



# FY 2003

**District of Columbia Water and Sewer Authority  
Proposed FY 2003 Operating and Capital Budgets  
October 25, 2001**



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**GENERAL  
MANAGER'S  
MESSAGE**





# DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

5000 OVERLOOK AVENUE, S.W., WASHINGTON, D.C. 20032

Mr. Glenn S. Gerstell  
Chairman  
District of Columbia Water and Sewer Authority Board of Directors  
5000 Overlook Avenue, S.W.  
Washington, DC 20032

October 25, 2001

Dear Chairman Gerstell and WASA Board Members:

Pursuant to the directive of the Board of Directors of the District of Columbia Water and Sewer Authority and consistent with my responsibilities as General Manager, I hereby submit for your review and consideration the revised FY 2002 and proposed FY 2003 budgets. These budgets are intended to meet the mandate as provided for in District of Columbia Law, 11-111, which specifies that “...WASA shall prepare and submit to the Mayor, for inclusion in the annual budget, annual estimates of the expenditures and appropriations necessary for the operation of the Authority for the year...”

In keeping with the strategic mission of the Board of Directors to become a world-class utility, achieve operational and financial efficiencies through implementation of an Authority-wide Internal Improvement Plan, and deliver on our number one priority, service to our customers, I am pleased to present this spending plan, which I believe accomplishes these goals. WASA will mark its sixth anniversary at the beginning of FY 2003. Under the leadership of the Board of Directors, we will continue to progress in all areas of operation of the Authority, building on major achievements realized since our agency was created in 1996.

## **Customer Service Improvements**

The improvements in service delivery made in FY 2001 demonstrate that service to our customers is the highest priority of the Board of Directors and WASA management. These improvements include:

- At the Chairman’s direction, creating a Customer Service Committee, indicative of Board and management focus and commitment to customer service;

- Implementing a new customer information system, which allows customers to obtain account information online, receive accurate and consistent information from customer service representatives, and make credit card or electronic funds transfer bill payments;
- An updated, user-friendly Web page that allows our customers easy access to the customer information system;
- Instituting a quarterly newsletter, *What's on Tap*, to inform our customers of improvements to our service delivery;
- Fully implementing our S.P.L.A.S.H. (Serving People by Lending a Supporting Hand) and customer assistance programs, which will help our customers in financial need pay their water bills;
- Shortened the time for claims resolution;
- Completing our large meter testing and repair program, one of several steps to assure that all customers are paying for their fair share of water consumption;
- Completing the planning and procurement phase of our comprehensive Automated Meter Reading project; and
- Improved response time to water main breaks and other requests for service.

### ***Environmental Initiatives & Regulatory Compliance***

When WASA was first created, we faced serious regulatory challenges. We have made great progress in this area and have been in compliance with all regulatory standards for the past five years. We have been lauded by the EPA for our operational improvements and were, in fact, released from one consent decree and stipulated agreement in May 2000. Key accomplishments in FY 2001 include:

- Completion and public presentation of our draft Long Term Control Plan to address combined sewer overflows in the Potomac, Anacostia, and Rock Creek waterways;
- Meeting or exceeding EPA standards for safe drinking water for the past 61 months;
- Assuming our responsibilities as administrator of the District's stormwater permit compliance efforts in conjunction with the Departments of Health and Public Works;
- Meeting all the requirements of a 1996 wastewater consent decree and stipulated order, following our May 2000 release from a 1995 wastewater consent decree;
- Completing activities on schedule for the December 2002 deadline for compliance with a water consent order;
- Commitment to Anacostia River clean-up with our pilot netting program to capture floatable debris at one of our CSO outfall structures and improved skimmer boat operations;
- Continued improvement of our catch basin cleaning performance, emphasizing preventive measures in areas prone to high water levels during periods of heavy rainfall;
- Successful conversion by the Washington Aqueduct to chloramine disinfection of the water supply to reduce disinfectant byproducts;
- Fully implementing our biological nitrogen removal program at the beginning of FY 2001, resulting in a 40 percent nitrogen reduction as called for in the Chesapeake Bay Agreement, becoming the first wastewater utility in the region to meet this standard; and
- Relocated the Office of Water Quality to Fort Reno in order to offer better service to our customers.

## ***Financial Performance***

We have continued to build upon our significant improvements in our financial performance and operations: operating budget results, revenue projections, and capital financing goals continue to meet or exceed Board-adopted policies and meet the expectations of the larger financial community, especially the capital markets. Financial operations are stronger than ever - vendor payments are made on time, payroll processing for our employees has been greatly enhanced, and our financial statements are produced ahead of schedule with clean opinions from our auditors. FY 2001 accomplishments include:

- Successful implementation of WASA's own financial management system, independent of the District of Columbia's system as required by our enabling legislation, affording internal control of WASA's day-to-day fiscal transactions;
- Development of WASA's commercial paper program for interim financing of our capital program, which will result in near term debt service savings, with the first issue in November 2001;
- Presentations to the New York rating agencies that resulted in Standard and Poor's voluntary review of WASA's rating in conjunction with the commercial paper program; and
- Receipt of a fourth consecutive unqualified audit opinion by our independent auditors for financial statements and the fourth consecutive Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association for the fiscal year ending September 30, 2000.

## ***Capital Investment***

Many of the operating and regulatory challenges that WASA and its predecessor faced were due to significant underinvestment in our plant and infrastructure over the past 10 to 15 years. We have:

- Increased capital spending in the years immediately following WASA's creation, from \$38 million in FY 1996 to more than \$100 million annually in FY 2000 and FY 2001;
- Undertaken the initial phases of implementing a plantwide process computer control system, which will produce cost savings consistent with the Internal Improvement Plan through monitoring and adjusting chemical dosing and energy consumption, and reducing manpower needs for plant operations;
- Undertaken capital projects that will reduce operations and maintenance costs, such as rehabilitation of the primary sedimentation tanks and the secondary treatment facilities;
- Focused on our valve replacement, repair and exercise program in the Department of Water Services; and
- Financed a significant portion of our capital program with cash balances available over our 180-day operations and maintenance reserve requirement, consistent with Board policy, thereby reducing pressure on rates and contributing to our strong bond ratings.



## ***Operations & Administration Accomplishments***

WASA continued to pursue its goal of improved operational performance. Among our achievements are:

- Receiving the prestigious gold award from the Association of Metropolitan Sewerage Agencies for the third time in four years;
- Initiating Internal Improvement Plans in Water Services and Sewer Services, with implementation to occur in FY 2002;
- Continuing reductions in staffing levels due to Internal Improvement Plans already implemented in Customer Service and in Blue Plains operations;
- Realignment and consolidation of certain maintenance functions; and
- Replacement of lime feed facilities at Blue Plains with sodium hydroxide storage and feed facilities, a safer, simpler, and more reliable system.

## ***Investment in Technology***

The technology infrastructure and implementation of mission critical systems, such as the new financial and customer information systems, has been a major focus of attention in FY 2001. Great strides have been made in stabilizing the server and network environment, and upgrades will continue. Major changes to WASA's Internet environment are planned so that our customers will have greater ease of access to the information they need to do business with WASA. FY 2001 accomplishments include:

- Completion of the research and development phase of the Web development project, including an on-line public survey, redefining how we offer services to our customers, with the new *dcwasa.com* scheduled to be launched in February 2002;
- Formulation of an Information Technology Strategic Plan, to address WASA-wide technology project evaluation and prioritization, and the development of an information technology master plan, outlining the implementation of these initiatives;
- Completion of the evaluation phase for the maintenance management system project, which will support a more efficient maintenance program at a lower cost to help us reach our Internal Improvement Plan goals, with full system implementation by the end of FY 2002; and
- Installing security measures to protect our technology environment.

## ***Investment in Employees***

Our continuing commitment to our workforce is evidenced by FY 2001 accomplishments, including:

- A new labor agreement with WASA's bargaining units, containing new work rules consistent with Internal Improvement Plans, and compensation increases that are competitive with other pay scales in the region, and for the first time, pay for performance for union employees;
- Continuation of our Employee Recognition Program, honoring employees for length of service;

- Implementing an alternative duty work program, allowing workers injured on-the-job to continue working in positions that match their physical needs, and returning employees to work as quickly as possible in order to maintain productivity and reduce claims costs;
- Continuation of training programs for our employees, budgeted at approximately \$2 million in FY 2002 and FY 2003, to assure that they have professional skills needed in the workplace; and
- Continuation on our emphasis on safety, with approximately more than \$1 million budgeted in each of the next two years for supplies, equipment, and safety training.

**Summary**

In the years since our creation, we have made great strides in internal improvement of operations, stabilizing our finances, and focusing on more efficient service delivery to our customers. We move forward with the goal of building on these improvements and reaching an even higher level of operational performance and customer service.

Activities that will help us meet these goals are the focus of the budgets I have presented here.

**FINANCIAL OVERVIEW**

**Operating Budget**

For the fourth consecutive year, we have prepared a revised operating budget that holds the line on expenditures compared to the previous year’s approved budget. Our revised FY 2002 operating budget totals \$244.9 million, a \$0.1 million decrease from the approved FY 2002 budget. We have maintained approximately the same level of spending while addressing a number of issues that are largely outside of WASA’s control without increasing the overall budget in FY 2002, as described in more detail below.

**Total Operations and Maintenance**

Category	\$ in millions		
	FY 2002 Approved	FY 2002 Revised	FY 2003 Proposed
Operating and Maintenance Expenditures	\$185.2	\$191.9	\$195.0
Payment in Lieu of Taxes/Right of Way Fee	15.5	15.5	16.0
Debt Service	44.2	37.5	43.8
<b>Total Operating and Maintenance Expenditures</b>	<b>\$245.0</b>	<b>\$244.9</b>	<b>\$254.8</b>

Our operations and maintenance budget, net of debt service, the payment in lieu of taxes (PILOT), and the District's right of way fee, totals \$191.9 million, a \$6.7 million increase over the approved FY 2002 budget. As I have described to the Board over the past few months, we faced a number of budgetary issues in FY 2001 that were outside of WASA's control. These issues carry forward at similar levels in FY 2003 and beyond and are accommodated in these budget proposals.

- *Increased street cut and restoration requirements* – These budgets reflect a \$1.7 million increase over FY 2001 to accommodate revised street repair and restoration requirements. In total, we have included approximately \$3.1 million annually in operating costs. In addition, these budgets also reflect \$0.5 million in annual spending for mandated participation in the “Miss Utility” one-call center.
- *Biosolids hauling costs* – In late FY 2001, we competitively resolicited our biosolids hauling contracts and received bids that were approximately 25 percent higher than our previous contracts. These increases are indicative of the biosolids hauling market in general and have been experienced by other utilities in the region, and result in a \$2.1 million increase in the FY 2002 budget. Biosolids hauling costs are also impacted by the recent decommissioning of the existing digesters. Once the new digesters are fully operational, projected to occur in FY 2008, we will achieve significant operating savings in biosolids hauling costs.
- *Chemicals* – Chemical costs at Blue Plains are projected to increase by \$2.1 million over FY 2001 levels due primarily to the conversion from lime to sodium hydroxide at Blue Plains and increased methanol prices for biological nitrogen removal (BNR) due to volatility in the natural gas market.

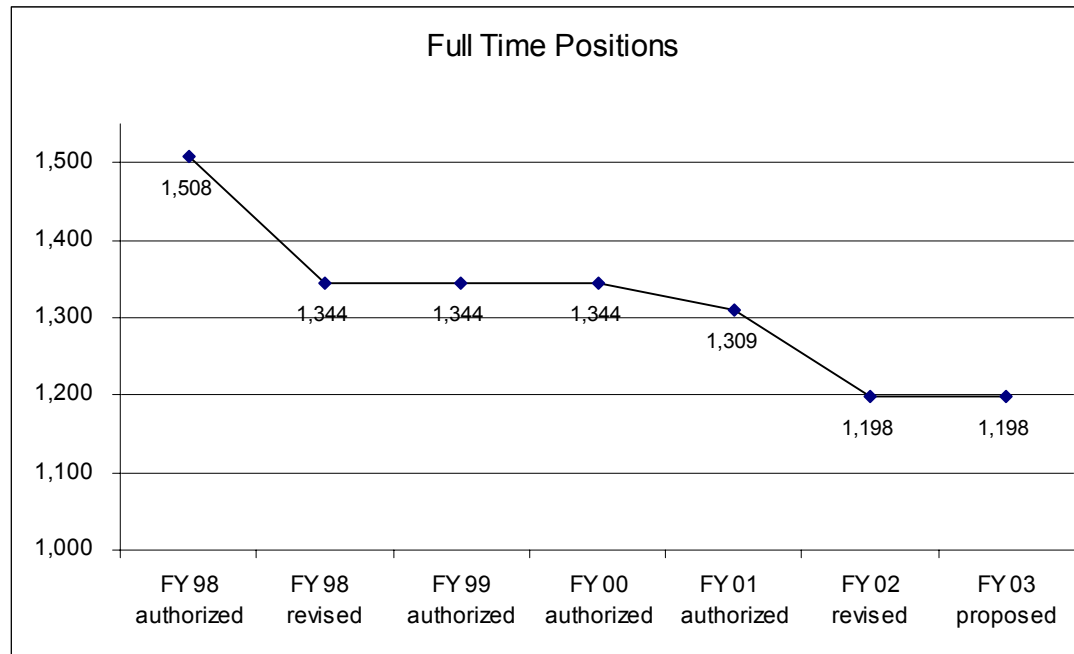
Without these issues, our revised FY 2002 operating and maintenance budget would total \$184 million, excluding debt service and PILOT, approximately level with the approved FY 2002 budget.

The proposed FY 2003 budget, including debt service and PILOT, totals \$254.8 million, a \$9.9 million increase over the revised FY 2002 budget. The majority of this increase is due to additional debt service as the capital program progresses. Our operating and maintenance budget (net of debt service, the payment in lieu of taxes, and the District's right of way fee) totals \$194.9 million, a \$3.1 million, or 1.6 percent, increase over the revised FY 2002 budget. This increase reflects two critical items: 1) a \$2 million increase in chemical spending due to the conversion of one of our key wastewater treatment processes from chlorine to sodium hypochlorite and sodium bisulfite; and 2) the four percent compensation increase for WASA's union employees outlined in the recently approved labor agreement. We have accommodated these increases as well as the external costs outlined above and still limited the growth of our operating and maintenance budget to only 1.6 percent over FY 2002. After taking into account inflation, the proposed FY 2003 budget reflects a true decline from FY 2002.

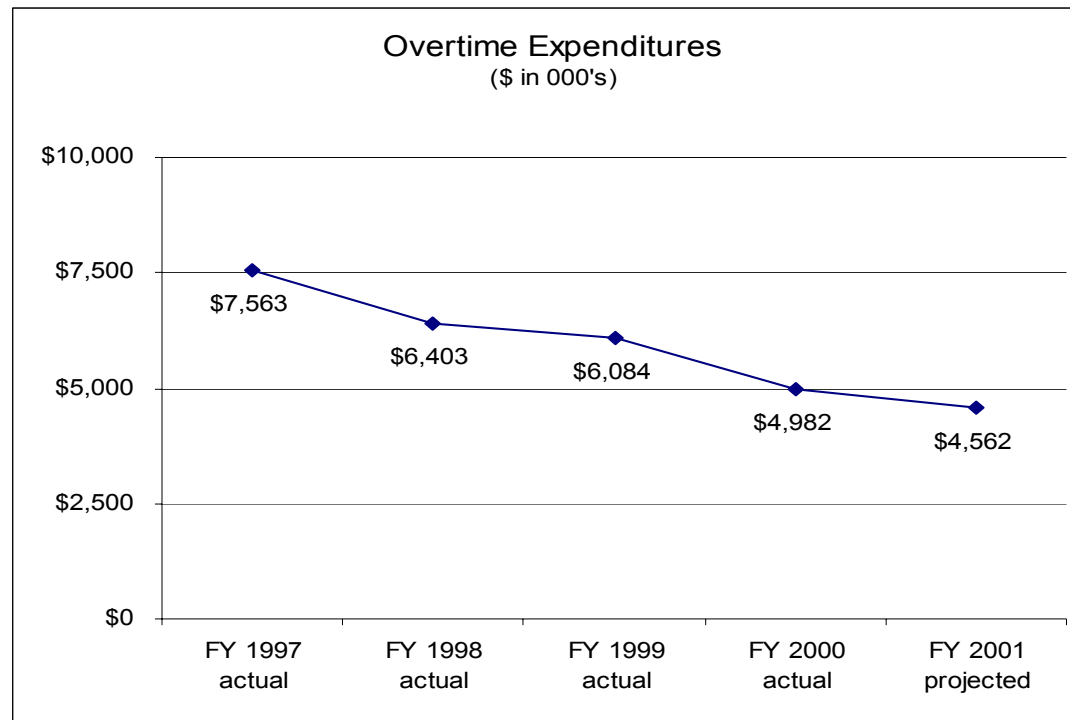
Finally, these budgets also reflect the District's right of way fee. In November 2000, we received a proposal from the District of Columbia's Department of Public Works that set the fee at \$14.4 million with a credit of \$9 million for WASA's payment in lieu of taxes, resulting in a net increase of \$5.4 million. We have included this same amount in both the revised FY 2002 and proposed FY 2003 budgets.

## Staffing

Reflecting the commitments we have made through our various Internal Improvement Plans across WASA, we have steadily reduced position levels. As shown in the chart below, in FY 1998, our approved position level totaled 1,508 positions; in FY 2001, our approved position level totaled 1,309 positions, a reduction of just under 200 positions over three years. This year we have eliminated an additional 111 positions across our operations. Over the last two years, we have held our staffing to levels lower than authorized levels, and have gained efficiencies by accomplishing our operational goals with fewer personnel. In FY 2002 and FY 2003, we have eliminated positions that in recent years have been intentionally unfilled, as well as built our budgets and long term plans around continued reductions in staffing levels. In particular, the Departments of Wastewater Treatment and Maintenance Services have reduced staffing levels as part of the Blue Plains IIP and will continue to do so over the next 4-5 years. Customer Service is reducing positions in FY 2002 due to efficiencies realized through implementation of the new customer information system, and beyond FY 2003, will reduce more positions as the comprehensive meter replacement / automated meter reading (AMR) program is completed.



Since we were created, WASA has closely managed its overtime costs. In FY 1997, total overtime costs were running at a rate exceeding 20 percent of the total payroll budget prior to our implementation of strong management controls. In FY 2001, overtime was budgeted at approximately eight percent of the total payroll budget, but year-end projections indicate that we will spend only 85 percent of budget in this area. We have budgeted eight percent of the payroll budget for overtime expenses in fiscal years 2002 and decreased the amount to approximately seven percent in FY 2003.

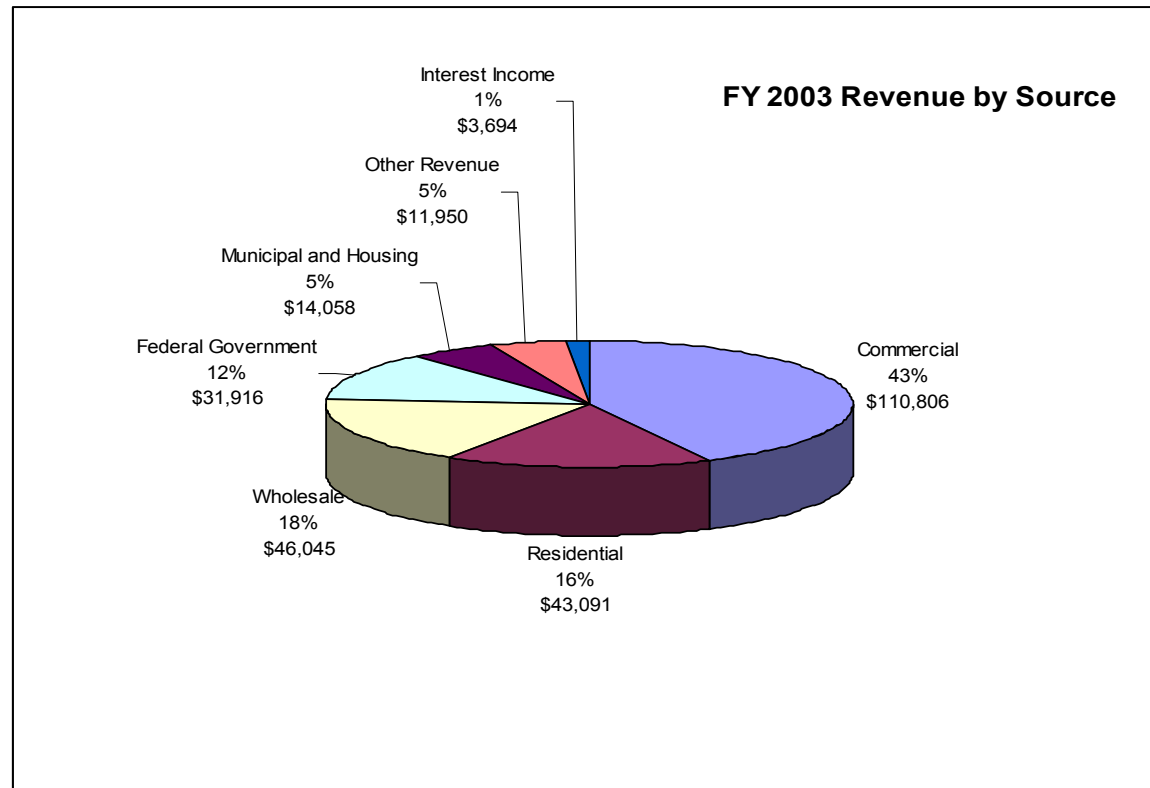


### **Revenues**

We continue to build on the great progress we have made over the last few years in revenue forecasting and monitoring. A large part of this success has been due to the investments we have made in customer service. Our new customer billing and information system allows for substantially enhanced reporting and revenue monitoring, while the completion of our large meter testing program has helped ensure that

we are accurately billing our customers. Our Customer Service Department has instituted a number of measures to assure that we collect the revenues due to us including establishing a large accounts unit, establishing payment plans, multi-family service cut-offs, enforcement of liens, and improved collection practices.

These measures, coupled with detailed monitoring and analysis in our finance area, have resulted in strong revenue performance and stabilized projections. In addition, we benefit from a diverse customer base (as shown in the chart below), which also assures revenue stability.



Our revised FY 2002 revenue budget totals \$252.1 million, and in FY 2003 is projected to grow to \$261.6 million. These projections assume five percent retail rate increases both in April 2002 and April 2003, which are currently under consideration by the Retail Rates Committee with final action to be taken at the conclusion of this year's budget process. These projections also reflect the recent completion of our large



meter testing program – our revenue projections in FY 2002 assume a 10 percent increase in commercial and federal revenues due to this program. Finally, revenues from our wholesale customers are also projected to increase, reflecting their share of increased costs of biosolids hauling and chemicals costs at Blue Plains.

Similar to last year's revenue budget, these projections do not reflect any revenues from implementation of the groundwater metering and billing program due to the proposed legislation under consideration by the District of Columbia Council that would repeal our ability to implement this program.

The dollar amount for delinquent payments increased toward the end of FY 2001, and we moved quickly to address the issue as staff resources were freed up from implementing the customer billing and information system. Among the Board's first actions in 1997 was a strong focus on collections of unpaid water and sewer bills. We strengthened our collections policies, sold \$17.1 million in extremely delinquent receivables (primarily multi-family) in January 1999, and in summer 1999, began terminating service to chronically delinquent multi-family customers. As a result of these aggressive actions, WASA's delinquent accounts over 90 days old, which peaked in FY 1998 at \$28 million due to the 42 percent rate increase, have now declined to \$17.9 (net of Breen) at the end of FY 2001. We have experienced a short-term increase in receivables over the last few months – as part of the implementation of our new customer information and billing system, we stopped disconnecting service on delinquent accounts for approximately three months due to data conversion and related issues. We have aggressively restarted these efforts, and expect to fully recover these short-term increases in FY 2002. In addition, we are also taking advantage of recent legislative changes on receiverships and other related collections tools.

### **Cash Reserves**

WASA Board policy calls for cash reserves equivalent to approximately six months' operating costs, or roughly \$90 million. Over the first two years of our existence, we built these reserves from zero to the Board policy level primarily through repayment by the District of approximately \$83 million over a five-year period, reimbursing us for borrowings by the District from our predecessor agency. The last of these payments was received in October 2000. In addition, we received \$39 million from Loudoun County as payment of prior years' capacity use at Blue Plains and purchase of additional capacity.

As projected, our cash balance gradually declined during FY 2001 as we financed the District's share of the capital program with pay-as-you-go financing. Balances declined from \$156 million at the beginning of FY 2001 to just over \$123 million at the end of FY 2001. Our cash reserves includes three primary components:

- Board-adopted operating and maintenance reserve of approximately \$90 million
- Rate stabilization fund of \$6.5 million
- Reserve for prior year federal billing issues of \$12.8 million, which will be paid out in FY 2003

Over the next two fiscal years, our cash balance will remain close to these required reserve levels as we begin to finance much of the District's share of the capital program with debt. In addition, as our operating and maintenance budgets grow, our required operating and maintenance reserve levels will grow as well. In FY 2003, the operating and maintenance reserve requirement totals \$93.2 million.

### ***Water and Sewer Rates***

Average retail rate increases over the next 10 years are projected at 5.5 percent annually, due to our continued implementation of the capital improvement program. This includes the proposed five percent rate increases for FY 2002 and FY 2003 currently under consideration by the Retail Rates Committee, and scheduled for action at the conclusion of this year's budget process in January. We continue to build our 10-year plan and proposed rate increase schedule based on the Board's rate setting principles, which call for gradual and predictable rate increases, avoiding spike rate increases, and rates that are based on the actual cost to deliver each service.

The proposed rate increases over the 10-year plan reflect a variety of critical issues we have discussed with the Board over the last year, including new District requirements such as the right of way fee, new street repair requirements, and the proposed elimination of our ability to charge for groundwater discharge into the combined sewer system. This year's budgets also reflect other issues, such as increased biosolids hauling costs that are being experienced across the region. Other changes to the 10-year plan and near-term projections include revised capital spending projections in the early years of the program based on a project by project analysis and the implementation of our new commercial paper program, which together result in near-term debt service savings. In addition, as projected, cash balances declined substantially over the past year and will stay at the Board-adopted reserve level over the next 10 years, and senior debt service coverage, while still above Board policy levels, has declined as projected.

Projected rate increases do not reflect the draft CSO long-term control plan that was presented to the Board this past summer. As discussed later in this document, this plan includes \$1.05 billion (in FY 2001 dollars) in projected capital costs as well as additional operating costs. The vast majority of projected costs are not included in our current capital improvement program; based on the experience of other similar jurisdictions on the East Coast and the unique nature of our service area as the nation's capital, we will be seeking significant federal funding for this project. Without outside assistance, the impact on our ratepayers, especially low income ratepayers, could be severe. In conjunction with our search for outside assistance, we are examining alternative rate structures that ensure that the beneficiaries of this system pay their fair share of costs, yet is not extremely complex and /or cost-prohibitive to implement and administer.

In addition, we are currently evaluating the feasibility of a meter maintenance fee to recover the incremental costs of ownership of commercial and federal meters, which we are pursuing as part of our comprehensive meter replacement / AMR program.

WASA is committed to holding the line on expenses wherever possible and ensuring that we fairly and fully recover the cost of providing services to all categories of customers. We will also hold ourselves responsible for those goals - to that end, we have already reflected in our 10-year financial plan and future rate projections several major projects and initiatives that help reduce the pressure on rates, discussed further in this budget document.

Even with the proposed rate increases, WASA's rates remain very competitive with other utilities in our geographic area. Our average residential bill is currently \$37 per month and if the proposed rate increases are adopted, will increase by approximately \$1.88 per month in FY 2002, and \$1.96 per month in FY 2003. Rates for neighboring jurisdictions in Virginia and Maryland range from \$25 to \$43 per month, and rates for other large, East Coast cities range from \$29 to \$54 per month.

### ***Federal Customer Issues***

We continue to invest significant resources in improving the billing process for our federal customers and addressing historical billing issues that remain with a few federal agencies, primarily in Northern Virginia. Over the last year, modifications were made to the federal billing legislation that eliminated the U.S. Treasury's ability to use its own special appropriation to pay WASA's bills if individual agencies delayed their payment to the U.S. Treasury. This change resulted in delayed payments to WASA during FY 2001, but full payment was ultimately received. The process of working through these issues has generally been very positive, resulting in direct contact with federal customers who in the past have always worked with the U.S. Treasury, instead of WASA, to get billing and service information. Going forward, we will continue to work closely with our federal customers and House Appropriations staff who have been assisting us in resolving these issues. Modifications to the current billing legislation continue to be proposed by the U.S. Treasury and other agencies, and while we support changes that will simplify the process and improve direct ties to our federal customers, any changes must contain provisions that ensure we are paid in full and on time for all services provided.

We continue to address longstanding billing and service issues for the federally-owned water system in Northern Virginia. WASA provides water service and billing for this system through two meters at the Key Bridge; beyond that point, the Pentagon, as owner of the system, is responsible for system maintenance and installation and maintenance of meters. Because the Pentagon has not installed separate meters for each agency in Northern Virginia, there have been disagreements about the Pentagon's allocation of actual consumption and billing among the various agencies. We will continue to provide and bill for this service based on the two Key Bridge meters, and will provide the U.S. Treasury and other federal agencies with information they need to resolve these issues internally. In addition, the Pentagon is still pursuing its plan to receive water service from Arlington County rather than WASA, and has engaged Arlington County to install meters at various connection points in Northern Virginia. Over the last year, we have been working with Arlington County on wholesale rate structure and service options and will continue this effort over the next year. In FY 2001, revenues from the federally-owned system (including Ronald Reagan National Airport) totaled \$1.1 million, or less than one percent of total retail revenues.

### ***Rate Stabilization Fund***

Consistent with Board policy, we continue to contribute to our rate stabilization fund, helping us avoid "spike" rate increases associated with capital spending and ensuring a smooth rate increase schedule that is both gradual and predictable. In FY 2000, we contributed \$3.5 million to this fund, and contributed an additional \$3.0 million at the end of FY 2001 as a result of higher than projected debt service coverage and slightly higher than projected cash balances. This fund is on top of the Board-adopted 180 day operating and maintenance reserve

(approximately \$90 million), and additional contributions will be determined each year based on actual financial performance and only if all other Board policy and indenture requirements are met. The fund would be fully utilized in FY 2007 and FY 2008 under the proposed 10-year plan.

### ***Bond Rating***

During the spring of 2000, the three major rating agencies (Moody's Investor Service, Inc., Standard & Poor's, and Fitch ICBA) upgraded WASA's bond ratings. All three agencies cited the substantial progress WASA made over its initial years of existence. In preparation for WASA's first issuance of commercial paper in the fall of 2001, the Board Chairman and senior management visited the rating agencies in June. At that time, Standard & Poor's indicated that they would again review WASA's rating in the fall. WASA's current ratings appear in the table below.

<b>Rating Agency</b>	<b>Rating</b>
Moody's	"A1" with stable outlook
Standard & Poor's	"A" with positive outlook
Fitch ICBA	"A+" with stable outlook

### ***Capital Financing Plans and Debt Issuance***

Implementation of our capital financing plan is well underway and meets the dual objectives of providing maximum flexibility while resulting in as low a cost of capital as possible. Specifically, this plan included three primary components

- Utilize available pay-as-you-go financing to pay down higher cost U.S. Treasury notes for the Washington Aqueduct – we have prepaid \$34 million to date and will prepay another \$25 million over the next two years.
- Establish an interim financing program to finance construction – We have developed a commercial paper program for this purpose and will close on this transaction in mid-November.
- Issue fixed rate debt approximately annually to take out interim financing proceeds – The timing and size of our next fixed rate issuance will depend on capital spending in the upcoming year and market conditions, although we do not expect to enter the markets with long-term debt until mid-FY 2003 at the earliest.

In particular, the commercial paper program will provide greatly enhanced flexibility to deal with changes in capital spending, allowing us to match timing and sizing of borrowings to actual capital needs. In addition, interest rates on commercial paper are typically significantly lower than long-term rates, providing significant near-term debt service savings. As mentioned earlier, we will close on this financing in mid-November and will initially borrow \$60 million under this program.

### ***Washington Aqueduct Financing***

In line with the capital financing plan described above, since 1997 we have financed 100 percent of our share of the Washington Aqueduct's capital projects with pay-as-you-go financing and will continue to do so in the future. Because the Aqueduct is a federally-owned facility, its capital improvements generally must be financed on a taxable basis per the Internal Revenue Code, resulting in a higher cost of capital compared to other WASA projects. We have utilized U.S. Treasury financing on an interim basis for financing their projects due to the administrative flexibility it provides both the Aqueduct and WASA. We have prepaid \$34 million of U.S. Treasury notes through the end of FY 2001, and will prepay an additional \$16 million in FY 2002, with a final prepayment of approximately \$9 million projected in FY 2003.

We are continuing to investigate options that will increase our flexibility in financing Aqueduct capital projects. Currently, for projects not covered by the U.S. Treasury interim financing vehicle, the U.S. Corps of Engineers requires WASA to remit cash in an amount equal to the total project cost in advance of advertising contracts. These funds are transferred immediately to a Corps / U.S. Treasury account at zero return to WASA. In the past, this has not been a significant issue to WASA as the level of projects to be undertaken was relatively small. However, beginning in FY 2002, as these projects begin to increase in size and scope, this will become an unreasonable cost for WASA's customers to bear. We are currently exploring options such as transferring dollars on a phased basis and / or providing the Corps with a bank line of credit, both of which would allow us to keep our cash and related interest earnings until the funds are actually needed by the Corps.

### ***Grants***

In January 2001, WASA received a \$73.5 million grant from the Environmental Protection Agency (EPA) for facilities upgrade projects. More than \$64 million of this grant will be used for Blue Plains projects, including grit and screenings, new centrifuges and rehabilitation of existing centrifuges, and wastewater chemical storage and feed systems. The balance of the grant will be used to replace valves and repair, replace, and clean and line water mains.

In FY 1999, we worked with the EPA to develop a plan to close out 27 old wastewater grants that WASA inherited from its predecessor agency, ranging in time from 1971 to 1990. We have executed this plan on schedule, and have received final notification from the EPA that all but one of the grants are closed. Beginning in FY 2000, Delegate Eleanor Holmes Norton successfully petitioned Congress to extend the 80-percent federal grant participation level, and it is currently extended through FY 2002. Because of our aggressive approach to closing out the old grants, WASA was not in a "use or lose" situation for any federal funds in FY 2001.

The EPA has awarded WASA over \$126 million in grants under the provisions of the *Safe Drinking Water* and *Clean Water Acts* since 1997. In FY 2001, we submitted grant applications in the amount of \$15.4 million for *Safe Drinking Water* projects and \$17 for *Clean Water* projects, which will be awarded in FY 2002. Over the 10-year plan, we expect to receive \$205 million in grant funding. Without these monies, rates would have to be increased an additional eight to 11 percent over the 10-year period.

In FY 2001, WASA was responsible for its own single audit for the second year. This is a special separate audit of federal grants. This function was transferred to individual agencies and authorities from the Inspector General's Office in May, 2000. For the second year in a row, WASA received a clean audit opinion, the audit was submitted on time, and there were no prior year findings.

### ***Audit***

In FY 2000, we received our fourth unqualified audit opinion. The audit was completed in a timely manner, and submitted to the Chief Financial Officer of the District of Columbia prior to the December 31 deadline. FY 2000 marked the fourth consecutive year that the Comprehensive Annual Financial Report, including the audited financial statements, received the Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association.

The Authority selected a new independent auditor during the past year, and we expect the FY 2001 audit to reflect continued improvement in our accounting operations, audit planning, and information technology security.

### ***Impact of Federal Regulatory Requirements***

WASA faces a number of regulatory requirements from the federal government over the next 10 to 15 years.

*Combined Sewer Overflows Long-Term Control Plan (CSO LTCP)* – We completed our draft CSO long-term control plan in June 2001 – a major accomplishment for our organization. The issue of CSOs has been studied by WASA and our predecessor agency for almost two decades, and the development of this draft plan represents a significant milestone in our history.

The development of this plan included significant involvement from the public - our customers, environmental advocacy groups, and various local and federal regulatory agencies. We formed a special CSO stakeholders' group that was briefed regularly, and which provided meaningful input as the plan was developed. Over the course of this summer after the draft plan was unveiled, we held nine formal neighborhood meetings and a number of other briefings, and will be holding an official public hearing in late October. We have carried out an aggressive public information effort in conjunction with this planning process, including mailings to our customers, inclusion of detailed material on our Web site, and substantial media involvement. As we continue to develop the final terms of the plan, we will continue to involve the public.

The draft recommended a combination of large storage tunnels, rehabilitation of pumping stations, new pipelines, and other targeted improvements that will allow us to store combined flows in storm events until they can be gradually sent to Blue Plains for treatment. The plan also included Low Impact Retrofit (LID-R) in the final alternatives. LID-R consists of retrofitting existing development in the District with micro-scale storage and treatment facilities, such as biofilters, tree planting, rain gardens, sand filters, porous pavement, storm water detention, and rooftop greening. If LID-R were implemented over 15 percent of the impervious land in the District, it could have an impact in



reducing CSOs into area waterways. A consideration of including LID-R in the long term control plan is that WASA's discharge permit will require a specified degree of performance for CSO controls, and WASA's ability to implement LID-R District-wide is extremely limited.

The benefits of this plan are great – CSO volume is projected to be reduced by 92 percent thus improving water quality, debris in our rivers from CSOs will be greatly reduced, and historical flooding issues in the Northeast Boundary area will be addressed. The projected capital cost of this plan totals approximately \$1.05 billion (in FY 2001 dollars) and is projected to occur over a twenty year timeframe, with construction beginning as soon as 18 to 24 months from EPA approval. The draft plan was submitted to the EPA in June and we will be working with them beginning early in calendar year 2002, upon approval of the final submission. The vast majority of projected costs for the draft plan are not included in our current capital improvement program; based on the experience of other similar jurisdictions on the East Coast and the unique nature of the our service area as the nation's capital, we will be seeking significant federal funding for this project. Without outside assistance, the impact on our ratepayers, especially low income ratepayers, could be severe. In conjunction with our search for outside assistance, we will be examining methods of recovering costs for this program from system users.

Our current CIP includes approximately \$109 million (disbursements basis) for improvements to our existing combined sewer system, primarily in pumping station improvements. A portion of these pumping station improvements are interim improvements so that the system can continue to function reliably pending implementation of the entire plan over the next twenty years. Other improvements will result in actual reduction of CSO flows into receiving waters.

*Stormwater System and Management* – In FY 2001, WASA began its responsibilities as the District of Columbia's Stormwater Administrator. Over the past few years we have been working with the District's Departments of Health and Public Works and the Mayor's Stormwater Task Force to address the requirements of the District's stormwater permit that was issued to the District in April 2000. During FY 2001 the District of Columbia Council passed legislation that named WASA as Stormwater Administrator with responsibilities for coordination and administration of all three agencies' stormwater control efforts. In addition, City Council established a fee (to appear on WASA's water and sewer bill) to support all three agencies' incremental efforts through permit expiration in FY 2003. WASA began implementing this fee in June 2001. Annual implementation costs are projected to total \$3 million for all three agencies, with WASA's share amounting to approximately \$1 million. As part of the effort, we also negotiated a separate memorandum of understanding with the District's Chief Financial Officer and the Departments of Health and Public Works that ensures that WASA is completely covered for all stormwater-related expenditures; if funding is insufficient from the stormwater fee, WASA will be made whole by the District.

In addition to beginning implementation of the District's stormwater fee on our customer bills, we also coordinated the development and submission of the first annual report and review in April 2001 as well as began holding meetings of the Stormwater Advisory Panel, as required under the stormwater legislation. Major activities in FY 2002 and FY 2003 will include preparation of a detailed management and implementation plan, additional outfall monitoring, and preparation for permit renewal. The District's current permit expires in April 2003, and it is anticipated that the EPA will issue the District a new stormwater permit that could include substantially more rigorous requirements, including additional programmatic spending. It is anticipated that any incremental requirements of WASA due to the new permit will be fully paid from proceeds of the stormwater fee or other outside sources.

WASA already performs a number of stormwater management activities that are not funded by the stormwater fee, including catch basin cleaning in areas served by separate sewers and cleaning lateral drainage channels, amounting to approximately \$3 to \$4 million annually. In addition, we have included \$36.5 million in our existing capital program for improvements to stormwater pumping stations and other parts of the separate stormwater collection system. We have begun discussions with the District regarding transitioning all stormwater-related costs to the Stormwater Enterprise Fund.

### ***Drinking Water & Washington Aqueduct***

The Washington Aqueduct is facing two regulatory issues that could potentially impact WASA's capital budget for our share of water treatment facilities. The EPA is considering:

*Residuals/Solids Recovery Project.* This project would take the solids that settle out from water in the Dalecarlia and Georgetown Reservoirs and concentrate them for removal. Currently these solids are periodically discharged into the Potomac River during high river flow conditions. The Aqueduct recently completed an extensive study of the environmental impact of these discharges and the EPA is currently reviewing the report as part of the permit renewal process. Current cost estimates (WASA share only) total \$45.6 million. The current capital improvement program includes expenditures for this project starting in FY 2006.

*Backwash Treatment Project.* This project would construct facilities to separately treat backwash from filters. Filter backwash water is currently routed to on-site reservoirs for settling. In the future, the EPA may require specific treatment. If the EPA requires additional treatment, the Aqueduct currently projects that work would not be required until late in our 10-year planning period. The current 10-year capital improvement program reflects initial funding of this project of \$10.6 million beginning in FY 2009.

### **CAPITAL IMPROVEMENT PROGRAM**

Our ultimate success in achieving the goals of the Internal Improvement Plan and our continued success in regulatory compliance (on a disbursements basis, approximately 24 percent of the capital program is mandated) depends in large part on the implementation of our 10-year capital improvement program. This \$1.6 billion program will roughly *double* the value of our physical infrastructure, and will result in improved service to all of our customers, both wholesale and retail.

The proposed FY 2001 – 2010 capital improvement program is \$1.61 billion, which is not significantly changed from last year's plan, and containing no major changes in projects. The plan is broken into seven service areas, as shown in the chart below.

**FY 2001 - FY 2010 Capital Improvement Program  
(\$ in 000's)**

Service Area	Cost	% of Total
Wastewater Treatment	\$733,384	45.5%
Combined Sewer Overflow	125,793	7.8%
Stormwater	36,454	2.3%
Sanitary Sewer	126,087	7.8%
Water	357,647	22.2%
Washington Aqueduct	147,257	9.1%
Capital Equipment	83,492	5.2%
<b>Total</b>	<b>\$1,610,115</b>	<b>100.0%</b>

As part of the development of the \$1.6 billion capital program, we have placed a very strong emphasis on long-term planning and evaluation of the physical condition of our infrastructure. In 1998, we completed our first 20-year master facilities plan, and intend to update this plan on a continuing basis, with a revision scheduled early in FY 2002. In FY 2000, we completed both the biosolids facilities plan and the water distribution system analysis and plan, and in FY 2001, we completed our long term control plan for combined sewer overflows. In FY 2002, we will begin our first comprehensive assessment of the sewer system.

Capital spending in FY 2001 totaled \$103 million versus the adopted budget of \$176 million due to various design delays and other delays at Blue Plains, and in the Water Services area, due to valve operation and District permitting issues. In developing near-term capital disbursement projections, we performed a detailed, project-by-project analysis, taking into account the status of each project and the issues faced, particularly in the water system. As a result, our FY 2002 and FY 2003 disbursement projections are lower this year than last year. Over the two-year period in last year's CIP, total disbursements were \$446 million; in this year's plan, total disbursements are \$388 million.

***Blue Plains Capital Projects***

Representing the largest portion of our capital program, we will invest over \$733 million in Blue Plains over the next 10 years, the largest portion of our capital program. The projects slated for Blue Plains are central to achieving the cost savings that are outlined in our Internal Improvement Plan.

The Biosolids Management Program, developed by WASA through a stakeholders group that included neighboring jurisdictions, and adopted by the Board of Directors in 1999, calls for full biosolids digestion as our primary long-term alternative solution and continuing land application as long as financially advantageous. We have now prepared a detailed facilities plan for this project at a total cost of \$440 million. This estimate represents the current best estimate for engineering and construction. A major component of this plan is to control

odors both offsite to fulfill our responsibility to our neighbors, and onsite. The new egg-shaped digesters, when installed, will contribute greatly to onsite odor control and reduced odors in our product that leaves Blue Plains, and other projects impacting odor control in the Biosolids Management Program include new sludge-thickening facilities and expansion and upgrade of the dewatering system. When completed, this program will significantly reduce the volume of biosolids produced.

During FY 2001, it was determined that the site of the abandoned composting facility at Blue Plains would be a preferable location for the new digesters, rather than rebuilding at the current location. The composting site has the advantages of moving the digesters back from the Potomac waterfront, and reducing the visual impact on the shoreline. Design of the new digesters will be completed during FY 2002 and FY 2003, and construction will begin in FY 2004. Construction completion is scheduled for FY 2008.

Two significant capital projects address chemical handling and feed systems that have presented potential operating and safety concerns to WASA for a number of years. The first project is to provide sodium hydroxide storage and feed facilities, replacing the outdated lime feed facilities at Blue Plains. The liquid product (sodium hydroxide), while more expensive to purchase, is much easier to handle, and the feed equipment is simpler and more reliable. This project will be completed in late 2001, and the increased operations and maintenance costs are reflected in the FY 2002 operating budget.

The second project involves a transition to sodium hypochlorite (concentrated bleach) for disinfection and sodium bisulfite for dechlorination from the current liquid/gaseous products (chlorine and sulfur dioxide). Again, while the chemicals themselves are more expensive to purchase, the handling and associated safety concerns are considerably reduced. This change in disinfection procedures is scheduled to occur in FY 2003, and again, increased operations and maintenance costs are reflected in the FY 2003 operating budget.

This year's plan also reflects the continued development of the Blue Plains high priority rehabilitation program, which provides for various process equipment upgrades and replacement to insure the reliability of critical equipment while the capital improvement program is implemented. The program is being jointly developed and managed by the Departments of Wastewater Treatment and Maintenance Services.

The Process Computer Control System will monitor and control process aeration and sludge pumping systems, monitor equipment operation in each process area, control chemical feed dosing, and monitor energy use in each plant process area. This multi-year project will begin in FY 2002.

As part of the liquids processing program upgrades, construction is scheduled to begin in FY 2002 for grit chambers and screening facilities. The solids processing program calls for construction of additional dewatering facilities in the coming year.

## ***Wastewater Collection***

The 10-year capital improvement plan currently includes approximately \$252 million for rehabilitating and extending our collection system and for addressing the issue of combined sewer overflows.

WASA is responsible for wastewater collection from the District of Columbia, as well as flows from parts of Virginia and Maryland that are directed to the treatment plant via the 50-mile long Potomac Interceptor. WASA has been working with environmental groups, our wholesale customers, and the National Park Service on capital projects that address odor control and provide capital maintenance of the 30-year-old structure. Interim odor control measures have been installed at critical locations, which include odor-absorbing chemicals and carbon filters. In FY 2001, field tests were carried out to test design calculations and assumptions, and based on these tests, the National Park Service gave approval to proceed with an environmental assessment. After the assessment is completed in early FY 2002, design will be completed, and construction will take place in FY 2003. The overall project will cost \$3.7 million. In addition to odor control, more than \$13 million will be spent on Potomac Interceptor rehabilitation projects in the next 10 years.

## ***Combined Sewer Overflows (CSOs)***

Nearly one-third of the sewer system in the District is comprised of combined sewers, in which sanitary and stormwater flows are conveyed to Blue Plains in the same lines. During heavy rain events, the capacity of the combined system can be exceeded, resulting in combined sewer overflows (CSOs) directly into area waterways. Improving the quality of the area's waterways will contribute to the economic development of the nation's capital and support the Mayor's revitalization initiatives.

In response to concerns raised by area residents, the Northeast Boundary Sewer was cleaned and rehabilitated in FY 2001, and corrective actions taken will provide significant relief from flooding in areas adjacent to this sewer. This project was moved forward into FY 2001 because of the urgency of the flooding problems, and the sewer is now completely unobstructed. Efforts will continue in FY 2002 with work in conjunction with the Department of Public Works, which will lead to relief from street flooding caused by a normal storm.

Additional CSO activities involve a capital program management team (EPMC IIIa), which will begin work on comprehensive planning and assessment of the sewer system and develop a corrective action plan so that we can more systematically address capital project needs outside the combined sewer area.

A major component of our CSO program is our long term control plan. A draft of the plan was submitted to the Environmental Protection Agency in June, and is discussed in detail in the *Impact of Federal Regulatory Requirements* section of this letter, as well as in the *Capital Program* section of this book.

## ***Water System Capital Projects***

Our investment in the water distribution system will total \$358 million over the next 10 years, approximately 20 percent of the total capital program, excluding metering projects. A high priority for FY 2002 is improving the security of our water distribution system, and we have received a grant from the Environmental Protection Agency to assist in carrying out that work. The authority will install electronic security upgrades at reservoirs, pumping stations and water towers. Improvements will include cameras, and intrusion detection devices, and work throughout the system will be completed during FY 2002.

The schedule for water system projects has been revised due to difficulties with permitting requirements and the street cut moratorium. Also, WASA is attempting to coordinate with other utilities to minimize disruptions to city streets, which has also slowed project completion. One valve improvement contract was executed in FY 2001, with another scheduled for FY 2002. This work needs to be completed prior to moving on to cleaning and lining capital projects.

Construction work will begin in FY 2002 on the Anacostia water storage plan, followed by work on pumping facilities. We have revised this plan in order to provide better service to our customers, who have had problems with water pressure, and to support neighborhood growth and development.

A major rehabilitation project is underway at the Bryant Street facilities and will continue in FY 2002. Parking lot paving has begun, which will have a positive impact on the neighborhood as utility vehicles no longer occupy streets in the area. The project will include pump upgrades to improve reliability of water delivery and security upgrades.

## **OPERATIONS**

### ***Security***

We are actively pursuing federal funds to enhance security at all WASA-owned sites following our heightened awareness brought on by the September 11 attacks on the Pentagon and World Trade Center. Ensuring security has always been a critical matter for WASA, and grant funding is already in place to upgrade electronic security at water storage facilities throughout the system. Work will include upgrading camera equipment and intrusion detection devices will be installed. Security upgrades are budgeted for the O Street pump station in FY 2003. Included in the plan is a new guard booth, automated gates, and surveillance and monitoring equipment installation. We are coordinating security measures with the Washington Aqueduct to assure the safety of both water treatment and water distribution facilities.

We initiated a complete facilities security review in FY 2000, working with the Federal Bureau of Investigation, the Federal Protective Service (GSA), the Bureau of Alcohol, Tobacco and Firearms, the Metropolitan Police Department. We continue to work with our neighbors at the Naval Research Laboratory and Bolling Air Force Base, and the District of Columbia and federal governments to assure that coordinated security measures are in place.



## **Safety**

WASA continues its commitment to health and safety programs. Our operating budget for safety supplies, training, and equipment will be over \$1 million per year for both FY 2002 and FY 2003.

The Comprehensive Safety Plan (CSP) for the Authority was released in July, 2001. It addresses personal safety issues and accident prevention, reporting, and investigation, and provides for specific, measurable milestones to determine progress and accomplishments. It also includes a component for maintaining a plan to ensure emergency planning and training is regularly updated and practiced annually for emergencies related to fire, chemical spills, bomb threats or other emergency incidents. An interim plan was implemented, and is being refined in light of our heightened awareness following the September 11 terrorist attacks.

The CSP also addressed procedures for key departments and included components for safety training in areas such as driving and chemical handling. Safety policies were completed during FY 2001, which were integrated into the new union contract.

## **WASA in the Community**

As part of our strong emphasis on serving our customers, we strive to extend a helping hand to our community. Among the community service activities that we have participated in or will initiate are:

*Georgetown Joint Utility Project* – In June, WASA entered into the Georgetown Joint Utility Project with Pepco, Washington Gas, and Verizon. This project was created after the Georgetown community experienced major economic disruption caused by underground electrical fires. Pepco subsequently determined that they would have to disrupt the neighborhood even further to repair aging infrastructure. In an effort minimize negative impact on residents and businesses in the area, the District of Columbia government asked other utilities to agree to upgrade their systems at the same time. WASA activities that were rescheduled to minimize inconvenience to the community include replacing fire hydrants and improving connections to main sewer lines.

*Christmas in April* – For the second year, WASA staff participated in the Christmas in April program, designed to help residents with maintaining their properties when they do not have the resources to do work on their own. On April 28, 2001, volunteers from WASA's Sewer Services Department performed repair work on a broken sewer lateral for a resident in a northeast neighborhood.

*Keep America Beautiful* – WASA volunteers from the Sewer Services, Facilities, and Human Relations Departments participated in the "Keep America Beautiful" campaign on Saturday, March 24, 2001. Activities included catch basin cleaning, painting fire hydrants, and general cleanup. WASA also provided paint to the Fort Davis Civic Association for volunteers to paint fire hydrants in that neighborhood.

*Adopt-a-Block Program* – WASA employees have worked with the Office of the Mayor on the District's Adopt-a-Block program. WASA has adopted a block on Martin Luther King Avenue and another on Benning Road. Employees clean catch basins, and provide paint and brushes for neighborhood groups to paint fire hydrants. WASA employees also participate in other clean up activities sponsored by individual wards, providing both services and materials.

*Water Day, 2001* – On June 19, WASA sponsored its first Water Day. Area restaurants donated a portion of their proceeds to the customer assistance program that offers emergency grants, based on voluntary contributions. Six restaurants participated in the event, and WASA hopes to expand participation by members of the hospitality industry in years to come.

*Joint Utility Discount Day* – October 2000 marked WASA's first participation in the Joint Utility Discount Day, held at the Washington Convention Center. Over 4,000 residents attended the event in order to apply for discounted water, electric, gas, and telephone bills. More than 1,300 participants qualified for the water discount, which is approximately \$84 per year for average water consumption. WASA employees assisted participants with the application process and distributed water conservation kits to everyone in attendance. Additionally, day-long demonstrations of home water conservation techniques were presented. Approximately 30 WASA employees participated in the 2001 event on October 18.

*Stanton Elementary School Partnership* – WASA rehabilitated a major water storage facility near the playground of Stanton Elementary School two years ago. After the work was completed, WASA planted and fenced in a flower garden to enhance the appearance of the facility, located at the intersection of Naylor Road and Alabama Avenue, S.E. Since that time, we have maintained a partnership with the school by assisting in the maintenance of the garden.

### ***Applied Research***

WASA continues to support and implement research to develop improved methods of carrying out our mission. The Blue Plains Advanced Wastewater Treatment Plant provides numerous opportunities for demonstration of new technical approaches and ideas. The FY 2002 budget includes funding for the following significant research efforts:

- In cooperation with other utilities in Maryland and Virginia, WASA is funding the third and final year of a major project involving the mobility of phosphorus from biosolids to the aquatic environment. This research is being conducted by the University of Delaware, Virginia Tech, the University of Maryland, and Penn State University.
- Through our sponsorship of the Water Environment Research Foundation, WASA is participating in another collaborative research effort involving utilities around the world to develop new technology to improve wastewater system operations. WASA staff serves on project advisory committees addressing health and safety and management issues.

- WASA is supporting joint research by the University of Maryland and the United States Department of Agriculture to assess odors associated with land application of biosolids.
- WASA has begun a partnership with Howard University, College of Engineering, Architecture and Computer Sciences to develop a wastewater technologies center, initially focusing on the application of membrane and filtration processes to improve wastewater treatment efficiency.
- Through the Washington Aqueduct, WASA provides support to the American Water Works Association Research Foundation, a national collaborative research effort involving over 1,000 utilities and other supporters around the world. Research projects address drinking water quality, operation and maintenance methods, health effects, and management issues.

### ***Regionalization Study***

Another milestone in our history as an organization was accomplished in January 2001 with the completion of the regionalization study. Our enabling legislation required us to study the ongoing relationship of user jurisdictions to WASA as well as the scope of services provided to the region. The Board established a special ad hoc committee, the Privatization / Regionalization Committee, to direct this effort and utilized the services of the Metropolitan Washington Council of Governments to complete the study. Completed in January, this study looked at a wide range of possible configurations of WASA. The final Board-adopted study strongly endorsed the current governance and organizational structure and operational and financial successes to date, and each participating jurisdiction in the Intermunicipal Agreement supported the recommendation to maintain the current structure. The report expressed great confidence in WASA's actions to preserve financial and management independence, and included a provision to reexamine our governance structure again no later than 2005.

### ***Blue Plains Permit Renewal***

We continue to operate under the conditions of our original NPDES permit, originally effective through June 30, 1999. Our application for renewal was submitted in a timely manner, and we are in the final stages of negotiating our new permit with the EPA. We anticipate finalization of the new permit by early 2002, and expect only minor changes in current requirements. We also anticipate that this five-year document will provide a stable road map for future plant improvements, and expect that permit language addressing progress toward mitigating combined sewer overflows will be included in the new permit.

### ***Wastewater Collection***

In FY 2001, the Department of Sewer Services cleaned approximately 25,000 catch basins and repaired 600. Over 100 miles of sewer lines were cleaned, and approximately 350 inspections of the lines were performed. A fifth project management team will start work during FY 2002 on developing a comprehensive inspection and preventive maintenance program for the wastewater collection system.

## **WATER SYSTEM INITIATIVES**

### ***Drinking Water Quality***

For the past 61 months, we have surpassed water quality requirements set by the EPA, and can safely state that the District's past water quality concerns are no longer an issue. The EPA has commended us for meeting the requirements of a consent decree in a timely manner.

WASA produced its third consumer confidence report, and, in FY 2001 continued its Cross-Connection Control Program. This program is a partnering effort involving WASA, the EPA, and the Departments of Health and Consumer and Regulatory Affairs of the District government. To protect public health, WASA and these partners are encouraging local businesses to install backflow prevention devices at the water service connection, which prevents contaminants from entering the drinking water supply.

Annually, each spring through fall, WASA conducts an aggressive flushing program to systematically "flush" water mains in the distribution system. Flushing water through the pipes at high velocities removes buildup in pipes that can cause rusty or "dirty" water problems, and also reduces potential for bacterial growth in the distribution system.

### ***Distribution System***

*"Sold v. Pumped" Ratio* – Our sold vs. pumped ratio has remained steady over the last two years at approximately 67 percent. Unlike most other utilities, we do not adjust our ratio – it is not modified to reflect normal uses of water for activities such as firefighting, street cleaning, and system maintenance activities (including flushing and cleaning and lining). We will complete our two year water audit in early FY 2002; this study will assist us in identifying the sources of unaccounted for water and potential actions to take to address this issue. Other actions taken to date include the recent completion of our large meter testing and repair contract this past summer – the results of this project indicate that a significant portion of our large meters are under-registering consumption by 18 percent on average. The completion of this project and the beginning of our comprehensive meter replacement program should help address this issue. We have also improved our response time to water main breaks and significantly reduced our backlog of main breaks and service line repairs.

### ***Water Conservation Study***

WASA has completed a water conservation study, and is continuing its water conservation program into FY 2002. Water audits were performed by WASA at 23 sites in FY 2001, including Howard University, the Martin Luther King Memorial Library, and other public buildings. The potential for significant savings was found at each audit site, and the activities of the past year served as a model for future use when auditing large commercial accounts. Other continuing activities include providing technical assistance and distributing household water conservation materials to our customers. In the fall of 2001, staff from across the WASA organization again participated in conservation efforts when they presented daylong demonstrations of household conservation practices and distributed conservation

materials to approximately 4,000 District of Columbia at the Joint Utility Discount Day signup event, and staff is involved in additional separate conservation efforts in the community.

### ***Fire Hydrants***

Since 1997, we have succeeded in improving the number of hydrants in operation, and continue to work with the fire department to establish standard operating procedures for identifying needed repairs to maintain our operations and the safety of District residents. Routine maintenance, including inspection and operation, was performed on approximately one-third of the hydrants each year beginning in the last fiscal year, and a daily log of hydrants in service and out of service was initiated in FY 2001. Our goal is to investigate any report of malfunctioning fire hydrants within 24 hours, and needed repairs are to be made in five working days. Continuing into FY 2002, we will provide paint and brushes to neighborhood groups for maintaining the appearance of hydrants as part of beautification efforts, in addition to our own painting program.

## **INTERNAL IMPROVEMENT PLANS**

We continue our organization-wide focus on improving service to our customers through the implementation of Internal Improvement Plans (IIP). A clear mandate from the Board has been to streamline operations and reduce costs wherever possible, and the Internal Improvement Plans serve as our roadmap to accomplishing these critical goals. As an indication of our commitment to the IIP, our 10-year plan assumes that operating and maintenance expenses will only increase by 1.4 percent annually after FY 2003, less than the historical rate of inflation. In total, we have reduced 310 positions since the Congressionally-approved FY 1998 budget was adopted.

A new focus in FY 2002 and FY 2003 is the creation of a productivity analysis and planning group that will lead our organization-wide efforts to accomplish the goals laid out in each departmental IIP. A summary of the IIP and recent accomplishments for each area of our operations follows:

### ***Blue Plains***

We continue to implement our Blue Plains IIP. This plan, which was presented to the Board in March 2000, projected total position reductions of 228 at Blue Plains and annual cost savings of \$23 to \$24 million when fully implemented in seven to eight years, with approximately half of the savings to be achieved due to new capital projects. In addition to WASA personnel reductions, the plan called for reducing the number of contractor full time equivalents at the plant from 166 to 36. In FY 2001, we eliminated 35 positions at Blue Plains, and in FY 2002, have reduced an additional 50 positions. Maintenance Services has begun a reduction of some contractual services, particularly in the area of small process equipment maintenance. The recent labor agreement also included modifications to work rules to support our IIP efforts. Finally, we have begun implementation of a number of capital projects that are critical to meeting our IIP goals, including the initial design and implementation phases of the process computer control system, a new chemical feed system, construction of additional dewatering facilities, and design of the new digesters.

### *Customer Service*

Implementation of our Customer Service IIP is well underway. As discussed earlier, our new customer information system went live in June 2001, and as a result, we have achieved our dual goals of increasing operating efficiency and improving service to our customers. The FY 2002 budget reflects the efficiencies achieved by the new system, including outsourcing the billing and account maintenance functions. The implementation of the automated meter reading system, beginning in FY 2002, will introduce further accuracy and efficiency into our customer service activities, with meter consumption information transmitted from meters directly to WASA. Both systems will reduce manpower needs while improving service. Additional investments in interactive voice response and automated service dispatch will yield operating efficiencies.

### *Water & Sewer System Operations*

We recently completed an initial evaluation of our Water Services and Sewer Services operations. This analysis identified “benchmark” staffing levels approximately equal to the number of currently filled positions. It also outlined opportunities for cross-functional sharing of resources during peak service demand periods (specifically during winter months to deal with water main breaks and support needed for the capital improvement program), and appropriate levels of equipment and parts to be provided to field crews. We have reduced 42 positions in this year’s budget, based on improved work methods suggested by the plan. These positions are vacant, for the most part.

### *Other Departments*

While the primary focus of our internal improvement efforts has been at Blue Plains and in Customer Service, we have also restructured other areas of our operations as needed, including reducing unnecessary positions. These efforts include:

- Reorganization of our finance and budget areas in FY 1999, reducing the number of positions from 65 to 42
- Realignment of responsibilities between the Departments of Maintenance Services and Facilities and Security to ensure a proper separation of plant process maintenance and facilities maintenance and to reduce contractual services costs
  - In FY 1999, 23 positions were transferred from Maintenance Services to Facilities
  -

## **CUSTOMER SERVICE**

Our former Water Measurement and Billing Department was one of the first areas to receive attention when we became an independent agency. Customer requests were not resolved and many meter reads were inaccurate or estimated for long periods of time.

Key additions were made to the management team, and an initial effort was made to train customer services representatives to focus on customer needs. Procedures were developed that reduced the time that it took to respond to customer inquiries and complaints, and we moved our walk-in office to a more convenient location for our customers. After these changes were made, we changed the name of the department to Customer Service to reflect the new mission of the department.

FY 2001 was a year of dramatic improvements in WASA's Customer Service Department. The most visible indication of change to our customers was the new customer billing and information system, implemented on June 4, 2001. The new system enhanced service to our customers with such features as credit card payments, electronic funds transfer capability, and internet access to account information. Additionally, customer service representatives are able to provide customers with timely, accurate, and consistent information. The new system utilizes an innovative application service provider (ASP) solution, which involves outsourcing key responsibilities including bill generation and mailing, basic account maintenance, and hardware/software maintenance. The ASP solution puts WASA at the forefront of the industry, and is an approach that other utilities have not taken. This approach has resulted in savings for supplies and equipment, as well as reduced staffing needs. The FY 2002 authorized position count has been reduced to 123 positions.

The large meter testing program was completed in FY 2001, in which approximately 2,500 large meters were tested and nearly 900 meters were repaired. On average, test results indicated that meters were running 18 percent slow. We purchased new testing and repair equipment for our meter shop, and WASA staff received training in meter repairing to increase staff efficiency. Subsequent to testing, repairs performed were prioritized based on consumption. Revenues are projected to increase in FY 2002 now that this program has been completed.

The second component of WASA's metering project is the comprehensive meter replacement/automated meter reading program. This project will replace the nearly 130,000 meters in our water system with meters that will automatically transmit consumption data via cellular technology. This will introduce tremendous efficiency and accuracy into the meter reading and billing process. The current cost for a single meter read is currently \$2.96; upon completion of this program, the cost to read a meter will decrease to \$1.13, and costs will continue to decline thereafter. Staff conducted site visits during FY 2001, selected a vendor, and completed the contracting process. Installation of new meters will begin with replacement of residential meters in FY 2002 and FY 2003, and as meters are replaced, customers will begin to be billed on a monthly, rather than quarterly, basis. The entire meter changeout is scheduled to be completed in approximately two years. We will continue our efforts to take ownership of commercial, municipal, and federal meters that are currently owned by customers as we proceed with the meter replacement program.

Another activity scheduled for FY 2002 is installing meters for our cooling tower accounts. These accounts receive a reduction in wastewater consumption charges, based on the fact that these customers are discharging a volume into the sewer system that is less than their water consumption. Rather than calculating the difference, metering will produce the precise amount that should be billed.

Work on a WASA-wide Service Dispatching and Work Management system will begin in FY 2003. With the implementation of this system, customer calls will be routed to the nearest available truck for diagnosis of water leaks or billing/meter investigations, and information will be relayed to the call center or any other user in WASA that needs the information instantaneously upon completion. When customers pay their bills, the information can be immediately accessed from a service vehicle to confirm payment and eliminate any confusion about payment status. Most customer problems will be resolved the day they are scheduled to be worked, with no lag for processing and lost paperwork – there will be no paper to process. Confusion and miscommunications due to radio traffic will be eliminated and scheduling of work will become a simple task. Significant productivity improvements will result when these this system is completely on line.

## **INFORMATION TECHNOLOGY**

With these budgets, we continue our focus on another Board priority: to be an industry leader in the introduction of technology to deliver water and wastewater services. We fully implemented our financial management system in six months, successfully going live on the first day of FY 2001. Our new Customer Information System (CIS) went live on June 4, and immediately offered convenient payment options to our customers. The evaluation phase for the maintenance management/inventory system was completed at the end of FY 2001, and beginning in early FY 2002 will follow a nine-month schedule to complete implementation. For every major technology project that we undertake we are assessing cost savings and productivity growth. These activities will be formalized in the context of the Information Technology Strategic and Master Plan, which will be released in the fall 2001.

In FY 2002, we will fully entrench the new financial system in all of WASA's financial operations, including interfaces with CIS, and maintenance management/inventory systems. We are currently preparing a state-of-the-art, customer/constituent focused Web page, integrated with our financial systems, allowing customers and constituents to obtain any needed information and complete all customer transactions on line. In conjunction with these activities, we have installed firewalls and state-of-the-art encryption software to protect our own resources and to ensure confidentiality of customer information now that transactions can be completed online.

The maintenance management system is scheduled to be online by the end of FY 2002, at a cost of \$2 million. Phased work will begin on the process computer control system in the upcoming year. A significant new focus for WASA will be planning for and building progressive information technology and business practices into all of WASA's operations. These efforts are key to achieving the IIP goals as directed by the Board, and will be led on a collaborative basis by Information Technology, Engineering and user departments. The synergies available from these efforts are significant and, when these systems are in place, WASA will be among the industry leaders in the usage of information technology to meet its customer and constituent expectations. Disbursements for technology initiatives are expected to be nearly \$12 million in FY 2002 and FY 2003 combined.



## **PUBLIC RELATIONS**

The Office of Public Affairs has assumed the role of managing all publications, including our customer newsletter *What's on Tap* and mass mailings, as well as managing information on WASA's Web site, giving WASA a consistent image with customers and the community at large. During FY 2001, key vacancies were filled that enhanced our capability to produce publications using inhouse resources. The department also introduced training for managers in public relations and media relations, and began publication of a monthly employee newsletter.

The Office continues its role of providing support for special projects initiated by the Board of Directors and the General Manager, publishing the Annual Report, and preparing testimonies and presentations for public hearings, governmental briefings and community meetings.

## **ORGANIZATION AND ADMINISTRATION**

### ***Internal Audit***

The Internal Audit Office was fully staffed in FY 2001 with the hiring of two professional auditors, augmented by contractual services, for the purpose of reviewing and appraising the soundness, adequacy, and applications of accounting, financial, and other operating controls. Internal Audit reviews key business process and business risks throughout the entire organization.

Internal Audit continues to focus on implementation of an Annual Audit Plan, approved by the Board's Audit Committee. During FY 2001, 15 audits were completed, including review of the WASA financial system implementation, ongoing payroll testing, and purchasing card pilot program review.

## ***Human Resources***

The performance management system, designed to provide two-way communication of performance goals and expectations, was institutionalized in FY 2001 for non-union employees. Training sessions were conducted for managers and staff throughout the Authority to promote a thorough understanding of the pay-for-performance program. In addition, the new union contract calls for pay for performance beginning in FY 2003, becoming the first collective bargaining agreement in the District to contain such a provision.

Another major accomplishment in FY 2001 was the implementation of the time and attendance module of the payroll/human resources system that was brought online in FY 2000. This module allows for accurate and uniform pay calculations, and will also contribute to staff reductions in accordance with the Blue Plains Internal Improvement Plan by eliminating the need for many of the timekeeper positions in various departments.

A total of 73 positions were filled during the year, either with outside hires or internal promotions.

Major activities in FY 2002 will include rebidding the benefits contracts for WASA employees, and fully implementing the pay-for-performance and gainsharing components of the new union contract.

*Training* - Training continues to be a major area of focus, budgeted at approximately \$2 million annually in FY 2002 and FY 2003, ensuring that our employees have the skills necessary to complete the Authority's mission. WASA's training program consists of three major components: mandatory (including safety training); technical; and, skills improvement.

In FY 2001, we completed an organization-wide basic skills needs assessment for first line supervisors and employees. The assessment measured comprehension levels and problem-solving skills. Data from the assessment will be instrumental in designing basic skills development and management development programs in FY 2002.

In January 2001, the Authority required all wastewater treatment operators to be certified. Training classes were offered on a continuous basis to prepare operators for certification tests. As a result of this training program, 40 operators have received their required certifications. In addition to the operators, employees from the Department of Maintenance Services attended in order to expand their job knowledge. Four maintenance employees have also attained wastewater treatment operator certification.

In support of the Internal Improvement Plan, a pilot maintenance certification program was designed and implemented for employees in the Department of Maintenance Services. This program is the first of its kind in the country to be offered by a wastewater treatment facility, and is similar to a program offered by the International Maintenance Institute (IMI). Thirty two employees have received their IMI certification as a result of this program.

*Labor Relations* – During most of FY 2001, WASA was in negotiations with its five collective bargaining units. In September 2001, an agreement was made effective for all union employees. Major provisions of the new four-year agreement include:

- A performance-based lump sum bonus in FY 2003;
- Participation in the WASA benefits program for post-1987 employees;
- A gainsharing program in FY 2003;
- Discipline for positive drug and/or alcohol test results; and
- Uniform testing levels and procedures for all WASA employees.

*Benefits* - In January, 2000, WASA implemented and began administration of its own benefits program, independent from the District program. The program includes health and welfare and retirement plans. Employees may elect to participate in medical, dental, vision, group life, and short- and long-term disability insurance plans. Employee costs for these benefits are deducted on a pre-tax basis. Additionally, employees may elect to take advantage of pre-tax savings by participating in health care and dependent care flexible spending accounts. WASA contributes to a 401 (a) retirement plan for eligible employees, and employees have the opportunity to make elective contributions to a 457 (b) retirement plan and receive matching contributions from WASA. This program will be extended from non-union employees to eligible union employees in January 2002.

*Internship Program* – WASA is firmly committed to supporting and encouraging the educational goals of college students by exposing them to careers in wastewater treatment and water distribution through its internship programs. Participants in the programs receive opportunities to work closely with diverse groups of professionals performing critical tasks that are required to operate a large utility. Exposure to careers and opportunities at the Authority help the interns make a conscious decision about their academic and career choices. We had 29 interns participating in our FY 2001 program. The intern program is paid for with savings from vacancies, and is offered at no additional cost to our ratepayers.

*Ground Hog Job Shadow Day* – On February 2, WASA participated in this national effort designed to enrich the lives of young people by hosting three students from Jefferson Junior High School. Each of the ninth graders spent the day shadowing WASA personnel in their areas of professional interest – Human Resources, Public Affairs, and Engineering.

### ***Risk Management***

WASA has entered its fourth year with a comprehensive Risk Management Program, designed to cost effectively manage WASA's financial risks and protect its assets.

During the past year an Alternate Duty Program was implemented to bring employees back to work after an on-the-job injury. This program is designed to return the injured employee to work status, while meeting the physical requirements of the individual, and thereby reducing the cost of claims to WASA.

Also in FY 2001, Risk Management completed an evaluation of all insurance costs and coverages. It was found to be more cost effective to self-insure than to maintain insurance contracts for automobile and workers' compensation coverage. WASA will self-fund the first \$1 million for any one loss and maintain excess levels of insurance. A third-party administrator was contracted to oversee workers' compensation and third party liability claims, reducing the time needed to process claims and providing cost savings for the Authority.

### ***Procurement***

Procurement training was initiated in FY 2001 with quarterly workshops for managers, first line supervisors, and requisition specialists. Topics included ethics in procurement, non-competitive procurements, statement of work preparation, emergency procurement procedures, and contractor performance evaluation. Training personnel for procurement certification also continued in FY 2001, and will be ongoing in FY 2002.

The emphasis on meeting the Board of Directors' Business Development Plan continued. This plan commits the Board to evaluate the Authority's performance in promoting certified local, small and disadvantaged businesses (LSDBE's). The goal set by the Board for LSDBE participation is 50 percent of all discretionary spending, and this guideline is followed for all new solicitations for outside vendors.

Efforts to realign inventory were continued in FY 2001 with an assessment of inventory serviceability and obsolescence, and establishment of appropriate inventory levels. An e-contracting management system has been developed to accommodate inventory data, which will be converted into the maintenance management system, after it becomes functional in FY 2002. All of these efforts provide the support to convert to "just in time supply" inventory.

### ***Fleet Management***

WASA ended FY 2001 with a fleet of 546 registered vehicles and 39 non-registered vehicles, which is within the range of the industry average for an organization such as WASA. The average age of the fleet has now been upgraded to approximately three and a half years old.

During FY 2001, General Motors approved WASA's fleet maintenance facility as a warranty repair center. This will result in substantial savings to the Authority in FY 2002 by reducing the down time need to schedule repairs with a dealership, and vehicle delivery and pickup.

We are continuing to work on curtailing vehicle abuse by evaluating the skills of drivers and tailoring training programs to the needs that are identified. Activities aimed at reducing abuse of vehicles include training in driving procedures on ice and snow, use of antilock brakes, operation of water and sewer equipment, and defensive driving. Driver evaluation is also part of the effort to curb vehicle abuse.

### ***Facilities***

Following the realignment of the Department of Facilities and Security, incorporating employees from the Department of Maintenance Services, a renewed emphasis was placed on the condition of WASA facilities and their security. A number of major projects were undertaken in the past year, including major renovations to the workspace in the Central Operations Facility (COF) building at Blue Plains, asbestos abatement and lead-based paint removal was completed at our O Street and Bryant Street facilities. Additionally, restroom renovations were completed at Bryant Street, bringing them into compliance with Americans' with Disabilities Act (ADA) standards. Roofs were replaced on six buildings at the Blue Plains facility and at the Fort Reno pumping station.

Activities planned for FY 2002 include continuation of the COF renovations, including elevator replacement and renovations to bring all restrooms into ADA compliance, and a major Blue Plains landscaping project will be undertaken. The secondary blower building will also be renovated to accommodate staff from the Department of Engineering and Technical Services.

These budgets are the culmination of the entire organization in reviewing our operating and capital activities. We believe this plan meets our customer service and environmental commitments on a cost-effective basis. I welcome the opportunity to work with the Board in the coming weeks as we review this budget, a concrete demonstration of our commitment to our customers and our commitment to the environment.

I would like to extend a special thanks to the WASA employees who assisted in putting together this budget document. The bottom line and goal of this entire budget submission is to *provide excellent service delivery to our customers*. WASA's management and staff have this united focus throughout the Authority, as we move closer to becoming a world-class operation.

Sincerely,

Jerry N. Johnson  
General Manager



## **SUMMARY INFORMATION**



**Date Established:** October 1, 1996

**Service Area:** Approximately 725 square miles

Retail water and wastewater service provided to the District of Columbia

Wholesale wastewater treatment service provided to Montgomery County and Prince George's County in Maryland (through Washington Suburban Sanitary Commission), and Fairfax and Loudoun Counties in Virginia

**Blue Plains:** The largest advanced wastewater treatment facility in the world

**Population Served:** 572,000 in the District of Columbia (2000)  
Over 1.6 million in Maryland and Virginia

**No. of Positions:** 1,344 (FY 2000)  
1,309 (FY 2001)  
1,198 (FY 2002)  
1,198 (FY 2003)

**Water Pumped:** 131.9 million gallons per day average (FY 2001)

**Treated Water Storage:** 52 million gallons / 8 tanks

**Miles of Water Lines:** 1,300 miles

**Wastewater Treated:** 322 million gallons per day average (FY 2000)

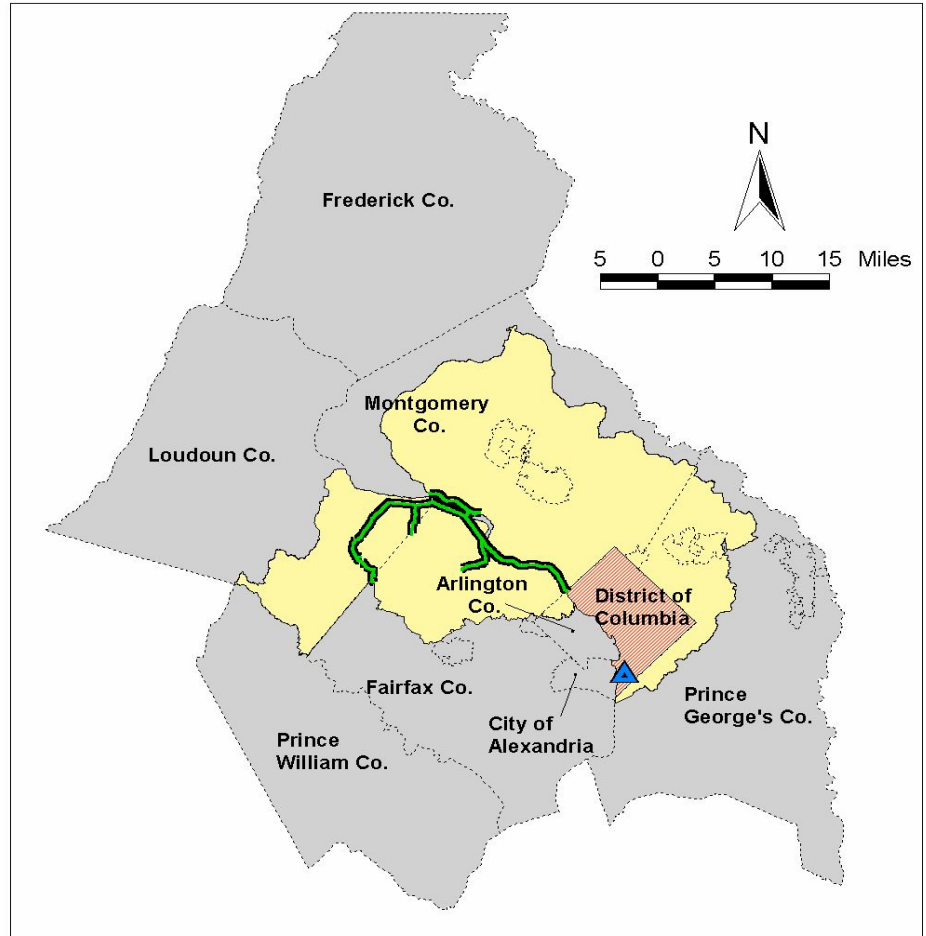
**Wastewater Capacity:** 370 million gallons per day (permitted)

**Miles of Sewer Lines:** 1,800 miles

**Bond Ratings:** A1/A/A+



Service Area



**Legend**  
**Facilities managed by & Service Areas Served by DC-WASA**

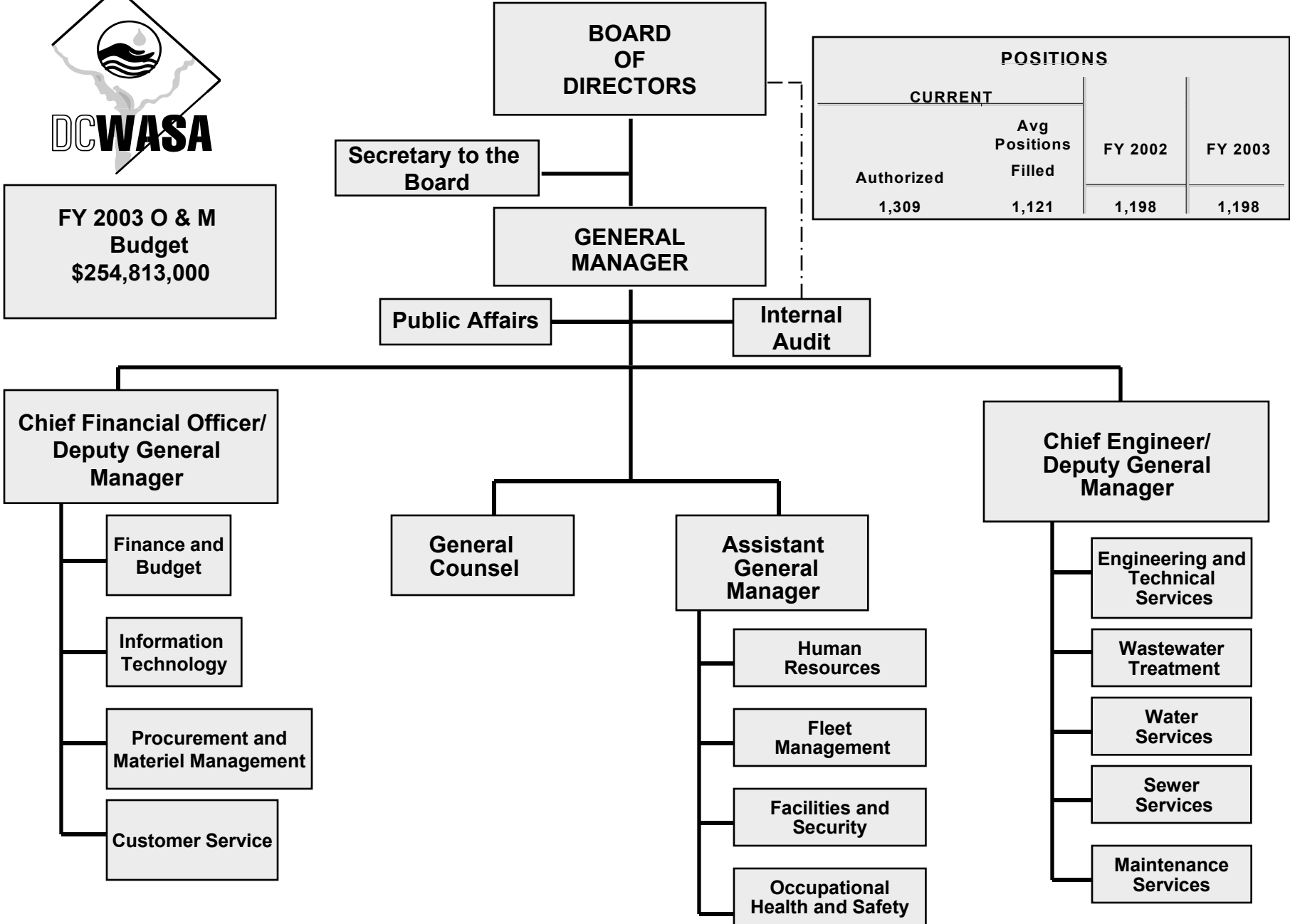
- Blue Plains Wastewater Treatment Plant
- Potomac Interceptor
- Jurisdictional Boundaries
- DC Water Distribution & Sewage Collection Systems
- Blue Plains Service Area (suburban portion)
- Blue Plains Service Area (DC portion)

Prepared for DC-WASA by Department of Environmental Programs  
Metropolitan Washington Council of Governments  
Created on: February, 2001

**Note:** WASA's service area covers the District of Columbia and portions of Montgomery and Prince George's Counties in Maryland, and Fairfax and Loudoun Counties in Virginia.



**FY 2003 O & M  
Budget  
\$254,813,000**



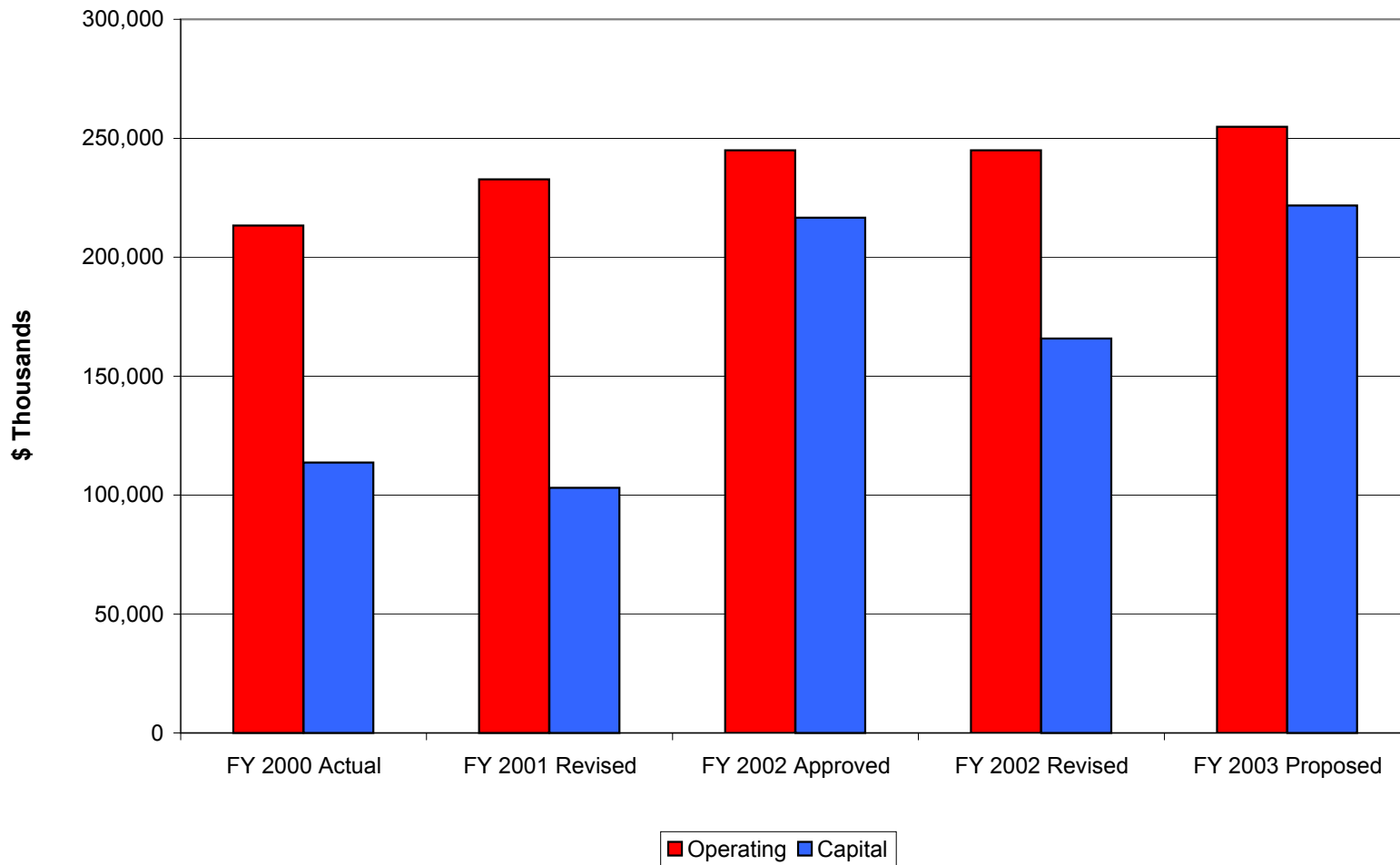
POSITIONS			
CURRENT		FY 2002	FY 2003
Authorized	Avg Positions Filled		
1,309	1,121	1,198	1,198

### Primary WASA Performance Measures and Targets

Title	Performance Target	FY 2001 Actual Performance
<b>Customer Service</b> <ul style="list-style-type: none"> <li>• Meter Reading Accuracy Rate</li> <li>• Calls Answered</li> </ul>	<ul style="list-style-type: none"> <li>• 99.9%</li> <li>• 97% serviced in 2 minutes</li> </ul>	<ul style="list-style-type: none"> <li>• 99.7%</li> <li>• 84% serviced in 2 minutes</li> </ul>
<b>Water System</b> <ul style="list-style-type: none"> <li>• Drinking Water Quality</li> <li>• Response time for Water Main Breaks</li> <li>• Percent of Fire Hydrants in Service at all times</li> </ul>	<ul style="list-style-type: none"> <li>• Exceed EPA requirements</li> <li>• Respond in less than 45 minutes</li> <li>• 99%</li> </ul>	<ul style="list-style-type: none"> <li>• Exceeded EPA requirements</li> <li>• 99.5% response within 45 minutes; average time to complete repair -- 10 days</li> <li>• 99.11% (as of mid-Sept. 2001)</li> </ul>
<b>Wastewater System</b> <ul style="list-style-type: none"> <li>• EPA Wastewater Quality Standards</li> <li>• Catch basin cleaning</li> </ul>	<ul style="list-style-type: none"> <li>• 100% compliance with EPA wastewater quality standards</li> <li>• 25,000 per year</li> </ul>	<ul style="list-style-type: none"> <li>• 100% compliance with EPA wastewater quality standards</li> <li>• 25,000 (as of mid-Sept 2001)</li> </ul>
<b>Financial</b> <ul style="list-style-type: none"> <li>• Senior Debt Service Coverage</li> <li>• Operating Cash Reserves</li> <li>• Net Operating Results (Cash Basis)</li> </ul>	<ul style="list-style-type: none"> <li>• 140% Board policy</li> <li>• 192% - 2001 projection</li> <li>• 180 days O&amp;M expenses – Board policy</li> <li>• \$116.1 million - 2001 projection</li> <li>• Exceed budget</li> </ul>	<ul style="list-style-type: none"> <li>• 238% (after transfer to rate stabilization fund)</li> <li>• \$123.2 million</li> <li>• \$21.2 million (budget \$13.1 million)</li> </ul>

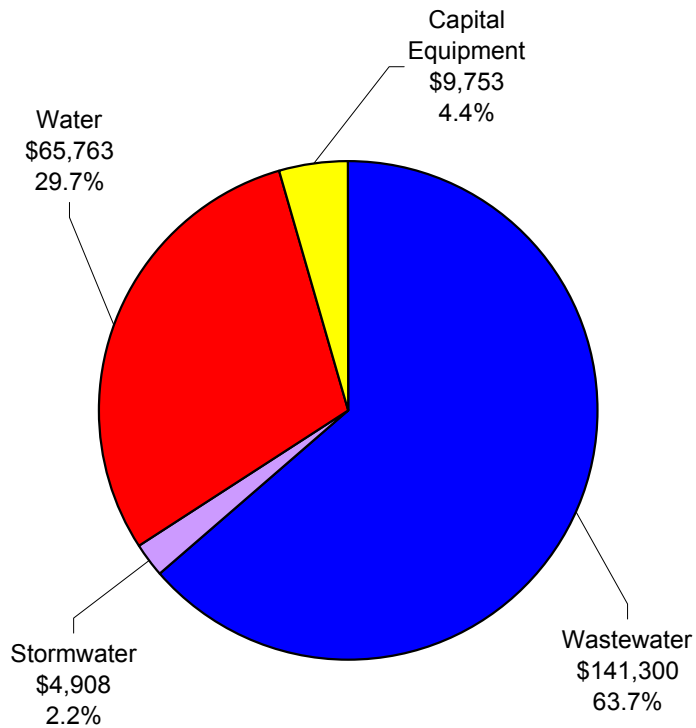
**NOTE:** This page describes the primary performance measures WASA is focusing on, based on Board of Directors' strategic plans and feedback from customers and other constituents.

# Operating and Capital Expenditures FY 2000 - FY 2003

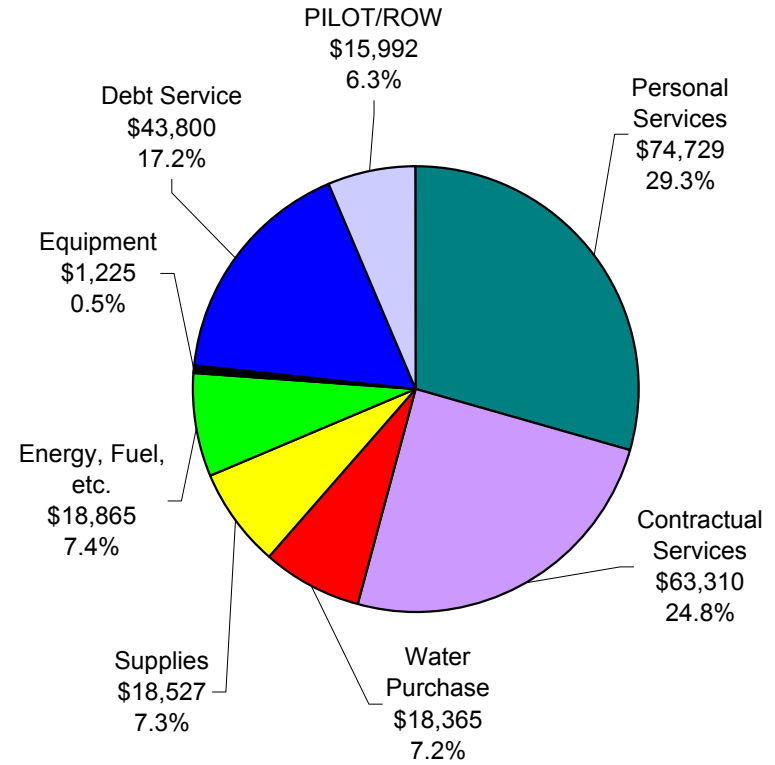


# FY 2003 Proposed Budget (\$000's)

CAPITAL = \$221,724



OPERATING = \$254,813



**Comparative Expenditures**  
**(\$000's)**

	<b><u>FY 2000 ACTUAL</u></b>	<b><u>FY 2001 REVISED</u></b>	<b><u>FY 2002 APPROVED</u></b>	<b><u>FY 2002 REVISED</u></b>	<b><u>FY 2003 PROPOSED</u></b>
<b><u>CAPITAL</u></b>					
Wastewater	73,365	56,002	142,259	97,964	141,300
Stormwater	211	194	4,932	3,353	4,908
Water	27,622	33,093	59,769	49,040	65,763
Capital Equipment	12,524	13,807	9,603	15,464	9,753
<b>Total Capital</b>	<b><u>113,722</u></b>	<b><u>103,096</u></b>	<b><u>216,563</u></b>	<b><u>165,820</u></b>	<b><u>221,724</u></b>
<b><u>OPERATING</u></b>					
Personal Services	68,746	69,145	71,914	72,595	74,729
Contractual Services	55,611	60,328	60,657	63,964	63,310
Water Purchase	16,358	18,365	18,365	18,365	18,365
Supplies	11,491	14,725	14,875	16,845	18,527
Energy, Fuel, etc.	19,960	18,317	18,390	18,849	18,865
Equipment	763	1,147	1,039	1,236	1,225
Total O&M	<u>172,929</u>	<u>182,027</u>	<u>185,240</u>	<u>191,855</u>	<u>195,021</u>
Debt Service	31,163	35,716	44,244	37,537	43,800
PILOT/ROW	9,177	15,022	15,494	15,493	15,992
Subtotal Operating	<u>213,269</u>	<u>232,765</u>	<u>244,978</u>	<u>244,885</u>	<u>254,813</u>
Transfer to Capital	(5,472)	(6,000)	(6,000)	(6,000)	(6,000)
<b>Total Operating</b>	<b><u>207,797</u></b>	<b><u>226,765</u></b>	<b><u>238,978</u></b>	<b><u>238,885</u></b>	<b><u>248,813</u></b>

## STATEMENT OF CASH FLOWS

	FY 2001 Actual	FY 2002 Approved Budget	FY 2002 Revised Budget	FY 2003 Proposed Budget
<b>OPERATING BUDGET</b>				
<b>Operating Cash Provided:</b>				
Retail	\$ 172,808,000	\$ 194,239,000	\$ 191,172,759	\$ 199,871,000
Wholesale	46,270,000	45,955,000	49,143,099	49,635,000
Other Operating Cash	18,381,000	14,076,000	11,759,000	12,055,000
<b>Total Operating Cash Provided</b>	<b>\$ 237,459,000</b>	<b>\$ 254,270,000</b>	<b>\$ 252,074,858</b>	<b>\$ 261,561,000</b>
<b>Operating Cash Used:</b>				
Operation & Maintenance	\$ 174,219,000	\$ 179,240,000	\$ 185,855,000	\$ 189,021,000
Payment in Lieu of Taxes / Right of Way Fee	9,511,000	15,493,207	15,493,207	15,997,867
Debt Service	32,546,000	44,243,964	37,537,114	43,800,291
<b>Total Operating Cash Used</b>	<b>\$ 216,276,000</b>	<b>\$ 238,977,171</b>	<b>\$ 238,885,321</b>	<b>\$ 248,819,158</b>
<b>Operating Surplus</b>	<b>\$ 21,183,000</b>	<b>\$ 15,292,829</b>	<b>\$ 13,189,537</b>	<b>\$ 12,741,842</b>
<b>CAPITAL BUDGET</b>				
Sources of Capital Funds	\$ 48,814,000	\$ 216,563,000	\$ 174,731,000	\$ 221,724,000
Uses of Capital Funds	103,094,000	216,563,000	165,821,000	221,724,000
<b>Cash Used for Capital / Reimbursement for Prior Years' Capital Disb.</b>	<b>\$ (54,280,000)</b>	<b>\$ -</b>	<b>\$ 8,910,000</b>	<b>\$ -</b>
<b>CASH RESERVES:</b>				
<b>Beginning Balances (Net of Rate Stabilization Fund &amp; Federal Billing Reserve)</b>	<b>\$ 140,271,000</b>	<b>\$ 99,790,968</b>	<b>\$ 103,899,000</b>	<b>\$ 91,727,981</b>
Operating Surplus (Deficit)	21,183,000	15,292,829	13,189,537	12,741,842
Cash Reserves Recovered from the District	10,400,000	-	-	-
Prior Year Payment In Lieu of Taxes	18,000	-	-	-
Wholesale Customer Refunds for Prior Years	(2,662,000)	-	(4,000,000)	-
Transfer to Rate Stabilization Fund	(3,000,000)	-	-	-
Prior Year Right of Way Payment	-	-	(5,400,000)	-
Retroactive Payroll Payment for Union & Non-Union Employees	-	-	(6,500,000)	-
Reimbursement for Legal Settlement	-	-	2,750,000	-
Prior Year Federal Billing Reconciliation	-	-	(5,034,560)	(1,260,674)
Prepayment of Aqueduct Treasury Loans	(8,031,000)	(25,083,797)	(16,085,996)	(9,485,234)
Reimbursement for Prior Years' Capital Disb.	-	-	20,000,000	-
Cash Used for Capital	(54,280,000)	-	(11,090,000)	-
Ending Balance, September 30	\$ 103,899,000	\$ 90,000,000	\$ 91,727,981	\$ 93,723,915
Amount Reserved for Rate Stabilization Fund	6,500,000	3,500,000	6,500,000	6,500,000
Amount Reserved for Prior Year Federal Billing Reconciliation	12,808,000	12,808,000	12,808,000	-
<b>Total Cash Balance, September 30</b>	<b>\$ 123,207,000</b>	<b>\$ 106,308,000</b>	<b>\$ 111,035,981</b>	<b>\$ 100,223,915</b>



**FY 2001 – 2010  
FINANCIAL PLAN**





## WASA KEY FINANCIAL POLICIES

- **DEBT SERVICE COVERAGE** -- WASA will set rates and develop operating and capital budgets that ensure **senior debt service coverage of 140 percent**
  - This coverage level exceeds WASA's bond indenture requirement of 120 percent senior debt service coverage
- **CASH RESERVES** -- WASA will maintain **cash reserves approximately equivalent to 180 days' operating and maintenance expenses**, approximately \$93 million in FY 2003.
- **PAY-GO FINANCING OF CAPITAL** -- WASA will finance a portion of its capital program on a **pay-go basis from cash reserves that exceed the \$90 million reserve level**.
- **RATE-SETTING PRINCIPLES**
  - WASA's rates and fees will be based on the **actual cost to deliver each service**.
  - Rate increases will be implemented in a **gradual and predictable** manner, avoiding large one-time rate increases.
- **RATE STABILIZATION FUND** -- Once WASA achieves its required level of cash reserves, a **rate stabilization fund** will be established **to avoid "rate shock."**

## **FY 2001 - 2010 FINANCIAL PLAN**

### ***Overview***

The improvement and stabilization of WASA's financial position since it began operations in October 1996 and its success in achieving bond rating upgrades has been in large part due to the annual development of and adherence to a ten year strategic financial plan. The ten year financial plan serves as one of management's key tools to monitor progress in meeting financial goals and to proactively address future financial and operational issues. During FY 2001, WASA has met or exceeded the goals set by Board policy and the FY 2000 - 2009 ten year plan. This budget includes WASA's fifth comprehensive ten year financial plan, covering FY 2001 – 2010.

The necessity of a ten year financial plan is clear:

1. WASA operates under a regulatory and capital project-driven environment that requires a minimum ten year planning horizon. In order to provide our customers with the best service possible and with gradual and predictable rate increases, WASA must plan for all projects on a long-term and integrated basis, including both capital and operating requirements. A five year, capital-only financial plan would insufficiently prepare WASA to address the major regulatory and capital project issues that will impact service, operations, and rates in the five to ten year period.
2. In accordance with Board policy, WASA will set rates so that each customer will be charged for the actual cost to provide each service, and rate increases will be gradual and predictable. Because proposed future rate increases are due primarily to WASA's capital program, the development of a ten year financial plan allows WASA to meet these key goals of full cost recovery and predictability.
3. The Board has directed WASA management to undertake internal improvements that will significantly lower operating costs over a ten year period. A ten year plan is required to bridge current operations and related capital and operating budgets with these longer term cost reduction goals.

Board policies and guidance in several key financial areas drive the development of the FY 2001 - 2010 financial plan. Given WASA's substantial borrowing needs over the next ten years, adherence to these Board policies is crucial in order to cost-effectively access the capital markets and retain our credibility with customers and regulators. Key Board policies are summarized below.

### *Capital Financing and Reserve Policies*

In order to secure the lowest practical cost of capital to finance WASA's long-term capital program, WASA will maintain:

1. Senior debt service coverage of 140 percent, exceeding WASA's bond indenture requirements of 120 percent; and
2. Cash reserves equivalent to six months' operating expenses, approximately \$92.7 million in FY 2003.
3. WASA will also finance a substantial portion of its capital program on a pay-go basis from cash balances that exceed the operating reserve level. This pay-go financing reduces the need for long-term debt and ultimately lowers WASA's debt service expenses.
4. WASA will, whenever possible, use the least costly type of financing for capital projects, based on a careful evaluation of WASA's capital and operating requirements and financial position for each year.
5. WASA will attempt to match the period of debt repayment, in total, with the lives of the assets financed by any such debt.
6. WASA will finance its capital equipment needs (e.g., computer equipment and systems; minor utility equipment such as pumps, motors, etc.) with operating cash or short-term financing instruments with the same or shorter lives as the related assets.

### *Rate Setting and Budgetary Policies*

WASA's rate-setting policies are based on the following principles:

1. Rates and fees will be based on the actual cost to deliver each service.
2. Current rates must be sufficient to cover current costs and to meet all bond covenants.
3. Rates will be based on an annually updated ten year financial plan (both operating and capital).
4. Rate increases will be implemented in a gradual and predictable manner, avoiding large one-time rate increases.
5. Once WASA achieves its required level of cash reserves, a rate stabilization fund will be established to avoid "rate shock." This fund was established in FY 2000 with an initial contribution of \$3.5 million, and an additional \$3.0 million was set aside in FY 2001.

### *Cash Management and Investment Policies*

In December 1997, the Board adopted comprehensive cash management and investment policies. These policies specified the amount of the portfolio allowed in each type of investment and also specified the following investment objectives, in priority order:

1. Safety
2. Liquidity
3. Return on investment

#### 4. Diversity

In FY 2001, the Board adopted revisions to the investment policy that clarified portfolio diversity requirements. Specifically, the revisions formalized WASA's practice of limiting investment in any one corporate issuer to five percent of the total portfolio and limited each investment to 10 percent of the outstanding debt of any one corporate issuer.

#### **Major Accomplishments**

The FY 2000 - 2009 financial plan, adopted in February 2001, and Board policy set out several financial and organizational goals to be accomplished in FY 2001. *During FY 2001, WASA met or exceeded the goals set out by the Board and the FY 2000 - 2009 financial plan, as summarized below.*

- ★ WASA Board policy calls for cash reserves equivalent to 180 days' operating and maintenance expenses, or approximately \$90 million in FY 2001. WASA consistently met this goal during FY 2001, and as projected, WASA's cash balances declined to \$123.2 million at the beginning of the year from \$156.6 million, reflecting financing of the District's share of the capital program with pay-as-you-go financing.
- ★ WASA Board policy requires senior debt service coverage of at least 140 percent, greater than the bond indenture requirement of 120 percent. WASA's senior debt service coverage in FY 2001 is projected at 238 percent, reflecting the Board's policy of gradual and predictable rate increases, lower than projected operating and capital spending, and contributions to the rate stabilization fund. Senior debt service coverage will decline to the Board's 140 percent policy level as capital spending and related debt issuance increase. Subordinate debt service coverage (subordinate debt service includes WASA's share of District of Columbia general obligation debt, Little Seneca Reservoir debt, and Jennings Randolph Reservoir debt) in FY 2001 is projected at 200 percent. WASA is required to have 100 percent coverage of subordinate debt service.
- ★ WASA adopted a series of multi-year rate increases in January 2000 to pay for future debt service associated with WASA's \$1.6 billion capital program. These rate increases totaled 4.8 percent and 4.9 percent in April 2000 and April 2001 respectively, and have been implemented. In conjunction with this year's budget review process, the Board is considering proposed rate increases of 5.0 percent in both April 2002 and April 2003. Proposed rate increases are consistent with the Board's rate-setting policies: 1) rate increases should be gradual and predictable; and 2) rate increases should be based on the actual cost to provide services to customers.
- ★ Consistent with Board policy described above, WASA contributed an additional \$3.0 million to the rate stabilization fund at the end of FY 2001. Combined with the \$3.5 million contributed in FY 2000, the rate stabilization fund balance totals \$6.5 million and will be used to smooth out projected rate increases, helping to avoid one-time spikes.

- ★ WASA completed the development phase of its commercial paper program which will provide interim financing for the District's share of the capital program. This program will greatly enhance WASA's flexibility to deal with variability in capital spending and, because of its short-term nature, should result in lower interest rates.
- ★ WASA received its fourth unqualified audit opinion for FY 2000, after its predecessor agency received qualified opinions in FY 1995 and FY 1996.
- ★ Overtime spending was reduced from a high of \$8.7 million in FY 1997 to a projected \$4.6 million in FY 2001, or eight percent of payroll. This reduction continues a five year trend of significant reductions in overtime costs, from a rate of 23 percent of payroll just before WASA was formed. Fiscal year 2002 and 2003 budgets reflect continued reduction of overtime, totaling \$5.1 million and 4.9 million respectively, and declining to seven percent of personal services expenditures in FY 2003.
- ★ WASA implemented the initial phases of the multi-year internal improvement plan for the Blue Plains Advanced Wastewater Treatment Plant operations (specifically the Departments of Wastewater Treatment and Maintenance Services.) Thirty-four positions were eliminated in these areas in FY 2001 and an additional 50 positions will be reduced during FY 2002 and FY 2003. In addition, several capital projects began in FY 2001 or will begin in FY 2002 that are critical to achieving these cost savings goals, including a new process computer control system and additional dewatering facilities. Required by WASA's enabling legislation, this plan identifies significant improvements to be made to operations (through implementation of the capital improvement program and work process improvements) that are projected to result in cost savings of \$24 million over the next ten years.
- ★ WASA continued to build on the significant improvements made in the Department of Customer Service over the last three years, which have resulted in greatly improved service to WASA customers. Major accomplishments over the last year in customer service include:
  - Implementation of the Customer Service internal improvement program, including the reorganization of billing, collections, call center, and other customer service functions due to the new customer information system and other work process improvements. This reorganization resulted in the reduction of four positions in FY 2001 (net of transfer to finance) and an additional 15 positions in FY 2002, with additional position reductions to begin during implementation of the automated meter reading system in FY 2004.
  - WASA completed the implementation of its new customer information system in June 2001. This system utilizes an innovative application service provider (ASP) solution, which involves outsourcing of key responsibilities including bill generation and mailing, basic account maintenance, and hardware / software maintenance, and results in reduced staffing

needs. In addition, this system provides substantial data redundancy and security features. Most importantly, the system substantially improves service to WASA customers, including enhanced payment options (on-line and via credit / debit card), provides on-line access to account information and assists in improving staff response time to customer questions.

- WASA completed its large meter testing program in late summer 2000. This program tested approximately 2,500 large (3 inches or greater) meters, which account for 45-50 percent of retail revenues and are concentrated in the federal and commercial categories. On average, test results indicated that these large meters were running eighteen percent slow. WASA repaired over 900 meters based on a prioritized list that reflected potential revenue gain. The remaining meters will be addressed as part of the comprehensive meter replacement / automated meter reading (AMR) project that will begin in December 2001.
- ★ WASA made significant investments in information technology in FY 2001, including:
  - WASA successfully implemented its new, independent financial management system, effective October 2000. (Previously, WASA utilized the District of Columbia's financial system.) This system conversion has resulted in the reengineering of most of WASA's financial processes and workflow, and has substantially improved financial, procurement, and other administrative functions across WASA.
  - WASA successfully implemented the time and attendance component of the payroll system in February 2001 which substantially improved the efficiency of WASA's bi-weekly timekeeping and payroll process by eliminating much of the manual data entry that was previously required of timekeepers
- ★ WASA successfully completed negotiations on a new labor agreement with its collective bargaining units in early fall 2001. This new agreement, which covers FY 2000 through FY 2003, includes substantial changes to work rules, disciplinary procedures, and for the first time, introduces pay for performance for union employees. Compensation increases range from three to four percent annually, in line with the federal government and other regional governments, and are accommodated within proposed operating budgets and the ten year plan.
- ★ WASA completed its draft combined sewer overflow (CSO) long-term control plan in summer 2001. This draft plan, which is required by the EPA, presents a range of operating and capital options to address CSOs, and the recommended plan includes \$1.05 billion (in FY 2001 dollars) in capital improvements that would occur over a twenty year timeframe. These costs are not included in this year's ten year plan pending an analysis of funding alternatives and potential rate structures which will occur over the next 1-2 years. The final Board-adopted plan is scheduled to be submitted to the EPA in early 2002.

## ***Future Goals***

The proposed FY 2001 - 2010 financial plan includes the resources necessary to accomplish critical financial and operational goals over the coming years, as summarized below.

- ★ Continue adherence to the Board's financial, investment, rate-setting and long-term planning policies.
- ★ Continue implementation of internal improvement plan across WASA, including Blue Plains, Customer Service, and the Departments of Water and Sewer Services to ensure long-term operating cost reduction goals are met.
- ★ Continue implementation of major improvement projects in customer service, including:
  - Complete comprehensive automated meter reading / meter change-out program in FY 2004 and complete related staffing reorganization
  - Continue efforts to take ownership of commercial, municipal, and federal meters that currently owned by customers
  - Begin implementation of automated dispatch and work management system in FY 2003
- ★ Successfully implement key financial / operational information systems, including:
  - Process computer control system - This system, which will automate a substantial number of plant processes, is critical to achieving Blue Plains internal improvement goals.
  - Maintenance management system
  - Work management and automated dispatch system
  - Successive phases and upgrades of the financial and payroll and human resources information system

As previously noted, the costs of the draft CSO long-term control plan are not included in the FY 2001 – 2010 plan pending determination of the scope and projects to be included in the final plan. Development of funding alternatives that allow WASA to maintain its strong financial performance will be an essential component of the long-term control plan ultimately selected.

## ***Rates***

The FY 2001 - 2010 financial plan assumes annual rate increases ranging from 4.9 to 6.5 percent, reflecting a decrease from last year's plan; average annual rate increases over ten years are 5.5 percent compared to 6.0 percent in last year's plan. As in prior

years, the primary driver of projected rate increases is WASA's \$1.6 billion capital program, of which approximately 47 percent will be financed by debt. Because of this, debt service over the ten year period increases by 11 percent on average per year, while operating and maintenance expenditures are projected to grow by only 1.9 percent annually, reflecting WASA's commitment to maintaining operating costs at less than the rate of inflation, in particular through the internal improvement program.

Total proposed rate increases are less than last year's Board-adopted plan for two reasons:

- Capital disbursement estimates in the early years of the program have been reduced, reflecting a more detailed analysis of construction schedules on capital projects currently underway and projects that are expected to begin work over the next two years. Specifically, total capital disbursement projections for FY 2002 and FY 2003 have been reduced, from \$446 million in last year's plan to \$388 million in this year's plan, reflecting revised estimates in Blue Plains and water system projects. These disbursements are delayed to later in the ten year plan.
- This year's ten year plan also reflects the implementation of the commercial paper program. Debt under this program will be issued on a subordinate basis, reducing debt service coverage requirements. In addition, the short-term nature of this program will, under normal market conditions, result in lower interest rates. Last year's plan did not reflect the implementation of the commercial paper program as it was still in the planning stages at the time of budget development, and instead assumed the issuance of all senior lien debt at long-term interest rates.

In line with Board policy of implementing rate increases on a gradual and predictable basis, proposed rate increases for FY 2002 and FY 2003 remain at five percent. As projected in last year's plan, debt service coverage in FY 2001 declined to 238 percent coverage (after the contribution to the rate stabilization fund) and will continue to decline over the ten year period. Similarly, cash balances also declined as projected.

The ten year plan and proposed rate increases do not reflect any new operating or capital requirements related to the draft CSO long-term control plan that was prepared in summer 2001. The projected capital cost of this draft plan totals approximately \$1.05 billion (in FY 2001 dollars) and is projected to occur over a twenty year timeframe, with construction beginning within 18 to 24 months of EPA approval. Costs could vary from \$1.05 billion depending on the final plan negotiated with the EPA. During FY 2002 and FY 2003, WASA will be developing a more detailed financing plan including the identification of outside financing sources as well as potential alternative rate and fee structures.

In conjunction with implementation of the meter change-out / automated meter reading program, WASA will continue to pursue legislative changes that will allow WASA to take ownership of federal, commercial, municipal and housing meters. Unlike most utilities, WASA's customers (with the exception of single-family residential) own and are responsible for maintenance of their meters. Over time, this contributed to some of the historical metering issues WASA faced, particularly in the federal and municipal categories. This change would require City Council approval, and WASA will continue to pursue this change in FY 2002. As part of this process



and in line with Board policy, WASA is evaluating the potential implementation of a meter maintenance fee for these accounts to recover the new, incremental costs of taking on meter ownership and maintenance responsibilities.

Similar to last year's plan, the FY 2001 – 2010 plan and FY 2002 and 2003 operating budgets reflect several new District initiatives have a significant budget impact, including:

- **Right of way fee** -- During FY 2000, the District of Columbia published regulations that implemented a public space occupancy permit rental fee ("right of way") fee on all area utilities that is to be imposed on infrastructure located in the public right of way, including WASA's water and sewer mains. Under a proposal received from the District, WASA's right of way fee would be set at \$14.4 million annually, with a credit of \$9 million for the payment in lieu of taxes, resulting in a net budget impact of \$5.4 million.
- **Proposed repeal of groundwater billing** – A proposal to repeal WASA's ability to meter and bill for groundwater discharge into the combined sewer system has been under serious consideration by City Council. Similar to last year's plan, \$3 million in annual groundwater revenue that was included in prior years' plans has been eliminated.
- **New street repair & restoration requirements** – In 2000, the District adopted new regulatory requirements that substantially increase the amount of paving required to repair street cuts after water and sewer system upgrades are made, and also required WASA's participation in the "Miss Utility" one-call center which is a clearinghouse to assist companies in locating underground utility lines prior to performing excavation work. The operating budget includes \$3.5 million annually for these requirements; the capital budget includes approximately \$58 million over the ten year program.

In addition to these new costs, the FY 2001 - 2010 financial plan (consistent with last year's plan) already reflects areas of potential revenue enhancement and cost savings:

- **Internal improvement program** – The ten year plan assumes \$24 million in savings at Blue Plains as a result of this program. Approximately 50 percent of the savings will be passed on to WASA's wholesale customers, representing their share of usage of Blue Plains, with 50 percent accruing to District ratepayers.
- **Large meter testing** – The ten year plan reflects a five percent increase in commercial revenues and a ten percent increase in federal revenues in FY 2002 due to completion of WASA's large meter testing program.

In June 2000, the Board adopted a customer assistance program that assists low-income customers in paying their water bills. The program is comprised of two components: a component funded by voluntary contributions from ratepayers; and a component funded by WASA and based on a bill credit for 400 cubic feet of water consumption per month. The component that includes a bill credit is limited to single family homeowners that meet income guidelines promulgated by the U.S. Office of Management and Budget. In FY 2001, the first year of implementation of this program, approximately 1,400 customers participated in this program for a total cost to WASA of approximately \$120,000.

WASA's current rates remain competitive with other water and wastewater providers in the mid-Atlantic and the eastern United States, as shown on the charts in Section 4. The proposed future rate increases over the ten year planning period are also consistent with regional and national providers.

### *Rate Stabilization Fund*

This year's plan reflects continued funding of the rate stabilization fund, including a contribution of \$3.0 million in FY 2001 as a result of higher than projected senior debt service coverage and higher than projected cash balances. The total balance in the fund is currently \$6.5 million, including the \$3.5 million contribution made in FY 2000. Under the current ten year plan, the rate stabilization fund would be utilized in FY 2007 and FY 2008, and would help level out proposed rate increases in those years. Additional contributions to the rate stabilization fund will be determined each year based on actual financial performance and the latest ten year plan. No deposits to the rate stabilization fund would be made unless the Board's 180 day operating and maintenance reserve policy and all other bond indenture requirements are met.

### **Revenues**

Since its creation, WASA has made significant progress in our metering, billing, and collections operations. Combined with strong revenue monitoring and analysis in the finance area, these improvements have resulted in strong and consistent revenue performance over the last few years. Key improvements include:

- *Comprehensive meter testing and change-out programs* - As described earlier, WASA completed its large meter testing and repair program in late FY 2001 and will begin its comprehensive meter change-out program in December 2001. Both programs will enhance meter reading accuracy and performance.
- *New customer information system* – This system assists in ensuring bills are more accurate through enhanced exception reporting and also provides more advanced revenue reporting in general, enabling the customer service team to better track revenue issues.
- *Enhanced collections practices* – Among the Board's first actions in 1997 was a strong focus on collections of unpaid water and sewer bills. WASA strengthened its collections policies, sold \$17.1 million in extremely delinquent receivables (primarily multi-family) in January 1999, and in summer 1999, began terminating service to chronically delinquent multi-family customers. As a result of these aggressive actions, WASA's delinquent accounts over 90 days old, which peaked at \$28 million in FY 1998 as a result of the 42 percent rate increase, have now declined to \$17.9 (net of the receivables that were sold) at the end of FY 2001. (As part of the implementation plan for the new customer information system, disconnection of service on delinquent accounts was stopped for all accounts from mid-May until mid-September. If not for this temporary change, balances over 90 days at the end of FY 2001 would be approximately \$4.5 million lower. Over the next 3-6 months, WASA's collections unit expects to fully

recover these short-term increases in unpaid bills as we fully implement higher levels of disconnection of service for non-payment.)

- *Simultaneous focus on long-term forecasting and planning and detailed, short-term monitoring* - WASA's revenue team meets monthly to evaluate recent revenue performance, discuss major revenue issues, and develop action plans to address all issues.

Revised FY 2002 revenue projections total \$252.1 million, approximately \$15.0 million, or 6.3 percent higher than FY 2001 results. This increase is due to a number of factors that are described in more detail below:

- *Residential and commercial revenues* are projected to increase by \$9.3 million, or 6.9 percent, due to projected rate increases and the balance of projected five percent increase in commercial revenues reflecting completion of WASA's large meter testing and repair program
- *Federal revenues* are projected to increase by \$8.9 million, reflecting projected rate increases and a projected ten percent increase due to completion of WASA's large meter testing and repair program
- *Wholesale revenues* are projected to increase by \$2.9 million reflecting increased operating and maintenance costs at Blue Plains described in more detail below.
- *Other revenues* are projected to decrease by \$6.6 million due to lower cash balances than in FY 2001 and significantly lower interest rates

Proposed FY 2003 revenues total \$261.6 million, approximately \$9.5 million, or 3.8 percent higher than revised FY 2002 projections. This increase is due primarily to the proposed rate increase currently under consideration by the Board of five percent effective April 2003.

Additional details on revenue projections for each class of customers are described below.

*Residential & Commercial* - Revised FY 2002 projections reflect an increase of \$9.3 million, or 6.9 percent over FY 2001, due primarily to:

- Five percent increase in metered commercial consumption reflecting the results of WASA's large meter testing and repair program;
- Half year impact of the proposed 5.0 percent rate increase (assumes half year implementation); and
- Implementation of the customer assistance program, which reduces projected revenues by approximately \$0.5 million.

Proposed FY 2003 revenue projections reflect an increase of \$9.8 million, or approximately 6.8 percent over FY 2002, due to the following reasons:

- Continued increase in metered commercial consumption reflecting replacement of commercial meters not addressed as part of the large meter testing and repair program
- Proposed rate increase of 5.0 percent (assumes half year implementation); and
- Continued implementation of the customer assistance program, which reduces projected revenues by approximately \$0.5 million.

*Federal* - Revised FY 2002 federal revenues are projected to total \$33.5 million, or \$8.9 million higher than FY 2001. Under the current federal billing legislation, federal billings are prepared on an estimated basis eighteen months in advance of the start of the fiscal year (e.g., the FY 2002 billing was prepared in April 2000), and are based on then-current consumption estimates and projected rate increases as included in the then-current ten year plan. These estimates are then reconciled with actual consumption and rate increases, and an adjustment is made in the subsequent year's billing (e.g., the reconciliation of FY 2002 estimated vs. actual 2002 consumption and rate increases will be included in the FY 2005 billing, prepared in April 2003) Federal revenues in the ten year plan are presented on a revenue basis, net of any adjustments for prior year reconciliations which are accounted for as reserve items. Consistent with this methodology, revised FY 2002 federal revenues reflect the final billing sent to the federal government, net of the adjustment for the prior year (FY 1999) reconciliation. This billing estimate included a ten percent increase in consumption reflecting the results of the large meter testing program and \$2.1 million in projected groundwater billings that will likely not be attainable based on legislation proposed by City Council to eliminate WASA's ability to recover this fee.

Proposed FY 2003 federal revenues are projected to total \$31.9 million, a decrease of \$1.6 million from FY 2002, primarily reflecting the projected loss of groundwater revenue and reduced consumption. As discussed later in this document, the FY 2003 billing included the reconciliation of estimated vs. actual consumption and billings for FY 2000. Due to historical federal metering issues, this reconciliation totals approximately \$14.1 million which is to be refunded to the federal government. In FY 2000, WASA reserved \$12.8 million to address this issue.

Over the past year, WASA has continued to pursue resolution of long-standing Northern Virginia federal billing issues. Currently, WASA provides water service to the federally-owned system in Northern Virginia, while Arlington County provides sewer service. WASA's water service is provided via two large mains that cross the Key Bridge, with billings based on two meters on the Virginia side of the Key Bridge. The Pentagon, as owner of the Northern Virginia water system, is responsible for maintenance of these mains, overall system maintenance, and installation and maintenance of meters. Because the Pentagon has not installed separate meters for the other user agencies in Northern Virginia, there have been disagreements about the Pentagon's allocation of actual consumption and billing among the various agencies. Over time, the lack of individual meters at some federal locations in Northern Virginia and the complex billing process has caused disagreements about actual consumption and billing among the individual Northern Virginia customers.

In summer 2000, the Pentagon formally expressed its desire to receive water service from Arlington County rather than WASA, and engaged Arlington County to install meters at various connection points in Northern Virginia. Over the last year, WASA staff have

been working with Arlington County on wholesale rate structure and service options and will continue this effort over the next year. In FY 2001, revenues from the federally-owned system (including Ronald Reagan National Airport) totaled \$1.1 million, or less than one percent of total retail revenues.

*Municipal & D.C. Housing Authority* - Representing approximately five percent of total revenues, revenues from the District of Columbia government and the District of Columbia Housing Authority are expected to remain relatively stable over FY 2002 and FY 2003 with the only impact being proposed rate increases. Fiscal year 2001 District government revenues declined by approximately \$1.6 million from FY 2000 because of significantly decreased consumption at St. Elizabeth's Hospital due primarily to changes in how their primary storage tank is managed. Previously, St. Elizabeth's represented over one-third of municipal revenues.

*Wholesale* - WASA's wholesale customers are responsible for a proportionate share of operating and maintenance expenses (associated only with shared facilities primarily at Blue Plains) based on their respective share of wastewater volume discharged. In addition, each user is responsible for a proportionate share of related indirect costs, or overhead. Wholesale revenues are projected to increase by \$2.9 million over FY 2001, reflecting their proportionate share of higher biosolids hauling costs and increased chemical costs due to the conversion of a key treatment process from lime to sodium hydroxide. Wholesale revenues are projected to increase by approximately one percent annually after FY 2002, consistent with WASA's operating and maintenance expense increase assumption over the ten year period. This assumption assumes full development of WASA's Blue Plains internal improvement plan which is projected to result in operating savings of \$24 million (2000 dollars.) WASA's wholesale customers will receive approximately 50 percent of any savings due to the internal improvement program, based on their usage of Blue Plains.

*Stormwater* – WASA's FY 2002 and FY 2003 revenues include \$1 million annually from the District's proposed stormwater fee that will be used to fund WASA's share of District stormwater permit compliance activities. As described in more detail later in this document, the FY 2001 - 2010 financial plan assumes that all incremental costs borne by WASA for stormwater will be covered by the stormwater fee approved by City Council, and that no WASA funds will be advanced to pay for these activities.

*Groundwater* – Consistent with last year's Board-adopted ten year plan, this revenue source has been eliminated from WASA's FY 2002 and FY 2003 revenue budgets and ten year plan due to proposals from City Council that would repeal the legislation authorizing WASA to bill for groundwater discharges. Prior revenue estimates totaled \$3 million annually.

Other major assumptions underlying the revenue projections contained in the FY 2001 - 2010 financial plan include:

- One percent reduction in water sales from FY 2002 to 2010 (with the exception of commercial and federal customers in the early years of the ten year plan due to implementation of the large meter testing and repair program), based on historical trends in consumption levels.

- One percent annual increase in revenues from wholesale customers between FY 2003 and 2010, consistent with operating and maintenance expense increase assumptions and the goals of the Blue Plains internal improvement plan.
- Based on the current interest rate environment, interest earnings assume 2.5 percent and 3.0 percent interest rates for FY 2002 and FY 2003, respectively. Beyond FY 2003, interest rates are assumed to return to the 5.0 percent range. In addition, interest earnings are based on cash balances remaining in line with the Board-adopted operating and maintenance reserve.
- The majority of other non-operating revenues, totaling \$8.4 million in FY 2002, are projected to remain relatively stable over the ten year plan, and include such items as:
  - Reimbursement from Arlington County and Falls Church for debt service issued for pre-1997 Washington Aqueduct capital improvements - \$1.9 million
  - WASA's share of the District's stormwater fee - \$1.0 million
  - Fire protection fee that was adopted by the Board in January 2000 and is charged to the District of Columbia government - \$1.9 million
  - Other miscellaneous fees and charges, including meter maintenance fees, developer-related fees, etc. - \$3.6 million

### ***Operating Expenditures***

Due to WASA's \$1.61 billion capital improvement program, debt service is the fastest growing area of expenditure in the ten year plan, growing at an average annual rate of 11 percent, and from 14 percent of expenditures in FY 2001 to 26 percent in FY 2010. All other operating and maintenance expenses are projected to grow at an average annual rate of 1.9 percent, less than projected inflation, due to implementation of internal improvement plans at Blue Plains and in our customer service operations that are projected to result in operating savings of approximately \$24 million over the ten year planning period. These savings are already reflected in the FY 2001 - 2010 plan and proposed rate structure and wholesale revenue projections: operating and maintenance expenses (excluding the Washington Aqueduct) are projected to grow by one percent annually, versus projected annual inflation of three percent. Approximately 50 percent of projected savings at Blue Plains due to the internal improvement plan will accrue to WASA's wholesale customers.

As described in more detail below, the revised FY 2002 operating and maintenance budget does reflect additional costs related to biosolids hauling, the new labor agreement, and increased chemical costs. Similar to last year's plan, operating and maintenance budgets and the ten year plan reflect the impact of several new District initiatives, including the right of way fee and increased street repair and restoration requirements.

The following chart provides detail of the FY 2002 and FY 2003 operating budgets.

**COMPARISON OF FY 2002 & FY 2003 OPERATING BUDGETS**  
(In \$000's)

	FY 2002 APPROVED	FY 2002 REVISED	Percent Change	FY 2003 PROPOSED	Percent Change
Personal Services	71,914	72,595	0.9%	74,429	2.5%
Contractual Services	60,657	63,964	5.5%	63,310	-1.0%
Water Purchase	18,365	18,365	0.0%	18,365	0.0%
Supplies	14,875	16,845	13.2%	18,527	10.0%
Energy, Fuel, etc.	18,390	18,849	2.5%	18,865	0.1%
Equipment	1,039	1,236	19.0%	1,225	-0.9%
Transfer to Capital	(6,000)	(6,000)	0.0%	(6,000)	0.0%
<b>Subtotal Operations &amp; Maintenance</b>	<b>179,240</b>	<b>185,854</b>	<b>3.7%</b>	<b>188,721</b>	<b>1.5%</b>
Debt Service	44,244	37,537	-15.2%	43,800	16.7%
PILOT / Right of Way Fee	15,494	15,493	0.0%	15,992	3.2%
<b>Subtotal Debt Service &amp; PILOT</b>	<b>59,738</b>	<b>53,030</b>	<b>-11.2%</b>	<b>59,792</b>	<b>12.8%</b>
<b>TOTAL</b>	<b>238,978</b>	<b>238,884</b>	<b>0.0%</b>	<b>248,513</b>	<b>4.0%</b>

The revised FY 2002 budget (net of personal services charged to capital projects) totals \$238.9 million, reflecting a slight reduction from the approved FY 2002 budget. The revised FY 2002 operations and maintenance budget (net of debt service, the payment in lieu of taxes, and the right of way fee) is 3.7 percent greater than the original budget, as described in more detail below:

- **Personal service expenditures** increase by \$0.7 million, or 0.9 percent, due to implementation of the new labor agreement. This agreement covered FY 2000 – FY 2003, and includes the following salary increases:
  - 3% in FY 2000
  - 3% in FY 2001
  - 4% in FY 2002
  - 4% in FY 2003 and a pay for performance package

These increases have been included in the FY 2002 and FY 2003 operating budgets and in the ten year plan. In FY 2003, personal service costs increase by only 2.5 percent vs. 4 percent in the labor agreement, reflecting the reduction of positions at Blue Plains and in Customer Service.

- **Contractual service expenditures** increase by \$3.3 million, or 5.5 percent, reflecting the following increases:
  - Increased biosolids hauling costs totaling \$2.1 million and reflecting industry-wide increases
  - Increased costs of street repair and restoration regulations required by the District of Columbia, with an incremental impact of \$1.7 million in FY 2002 and beyond
  - Increased outside legal services and claims costs totaling \$1.7 million
  - Reductions in various contractual services across other departments totaling \$2.2 million
- **Supplies expenditures** increase by 13 percent reflecting the transition from lime to sodium hydroxide treatment at Blue Plains in early FY 2002
- **Energy & fuel expenditures** increase by 2.5 percent reflecting recent trends in electrical and fuel consumption and prices across WASA operations.

The proposed FY 2003 budget (net of personal services charged to capital projects) totals \$248.5 million, a 4.0 percent increase over the revised FY 2002 budget, primarily due to increased debt service for the capital program. The FY 2003 operations and maintenance budget (net of debt service, the payment in lieu of taxes, and the right of way fee) increases by only 1.5 percent, less than the projected rate of inflation. This includes increased chemical costs of \$1.7 million due to the transition from chlorine to sodium hypochlorite at Blue Plains in early FY 2003. Without this cost, the operating budget would have only increased by 0.6 percent. Specific information regarding each department is included in Section 7.

Beginning in FY 2003, the ten year financial plan reflects the following major assumptions:

- One percent increase over proposed FY 2002 levels in most expense categories, reflecting implementation of the Blue Plains, Customer Service, and other departmental internal improvement programs over the next ten years.
- Three percent increase in water purchase costs, based on projected Washington Aqueduct budget trends.
- Payment in lieu of taxes (PILOT) to the District of Columbia increases at the same rate as WASA retail rate increases, in accordance with the memorandum of understanding with the District.
- Right of way payment to the District of Columbia stays level at \$5.4 million as outlined in the District's November 2000 proposal.

### ***Capital Financing Program, Cash Position, & Long-Term Debt***

The FY 2001 - 2010 financial plan funds total capital disbursements of \$1.61 billion, approximately the same size as last year's plan. The permanent financing of WASA's capital program comes from four primary sources, as more fully described below. The amount



of EPA grant funding is fixed by federal regulation, while jurisdictional capital contributions are based on a fixed percentage of Blue Plains and related facilities. The remainder of the program is funded with WASA debt and pay-go financing from operations. The amount of pay-go financing is generally equal to the amount available after fully funding the 180 day operating reserve and meeting Board policies on the level and timing of rate increases and debt service coverage.

During FY 1999, WASA developed a comprehensive financing plan with the dual goals of 1) securing the lowest cost of capital possible, and 2) maximizing administrative and operating flexibility. The plan includes the following components:

- *Implement interim financing program for construction financing* - As presented to the Budget & Finance Committee, WASA has completed the development phase of the commercial paper program and expect to close on this transaction in November 2001.
- *Issue fixed rate bonds annually to take out interim financing* - By issuing fixed rate bonds annually, WASA should achieve a long-term cost of capital approximately equivalent to market averages over this period.
- *Utilize WASA pay-go financing to first pay off Washington Aqueduct debt* - Rather than permanently funding WASA's share of Aqueduct improvements with higher cost, taxable U.S. Treasury notes, WASA will first use available pay-go funds to pay these obligations. WASA will continue to use U.S. Treasury notes as an interim financing source for Aqueduct improvements due to the administrative flexibility afforded to WASA and the Aqueduct, but will prepay outstanding amounts in the year immediately following the initial interim borrowing. To date, WASA has prepaid \$34 million in U.S. Treasury notes.
- *Explore financing options for capital equipment*

Additional details on each financing source are described below.

	<b>FY2001 - 2010 PLAN</b>	<b>Percent</b>
	<b>TOTAL</b>	<b>of Total</b>
EPA Grants	\$ 202,377	12.6%
Wholesale Capital Payments	459,521	28.5%
Revenue Bonds / Commercial Paper	754,228	46.8%
Pay-Go Financing	177,554	11.0%
Interest Income on Bond Proceeds	16,450	1.0%
<b>TOTAL SOURCES</b>	<b>\$ 1,610,129</b>	<b>100.0%</b>

1. **EPA Grants** - WASA currently receives 80 percent EPA grant funding for certain eligible projects under the Clean Water and Safe Drinking Water Acts. In general, the District of Columbia projects carried out by WASA are supported by one percent of the available annual funding through revolving fund programs associated with the Clean Water and Safe Drinking Water Acts.

2. **Wholesale Capital Payments** - Nearly 60 percent of the capacity of WASA's wastewater treatment facilities are contractually committed to provide wholesale service to suburban jurisdictions under various contracts. Montgomery and Prince George's Counties (through the Washington Suburban Sanitary Commission (WSSC)), Fairfax County, and the Loudoun County Sanitation Authority pay a proportionate share of capital-related costs equal to their share of contracted capacity at Blue Plains. Washington

Dulles International Airport, the Department of the Navy, the National Park Service, and the Town of Vienna also pay a proportionate share of capital-related costs equal to their actual use of Blue Plains each year, which approximates their long-term capacity requirements.

3. **Senior Lien Revenue Bonds** - Senior lien bond issuance represents only 47 percent of the ten year capital program, a very low rate given the size of WASA's capital program. A common ratio used by the rating agencies to measure leverage and debt burden is the ratio of debt to net fixed assets (plant). In FY 1999, WASA's debt to plant ratio was 36 percent, and, based on the current capital improvement program, is projected to remain at less than 50 percent through FY 2010, a very low level given the size of WASA's capital program and when compared to other comparable utilities. In addition, debt service as a percentage of total operating expenditures remains at less than thirty percent through the ten year planning period, even with substantial new debt issuance projected during this period.
4. **Pay-Go (Internal) Financing** - The amount transferred from operations to the capital program each year is equal to the amount remaining in cash reserves after the 180 day operating and maintenance reserve and rate stabilization fund goals have been satisfied. Approximately 11 percent of total funding for the FY 2001 - 2010 plan is projected to come from pay-go financing, which strikes an appropriate balance between maintaining moderate debt levels and financing provided by current ratepayers. Pay-go funds will be used in a manner consistent with our financial policies: 1) to fund items with shorter useful lives where bond financing is less appropriate, such as capital equipment; and 2) to achieve the lowest cost of capital possible, including using pay-go funds to reduce higher cost debt, such as the taxable Washington Aqueduct Treasury notes.

#### *FY 2002 & 2003 Debt Issuance Plans & Debt Service Assumptions*

Closing on the commercial paper program is scheduled for November 2001, with an initial draw of \$60 million planned, including \$40 million in new money and \$20 million for reimbursement of prior years' capital disbursements. As described earlier, the proposed commercial paper program will be used as interim financing of the capital program, and WASA will issue fixed rate bonds approximately annually to take out any outstanding balances under the commercial paper program. Based on current capital disbursement projections, the entire \$100 million authorized under this program would be drawn down in FY 2002, with fixed rate issuance to follow thereafter, depending on actual capital spending and market conditions.

As part of the development of this year's plan, we revisited short and long-term debt issuance assumptions. Prior years' plans did not reflect the proposed commercial paper program as it was still in the planning stages. This year's plan reflects this program as well as other modifications to debt amortization assumptions. A primary advantage of the commercial paper program is that it is issued on a subordinate basis, reducing debt service coverage requirements. In addition, the short-term nature of this program will, under normal market conditions, result in lower interest rates. The ten year plan assumes that commercial paper will carry interest

rates of 4.5 percent, plus ongoing costs such as letter of credit and dealer fees, while long-term debt is assumed to carry interest rates of 6.5 percent. Current short-term interest rates range from 2.0 to 2.5 percent; current long-term interest rates (30 year maturity) range from 5.1 to 5.2 percent.

### Cash Position & Reserves

Cash balances totaled \$123.2 million at the end of FY 2001, reflecting a decline from \$156.6 million at the beginning of the year, as projected. As described below, this includes \$6.5 million for rate stabilization and \$12.8 million for future federal billing issues. Over the next ten years, cash balances are projected to remain close to the Board-required reserve levels, with the operating and maintenance reserve totaling \$91 million in FY 2002 and growing to approximately \$100.8 million in FY 2010, based on one percent compounded growth in operations and maintenance expenses. WASA's base 180 day operating and maintenance reserve includes the following components:

**FY 2002 CASH RESERVES**  
(In 000's)

<b>BOARD-ADOPTED OPERATING RESERVE (180 Days O&amp;M)</b>	
60 Day Operating Reserve (Indenture-Required)	\$ 30,387
Renewal & Replacement Reserve (Indenture-Required)	32,434
District of Columbia General Obligation Reserve	1,798
Risk Management & Claims Reserve	4,400
Undesignated Reserve	22,708
<b>TOTAL OPERATING RESERVE</b>	<u>\$ 91,728</u>
Reserve for Prior Year Federal Billing Reconciliation	\$ 12,808
Reserve for Rate Stabilization Fund	6,500
<b>TOTAL OTHER RESERVES</b>	<u>\$ 19,308</u>
<b>TOTAL CASH RESERVES</b>	<u><u>\$ 111,036</u></u>

- *Operating Reserve* - This reserve is required by WASA's bond indenture and is equivalent to two months' prior year operations and maintenance expenses, or approximately \$30.4 million in FY 2002.
- *Renewal & Replacement Reserve* - This reserve is also required by the bond indenture to provide funding for unforeseen emergency needs, and is equivalent to two percent of original plant in service, or \$32.4 million. As plant in service is replaced and upgraded over the next several years, the required size of this reserve will increase significantly. In recognition of this dynamic, the bond indenture provides WASA with the flexibility to revisit the appropriate size of this reserve.

- *District of Columbia General Obligation Bond Reserve* - This reserve is required under WASA's memorandum of understanding with the District of Columbia regarding payment of District general obligation bonds that WASA is responsible for. This reserve is equal to ten percent of the succeeding fiscal year's debt service, or \$1.8 million in FY 2002.

- *Risk Management & Claims Reserve* – This reserve is to cover unpaid tort and workers' compensation claims and deductible amounts on all insurance policies, in excess of projected amounts included in the operating budget. Total reserves currently set aside for these purposes are \$4.4 million.
- *Undesignated Reserve* - After allocating portions of the 180 day operating and maintenance reserve to the reserves listed above, the amount that remains (approximately \$22.7 million projected for FY 2002) is WASA's undesignated reserve, and is available for other contingencies.

In addition to the reserves allocated within the Board-adopted 180 day operating and maintenance reserve, additional cash balances are designated for the following purposes.

- *Reserve for Federal Billing Issues* - As described previously, under the current federal billing process, WASA prepares federal billings approximately 18 months in advance (e.g., the FY 2002 federal bill was prepared in April 2000) in order to meet the Congressional budget schedule. This billing is based on projected rate increases as proposed in the then-current ten year plan as well as projected consumption. This billing also reflects a "true-up" of estimated vs. actual consumption and rate increases of the most recently completed fiscal year (e.g., the FY 2002 federal bill contained a true-up for the fiscal year ended September 30, 1999.) During FY 2000, we estimated that actual consumption and billings in FY 2000 would be lower than the projected bill (which was prepared in FY 1998) by approximately \$12.8 million. This amount was directed to reserves, and in accordance with the current federal billing process, will be netted against the FY 2003 federal billing.

WASA has other reserves that are available to it in very specific circumstances:

- *Rate Stabilization Fund* - Consistent with the Board's financial policies and as envisioned in the bond indenture, this fund is to be established to mitigate large annual rate increases. At the end of FY 2001, the balance in this fund totaled \$6.5 million. Under the FY 2001 - 2010 financial plan, this deposit would be utilized in FY 2007 and FY 2008. Future deposits to the rate stabilization fund will be determined annually based on financial performance in that fiscal year and updated ten year capital and operating forecasts.
- *Senior Lien Debt Service Reserve Fund* - The bond indenture requires WASA to maintain a debt service reserve fund for its senior lien bonds in the amount of ten percent of future maximum annual debt service. This reserve is in addition to the 180 day operating and maintenance reserve, is held by WASA's trustee and can only be used in the event that net revenues are insufficient to meet the next debt service payment. Currently, this reserve is sized at approximately \$23.1 million, and will increase as WASA issues additional fixed rate debt. WASA earns interest on this reserve that is included in other operating

revenue and is used to offset annual debt service payments. (The level of interest earnings that WASA can retain on the debt service reserve fund is limited by federal arbitrage restrictions.)

### ***Long-Term Operational & Financial Issues***

Over the next ten years, WASA faces a number of significant operational and related financial issues that will impact future financial plans:

***Combined sewer overflow long-term control plan*** - Similar to many older communities in the Mid-Atlantic, Northeast, and Midwest portions of the country, approximately one-third of the District of Columbia, mostly the downtown and older parts of the city, is served by a combined sewer system. In dry weather, the system delivers sanitary sewage to the Blue Plains Wastewater Treatment Plant. In wet weather, rain also enters the system, and if the carrying capacity of the system is exceeded, the excess flow overflows into the creeks of the District of Columbia; this overflow is called combined sewer overflow (CSO).

As required by the EPA's CSO policy, WASA completed its draft CSO long-term control plan in summer 2001. Projected capital costs of this draft plan total approximately \$1.05 billion (in FY 2001 dollars); the final plan is scheduled to be submitted to the EPA in early calendar year 2002, and final costs could vary from this initial draft plan. Once approved, capital improvements are projected to be phased in over a twenty year timeframe, with construction beginning within 18 to 24 months of EPA approval. Projected costs for the draft plan are not included in the current capital improvement program and ten year plan. Over the next one to two years, WASA will be developing a comprehensive financing plan, including identification of outside funding sources and then alternative retail rate structures for both CSOs and stormwater.

***Stormwater*** -- Over the past few years, WASA has been working closely with the District on stormwater system planning issues. Approximately two-thirds of the sewer system in the District of Columbia is separate, with one sewer system conveying sanitary sewage flows to Blue Plains for treatment, and the second sewer system conveying stormwater to approximately 600 outfalls located on the Anacostia and Potomac Rivers and other waterways. As described above, the remaining one-third of the sewer system is combined, with sanitary sewage flows and stormwater combined in the same system and conveyed to Blue Plains for treatment. The stormwater permit addresses discharges from the separate storm sewer system. In April 2000, the District received its permit from the EPA that expires in April 2003.

During FY 2001 the District of Columbia Council passed legislation that named WASA as Stormwater Administrator with responsibilities for coordination and administration of all three agencies' stormwater control efforts. In addition, City Council

established a fee (to appear on WASA's water and sewer bill) to support all three agencies' incremental efforts through permit expiration in FY 2003. WASA began implementing this fee in June 2001. Annual implementation costs through the first permit period are projected to total \$3 million for all three agencies, with WASA's share amounting to approximately \$1 million. As part of the effort, a separate memorandum of understanding was negotiated with the District's Chief Financial Officer and the Departments of Health and Public Works that ensures that WASA is completely covered for all stormwater-related expenditures; if funding is insufficient from the stormwater fee, WASA will be made whole by the Departments of Health and Public Works or by a credit against the payment in lieu of taxes to the District.

The FY 2001 - 2010 financial plan assumes that all incremental costs borne by WASA for stormwater will be covered by the District's stormwater fee. In addition, the new permit issued for the period after FY 2003 may contain significant new operating and capital requirements for the stormwater system, although it is anticipated that WASA's share of these projects would again be financed with the District's stormwater fee.

## ***Results***

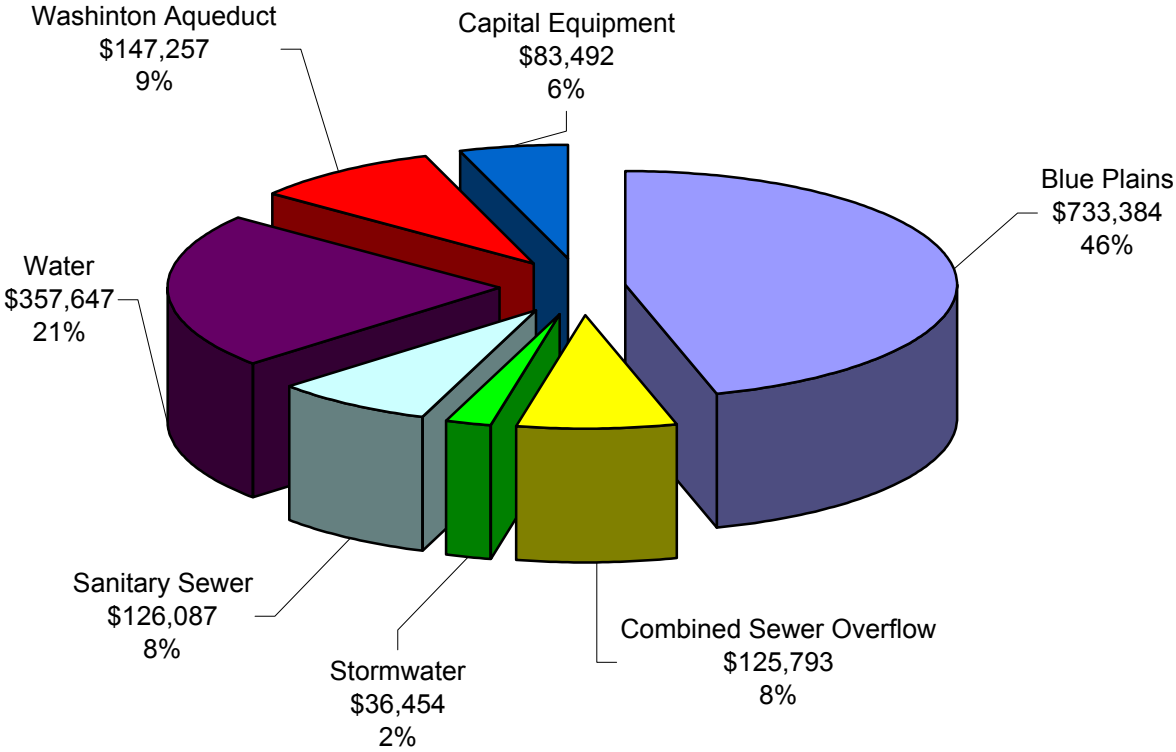
WASA's adherence to the Board's financial and rate-setting policies by implementing prior ten year plans has been one of the key reasons for WASA's financial success. The consistent support for and implementation of the plan has been commended and acknowledged by the capital markets and broader financial community, as evidenced by the numerous bond rating upgrades WASA has received since 1998. WASA's ratings currently are A1 / A / A+.

Continued adherence to Board policies and the proposed ten year plan will provide the financial resources to meet our ongoing commitment to 1) provide world-class service to our customers and 2) meet our regulatory and environmental obligations. An essential component of meeting these goals is fully funding the proposed capital program, which the proposed ten year plan accomplishes. Continuing implementation of the plan and its underlying policies will result in maintenance of WASA's already strong bond ratings and should result in future bond rating upgrades, producing continuing reductions in WASA's cost of capital which will be passed on to WASA's customers.



**FY 2001 – 2010  
CAPITAL IMPROVEMENT PROGRAM**

# FY 2001 - FY 2010 Capital Improvement Program (000's)





## **FY 2001 – 2010 CAPITAL IMPROVEMENT PROGRAM**

The ten-year program has remained approximately the same size as last year, with estimated ten-year disbursements totaling \$1.61 billion. This year's Capital Improvement Program reflects the results of the efforts of staff to further prioritize and refine the capital program to ensure WASA's place as a world-class organization. These efforts focus on incorporating advances in technologies by updating or replacing existing facilities, while ensuring critical systems operate at planned capacities until those new systems are in place.

A critical part of WASA's mission is the safety of our customers and the environment. We have accelerated repairs to wastewater pumping stations and have initiated critical initiatives in our water program. Renewed effort has been directed at improving responsiveness to problems in the water system, such as valve operation and repair, water main breaks and continued elimination of cross connections.

In the Wastewater Treatment area, our focus continues on upgrading aging facilities and the beginning stages of implementation of our biosolids management program. Our biosolids program reflects the implementation of an integrated, three-phase approach that focuses on end use and disposal options for biosolids, while improving the consistency and quality of the end product. This plan involves the replacement of aging processing facilities, while providing the flexibility to adjust to evolving conditions. Also, improvements to the biosolids program are critical to WASA's achievement of the operational savings goals outlined in the Blue Plains Internal Improvement Plan, such as lowered contractual, chemical and payroll costs.

In the Sanitary Sewer area, because of the age of the sewer system, we have focused our near-term efforts on equipment replacement/rehabilitation and other needed facilities' improvements in this CIP. These improvements are required to maintain operations of these facilities at their rated capacities. Also during FY 2002, we will enter into a contract with a fifth, large engineering firm or Engineering Program Management Consultant (EPMC) to assist us in developing and managing the capital projects in the Sanitary Sewer area. The first major task of this EPMC is to complete a comprehensive evaluation of the sewer system.

In the Combined Sewer area, the draft Combined Sewer Overflow (CSO) Long Term Control Plan was submitted to the Environmental Protection Agency (EPA) ahead of the schedule established. The development of this plan included significant involvement from the public – WASA customers, environmental advocacy groups and various local and federal regulatory agencies. A special CSO stakeholder group was formed and briefed regularly as the plan evolved. The draft plan includes a combination of large storage tunnels, rehabilitation of pumping stations and new pipelines to store combined flows resulting from storm events until they can be sent to Blue Plains for treatment. The benefits of this plan are significant – CSO volume is projected to be reduced by 92 percent, thus improving water quality, reducing debris in our rivers currently resulting from CSOs and addressing historical flooding issues in the Northeast Boundary area. The recommended projects are projected to cost \$1.05 billion (in FY 2001 dollars), and are anticipated to occur over a twenty-year span, with specific initiatives that may begin as early as FY 2002. The final plan is to be submitted early in calendar year 2002 and may include different recommendations that will be determined as negotiations with

regulatory agencies progress. Due to the scope and unsettled funding issues of this effort, the full impact of this project is not shown in the current capital program.

The current CIP includes approximately \$109 million (disbursements basis) for improvements to the existing combined sewer system, primarily in pumping station improvements. Several of these improvements are interim in nature so that the system can continue to function reliably pending implementation of the entire plan.

The Water Service program area includes plans to coordinate our water main work with the District's Department of Public Works' (DPW) proposed plan for street reconstruction. Coordination will allow WASA to replace/rehabilitate water mains while leveraging DPWs' street reconstruction work, resulting in project cost savings.

This year's plan also reflects the continued implementation of the high priority rehabilitation program, which provides for various process equipment upgrades and replacements to ensure the reliability of critical equipment and processes while the capital improvement program progresses. The high priority rehabilitation program impacts equipment at Blue Plains and pumping stations and is being jointly developed and managed by WASA's Departments of Wastewater Treatment, Maintenance Services and Sewer Services.

Historically, we have presented the ten year capital improvement program on a cash disbursements basis, which are needed to forecast the amount and timing of capital financings and retail rate increases. In addition to this focus on disbursements, we also perform an extensive review of total project budgets, which reflect the fully loaded, anticipated costs of a project, including both historical and projected spending as well as project contingencies. In particular, we review project status and related budget changes from year to year, reflecting changes in scope, design, construction or other related issues. This year's budget document includes a summary of lifetime project budgets by program area for the Board's review, including a comparison with last year's plan.

In FY 2001, projects were delayed at Blue Plains due to various design and other delays and in the Water Services area due to valve operation and District permitting issues. In developing near-term capital disbursement projections, we performed a detailed, project-by-project analysis, with consideration given to where each project is in its lifecycle as well as the historical issues faced in the water system that will most likely continue for the near term. As a result, our FY 2002 and FY 2003 disbursement projections are lower this year than last year: over the two-year period in last year's CIP, the Blue Plains and Water Services areas disbursements budgets totaled \$332.7 million and this year total \$252.5 million (excluding metering). This difference in disbursements has been delayed into later years.

**NOTE: ALL PROGRAM AREA BUDGETS PRESENTED ARE ON A "LIFETIME" BUDGET BASIS.**

## **WASTEWATER TREATMENT**

WASA operates the Blue Plains Advanced Wastewater Treatment Plant, the world's largest advanced wastewater treatment facility. Through Blue Plains, WASA provides wastewater treatment services to over two million people in our service area, including residents of the District of Columbia and significant portions of Montgomery and Prince George's Counties in Maryland and Fairfax and Loudoun Counties in Virginia. Wastewater treatment includes liquid treatment process facilities to handle both sanitary wastewater flows and peak storm flows, along with solids processing facilities to treat the residual solids removed in treatment units and produced by the liquid treatment process facilities. Blue Plains is rated for an average flow of 370 million gallons per day (MGD), and is required by its National Pollutant Discharge Elimination System (NPDES) permit to treat peak full treatment flow rates of 740 MGD for up to four hours, and continuous peak full treatment flow of 511 MGD. Additionally, up to 336 MGD storm water flow must receive partial treatment, resulting in a total plant capacity of 1076 MGD. The plant treats these flows to a level that meets one of the most stringent NPDES discharge permits in the United States.

### **Overview of the Wastewater Treatment Process**

The first wastewater treatment phase begins as debris and grit are removed and trucked to a landfill. The sewage then flows into primary sedimentation tanks that separate about half of the suspended solids from the liquid. The liquid flows to secondary treatment tanks where oxygen is provided to allow bacteria to break down the organic matter. In the next stages of treatment, bacteria convert ammonia into other forms of nitrogen and then into harmless nitrogen gas. Residual solids are settled out and the water is percolated down through sand filters, removing the remaining suspended solids. The water is disinfected, treated to remove chlorine and discharged into the Potomac. The solids from primary sedimentation tanks go to process units where the dense sludge settles to the bottom and thickens. Biological solids from the secondary and nitrification reactors are thickened separately using floatation thickeners. All thickened sludge is dewatered, lime is added to reduce pathogens, and the organic biosolids are applied to agricultural land in Maryland and Virginia.

Project lifetime budgets in the Wastewater Treatment Service Area total \$1.05 billion, or 46 percent of the total capital improvement program. As described in more detail below, capital projects in the Wastewater Treatment Service Area are required to rehabilitate, upgrade or provide new facilities at Blue Plains to ensure that it can reliably meet its NPDES permit requirements, produce a consistent, high-quality dewatered solids product for land application, and reduce odors both onsite and in the final product leaving Blue Plains.

In general, short-term improvements to the plant necessary to ensure plant process performance have been completed over the last four years. Fifteen short-term construction projects with a combined value of \$30 million are complete or nearing completion. Long term upgrade projects now under construction and anticipated to be completed in FY 2002 include Area Substation 5 and Primary Sedimentation Tanks 1 and 2. These projects, which have a combined cost of \$28 million, have rebuilt the two primary

sedimentation tanks, upgraded the sludge blending tanks to improve dewatering performance, and provided a means of loading contractor-produced sludge cake into the storage vats.

While major construction has been ongoing, during FY 2001 we initiated the major rehabilitation and upgrading of several key facilities. Six major upgrade projects were bid (a combined construction value of \$192 million) and will begin construction in FY 2001: Additional Chemical Systems-Phase I, Alternate Disinfection, Additional Dewatering Facilities, Primary Treatment Facilities, Process Control Computer System and Secondary Treatment Facilities-Phase I.

Four additional major upgrade projects are to be bid in FY 2002 that have a combined construction value of \$146 million and will begin construction in following years: Secondary Treatment Facilities-Phase II, Gravity Thickener Facilities, Additional Chemical Systems-Phase II and Grit and Screening Facilities.

### **Liquid Processing Program-- \$348.9 million**

Projects in this program encompass the upgrading and rehabilitation of those facilities that are involved in handling flows from the sanitary and combined sewer systems. These flows progress sequentially through the plant processes to ultimate discharge of the treated effluent into the Potomac River. Liquid treatment systems include headworks facilities that screen and pump the wastewater flows, grit facilities that remove sand and grit particles, primary treatment facilities that remove settleable solids by sedimentation, secondary treatment facilities that remove organic pollutants using a biological process, nitrification/denitrification facilities that remove nitrogen using a biological process and effluent filtration, disinfection, and dechlorination facilities.

Specific major projects under this program include:

- *Raw Wastewater Pumping Station Upgrades* – This project will rehabilitate pumping equipment and appurtenances in the two stations that pump incoming wastewater into the plant. Design is scheduled to start in FY 2002.
- *Influent Screening Facilities Upgrade* – This project will install fine screens to replace existing coarse screens at the head of the plant, as well as screenings conveyance, storage and outloading facilities. Design was completed in May 2001. Construction bids were received in September 2001, however only one bid, substantially higher than the project budget, was received. This project will be repackaged into at least two smaller contracts in an attempt to attract more competitive bids and facilitate coordination with other ongoing projects.
- *Grit Chamber Facilities Upgrade* -- This project provides for the construction of an automated, continuous grit removal system in all sixteen chambers. Impacts on operations include the elimination of current contractor-manual cleaning of each grit tank and lowered maintenance costs of tanks and pumps. Design was completed in May 2001. Construction bids were received in September 2001 (in conjunction with the Influent Screening Facilities project), and repackaging of this project is proceeding as discussed above.

- *Primary Treatment Facilities Upgrade* -- This project involves the replacement of clarifier mechanisms in the East Process and modifications of the clarifiers in the West Process, which will result in improved overall plant efficiency and lowered maintenance costs. Design was completed in February 2001. Construction will begin in Fall 2001.
- *Secondary Treatment Facilities Upgrade Phase I* -- Rehabilitation of the West and East Secondary Treatment facilities, expansion of two reactors and rehabilitation of support equipment and facilities are included in this project, resulting in lowered maintenance costs. Design was completed in July 2001, construction bids were taken in September 2001 and construction will start in FY 2002.
- *Secondary Treatment Facilities Upgrade Phase II* -- This project includes the rehabilitation of the West Secondary Sedimentation Basins (basins number 1-12), West Secondary Reactors and expansion of Secondary Reactors 5 and 6. This will result in improved process efficiency, lowered chemical usage and lowered maintenance costs. Design is underway and expected to be completed in March 2002.
- *Nitrification/Denitrification Facilities Upgrade* -- This project entails the rehabilitation of existing Nitrification facilities and improvement of interim Denitrification facilities, which will result in lowered maintenance and energy costs due to improved efficiency. Design is scheduled to start in FY 2002
- *Filtration and Disinfection Facilities Upgrade* -- Replacement of existing filter media and the addition of an air/water backwash system and improvements to pump operation will result in reduced power usage and treatment costs due to reduced backwash water usage. Design is scheduled to start in FY 2002

### **Solids Processing Program -- \$483.8 million**

In general, biosolids processing involves reductions in volume along with treatment to meet federal or state and local requirements as applicable for the ultimate disposal method. Treatment is provided by a system of processing facilities that include gravity thickening of primary sludge, floatation thickening of the biological waste sludges produced by the secondary and nitrification/denitrification facilities, digestion of all biosolids streams, dewatering by centrifuge or belt press and lime stabilization. Dewatered biosolids are conveyed to temporary storage in the Dewatered Sludge Loading Facility or directly to bunkers prior to outloading to tractor-trailers for removal from the plant and ultimate land application. Solids processing facilities are required to produce a biosolids product that can be reused or disposed of in an economical and environmentally acceptable manner.

WASA has conducted a comprehensive Decision Science planning process to develop a long-term plan for biosolids processing and disposal. (Currently, 1,350 tons of biosolids are generated daily at Blue Plains. The predominant means of disposal is land application in Virginia, although changes in the regulatory environment and local restrictions on land application may limit the availability of this disposal means in the long run). The Decision Science planning process identified a number of alternatives, all of which included full digestion as a key component. As a result of this process, the Board adopted a Biosolids Management Plan that approved full biosolids digestion as our primary long-term alternative and continuing land application as long as it is financially advantageous.

We have now prepared a detailed facilities plan for this program, which has a total cost of \$440 million. These costs are primarily included in the Solids Processing Program, although some costs (such as Phase 2 of the Process Control Computer System) are included in the Plant Wide Facilities Program. The linchpin of the program is the design and construction of nine, 4 million gallon egg-shaped digesters, sized for the total biosolids production of the plant. In FY 2001, it was determined that the site of the abandoned composting facility at Blue Plains would be a preferable location for the new digesters, rather than rebuilding at the current location. The composting site has the advantages of moving the digesters back from the Potomac waterfront, and creating less of a visual impact on the shoreline. We have begun partnering with our neighbors and community groups to ensure that the designs of the digesters are acceptable to all those affected, and will continue to update WASA's Board of Directors on any changes in the project.

Specific major projects under this program include:

- *Anaerobic Digestion Facilities* – This project entails the replacement of the existing digesters, with substantial expansion of digester capacity. Existing digestion facilities, which processed about one-third of the biosolids production, were taken out of service during fiscal year 2001. This has resulted in a temporary increase in operating costs due to increased volume during the period until the new digesters are in service. Once the new digesters are operational, operating costs (in particular hauling and chemical purchases) will be substantially reduced. Design is scheduled to start in FY 2002, with construction scheduled to begin in late 2004 or early 2005.
- *Additional Dewatering Facilities* – The addition of new centrifuge dewatering equipment and modification of existing centrifuges to reduce dewatered solids generation will be provided by completion of this project. Impacts on operational costs include reductions in hauling and contract dewatering costs. Design work was completed in May 2001. Construction bids were received in August 2001. Construction will commence in FY 2002.
- *Biological Sludge Thickening Facilities* - This project will provide new mechanical thickening equipment and appurtenances for waste-activated sludges to replace the existing, less efficient floatation thickening units. The mechanical thickeners will result in reductions in sludge processing and chemical usage costs through their greater efficiency. Design is scheduled to start in FY 2002.
- *Gravity Thickening Facility Upgrade* -- This project includes the rehabilitation of gravity thickeners 1-6 and all sludge and scum pumping systems. Also planned is the rehabilitation of equipment in the dewatering and grinding facility and the addition of the ability to add chemical components to the influent flow for odor control. Design is underway, to be completed in March 2002.

#### **Plant Wide Facilities Program -- \$219.3 million**

This program provides for upgrading, rehabilitation or installation of support systems and facilities that are required for both the liquid processing and solids processing programs. Systems include a process control and computer system for monitoring and control of all processes and facilities, upgrades to city and plant water systems, chemical systems, electrical power and distribution systems upgrade, telephone service, and data highway infrastructure for process, safety, security and information needs. Facilities comprise

chemical receiving, storage, transmission and feed systems for chemicals used throughout the liquid and solids processes, including metal salts, polymers, sodium hypochlorite, and sodium bisulfite. Projects impacting support facilities include the rehabilitation of the Central Operations Facility and the Central Maintenance Facility. Specific projects under this program include:

- *Nitrification Sodium Hydroxide Facility* – In early FY 2002, WASA will complete the construction of an interim replacement of the current outdated nitrification lime feed system with a nitrification sodium hydroxide facility. Sodium hydroxide, while more expensive, is much easier to handle and the feed equipment is simpler and more reliable. Impacts on operations will include higher chemical costs not offset by lowered facilities maintenance costs and reduced safety concerns.
- *Additional Chemical Systems - Phase I* - This project will replace all of the chemical storage, transmission, and feed facilities at Blue Plains that are used for metal salts.
- *Additional Chemical Systems – Phase II* – This project will result in the installation of new centralized bulk polymer receipt, batching, storage and feed facilities for the entire plant's polymer needs. This new installation will result in improved process efficiencies and reduced maintenance requirements.
- *Alternate Disinfection Facilities* – This project will replace the current disinfection and dechlorination facilities that use liquid/gaseous chlorine and sulfur dioxide with liquid sodium hypochlorite (concentrated bleach) and liquid sodium bisulfite. Currently, chlorine and sulfur dioxide are shipped to Blue Plains in 90-ton railcars, and have historically posed handling and safety concerns. As part of our safety initiatives, WASA has accelerated this project and it is to be completed in early FY 2003.
- *Process Control and Computer System (Phase 1, 2 and 3)* – This new system will allow for automation of a significant number of plant processes at Blue Plains, which will allow for better management of previously manually monitored processes. Operating cost savings are anticipated from lowered chemical usage and electricity consumption (due to minimizing peak demand), and ultimately lower staffing. This project is critical to achieving the goals presented in the Blue Plains Internal Improvement Plan (IIP). The new system will be implemented in three phases, beginning with the grit chambers, primary and secondary treatment, and dewatering processes, and then moving to nitrification, filtration, disinfection, and solids processing. WASA pre-qualified three vendors for this system and has received bids. The construction notice to proceed is anticipated in FY 2002.

## **SANITARY SEWER**

WASA is responsible for wastewater collection and transmission in the District of Columbia, including operation and maintenance of the sanitary sewer system. WASA's sanitary and combined sewer system includes approximately 1,800 miles of large interceptor sewer and smaller gravity collection sewers as well as twenty-four pumping stations. WASA is also responsible for sewer lateral connections from mains to the property lines of residential, government, and commercial properties. In addition, WASA is responsible for the 50 mile long Potomac Interceptor Sewer, which provides conveyance of wastewater from areas in Virginia and Maryland to Blue Plains. The existing sanitary sewer system dates back to 1810, and includes a variety of materials such as fiberglass, ductile iron, plastic, steel, brick, cast iron, cast in place concrete, brick and concrete, vitrified clay and concrete.

Over the next few years, WASA will be undertaking an evaluation of the sewer system to determine its condition, verify adequate capacity, and to develop new capital projects, as appropriate. The FY 2001 - 2010 capital improvement program includes \$6.7 million (commitments basis) for initial funding to perform planning and assessments to develop sanitary sewer capital project needs. Similarly, assessments will be made of the combined sewer piping systems.

In general, projects in the existing sanitary sewer service area program provide for replacement or rehabilitation of the system as well as extensions to this system for development and growth as needed. As in last year's program, this year's again reflects the substantial costs of street repaving due to the new street repair and restoration regulations required of WASA and other area utilities by the District.

The current CIP includes the following projects:

### **Sanitary Sewer Service Area Management – \$7.5 million**

In FY 2001, WASA began a comprehensive evaluation of the sanitary and combined sewer systems, which will be accomplished through the addition of a new engineering project management contract (EPMC-III A). This project is scheduled to be completed over several phases, with completion in FY 2005. In addition, management of the design of pumping station rehabilitation projects will be undertaken under a separate contract. The following projects are included in this category:

- *Sanitary Sewer Program Management & Planning* - This planning began in FY 2001 and will allow WASA to ensure that the sewer system is in adequate structural condition, and has sufficient capacity to meet current service demands and planned growth. The planning effort required to comply with federal regulations addressing sanitary sewer overflows is also included in this initiative.
- *Design Management for Sanitary Sewer Pumping Stations* - This project began in FY 2001 and provides for the management of the design of all sanitary sewage pumping stations requiring major rehabilitation or replacement. A project design engineer has been selected, with design scheduled to begin in FY 2002.

### **Collection Sewer Projects – \$22.0 million**

This program includes studies and projects to effectively eliminate infiltration/inflow, stormwater and other flows to Blue Plains to optimize use of the treatment facilities. This category also includes projects to rehabilitate collection system sewers as well as projects that serve existing properties and new development.



## **Interceptor/Trunk Sewer/Force Sewers – \$80.2 million**

This program includes large diameter sewers that may be required to serve new development, replace undersized sewers, or replace or rehabilitate large diameter sewers that have reached their useful life or are in need of major repair. In addition, this category includes approximately \$30 million for initial funding of capital projects that may be identified as part of the comprehensive assessment of the sewer system that began in FY 2001.

The current CIP contains several projects in this service area, including:

- *Potomac Interceptor Rehabilitation* – The Potomac Interceptor is a 50-mile long sewer that provides conveyance of wastewater from areas in Virginia and Maryland to Blue Plains. WASA has been working with our wholesale customers on a variety of capital projects to address odor control issues related to the Potomac Interceptor and to ensure the long-term structural health of this major sewer, including:
  - *Potomac Interceptor Rehabilitation in Fairfax County* – The capital improvement program includes \$8.7 million to design and reconstruct a portion of the interceptor in Fairfax County that is seriously deteriorated due to hydrogen sulfide corrosion. While final design efforts will define the exact construction techniques to be used, it is anticipated that an in-pipe liner will be employed. Design is scheduled to begin in fall 2001, with construction beginning in spring 2003 and extending through spring 2006.
  - *Potomac Interceptor Rehabilitation in Loudoun County* – The capital improvement program includes funding to construct and repair using PVC lining of a segment of the Potomac Interceptor in Loudoun County. Bids were received in September 2001 at a price of \$0.4 million. Construction is scheduled to begin in early calendar year 2002 and extend through spring 2003.
  - *Other Potomac Interceptor Rehabilitation Projects* – \$1.3 million is included from FY 2001 to FY 2005 to repair other segments of the Potomac Interceptor as determined by a study that is currently being undertaken by the Metropolitan Washington Council of Governments (COG). This will include manhole replacement and rehabilitation of miscellaneous structures along the length of the line.
- *Odor Control Projects:*
  - *Interim Odor Control* – As an interim step, WASA installed odor-absorbing chemicals and passive carbon filters in manholes at selected locations where problems have been observed. This interim project cost approximately \$.35 million and was completed in July 2000.
  - *Permanent Odor Control* – WASA will install a permanent odor control system that includes a forced air/activated carbon filter system. This project will cost approximately \$3.7 million. Preliminary design was completed in FY 2000. During FY 2001, WASA has been seeking the requisite National Park Service permit, performing associated environmental

assessments, and coordinating with the community. Current schedules call for construction to begin in the summer of 2003 and to be completed in the fall of 2004.

- *Slash Run Sewer Repair (located at 22nd and N St. NW)* - This project involves the repair of a major trunk sewer. Engineering studies required to define the nature and extent of the needed repair began in the spring of 2001 and will be complete by spring 2002.

### **Pumping Facilities – \$15.2 million**

This program includes projects required for the rehabilitation or replacement of existing wastewater pumping stations as well as projects for the engineering and construction of new wastewater pumping facilities as required. The current program includes projects to rehabilitate three existing wastewater pumping stations (Upper Anacostia, Earl Place, and Rock Creek pumping stations). Design of these pumping stations will begin in FY 2002. The comprehensive sanitary sewer condition assessment and planning that began in FY 2001 may define the need for additional projects that will then be subsequently programmed in the CIP.

### **Ongoing Sanitary Sewer Projects – \$53.1 million**

This area includes capital projects managed by the Department of Sewer Services, including the replacement of sewer laterals and related capital improvements. In addition, this project area again reflects the increased costs from last year's budget related to the District's substantial new paving requirements. This program also includes funding made necessary by the District of Columbia Department of Public Works (DPW) road projects, which often require the relocation of sewers. Budget requirements are projected based on the best available information from DPW.

## **STORMWATER**

WASA is responsible for the maintenance of certain public facilities that convey stormwater runoff to the Anacostia and Potomac Rivers and other receiving streams. The stormwater system includes approximately 600 miles of storm sewer pipes, catch basins, inlets, special structures, pumping stations, and related facilities. Some components of the existing storm sewer system are well over 100 years old. The system is constructed of a variety of materials such as ductile iron, plastic, steel, brick, cast iron, cast-in place concrete, brick and concrete, vitrified clay, and concrete. Projects include extensions to the system, relief of certain storm sewers, as well as projects to rehabilitate or replace storm sewer systems that have experienced structural deterioration.

Over the past few years, WASA has been working closely with the District on stormwater system planning issues in anticipation of the EPA's issuance of a stormwater permit to the District. In April 2000, the District received its permit from the EPA, which expires in April 2003.

WASA has entered into a memorandum of understanding (MOU) with the Department of Health and the Department of Public Works that delineates the administrative and funding responsibilities for this effort. Legislation has been passed which established a stormwater administration within WASA to monitor and coordinate permit compliance citywide. It also established a stormwater enterprise fund to finance these activities. A stormwater management fee (authorized by the District of Columbia and which appears on WASA's water & sewer bill) funds the incremental operating requirements of the initial permit period and it is anticipated that future adjustments of this fee will be required. The permit issued for the period after FY 2003 will likely contain significant new requirements for the stormwater system. Currently, WASA is engaged in discussions with the District to determine how these initiatives will be financed. While significant new capital projects are not anticipated at this time, the specific future permit requirements and implications cannot be foreseen at this time.

### **Trunk/Force Sewers -- \$2.5 million**

This program includes large diameter storm sewers, or pumping station force sewers that serve new development, replace undersized sewers, or replace or rehabilitate those storm sewers that have reached their useful life. Currently the capital improvement program contains one significant active project in this area - the Repair Shaft & Bulkhead of the Capitol Hill Sewer. This project is needed to correct a long-standing, partially completed project to address safety considerations.

### **Pumping Facilities – \$26.0 million**

This program includes projects for the rehabilitation or replacement of fifteen existing stormwater-pumping stations. Detailed design of these improvements is on "hold" pending discussion with the District's City Administrator over funding sources.

### **Extension/Local Drainage Projects -- \$11.3 million**

This category includes a number of projects to relieve local flooding and to address short term needs for improvements to storm sewers located in the separate and combined sewer areas. In particular, projects in this year's CIP include:

- *Sewer lining at 22<sup>nd</sup> & P Streets, NW*- Engineering studies to define the design parameters began in spring 2001 and will be complete in the fall of 2001.
- *Dumbarton Oaks* – This project will separate a storm sewer currently discharging into a combined sewer, thereby reducing flow to Blue Plains. In addition, separation will alleviate maintenance issues which have been problematic to WASA and to the National Park Service (NPS). Approximately \$1.1 million is budgeted from FY 2002 to FY 2005 for the design and construction of this project. Design will commence as soon as NPS required permits are obtained.

### **On-Going Stormwater Projects – \$5.6 million**

These include projects carried out by WASA's Department of Sewer Services, including storm sewer rehabilitation and extensions to serve new development.

### **DPW Storm Projects – \$23.1 million**

This program funds projects made necessary by the District of Columbia's Department of Public Works road projects, which often require the relocation of storm sewers, inlets or other structures. Budget requirements are projected based on the best available information from DPW.

### **Stormwater Program Management -- \$6.4 million**

This area provides for design management and construction management of all storm sewage pumping stations requiring major rehabilitation or replacement as well as long-term planning. It also provides for funding for the sewer system program management (EPMC IIIA) associated with the storm sewer system.

## **COMBINED SEWER**

Similar to many older communities in the Mid-Atlantic, Northeast, and Midwest portions of the country, approximately one-third of the District of Columbia, mostly the downtown and older parts of the city, is served by a combined sewer system. In dry weather, the system delivers wastewater to the Blue Plains Wastewater Treatment Plant. In wet weather, storm water also enters the system, and if the conveyance capacity of the system is exceeded, the excess flow overflows into the waterways of the District of Columbia. This discharge is called combined sewer overflow (CSO). There are sixty permitted CSO outfalls in the District.

As required by EPA's CSO policy, WASA has recently developed a draft Long Term Control Plan (LTCP), which was submitted to the EPA ahead of the scheduled established. As part of this process, we have completed a comprehensive public information program, including the creation of a stakeholder advisory panel and presentation of the plan at a number of public meetings.

The draft LTCP submitted to regulatory agencies this summer recommended projects costing \$1.05 billion (in FY 2001 dollars) to substantially reduce CSOs. The majority of these recommended LTCP projects have not been included in the current CIP. The final LTCP may include different recommendations for CSO reduction. Recommended projects in the draft plan call for construction of tunnels for storage of excess flows during storm events, upgrades of pump stations to facilitate flows to Blue Plains and additional treatment capacity at Blue Plains. A formal public hearing dealing with the draft LTCP will be held early in FY 2002.

Projects in this program include:

- *Rehabilitation of the Eastside Interceptor* - This collection system carries flow from the Northeast Boundary Sewer to the Main and "O" Street pump station and has been severely silted. Construction completed in July 2001 has remediated this problem.
- *Northeast Boundary Sewer* – This project will mitigate local flooding in six areas, with construction beginning in 2002 in the Northeast and Northwest quadrants of the District. Design is complete. Discussions continue between DPW/DDOT and WASA regarding funding responsibilities. Construction of the project will cost approximately \$3.9 million.
- *Fabridam Rehabilitation Project* – These inflatable dams were installed to increase storage of wastewater in the conveyance system for delivery and treatment to Blue Plains when capacity is available, thereby reducing CSO volume. Additional projects in this category may be recommended as part of the CSO LTCP currently being prepared. Replacement of twelve fabridams at eight locations will begin in FY 2002.
- *Pumping Stations Rehabilitation & Reconstruction* -- Following an extensive condition survey and hydraulic study, it has been determined that several pumping stations require varying levels of rehabilitation. Main & O Street Pumping Stations will be upgraded to its design capacity of 240 MGD. The Eastside Pumping Station (located in the vicinity of RFK Stadium) will be rehabilitated and rebuilt to its design capacity of 45 MGD, along with installation of a new screening facility. Poplar Point Pumping Station (located at Anacostia Park) will be rehabilitated to a capacity of 45 MGD until the CSO LTCP construction is in place. Finally, the Potomac Pumping Station will be restored to its rated capacity of 460 MGD.
- *Northeast Boundary Swirl Facility (located near RFK Stadium)* -- This facility works in conjunction with the Eastside Pumping Station and was constructed to treat 400 MGD of wastewater. Modification to this facility was recently completed to increase its effectiveness. A thorough evaluation of the effectiveness of this experimental technology is underway and will be completed in FY 2002.

## **WATER**

The water distribution system operated and maintained by WASA includes almost 1,300 miles of water mains ranging in size from 4 to 78 inches in diameter, three elevated water storage tanks, five underground water storage reservoirs, and four water-pumping stations. The water distribution system also includes appurtenances necessary for proper system operation, inspection and repair, such as main line valves at regular intervals to allow flow control; air release valves to prevent air entrapment; blowoff valves for draining the water mains; check valves to permit flow in one direction only; division valves to allow transfer of water between service areas during emergencies; fire hydrants for fire-fighting purposes, and water meters. WASA's system includes over 36,000 valves of various sizes, over 8,800 hydrants and approximately 125,000 meters; of these, commercial meters are currently owned by customers.

Projects in the Water Service Area are required to rehabilitate, replace and extend water mains, storage facilities and pumping stations in order to provide service to new developments, maintain an adequate water supply for customer service, fire protection, protect the quality of the potable water, and completely upgrade the meter system. As in last year's program, this year's again

reflects the substantial costs of street repaving due to the new street repair and restoration regulations required of WASA and other area utilities by the District.

Highlights of the water system programs are:

### **Water Pumping Facilities -- \$77.3 million**

This program includes several projects to rehabilitate or replace water-pumping stations in the system. The status of these projects is as follows:

- The Bryant Street Pumping Station will undergo a major rehabilitation. The design was completed in FY 2001 and the construction contract advertised. Construction is scheduled to start in FY 2002 and will last three and half years.
- The Fort Reno Pumping Station will be provided with upgrades to address operational concerns. Design will start in FY 2002.
- The Anacostia Pumping Station will be replaced in kind on the same site it presently occupies. Design will start in FY 2003.
- A new booster pumping station will be constructed in the vicinity of the Fort Stanton Reservoirs to boost pressures in the southern portion of the Anacostia service areas. Design will start in FY 2003.

### **Water Storage Facilities -- \$42.5 million**

This program includes the rehabilitation of existing storage tanks and reservoirs in the system, as well as the construction of new storage facilities as required to meet system operational needs. The EPA Administrative Order and Consent Decree III-96-001-DS requires that existing storage facilities undergo rehabilitation to upgrade facilities and maintain water quality. This work which included the rehabilitation of five underground reservoirs and three elevated tanks has been completed, with the exception of the painting of the Boulevard elevated tank and the exterior painting of the Good Hope elevated tank. Painting of the elevated tanks will start in FY 2002.

The need for several new storage facilities, including elevated as well as ground level storage, has been identified, budgeted for and will be implemented in the future. Siting studies for these facilities will start in FY 2002.

### **Water Distribution System --\$229.0 million**

This program provides for the rehabilitation, replacement or extension of the water distribution system through several categories of projects. Again, as in last year's program, this year's reflects substantial costs due to the District's street repair and restoration regulations required of WASA and other area utilities. It also includes internal repair of a 48-inch water main at M Street, replacement of two large valves and fire hydrant related work to eliminate cross connections as part of the Georgetown Streetscape Project that will be under construction in FY 2002. Highlights of the work under this program by project category includes:

- *Valve Replacements* -- This involves the replacement of defective valves throughout the water distribution system. Operable valves are necessary for the completion of the annual flushing program, for routine and emergency system repairs, and for the completion of other capital projects that require valve operation necessary to isolate portions of the system. Two contracts for the replacement of small valves (12-inch and smaller) with a total value of \$1.7 million are under construction. One contract in the amount of \$0.9 million for the replacement of large valves (16-inch and larger) is under construction, and three more contracts to replace approximately 60 large valves will be advertised in FY 2002.
- *Cross Connection Elimination* – This project entails the elimination of potential cross connections between the water distribution system and the sewer system by removing the connection of fire hydrant drains and blowoffs to the sewer system. The EPA's Administrative Order and Consent Decree III-96-001-DS requires this work to be done. Four construction contracts for the elimination of cross connections have been completed, one contract is under construction, the design for the two last constructions contracts has been completed and both contracts will be under construction in FY 2002.
- *Dead End Elimination* -- This will eliminate the potential for stagnant water to accumulate at the ends of water mains and will assist in maintaining water quality in the distribution system. The elimination of dead end water mains is accomplished by looping to other water mains or by providing a fire hydrant to flush the line. There are two projects in the capital program to perform this work. Design for the first project will start in FY 2002 and for the second in FY 2003.
- *Main Extension and Replacement* -- The extension and replacement of water mains is required to provide service to new developments, or to replace undersized or defective mains in the system. Also included is the replacement of service connections as required during these projects. An in-house design to replace 14,600 linear feet of 12-inch diameter and smaller water main at different locations is almost completed and the construction contract will be advertised in FY 2002. In addition, the design work just began to replace 3,350 linear feet of 12-inch water main at Livingston Road, SE.
- *Large Diameter Water Main Rehabilitation* -- Work in this project consists of performing internal joint repairs on large diameter (16-inch diameter and larger) water mains exhibiting a high frequency of joint leaks. It also includes the cleaning and lining of the water main if necessary, and the replacement or rehabilitation of smaller segments of water mains. Work also includes the relocation of water mains from underneath private property when necessary. A design to rehabilitate a 48-inch water main in the third high service area and a 42-inch concrete pipe water main in the second high service area will be completed in FY 2002.
- *Distribution/Transmission Mains* -- This project category includes the replacement and construction of distribution and transmission mains in the system. A design to replace 5,150 linear feet of a 20-inch Anacostia first high water main just started and another design to replace an additional 6,100 linear feet of the 20-inch water main will start in FY 2002.
- *Cleaning & Lining Large Diameter Water Mains* – Work consists of cleaning and lining large diameter (16-inch diameter and larger) unlined cast iron water mains, and includes the replacement of in-line and side stop valves. Two construction contracts were completed in FY 2001 and a new construction contract will start in FY 2002.
- *Small Diameter Water Main Rehabilitation* – Work consists of cleaning and lining small diameter (12-inch diameter and smaller) water mains to improve water pressure and flows in the system, as well as to maintain water quality. It also includes extending the water main to eliminate dead ends and replacing water mains in too a poor condition to be rehabilitated. In FY 2002, the design work on one such project will be completed and design work on three new projects will begin.

### **On-Going Water Projects -- \$ 44.3 million**

This program includes small projects for extension of water mains to service new development in the District of Columbia, repair of water main breaks, replacement of valves and fire hydrants, and other minor water main rehabilitation work. As in last year's program, this year's again reflects the substantial costs of street repaving due to the new street repair and restoration regulations required of WASA and other area utilities by the District. These projects are managed by WASA's Department of Water Services. In FY 2001, \$2.2 million was spent in this program and it is projected that \$2.3 million will be expended in FY 2002.

### **DPW Water Program -- \$ 30.2 million**

This program includes projects for the rehabilitation, replacement and extension of water mains in which the work is done under DPW construction contracts for street paving. In FY 200, \$0.6 million was spent in this program, although expenditures are projected to increase to \$5.1 million in FY 2002. This increase in spending is necessary to coordinate the water main work with DPW's proposed street reconstruction plan.

### **Water Service Area Management -- \$28.8 million**

This program area provides engineering program management services for the water system capital improvements program to assess system needs; develop facilities plans and conceptual designs; and to manage design consultants through the development of scopes of work, cost estimates, task orders or agreements, and the review of design documents.

### **Metering -- \$40.0 million**

Beginning in FY 2002, WASA will undertake a comprehensive meter change-out program, which will entail the replacement of all 130,000 meters currently in the system. The new meters will automatically transmit consumption data to WASA's computers via cellular technology. This program is critical to achieving IIP goals in the Customer Service Department. It will not only improve the labor intensive method now used by WASA, but also decrease the cost of reading a single meter from the current \$2.96 to \$1.13 by 2004. Meter reading costs will continue to decrease over the life of the project.

The evaluation and contract negotiation phase for this project was completed in FY 2001, with work scheduled to begin in December. Residential meters will be replaced in the first two years of the program, and as the meters are replaced, we will convert to a monthly billing cycle. Residential accounts are currently billed on a quarterly basis. Commercial meters will be replaced in the third year of the program, pending legislative changes regarding meter ownership.

The change-out project follows the large meter testing project, which was completed in June 2001. Approximately 2,500 meters were tested and on average, were running 18 percent slow. Repairs were made to nearly 900 of those meters, prioritized on a revenue gain basis.



## WASHINGTON AQUEDUCT

WASA's share of improvements to the Washington Aqueduct facilities totals \$201.6 million. As the largest of the three wholesale customers of the Aqueduct, WASA is responsible for approximately 76 percent of the funding for the Aqueduct's capital projects. This percentage is based on WASA's percentage of the Aqueduct's total water sales. Over the past three years, the Aqueduct has spent \$32 million (WASA's share only) on a variety of projects, including the conversion from chlorine to chloramines for primary disinfection; rehabilitation of the raw water conduits from the Potomac; and various improvements to the McMillan and Dalecarlia Treatment Plants.

The Aqueduct also faces potential new regulatory requirements:

- *Residuals/ Solids Recovery* would take the solids that settle out from water in the Dalecarlia and Georgetown Reservoirs and concentrate them for removal. Currently these solids are periodically discharged into the Potomac River during high river flow conditions. The Aqueduct recently completed an extensive study of the environmental impact of these discharges recently and the EPA is currently reviewing the report as part of the permit renewal process. If required, projected cost estimates (WASA share only) total \$45.6 million.
- *Backwash Treatment Project* would construct facilities to separately treat backwash from filters. Filter backwash water is currently routed to on-site reservoirs for settling. EPA may in the future require specific treatment to be accomplished. If the EPA requires additional treatment, the Aqueduct currently projects that work would not be required until late in our ten-year planning period, with total projected costs of \$10.6 million.

WASA will continue to work closely with the Aqueduct, monitoring potential regulatory requirements and will revise future years' capital programs as appropriate.

## CAPITAL EQUIPMENT

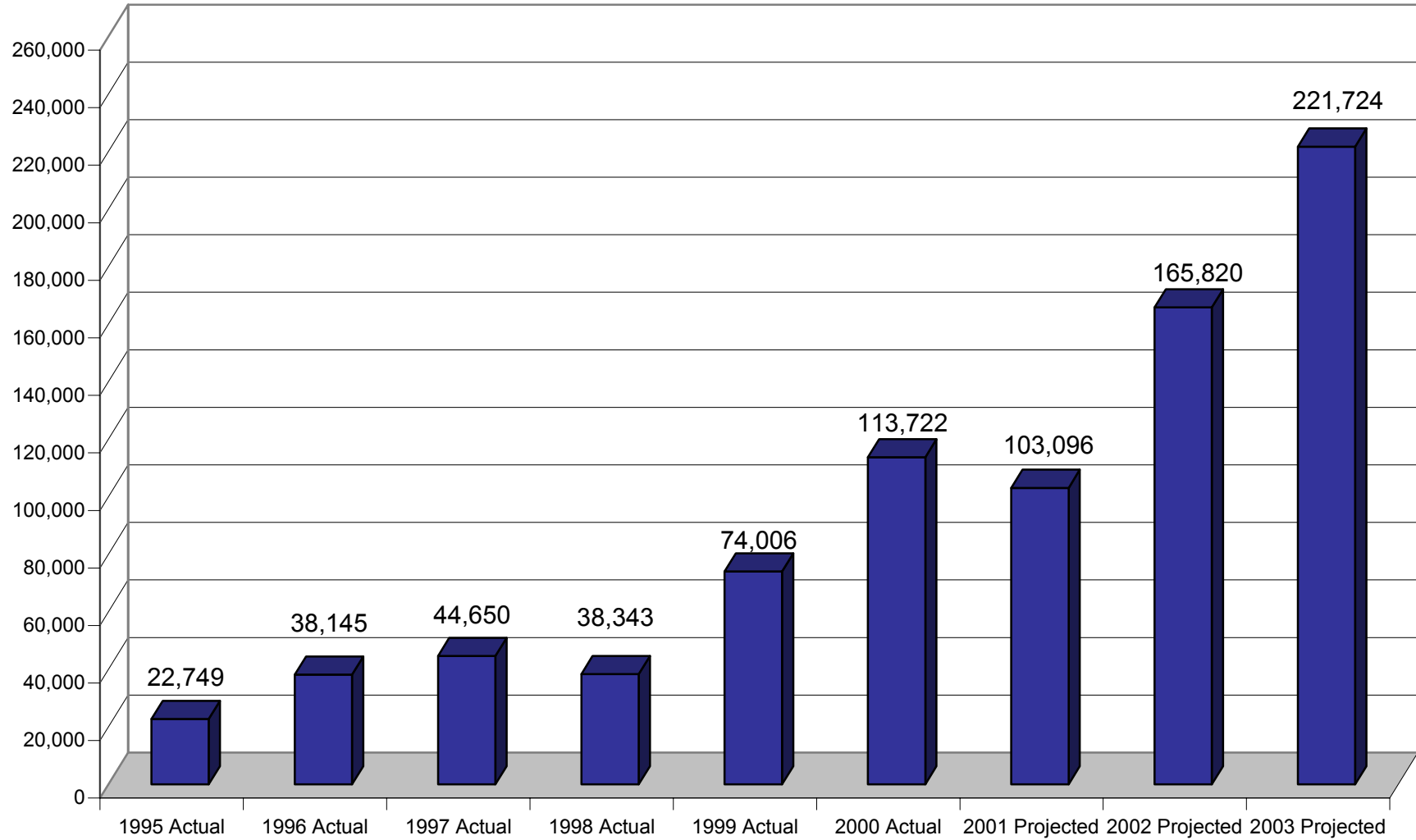
WASA's ten-year capital equipment budget totals \$84 million. As in past years, the largest area of expenditure is in the area of technology infrastructure, representing more than 40 percent of the ten-year plan. Near term plans include upgrading WASA's network environment, implementing systems essential to maintenance management and plant operations, ongoing improvements to the financial management, payroll, and customer information systems, and replacing personal computing equipment. Capital maintenance of pumps, large motors, and other major equipment at Blue Plains and by sewage pumping stations is budgeted at over \$15 million, approximately 19 percent of disbursements, over the next ten years, and approximately 19 percent of the budget is for ongoing fleet upgrades. Other projects included in the capital equipment program include various ongoing small valve, fire hydrant, and catch basin replacements.

## **CAPITAL AUTHORITY**

As part of WASA's enabling legislation, Congressional appropriations authority is required before any capital design or construction contract can be entered into. The FY 2003 request totals \$288.5 million, and reflects the following:

- Remaining authority from prior years' appropriations
- Projected commitments in FY 2002 and FY 2003
- Approximately half of projected FY 2004 commitments to ensure adequate authority exists in case any projects are accelerated. Due to the timing of the Congressional appropriations process, authority requests must be made well in advance of commitment execution. In addition, execution of any contract requires General Manager approval, with major projects and contracts requiring Board approval.

# Historical & Projected Capital Spending FY 1995 - FY 2003 (\$000's)

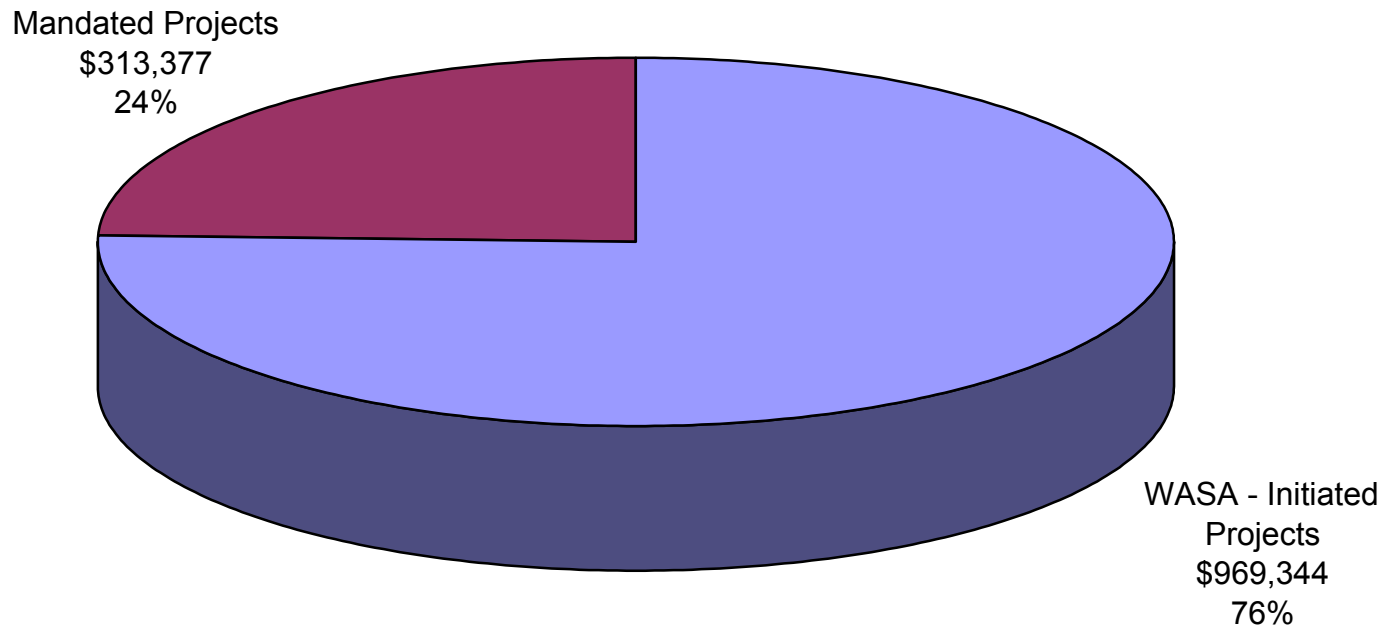


## FY 2001 - FY 2010 PROJECTED CAPITAL IMPROVEMENT PLAN (\$000's)

	FY 2001 Projected	FY 2002 Revised	FY 2003 Proposed	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	Total FY '01-'10
<b>Wastewater Treatment</b>											
Liquid Processing Projects	15,675	21,991	32,385	50,803	57,672	43,291	12,998	1,645	6	16	236,482
Plantwide Projects	20,591	41,949	41,945	13,519	11,755	18,778	4,403	3,590	2,386	2,427	161,342
Solids Processing Projects	5,605	17,816	40,713	35,456	27,701	72,837	83,524	43,561	8,257	90	335,560
<b>Total</b>	<b>41,871</b>	<b>81,756</b>	<b>115,043</b>	<b>99,778</b>	<b>97,128</b>	<b>134,906</b>	<b>100,924</b>	<b>48,796</b>	<b>10,649</b>	<b>2,533</b>	<b>733,384</b>
<b>Combined Sewer Overflow</b>											
CSO Program Management	4,545	3,804	3,649	2,992	855	510	199	174	257	239	17,225
Combined Sewer Projects	3,282	6,028	12,714	7,875	13,614	21,449	24,836	14,656	4,098	16	108,567
Long-Term Control Plan (see note)	-	-	*	*	*	*	*	*	*	*	*
<b>Total</b>	<b>7,827</b>	<b>9,831</b>	<b>16,364</b>	<b>10,867</b>	<b>14,469</b>	<b>21,960</b>	<b>25,035</b>	<b>14,830</b>	<b>4,355</b>	<b>255</b>	<b>125,793</b>
<b>Stormwater</b>											
Stormwater Extensions/Local Drainage	-	173	1,272	1,514	1,930	412	-	-	-	-	5,301
Stormwater On-Going Program	53	364	399	229	228	224	226	238	261	278	2,500
Stormwater Pumping Facilities	4	223	541	776	933	3,048	5,463	2,004	78	-	13,069
DPW Stormwater Program	77	2,304	1,388	922	937	973	1,027	1,136	1,301	1,398	11,463
Stormwater Projects Program Management	-	200	357	533	716	576	421	45	66	85	2,999
Stormwater Trunk/Force Sewers	60	88	951	23	-	-	-	-	-	-	1,122
<b>Total</b>	<b>194</b>	<b>3,353</b>	<b>4,908</b>	<b>3,998</b>	<b>4,743</b>	<b>5,233</b>	<b>7,136</b>	<b>3,422</b>	<b>1,706</b>	<b>1,761</b>	<b>36,454</b>
<b>Sanitary Sewer</b>											
Sanitary Collection Sewers	928	776	2,086	3,852	3,099	3,464	627	9	-	-	14,840
Sanitary On-Going Projects	4,673	3,725	4,474	3,439	3,405	3,358	3,401	3,572	3,906	4,631	38,583
Sanitary Pumping Facilities	-	483	621	506	3,099	5,509	1,191	-	-	-	11,409
Sanitary Sewer Projects Program Management	102	406	650	895	1,201	1,002	731	144	208	274	5,614
Sanitary Interceptor/Trunk Force Sewers	601	986	2,062	12,041	7,990	7,068	6,949	5,494	6,033	6,418	55,642
<b>Total</b>	<b>6,304</b>	<b>6,377</b>	<b>9,893</b>	<b>20,732</b>	<b>18,794</b>	<b>20,400</b>	<b>12,899</b>	<b>9,218</b>	<b>10,147</b>	<b>11,323</b>	<b>126,087</b>
<b>Water</b>											
Water Distribution Systems	5,809	8,186	14,529	23,660	30,591	15,893	12,533	11,384	11,353	11,207	145,145
Water On-Going Projects	2,172	2,570	3,597	4,454	4,430	4,124	3,936	4,017	3,957	4,151	37,408
Water Pumping Facilities	2,055	5,094	9,452	17,731	12,563	12,033	1,535	186	88	-	60,738
DPW Water Projects	606	5,573	2,034	2,178	2,317	2,486	2,678	2,866	2,598	2,823	26,159
Water Storage Facilities	1,494	916	1,722	3,761	1,011	854	5,607	4,783	8,313	473	28,934
Water Projects Program Management	1,383	875	1,132	2,282	2,521	3,581	2,511	1,987	1,483	1,550	19,306
Meter Replacement /AMR Installation	2,659	7,000	23,000	7,300	-	-	-	-	-	-	39,959
<b>Total</b>	<b>16,178</b>	<b>30,213</b>	<b>55,465</b>	<b>61,366</b>	<b>53,434</b>	<b>38,973</b>	<b>28,800</b>	<b>25,223</b>	<b>27,793</b>	<b>20,204</b>	<b>357,647</b>
<b>Washington Aqueduct</b>	<b>16,915</b>	<b>18,827</b>	<b>10,298</b>	<b>7,486</b>	<b>7,243</b>	<b>10,982</b>	<b>45,980</b>	<b>7,600</b>	<b>8,094</b>	<b>13,832</b>	<b>147,257</b>
<b>Capital Equipment</b>	<b>13,807</b>	<b>15,464</b>	<b>9,753</b>	<b>7,340</b>	<b>7,977</b>	<b>7,114</b>	<b>5,185</b>	<b>5,823</b>	<b>5,426</b>	<b>5,605</b>	<b>83,492</b>
<b>Grand Total</b>	<b>103,096</b>	<b>165,820</b>	<b>221,724</b>	<b>211,567</b>	<b>203,787</b>	<b>239,568</b>	<b>225,960</b>	<b>114,912</b>	<b>68,169</b>	<b>55,513</b>	<b>1,610,115</b>

Note: As discussed in section V of the General Manager's Proposed FY 2003 Capital and Operating Budgets, the draft CSO Long Term Control Plan that was submitted to regulatory agencies in FY 2001 recommended projects costing \$1.05 billion (in FY 2001 dollars), with specific projects that may begin as early as FY 2002. The final long term control plan, expected to be adopted by the Board in FY 2002, may differ substantially from the draft plan. Additionally, following submittal of the final plan, input from regulatory agencies may result in further modifications to the plan and adjustments in schedules and/or funding requirements.

# Mandated and WASA - Initiated Capital Projects FY 2002 - FY 2010 (\$000's)



Excludes capital equipment, metering and in-house labor

**FY 2002 - FY 2010 Capital Equipment Disbursements (\$ in 000's)**

<b>Department</b>	<b>Equipment Type</b>	<b>FY 2002 Revised</b>	<b>FY 2003 Proposed</b>	<b>FY 2004</b>	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 02- FY10 Total</b>
<b>Wastewater Treatment</b>											
	Laboratory Equipment	\$50	\$30	\$42	\$34	\$34	\$27	\$27	\$22	\$25	\$289
	Plant Model	252	-	-	-	-	-	-	-	-	252
<b>Total</b>		<b>\$302</b>	<b>\$30</b>	<b>\$42</b>	<b>\$34</b>	<b>\$34</b>	<b>\$27</b>	<b>\$27</b>	<b>\$22</b>	<b>\$25</b>	<b>\$541</b>
<b>Water Services</b>											
	Fire Hydrant Replacements	\$55	\$100	\$240	\$240	\$240	\$240	\$240	\$240	\$240	\$1,835
	System Valve Replacements	65	150	100	100	100	100	100	100	100	915
	Variable Frequency Drives	120	-	-	-	-	-	-	-	-	120
	Miscellaneous Equipment/Parts	360	350	500	500	500	500	500	500	500	4,210
<b>Total</b>		<b>\$600</b>	<b>\$600</b>	<b>\$840</b>	<b>\$840</b>	<b>\$840</b>	<b>\$840</b>	<b>\$840</b>	<b>\$840</b>	<b>\$840</b>	<b>\$7,080</b>
<b>Sewer Services</b>											
	Sewer Pipes/Fittings	30	30	30	30	30	30	30	30	30	270
	TV Camera Equipment	50	-	-	-	-	-	-	-	-	50
	Regulator and Gate Rehabilitation	200	50	50	50	50	50	50	50	50	600
	Manhole Covers/Frames	33	33	33	33	33	33	33	33	33	297
	Visitors' Center	200	-	-	-	-	-	-	-	-	200
	Outfall Gates	150	150	-	-	-	-	-	-	200	500
	Portable Pumps	12	-	-	-	12	-	-	-	12	36
	Catch Basin Tops/Frames/Covers	40	40	40	40	40	40	40	40	40	360
<b>Total</b>		<b>\$715</b>	<b>\$303</b>	<b>\$153</b>	<b>\$153</b>	<b>\$165</b>	<b>\$153</b>	<b>\$153</b>	<b>\$153</b>	<b>\$365</b>	<b>\$2,314</b>
<b>Customer Service</b>											
	Meters/Meter Parts	\$108	-	\$200	\$250	\$250	\$250	\$250	\$250	\$250	\$1,808
<b>Total</b>		<b>\$108</b>	<b>\$0</b>	<b>\$200</b>	<b>\$250</b>	<b>\$250</b>	<b>\$250</b>	<b>\$250</b>	<b>\$250</b>	<b>\$250</b>	<b>\$1,808</b>
<b>Fleet Management</b>											
	Emergency Generators	\$60	-	-	\$60	-	-	-	-	-	\$120
	Vehicles	1,129	1,085	1,000	2,500	2,500	1,100	1,200	1,400	1,500	13,414
<b>Total</b>		<b>\$1,189</b>	<b>\$1,085</b>	<b>\$1,000</b>	<b>\$2,560</b>	<b>\$2,500</b>	<b>\$1,100</b>	<b>\$1,200</b>	<b>\$1,400</b>	<b>\$1,500</b>	<b>\$13,534</b>

**FY 2002 - FY 2010 Capital Equipment Disbursements (\$ in 000's)**

<b>Department</b>	<b>Equipment Type</b>	<b>FY 2002 Revised</b>	<b>FY 2003 Proposed</b>	<b>FY 2004</b>	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 02- FY10 Total</b>
<b>Facilities and Security</b>											
	Design Services	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$450
	Water System Electronic Security	590	590	-	-	-	-	-	-	-	1,300
	Facilities Improvements	-	-	100	200	200	200	200	200	200	1,180
	Secondary Blower Building	362	-	-	-	-	-	-	-	-	362
	HVAC	-	301	-	-	-	-	-	-	-	301
	Diesel Slope Machine	25	-	-	-	-	-	-	-	-	25
	Chipper/Shredder	15	-	-	-	-	-	-	-	-	15
	Fire Alarm/Sprinkler Systems	225	130	-	-	-	-	-	-	-	355
<b>Total</b>		<b>\$1,267</b>	<b>\$1,071</b>	<b>\$150</b>	<b>\$250</b>	<b>\$250</b>	<b>\$250</b>	<b>\$250</b>	<b>\$250</b>	<b>\$250</b>	<b>\$3,988</b>
<b>Information Technology</b>											
	Engineering Plotters/Scanners	-	\$50	-	-	-	-	\$63	\$36	-	\$95
	Automated Dispatch System	-	950	1,000	50	50	50	50	50	50	2,250
	Help Desk System	45	-	-	15	-	-	15	-	-	75
	Software Applications/Licenses	366	150	150	150	150	150	150	150	150	1,566
	Redundant Data Center	260	440	60	60	60	200	200	60	60	1,400
	Maintenance/Radio Systems - Water/Sewer	800	300	50	50	50	50	50	50	50	1,450
	Financial Management System	500	500	100	100	100	100	100	100	100	1,700
	Payroll/HR System	640	50	30	30	30	30	30	30	30	900
	Customer Information System	639	239	100	100	100	100	100	100	100	1,578
	Interactive Voice Response	60	40	20	20	20	20	20	20	20	240
	Maintenance Management System	1,950	50	50	50	50	50	50	50	50	2,350
	GIS	50	-	-	-	-	-	-	-	-	50
	Document Imaging System	300	-	-	-	-	-	-	-	-	300
	WEB Development	239	75	75	75	75	75	75	75	75	839
	Network System Renewal	700	550	150	700	150	150	650	150	150	3,350
	Desktop Replacements	600	600	500	500	500	500	500	500	500	4,700
	Cable Renewal	200	200	200	200	200	200	200	200	200	1,800
	Telephone System Renewal	100	100	600	100	100	100	100	100	100	1,400
	Lotus Notes Migration	80	10	10	70	10	10	10	10	10	220
	Windows NT Migration	142	30	30	140	30	30	140	30	30	602
<b>Total</b>		<b>\$7,671</b>	<b>\$4,334</b>	<b>\$3,125</b>	<b>\$2,410</b>	<b>\$1,675</b>	<b>\$1,815</b>	<b>\$2,503</b>	<b>\$1,711</b>	<b>\$1,675</b>	<b>\$26,919</b>

**FY 2002 - FY 2010 Capital Equipment Disbursements (\$ in 000's)**

<b>Department</b>	<b>Equipment Type</b>	<b>FY 2002 Revised</b>	<b>FY 2003 Proposed</b>	<b>FY 2004</b>	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 02- FY10 Total</b>
<b>Maintenance Services</b>											
	Major Screen Rebuilds	\$200	-	-	\$80	-	-	-	-	-	\$280
	Turbine Aerator Rebuild/Replace	582	-	-	-	-	-	-	-	-	582
	Centrifuge Repair/Replace	-	-	300	300	300	150	-	300	300	1,650
	VFD Replacement-Nitrification Pumping	500	-	-	-	-	-	-	-	-	500
	Plant Lighting	30	30	30	-	-	-	-	-	-	90
	Pump Repair/Replacement	500	500	500	300	300	200	200	100	100	2,700
	Large Electric Motors	900	900	500	300	300	200	200	200	200	3,700
	High Priority Rehab Program	900	900	500	500	500	200	200	200	100	4,000
	<b>Total</b>	<b>\$3,612</b>	<b>\$2,330</b>	<b>\$1,830</b>	<b>\$1,480</b>	<b>\$1,400</b>	<b>\$750</b>	<b>\$600</b>	<b>\$800</b>	<b>\$700</b>	<b>\$13,502</b>
<hr/>											
<b>Total Capital Equipment</b>		<b>\$15,464</b>	<b>\$9,753</b>	<b>\$7,340</b>	<b>\$7,977</b>	<b>\$7,114</b>	<b>\$5,185</b>	<b>\$5,823</b>	<b>\$5,426</b>	<b>\$5,605</b>	<b>\$69,685</b>



**FY 2001 - FY 2010 Capital Improvement Plan**  
**Project Lifetime Budgets by Program Area**

	<u>FY 2001</u>	<u>FY 2002</u>	<u>Increase/ (Decrease)</u>
<b><u>Wastewater Treatment</u></b>			
Liquid Processing Projects	344,625	348,912	4,287
Plantwide Projects	219,272	219,330	59
Solids Processing Projects	483,966	483,810	(156)
<b>Total</b>	<b>1,047,862</b>	<b>1,052,052</b>	<b>4,190</b>
<b><u>Combined Sewer Overflow</u></b>			
CSO Program Management	20,827	23,997	3,170
Combined Sewer Projects	157,692	138,840	(18,851)
Long-Term Control Plan (see note)	-	-	-
<b>Total</b>	<b>178,519</b>	<b>162,837</b>	<b>(15,682)</b>
<b><u>Stormwater</u></b>			
Stormwater Extensions/Local Drainage	11,344	11,344	-
Stormwater On-Going Program	4,970	5,570	600
Stormwater Pumping Facilities	23,492	26,025	2,533
DPW Stormwater Program	20,475	23,100	2,625
Stormwater Projects Program Management	6,415	6,415	-
Stormwater Trunk/Force Sewers	20,493	2,535	(17,958)
<b>Total</b>	<b>87,189</b>	<b>74,989</b>	<b>(12,200)</b>
<b><u>Sanitary Sewer</u></b>			
Sanitary Collection Sewers	20,101	22,001	1,900
Sanitary On-Going Projects	48,438	53,078	4,640
Sanitary Pumping Facilities	14,635	15,205	570
Sanitary Sewer Projects Program Management	7,506	7,506	-
Sanitary Interceptor/Trunk Force Sewers	72,161	80,163	8,002
<b>Total</b>	<b>162,841</b>	<b>177,952</b>	<b>15,112</b>
<b><u>Water</u></b>			
Water Distribution Systems	279,316	228,959	(50,357)
Water On-Going Projects	52,281	44,281	(8,000)
Water Pumping Facilities	67,422	77,266	9,844
DPW Water Projects	24,518	30,193	5,675
Water Storage Facilities	38,227	42,482	4,255
Water Projects Program Management	13,798	28,798	15,000
Meter Replacement /AMR Installation	34,384	39,959	5,575
<b>Total</b>	<b>509,947</b>	<b>491,939</b>	<b>(18,008)</b>
<b>Washington Aqueduct</b>	<b>190,702</b>	<b>222,327</b>	<b>31,625</b>
<b>Capital Equipment</b>	<b>95,923</b>	<b>106,026</b>	<b>10,103</b>
<b>Grand Total</b>	<b>2,272,982</b>	<b>2,288,123</b>	<b>15,141</b>

Notes:

1) As discussed in section V of the General Manager's Proposed FY 2003 Capital and Operating Budgets, the draft CSO Long Term Control Plan that was submitted to regulatory agencies in FY 2001 recommended projects costing \$1.05 billion (in FY 2001 dollars), with specific projects that may begin as early as FY 2002. The final Long Term Control Plan, expected to be adopted by the Board in FY 2002, may differ substantially from the draft plan. Additionally, following submittal of the final plan, input from regulatory agencies may result in further modifications to the plan and adjustments in schedules and/or funding requirements.

2) Lifetime budgets shown here represent total approved budgets for active projects as of October 1998 (which was the inception of WASA's project management system) and includes historical spending prior to the beginning of the current ten year plan and projected spending beyond the end of the current 10 year plan.

3) These budgets do not include labor costs, which historically have been applied at an average of \$6 million annually and is applicable primarily to the Departments of Engineering, Sewer Services and Water Services in-house labor costs pertaining to capital projects.