

# DCWASA

## 2006 Annual Report

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#### District of Columbia Water and Sewer Authority

#### **MISSION**

The mission of WASA is to serve all its customers with outstanding service by providing reliable and cost-effective water and wastewater services in accordance with best practices.

#### **VISION**

WASA provides world-class water and wastewater services as a leading environmental steward.

#### **VALUES**

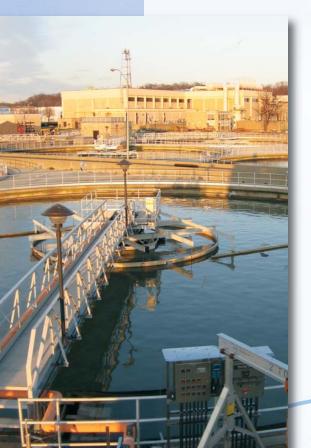
- Respectful, responsive, and sensitive to the needs of our customers and employees
- Ethical in professional and personal conduct
- Vigilant to ensure optimal health, safety, and environmental outcomes
- Dedicated to teamwork and cooperation
- Committed to equity, trust, and integrity in all we do



# A Regional Approach to Providing Critical Public Services

The District of Columbia Water and Sewer Authority (WASA) is a regional utility serving the needs of several jurisdictions. WASA provides drinking water and wastewater collection and treatment to a population of more than 500,000 in the District through a base of 130,000 residential, commercial, and government customers. WASA also collects and treats wastewater for a population of 1.6 million in Maryland and Virginia. At the end of fiscal year 2006, WASA had net assets of \$934.8 million and operating revenues of \$293.5 million.

ASA was established in 1996 as a result of an agreement between the District of Columbia, Montgomery and Prince George's counties in Maryland, Fairfax and Loudoun counties in Virginia and the United States Congress. The agreement, supported by legislation enacted by the Council of the District of Columbia, created an independent, multijurisdictional water and wastewater authority.



WASA is governed by an 11-member Board of Directors comprised of representatives from each service area jurisdiction who independently establish policy and set rates. WASA's daily operations are administered by a General Manager who reports to the Board.

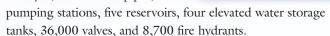
WASA provides retail water and wastewater services to residential and commercial customers in the District. Wholesale wastewater treatment is provided to areas of Montgomery and Prince George's counties in Maryland, and Fairfax and Loudoun counties, as well as the Town of Vienna, in Virginia. The suburban jurisdictions pay the full cost for their use of WASA facilities and services based on a funding formula.

WASA purchases its drinking water from the Washington Aqueduct, a division of the U.S. Army Corps of Engineers. The Aqueduct treats the water, and WASA distributes it throughout the District.

WASA's Board of Directors establishes rates, fees, and other charges for service. These revenues are used to pay WASA's operating costs and to maintain and undertake capital investments.

#### **Quick WASA Facts**

- WASA is a *multi-jurisdictional regional utility* that provides drinking water and wastewater services to a population of more than 500,000 in the District of Columbia. It also collects and treats wastewater for a population of 1.6 million in Montgomery and Prince George's counties in Maryland, and Fairfax and Loudoun counties as well as the Town of Vienna in Virginia.
- Approximately 1,100 employees work at various facilities throughout the District of Columbia.
- WASA's service area covers approximately **725 square miles**.
- WASA purchases water wholesale from the U.S. Army Corps of Engineers Washington Aqueduct treatment plant and delivers it to more than 130,000 locations in the District of Columbia, providing approximately 135 million gallons each day (MGD) of drinking water to individuals, institutions and businesses.
- WASA operates the *Blue Plains Advanced Wastewater Treatment Plant*, which is one of the largest such plants in the world. Located on the bank of the Potomac River, the plant covers 150 acres with a rated treatment capacity of 370 MGD and a peak capacity of more than 1 billion gallons a day.
- WASA's Board of Directors establishes rates, fees, and other charges for all services provided. These revenues pay operating expenses and capital improvement costs.
- To distribute water, WASA operates nearly 1,300 miles of pipes, five



- To collect wastewater, WASA operates and maintains, on behalf of the District of Columbia, 1,800 miles of sanitary and combined sewers, 22 flow-metering stations, nine off-site wastewater pumping stations and 16 stormwater pumping stations within the District. Separate sanitary and stormwater sewers serve two-thirds of the city. In the remaining part of the city, primarily in the downtown area, combined sewers (pipes) are in service.
- WASA's rates are very competitive when compared to water and wastewater rates in similar cities in the Mid-Atlantic region.
- WASA has a very stable customer base. More than 38 percent of its revenue comes from federal, municipal, and county governments, and 40 percent comes from commercial entities whose businesses are substantially driven by the regional economy. The remaining 17 percent of revenue is derived from residential customers in the District.







## Message from the Chairman

his, our tenth Annual Report, and my last one as chairman, affords a good opportunity to review some of WASA's achievements as well as to look forward to some of the challenges that lie ahead. Since its creation as an independent regional authority from the District of Columbia government, the Authority has overcome what seemed to be almost insurmountable challenges—a failing water and sewer system and near bankruptcy—to become one of the nation's preeminent public utilities.

Tenth anniversaries are usually special occasions—a decade in most endeavors is a long time—and that's certainly true for the District of Columbia Water and Sewer Authority (WASA), which was established only in 1996.

The early years of WASA's existence were concentrated on repairing and upgrading the Blue Plains wastewater treatment plant—the largest of its kind in the world—so that it didn't pollute the Potomac. At the same time, WASA was replacing miles of aging and deteriorating infrastructure, so the nation's capital would have reliable and safe water and sewer services. In 2000, when Mayor Anthony Williams asked me to become chairman, a volunteer position, I eagerly accepted because I wanted to play a role in the revitalization of Washington.

In the ensuing six years, our focus turned principally to customer service. WASA now has a sophisticated computer system that allows customers, with just one phone call, to access a range of services—from setting up a direct debit account for monthly bill payments to obtaining a final water bill for a house sale. All this and more

can also be done on WASA's website (www.dcwasa.com), which has information about our water and sewer systems and provides realtime alerts on where WASA crews are doing work that may impact service or traffic.

We have other customer projects underway that are the largest of their kind in the nation. Two examples are the replacement of old water meters in every house and apartment building with accurate, automated meters, and the replacement of publicly owned lead water service lines with copper pipe. We have already replaced nearly a third of the estimated 34,000 lead lines to help insure water quality.

Under the strong leadership of both the Board of Directors and our General Manager Jerry Johnson, WASA has also made major strides in environmental protection. We won federal approval of a long-term plan to help restore the health of local rivers and streams by reducing combined sewer overflows (CSOs). The first phase of our work will be completed in 2008 and result in a 40 percent reduction of CSOs in the Anacostia and Potomac rivers and Rock Creek. With a 20-year timeline and a \$2 billion cost, the next phase is the longest and most expensive and will result in a 96 percent CSO reduction overall.

WASA is now run as efficiently as a business corporation, with a critical public purpose, at all levels of the organization. We've kept tight reins on spending with an operating budget that is just slightly over where it was a decade ago.

Moreover, WASA's prudent financial management has resulted in AA-category bond ratings that ultimately reduce costs for our customers.

Our workforce is an integral part of our success. More than 1,100 employees work at WASA, and their partnership with management and the Board of Directors is what really drives WASA. Whether it's repairing a broken water main in the dead of winter or helping an elderly customer



work out a budget plan for water bills, our employees perform a vital public service for our community, 24 hours a day, seven days a week. All of us on the Board are truly appreciative of their dedication, innovation and commitment to our goal to become a world-class utility.

As I step down after serving as chairman for over half the Authority's existence, I recognize that my successors will have to grapple with continuing and new challenges. The most pressing one is the fact that WASA will be required to meet more stringent environmental requirements at a cost of billions of dollars over the next two decades. The financial burden will be augmented by the ongoing and equally necessary expenses of repairing and renovating aging pipes and equipment throughout the region. The surrounding counties in Maryland and Virginia will pay their fair share of these costs,

but a major responsibility for this will have to be borne by District ratepayers. That means that rates will almost surely keep increasing. Since so much of the required capital expenditures are federally mandated and since much of WASA's original system was designed and paid for by the federal government, the Authority has taken the position that Congress should shoulder a large portion of these costs. Obviously, with so many competing demands on the federal budget, we will have to work hard on this issue.

Down the road, we will also have to renew the agreement between the various jurisdictions that allocates wastewater capacity at the Blue Plains treatment plant, and we will examine carefully the Authority's relationship with the Army Corps of Engineers, which supplies us with treated water through the Washington Aqueduct. Internally, there is always room for improvement, and WASA plans to continue to focus on customer service while constantly upgrading operations.

I've touched upon some of the highlights of the past decade and the challenges that await us. The pages that follow in this Fiscal Year 2006 Annual Report focus on events of the past fiscal year. I have customarily closed my comments in this space with an expression of gratitude to my fellow Board members and our General Manager and his team. This year will be no exception, but since it is my last, I want to say not only that am I truly appreciative of their sustained and excellent efforts, but also that I wish to thank the citizens of this region for the opportunity to serve them in this position.

Sincerely,

Glenn S. Gerstell

Jen S. Sentin

Chairman of the Board (2001–2006)



### 2005-2007 Strategic Plan— Board of Directors

The WASA Board of Directors has developed a revised 2005–2007 Strategic Plan collectively with WASA staff and other key stakeholders. The plan serves as a guide to policy-setting and the management of service delivery, operations and finances. The Board's goal is to create a streamlined plan to provide a road map to meet goals and objectives in four specific Strategic Focus Areas.



WASA is committed to understanding, serving, and responding to the needs of its diverse customers and stakeholders. WASA will utilize state-of-the-art technology to monitor, measure, inform, and address customer expectations, and reach out to improve relationships with stakeholders and the public.

## Organizational Effectiveness

WASA will ensure the effectiveness of the organization by creating and maintaining a safe, productive, highly competent, diverse workforce. WASA will through partnerships with stakeholders maintain a professional, well-functioning, ethical work environment and culture.

#### Environmental Quality and Operations

WASA will provide excellent environmental stewardship, meet and surpass regulatory standards and manage the Authority's infrastructure effectively.

## Finance and Budget

WASA will maintain a sound financial position by optimizing operational and capital programs and exploring additional revenue sources while maintaining fair and equitable rates and rate structures.



Robert C. Bobb

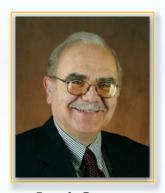
Principal Member
District of Columbia



Dr. Jacqueline F. Brown

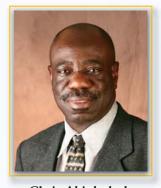
Principal Member

Prince George's County, MD



Joseph Cotruvo

Alternate Member
District of Columbia



Chris Akinbobola

Alternate Member
Prince George's County, MD

VACANT

Alternate Member District of Columbia



F. Alexis H. Roberson

Principal Member

District of Columbia



Lisa Morgan

Principal Member

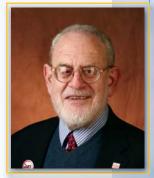
District of Columbia



Alexander McPhail

Principal Member

District of Columbia



David J. Bardin

Principal Member

District of Columbia



Donna MP Wilson

Principal Member

Prince George's County, MD



James A. Caldwell

Principal Member

Montgomery County, MD



Bruce F. Romer

Principal Member

Montgomery County, MD



Anthony H. Griffin

Principal Member
Fairfax County, VA



Kenneth Davis

Alternate Member
District of Columbia



Howard Gibbs

Alternate Member
District of Columbia



Steven McLendon

Alternate Member

District of Columbia



Brenda Richardson

Alternate Member
District of Columbia



Beverly Warfield

Alternate Member
Prince George's County, MD



David W. Lake
Alternate Member
Montgomery County, MD



Paul E. Folkers

Alternate Member

Montgomery County, MD



Robert Stalzer

Alternate Member
Fairfax County, VA



## Message from the General Manager

ASA's first ten years as an independent agency have been extraordinarily successful and productive. This is due, in large measure, to the excellent leadership of the Board of Directors and to the talent and hard work of employees who have built one of the

most accomplished and forward-looking public utilities in the country. Highlighted in this annual report are WASA's achievements in fiscal year 2006, reflecting the efficiency, integrity and transparency of an organization entrusted with providing critical public services.

Financial Performance WASA

continued its strong financial performance in fiscal year 2006. Revenues exceeded expenses by \$54.1 million, and the year ended with operating expenditures under budget. Specifically, operating cash receipts surpassed budget by \$64 million and operating expenditures were approximately 8.2 percent less than budget in fiscal year 2006. Consistent with Board policy, WASA maintained cash reserves in excess of six months operating expenses, or \$102.4 million. The balance in the Rate Stabilization Fund, created to help minimize spikes in future rate increases, was raised to \$58.5 million.

Customer Services By placing customers and consumers at the center of our mission, WASA has embraced a customer-first approach to operations. We continue to use our recent Gallup survey responses to look closely at customer experiences and services—to build on our successes and to improve business processes where needed. In fiscal year 2006, we began the process to register the copyright for the High Use Notification Alert system, a leak detection technology that phones or e-mails customers when there are unusual spikes in their water use. WASA's Asset Management System (AMS) represents another significant leap in automation this year. AMS uses

technology to integrate maintenance, customer, and service call information to better manage our water and sewer operations. During the year, WASA also launched a language line service to handle billing and other inquiries in more than 90 languages.

As WASA enters its tenth year with an impressive track record of projects, technology and research, we are well on our way to world class status in the public utility industry.

> Capital Improvements The Authority spent \$191.3 million in fiscal year 2006 on capital projects to address facility and infrastructure repairs and upgrades. WASA continues to focus on water quality and service reliability. During the last two years (24 consecutive months in 2005 and 2006) lead levels in District drinking water have met federal safe drinking water quality standards. In fiscal year 2006 alone, WASA replaced more than 4,380 lead water services in public space with new copper pipe, as part of a \$400 million commitment to remove all known lead service lines throughout the District. More than \$70 million in water system improvements east of the Anacostia River are being made to improve water pressures, replace old cast iron mains with new ductile iron pipes, and replace water pumping and storage facilities. Elsewhere in the District, construction projects to address defective valves, eliminate water main dead ends, and clean and line water mains continue to ensure reliability and water quality. A five-year study to evaluate the condition of the city's sewer system is now in its fourth year. The inspection targets 80 miles of the most critical segments of the system and has moved several projects, like the Georgetown sewer rehabilitation, through the design phase.



Since 1997, WASA has invested more than \$900 million in a critical overhaul of the wastewater treatment plant—targeting the repair and replacement of every process unit, from grit chambers and screening to nitrogen removal and final filtration. As a result, the plant at Blue Plains has evolved from a facility with significant reliability and odor issues ten years ago, to one that is nationally recognized for its water quality and biosolids management programs.

Environmental Quality Investments WASA's programs, achievements and goals in the area of environmental quality are extensive, costly, and driven by the Clean Water Act and the Chesapeake Bay Act regulations. To date, we have eliminated more than 30 percent of combined sewer overflows (CSOs) in our local waterways. Work on the CSO Long Term Control

Plan is moving forward with soil drillings around the city to determine specific routes for the construction of miles of huge underground tunnels necessary to retain overflows. When this massive, 20-year project is completed, overflows will be reduced by 98 percent in the Anacostia and 96 percent overall. We continue to impress upon our partners at the federal level the importance of continued funding assistance, and in fiscal year 2006, these efforts resulted in a Presidential budget request of \$7 million for this major environmental initiative.

Employee and Community Relations Our employees are the most valuable resource and key to accomplishing the Board's strategic goals. In fiscal year 2006, WASA expanded training opportunities in areas related to safety, technology, government regulations, and professional and career development. The return on this investment is a skilled, safe and competent workforce. During the year, the Authority also continued its strong commitment to the community through volunteer service, as employees participated in special events, fundraising and other volunteer activities to help improve the quality of life for residents.

Today, WASA continues to thrive because our employees and our Board of Directors, under the leadership of Chairman Gerstell, have been dedicated to improving service quality and reliability. There has been measurable and continual progress since WASA began ten years ago, and we look forward to even greater achievements in the coming years.

Sincerely,

Jerry N. Johnson General Manager



# Financial Performance

he end of fiscal year 2006 marks the Authority's tenth year in operation as an independent agency. Guided by the framework of policies the Board of Directors established early on and its four core strategic goals, the Authority and its management continue to build on the successes of its previous nine years of operations. The following are highlighted financial achievements in fiscal year 2006.

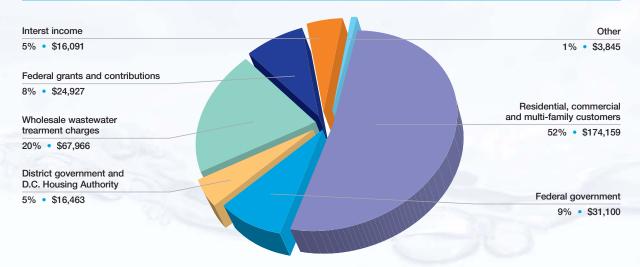
- WASA collected \$22.4 million from one of its large wholesale customers, the Washington Suburban Sanitary Commission (WSSC), for repayment of a longstanding construction claim and agreement on several smaller cost allocation issues.
- The Authority contributed \$27.0 million to the rate stabilization fund at the end of fiscal year 2006, raising the balance to \$58.5 million. The rate stabilization fund will be used in the future to smooth out peak rate increases at the Authority's discretion and in accordance with the Board's policy of gradual and predictable rate increases.
- The Authority received \$7.0 million in additional appropriation from the U.S.
   Government to be used, with matching funds, for capital projects aimed at reducing
   Combined Sewer Overflows (CSO). This raised the total federal appropriation to \$91.2 million through the end of fiscal year 2006.
- WASA's bond ratings remained at the "AA" level, the second highest rating category available to state and local issuers, helping reduce the interest rates we pay on our debt borrowings, resulting in lower bills to our customers.

During its brief existence, WASA has exceeded its financial goals and policies. WASA's financial management is, in fact, a significant credit strength.

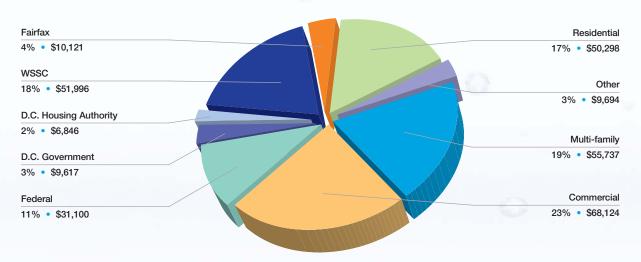
Jerry N. Johnson, General Manager

- The Authority received its tenth consecutive unqualified audit opinion on its financial statements in fiscal year 2006.
- Residential, commercial and multi-family customer receivables over 90 days including bad debt continued on its downward trend, declining to \$7.4 million at the end of fiscal year 2006 from \$10.9 million at the end of fiscal year 2005. This reduction is largely due to the comprehensive Arrears Management Program that was implemented in fiscal year 2004. This program emphasizes improved performance in the daily administration of accounts receivable management through activities such as stepped up collection efforts, more systematic field service collections, and the "Dialing for Dollars" program.
- In fiscal year 2006, the Authority successfully renewed all insurance policies at essentially the same coverage and terms at a net increase of 2 percent over the previous year, lower than anticipated market increase of 9 percent.

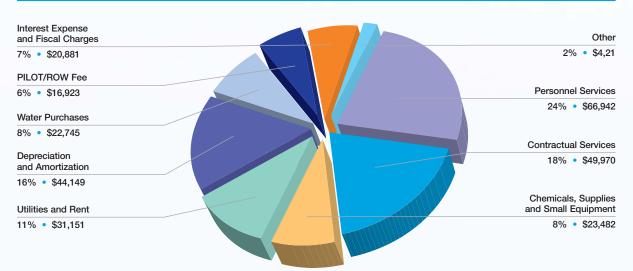
#### FY 2006 TOTAL REVENUES (\$ in thousands)



#### FY 2006 OPERATING REVENUE BY SOURCE (\$ in thousands)



#### FY 2006 TOTAL EXPENSES (\$ in thousands)





## Consumer and Community Services

ASA has embraced a true customer service approach to its operations—from its website with easyto-find information and services—to its water and sewer crews who work hard to maintain vital, often taken-for-granted, public services.

#### High Usage Notification Program may plug those leaks!

The Automated Meter Reading (AMR) system has been expanded to provide more information and value for customers. This year, WASA rolls out its first-in-thenation water use

analysis tool that integrates AMR's radio frequency technology with a Web-based program that lets customer check on their water use and alerts them by e-mail or telephone if it is unusually high. This High Usage Notification Program provides graphical illustrations of the AMR data, allowing customers to pinpoint high use on the exact day it occurred. Through this program, customers are advised of a potential leak or plumbing problem and can also manage their water use through conservation measures.

High Use Notification Alert, patented by WASA, notifies customers of unusual spikes in water use which could mean a leak or other plumbing problem.

#### Voice technology serves customers 24 hours a day

WASA continues to add improvements to its Interactive Voice Recognition (IVR) system, allowing customers to perform many self-service applications through voice communications 24 hours a day. Automated options include bill payment, water use information, payment extensions, and other services. This year, the IVR system is integrated with the High Usage Notification Program to send a telephone message advising customers of unusually high water use and a potential problem. This service is especially helpful for customers who do not use the Internet.





The WASA Command Center is a 24-hour

operation handling

service orders and

dispatching field crews.

emergency and nonemergency calls and

> Ten Years of Extraordinary **Progress and Partnerships**

On April 18, the DC Council creates the District of Columbia Water and Sewer Authority (WASA), a semi-independent regional agency. The Board of Directors consists of members from the District and Montgomery, Prince George's, and Fairfax counties.

"Every aspect of our operation has an impact on customer service. Over the years, I am particularly proud of WASA's track record of service improvements and community outreach."

Jerry N. Johnson, General Manager

## Call Center assists customers in 90 languages

In fiscal year 2006, WASA implements its first language line service to communicate with its diverse customer base in more than 90 languages. Spanish, Chinese and Vietnamese are the most commonly used foreign languages by customers contacting WASA for services or billing information.

## WASA measures customer satisfaction and perceptions

This year, WASA commissions a Gallup, Inc. survey of 1,500 residential and commercial customers to evaluate customer satisfaction, as well as attitudes and perceptions about WASA and the services it provides. Highly rated areas among the survey respondents were overall customer satisfaction, easy and accurate billing, courteous and knowledgeable customer service representatives, the monthly What's on Tap customer newsletter, and the website. WASA begins to address concerns expressed in the survey including permitting process delays water distribution system reliability, and perceived water quality issues.

# Communications and outreach are cornerstones of customer and community relations

WASA's extensive customer communications and community outreach programs engage and educate the community on issues including rate proposals, water and sewer projects and environmental protection efforts. During fiscal year 2006, WASA participates in more than 45 community meetings on a variety of issues ranging from the Lead



At its first meeting, the Board considers a ten-year strategic plan for improving service quality as well as replacing an aging water and sewer infrastructure.



Bob Lee, Bureau of Water Services, creates WASA's slogan "Serving the Public, Protecting the To improve its financial standing, the WASA Board begins to collect long overdue accounts from customers who took advantage of a dysfunctional billing system.

1996





WASA takes its Sewer Science Program into the District high schools with classroom lessons and an interactive laboratory.

Boundary Sewer upgrade, and Watts Branch sewer system restoration.

#### WASA is a recognized industry leader

WASA receives national and international recognition for its capital projects through industry publications and broadcast documentaries, industry and environmental conference presentations, and by hosting delegations from other parts of the world. WASA is lauded for its sustained financial performance, ground breaking research, and for plant operations that go much beyond the minimum needed to meet federal Clean Water Act requirements.

## Customer Assistance Programs help those in need

WASA sponsors two programs to assist eligible individuals and families who are having difficulty paying their water and sewer bill. As the end of fiscal year 2006, nearly 4,200 customers are participating in the Utility Discount Program that provides a discount of 4 Ccfs on each monthly bill. This is a savings of approximately \$84 a year. Another program, Serving People by Lending a Supporting Hand (SPLASH), far exceeded this year's goal with \$66,000 in contributions. This program has grown tremendously with a convenient Round-Up feature which enables customers to make voluntary donations with their bill payments. SPLASH is administered on WASA's behalf by a local non-profit agency.

Service Line Replacement Program to sewer back up and flood prevention. Numerous District public schools participate in WASA's Sewer Science Program—a mini-wastewater treatment laboratory exercise for high school students. Proposed rate changes are discussed citywide with customers, the media, business associations, elected officials and other stakeholders. Exhibits and demonstrations are routinely staged at environmental, health, and career fairs, senior events, home and garden shows, Latino information fairs, and at the annual celebrations of National Drinking Water Week, GreenDC Week and Earth Day. Throughout the District, WASA provides community updates on high-profile projects including the combined sewer overflow (CSO) control program, Rock Creek and Anacostia pumping station upgrades, Georgetown sinkhole (collapsed sewer) repairs, East of the Anacostia water and sewer improvements, the Northern

Ten Years of Extraordinary Progress and Partnerships The WASA logo is designed by Richard Ulrich in the Bureau of Maintenance Services.



WASA enters a new agreement with the U.S. Army Corps of Engineers that gives the Authority a 76 percent share of operating and capital costs at the Washington Aqueduct, WASA's water supplier.

WASA approves the first retail water and sewer rates increase since 1986.

Over 700 (one in three) visitors selected District

water over bottled water in a WASA taste test at the

2006 Home and Garden

Show at the Washington Convention Center

Take a si

Enter d or b

WASA District of Columbi

#### Community service plays a large role in outreach efforts

WASA believes in helping to improve the quality of life for others, and participates in a wide variety of volunteer efforts in fiscal year 2006. Here are a few.

- WASA employees donate \$36,297 to the American Red Cross for its Hurricane Katrina Relief Fund. The cash contribution represents individual donations and the value of more than 775 hours of unused employee leave.
- Through Bread for the Soul, WASA provides food, cash donations and other gifts during the holidays to 75 families in the District affected by HIV/AIDS.
- More than \$30,000 is raised for **One Fund**, the District's only charitable fundraiser that supports a range of non-profit organizations in the area.
- WASA employees partnered with the **Susan G. Komen Foundation** in the annual 5K walk to support the fight against breast cancer, raising over \$1,000 in donations.
- Forty-six WASA employees contributed more than \$1,800 and 25 employees and family members participated in AIDS Walk Washington to benefit the Whitman-Walker Clinic.
- Through a partnership with **Covenant House Washington**, a community youth

advocacy organization, employment for young adults. By working in WASA's in Facilities department, these individuals learn carpentry, construction, and landscaping.

WASA provides summer

WASA participates with other area utilities in Joint Utility Discount Day (JUDD). This annual event helps eligible customers by offering utility discounts.



WASA begins Biological Nitrogen Removal (BNR) pilot project at the Blue Plains wastewater treatment plant.

WASA's cutting-edge pilot program for nutrient removal draws worldwide attention and praise as engineers and officials throughout the US and China visit Blue Plains.

1998



## Operations and Environmental Quality

WASA will provide excellent environmental stewardship, meet and surpass regulatory standards, and manage the Authority's infrastructure effectively.

Board of Directors Strategic Plan



## Water System Operations and Service Improvements

ASA purchases treated water from the Washington Aqueduct Division of the U.S. Army Corps of

Engineers (the Aqueduct) and distributes it throughout the District through pumping stations, distribution reservoirs and elevated tanks. The Department of Water Services oversees the entire water distribution system which includes 1,300 miles of pipes, ranging from four to 78 inches in diameter. The system includes a variety of pipe materials—cast iron, ductile iron, reinforced and pre-stressed concrete, and steel. It contains more than 36,000 valves and 8,700 hydrants. The Authority also operates and maintains four pumping stations: Bryant Street, Fort Reno, Anacostia, and Alaska Avenue.

Over the next ten years, investment in the District's water infrastructure will be close to \$700 million, with a lifetime budget of approximately \$1 billion. Major projects include the replacement of lead service lines, rehabilitation and construction of water pumping stations, elimination of dead ends, and repair and replacement of water mains, valves and hydrants.

WASA undertakes the largest lead water service line replacement program in the country

WASA is replacing all known lead service lines in public space throughout the District with copper pipe. Service lines are pipes that carry water from the main in the street to

Ten Years of Extraordinary Progress and Partnerships

WASA negotiates the first

Master Labor Agreement

covering five local labor unions.

WASA receives an A2 bond rating from Moody's Investors Service that allows it to borrow funds to finance a vital Capital Improvement Plan (CIP) at a lower interest rate. The replacement and maintenance of approximately 8,700 fire hydrants in the District is a critical water distribution system operation. In fiscal year 2006, 255 fire hydrants were replaced or repaired.

the home. It will cost more than \$400 million to replace the estimated 34,000 lead service lines. To date, WASA has removed approximately 10,500 lead services, including more than 4,200 lines alone in fiscal year 2006. Home owners are encouraged to replace the section of lead pipe on their private property. Financial assistance in the form of grants, low-interest loans and installment payments is available to eligible property owners. So far, 3,700 property owners have requested replacement of privately-owned lead service lines.

#### WASA places a strong emphasis on water quality

The District's water supply is closely monitored throughout distribution system. Hundreds of samples are collected and analyzed each month from various locations, including residences, commercial buildings, schools and day care facilities. WASA's mobile laboratory units also respond to water quality concerns and emergencies.

WASA conduct several programs to protect and enhance the quality of the water it delivers:

- Each year, WASA *systematically flushes* its system to remove any potential build-up in pipes that may discolor the water.
- By *eliminating dead-end water mains*, WASA improves circulation by removing the potential for stagnant water to accumulate. This program will be completed in fiscal year 2007 at a cost of \$17 million.
- WASA's *cross-connection control program* regulations and inspections protect public health by requiring businesses to install backflow prevention devices to keep contaminants from entering the water system. WASA has successfully eliminated close to 4,300 cross connections since 1998 at a cost of \$19.5 million.

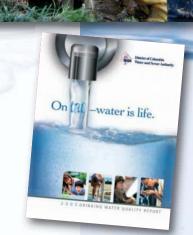


Maintenance and repairs on the District's vast water distribution infrastructure is a core function for WASA field crews. In fiscal year 2006, 392 water mains, 275 service line leaks and 80 leaking valves were repaired or replaced.

WASA crews work around the clock to repair a record 700 water main breaks.



The percentage of fleet vehicles in operation increases to 95 percent, from less than 50 percent in 1997.



WASA distributes a Drinking Water Quality Report annually to every address in the District with information on its drinking water.



A 10-year, \$1.6 billion Capital Improvement Plan (CIP) receives Board approval.



## WASA is investing more than \$70 million in system improvements east of the Anacostia River

To improve water pressure and reliability in the distribution system east of the Anacostia River, WASA is replacing old cast iron mains with new ductile iron pipe, replacing an old pumping station originally built in 1913 with one that is fully automated, and constructing an elevated storage tower at St. Elizabeth's Hospital Campus.

## The replacement and repair of defective valves is a \$36 million job

WASA's valve replacement projects are essential to the performance and maintenance of the distribution system. Defective valves can delay critical capital and repair projects, because valves are used to isolate

sections of the distribution system during emergency work. As part of its 10-year Capital Improvements Plan (CIP), WASA earmarks \$36 million to repair and replace large- and small-diameter valves that have corroded or become inoperable following years of inattention. In fiscal year 2006, 80 valves were repaired or replaced.

#### Strong partnerships help ensure water quality

WASA water quality personnel work with the Washington Aqueduct and other industry professionals to evaluate and monitor planned changes in drinking water chemistry. Productive, working partnerships have also been developed with the District departments of health and the environment and advisors at the George Washington University School of Public Health.

# Projects completed east of the Anacostia

- Rehabilitation of two existing elevated water towers
- Replacement of a 12-inch main along Livingston Road
- Improvements to two Fort Stanton underground reservoirs
- Replacement of a 20-inch main along Martin Luther King Boulevard

Water Quality Technicians collect and analyze an average of 300 water samples each month.

Ten Years of Extraordinary Progress and Partnerships A Regionalization Study recommends that WASA retain its current governing, financial and management structure, and revisit the governance issue again no later than 2005.

Cutting-edge technology is used to treat wastewater flowing into Blue Plains to reduce nitrogen levels.



## Wastewater collection system operations and upgrades

ASA operates the District's sewage collection system which consists of approximately 1,800 miles of sanitary and combined sewers, ranging from eight-inch diameter pipes to 27-foot arch sewers. The system includes approximately 600 miles of large interceptor sewers and smaller gravity collection sewers, lateral connectors from the sewer mains to the property line, and a 50-milelong Potomac Interceptor system that conveys wastewater from Virginia and Maryland to Blue Plains. The system dates back to the early 1800s and includes a variety of materials such as brick, concrete, clay, ductile and cast iron, concrete and fiberglass. Two-thirds of the District is served by separate sanitary and storm sewers. The remaining area, principally in the downtown and older parts of the city, is served by a combined sanitary and storm sewer system. Also included in the sewage collection system are 22 flow-metering stations, nine off-site wastewater pumping stations, and 16 stormwater pumping stations.

## The rehabilitation of two major sewer lines is underway

WASA continues to work with its wholesale customers to address odor control and the structural integrity of the 50-mile Potomac Interceptor sewer line that extends through several jurisdictions. In addition, the 70-year-old Upper Anacostia Main Interceptor, another large-diameter sanitary sewer, is being replaced at a cost of approximately \$2 million.

## Sewer system evaluation focuses on 80 miles of critical sewer lines

WASA enters the fourth year of a five-year program to evaluate the condition of certain critical sewer lines and recommend repair and construction projects where necessary. The assessment focuses on high priority sewers, such as outfalls, siphons, stream crossings, major interceptors, and those under buildings. Recommended work on the Georgetown and the Watts Branch sewer systems is scheduled to begin in fiscal year 2007. Meanwhile, WASA addresses immediate sewer problems and failures with TV/video inspections, cleaning and lining and other rehabilitation technologies including trenchless repair.

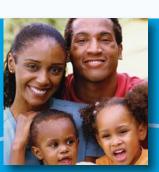
As the sewer study and related capital projects progress, operating and maintenance program in the system continue. In fiscal year 2006, 27,857 storm water catch basins and 135 miles of sewer lines are cleaned, and approximately 420 sewer laterals are repaired or replaced. Immediate sewer

problems and failures are quickly addressed using video inspections, cleaning and lining, and other trenchless rehabilitation technologies.

WASA crews cleaning catch basins are the focus of a live WJLA-TV news report on preparations for tropical storm Ernesto in August 2006.



WASA initiates Serving People by Lending a Supporting Hand (SPLASH)—a program that assists individuals and families facing hardships to maintain critical water and sewer services.



The use of chlorine and sodium bisulfate is discontinued at the Blue Plains plant after the September 11 terrorist attacks.



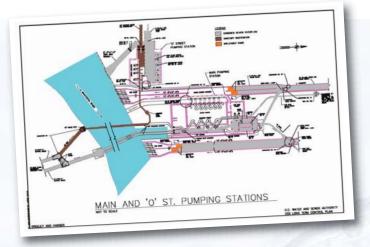
The "O" Street Pumping Station, a major WASA facility last renovated in 1950, is undergoing extensive renovations of its electrical, mechanical and HVAC systems.

## Pumping station improvements are key to enhanced system capacity and reliability.

The new above-ground Eastside Pumping Station goes in service in fiscal year 2006, replacing the older underground facility with more operating capacity of 45 million gallons per day (MGD). The new facility increases flow to Blue Plains and is a key component in WASA's program to reduce combined sewer overflows, principally to the Anacostia River. Construction begins on the rehabilitation of three wastewater pumping stations—Upper Anacostia, Rock Creek, and Earl Place.

# Wastewater treatment upgrades and biosolids management

lue Plains, the District's wastewater treatment facility was originally constructed in 1938 and sits on a 150-acre site along the Potomac River. Blue Plains is one of the largest advanced wastewater treatment facilities of its type, with a rated annual average capacity of 370 million gallons per day and a peak wet weather capacity of more than a billion gallons per day. While other metropolitan areas have facilities with larger capacities, none of these provide the high level of treatment that Blue Plains does with its nitrification, de-nitrification and filtration processes. Consistent with the high level of treatment provided, the plant's operating permit contains the most stringent effluent discharge requirements of any plant its size. Since 1997, WASA has



invested more than \$600 million in a critical overhaul of the plant—targeting the repair and replacement of every process unit, from grit chambers and screening to nitrogen removal and final filtration. As a result, Blue Plains has evolved from a facility with significant reliability and odor issues ten years ago to one that is nationally recognized for its high quality effluent and biosolids management program.

## A significant milestone is reached in major upgrades at Blue Plains

In fiscal year 2006, a number of significant plant upgrades are placed in service, including:

- New screens at the head of the plant to reduce clogging of sludge pumps, and new grit chambers with automated grit removal to protect tanks and pumps
- Upgraded primary treatment facilities
- Additional dewatering facilities including seven new centrifuges and two new sludge storage vessels
- Additional chemical systems for metal salts, polymers, and sodium hypochloride
- A new process control system to monitor and control systems and equipment

Ten Years of Extraordinary Progress and Partnerships

WASA is the first wastewater utility in the region to meet the 40 percent nitrogen reduction goal in the Chesapeake Bay Agreement by fully implementing its nitrogen removal program.



The new labor agreement with WASA's bargaining units contains new work rules, competitive pay increases, and, for the first time, pay-forperformance for union employees.

#### Additional Blue Plains plant upgrades to focus on advanced treatment

In fiscal year 2007, the emphasis and construction shift to projects that enhance the advanced treatment processes—nitrification/de-nitrification and (effluent) filtration.

These Liquid Processing Program projects include:

- Upgrade to the Biological Nutrient (nitrogen and phosphorous) Removal (BNR) reactors to enable WASA to meet interim nitrogen levels in its federal discharge permit
- Rehabilitation of the secondary sedimentation basins to improve process efficiency and lower chemical and maintenance costs
- Rehabilitation and upgrade of nitrification and de-nitrification-related process components
- Upgrade of filtration and disinfection facilities with new filter media and backwash

system and pump improvements

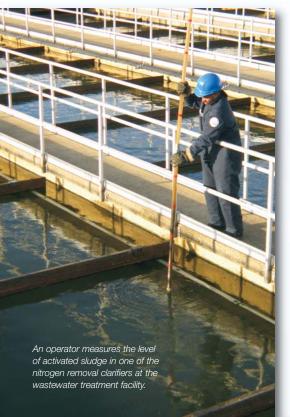


After an extensive and rigorous evaluation, WASA rejects the single bid received in fiscal year 2006 for the construction phase of the Egg-Shaped Digester Project. The use of egg-shaped digesters is a progressive and effective technology for handling biosolids (treated residue from the wastewater treatment process) generated at Blue Plains. The digester project bid was nearly 70 percent over WASA's 2006 budget estimate of \$350 million. The total project cost has escalated from the originally budgeted \$148 million in 2000 to \$350 million in 2006 to an estimated \$600 million in 200. Going forward, WASA will monitor the construction market, regulatory initiatives and evolving wastewater treatment technologies over the next three years to revise its strategy for long-term biosolids management.

Currently, more than 1300 wet tons of biosolids are hauled daily from the plant for reuse as fertilizer. WASA's award-winning Biosolids Management Program has been recognized by the U.S. Environmental Protection Agency for its outstanding operations, technological advances, and promotion of the beneficial uses of municipal wastewater biosolids.



At Blue Plains, personnel measure nitrogen, a key pollutant that depletes oxygen in water.



WASA's
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WASA approves a \$2.2 billion 20-year capital improvement plan to reduce combined sewer overflow (CSO) by 96 percent in the Anacostia and Potomac rivers and Rock Creek.

WASA implements the Automated Meter Reading (AMR) program which uses state-of-the-art radio frequency technology to transmit accurate information on customer water use.



## WASA is an environmental partner in the region's future

ith the construction for the new Washington Nationals baseball stadium and plans for other mixed use development along the Anacostia River, much of the District's future is focusing on the riverfront. At the same time, a federal and multistate (including the District) partnership is working to protect the Chesapeake Bay by setting a cleanup goal for 2010. In both areas, WASA is a leader among environmentalists with a major role in restoring and protecting these valuable natural resources.

# Combined Sewer Overflow Reductions Average yearly CSO volume and percent reduction (billion gallons) 0 .5 1.5 2 2.5 3 3.5 4 Year 1996 WASA Formed 2006 30% After Long-Term Control Plan

#### The Anacostia River tops WASA's list for pollution control

Nearly a third of the District is served by a pre-1900 combined sewer system—mostly in the downtown and older parts of the city. This system carries both sanitary sewage and stormwater in a single pipe to Blue

Plains for treatment. During heavy rains, however, the volume of combined wastewater can be more than the sewer system can handle, and the excess flow spills from several outfall locations into the Anacostia and Potomac rivers and Rock Creek. These discharges are called combined sewer overflow (CSO). Since 1996 WASA has been working on various projects to control

CSOs and help reduce pollution in these waterways, with particular attention to the Anacostia—the most impaired of the three. WASA is completing a \$140 million program to reduce overflows to the Anacostia by 40 percent by 2008. To date, overflows are reduced by 30 percent since the replacement of tide gates to keep river water from entering the sewer system and inflatable dams that hold back overflows until they can be treated. This project also includes the completed construction this year of a new East Side sewage pumping station and the separation next year of combined sewers in the Anacostia and Rock Creek areas of the city. Additionally, design and construction work is underway on the rehabilitation of other major sewage pumping stations to increase their capacity.

WASA skimmer boats help clean the rivers by capturing and removing floating trash and debris from stormwater runoff. These boats 60 miles of shoreline, removing up to 120 tons of trash each month.



Ten Years of Extraordinary Progress and Partnerships WASA receives an AA-category bond rating upgrade.



WASA receives the Gold Award from the Association of Metropolitan Sewerage Agencies (AMSA) for its high level of compliance with federal standards for discharges from the Blue Plains plant into the Potomac River.

2003

Separate Luzon Valley

Piney Branch Storage Tunnel

**Rock Creek** Regulator Improvements

Separate four Rock Creek CSOs

**Potomac Storage** 

Soil sampling begins in fiscal year 2007 to determine the exact routes for huge underground tunnels, like this one, that will hold sewer system overflows until they can be pumped to Blue Plains for treatment.

#### Long-term CSO control is a \$2 billion investment

WASA's Long-Term (20-year) CSO Control Plan will reduce overflows by 96 percent overall and 98 percent on the Anacostia River alone.

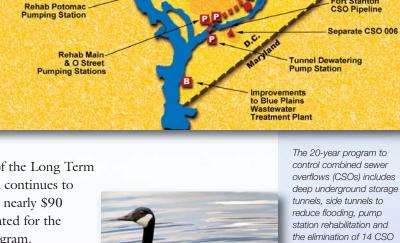
Under the terms of 2004 agreement with the federal government, WASA continues making progress on a very extensive program that reduce combined sewer overflows by 96 percent overall and 98 percent on the Anacostia alone.

The Long-Term Control Plan (LTCP) requires WASA to complete, over a 20-year period, a variety of capital investments throughout the District, including:

- Construction of eight miles of huge Metro-size underground tunnels to store the combined sewage and stormwater until it can be treated at Blue Plains
- Elimination of 14 CSO outfalls along the rivers near public areas including the Georgetown waterfront and the Anacostia marinas through sewer separation and outfall consolidation
- Construction and rehabilitation of pump stations
- Improvements to the Blue Plains wastewater plant to increase excess flow capacity

WASA is beginning geotechnical studies, including soil borings, to determine the specific routes for tunnel construction.

Realizing the significant impact the \$2 billion cost of the Long Term Control Plan will have on District ratepayers, WASA continues to aggressively seek federal funding assistance. To date, nearly \$90 million in Congressional funding has been appropriated for the program. funding has been appropriated for the program.



The 20-year program to control combined sewer overflows (CSOs) includes deep underground storage tunnels, side tunnels to reduce flooding, pump station rehabilitation and the elimination of 14 CSO outfalls along the Potomac and Anacostia rivers and Rock Creek

Rehab Eastside **Pumping Station** 

ort Stanton

WASA is a leader among environmentalists, community groups, governments, and businesses working to improve conditions for life in and around District rivers and streams.

WASA deployed a new radio system, in collaboration with the District's Emergency Management Agency, that greatly improves communications with city departments and becomes crucial during Hurricane Isabel.



When elevated lead levels are discovered in some of the District's drinking water, WASA expands its water testing program, replaces lead service pipes, and sends free filters and test kits to homes upon request.

Low Impact

Development-Retrofit

Storage





## Organizational Effectiveness

ASA invests in its employees through organization-wide programs in leadership and skills training, labor relations, health and finance, and performance management.

includes seminars and workshops on a variety of health topics, workplace health screenings, exercise activities and fitness tests. In the 2006 WASA Fit Program, eleven employee teams committed to walking 5,000 steps a

"WASA is committed to the professional and personal development of its workforce to support the provision of excellent water and sewer services."

Glenn S. Gerstell, Board Chairman



WASA departments routinely host international visitors interested in WASA operations, technology and research.

day for 12 weeks in a competition to encourage physical fitness.

- Now in its fourth year, *WASA Reads*, an adult literacy program, provides employees basic skill training in reading, writing, and arithmetic using work-related materials. In fiscal year 2006, the program expands to include reading comprehension and critical thinking along with a six-part math prep class.
  - WASA partners with its investment manager, Fidelity, to provide individualized *invest*ment counseling and retirement seminars.
  - Employee participation in WASA's *Career Development Program* unlocks the door to future opportunities within the organization. The program provides personal evaluations, one-on-one career counseling, workshops and education and training opportunities.
  - The two-year *Engineering Management Training Program* is designed to develop a pool of qualified engineers entering the fields of water distribution, wastewater treatment, and utility project management.
- The *Education Reimbursement Program* is a win-win for employees and WASA. It offers monetary assistance through tuition reimbursement to eligible employees who are enrolled in college, university or trade school programs related to their current job.

Through the Wellness Program, WASA offers employees a discount for a Gold's Gym membership.

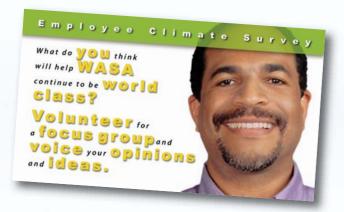


Ten Years of Extraordinary Progress and Partnerships WASA's biosolids program at Blue Plains is the fifth in the nation—and the first on the East Coast—to receive national certification of its Environmental Management System.

WASA initiates an ambitious project to replace an estimated 34,000 lead service pipes in public spaces throughout the District—the largest program of its kind in the nation—at a cost of approximately \$400 million.

#### The Summer Internship Program builds careers for the next generation

In fiscal year 2006, 39 interns from 26 colleges and universities participate in WASA's Summer Internship program, including international students from Thailand, Ghana, Kenya, Serbia and China. The internship program encourages and supports the educational goals of college students by exposing them to careers in all aspects of WASA operations—from civil engineering and financial management to environmental science and infrastructure repair. Nine students from the summer remain in the year-round program to continue research assignments during the school year.



## WASA takes an important step with its Employee Climate Survey

In fiscal year 2006, employees volunteer to participate in focus groups to share ideas on ways to improve management and communication in the organization. These sessions



are an outcropping of last year's Employee Climate Survey in which employees were asked how they felt about morale, job commitment and management. The survey was designed to gauge the impact of organizational changes on WASA's workforce and operations.

## Annual event promotes proper safety techniques

The Occupational Safety and Health Department and the Union Management Safety Committee jointly host the Fourth Annual Safety Day. The event featured indoor and outdoor exhibits along with employee demonstrations of procedures,

skills and technologies such as backhoe operations, confined space entry techniques and traffic control. The 2006 Summer Internship Program enters its ninth year with the largest class ever of young men and women receiving real work experience to complement their academic studies.

WASA offers employees a comprehensive selection of benefit plans and options for health care, financial protection, and much more.



A new Customer Information and Billing System gives customers the ability to access their daily water use from WASA's website or its Interactive Voice Response (IVR) phone system WASA approves an agreement with federal government to implement an extensive, long-term program that will dramatically reduce the overflows from the District's combined sewer system that pollute local waterways, especially the slow-moving Anacostia River.





WASA's fleet program made the list of "100 BEST Fleets" in the nation, published in the March 2006 issue of Fleet Equipment magazine.

## Contractor safety is a high priority for insurance program

WASA enters the second year of its Rolling Owner Controlled Insurance Program (ROCIP). The program has both financial and safety benefits. All contractors bidding on capital projects are required to participate in the ROCIP are given guidelines for developing and maintaining a safety program. Under this program, WASA procures insurance for all contractors working on construction projects. The benefits are broader coverage and enhanced safety and loss control, which should result in fewer claims, increased minority participation, and cost savings. At the end of fiscal year 2006, 34 projects are enrolled in the program, and savings to date are estimated around \$500,000.

## Governance study examines WASA's structure and efficacy

In fiscal year 2006, a special ad hoc committee of the Board, created to re-examine the issue of WASA's governance, engages the services of a multi-disciplinary consulting team. The final report endorses the existing Board and organizational structure. Its recommendations are incorporated into several Board committee work plans for additional review. One of the major issues raised in the study is the integration of the District's water production, treatment and distribution under one agency.

## Technology initiatives focus on managing assets and improving service

In fiscal year 2006, WASA continues implementation of its Total Enterprise Asset Management System (TEAMS). This data management system will integrate WASA's systems and facilities for customer information, facility operations, finance, records and document management and improve both the management and maintenance of our water and sewer infrastructure.

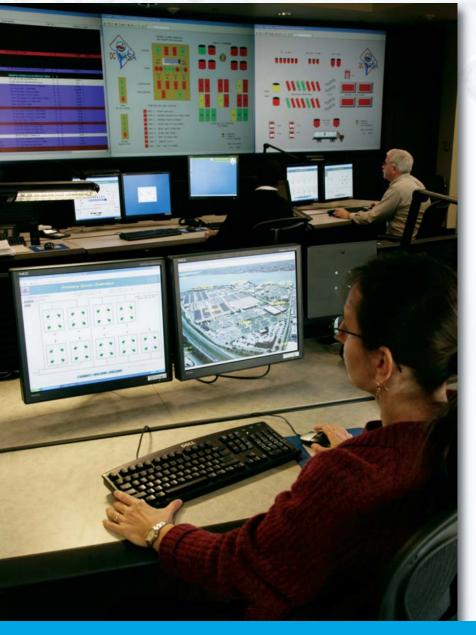
Ten Years of Extraordinary Progress and Partnerships

WASA's Biosolids
Management Program
receives the EPA 2005
National First Place Clean
Water Act Recognition
Award.



WASA hosts the 100th meeting of the Board of Directors with present and past Board members in attendance.

The integration of a *Geographical Information System (GIS)* begins this year allowing users to enter an asset and view its geographical location with the click of a button. This data is used by various departments for timely response to customer inquiries and requests for service.



#### The Process Computer Control System (PCCS)

integrates information technology with operational functions to manage chemical use and electricity consumption (minimizing peak demand usage) and other operating efficiencies. Process control implementation, including upgrading fiber optical cable infrastructure is underway in the primary, secondary, and solids processing areas at Blue Plains.

WASA fields a team of wastewater operators at the Operations Challenge event during the annual Water Environment Federation Technical Conference (WEFTEC).

0

The Central Control Room at Blue Plains is where vital aspects of the treatment process and related equipment are monitored and controlled 24 hours a day.

WASA hosts the 100th meeting of the Board of Directors with past Board members in attendance. WASA completes a \$64 million renovation of the 1908 Bryant Street Pumping Station, which pumps nearly 90 million gallons of water throughout the city daily.





## Research Partnerships

hrough collaborations with industry colleagues, national foundations and Mid-Atlantic universities, WASA expands its research capabilities wastewater treatment, biosolids management, and drinking water quality. WASA is participating in thirteen projects through the Water Environment Research Foundation (WERF), including nutrient removal, disinfection, solids processing technologies, biosolids management, plant automation and plant security. WASA's General Manager serves on WERF's Board of Directors, and WASA staff serves on project advisory committees addressing health, safety and management issues.

WASA supports the American Water Works Association Research Foundation, a national effort involving more than 1,000 utilities and other supporters worldwide. Projects address drinking water quality, utility operation and maintenance, health effects, and management issues. WASA is taking part in projects involving the condition assessment of valves and other infrastructure, continuity of system operations and the environmental impact of discharges of treated water during maintenance activities.

WASA actively disseminates cutting-edge research and process innovations at many national and international utility industry and environmental impact conferences with more 30 papers presented in 2006 alone.



Water quality technicians at WASA follow a strict testing regimen to continuously evaluate water in the city's distribution system.

Through productive partnerships world-wide, WASA is a research leader in waste-water treatment technologies and biosolids management and recycling.

 WASA, in cooperation with Howard University and utilities in Maryland and Virginia, is leading research to understand the bioavailability of organic nitrogen from wastewater effluents.

Ten Years of Extraordinary Progress and Partnerships

- WASA conducts hands-on Sewer Science classes in District high schools, using small, portable wastewater treatment laboratory set ups.
- WASA's Customer Service Department communicates with non-English speaking customers in more than 90 different languages, using *Language Line Services* to access a telephone interpreter.



- WASA is initiating large-scale pilot projects at Blue Plains to evaluate ballasted flocculation, a new technology for treatment of excess storm flows.
- WASA and the City of Salzburg, Austria are evaluating bioaugmentation of seed nitrification and denitrification organisms to more effectively use process capacity in a two-stage plant.
- WASA, in cooperation with New York City Department of Environmental Protection and Alexandria Sanitation Authority, is evaluating a new ANAMMOX technology to efficiently treat and remove high-strength ammonia from recycle streams without external carbon. Three pilot units are being used for testing in association with University of Innsbruck, Virginia Tech, Columbia University and City College of New York.
- In cooperation with utilities in Maryland and Virginia, WASA is evaluating *alternate carbon sources for denitrification*, including methanol, ethanol, acetic acid, sugar, glycerol and proprietary chemicals. The testing is coordinated through faculty and students from the University of Cincinnati, Virginia Military Institute and George Washington University.
- WASA and the City of Toronto, Canada are evaluating *anaerobic digestion* processes to enhance digester gas formation and reduce biosolids inventory.
- Several North America utilities, including WASA, are evaluating methods to more effectively destroy fecal coliforms from Class A and Class B anaerobic digestion.

- WASA, along with Virginia Tech University and George Washington University, are conducting laboratory-scale testing of thermophilic digestion to understand methods to achieve Class A biosolids.
- WASA, in conjunction with Virginia Tech University and Bucknell University, is examining *microbial secretion of excential plant bormones* capable of fending off drought and other plant stresses.
- WASA partners with USDA and University
  of Maryland to examine *Endocrine Disrupting Compounds* (EDC's) in the
  wastewater treatment process and the fate
  and transport of EDC's from land application sites.
- WASA is working with Metro Washington Council of Governments and Virginia Tech on the examination of *nutrient loading*

*rates* for forest application of biosolids.

WASA, Washington Suburban Sanitary Commission and the University of Maryland are studying trenched biosolids applications at gravel pit reclamation sites with poplar tree plantations in order to determine the dynamics of nutrient movement to the trees.

Blue Plains laboratory staff measure the chemical residue in the wastewater disinfection process.



- WASA begins soil sampling for the construction of a network of huge, 200-foot deep, underground tunnels, nearly 10-miles long and 25 feet in diameter to reduce CSOs in the Anacostia and Potomac rivers and Rock Creek during heavy rain storms.
- The 2006 Platinum Award for Sustained
  Competitive Achievement is presented to WASA
  from the Association of Metropolitan Water
  Agencies (AMWA) at its annual conference.



## Awards and Industry Recognition

ASA's reputation as a leader in the water and wastewater utility industry is underscored by a number of performance awards received from industry peers for regulatory compliance, competitive achievement and financial reporting.

## WASA Receives National Honor for Water Utility Management

WASA is recognized as a national leader in water utility management with the 2006 Platinum Award for Sustained Competitive Achievement from the Association of Metropolitan Water Agencies (AMWA). The AMWA award, presented to only nine utilities in the country this year, recognizes the long-term accomplishments

of progressive-thinking water agencies. Platinum Award winners are all previous AMWA Gold Award winners that have successfully maintained and expanded their competitive initiatives in areas such as new technology, infrastructure management and customer satisfaction. WASA received the Gold Award for Competitive Achievement in 2003.

The Platinum Award winners have established a track record of management excellence, continuously applying best management practices to meet the public's requirements for safe water and low-cost service. Improvement gains from effectiveness and efficiency have been reinvested to enhance quality, increase customer satisfaction and control rate.

Mark Premo, President Association of Metropolitan Water Agencies

Jerry N. Johnson, WASA
General Manager (I),
receives the 2005
National First Place Clean
Water Act Recogniton
Award from Benjamin
Grumbles, Assistant
Administrator of the
Office of Water and
Environmental Protection
Agency (EPA).



## Blue Plains wastewater treatment plant is recognized for high performance

WASA receives the prestigious Gold Award from the National Association of Clean Water Agencies (NACWA), formerly the Association of Metropolitan Sewerage Agencies (AMSA), adding to five gold and three silver awards received in the previous eight years. This recognition cites the Authority's high level of compliance with federal standards for discharges from the Blue Plains wastewater treatment plant into the Potomac River.

#### U.S. EPA names WASA as recipient of the 2005 National First Place Clean Water Act Recognition Award

The Environmental Protection Agency (EPA) honors the Authority's Biosolids Management Program with an award for *Exemplary Biosolids Management for Large Operating Projects.* The award recognizes WASA's biosolids research, innovation, and the Environmental Management System (EMS) program.

## Public information and communication program wins two awards

The Communicator Award is the largest competition in the country for production, design, marketing, communication, advertising and public relations professionals. WASA's 40-page Fiscal Year 2004 Annual Report receives the group's Award of Excellence in the Print category. An Award of Distinction is given to the WASA for its 60-second radio public service announcement (PSA) Keeping Catch Basins Clean. Targeting the 18-to-34 radio audience in the District, the radio announcement uses humor to urge listeners not to pollute local waterways such as the Anacostia River.

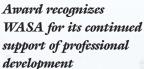
## WASA receives national recognition as one of best fleet operations the country

When WASA was created in 1996, less than 50 percent of its fleet was operational. This year, WASA's fleet program makes the list of 100 Best Fleets in the nation, as published in the

March 2006 issue of *Fleet Equipment* magazine. The award recognizes WASA for outstanding maintenance performance.

#### Exemplary Employer Award is presented for WASA's outstanding employment training, partnership and career opportunities

The Covenant House, at outreach agency for at-risk youth ages 16 to 20, cited WASA for its participation over the years with the non-profit organization as an employer. WASA serves as a mentor grooming young adults for employment while acquiring job skills at WASA.



The Water and Waste Operators
Association (WWOA) of Maryland,
Delaware and the District of
Columbia honors WASA in fiscal year
2006 for its support and participation
in the organization over the years.
WWOA is an association of waste,
wastewater, and biosolids professionals
dedicated to improving the environment and developing highly skilled,
certified plant operators.



WASA receives Distinguished Budget Presentation Award and Certificate of Achievement for Excellence in Financial Reporting



Operation of the Blue Plains wastewater treatment plant is consistently lauded by U.S. EPA and peer utilities for compliance with stringent permit requirements.



# Finance and Budget

#### **Total Revenues**

Total revenues (including federal grants and contributions) were \$334.6 million in fiscal year 2006, an increase of \$14.6 million, or 4.6 percent over fiscal year 2005. This is primarily due to increases of \$8.1 million from retail customers, \$5.8

"Through prudent financial policies and effective management, WASA maintains a stable financial position that is the basis for excellent credit ratings, lower interest costs, and moderate rate adjustments when necessary."

Glenn S. Gerstell, Chairman

million in water and wastewater user charges, \$6.3 million in federal government billings, \$3.4 million in interest income, offset by a \$9.6 million decrease in Federal grants contribution.

#### Diversity and Stability of Operating Revenues

The Authority's operating revenue base is very diverse, including established customers such as the Federal government, the District government, surrounding jurisdictions in Maryland and Virginia and commercial and residential customers within the District. As shown on the chart below, no one category accounts for more than 23 percent of total revenue.

#### **Expenses**

Operating expenses increased by \$12.5 million, or 5.4 percent in fiscal year 2006, primarily due to a \$5.6 million increase in utilities and rent expense, \$2.9 million increase in personnel services, \$3.1 million in water purchases expense, \$3.1 million increase in depreciation expense and \$1.4 million increase in chemical, supplies and small equipment purchases. These increases were offset by a \$4.2 million decrease in contractual services.

#### **Utility Plant (Capital Assets)**

At the end of fiscal year 2006, the Authority had \$2.0 billion invested in a broad range of capital assets (utility plant), including its wastewater collection, wastewater treatment and water distribution systems. This amount represents a net increase of nearly \$157.9 million, or 8.4 percent over last year due to continued capital spending in accordance with the capital improvement program.

#### THOMPSON, COBB, BAZILIO & ASSOCIATES, P.C.

#### Certified Public Accountants and Management, Systems and Financial Consultants

Main: 1101 15th Street, N.W. Suite 400 Washington, D.C. 20005 (202) 737-3300 Fax: (202) 737-2684

Regional: 100 Pearl Street 14th Floor Hartford, CT 06103 (203) 249-7246 Fax: (203) 275-6504

Regional: 21250 Hawthorne Boulevard Suite 500 Torrance, California 90503 (310) 792-7001 Fax: (310) 792-7004

#### Independent Auditor's Report

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 (a component unit of the District of Columbia) as of September 30, 2006 and 2005, 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 WASA'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.

The Management's Discussion and Analysis on pages thirty-five through forty-four is not a required part of the basic financial statements but is supplementary information required by the Governmental Accounting Standards Board. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the supplementary information. However, we did not audit the information and express no opinion on it.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the District of Columbia Water and Sewer Authority as of September 30, 2006 and 2005, and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

December 20, 2006

Washington, DC Thompson, Cobb, Boyelis & Associates, P. C.



#### STATEMENTS OF NET ASSETS

September 30, 2006 and 2005 (In thousands)

ASSETS	2006	2005
Current assets:		
Cash and cash equivalents (note 3)	\$ 44,980	\$ 89,331
Investments (note 3)	146,978	64,762
Customer receivables, net of allowance for doubtful accounts		
of \$8,045 in 2006 and \$7,756 in 2005 (note 7)	33,693	34,721
Due from Federal government (note 6)	20,113	19,301
Due from District government (note 13)	7,584	14,162
Due from other jurisdictions (note 8)	9,987	12,653
Due from stormwater fund (note 13)	343	211
Inventory	7,369	7,097
Prepaid assets	232	460
Total current assets	271,279	242,698
Noncurrent assets:	·	
Restricted assets (note 3):		
Cash and cash equivalents	83,479	217,538
Investments	48,834	20,000
Total restricted cash equivalents and investments	132,313	237,538
Utility plant (note 4):	·	· · · · · · · · · · · · · · · · · · ·
In-service	2,228,920	1,823,606
Less accumulated depreciation	(712,111)	(672,559)
Net utility plant in service	1,516,809	1,151,047
Construction in progress	526,713	734,600
Net utility plant	2,043,522	1,885,647
Other noncurrent assets:	, ,	, ,
Due from other jurisdictions, net of allowance for doubtful		
accounts of \$2,582 in 2006 and \$4,396 in 2005 (note 8)	7,998	26,377
Purchased capacity, net of accumulated amortization of	,,,,,,	
\$40,917 in 2006 and \$37,729 in 2005 (note 5)	149,112	147,405
Total other noncurrent assets	157,110	173,782
Total noncurrent assets	2,332,945	2,296,967
Total Assets	2,604,224	2,539,665
LIABILITIES		
Current liabilities:		
Accounts payable and accrued expenses	79,120	72,219
·	•	•
Compensation payable (note 9) Accrued interest	7,726 12,312	13,123 12,563
	•	•
Due to jurisdictions	6,916	8,560
Deferred revenue	24,766	29,875
Current maturities of long-term debt (note 10)	7,555	13,390
Total current liabilities	138,395	149,730
Noncurrent liabilities:	000 000	0.40, 400
Deferred revenue	680,066	646,490
Deferred revenue—Combined Sewer Overflow	65,130	70,406
Other liabilities (note 12)	21,828	20,674
Long-term debt excluding current maturities (note 10)	763,987	771,637
Total noncurrent liabilities	1,531,011	1,509,207
Total liabilities	1,669,406	1,658,937
NET ASSETS		
Invested in utility plant, net of related debt	749,965	713,470
Restricted for:		
Debt service	39,730	39,765
Capital projects	2,146	
Unrestricted	139,965	125,347
Total net assets	\$ 934,818	\$ 880,728

The notes to the basic financial statements are an integral part of this statement.

## STATEMENTS OF RENENUES, EXPENSES AND CHANGE IN NET ASSETS

Years Ended September 30, 2006 and 2005 (In thousands)

	2006	2005
Operating revenues:		
Water and wastewater user charges:		
Residential, commercial and multi-family customers	\$ 174,159	\$ 166,045
Federal government	31,100	24,770
District government and DC Housing Authority (note 13)	16,463	15,436
Charges for wholesale wastewater treatment	67,966	62,126
Other	3,845	4,366
Total operating revenues	293,533	272,743
Operating expenses:		
Personnel services	66,942	64,038
Contractual services	49,970	54,156
Chemicals, supplies and small equipment	23,482	22,062
Utilities and rent	31,151	25,562
Depreciation and amortization	44,149	41,069
Water purchases	22,745	19,625
Other	4,218	3,679
Total operating expenses	242,657	230,191
Operating income	50,876	42,552
Non-operating revenues (expenses):		
Interest income	16,091	12,612
Payment in lieu of taxes and right of way fee (note 13)	(16,923)	(16,307)
Interest expense and fiscal charges	(20,881)	(25,415)
Total non-operating revenues (expenses)	(21,713)	(29,110)
Income before Federal grants and contributions	29,163	13,442
Federal grants and contributions	24,927	34,578
Change in net assets	 54,090	48,020
Total net assets, beginning of year	880,728	832,708
Total net assets, ending of year	\$ 934,818	\$ 880,728



#### STATEMENTS OF CASH FLOWS

Years Ended September 30, 2006 and 2005 (In thousands)

		2006		2005
Cash flows from operating activities:				
Cash received from customers	\$	289,388	\$	273,605
Cash paid to suppliers for goods and services		(128,615)		(122,459)
Cash paid to employees for services		(69,388)		(59,957)
Net cash provided by operating activities		91,385		91,189
Cash flows from capital and related financing activities:				
Proceeds from other jurisdictions		61,226		67,284
Repayments of bond principal and notes payable to federal and district governments	ment			(15,297)
Acquisition of utility plant and purchased capacity		(199,909)		(206,721)
Payments of interest and fiscal charges		(34,466)		(32,422)
Contributions of capital from Federal government		24,765		30,592
Net cash used in capital and related financing activities		(157,141)		(156,564)
Cash flows from non-capital financing activities:				(40.000)
Repayment of loan to DC government		(4.0.000)		(10,900)
Transfers-Out (payment in lieu of taxes and Right of way fee)		(16,923)		(16,307)
Net cash used by non-capital financing activities		(16,923)		(27,207)
Cash flows from investing activities:				
Cash received for interest		15,318		10,031
Investment purchases		(436,544)		(182,810)
Investment maturities		325,495		242,612
Net cash (used in) provided by investing activities		(95,731)		69,833
Net decrease in cash and cash equivalents		(178,410)		(22,749)
Cash and cash equivalents (including restricted) at beginning of year		306,869		329,618
Cash and cash equivalents (including restricted) at end of year	\$	128,459	\$	306,869
Operating income	\$	50,876	\$	42,552
Adjustments to reconcile operating income to net cash provided by operating activities:	Ψ	00,070	Ψ	12,002
Depreciation and amortization		44,149		41,069
Change in operating assets and liabilities:				
Decrease in customer and other receivables		13,839		6,756
Increase in inventory		(45)		(276)
Increase (decrease) in payables and accrued liabilities		(962)		9,038
Decrease in deferred revenue		(16,472)		(7,950)
Net cash provided by operating activities	\$	91,385	\$	91,189
Net Cash provided by operating activities	Ψ	91,000	Ψ	91,109

#### **OPERATING REVENUE BY SOURCE**

**FY** 1996-2006 (In thousands)

REVENUE SOURCE	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Residential/Commercial	\$115,294	\$138,697	\$138,328	\$131,399	\$139,429	\$148,134	\$147,870	\$159,165	\$166,045	\$174,159
Governmental										
Federal	24,024	25,068	26,859	24,092	26,199	28,501	26,884	26,444	24,770	31,100
DC Government (1)	12,268	21,883	11,168	10,883	9,543	10,293	9,943	9,129	8,968	9,617
DC Housing Authority	7,035	7,770	5,720	5,194	6,284	6,203	6,129	6,335	6,468	6,846
Subtotal Governmental	43,327	54,721	43,747	40,169	42,026	44,997	42,956	41,908	40,206	47,563
TOTAL RETAIL REVENUES	\$158,621	\$193,418	\$182,075	\$171,568	\$181,455	\$193,131	\$190,826	\$201,073	\$206,251	\$221,722
Charges for Wholesale Sewer Treatment	52,333	50,566	56,107	50,284	52,542	53,211	61,682	60,834	62,126	67,966
Other Revenues	6,230	14,459	4,450	6,078	3,483	2,387	3,287	2,427	4,366	3,845
Wholesale Water Revenues <sup>(2)</sup>	4,310	-	-		-	-	-	-	-	-
TOTAL REVENUES	\$221,494	\$258,443	\$242,632	\$227,930	\$237,480	\$248,729	\$255,795	\$264,334	\$272,743	\$293,533

<sup>(1)</sup> As part of the Authority's enabling legislation, the District of Columbia Government pays the Authority for water and sewer services.

(2) In FY 1997, the Authority entered into an operating agreement with the U.S. Army Corps of Engineers, which operates the Washington Aqueduct. Prior to the execution of the agreement, amounts paid to the Aqueduct by its other customers (the City of Falls Church and Arlington County, Virginia) were recorded as revenue of the Authority.

Source: FY 1997–2006 Audited Statements of Revenue, Expenses and Changes in Net Assets

#### **OPERATING EXPENSES BY CATEGORY**

FY 1996-2006 (In thousands)

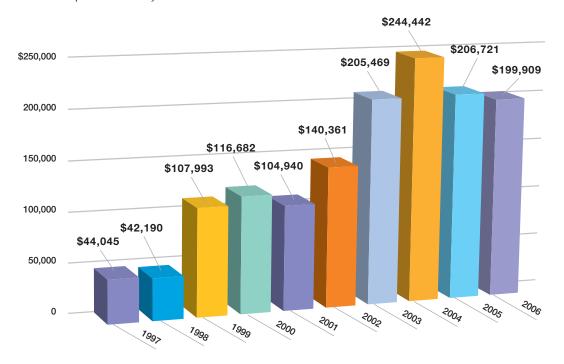
EXPENSE CATEGORY	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Personnel	\$ 51,197	\$ 53,956	\$ 60,674	\$ 63,078	\$ 62,055	\$ 62,162	\$ 64,091	\$ 62,449	\$ 64,038	\$ 66,942
Contractual	55,904	66,340	56,017	54,552	58,976	59,166	63,065	61,491	54,156	49,970
Supplies	14,057	17,722	11,431	13,129	15,488	13,683	14,768	17,384	22,062	23,482
Occupancy	16,668	21,173	21,225	20,091	21,219	20,071	20,804	22,217	25,562	31,151
Depreciation & Amortization	25,695	26,278	28,227	30,329	32,971	37,099	39,524	40,500	41,069	44,149
Water Purchases	21,620	23,313	18,922	16,358	17,085	16,904	13,723	20,692	19,625	22,745
PILOT/Right of Way Fee (1)	-	-	-	9,177	15,026	15,247	15,513	15,778	16,307	16,923
Other	1,407	-	-	-	-	-	-	3,955	3,679	4,218
TOTAL OPERATING EXPENSES	\$186,548	\$208,782	\$196,496	\$206,714	\$222,820	\$224,332	\$231,488	\$244,466	\$246,498	\$259,580

(1) PILOT / Right of way fee not considered operating expense for financial reporting purposes and in the Authority's Master Indenture of Trust. Source: FY 1997–2006 Audited Statements of Revenue, Expenses and Changes in Net Assets



#### **CAPITAL DISBURSEMENTS**

FY 1996-2006 (In thousands)



Note: These disbursements include the Authority's share of Washington Aqueduct's capital disbursements, which in FY 1997–2002 have been financed by U.S. Treasury notes.

Source: FY 1997–2006 Audited Statements of Cash Flows

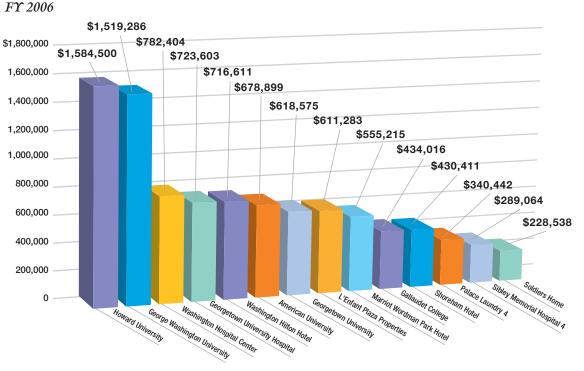
#### NUMBER AND TYPE OF CUSTOMER ACCOUNTS

As of September 30, 2006

TYPE OF ACCOUNT	NUMBER OF ACCOUNTS
Residential	102,655
Commercial (A)	18,489
Governmental	
Federal	526
District of Columbia	582
DC Housing Authority	1,173
Total Governmental	2,281
WASA	29
Washington Aqueduct	1
Wholesale	7
TOTAL NUMBER OF ACCOUNTS	123,462

(A) Included in commercial accounts are 46 exempt accounts (38 for Howard University and 7 for Soldiers' Home) Source: D.C. Water and Sewer Authority Department of Customer Service

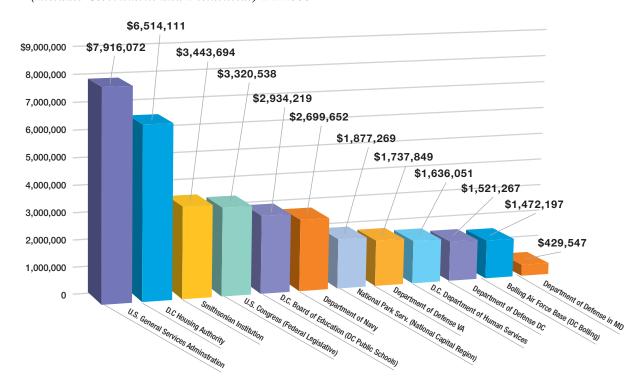
#### LARGEST COMMERCIAL CUSTOMER ACCOUNTS



#### Source: WASA Department of Customer Service

#### **LARGEST RETAIL CUSTOMER ACCOUNTS**

(Includes Covernment and Residential) FY 2006



Source: WASA Department of Customer Service



#### **HISTORY OF RETAIL WATER AND SEWER RATES PER Ccf**

FY 1980-2006 (In thousands)

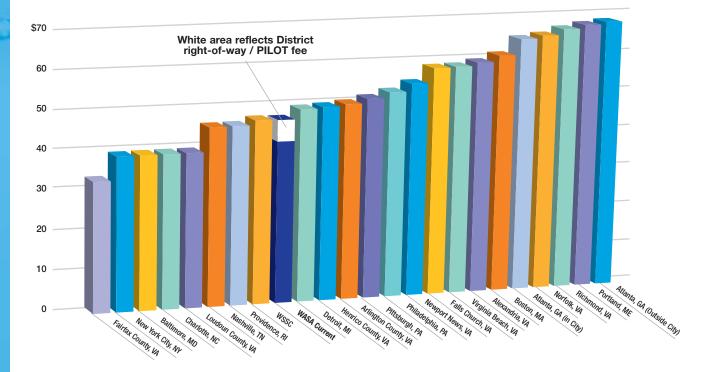
FISCAL YEARS	METERING FEE	DISTRICT PUBLIC SPACE OCCUPANCY FEE - PILOT	WATER CONSUMPTION RATE	SEWER CONSUMPTION RATE	COMBINED CONSUMPTION RATE	AVERAGE MONTHLY BILL <sup>(2)</sup>
1980-1983	\$ -	\$ -	\$ 0.460	\$ 0.677	\$ 1.137	\$ 9.471
1984	-	-	0.537	0.998	1.535	12.787
1985	-	-	0.698	1.297	1.995	16.618
1986	-	-	0.873	1.621	2.494	20.775
1987-1996	-	-	1.004	1.864	2.868	23.890
1997	-	-	1.380	2.710	4.090	34.070
1998	-	-	1.380	2.710	4.090	34.070
1999	-	-	1.380	2.710	4.090	34.070
2000	-	-	1.576	2.710	4.286	35.702
2001-2002	-	-	1.786	2.710	4.496	37.452
2003 <sup>(1)</sup>	2.010	0.360	1.690	2.570	4.260	40.490
2004(1)	2.010	0.360	1.740	2.630	4.370	41.410
2005 <sup>(1)</sup>	2.010	0.360	1.830	2.760	4.590	43.240
2006 <sup>(1)</sup>	2.010	0.420	1.930	2.910	4.840	45.830

<sup>(1)</sup> All rates are for one hundred cubic feet (1 Ccf) consumption with the exception of the flat metering fee, which became effective on October 1, 2002.

Source: WASA Department of Finance & Budget

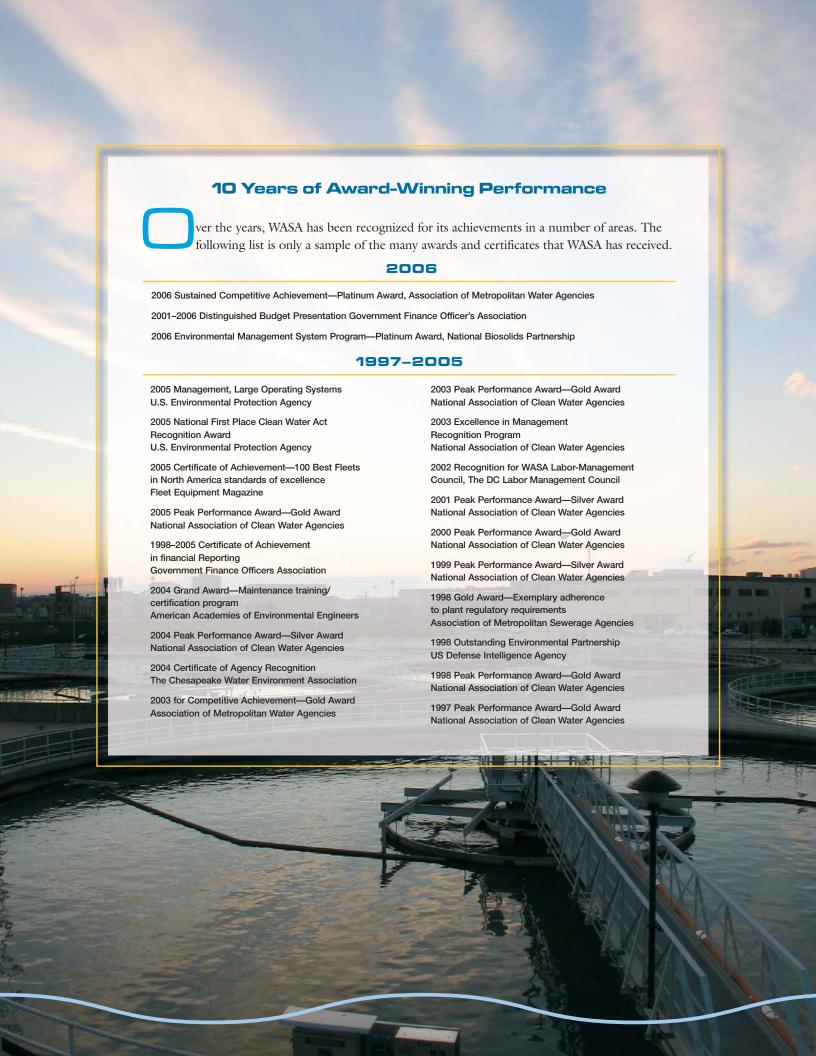
#### RESIDENTIAL WATER AND WASTEWATER BILL COMPARISONS

Monthly Basis as of September 30, 2006 (1)



(1) This analysis is based on 5/8" meters and a 8.33 Ccf (hundred cubic feet) per month consumption (25 Ccf per quarter) for residential customers. Source: WASA Department of Finance and Budget

<sup>(2)</sup> Average consumption is 8.33 Ccf per month.





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