



2012 ANNUAL REPORT

celebrating 75 years



## DC WATER CELEBRATES 75 YEARS – BUILDING FOR THE FUTURE

In July 2012, the Blue Plains Advanced Wastewater Treatment Plant celebrated 75 years of serving the region and bringing innovative research that influences treatment solutions around the globe.

In July 1937, the Blue Plains Sewage Disposal Plant opened for limited operations, ushering in a new era in sanitation. The federal government commissioned the construction of Blue Plains under the Public Works Administration as part of FDR's New Deal and funded the \$4 million construction. There was serious debate about what type of secondary treatment should be employed. In the end, they constructed a plant of solely primary treatment in 12 primary clarifiers, and had acres of unused land.

Through substantial upgrades over the last 75 years, today's Blue Plains has primary, secondary, tertiary and filtration wastewater treatment processes. These take up almost all of the 153-acre

site – and more facilities are being built to protect the environment. Blue Plains is held to some of the

strictest discharge permit levels in the world, requiring cutting-edge scientific research to achieve. DC Water's research team operates at Blue Plains in collaboration with highly regarded researchers around the world.

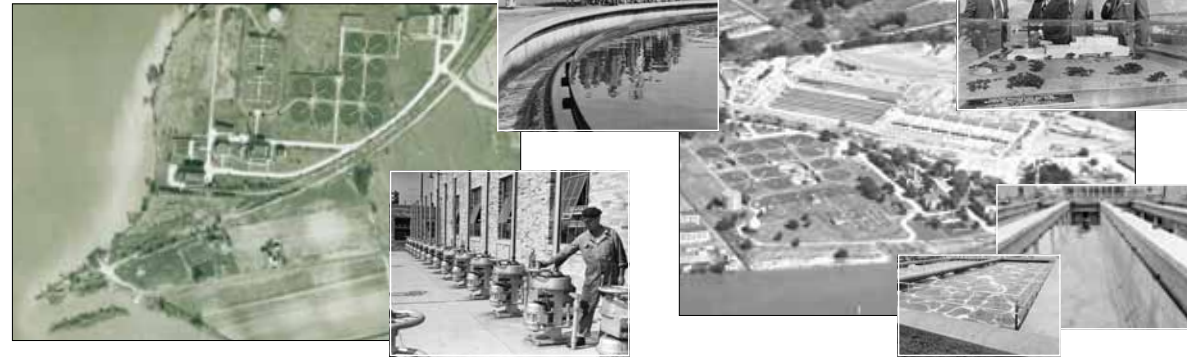
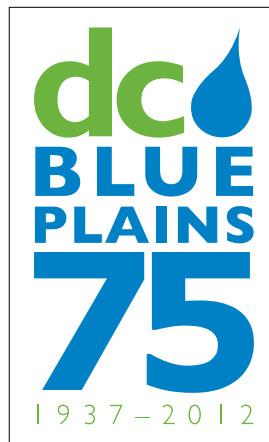
Today there is a flurry of construction activity—20 cranes, hundreds of construction workers and a steady stream of vehicles—all working on the next generation of wastewater treatment. Three major projects are underway, at a total cost of almost \$4 billion.

**Enhanced Nutrient Removal Facilities (ENRF)**- This \$950 million project will reduce nitrogen in the treated wastewater from 8.5 million pounds per year to 4.4 million pounds per year. The solution includes building additional large nitrification/denitrification tanks that use microbes to transfer nitrogen in the liquid to a gaseous form, releasing it from the wastewater. Nitrogen in water can cause algae blooms, depriving marine life

of oxygen it needs to survive. At the end of FY 2012, this project is halfway complete and should be operational in 2014.

**Thermal hydrolysis/anaerobic digestion**- This project makes economic sense as it enables DC Water to create energy (heat and electricity) from wastewater treatment. By using an innovative process called thermal hydrolysis to pressure cook the biosolids left over after treatment, the residual can be fed to anaerobic digesters that use microbes to break down the biosolids and produce methane gas. The end result is a cleaner biosolid—Class A rather than Class B—and combined heat and power which will provide about a third of the plant's energy needs, saving \$10-15 million annually on energy costs. This project is also on target for operation in 2014.

**Clean Rivers Project**- Read more on page 9 about this \$2.6 billion project to significantly reduce combined sewer overflows to the District's waterways.



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### 1937–1965 FEDERAL SEWER DEPARTMENT

Franklin D. Roosevelt 1933-1945 • Harry S. Truman 1945-1953 • Dwight D. Eisenhower 1953-1961 • John F. Kennedy 1961-1963 • Lyndon B. Johnson 1963-1969

### 1965–1983 FEDERAL DEPARTMENT OF SANITARY ENGINEERING

Lyndon B. Johnson 1963-1969 • Richard M. Nixon 1969-1974 • Gerald R. Ford 1974-1977 • James E. Carter 1977-1981 • Ronald W. Reagan 1981-1989

### 1983–1996 DISTRICT DEPARTMENT OF PUBLIC WORKS/WATER AND SEWER UTILITY ADMINISTRATION (WASUA)

Ronald W. Reagan 1981-1989 • George H. W. Bush 1989-1993 • William J. Clinton 1993-2001

### 1996–2010 DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY (DC WASA)

William J. Clinton 1993-2001 • George W. Bush 2001–2009 • Barack H. Obama 2009-Present

### 2010–2012 DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY (DC WATER)

Barack H. Obama 2009-Present



Learn more about the Blue Plains 75th Celebration at [dcwater.com/bp75.com](http://dcwater.com/bp75.com)

... kudos inside from

DC Water Customers



## CHAIRMAN'S MESSAGE

*"The DC water workers came out and worked long hours, non-stop and repaired the water flow/pipe break. I couldn't ask for anything more. Thank you."*

James Madison Kee, Ward 8

### Dear Customers,

As we look back on another successful fiscal year and the milestone anniversaries of Blue Plains and the Clean Water Act, DC Water's plans for the future have never been more important. I want to give three recent examples.

### Transition in DC Water's financial management

We said goodbye in Fiscal Year 2012 to Olu Adebo, the Authority's Chief Financial Officer,

who departed after a dozen years of service. Olu's tenure had many notable highlights, but just this past year, his stewardship brought a tremendous vote of confidence from Wall Street. One of the three principal credit rating agencies upgraded its rating of DC Water, while the other two affirmed theirs. This lowers the interest rates we pay when borrowing, saving you money. It also came just a few months after the federal government saw its credit rating downgraded.

The nationwide search for Olu's successor has already begun, and the Authority's finances are in the solid hands of his top deputy, Yvette Downs, for now. Fiscal Year 2013 will bring DC Water's largest capital expenditure in a single year – some \$700 million – making the Board's mandate to Yvette and her team ever clear: hold the line on rates while delivering the funding necessary to build for the future.

**Flooding in Bloomingdale and LeDroit Park** These two low-lying neighborhoods of the District have been prone to floods in the past, but the summer of 2012 brought four widespread instances of flooding and sewer backups. The cause is a combination of unusually intense but brief rainfall and an undersized trunk sewer. While General Manager Hawkins mobilized his team to provide short and mid-term relief, the long-term mitigation for this situation is DC Water's \$2.6 billion tunnel system called the Clean Rivers Project.

Though designed to improve the health of the District's waterways under the Clean Water Act, Clean Rivers has a flood-control component that will come online in 2022. We broke ground on the first tunnel in 2012, and our engineers are hard at work on medium-term measures that will bring relief even sooner.

**Hurricane Sandy** We've all seen pictures of the devastation this extra-large storm brought further up the East Coast, in New York and New Jersey. While the DC Water staff filled sandbags, cleaned catch basins and responded to calls, the District's drinking water service and wastewater collection and treatment went uninterrupted. This was thanks to an extraordinary amount of preparation and hard work, including a story that went nearly untold.

During the height of the storm, one of the two main electric feeds to the Blue Plains plant lost power. Because our electrical supplier couldn't have crews out during the heavy wind, and investigating the cause would take time, our wastewater treatment team immediately switched the entire plant to the second feed. There was more than enough electricity to continue operations – a redundancy built into the system – but a second power loss would have been catastrophic.

In Fiscal Year 2012, we broke ground on a project that will provide another measure of energy security at Blue Plains as it saves customers money and reduces the plant's carbon footprint. By digesting the solids that result from treating wastewater, we will generate enough electricity to cover a third of the operations and reduce our dependence on the grid.

These preparations for the future will ensure our continuity of operations and keep DC Water at the forefront of innovation in the next fiscal year and beyond. The people we serve every day deserve nothing less.

William M. Walker, Chairman  
DC Water Board of Directors



## GENERAL MANAGER'S MESSAGE

### Milestones and Moving Forward

This year marked a milestone for DC Water, as we celebrated the 75th anniversary of our Blue Plains Advanced Wastewater Treatment Plant. But our plant has been a major part of another anniversary this year as well – the Clean Water Act marked 40 years since its passage.

Four decades later, it's safe to say that the Act was a rousing

success. In 1965, President Lyndon Johnson called the Potomac River a national disgrace because of its condition as a cesspool of sewage and industrial pollution. Today, one of ten locations selected for the national bass fishing tournament is on the Potomac River, just downstream from one of the largest wastewater treatment plants in the world – ours. Fish are swimming again in the Potomac and other rivers that run through our major cities. The Clean Water Act should be celebrated for what it is—a flagship environmental achievement, one of the great government success stories of our time.

But that is not the end of the story. For the Act has been a victim of its own success. Improvements in many water bodies have stalled. Our waters will not remain clean for another 40 years if we continue to look at the same sources.

Consider Blue Plains. Our federal permit under the Clean Water Act mandates that we remove nitrogen and phosphorus from the effluent, or cleaned wastewater, that we discharge into the Potomac. The limits get tighter with each new permit. In 2000, we removed 7.3 million pounds of nitrogen per year at a cost of \$16 million. In 2010, we removed another 2.9 million pounds per year at a cost of \$130 million. For 2015, we are required to remove another 1.2 million pounds per year at a cost of \$1 billion. This is about 350 times more expensive per pound!

Yet for all of this reduction, Blue Plains' discharge contains just one percent of the total nutrient load that goes into the Chesapeake Bay. Agricultural runoff causes 40 times more of the problem. Which is why, despite the enormous expenditures by industry and utilities, the capital region's rivers and the Bay are no longer improving. The Clean Water Act's success has ensured that industry and utilities are no longer the largest share of the problem. But even if we reduce pollutants from these sources to zero, the area's waters would still not be that much cleaner.

Compounding the failure is the unfairness of overloading metropolitan ratepayers with a disproportionate share of resolving the nation's clean-water problem. Customers foot the bill for the billions of dollars of costs incurred to pay for these huge capital projects, despite the relatively minor incremental improvements to water quality, in their escalating monthly water bills.

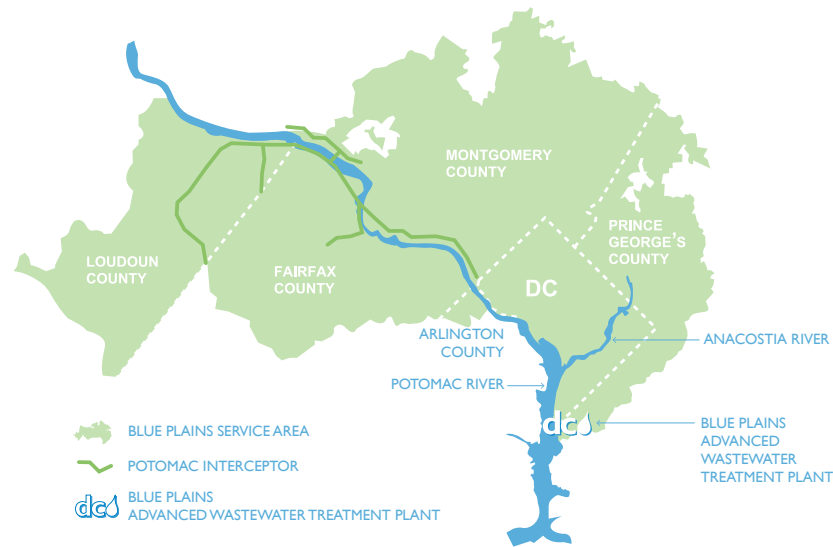
At DC Water, we will keep advancing on the environmental front into the next year and beyond. In Fiscal Year 2013, we will spend more than \$700 million on capital improvements – including our massive Clean Rivers Project to nearly eliminate sewer overflows to the District's waterways, our waste-to-energy installation at Blue Plains, and nutrient removal to meet our Chesapeake Bay goals.

What will the next generation of environmental improvements look like, and who will pay the bill? This is a conversation we intend to keep having on a local and national level.

George S. Hawkins



Facilities managed by, and service areas served by, DC Water



*"I can't thank you enough for the incredible service your department provided in installing an outdoor meter in our front yard. All the people who contributed to fixing our problem were just great, especially the men of Omega 31 who dug up our front lawn as carefully as if they were digging up their own. You and your employees have restored my faith in DC city services. ... Thank you very much for solving a complicated and stressful situation."*

Anne Seidlitz, Ward 3

**History:**

In 1996, the District of Columbia Water and Sewer Authority was created by District law, with the approval of the United States Congress, as an independent authority of the District Government with a separate legal existence.

**Age of Pipes:**

The median age of District water main pipes is 78 years old, with approximately 9 percent of pipes installed in the 1900s and 2 percent dating back to the 1860s before the Civil War.

**Service Area:**

Providing more than 600,000 residents and 17.8 million annual visitors in the District of Columbia with retail water and wastewater (sewer) service, DC Water has a total service area of approximately 725 square miles. In addition, DC Water treats wastewater for approximately 1.6 million people in neighboring jurisdictions, including Montgomery and Prince George's counties in Maryland and Fairfax and Loudoun counties in Virginia.

**Employees:**

Approximately 1,100 people are employed by DC Water and work at various facilities across the District.

**Drinking Water Quality:**

With a strong emphasis on water quality, DC Water maintains an annual flushing program, regulatory and voluntary water quality testing, ongoing system upgrades and lead service replacements. In partnership with the U.S. Army Corps of Engineers

Washington Aqueduct, DC Water ensures a high quality treatment process for delivering optimal drinking water all year round.

**Pumped and Treated Water Storage:**

During Fiscal Year 2012, DC Water pumped an average of 100.9 million gallons of water per day. In addition, DC Water stores 61 million gallons of treated water at its eight facilities. The Washington Aqueduct stores an additional 49 million gallons.

**Water Distribution System:**

DC Water delivers water through 1,350 miles of interconnected pipes, four pumping stations, five reservoirs, three water tanks, 37,105 valves, and 9,343 fire hydrants.

**Blue Plains Advanced Wastewater Treatment Plant:**

Blue Plains, located at the southernmost tip of the District, is the largest advanced wastewater treatment facility in the world, covering 153 acres along the Potomac River.

**Wastewater Treatment Capacity:**

Blue Plains treats an annual average of 300 million gallons per day (MGD) and has a design capacity of 370 MGD, with a peak design capacity to treat more than one billion gallons per day.

**Sewer System:**

1,800 miles of sanitary and combined sewers and 22 flow-metering stations, nine off-site wastewater pumping stations, 16 stormwater pumping stations, 12 inflatable dams and a swirl facility comprise the DC Water sewer system.

**Financial Performance:**

In Fiscal Year 2012, DC Water maintained a "AA" credit rating by two leading credit rating agencies and received an upgrade to "AA+" by the third. DC Water also received its 16th consecutive unqualified audit opinion of its financial statements.

**Customer Service:**

DC Water communicates valuable customer-related information through bill inserts, monthly newsletters, its website, and

social media including Facebook, YouTube and Twitter. Using an interactive voice recognition system, DC Water makes information readily available in more than 150 languages. A 24-hour Emergency Command Center, at (202) 612-3400, operates as the centralized communication facility for receiving and responding to a variety of emergency calls from customers and the public, remaining in contact with crews in the field.

**Community Service:**

Donating their time and resources, DC Water employees actively support a variety of charitable projects and community service. DC Water also invests in the community through its education programs in DC public and public charter schools, and engaging the public through tours of Blue Plains. More than 1,000 people toured Blue Plains in FY 2012.

**Governance:**

DC Water's Board of Directors establishes policies and guides the strategic planning process. The Board is composed of 22 members, representing the District, Montgomery and Prince George's counties in Maryland and Fairfax County in Virginia. The District members set rates, charges and policies for District services. The entire Board votes and establishes policies for joint-use services. The General Manager reports to the Board and manages the day-to-day operations and performance of the enterprise.



## BOARD OF DIRECTORS / EXECUTIVE TEAM

### Eleven Principal and Eleven Alternate Board Members Govern DC Water.

The DC Water Board meets monthly at the Blue Plains Advanced Wastewater Treatment Plant. The Board Chairperson is appointed by the Mayor of the District of Columbia. Currently, the Board has eight standing committees:

- *Environmental Quality and Sewerage Services*, Robert Hoyt, Chair
- *Water Quality and Water Services*, Joseph Cotruvo, Chair
- *Finance & Budget*, Timothy Firestine, Chair
- *Human Resources and Labor Relations*, Anthony Griffin, Chair
- *Audit*, Bradford Seamon, Chair
- *Strategic Planning*, William Walker, Chair
- *Governance*, Alethia Nancoo, Chair
- *DC Retail Water and Sewer Rates*, Howard Gibbs, Chair

*I had been eagerly awaiting a water bill with my name on it so that I could verify my change of address for my car registration and residential parking. I called DC Water and spoke with Kenise Barrett, who was incredibly helpful. She scanned and emailed me my bill and worked patiently even as she dealt with a paper jam. She stayed on the line with me until she made sure I had received the bill."*

Carlotta Hester, Ward 2



### Principal Members

William M. Walker  
Chairman  
District of Columbia  
*Walker & Dunlop, Inc.,  
Chairman and Chief  
Executive Officer*

Allen Lew  
District of Columbia  
*City Administrator*

Rachna Butani  
District of Columbia  
*HRGM Corporation,  
Director*

Alan J. Roth  
District of Columbia  
*United States Telecom  
Association, Senior  
Executive Vice President*

Alethia Nancoo  
District of Columbia  
*Hogan Lovells US LLP, Partner*

Adam Clampitt  
District of Columbia  
*Strategic Communications and  
Public Relations Consultant*

Bradford Seamon  
Prince George's County, MD  
*Chief Administrative  
Officer*

Carla Reid  
Prince George's County, MD  
*Office of the County Executive  
Deputy Chief Administrative  
Officer*

Timothy L. Firestine  
Montgomery County, MD  
*Chief Administrative Officer*

Robert Hoyt  
Montgomery County, MD  
*Department of Environmental  
Protection, Director*

Edward L. Long, Jr.  
Fairfax County, VA  
*County Executive*

### Executive Team

George S. Hawkins  
General Manager

Olu Adebo  
Chief Financial Officer

Walter Bailey  
Assistant General Manager,  
Blue Plains

Leonard Benson  
Chief Engineer

Christopher Carew  
Chief of Staff

Randy Hayman  
General Counsel

Alan Heymann  
Chief, External Affairs

Charles Kiely  
Assistant General Manager,  
Customer Care and Operations  
(Formerly Consumer Services)

Joe Edwards  
Acting Chief Information Officer

Katrina Wiggins  
Assistant General Manager

### Alternate Members

Terry Bellamy  
District of Columbia  
*District Department of  
Transportation, Director*

Howard C. Gibbs, PE  
District of Columbia  
*Retired*

Brenda Richardson  
District of Columbia  
*Office of Councilmember  
Marion Barry, Deputy Chief  
of Staff*

Howard Croft  
District of Columbia  
*Retired*

Joseph Cotruvo  
District of Columbia  
*Joseph Cotruvo & Associates,  
LLC, President*

Samuel Wynkoop  
Prince George's County, MD  
*Department of Environmental  
Programs, Director*

Dawn Hawkins-Nixon  
Prince George's County, MD  
*Department of Environmental  
Resources, Prince George's County  
Government, Section Head*

Kathleen Boucher  
Montgomery County, MD  
*Montgomery County Government,  
Assistant Chief Administrative  
Officer*

David W. Lake  
Montgomery County, MD  
*Water and Wastewater Policy,  
Montgomery County Government  
Department of Environmental  
Protection, Special Assistant*

James Patteson  
Fairfax County, VA  
*Department of Public Works and  
Environmental Services,  
Fairfax County Government,  
Director*



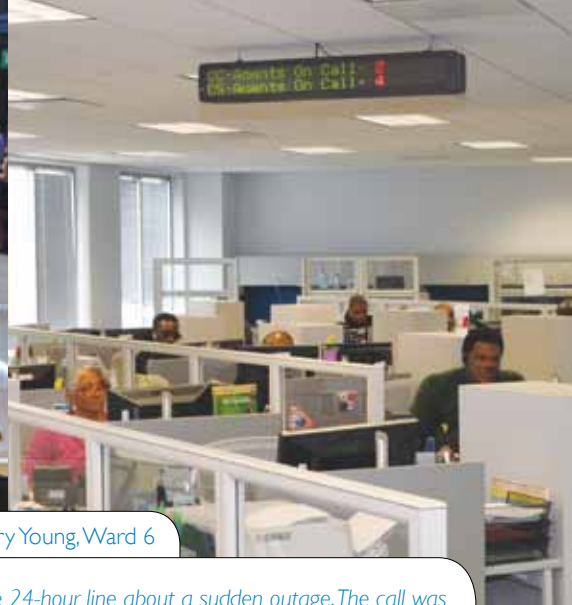
"I write to express my appreciation for the courtesy and kindness of Mr. Mack from your Customer Service office. Mr. Mack was professional and attentive in addressing the issues relating to my concerns."

Kuross Samii, Ward 3



Kerry Young, Ward 6

"... I had to call the 24-hour line about a sudden outage. The call was picked up immediately and the DC Water employee who answered got me an answer quickly. This level of attention is much appreciated."



## CUSTOMER SERVICE AND EXTERNAL AFFAIRS

DC Water's customer service, communications, outreach and government relations work touched more customers and stakeholders than ever before. The Office of External Affairs continues to win acclaim from customers and within the water sector for its social media efforts. The Authority's outreach team also began an aggressive expansion of its participation in large public events, bringing a pro-tap water message and the water itself to tens of thousands of customers. And a reinvigorated government relations program reinforced DC Water's relationships with regulators on the local and national level.

### Customer Service

In 2012, DC Water implemented mobile service order scheduling for meter technicians, allowing more scheduling of service orders in advance, and giving the customer a more precise appointment time. The system also allows operators to dispatch service orders electronically to a mobile terminal directly in trucks, and to complete the record keeping in the truck real-time. By moving to electronic record keeping, mobile scheduling also saves more than 500 pieces of paper a day and reduces labor costs.

### Communications, Marketing and Outreach

DC Water's industry-leading efforts to market tap water

reached new heights in Fiscal Year 2012, culminating in a *Washington City Paper* cover story touting DC tap as a prized local ingredient for food and drink, and multiple national news cycles surrounding the 2013 presidential inauguration. After the chair of the inaugural committee, U.S. Sen. Charles Schumer, announced that expensive bottled water from New York would be served at the celebration, General Manager Hawkins stepped forward with a letter suggesting the use of DC tap water instead. Following extensive media coverage, Sen. Schumer responded that tap water would be available at the inauguration as it is every day in the Capitol.

To foster more use of tap water, DC Water gave away 150 branded dog bowls to businesses and dog parks across the District, distributed pint glasses and kids' cups to more than 30 restaurants, and donated reusable water bottles to every member of the Metropolitan Police Department (MPD) during the summer. MPD officers will join a growing number of District residents, employees and visitors choosing to carry reusable water bottles and using the TapIt™ network for free water refills on the go.

Attending more than 150 Advisory Neighborhood Commission and other public meetings and outreach events over the past

year, DC Water continues to increase its presence throughout the District. Along with an environmental education program reaching more than 1,000 students in schools across the city, the Authority kicked off an active summer 2012 outreach calendar with its first-time participation in the Capital Pride Parade and Festival. Portable water refill stations and free reusable bottles, branded with the DC Water logo, took more water to the public than ever. The outreach team conducted blind taste tests of tap water and bottled water in each ward. More than half the 839 participants rank tap water as better tasting than bottled water or do not taste a difference between the two.

The Office of External Affairs continued its social media efforts, adding several hundred Twitter followers and fielding hundreds of service requests, policy questions and general inquiries and complaints.

In Fiscal Year 2012, DC Water broke ground on the Clean Rivers Project, drawing local and national speakers and news coverage around the world. A celebration of the 75th anniversary of Blue Plains drew more than 200 attendees. More than 1,000 people visited Blue Plains to tour the world's largest advanced wastewater treatment plant.

Positive news coverage this year included a front-page *Washington Post* article about the challenges of funding an aging infrastructure, a cover story in *Engineering News Record* about the greening of Blue Plains, a *Washington City Paper* photo essay and cover story about Blue Plains, a *Washington Post* Writers' Group profile of General Manager Hawkins and the Clean Rivers Project, and numerous television and radio appearances.

### Government Relations

DC Water took advantage of several opportunities to testify in the DC Council and in Congress, including a U.S. House of Representatives Subcommittee on Water Resources and Environment hearing on EPA's integrated planning framework. The General Manager's testimony highlighted the financial burdens large federally-mandated projects such as Clean Rivers and Enhanced Nutrient Removal place on DC Water's ratepayers, especially considering the growing need to maintain and upgrade the existing water and sewer infrastructure. General Manager Hawkins and his staff worked closely with the executive and legislative branches of the District Government in implementing the Blue Plains Intermunicipal Agreement and as members of the Mayor's Task Force on the Prevention of Flooding.

## SPOTLIGHT ON CLEAN RIVERS

This year marked the beginning of construction of the massive tunnel system that will greatly improve the health of local waterways. DC Water celebrated the groundbreaking for the Clean Rivers Project in October 2011, and in 2012 finished site preparations and began excavating the shaft for the Blue Plains Tunnel. This shaft will be more than 100 feet deep and is located on the grounds of the Blue Plains Advanced Wastewater Treatment Plant. When the shaft is completed, a massive tunnel boring machine will be lowered into it, in pieces, and assembled at the bottom. Once assembled, this machine will tunnel alongside and underneath the Potomac and Anacostia rivers to complete the 13-mile Anacostia River Tunnel. The tunnel will have an inside diameter of 23 feet—larger than a Metro tunnel.

Meanwhile, a pumping station and an enhanced treatment facility will be built on the plant to treat the combined sewage as it is conveyed to Blue Plains. This will reduce combined sewer overflows to the Anacostia River by roughly 98 percent, drastically improving the slow-moving river's health. This portion of the Clean Rivers Project will be operational by the end of 2018.

### Green Infrastructure Project



In 2012, DC Water embarked on a mission to incorporate green infrastructure into the solution for combined sewer overflows to Rock Creek and the Potomac River. Reinforcing the concept at a Green Summit in February, the DC Water team explained that green infrastructure such as green roofs, rain gardens, tree plantings, rain barrels, bioswales and porous pavers can reduce runoff during intense rainstorms and proposed a pilot study to assess its feasibility. At the end of this study, if the capture rate is not adequate, DC Water would still build the Rock Creek and Potomac tunnels as planned, but all parties involved hope the capture rate will

be high enough to reduce the size of the tunnels or even eliminate the need altogether. This solution has the potential to green the District on a scale never before attempted, add sustainable jobs to the region and clean the waterways. At the end of FY 2012, DC Water and the U.S. Environmental Protection Agency were discussing the pilot program and looking at original requirements of the consent decree. The Anacostia River Tunnel plans remain unchanged and that part of the project will become operational in 2018. The current cost estimate for the entire project is \$2.6 billion, nearly all of which is bond financed, meaning DC Water's ratepayers will ultimately pay for the majority of the construction through their water and sewer bills. The federal government has contributed \$168 million to date through appropriations and the Clean Water Act revolving funds.

Clean Rivers construction has also begun in other parts of the District as the tunnel shafts are undergoing excavation at Joint Base Anacostia-Bolling, South Capitol Street and adjacent to Nationals Stadium. The tunnel system will eventually connect to all of the shafts.



"The crew was really terrific, informative, quick and neat. Hooray for DC Water! I'll report back after the big dig.Thanks again!"

Emily Chabel, Ward 1

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DC Water delivers reliable, clean and affordable drinking water. In partnership with the U.S. Army Corps of Engineers Washington Aqueduct, DC Water ensures a high quality treatment process for delivering optimal drinking water. In 2012, DC Water again surpassed all United States Environmental Protection Agency (EPA) drinking water standards.

Regulatory and voluntary water testing programs help safeguard the drinking water supply. An annual hydrant flushing program helps clean water mains throughout the District's water distribution system. Each year, the flushing program and a temporary switch in water disinfection enhance drinking water quality and minimize the impacts of aging pipes on water quality.

In the past year, DC Water collected more than 5,600 water samples from hydrants, commercial buildings and household taps throughout the District of Columbia and performed more than 41,000 tests. The Authority operates a voluntary monitoring program to respond to reported water quality issues and conduct household water quality investigations. This program helps homeowners and DC Water identify water quality issues in the distribution system and household plumbing. Daily routine monitoring also covers water quality in District schools and daycares.

DC Water continues to work closely with homeowners to monitor for lead in household drinking water, including regulatory and voluntary testing. Free, voluntary lead testing is offered to all single-family households in the District and declining lead levels continue to be far below the EPA Lead and Copper Rule Action Level. In an effort to remove sources of lead in water, DC Water operates a lead service pipe replacement program in conjunction with our construction projects and in coordination with individual property owners.

DC Water also participates in regional and national research projects on various drinking water issues, including emerging contaminants, lead in water, and contaminant warning systems, communications and emergency response.



**Wastewater Treatment Research**

In FY 2012, the DC Water research and technology program continued to support innovations in water reclamation technology and enhancements to water, air and biosolids quality. The program serves DC Water by investigating new processes, sustainable solutions, and emerging issues. Through collaboration with regional, national, and international universities, DC Water currently supports about 20 MS and Ph.D. students who are completing their research on DC Water projects. Collaborating universities include Virginia Tech, University of Maryland, George Washington University, Howard University, Bucknell University, Columbia University, Ghent University, University of Innsbruck and University of Queensland. Supporting organizations include USDA and the Metropolitan Washington Council of Governments. DC Water also continues a strong collaborative relationship with the Water Environment Research Foundation (WERF).

Technology projects are focused on reengineering existing infrastructure to achieve energy and carbon neutrality while continuing to meet ever-more stringent water quality permits.

**Projects include:**

- Piloting of annamox bacteria in a deammonification pilot plant, a process that can dramatically reduce energy and carbon needs, saving money
- Investigating anaerobic digestion process startup and

- automated control to minimize startup period and to maximize gas production
- Evaluating design parameters for dewatering Cambi™ digestion biosolids
- Understanding the production and mitigation of fugitive greenhouse gases in wastewater treatment plants
- Determining the concentration, fate, and transport of persistent chemicals in land-applied biosolids
- Optimizing energy use modeling
- Understanding the nutrient dynamics in land-applied biosolids

These projects are designed to help implement long-term sustainable practices, reduce operating costs and stimulate innovations that will advance knowledge.

**Water Services Research**

DC Water participated in a Water Research Foundation (WRF) research project during FY 2012 to evaluate lead release from galvanic corrosion. Service lines and plumbing within buildings often have connections of two different metals, which produces an electrical current between the two when the pipe is filled with water. This project researched lead release from joining lead and copper with different couplings to determine the extent of the lead release and if the coupling materials (brass, plastic, dielectric, low-lead brass) affected the amount of lead release.



"Yea! Mr. Ralph Williams did the trick! Thank you for your support, determination and success in getting this accomplished. I can once more happily walk out my door and come home. Thanks for all you do."

Sarah Hatch, Ward 7

DC Water's executive team has adopted the goal of world-class programs for safety and asset management, which will require sustained cultural transformation. Significant changes in business processes, work habits, training, communication and decision-making lie ahead.

Cultural change doesn't happen by accident—especially transformative change that touches every aspect of an organization. It requires an institutional response to the challenge of change itself. And that institutional response requires consistency in behavior among the organization's leadership. Recognizing this reality, DC Water's management team developed the concept of PACT (Positive attitude, Accountability, Communication and Teamwork) as a response to the challenge of change.

The acronym itself conveys a powerful meaning, and the managers collaborated to write and sign a pledge adopting

these four behaviors. In doing so, they continue to build on DC Water's considerable strengths to become a world-class utility. The PACT pledge is on display in the Office of the General Manager.

But the four pillars of PACT have become an organizing principle for far more than a management pledge. Through the efforts of the Chief of Staff and other leaders, these principles are included in management performance factors, an in-house Leadership Academy, the staff recruitment process, the organization of the Office of the General Manager, and presentations for senior staff, all-hands meetings, employee orientation sessions and DC Water's five unions.

The DC Water management team is proud of and excited by the potential impact of the Team Blue PACT as we pursue our goal of being a world-class water utility.

## AWARDS

### Engineering and Technical Services

Design-Build Pioneer Award for Demonstrated Leadership in the Advancement of Design-Build Project Delivery  
– Design-Build Institute of America

Excellence in Environmental Engineering for Planning (DC Water Biosolids Program)

Excellence in Environmental Engineering for Research (Advancements in Energy Neutrality)

Appreciation Award for 55 Years of Continuing Support and Advocate of the Construction Industry  
– National Utility Contractors Association, DC Chapter

Washington Contractor Award  
– Associated General Contractors of Metropolitan Washington

### External Affairs

2012 Silver Communicators Award of Distinction (Animation)  
– The Communicator Award

Excellence in Environmental Engineering for Environmental Communications Awards  
– American Academy of Environmental Engineers

2012 Silver Communicators Award of Distinction (Public Service)  
– The Communicator Award

2012 Bronze Telly Award (Education)  
– Telly Awards

2012 Bronze Telly Award (Animation)  
– Telly Awards

### Finance

Finalist in CFO of the Year Awards  
– The Washington Business Journal

Distinguished Budget Presentation Award  
– Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting for the Comprehensive Annual Financial Report (fiscal year ended September 30, 2011)  
– Government Finance Officers Association

### General Manager

National Environmental Achievement Award for Outstanding Contributions to Environmental Protection and the Clean Water Community  
– National Association of Clean Water Agencies

Research and Technology Award for innovative work on nutrient removal  
– National Association of Clean Water Agencies

### Wastewater Treatment

2011 Stewardship Award-DC Water's Floatable Debris Unit  
– Anacostia Community Boathouse Association

2011 Award for Excellence in Innovation for Biosolids Program  
– Water Environment Research Foundation

Research and Technology Award for high strength nitrogen treatment  
– American Academy of Environmental Engineers

Planning Award for biosolids program  
– American Academy of Environmental Engineers

Planning Honour Award for biosolids program  
– International Water Association

Fuhrman Medal for Research Collaboration between practice and academia  
– Water Environment Federation

"We want to thank the DC Water crew who came out to save us June 2nd when a clogged drain in Capitol Court caused several basements to flood. The men worked long and tirelessly to correct the situation. They are to be commended for their efforts. Thank you from all of us."

Karen Wirt, Ward 6



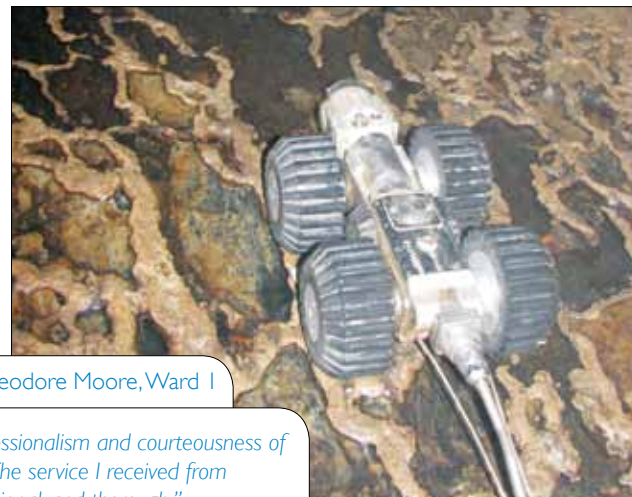
## SPOTLIGHT ON SAVINGS: CURED-IN-PLACE SEWER LINING

With a responsibility to stretch every capital dollar, DC Water's management team seeks innovative ways to complete necessary capital projects. As an example, DC Water is responsible for maintaining the approximate 150,000 sewer laterals in public space. We replace more than 400 sewer laterals per year at a cost of about \$4.4 million. For decades, DC Water has employed the conventional open cut construction method for lateral replacements, resulting in significant restoration costs, direct labor charges, and unavoidable customer inconveniences.

DC Water evaluated and employed trenchless technologies to reduce the life cycle costs by selecting a cured in place pipe (CIPP) solution with in-house crews rather than contractors. Typically, it can be installed in less than one day compared to the four days needed for the conventional method – resulting in only minor interference with the customer's daily routine. Work is completed with minimal surface excavation, providing a far safer environment for employees.

The process is simple but effective. A camera is sent through the lateral pipe to assess the material type and pipe condition. A decision is made onsite on whether the pipe condition is favorable for CIPP. The lateral is flushed, cleaned and cleared of all roots and other debris. A resin-soaked liner is then inserted into the damaged pipe using air pressure, followed by a bladder inflated with air to force the wet lining against the inside of the pipe. The resin cures in a few hours and we are left with a smooth, seamless inner pipe wall, essentially a new pipe from the home to the main sewer connection with an expected useful life of 50 years.

CIPP eliminates infiltration and root intrusion and permanently seals open joints and holes in pipe walls. The CIPP process virtually eliminates road and pavement restorations associated with open trench construction while also reducing the need for traffic control. Time spent on the job site is significantly reduced, often as high as 75 percent if we do not have to install a cleanout, and the average cost of installation is about \$3,900 – or a \$7,300 savings over the conventional open cut method. Imagine spending 65 percent less to do more simply by working smarter.



Theodore Moore, Ward 1

*"DC Water has impressed me with the professionalism and courteousness of service provided in the past several weeks. The service I received from Mr. Antoine Kingsbury was courteous, professional, and thorough."*—

## FINANCE AND BUDGET

### Financial Performance

DC Water ended Fiscal Year 2012 with strong financial performance. These results included strong liquidity and cash position, solid operating revenues with tight control over expenses, positive budget to actual results. The Authority met or exceeded all financial targets and complied with Board policies and bond covenants. DC Water received its 16th consecutive unqualified audit opinion on its financial statements.

### Other financial highlights for the year include:

- Successfully issued \$441 million Public Utility Subordinate Lien Revenue Bonds, (Series 2012 A-C). The 2012A are fixed rate new money bonds and the 2012C are fixed rate refunding bonds yielding a true interest cost of 3.6 percent and 3.7 percent respectively and; the 2012B-1 and B-2 are indexed variable rate new money bonds. Refunding \$176.2 million from Series 2003 (using proceeds from series C of the 2012 issuance) will produce \$1.2 million in annual savings. Issuing SIFMA indexed variable rate bonds will provide an additional \$3 million annual benefit.
- Projected senior debt service coverage rate of 354 percent and combined rate of 149 percent.
- The Board allocated a projected \$20.5 million operating surplus for the fiscal year:
  - \$5.8 million to wholesale (suburban) customers who pay into the cost of wastewater collection and treatment.
  - \$4.2 million as a direct rebate to customers.
  - \$5 million to pay-as-you-go financing, saving on the interest cost of future capital projects.
  - \$5.5 million to our Rate Stabilization Fund.
- Government Finance Officers Association (GFOA) once again awarded DC Water with a Certificate of Achievement for Excellence in Financial Reporting and the Distinguished Budget Presentation Award. The Authority has received the certificate for every year of DC Water's existence and the award for the twelfth consecutive year.

**Operating Revenues:** Operating revenues increased by \$32.3 million to \$440.6 million or 7.9 percent, primarily due to increased revenues from residential and commercial customers, federal government and wholesale wastewater charges.

**Operating Expenditures:** Operating expenses increased by \$1.8 million to \$321.1 million, or 0.6 percent primarily for

increases in personnel, water purchases, depreciation offset by reductions in contractual services, and utilities.

**Capital Disbursements:** In FY 2012, acquisition of utility plant and purchased capacity totaled \$472.4 million, bringing the investment in capital assets to \$3.5 billion.

### Independent Auditor's Report

Submitted to  
DC Water Board of Directors  
by Bazilio Cobb Associates



Board of Directors  
District of Columbia Water and Sewer Authority:

We have audited the accompanying statements of net assets of the District of Columbia Water and Sewer Authority (the Authority), a component unit of the District of Columbia as of September 30, 2012 and 2011, and the related statements of revenues, expenses and change in net assets and cash flows for the years then ended. These financial statements are the responsibility of the Authority's management. Our responsibility is to express an opinion on these financial statements based on our audits.

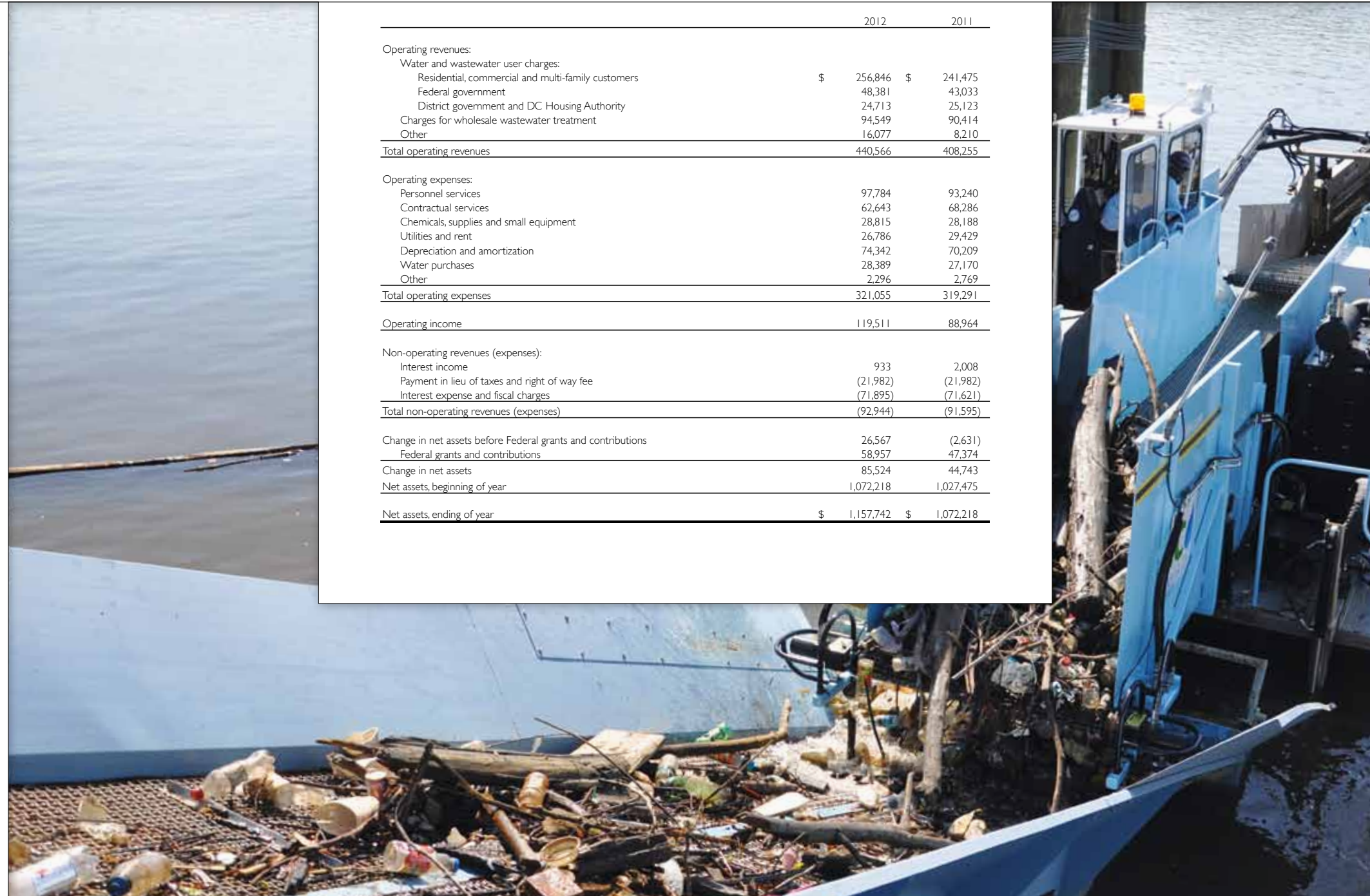
We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Authority as of September 30, 2012 and 2011, and changes in its financial position and cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Washington, DC  
December 17, 2012

Assets	2012	2011
<b>Current assets:</b>		
Cash and cash equivalents	\$ 94,472	\$ 112,944
Investments	100,489	69,764
Customer receivables, net of allowance for doubtful accounts of \$15,271 in 2012 and \$14,350 in 2011	50,233	39,252
Due from Federal government	23,491	20,505
Due from other jurisdictions	7,975	16,202
Inventory	6,674	7,264
Due from District government	1,964	—
Prepaid assets	519	204
<b>Total current assets</b>	<b>285,817</b>	<b>266,135</b>
<b>Noncurrent assets:</b>		
<b>Restricted assets:</b>		
Cash and cash equivalents	175,567	98,054
Investments	203,940	183,121
<b>Total restricted cash equivalents and investments</b>	<b>379,507</b>	<b>281,175</b>
Utility plant:		
In-service	3,706,354	3,547,829
Less accumulated depreciation	(1,049,548)	(981,030)
Net utility plant in service	2,656,806	2,566,799
Construction-in-progress	807,430	485,497
<b>Net utility plant</b>	<b>3,464,236</b>	<b>3,052,296</b>
<b>Other noncurrent assets:</b>		
Purchased capacity, net of accumulated amortization of \$65,833 in 2012 and \$60,543 in 2011	254,007	247,050
Unamortized bond issuance costs	19,536	17,430
Due from other jurisdictions	12,506	6,639
<b>Total other noncurrent assets</b>	<b>286,049</b>	<b>271,119</b>
<b>Total noncurrent assets</b>	<b>4,129,792</b>	<b>3,604,590</b>
<b>Total assets</b>	<b>4,415,609</b>	<b>3,870,725</b>
<b>Liabilities</b>		
<b>Current liabilities:</b>		
Accounts payable and accrued expenses	143,375	119,850
Compensation payable	18,302	16,748
Accrued interest	43,841	39,945
Deferred revenue	42,875	33,568
Commercial paper notes payable	41,200	35,200
Current maturities of long-term debt	19,692	18,721
Due to jurisdictions	7,645	8,500
Due to Storm Water Fund	473	417
Due to District government	—	1,563
<b>Total current liabilities</b>	<b>317,403</b>	<b>274,512</b>
<b>Noncurrent liabilities:</b>		
Deferred revenue	1,071,616	918,787
Deferred revenue - combined sewer overflow	27,788	43,314
Other liabilities	27,093	31,720
Long-term debt, excluding current maturities	1,813,967	1,530,174
<b>Total noncurrent liabilities</b>	<b>2,940,464</b>	<b>2,523,995</b>
<b>Total liabilities</b>	<b>3,257,867</b>	<b>2,798,507</b>
<b>Net Assets</b>		
Invested in utility plant, net of related debt	1,035,584	946,868
<b>Restricted for:</b>		
Debt service	51,344	50,872
Capital projects	12,253	11,633
Unrestricted	58,561	62,845
<b>Total net assets</b>	<b>\$ 1,157,742</b>	<b>\$ 1,072,218</b>

	2012	2011
<b>Operating revenues:</b>		
Water and wastewater user charges:		
Residential, commercial and multi-family customers	\$ 256,846	\$ 241,475
Federal government	48,381	43,033
District government and DC Housing Authority	24,713	25,123
Charges for wholesale wastewater treatment	94,549	90,414
Other	16,077	8,210
<b>Total operating revenues</b>	<b>440,566</b>	<b>408,255</b>
<b>Operating expenses:</b>		
Personnel services	97,784	93,240
Contractual services	62,643	68,286
Chemicals, supplies and small equipment	28,815	28,188
Utilities and rent	26,786	29,429
Depreciation and amortization	74,342	70,209
Water purchases	28,389	27,170
Other	2,296	2,769
<b>Total operating expenses</b>	<b>321,055</b>	<b>319,291</b>
<b>Operating income</b>	<b>119,511</b>	<b>88,964</b>
<b>Non-operating revenues (expenses):</b>		
Interest income	933	2,008
Payment in lieu of taxes and right of way fee	(21,982)	(21,982)
Interest expense and fiscal charges	(71,895)	(71,621)
<b>Total non-operating revenues (expenses)</b>	<b>(92,944)</b>	<b>(91,595)</b>
<b>Change in net assets before Federal grants and contributions</b>	<b>26,567</b>	<b>(2,631)</b>
<b>Federal grants and contributions</b>	<b>58,957</b>	<b>47,374</b>
<b>Change in net assets</b>	<b>85,524</b>	<b>44,743</b>
<b>Net assets, beginning of year</b>	<b>1,072,218</b>	<b>1,027,475</b>
<b>Net assets, ending of year</b>	<b>\$ 1,157,742</b>	<b>\$ 1,072,218</b>



FINANCE AND BUDGET – Statements of Cash Flows / Years Ended September 30, 2012 and 2011 (In thousands)

	2012	2011
Cash flows from operating activities:		
Cash received from customers	\$ 425,174	\$ 401,510
Cash paid to suppliers for goods and services	(149,123)	(154,385)
Cash paid to employees for services	(96,230)	(91,535)
<b>Net cash provided by operating activities</b>	<b>179,821</b>	<b>155,590</b>
Cash flows from capital and related financing activities:		
Proceeds from issuance of revenue bonds	491,102	297,580
Proceeds from other jurisdictions	174,259	82,856
Repayments of bond principal and notes payable to Federal and District governments	(194,941)	(17,792)
Acquisition of utility plant and purchased capacity	(472,377)	(302,536)
Payments of interest and fiscal charges	(96,393)	(74,715)
Contributions of capital from Federal government	39,560	27,485
Proceeds from issuance of commercial paper	6,000	6,000
<b>Net cash (used in) provided by capital and related financing activities</b>	<b>(52,790)</b>	<b>18,878</b>
Cash flows from non-capital financing activities:		
Transfers out (payment in lieu of taxes and right of way fee)	(17,514)	(20,618)
<b>Net cash used by non-capital financing activities</b>	<b>(17,514)</b>	<b>(20,618)</b>
Cash flows from investing activities:		
Cash received for interest	1,068	1,894
Investment purchases	(730,705)	(564,757)
Investment maturities	679,161	422,156
<b>Net cash used by investing activities</b>	<b>(50,476)</b>	<b>(140,707)</b>
<b>Net increase in cash and cash equivalents</b>	<b>59,041</b>	<b>13,143</b>
Cash and cash equivalents (including restricted) at beginning of year	210,998	197,855
<b>Cash and cash equivalents (including restricted) at end of year</b>	<b>\$ 270,039</b>	<b>\$ 210,998</b>
Operating income	\$ 119,511	\$ 88,964
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation and amortization	74,342	70,209
Change in operating assets and liabilities:		
(Increase) decrease in customer and other receivables	(3,127)	183
Decrease in inventory	275	241
(Decrease) increase in payables and accrued liabilities	(1,750)	5,729
Decrease in deferred revenue	(9,430)	(9,736)
<b>Net cash provided by operating activities</b>	<b>\$ 179,821</b>	<b>\$ 155,590</b>

– Change in Net Assets / Fiscal Years 2003 – 2012 (In thousands)

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Revenues										
Operating revenues:										
Residential, commercial and multi-family customers	\$ 147,870	\$ 159,165	\$ 166,045	\$ 174,159	\$ 182,327	\$ 183,553	\$ 191,543	\$ 209,796	\$ 241,475	\$ 256,846
Federal government	26,884	26,444	24,770	31,100	30,751	35,888	35,195	37,845	43,033	48,381
District government and DC Housing Authority	16,072	15,464	15,436	16,463	17,266	16,193	16,804	21,947	25,123	24,713
Charges for wholesale wastewater treatment	61,682	60,834	62,126	67,966	73,378	82,854	85,519	87,505	90,414	94,549
Other	3,287	2,427	4,366	3,845	2,735	3,846	3,337	6,655	8,210	16,077
Total Operating Revenues	255,795	264,334	272,743	293,533	306,457	322,334	332,398	363,748	408,255	440,566
Non-operating revenues:										
Interest income	3,090	3,472	12,612	16,091	20,239	13,573	2,285	1,561	2,008	933
Total Revenues	258,885	267,806	285,355	309,624	326,696	335,907	334,683	365,309	410,263	441,499
Expenses										
Operating expenses:										
Personnel services	64,091	62,449	64,038	66,942	70,956	75,838	82,248	88,210	93,240	97,784
Contractual services	63,065	61,491	54,156	49,970	52,116	55,127	61,277	66,747	68,286	62,643
Chemicals, supplies and small equipment	14,768	17,384	22,062	23,482	24,510	28,816	29,074	29,003	28,188	28,815
Utilities and rent	20,804	22,217	25,562	31,151	32,238	37,843	32,813	29,929	29,429	26,786
Depreciation and amortization	39,524	40,500	41,069	44,149	49,355	54,418	59,291	64,425	70,209	74,342
Water purchases	13,723	20,692	19,625	22,745	24,042	25,746	25,371	27,587	27,170	28,389
Other	-	3,955	3,679	4,218	4,452	3,603	3,236	2,750	2,769	2,296
Total operating expenses	215,975	228,688	230,191	242,657	257,669	281,391	293,310	308,651	319,291	321,055
Non-operating expenses:										
Interest expense and fiscal charges	17,816	26,060	25,415	20,881	30,524	39,342	51,431	58,370	71,621	71,895
Payment in lieu of taxes and right of way fee	15,513	15,778	16,307	16,923	17,514	17,525	19,183	20,474	21,982	21,982
Total non-operating expenses	33,329	41,838	41,722	37,804	48,038	56,867	70,614	78,844	93,603	93,877
Total expenses	249,304	270,526	271,913	280,461	305,707	338,258	363,924	387,495	412,894	414,932
Income before Federal grants and contributions	9,581	(2,720)	13,442	29,163	20,989	(2,351)	(29,241)	(22,186)	(2,631)	26,567
Federal grants and contributions	39,626	31,455	34,578	24,927	25,083	42,208	27,752	30,403	47,374	58,957
<b>Change in net assets</b>	<b>49,207</b>	<b>28,735</b>	<b>48,020</b>	<b>54,090</b>	<b>46,072</b>	<b>39,857</b>	<b>(1,489)</b>	<b>8,217</b>	<b>44,743</b>	<b>85,524</b>
Net assets, beginning of year	754,766	803,973	832,708	880,728	934,818	980,890	1,020,747	1,019,258	1,027,475	1,072,218
<b>Net assets, end of year</b>	<b>\$ 803,973</b>	<b>\$ 832,708</b>	<b>\$ 880,728</b>	<b>\$ 934,818</b>	<b>\$ 980,890</b>	<b>\$ 1,020,747</b>	<b>\$ 1,019,258</b>	<b>\$ 1,027,475</b>	<b>\$ 1,072,218</b>	<b>\$ 1,157,742</b>





“Water is life’s mater and matrix, mother and medium. There is no life without water.”

– Albert Szent-Gyorgyi

[dcwater.com](http://dcwater.com)

