



ANNUAL REPORT FOR FY 1998 AND FY 1999



DISTRICT OF COLUMBIA
**WATER AND
SEWER
AUTHORITY**



SERVING THE PUBLIC ■ PROTECTING THE ENVIRONMENT



TABLE OF CONTENTS

BOARD CHAIRMAN'S MESSAGE	2
WASA BOARD MEMBERS	4
GENERAL MANAGER'S COMMENTS	6
THE NEW WASA	9
FACTS ABOUT WASA	10
FINANCIAL HIGHLIGHTS	13
THE BLUE PLAINS WASTEWATER TREATMENT PLANT	18
THE WATER DISTRIBUTION SYSTEM	20
THE QUALITY OF OUR DRINKING WATER	21
CUSTOMER SERVICE	23
MAJOR INITIATIVES	25
ANACOSTIA RIVER WATER QUALITY INITIATIVES	32



BOARD CHAIRMAN'S MESSAGE



It is not customary for anyone to put as much time and effort into a project and see as quick a return as we have seen with the DC Water and Sewer Authority (WASA.) During this reporting period, members of the Board, management and employees have continued to build on the foundation we laid in 1996. Our goal: A new utility that considers the good of each ratepayer as paramount.

Customer service, quality customer service, is WASA's watchword and that desire is reflected in the new way that we do business. In fact, improved customer service has already been realized as a result of Board policy development.

The Authority's \$1.6 billion capital improvement program will upgrade WASA's aging infrastructure, ensure that we remain in regulatory compliance with local and federal guidelines and improve the day-to-day service we provide our customers. Through WASA's 10-year financial plan, we have already signaled our intentions by developing and implementing a road map to strong, predictable, long-term performance.

Wall Street has taken notice as evidenced by WASA successfully entering the capital markets for the first time in FY 1998 and issuing \$285 million in revenue bonds. Just prior to the bond issue, WASA garnered excellent first-time ratings from the bond-rating agencies. We're also extremely proud of the fact that during FY 1998 and FY 1999, the Authority received unqualified audits, after two consecutive years of qualified audits in FY 1995 and 1996.



I must also comment on how well the Board has worked together. Our members represent several jurisdictions. And we all felt what was good for the District was also good for their respective jurisdictions and vice versa. The collegiality among members of this body is the cornerstone of the Board's effectiveness.

While it is fair to say that WASA has made significant progress during this reporting period, we cannot afford to rest on our laurels. There is still much to be done but I am confident that we are moving in the right direction. Our task has been to lay a solid foundation on which to stake WASA's future. In developing policies, our focus is always clear - *to provide excellent and reliable service delivery to all of our customers every day.*

Sincerely,

Ron M. Linton
Chairman, WASA Board of Directors

Our goal: A new utility that considers the good of each ratepayer as paramount.

WASA BOARD MEMBERS



PRINCIPALS:

Ron M. Linton

*Chairman, District of Columbia
FY 1999*

*Principal, Chair, Budget and Finance
Committee
FY 1998*

*Chair, Retail Rates Committee
(assumed Chairmanship July 1998)
FY 1999*



William Johnson

*District of Columbia
FY 1999 (FY 1998 – alternate
member)*

*Chair, Stormwater Management
Committee
FY 1999*



Michael C. Rogers

*Former Chairman,
District of Columbia
FY 1998*

*Chair, Retail Rates Committee
FY 1998*



Barbara Blum

*District of Columbia
FY 1998 & FY 1999*



Charles Johnson, Jr.

*District of Columbia
FY 1998 & FY 1999*

Chair, Operations Committee



Lucy Murray

*District of Columbia
FY 1988 & FY 1999*

*Chair, Human Resources and
Labor Relations Committee*



Marianne Coleman Niles

*District of Columbia
FY 1998*



Jeanette Michael

*District of Columbia
FY 1999 (FY 1998 - alternate
member)*



Benson Doyle Mitchell, Jr.
Prince George's County, MD
 FY 1998 & FY 1999
Treasurer
 FY 1998
Chair, Internal Audit Committee
 FY 1998 & FY 1999



Robert O' Neill
Fairfax County, VA
 FY 1998 & FY 1999



Howard Stone, Jr.
Prince George's County, MD
 FY 1998 & FY 1999
Vice Chairman
 FY 1999

1998 ALTERNATES:



(l to r) Anthony Griffin, Fairfax County, VA; Samuel E. Wynkoop, Prince George's County, MD; Jeanette A. Michael, District of Columbia; Maria Holleran-Rivera, District of Columbia; William B. Johnson, District of Columbia and James Caldwell, Montgomery County, MD (Not pictured: Geraldine Boykin, District of Columbia; Gordon A. Aoyagi, Montgomery County, MD, P. Michael Errico, Prince George's County, MD and Pedro Alphonso, District of Columbia)



Bruce Romer
Montgomery County, MD
 FY 1998 & FY 1999
Vice Chairman
 FY 1998
Chair, Privatization and Regionalization Committee
 FY 1998 & FY 1999

1999 ALTERNATES:



(l to r seated) A. Scott Bolden, District of Columbia; Loretta Caldwell, District of Columbia and Gordon A. Aoyagi, Montgomery County, MD. (l to r standing) Wesley Brown, District of Columbia; James Caldwell, Montgomery County, MD; Anthony Griffin, Fairfax County, VA, Treasurer and Samuel E. Wynkoop, Prince George's County, MD (Not pictured: Geraldine Boykin, District of Columbia; Maria Holleran-Rivera, District of Columbia and P. Michael Errico, Prince George's County)



Sidney Kramer
Montgomery County, MD
 FY 1998 & FY 1999
Chair, Budget and Finance Committee
 FY 1999

GENERAL MANAGER'S COMMENTS



This period has been a time when the DC Water and Sewer Authority consolidated the gains the utility has made since its creation in October 1996. There have been numerous challenges, a few being our successful efforts to make the Authority Y2K-compliant, moving forward with our 10-year financial plan and continuing to implement the long-term comprehensive plan from which to operate.

For every obstacle, however, the DC Water and Sewer Authority has soared. For example, throughout FY 1998 and 1999, WASA had met all Environmental Protection Agency (EPA) drinking water quality requirements every single day.

During FY 1998 and 1999, WASA's Board of Directors and managers oversaw a major staff reorganization in the Finance and Budget Office, the creation of the Department of Human Resources, the Office of the General Counsel, a Water Quality Division and reached the Board's objective of keeping \$90 million in cash reserves in November 1998, almost one year ahead of schedule.

During this period, we developed independent, progressive systems that have enabled our existing and newly-created departments to manage employee and customer concerns more efficiently. For example, our own streamlined procurement regulations were created in FY 1999; personnel rules and regulations were also formulated that year. WASA's own benefits and retirement program was created in FY 1998 and the actual supporting systems for these programs were devised in FY 1999. The Information Technology Department was created in FY 1999. This is a critical area where we examine how the organization's functions and service delivery can be enhanced through the utilization of state-of-the-art technology. Prior to this time, these mission-critical systems did not exist and have greatly propelled WASA in becoming a self-supporting, well-run entity.

FY 1999 also saw the creation of a "gainsharing" program for WASA employees – locally, the first of its kind to be initiated. The program allowed for monetary rewards based on performance at the group and individual levels and most employees were duly rewarded.



Significant progress has been made in making WASA a world-class organization, beginning with substantially improved customer service. In FY 1998 and FY 1999, we stepped up the training available to employees so they can respond in a more timely and accurate manner to customer inquiries. We also focused on giving employees the tools they'll need to handle the challenges of a rapidly-changing technological and work environment.

On the operations side, we are very pleased about an innovative project that is helping us keep a major environmental commitment relative to the Chesapeake Bay. At our Blue Plains Wastewater Treatment Plant, we partnered with the Environmental Protection Agency (EPA) in launching a Biological Nitrogen Removal Program. In FY 1999, this program was made part of the daily plant operations after a 2-year demonstration program. It removes the nitrogen - by 40 percent - from half of the wastewater during the treatment process before releasing into the Potomac River and ultimately into the Chesapeake Bay. This is important because too much nitrogen can promote the growth of algae that can be harmful to aquatic life. This is one of several commitments made and kept, as a regional guardian in protecting local waterways.

On the financial side, during FY 1998, the Authority adopted a series of policies governing finances, rate-setting and cash management, thus strengthening its financial and operating procedures. This, too, was a first for WASA.

As we enter this new millennium, we continue to build upon and improve our existing successes. In so doing, our focus is on continuous internal improvements for our employees, in providing progressive training and other resources needed to give our customers the best in service delivery. The integration of our new information systems will now and in the future allow us to serve our customers in the best manner possible. After all, that is why we come to work everyday - we want to ensure that at the end of *each day*, we can point to a job well done that had a positive effect on our customers.

Sincerely,
Jerry N. Johnson
General Manager





THE NEW WASA

The District of Columbia Water and Sewer Authority has been an independent entity since 1996 when the Council of the District of Columbia and the U.S. Congress approved legislation that created WASA. WASA controls its own procurements, human resources, financial operations, negotiates contract and labor agreements, and has demonstrated credit-worthiness in the bond market.

The Authority is governed by a Board of Directors consisting of 11 principal and 11 alternate members who represent the District of Columbia, Montgomery and Prince George's Counties in Maryland and Fairfax County in Virginia. The Mayor of the District of Columbia appoints, and the D.C. Council confirms, all six District Board members, including the Chairman. In addition, the Mayor appoints the five principal and five alternate members who represent the surrounding jurisdictions based on executive submissions from those jurisdictions. The Authority may only take action on policy matters after it receives a favorable vote of no less than six members of the Board of Directors.

All Board members participate in decisions directly affecting the management of joint-use facilities.

The District of Columbia members participate in those matters that affect District ratepayers and in setting fees for various services.

Funding for operations and facilities upgrades is generated through user fees, grants and the sale of revenue bonds. Rates for drinking water and sewer use for District customers are determined by the District members of the Board of Directors. Suburban jurisdictions pay separately for their usage of WASA facilities at Blue Plains.



Improved the percentage of fleet in service from less than 50 percent in 1997 to an operational rate of over 95 percent in FY 1999. The Authority received national recognition for this accomplishment as the July cover story of Utility Fleet magazine.

FACTS ABOUT WASA



FACTS ABOUT WASA

WASA is a multi-jurisdictional regional utility that provides drinking water and wastewater treatment to more than 500,000 residential, commercial and governmental customers in the District of Columbia, and also collects and treats wastewater for 1.6 million customers in Montgomery and Prince George's Counties in Maryland and Fairfax and Loudoun Counties in Virginia.

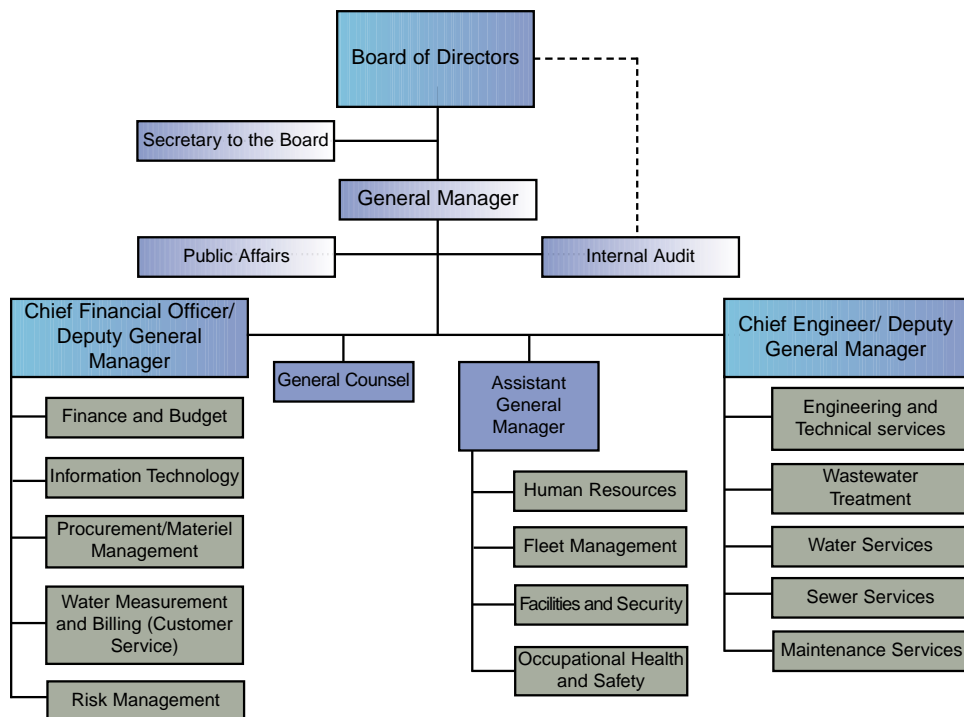
- The Authority establishes rates, fees and other charges for all services provided by WASA. These rates and fees from WASA's 2 million customers generate revenue, which pay all of WASA's operating costs.
- Each suburban jurisdiction pays its fair share of operating and capital costs at Blue Plains.
- The Blue Plains Wastewater Treatment Plant is the largest advanced wastewater treatment plant in the world, with a capacity of 370 million gallons per day (mgd), a peak capacity of 1.076 billion gallons per day and covering 150 acres.
- The Authority's service area covers approximately 725 square miles.
- Approximately 1,200 employees work at various facilities throughout the District.
- To distribute water and support the distribution system, the Authority operates over 1,200 miles of pipes, five pumping stations, five reservoirs, four elevated water storage tanks, 36,000 valves and 8,700 hydrants.
- To collect wastewater, the Authority operates 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 storm sewers serve approximately two-thirds of the District of Columbia. In older portions of the system, such as the District's downtown area, combined sanitary and storm sewer systems are prevalent.

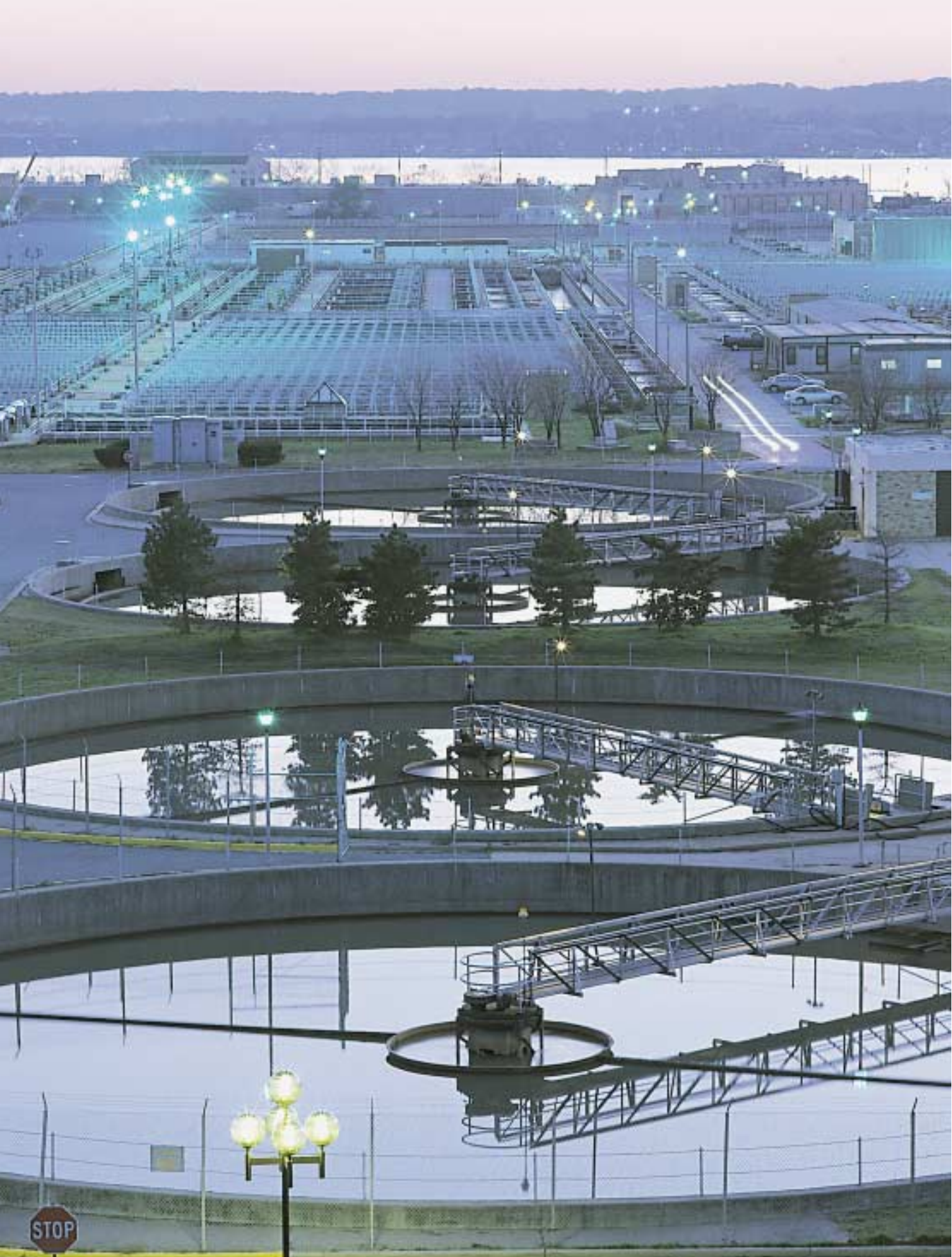
- When compared to water and wastewater rates in similar cities in the Mid-Atlantic region, the Authority's rates are highly competitive.
- The Authority has an unusually stable customer base. More than 38 percent of its revenues come from federal, municipal or county governments, and an

additional 40 percent of its revenues come from commercial entities whose businesses are substantially driven by the regional economy. The Authority derives only 17 percent of its revenues from residential customers in the District.

The Authority establishes rates, fees and other charges for all services based on costs provided by WASA. These rates and fees from WASA's 2 million customers generate revenue, which pay all of WASA's operating and capital costs.

GOVERNANCE AND ORGANIZATION STRUCTURE







FINANCIAL HIGHLIGHTS

The end of FY 1998 and 1999 marks the Authority's second and third year of operations as an independent regional authority. Using the framework of policies and goals the Board of Directors established, the Authority and its management continued to build on those successes achieved in year one. Major financial accomplishments during FY 1998 and FY 1999:

- Generated net income of \$56.4 million or 22 percent of operating revenues in FY 1998, its best performance in more than a decade; this compares to net income of \$21.2 million for FY 1997 and \$5.5 million in FY 1996.
- Generated net income of \$29.4 million in FY 1999. After taking into consideration two FY 1998 one-time positive adjustments, FY 1999 net income was approximately \$2.0 million greater than FY 1998.
- In FY 1998 when WASA entered the capital market for the first time by issuing \$285 million in revenue bonds, it received excellent ratings of A2 from Moody's Investors Service and A- from Standard and Poor's and Fitch IBCA as a first time issuer. Then in FY 1999, in an unsolicited action, Fitch IBCA upgraded the Authority's bond rating from "A-" to straight "A", citing the Authority's strong Board and management, excellent strategic planning, and adherence to sound financial policies.
- Developed FY 2000 and FY 2001 operating budgets that are lower than previous years' budgets while improving operations.
- Developed an efficient grant close out program for old grants (some dating back to the 1970's), that received compliments from the Environmental Protection Agency (EPA).
- Approved retail rate increases of 4.8 percent and 4.9 percent, effective April 1, 2000 and 2001, respectively.
- Began billing for groundwater usage by large commercial and federal customers in the central business district.
- Successfully continued implementation of the Authority's long-term plans and developed updates that reflect changes in the Authority's financial position and operating environment. These plans, which are key to the Authority's achievement of its financial, regulatory, and operational goals, include:

In an unsolicited action in FY '99, Fitch IBCA upgraded the Authority's bond rating from "A-" to straight "A", citing the Authority's strong Board and Management, excellent strategic planning, and adherence to sound financial policies.

FINANCIAL HIGHLIGHTS CONTINUED...

- A revised 10-year, \$1.6 billion capital improvement program to meet future regulatory and facility renewal needs.
 - A 10-year financial plan based on key financial and business policies approved by the Board covering rate setting, financing of fixed assets, cash reserve levels, and investment guidelines.
 - Adopted new streamlined procurement regulations.
 - Completed the bulk sale of \$17.1 million in delinquent water and sewer accounts to a private firm as part of the Authority's aggressive efforts to improve collections and put it in line with best industry practices.
 - As a result of more aggressive collections actions initiated by management and the Board, WASA made a downward revision in its allowance for uncollectible accounts receivables, resulting in a one-time \$10 million increase in revenues.
- In addition to these items, the implementation of a 42 percent retail rate increase by the Board in late in FY 1997 and realized for a full year in FY 1998 resulted in substantially increased revenues.

FY 1998 FINANCIAL RESULTS

In FY 1998, WASA continued to build on the financial success of its first year of operation, generating net income of \$56.4 million, approximately \$35 million greater than FY 1997. This increase was in part due to two one-time adjustments in FY 1998:

- WASA settled a long-standing issue with the Loudoun County Sanitation Authority (LCSA) that

compensated WASA for the original cost of building additional capacity to serve Loudoun County, resulting in approximately \$19 million of interest income in FY 1998.

FY 1999 FINANCIAL RESULTS

The Authority's net income totaled \$29.4 million in FY 1999, a decrease of \$27.0 million from FY 1998. Excluding the one-time adjustments recorded in FY 1998 (as described above), net income in FY 1999 is approximately \$2.0 million, or 8 percent more than FY 1998.

As shown in the chart on page 16, WASA's base level of net income (excluding one-time adjustments)

has greatly improved each year since WASA began operation. This is in large part due to the Authority's efforts at cost containment and the diversity and strength of the Authority's revenue base.

The Authority's original Congressionally-approved FY 1998 operating budget included \$263 million of funding (including debt service.) In 1997, the Authority performed an extensive analysis of its operating requirements and voluntarily reduced its original FY 1998 budget by approximately \$40 million. Since that time, the Authority's annual operating budgets have been relatively flat.

Looking forward, operating and maintenance expenses are expected to gradually decline as the Authority implements the \$1.6 billion capital improvement program (which will result in operational efficiencies) and continues internal improvement and reengineering processes in each area of operation. Over the next ten years, retail rate increases ranging from 3.9 to 5.5 percent annually are projected.

DIVERSITY AND STABILITY OF REVENUES

A key factor in the Authority's strong financial performance has been the diversity of our revenue base, which includes such established customers as the federal government, the District government, surrounding jurisdictions in Maryland and Virginia and commercial and residential customers within the District.

- Revenues from commercial customers in the District comprise approximately 40 percent of the Authority's total operating revenue. Commercial revenues are especially strong due to the tourism industry and the presence of many national associations, consulting firms, and colleges and universities in the District. Over the next few years, commercial revenue is projected to increase due to the Authority's comprehensive meter testing and change-out program.
- The Authority provides wastewater conveyance and treatment services to Montgomery and Prince George's Counties in Maryland

FINANCIAL HIGHLIGHTS CONTINUED...

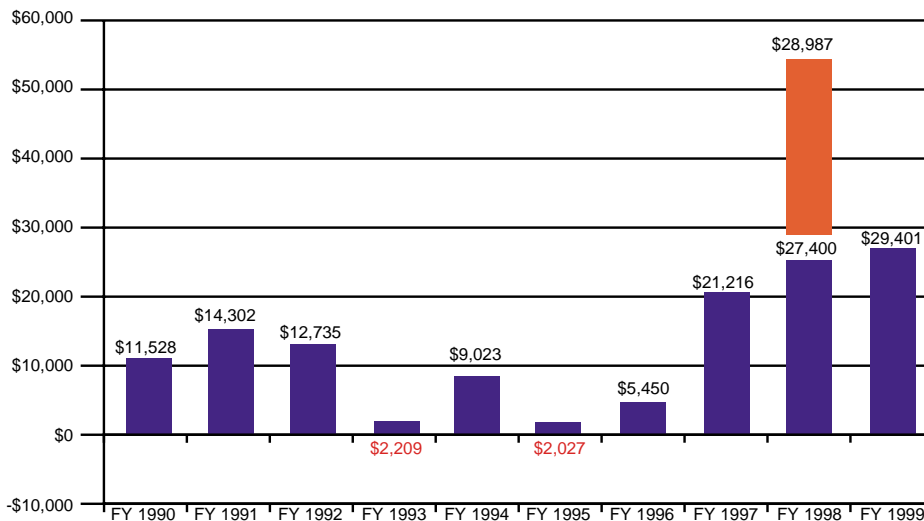
through the Washington Suburban Sanitary Commission and Fairfax and Loudoun Counties in Northern Virginia. Operating revenue from these users accounts for 20 percent of the Authority's revenues, and is based on their share of operating costs at Blue Plains, allocated to each user based on sewer flows.

- Residential customers in the District account for approximately 17 percent of total revenues. Over the next two years, the Authority will

begin its comprehensive automated meter reading and change-out program for residential accounts that will greatly improve the Authority's service to these customers.

- Payments from the federal government comprise approximately 11 percent of the Authority's total operating revenues and include customers such as the U.S. Congress, the Smithsonian Institution, and other federal agencies.

NET INCOME FY 1990 – 1999
(IN \$000's)

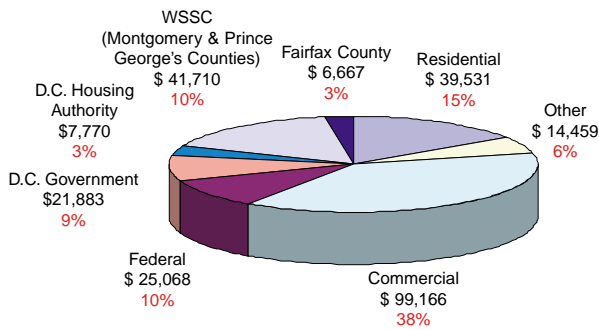


FINANCIAL HIGHLIGHTS CONTINUED...

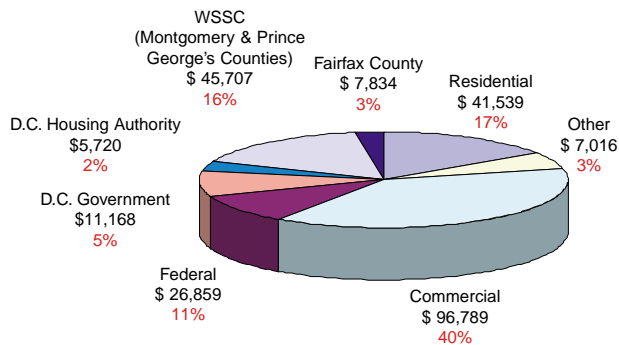
- Revenues from the District of Columbia government and the District of Columbia Housing Authority make up approximately 7 percent of total operating revenue. FY 1999 municipal revenue declined by approximately \$10 million from

FY 1998 due to the discovery of metering issues on a number of municipal accounts. This decrease was offset by a renegotiation of the Authority's payment in lieu of taxes to the District.

REVENUE BY SOURCE FY 1998
(IN \$000'S)



REVENUE BY SOURCE FY 1999
(IN \$000'S)



THE BLUE PLAINS WASTEWATER TREATMENT PLANT



HISTORY AND SERVICE AREA

In 1938, the first wastewater treatment facilities for the Washington metropolitan area were constructed at the site of the present Blue Plains Wastewater Treatment Plant. These facilities treated up to 130 mgd (million gallons per day) for a population of over 650,000, and provided primary treatment only. Since that time, there have been several expansions and upgrades. In 1949, Blue Plains was expanded to 175 mgd; and again to 240 mgd in 1959. Chlorination facilities and secondary (biological) treatment were also added. When the Federal Clean Water Act was enacted in 1972 requiring all municipal sewage treatment systems to incorporate secondary or advanced levels of treatment, Blue Plains was once again expanded and upgraded to comply with the federal regulations. Work on tertiary treatment projects and expansion was completed in 1983. Finally, work was completed in FY 1997 to expand the Blue Plains tertiary treatment capacity to 370 mgd, making it the largest advanced wastewater treatment facility in the world.

BIOSOLIDS DISPOSAL

In 1984, officials from all the jurisdictions served by Blue Plains established procedures for soliciting and entering into contracts for hauling and disposing of biosolids from Blue Plains. This high quality material consistently meets all applicable requirements of federal regulations. Most of the 1,100 tons per day of biosolids produced by the facility is directly land applied at various sites in Maryland and Virginia.

BIOLOGICAL NITROGEN REMOVAL PROCESS

The denitrification process, a pilot project underwritten by the EPA, is a program that has drawn worldwide attention and praise. Delegations of municipal officials, regulators and engineers from across the United States and around the world continue to visit WASA's Blue Plains Wastewater Treatment Plant to get a first-hand look at the operation.

Too much nitrogen has an adverse effect on rivers by promoting the growth of algae and harming fish and other aquatic wildlife. The pilot project, which initially treated half of the wastewater flowing through the plant, is removing

THE BLUE PLAINS WASTEWATER TREATMENT PLANT CONTINUED...

about three million of the 13 million pounds of nitrogen discharged annually into the Potomac River and on to the Chesapeake Bay.

The national demonstration project has been so successful that EPA extended it beyond the planned one-year duration. While it is not a permit requirement, WASA will continue the program in conformance with the Chesapeake Bay Agreement.

POTOMAC INTERCEPTOR

The Potomac Interceptor is a 42-mile long pipe that brings sanitary flows from Loudoun and Fairfax Counties in Virginia and Montgomery County in Maryland to Blue Plains. The costs of operating and maintaining the interceptor are borne by the jurisdictions it serves and WASA maintains it.



Treated wastewater from the Blue Plains Plant is released into the Potomac River.

THE WATER DISTRIBUTION SYSTEM



HISTORY AND SERVICE AREA

Prior to the establishment of the Washington Aqueduct of the United States Army Corps of Engineers (the Aqueduct) in 1858, residents of the District obtained their drinking water from springs and wells. The distribution system consisted primarily of bored logs and some cast iron pipes. Water from the Potomac River was tapped into the system in 1863. By 1905, the Washington City Tunnel, McMillan Reservoir and Filtration Plant, and the Bryant Street Pumping Station were completed. The Dalecarlia Filtration Plant and Pumping Station and all other major components of the present water supply and distribution system were in operation by 1928.

WATER TREATMENT AND DISTRIBUTION SYSTEM

The Authority is responsible for management of the treated water distribution system serving the District and certain Department of Defense and other small customers outside the District. The water itself is processed and treated by the Aqueduct. The Authority purchases its water from the Aqueduct, then transmits and distributes the water through five pumping stations, five distribution reservoirs and four

elevated water storage tanks. The Aqueduct's water source is the Potomac River. The Authority's Department of Water Services oversees the entire water distribution system serving the District. The Authority's water distribution system includes over 1,200 miles of pipes and mains ranging from 4 to 78 inches in diameter. The system includes cast iron, ductile iron, reinforced and pre-stressed concrete, and steel pipe, and contains more than 36,000 valves and 8,700 hydrants.



THE QUALITY OF OUR DRINKING WATER

WASA's drinking water has met or surpassed federal drinking water guidelines set forth in the Safe Drinking Water Act. The success in continuously improving the District of Columbia's drinking water comes as a result of several initiatives implemented since WASA's creation.

- 1. Flushing Program:** Beginning in 1997, and carried out annually between the spring and fall, WASA flushed its water distribution pipes which provide water for every business and residence in Washington, D.C. Flushing or forcing water through the pipes at a high velocity will carry away sediment that may have formed over time. Employees from the Water Quality Division perform this process in over 261 designated zones throughout the city.
- 2. Cleaning and Lining Pipes:** WASA continues to clean and line aging pipes in various neighborhoods in the District. Customers benefit from this process because it extends the life of pipes for a fraction of the cost of replacement. It also improves water pressure while minimizing the disruptions caused by open-cut replacements. Annually, a systematic approach determines where this process occurs.
- 3. Reservoir Cleaning:** WASA inspects, cleans and disinfects all District water storage reservoirs.
- 4. The Water Quality Division:** WASA established the Water Quality Division in FY 1999. Its mission is to be a proponent of safe drinking water, maintain water quality and ensure that water distributed meets or is better than applicable water quality regulations. The Division works with WASA customers to enhance public confidence and awareness, and develops partnerships with environmental groups and neighboring utilities in maintaining drinking water quality in the distribution system through educational programs.
- 5. New Sampling Program:** During FY 1998, WASA and the Washington Aqueduct developed a sampling program which uses a new technique to perform bacteriological analysis and reduces the turnaround time on

THE QUALITY OF OUR DRINKING WATER CONTINUED...

the off-chance public notification is needed. Both entities continue to work together to inspect all sampling sites where appropriate. Water quality experts gather over 200 samples monthly throughout the system to detect evidence of harmful bacteria.

FUTURE PROGRAMS

In late 2000, the Washington Aqueduct will convert from chlorine to chloramines. Historically, chlorine has been the only chemical used for disinfection of drinking water. Chlorine is added to water as a way to protect users against harmful bacteria and organisms. Beginning November 1, 2000, the Aqueduct will use chloramines (a mixture of chlorine and ammonia) as a disinfectant.

The change will reduce the concentrations of disinfectant by-products called trihalomethanes (THMs), in compliance with more rigorous national standards now required by the EPA. Most customers will not see any difference. A major benefit will be the absence of a chlorine odor and taste. However, some segments of the population, such as facilities that provide kidney dialysis treatment,

individuals and businesses maintaining fish tanks and some laboratories and businesses may be affected. These customers may need to change their pre-treatment steps to remove chloramines. For more information about this, contact WASA's Water Quality Division at 202-612-3440.

WATER CONSERVATION

Water Conservation is a vital part of WASA's mission. The Authority has several successful public-education programs. Two of the most successful have been a class teaching water conservation techniques and another do-it-yourself plumbing class that proved very popular with WASA customers. Our customers receive a water conservation kit during the classes.

In FY 1998 and 1999, WASA broadened these outreach efforts. We established alliances with customers of large accounts and performed water audits to check for meter accuracy and other potential weaknesses in their systems. Water conservation efforts benefit WASA customers directly by reducing the size of their bills. The effective management of water also reduces the volume treated at Blue Plains, thereby reducing treatment costs.



CUSTOMER SERVICE

One of the Authority's primary goals for FY 1998 and FY 1999 was improved customer service and, in virtually all areas of customer service, the Authority successfully met this goal. This involved a major reorganization and focus on the following:

■ **New Senior Management Team**

– The Authority appointed a new department head and hired five new senior managers in key areas including billing, collections, meter reading, meter operations, and customer communications. This management team has led the reorganization efforts, which have greatly improved performance and service delivery.

■ **Meter Reading & Operations** –

Prior to WASA's establishment, this unit substantially underperformed industry standards for the percentage of estimated meter reads, the accuracy of meter reads, and the cost to read meters. In addition, it did not have a program for regular repair and replacement of its meters. Also, the Authority has:

- Eliminated the practice of estimated reads on all accessible meters – the Authority on average is now making actual reads on over 97 percent of all accounts, and over 99 percent of

accounts with accessible meters; and

- Improved its meter reading accuracy rate to 99.9 percent, which is in line with best performance standards.

In FY 1999, the Authority budgeted approximately \$34.8 million to replace and automate its metering system. In late 2000 or early 2001, the Authority will begin a comprehensive automated meter reading (AMR) and meter change-out program for all 130,000 meters, using the most reliable and cost-effective technology available. This program will extend over the next three years, and will produce substantial operating efficiencies. As a result, WASA will bill real customers, versus billing an “address” and provide more timely billing/meter information.

- **Large Accounts Group** – The Authority established a large account service team to focus on the specific service and billing needs of our largest customers.

CUSTOMER SERVICE CONTINUED...

- **Groundwater Metering & Billing** – Due to the topography and generally high water table of the District, a substantial amount of groundwater is pumped out of the buildings located in the central business district each year. Much of this flow enters the Authority’s combined sewer system and is ultimately treated at Blue Plains. Historically, the Authority has not metered or billed customers for this flow. In late FY 1999, the Authority began the inspection, meter installation and billing for the approximately 400 buildings and a number of metro rail tunnels that have groundwater discharges.
- **New Customer Service Location & Call-In Center** – In fall 1998, the Authority moved its walk-in customer service and other billing operations to a more convenient location in downtown Washington. In addition, the Authority also streamlined and improved its call-in center and correspondence service to customers.
- WASA now takes most requests for services and other concerns over the phone. This eliminated the previously required practice of written requests from customers and resulted in quicker service delivery. Instituting this policy also brought a focus on a large correspondence backlog that existed and was totally eliminated.

Staying on the cutting-edge of technology advances is a key element of WASA's transformation. Without reliable and responsive technology, the Authority would not be in a position to effectively compete in the 21st Century. To accomplish this goal, WASA undertook a comprehensive information technology initiative to address several key areas:

YEAR 2000 (Y2K) REMEDIATION

In FY 1999, non-Y2K compliant systems or components were replaced, retired, upgraded or repaired. Contingency plans for mission-critical areas were developed and tested. Y2K inquiries were responded to and customers were informed of the Authority's Y2K readiness. A Y2K Command Center was created to prepare for the Y2K transition period to communicate with other government agencies and to handle emergency situations.

TECHNOLOGY INFRASTRUCTURE

The success of the Authority's technology plan depends on the strength of the underlying infrastructure. During FY 1998 and 1999, the Authority deployed more than 700 Y2K-compliant personal computers across the organization. The Authority's World Wide Web site was launched during FY 1999. Additional enhancement of the web site will be an ongoing activity.

TELECOMMUNICATIONS

Efficient and effective telecommunications is of great importance to the Authority. In FY 1999, WASA gutted its antiquated telephone system and replaced it with a state-of-the-art system that allows for greater employee efficiencies and customer interaction. Also during FY 1999, the Authority provided a new network environment that connects to other remote sites transparently. Installation of this system has resulted in greater reliability and a more manageable system at a lower cost.

NEW SYSTEMS AND APPLICATIONS

In FY 1998 and FY 1999, WASA designed the plans to transform all its major systems and, in some instances, transition from District government services that WASA was purchasing since becoming an independent agency. As a water and wastewater utility, WASA had specialized needs for which current



information systems were unsuitable. This included payroll functions, human resources and training requirements as well as financial management and customer billing and information. These new systems are tools to assist our employees and customer service delivery. The Authority's efforts to reengineer and improve service delivery will be supported and complimented by the simultaneous development and/or replacement of all major information systems. Key systems that will be focused on over the next one to three years include:

- **Financial Management System** – To improve the business processes and services, WASA is installing its own integrated financial system, including general ledger, payables, receivables, fixed assets, procurement and project costs functions. This system will be a fully integrated system and will provide a strong set of financial controls on day-to-day financial transactions. The system is expected to go live October 1, 2000.

- **Customer Billing and Information System** – The Authority will implement a true customer information system in FY 2001 that will facilitate “one-stop shopping” for all Authority customers. This system will include improved basic operating requirements such as meter reading, service requests, and billing. Customers will be able to view their bills privately on the Internet and pay their bill on-line. This system will also allow for on-the-spot internal financial information, the status of work orders and will be fully integrated with our future Work Management & Dispatching system.

- **Human Resources and Payroll System** – The Authority implemented its own combined system which in addition to payroll functions will also handle human resources issues. The new Human Resources and Payroll system supports all human resources management functions, including recruitment, position control and payroll.

Without reliable and responsive technology, the Authority would not be in a position to effectively compete in the 21st Century.

MAJOR INITIATIVES CONTINUED...

- **Maintenance Management System** – This new system will provide plant and asset management, including maintenance histories, development of future maintenance strategies, preventative maintenance, and work order management. This system will be implemented in FY 2000.
- **Work Management and Dispatching System** – This is a work-order management and personnel dispatch system that will support orderly data flow from the customer service organization to all of WASA's field operations and maintenance organizations. The system will be implemented in FY 2002.
- **Labor Negotiations** – Negotiated and executed a single collective bargaining agreement in FY 1998 covering unionized employees.
- **Gainsharing Program** – In FY 1999, WASA successfully implemented a "gainsharing program" – an innovative performance evaluation and reward program that allowed employees to earn cash awards

based upon workers reaching certain departmental performance and budgetary targets.

COLLECTION IMPROVEMENTS

The Authority has substantially improved its collection efforts, building on the 11-point plan adopted by the Board of Directors. This plan has produced tangible results, as the Authority's overall residential and commercial collections rate on current billings has stabilized at over 96 percent. As described below, the Authority has historically terminated service to delinquent customers in all categories except for multi-family housing. In the categories where WASA has consistently terminated service when necessary, the collections rate is over 98 percent.

- *Disconnection of Service to Multi-Family Customers* - In the past, service was terminated for non-payment to all customers except multi-family housing. This practice resulted in delinquencies of approximately \$30 million, of which \$24 million was attributable to multi-family accounts. In summer 1999, the Authority

began terminating service to this group of customers. An aggressive collections campaign was launched that included actual termination, enforcement of liens on properties, and when appropriate, entering into receiverships.

WATER SOLD/PUMPED RATIO

Like other water utilities, WASA closely monitors the amount of water that is pumped from its treatment source (the Washington Aqueduct) versus the amount that is actually sold to customers. In FY 1999, WASA's sold/pumped ratio was approximately 76 percent. This ratio is unadjusted and does not include water used for normal utility operations, such as system maintenance and fire fighting. WASA is committed to improving this ratio and has undertaken a system-wide water audit as well as the following actions:

- *Metering Improvements* – Under-registration of meters is one of the largest sources of unaccounted for water. The Authority's comprehensive meter change-out and large meter testing programs should result in much more accurate billing to customers, thus reducing the sold/pumped ratio.

- *Valve Replacement Program* – The Authority has accelerated its \$23.0 million valve replacement program, which will allow for replacing approximately 200 defective valves and other leaking valves in the system resulting in reduced disruption to the customers.

- *Consolidation of Water Leak Response Team* – Leakage from the system is one factor in the Authority's sold/pumped ratio but not the most significant. In an effort to improve the Authority's response time to water leaks and water main breaks, the Authority consolidated its water leak repair crews and functions in one department and added contractual support.

COST OF SERVICE/RATE STUDY

In February 1999, the Authority completed its first cost of service/rate study since it became an independent entity. The rate study contains recommendations on rate increases over a multi-year period, alternative rate structures and the determination of new rates and rate structures for groundwater discharges, fire protection and stormwater services. It also gave

MAJOR INITIATIVES CONTINUED...

assurance of predictable cost of providing services to each class of customer. The Authority's rate-setting policy calls for rate increases to be implemented on a gradual and predictable basis and adherence to Board adopted policies.

CAPITAL IMPROVEMENT PROGRAM

WASA's ambitious 10-year Capital Improvement Program (CIP) is projected at \$1.6 billion and rehabilitation will affect all of WASA's capital infrastructure. The CIP will repair and upgrade the water pumping and storage systems, and will rehabilitate wastewater treatment and sewage facilities. These improvements will garner improved productivity and performance within the workforce and customers will see tangible, ongoing improvements when utilizing WASA's services.

The CIP includes major wastewater, water distribution and stormwater projects, WASA's share of the Washington Aqueduct capital projects and capital equipment additions/replacements to meet these requirements. Compliance with strict and expensive regulatory requirements is built into the cost of these projects. For FY 1998,

WASA spent \$48 million on the CIP, while in FY 1999, that amount was \$111 million.

COMPREHENSIVE MASTER FACILITIES PLAN

This Plan was adopted by WASA's Board in FY 1998 and presented a 20-year analysis of system improvements in all aspects of WASA's operations. It's based on projections of future demands, changing regulatory requirements and evaluation of system conditions. This Plan provided a framework for the development of WASA's 10-year Capital Improvement Program, which is re-evaluated annually.

PRIVATIZATION FEASIBILITY STUDY

WASA's enabling legislation required a study on the feasibility of privatizing all or parts of the Blue Plains Wastewater Treatment Plant. In FY 1999, the study was completed and considered three alternatives in the assessment:

- Asset Sale
- Full Contract Operations
- Continuous Improvement

It was determined that the operations at Blue Plains could achieve similar cost savings as the

Full Contract Operations alternative by implementing a continuous improvement program. This more suitable alternative would also hold customer rates at reasonable levels, while reducing costs and personnel at the Plant. The Board of Directors adopted this alternative in FY 1999.

COMBINED SEWER OVERFLOWS (CSO's)

On occasions when some portions of the District's combined sewer system reach physical conveyance capacity, typically during heavy rains, excess flow is discharged to area waterways. These discharges are called Combined Sewer Overflows (CSO's).

The combined sewer system is a name given to sewers that transport both wastewater and stormwater. WASA's combined sewer system drainage area covers approximately 12,640 acres or 33 percent of the District of Columbia. Discharges are regulated as part of a permit issued by the U.S. Environmental Protection Agency (EPA).

The District's sewer system is like the sewer systems in most older US cities. WASA has in place short-and long-term projects that are aggressively addressing ways to mitigate, reduce and where practicable, eliminate CSO's. As part of the short-term plan,

a pilot project is underway involving a floating end-of-pipe netting system at one outfall.

In addition, the Authority's skimmer boats have trapped more than 3,000 tons of refuse and debris in the past seven years. With the assistance of an EPA planning grant, WASA will have a draft of a major CSO control plan ready by the summer of 2001.

Expenditures are over \$143 million for recent improvements, short-term projects and major capital improvement projects.

The long-term CSO control plan incorporates:

- an assessment of existing CSO facilities slated for repairs and replacement. Based on this assessment, both short-term and long-term improvement actions have been initiated and, where appropriate, incorporated into WASA's Capital Improvement Program.
- public participation through public meetings, a Stakeholder Advisory Committee, Water and Sewer bill mailings and a CSO website
- a focus on improving the quality of the Anacostia River
- consideration of a full range of permanent control options

ANACOSTIA RIVER WATER QUALITY IMPROVEMENT INITIATIVES

WASA has been involved in restoration of the Anacostia River water quality improvements for many years. The focus of WASA activities is to reduce the adverse impact of municipal waste on the river. As such, it has undertaken and continues to undertake specific pollution control activities.

FLOATABLE CONTROL PROJECTS

Floatable debris enters the Anacostia River from combined sewers and non-point sources in the District and the upstream drainage basin in Maryland. WASA has undertaken programmatic activities and special projects to reduce the impact of solid waste on the river.

CATCH BASIN CLEANUP PROGRAM

The Sewer Services department has a continuing program to clean the catch basins throughout the city. This is done by routinely collecting trash that collects in catch basins, and would otherwise end up in the river.

FLOATABLE DEBRIS COLLECTION PROGRAM

As stated earlier, WASA operates floatable debris skimmer boats to collect debris that enters the Anacostia River both from the District and Maryland. Booms have been placed near the Rail Line Bridge to enable consolidation of the floatable debris. Stray floatables

are also collected and disposed in approved disposal sites.

Approximately 800 tons of floatable debris are removed annually from the river.

SWIRL CONCENTRATOR

In FY 1999, WASA made substantial repairs and upgrades to its Swirl Concentrator near the Anacostia River. This facility provides treatment to CSOs before discharging into the Anacostia River during wet weather events.

ADDITIONAL INITIATIVES:

Sewer Rehabilitation Project: East Side Interceptor Cleanup

In FY 1999, WASA had undertaken a project to clean up years of accumulated sediments from the Eastside Interceptor which transfers sanitary (and combined) wastewater from the North East Boundary Sewer near RFK Stadium to the Main and "O" Street pump station and on to Blue Plains. Estimated project cost is \$2 million. The cleanup work is expected to be completed by summer 2001.

ANACOSTIA RIVER WATER QUALITY IMPROVEMENT INITIATIVES CONTINUED...

LONG TERM CONTROL PLAN

WASA has begun development of a Long Term Control Plan (LTCP) for reducing CSOs. The main focus of this project is the Anacostia River.

WET WEATHER MONITORING FOR LTCP

WASA has undertaken a project to quantify CSO discharges as well as the pollutants associated with CSOs. Additionally, the project will help assess the water quality impact of CSOs. This information is vital for developing a realistic CSO long-term control plan.

PUMP STATION UPGRADES

WASA has undertaken several projects to reduce the volume and the magnitude of CSOs to the Anacostia River. The following projects are underway based upon recommendations of our Facilities Plan Study of the eastern portion of District's wastewater conveyance system:

- **Rehabilitation of the Main and "O" Street pump stations.**
Estimated Project Cost:
\$89,185,836
Estimated Project Completion:
2009

- **Rehabilitation of East Side Pump Station**

Estimated Project Cost:
\$11,483,500
Estimated Completion: 2006

- **Poplar Point Pumping Station Upgrade**

Estimated Project Cost:
\$23,000,000
Estimated Completion: 2008

SPECIAL PANEL - WET WEATHER POLLUTION

In FY 1998, a special panel was convened to begin a comprehensive, watershed approach in addressing wet weather pollution issues. Under the leadership of the EPA, the panel included WASA, officials from Maryland, Federal and District agencies and environmental organizations. The common goal was to develop a series of recommendations and implementation steps for a coordinated approach in addressing these issues that affect the Potomac River, the Anacostia River and Rock Creek.