The evaluation of 15 proposed capital projects resulted in reduced spending by about \$13 million, with additional savings realized through overhauling maintenance practices at our treatment plants and other facilities. We expect these savings to continue as we fully apply the asset management principles.

Our Division of Power and Water saw its share of improvements including the continued construction of the Up-ground Reservoir. Plans were finalized for treatment and capacity upgrades at our water plants, as we also remained focused on other infrastructure upgrades such as water mains. In late June, our Power Section workers drew praise for their prompt response in the wake of a sudden and destructive derecho storm that knocked out electricity to thousands of customers in the region, and our sewer and water crews worked around the clock to maintain vital services. In the fall I announced the Power Section would be restored to division status, with an emphasis on service and growing our customer base, following the successful negotiation of long-term purchase power agreements to help promote the sustainability of the soon to be created Division of Power.

October saw the return of 5Cities+ to Columbus as we hosted the region's largest wastewater symposium. The department also played a major role in the return of the city's annual Small Business Conference, which guides local entrepreneurs on how to bid for work on city projects.

We remained active in the Neighborhood Pride program. Crews inspected 780 stormwater catch basins, painted 631 fire hydrants and repaired 66 streetlights within the four areas.

*From left in OARS tunnel: Administrator Dax Blake, Mayor Michael B. Coleman, Director Greg Davies, and Council Member/Utilities Chair Eileen Paley.*

*Cover photo: OARS engineering and construction team members in front of the tunnel boring machine in Germany.*





# 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 capacities 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 5,272 homes, businesses and community groups enrolled by the end of 2012, each committing to a series of behaviors promoting responsible stewardship of the environment.

The department's Environmental Management System, which began in 2008, completed targeted environmental compliance audits at its 10 facilities and an audit in 2012. Southerly received a renewal of its Title V permit covering air emission units at the facility. The Hap Cremean Water Plant received approval of its plans for a proposed ozonation system and other upgrades to its treatment facility from Ohio EPA. The Water Quality Assurance Lab received a favorable survey from OEPA; both Southerly and Jackson Pike Wastewater Treatment Plants received favorable results from agency inspections of their National Pollution Discharge Elimination System programs, and Southerly received a favorable inspection of its air compliance program.

## **Neighborhood Outreach**

Educational materials and resources were provided to residents at four Neighborhood Pride events. Our model green home continued to be a popular display, demonstrating over 40 energy and money saving tips that can be implemented in homes and yards. Conservation items were provided including reusable water bottles, rain gauges and water saving kits.

The Power Section continued the Efficiency Smart Program in partnership with American Municipal Power. The program provides grant money to businesses that reduce their energy consumption.

## **Partnerships**

The department has a strong partnership with other governmental agencies, environmental and neighborhood groups to help promote a sustainable community. Partnership activities included:

- 964 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 was developed and implemented in 2012. The program provides materials to support first grade curriculum in Columbus City Schools.
- In recognition of National Drinking Water Week, the fifth annual Central Ohio Children's Water Festival hosted 670 fifth-grade students and their teachers for a day of fun and learning. The event, moved to the Ohio Department of Natural Resources' Ohio Expo Center facility in 2012, 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.



# environment

Customer Violation Category	Type and Number	Fines
Industrial Wastewater, Pre-Treatment/Trucked Waste, Fats/Oils and Grease	13 Program, 19 Technical, 6 FOG	\$8,250
Stormwater and Regulatory Management	20 Illicit Discharge, 18 Sediment/Erosion Control	\$15,750
<b>Total</b>		<b>\$24,000</b>

The Surveillance Laboratory assists the wastewater treatment plants by analyzing samples associated with the plants. A total of 10,138 parameters were analyzed from 1,112 plant samples. The lab also supports the Industrial Wastewater Pretreatment Program by testing samples of the city's industrial customers. This program resulted in 29,102 compliance parameters (allowable limits of monitored substances) for analysis from 5,600 samples. This work group is also charged with monitoring background levels of pollutants within the sewer system. To achieve this, the lab analyzed 8,975 parameters from 306 samples. The City's stormwater program collects samples during high-flow periods generated by heavy rainfall. This program sent 170 samples to the Surveillance Lab last year for analysis of 957 parameters.

The Industrial Wastewater Pretreatment Group monitors discharges from permitted industries into the sanitary sewer system to ensure compliance with clean water goals. During 2012, staff performed 128 inspections and investigated 6 grease incidents, met with 9 food service establishments as part of the Fats, Oils and Grease Best Management Program, and distributed 2,088 educational door hangers. There was 1 cost recovery performed in 2012 due to blockages caused by grease.

The Stormwater and Regulatory Management Section personnel performed 4,583 site inspections on active construction sites for pollution control, field screened 2,644 storm sewer outfalls and investigated 51 reports of spills or suspected illicit discharge to the storm sewer system. Inspections were made at 70 businesses for compliance with OEPA Industrial General Permits for stormwater discharge.

The Compost Facility was established in 1980 as an environmentally friendly alternative to treat wastewater residuals. Recycling the bio-solids into a woodchip and composting gardening material reduces the amount that would otherwise be incinerated or landfilled.

<b>Compost Facility Production</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
Incoming Sludge:			
Wet Tons	41,337	32,562	38,276
Average Dry Solids	20%	19%	20%
Average Volatile Solids	73%	69%	76%
Dry Tons	8,036	6,267	7,451
Compost Processed (cubic yards)	224,900	181,350	280,000
Compost Screened (cubic yards)	270,079	260,531	259,200
Com-Til Sold	38,061	44,407	43,853
Total Compost Sold (dry tons)	11,280	12,405	13,979
Revenue	\$549,775	\$311,400	\$339,516
Total Expenditures	\$2,802,233	\$2,499,613	\$2,462,598

# communities



*5th Avenue Dam demolition*



*OARS shaft and biofilter*



# COMMUNITY REINVESTMENT

## Division of Sewerage and Drainage

### Sewer System Engineering Section

2012 was another busy year for the Sewer Systems Engineering Section as they progressed with many improvements related to the Wet Weather Management Plan. The large diameter OARS tunnel continued construction with both Phase 1 and Phase 2 well under construction. The model update continued to be refined to better predict collection system operation. The staff began implementing elements of Integrated Planning (IP), releasing requests for proposals for both the Clintonville and Barthman/Parsons areas.

#### **Downtown Infrastructure**

Construction of two biofilters continued in the Downtown area to mitigate odors emanating from the Olentangy-Scioto Interceptor Sewer and its tributaries, and to aid in protecting downtown sewerage facilities from hydrogen sulfide degradation. These biofilters are located near the Arena District and the Brewery District. Construction is expected to be completed in 2013.

#### **Combined Sewer Overflow (CSO) Regulator Sluice Gate Modification**

The CSO sluice gate regulator modification project completed construction in 2012. This project will result in a reduction in both volume and frequency of combined sewer and sanitary sewer overflow volumes into the Olentangy and Scioto rivers during an average year of rainfall by removing certain gates, increasing orificies and modifying weirs within the sewer collection system. The modifications will result in more wet weather flow capture for transport and treatment at the Jackson Pike and Southerly wastewater treatment plants.

#### **Lower Olentangy River Ecosystem Restoration, Fifth Avenue Dam Removal**

The Fifth Avenue Dam was removed in the fall and stream restoration of the Olentangy River went under construction. The restoration limits extend from the Fifth Avenue bridge upstream to the Lane Avenue bridge. Work includes creating a modified channel cross section and new channel profile with pools and riffles. Construction activities will extend into spring 2014.

#### **Inflow and Infiltration Studies**

All of the Inflow and Infiltration (I/I) studies had final report drafts completed, with city review to determine the effect the new Integrated Planning concepts will have on related recommended projects and their associated project areas. But first, the city must complete its newly approved and devised IP pilot projects. Data gathered by the studies regarding the source and quantities of extraneous stormwater will be invaluable in globalizing estimates of the impact of the IP solutions in the Barthman/Parsons and Clintonville areas city-wide.



OARS tunnel boring machine, "Marsha," signed by Mayor Coleman and Council Member Paley

communities

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

Work continued on this 20-foot diameter, 190 foot deep, nearly 4.5 mile long sewer tunnel project that will greatly reduce combined sewer overflows 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. This Phase 1 work is \$265 million. The \$77 million Phase 2 project also continued, which includes the pump station in addition to the intermediate shafts which will receive flows to the tunnel.

### **Wet Weather Planning**

The Sewer System Capacity Model remained a vital tool in evaluating capacity deficiencies and devising economical solutions to those deficiencies. This model allows the section to ensure continued compliance with the city's consent orders and general hydraulics of the system. The model replicates existing conditions in the collection system and forecasts future scenarios as defined by the modeler. In 2012, the collection system model was utilized to evaluate several impacts to our collection system from proposed capital improvements and private redevelopment projects. The progress in the reduction of both combined and sanitary sewer overflow volumes, in addition to the evaluation of the IP, were started and will continue to be refined moving forward.

### **Sewer Rehabilitation**

Various large and small scale cured-in-place sewer lining projects were performed again across the city. Where conditions are appropriate, this technology enables the Division of Sewerage and Drainage to renew sewer pipes without significantly disturbing the ground and at a lower cost to the ratepayer compared to traditional pipe replacement. In 2012, sewer lining continued within the Early Ditch and Livingston/James Inflow/Infiltration (I/I) areas. Additional sewer sections located throughout the city that were identified by SMOC crews for rehabilitation were also lined.

### **Large Diameter Sewer Rehabilitation**

Large diameter sewers, ranging in size from 3 to 10 feet in diameter, serve the largest portions of Columbus' population. To date, three sewers have been studied and evaluated for structural condition and accumulation of debris while another is in the early stages of the assessment process. Two projects went to construction in 2012, Scioto Main and Olentangy Main Phase 2. The assessment of the Alum Creek Trunk Sewer (middle section) was also completed, while requests for proposals for the assessment of the Alum Creek Trunk Sewer (south section) were advertised.

### **Neighborhood Stormwater Improvements**

Stormwater system improvement projects continued, many of them jointly with the Department of Public Service or the Division of Power and Water. Construction work on a joint sewer and water improvement project in the Idlewild area continued. This project will mitigate street and yard flooding for numerous homes by improving hydraulics to the Martin Grove Ditch.

A joint sewer and roadway project along Fairwood Avenue began; it includes construction of storm, curb and sidewalks between Koebel and Watkins Road with the storm improvements extending south to Southfield Drive.

Other notable projects which began construction included projects along 23rd, 24th, 25th Avenues east of Joyce Avenue; along Union, Springmont, Safford, and Homewood Avenues between Highland and Whitethorne Avenues; along Mound Street from 22nd Street to west of Monroe Avenue; along Bulen Avenue between Koebel and Watkins Roads; and along Weisheimer Road west of High Street which also included a rain garden.



*Waterline rehabilitation process*

***The Water Distribution Section designs, installs and maintains the infrastructure necessary to supply customers who rely on Columbus' three water treatment plants.***

communities

# COMMUNITY REINVESTMENT

## Division of Power and Water

### Water Distribution

#### **Eastmoor Area Water Line Improvements**

The Eastmoor Area Water Line Improvements project, which is part of the division's Replacement and Rehabilitation (R&R) Program, was successfully completed in 2012. This project provided for general rehabilitation of the area's distribution system and included construction of approximately 12,000 linear feet of 6 and 8 inch ductile iron water pipe, abandoning existing water mains, transferring water services and replacing fire hydrants on 9 residential streets in the Eastmoor area. The purpose of the project was to replace water mains that required repeated regular maintenance due to breakage and improve flow to the area.

#### **Sylvan Avenue Area Water Main Improvements**

This project rehabilitated the area's water distribution system and included 10,000 linear feet of 6 and 8 inch ductile iron water pipe, abandoning existing water mains, transferring water services and replacing fire hydrants on 11 residential streets in the Sylvan Avenue area. The purpose of the project was to replace water mains that required repeated regular maintenance due to breakage and improve flow to the area. Part of this project involved installing cured-in-place pipe (CIPP). This technology involves mechanically cleaning the existing pipe, then installing a structural lining on the inside, and was used to rehabilitate sections of water lines that would have been difficult to replace with conventional open cut methods. This not only seals any leaks in the original pipe but also extends its life by reinforcing its structure. Other advantages of the technology are improvements to hydraulic capacity and water quality. It cannot be used in every project but for those that qualify, it eliminates the need to dig up and replace the entire water line, saving ratepayer dollars with the added benefit of much less disruption to customers and the surrounding neighborhood. The improvement also involved the installation of new 6 and 8 inch ductile water lines.

#### **North Linden Area Water Main Improvements**

In this area, CIPP technology was also used. This project lined more than 10,000 linear feet of 6-inch and 8-inch water mains. The city has successfully completed three projects using CIPP water line rehabilitation.

#### **Fisher Road Booster Station Improvements**

The main feature of the Fisher Road Booster Station Improvements project was the installation of a permanent diesel powered generator. With this new generator and automatic transfer switch, backup power will be provided immediately in the event of a power outage. The new 1 megawatt generator provides the ability to pump more water during a power outage than was previously possible when a smaller portable generator was used. These improvements reduce the risk of customers in the area losing water service during a power outage.



*Aerial view of Upground Reservoir progress as of August 2012*



*Pump station for Upground Reservoir construction underway*

## Water Supply

Construction continued into the second year on the city's first upground reservoir, and its raw water pump station and pipeline, off the Scioto River north of the O'Shaughnessy Dam. This 850 acre, 9+ billion gallon reservoir is anticipated to be completed in the fall of 2013. The project will produce additional safe yield water supply as recommended in the Water Beyond 2000 study for the Dublin Road Water Plant. Total cost is \$123 million.

Contracts 1 and 2 for Dublin Road Water Plant were issued with work set to begin in early 2013. The future plant improvements coming from this design will provide for new processes to meet water quality regulations, future capacity demands and plant reliability. Construction will continue through 2016 and the total cost for all contracts is estimated at \$200 million.

Construction continued on the second of four planned well sites for the Parsons Avenue Water Plant. Also following the Water Beyond 2000 study recommendations, this project progressed toward the development of additional supplies of high quality water to the plant.

Construction for treatment improvements to the Hap Cremean Water Plant began. The \$68 million improvements will allow the plant to meet new Ohio EPA rules for the Safe Drinking Water Act.

Other improvements under construction in 2012 included the Dublin Road Water Plant Low Service Pump Replacement Phase 1, the PAWP Roof Restoration and the Hap Cremean Water Plant Automation Upgrade. Improvements under design in 2012 included the Parsons Avenue Surface Water Treatment Upgrade, the Watershed Roadway Improvements Project, the Alum Creek Pump Station Improvements, the Hoover Erosion Control Project and the South Wellfield Raw Waterline project. In addition, a Professional Construction Management program continued to be utilized with a consultant team.

Completed in 2012 were the Parsons Avenue Water Plant Automation Upgrade, the Parsons Avenue Sludge Disposal Part II, and the Supply Facilities Elevator Replacement Project. Other improvements completed included the Dublin Road Water Plant Flocculation Drive replacement project and the Parsons Avenue Water Plant South Wellfield Expansion Raw Water Line CW 106.



*The Power Section provides and maintains the city's street lighting infrastructure.*

communities



## Power Section

Engineers at the Power Section were responsible for overseeing and coordinating the installation of many projects throughout the year. This work included identifying projects, developing the budgeting, as well as design, installation, inspection and acceptance of various projects onto our electrical grid. In 2012, the Power Section's engineering staff added 236 streetlights to the city's system and completed various improvements to the power distribution system's infrastructure. The city added 54 new customer accounts on the grid, along with supplying new and upgraded services to projects such as: the newly expanded Scioto Downs, Banner Metals, the OARS sewer tunnel, 23 - Next G services for city Wi-Fi, and new service for 120 Gay Street.

During the year, plan review staff handled approximately 1,465 drawing submissions for construction projects within Columbus. The city's Development Department continues to hold pre-construction project review meetings throughout the year for private developers; Power participates as facility conditions warrant. Staff also participated in the creation of a right of way construction permit manual during the year. This work culminated in a training seminar for the local construction community in November.

Streetlighting and capital improvement projects in 2012:

- Work began on a contract for upgrading numerous streetlight circuits. This project involved repairing and updating old conductors, insulators and lights on the worst performing circuits throughout the city to improve reliability and to meet current specifications.
- Several requests for proposals were initiated for engineering design for new streetlight projects.
- A new contract was put in place for emergency storm restoration work.
- Streetlighting staff worked with URS Corporation to develop new streetlight specifications and standards to be used for future streetlighting projects.

The following streetlight projects were accepted into our grid in 2012:

Upper Albany West	Reynolds Crossing
Alkire Road	Livingston Avenue bridge
Big Run Ridge	Maxwell Place
Olentangy Meadows	Monarch Greene
Thomas Lane	Tenth Avenue
Sedgemoor Drive	Dodridge Street bridge (over Olentangy River Road)
Old Stone Crossing	Emerald Parkway
Waggoner Trace	Beggrow Street
West Broad Street	Fifth Avenue traffic islands
Grant Avenue	Galloway Ridge
Tamarack Boulevard Cul-De-Sac	



*Columbus Utilities Complex, 910 Dublin Road*

# service

<b>Customer Service Highlights</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
Meter service calls (installations, replacement, inspection, service renewal and termination)	67,521	75,227	82,641
Delinquent account service calls (door tags, service terminated)	18,189	13,710	24,201
Residential meter readings (recheck readings, inspect reading problems)	12,655	5,960	24,201
Total final service calls	25,588		
Commercial meters (test meters, investigate billing concerns)	1,943	1,792	1,812
Total customer calls	412,436	359,135	449,076
Low Income Water/Sewer Discount participants (single and multi-family properties)	5,719	5,943	5,747
Senior Water Discount participants	2,642	2,498	2,310
Senior Power Discount participants	168	158	121
Total customers billed:			
Water	279,803	277,413	277,413
Sewer	270,868	268,767	268,767
Stormwater	197,022	195,535	195,535
Power	12,603	12,545	13,563

# CUSTOMER SERVICE

## Call Center

A major part of what the Columbus Department of Public Utilities provides is customer support for the water, sewer, stormwater and electricity services it offers to its residents and contracting communities. A dedicated call center staffed with around 50 people 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 request for proposal was issued this year to secure a vendor to expand billing services to include e-billing. The Water Section continued a meter replacement program to ensure better accuracy in meter readings and billing.

A 20% discount for water and sewer consumption charges continued to be offered for qualifying low income residents. 4,509 single-family homes and 1,210 multi-unit families received this discount in 2012. 2,642 seniors in the Columbus water service area also received an additional discount on their bill through having their service charge waived. 168 Columbus power customers who are seniors enjoyed a 10% consumption discount on their electricity bills.

## Communications Office

The Communications Office continued to coordinate information requests from the media and the public, distribute news releases, brochures and customer bill inserts regarding water quality and conservation, prevention of water pollution and other notifications required by the Ohio EPA. The department's Web site remained responsive to the needs of ratepayers and companies that do business with the city by updating existing material and posting new content including the 2012 Stormwater Drainage Manual, and seasonal topics, many of which are also shared on social media. The department's Facebook page grew to over 200 followers, and a new department Twitter account was created in 2012.

## Project Dry Basement

Columbus residents continued to welcome the opportunity to participate in the Project Dry Basement sewer back-up prevention program, which began in 2004. During its eighth full year of the program, 36 new valves were installed, bringing the total to 725 homes participating to date. The program has had great success in preventing basement backups due to wet weather and sewer blockages.

## The Compost Facility

The department's Compost Facility became exclusively a wholesale distributor of its popular Com-Til products and arranged to have several retail outlets sell the product to the public. The staff participated in numerous community and trade events including the Central Ohio Nursery and Landscape Trade Show, the Central Ohio Home and Garden Show, the Chadwick Spring Plant Sale and various garden club meetings.

## Watershed Management

The Watershed Management section provided 474 boat safety inspections at 859 hours of reservoir boat patrol and participated in the following events: Hoover Fishing Seminar, Columbus Sports Vacation and Travel Show, Earth Day week events at both the Columbus Zoo and COSI, the Children's Water Festival and they organized reservoir litter cleanups at both Griggs and Hoover Reservoirs.

<b>Sewer Maintenance Activity</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
Repairs (manholes, catch basins, etc)	1,945	1,836	1,647
Catch basins inspected	30,597	24,783	16,443
Catch basins, inlets, manholes cleaned (city crews)	15,071	14,152	13,410
Catch basins, inlets, manholes cleaned (contracted)	0	0	236
Miles of sewer power cleaned	386	366	394
Miles of sewer closed circuit televised	134	136	116
<b>Total work orders</b>	<b>10,974</b>	<b>12,304</b>	<b>11,167</b>

<b>Water Maintenance Activity</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
Main Line Leak Repairs	547	572	808
Taps/Service Line:			
Repaired	71	120	94
Replaced	561	385	451
Cut-Off at Main	49	42	45
Put-in-Shapes	360	378	511
New Taps Main Line	8	7	12
Valves:			
Repaired	97	54	50
Installed/Replaced	121	95	90
Hydrants:			
Repaired	1,234	1,476	1,077
Replaced	72	57	71

# maintenance

# MAINTAINING OUR SYSTEMS

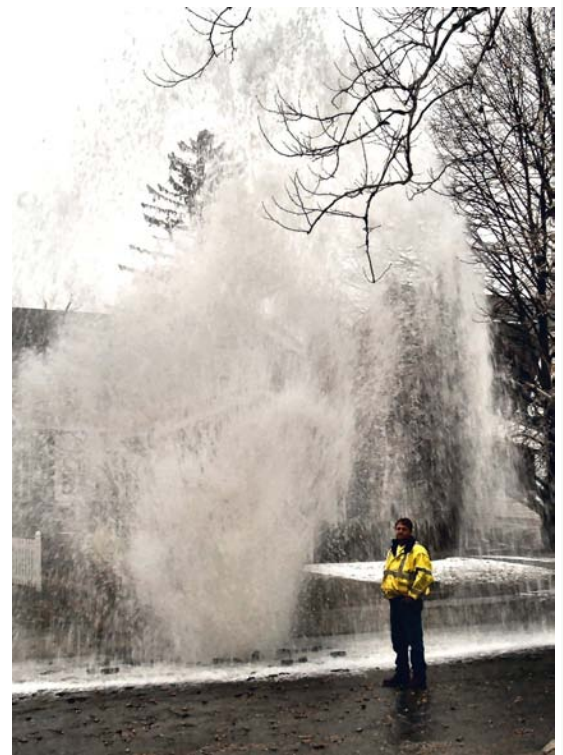
## Sewer Maintenance Operations Center

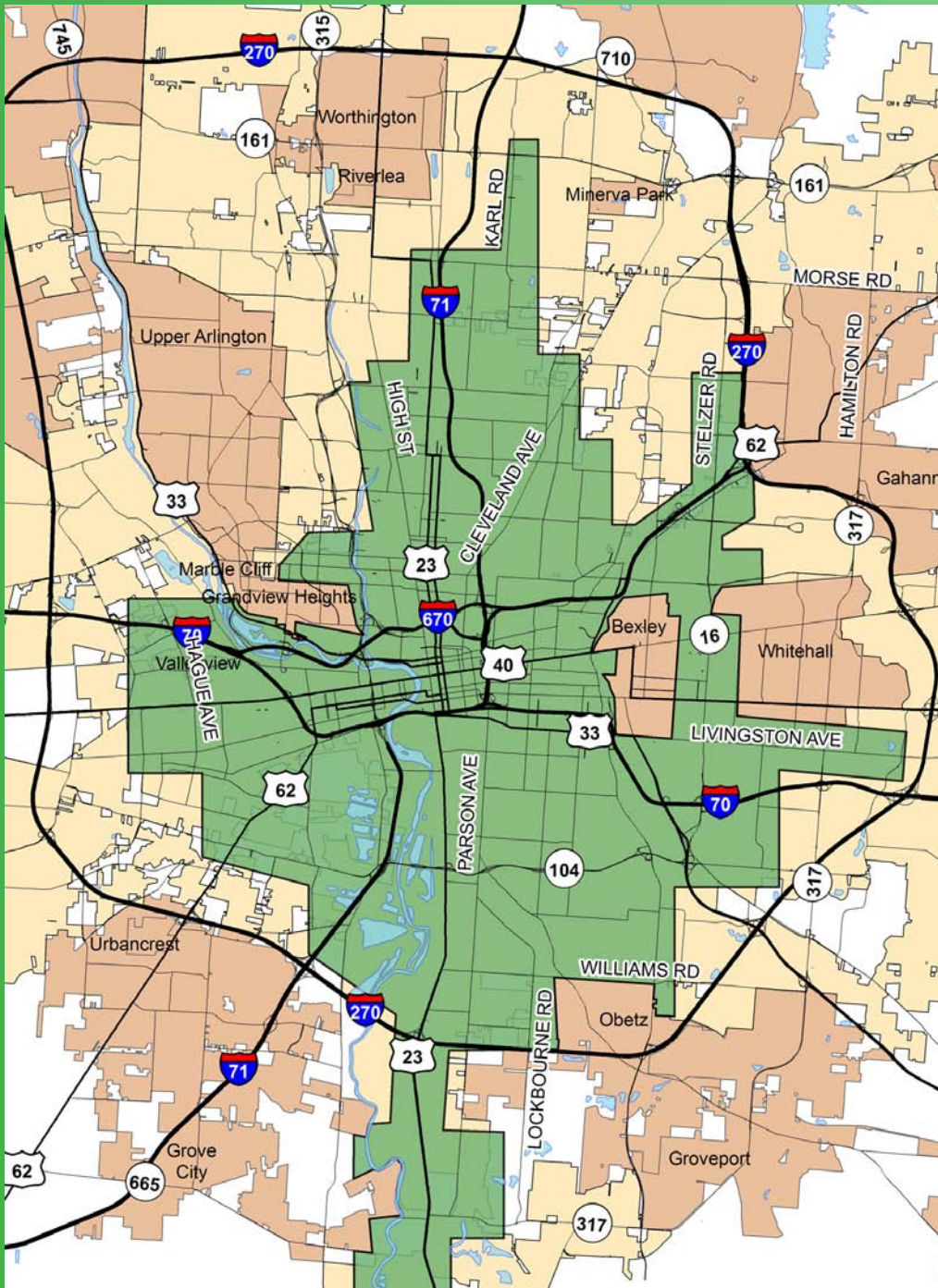
The maintenance of about 4,500 miles of storm, sanitary, and combined sewers is performed by the Sewer Maintenance Operations Center (SMOC), a 24-hour facility and the largest staffed section of the Division of Sewerage and Drainage. Maintenance responsibilities include: 10 sanitary and 16 storm pump stations monitored by 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.

## Water Distribution System Maintenance

Water Distribution Maintenance crews maintain around 3,600 miles of waterline in Columbus and contracted suburban service areas. Crews repaired a total of 547 water main leaks, repaired or replaced 632 water service leaks, repaired or replaced 218 valves, and repaired or replaced 1,306 fire hydrants in 2012. Included in the repairs were 74 leaks discovered by the Pitometer Survey Crew, which performed testing on about 1,390 miles of pipe to locate system leaks that do not surface, better known as unreported leaks.

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 34,726 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. A total of 10,054 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.





City of Columbus Power Service Area

*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 Power Section maintains a network of substations, transmission lines, distribution and street lighting circuits throughout the city. Columbus provides electricity to over 12,000 business and residential accounts, allowing us to provide maintenance and energy to 52,874 city streetlights. The staff also maintain the O'Shaughnessy hydro-electric unit and the Ohio Department of Transportation's freeway lights on major highways within our city limits.

The derecho storm in late June that caused thousands of power outages across central Ohio provided a reminder for many loyal customers of city power on why they remain customers: despite the severity of the storm, a majority of customers were back in power within 24 hours. Power Distribution Maintenance crews worked around the clock to get customers restored as quickly as possible. Many were very appreciative, as the photo below shows.



Power Maintenance Activity	2012	2011	2010
Wire/Cable Repaired (feet)	91,852	39,297	111,407
Tranformer KVA	9,303	8,248	781
Luminaries	1,526	2,599	1,405
Lamps	4,971	8,602	7,074
Wooden Poles	212	300	184
Standard Poles	130	379	146
Total Service Requests	9,774	9,557	9,446



*Dublin Road Water Tank*

# treatment



# WATER TREATMENT

The water treatment staff 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. In 2012, this plant provided 35% of all water pumped and has a capacity of 65 million gallons per day (MGD).
- The Hap Cremean Water Plant, on the north side, serves The Ohio State University and northern and northeastern Franklin County area residents. The water source is Hoover Reservoir on Big Walnut Creek. This plant provided 55% of all water pumped in 2012 and has a 100 MGD capacity.
- Parsons Avenue Water Plant on the south side draws water from wells and serves residents in the southeastern Franklin County area. The Parsons Avenue plant provided 10% of all water pumped in this year 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](http://utilities.columbus.gov).

<b>Water Pumpage Summary</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
Finished Water:			
Total (billion gallons)	51.2	50.3	51.2
Average (million gallons per day)	139.9	137.8	140.3
Estimated Service Population	1,139,345	1,132,500	1,125,900
Average Per Capita Consumption (gallons per day)	123	122	125



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

treatment

# WASTEWATER TREATMENT

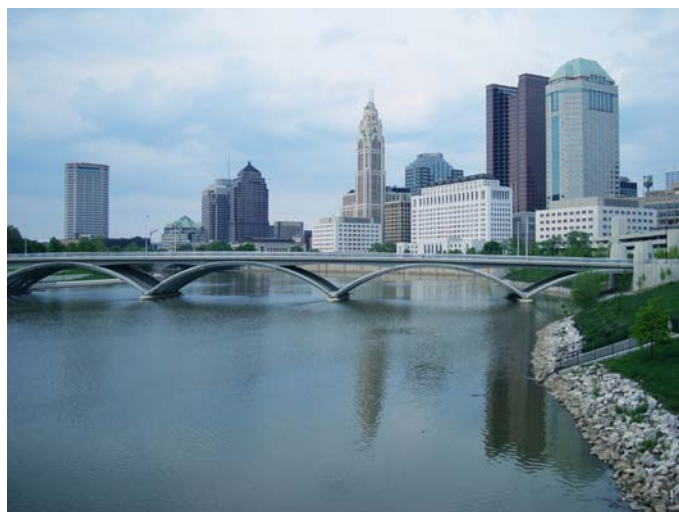
The City of Columbus operates two 24-hour, award-winning wastewater treatment plants, serving the city and 25 contracting suburban communities.

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 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	2012	2011	2010
Wastewater Treated:			
Total (million gallons)	56,139.59	76,234.60	57,283.53
Average (million gallons per day)	153.62	208.86	156.94
Carbonaceous Biological Oxygen Demand Removed	97.92%	97.6%	97.9%
Suspended Solids Removed	97.08%	97.3%	97.1%
Dry Tons Bio-Solids Handled:			
Composted	14,301	6,279	6,381
Land Filled	0	150	1,080
Land Applied	2,497	1,585	2,581
Incinerated	8,738	14,656	17,448
Solids to Energy	14,258	14,897	9,451
To Quasar (private facility that converts biosolids/ food waste to electricity)	4,095	3,273	n/a
Central Ohio Precipitation	37.27"	54.96"	36.2"



<b>Sanitary Enterprise Fund</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
<b>Revenue</b>			
Beginning Cash Balance	99,335,964	84,960,407	64,852,418
Sewer Service Charges	195,127,124	213,853,831	208,003,311
Wet Weather Fees	30,093,503	-	-
Investment Earnings	1,161,039	1,614,814	2,645,658
System Capacity Charges	3,799,556	4,326,943	4,061,321
Storm Sewer Reimbursements	7,526,542	7,794,381	7,007,270
Other Revenue	2,777,582	4,733,296	3,750,901
Revenues Before Transfers	240,485,346	232,323,265	225,468,461
Refunding Bonds	1,756,918	-	-
Revenues After Transfers	242,242,264	232,323,265	225,468,461
<b>Expenditures</b>			
Personnel	41,850,416	41,782,604	40,758,576
Supplies and Materials	6,300,640	6,428,760	5,345,335
Services	24,249,763	23,719,379	21,876,011
Pro-Rata	10,800,825	10,331,710	9,122,485
Electricity	9,339,268	9,525,662	8,832,533
Capital Equipment	2,246,554	1,398,271	1,617,654
Other	10,455,555	840,280	350,935
Debt Service	123,191,890	119,715,740	114,001,397
Sewer Share of DPU	4,567,018	4,205,303	3,832,073
Total Expenditures	233,001,928	217,947,708	205,360,473
Ending Cash Balance	108,576,300	99,335,964	84,960,407

# REVENUES AND EXPENDITURES

<b>Stormwater Enterprise Fund</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
<b>Revenue</b>			
Beginning Cash Balance	8,198,170	5,589,535	1,017,173
Storm Sewer Charges	36,607,096	37,914,392	36,858,863
Investment Earnings	212,251	212,251	299,249
Revenues Before Transfers	36,819,347	38,126,643	37,158,112
Refunding Bonds	732,974	-	-
Revenues After Transfers	37,552,321	38,126,643	37,158,112
<b>Expenditures</b>			
Personnel	1,320,055	1,395,932	1,393,452
Supplies and Materials	13,413	11,130	13,090
Services	16,559,786	16,482,126	15,228,300
Pro-Rata	1,653,798	1,681,270	1,496,601
Capital Equipment	75,962	22,508	-
Other	81,475	224,285	325,493
Debt Service	15,501,484	14,705,010	13,104,708
Storm Share of DPU	1,163,567	995,747	1,024,107
Total Expenditures	36,369,540	35,518,007	32,585,750
Ending Cash Balance	9,380,951	8,198,171	5,589,535

<b>Power Enterprise Fund</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
<b>Revenue</b>			
Beginning Cash Balance	2,338,474	938	23,874
Commercial Service	65,405,147	67,288,837	67,599,641
Investment Earnings	66,889	56,802	64,249
Kilowatt Hour Tax Reduction	(1,684,756)	(1,582,944)	(3,284,329)
Other	3,630,142	3,472,323	5,577,711
PCRA	15,954,168	13,928,729	11,303,790
Residential Service	6,472,479	6,845,225	6,558,799
Revenues Before Transfers	89,844,069	90,008,972	87,819,861
Refunding Bonds	54,404	-	-
Revenues After Transfers	89,898,473	90,008,972	87,819,861
<b>Expenditures</b>			
Personnel	7,530,972	7,927,958	8,455,067
Purchase Power	63,858,428	62,789,471	62,971,079
Supplies and Materials	818,922	696,133	644,287
Services	4,708,519	4,311,930	4,926,061
Pro-Rata	4,033,310	4,033,591	3,714,504
Other	3,848	126,640	18,985
Capital Equipment	605,815	474,343	682,826
Debt Service	4,657,508	5,297,227	5,876,651
Transfer Fund	-	1,481,000	-
Power Share of DPU	612,718	533,141	553,337
Total Expenditures	86,830,040	87,671,434	87,842,797
Ending Cash Balance	5,406,907	2,338,476	938

<b>Water Enterprise Fund</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
<b>Revenue</b>			
Beginning Cash Balance	14,695,935	6,707,105	1,298,309
Water Charges	161,821,636	142,640,540	135,745,830
Water Billing Penalties	2,044,188	1,862,358	1,772,801
Investment Earnings	1,064,763	1,004,973	1,026,337
System Capacity	3,867,888	3,372,935	2,821,000
Sewer Billing Charges	6,730,001	6,948,770	5,648,001
Meter Service Fees	503,401	570,974	389,160
Other Revenue	4,847,436	7,960,536	4,638,738
Revenues Before Transfers	180,879,313	164,361,085	152,041,867
Refunding Bonds	3,621,455	-	-
Revenues After Transfers	184,500,768	164,361,085	152,041,867
<b>Expenditures</b>			
Personnel	44,695,149	44,813,803	42,686,447
Supplies and Materials	3,301,654	3,415,579	3,749,520
Chemicals	16,223,132	14,965,624	15,711,799
Services	14,168,699	13,792,285	13,364,820
Pro-Rata	7,868,493	6,492,482	6,027,485
Electricity	8,678,878	9,315,127	8,195,536
Other	1,291,391	850,895	779,881
Capital Equipment	834,934	759,773	603,950
Debt Service	65,997,292	58,472,005	52,461,409
Water Share of DPU	3,805,902	3,494,682	3,405,740
Total Expenditures	166,865,524	156,372,255	146,633,071
Ending Cash Balance	32,331,179	14,695,935	6,707,105

# 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 a year. Revenue and operational needs are reviewed, along with any rate increase requests for the coming year. Chaired by Wallace Giffen, the board forwards their recommendation to Columbus City Council, who then review and vote to set rates or change fundamental policy.

## 2012 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**

*5th Avenue Dam demolition on the Olentangy River*