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The Office of Budget and Finance would like to extend its appreciation to all the departmental staff members whose hard work and dedication helped make this document possible.

TABLE OF CONTENTS

TABLE OF CONTENTS
(continued)

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
5000 OVERLOOK AVENUE, S.W., WASHINGTON, D.C. 20032

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

October 16, 2003

Dear Chairman Gerstell and WASA Board Members:

I am pleased to submit for your review and consideration the FY 2003 – FY 2012 Capital Improvement Program (CIP). This document sets forth a 10-year, $1.76 billion program (on a cash disbursements basis). This is the second year that we have produced a capital budget document, and building on last year's efforts, this book provides an enhanced framework for monitoring budgets and the progress of capital project completion. This document also serves as a valuable tool for evaluating our performance by the financial markets and other stakeholders.

I am particularly pleased to be starting the budget process on a high note – the upgrade of our bond ratings to the "AA" category. In conjunction with our issuance of long-term debt this past summer, all three Wall Street bond rating agencies took this positive action, a significant accomplishment for an organization as relatively young as ours. By reducing the interest rates we pay on our borrowings, our customers' bills will be lower than if we had not received these rating upgrades.

FY 2003 has been marked by unprecedented capital spending, particularly on upgrading the Blue Plains Advanced Wastewater Treatment Plant. For the first time ever, we surpassed our capital spending target, spending 101 percent of the revised FY 2003 budget. This success is due in large part to the direction provided by the Board, particularly through the detailed reviews performed by the Operations and Finance and Budget Committees.

OVERVIEW AND MAJOR CHANGES

Looking at CIP in the near term, the current plan for FY 2004 through FY 2006 totals $728.1 million (on a cash disbursements basis), compared to last year's plan of $650.4 million for the same time period. This accelerated rate of spending is based on the high level of

spending we achieved in FY 2003 which we expect to continue over the next few years as a large number of projects are in construction, particularly projects at Blue Plains. Approximately $27 million in disbursements are included in this year's plan for replacing lead water service lines, as described in more detail below. Additionally, capital equipment budgets for implementing an asset management system and purchasing photocopiers have added $10.8 million to the near term capital disbursement plan.

SIGNIFICANT ISSUES AND INITIATIVES

Projects in WASA's CIP are broken down into seven service areas, including Wastewater Treatment, Combined Sewer Overflow, Stormwater, Sanitary Sewer, Water, Washington Aqueduct, and Capital Equipment.

Wastewater Treatment Service Area: Several large projects entered construction phase in FY 2003, pushing capital spending at the Blue Plains facility to record levels of approximately $125 million. Projects completed or underway during the year included alternate disinfection (replacement of chlorine and sulfur dioxide with sodium hypochlorite and sodium bisulfite), additional dewatering facility upgrade, primary and secondary treatment facility upgrades, additional chemical systems, and rehabilitation of the influent grit and screening facility.

Over the next year, we will continue design of the largest single project in our CIP, the new digestion facilities. These facilities are projected to begin construction in FY 2005, and when fully operational in FY 2008, will result in substantial operating savings.

We regularly review and reprioritize our CIP projects to ensure that we are addressing all issues appropriately. In FY 2003, we completed an investigation of the Filtration/Disinfection facility, and identified damage to the filter underdrains. Continued deterioration of the facility could have eventually led to National Pollutant Discharge Elimination System (NPDES) permit violations, so we accelerated rehabilitation of this facility, and construction of new underdrains is expected to begin in December 2003. This work will be followed by rehabilitation of the backwash system and integration with the process computer control system. The revised plan adds $12.9 million to the lifetime budget for this project, and accelerates construction by nearly a year.

Fine bubble aeration, previously scheduled for FY 2011, has been moved forward to FY 2004 in conjunction with the biological nutrient removal project. This system will replace the existing coarse bubble diffuser system and produce a higher oxygen transfer efficiency needed to accommodate the increased nitrogen loading from the new egg-shaped digesters. Fine bubble aeration and the new digesters are scheduled to come online in FY 2007 and FY 2008.

Combined Sewer Overflow Service Area: In 2002, we completed and forwarded our proposed CSO Long-Term Control Plan to the EPA – a major accomplishment for our organization. Since that time, we have been negotiating the plan with the EPA and U.S. Department of Justice (DOJ), with particular focus on the implementation schedule and water quality standards. During this timeframe, we have also negotiated the settlement of a lawsuit against WASA regarding implementation of the federal CSO Nine Minimum Controls program (the "EarthJustice" lawsuit). As part of this settlement, WASA will continue to aggressively move forward with $143 million of previously budgeted and planned projects that will reduce combined sewer overflows by approximately forty percent when completed over the next six

years. These projects include repair and replacement of various tide gates, construction of new fabridams, and rehabilitation of various pumping stations.

The benefits of our long-term plan are significant -- when fully implemented, combined sewer overflows will be reduced by a projected 96 percent (98 percent on the Anacostia River), resulting in improved water quality and a significant reduction in debris on our national capital's waterways. As noted above, WASA's $143 million of previously planned projects for the next six years alone will result in an approximately 40 percent reduction in combined sewer overflows. The plan, described in more detail in the accompanying capital improvement program document, includes a variety of improvements planned throughout the District to improve the quality of the Anacostia and Potomac Rivers and Rock Creek:

- Four large storage tunnels, which will allow the storage of flows from storm events until they can be gradually sent to Blue Plains for advanced treatment
- Pumping station improvements
- Targeted separation of combined sewers in several sections of the District to include Anacostia
- Consolidation and elimination of 13 of 59 outfalls, including 4 outfalls on the Anacostia River
- Funds for low impact development (LID) at WASA facilities and to encourage LID across the District

While the benefits are great, the cost of this program is significant, totaling $1.265 billion in 2001 dollars. With inflation, this increases to $2.6 billion (assuming an implementation period of 40 years), one of the largest public infrastructure projects ever in the Washington metropolitan region. Because of the considerable cost of the program and the potential impact on our ratepayers, we have developed implementation scenarios that range from 15 to 40 years. If the LTCP were to be implemented over 15 or 20 years without any outside or federal assistance, our ratepayers would face multiple, annual double digit rate increases in the near future, hitting our lowest income customers the hardest. A 30 to 40 year schedule, while still resulting in significant rate increases over time, allows for a more gradual implementation of these increases, largely avoiding annual double digit increases. We have evaluated various rate and fee structures for recovery of these costs, including impervious surface area fees and similar structures. However, these significant costs will still be borne by some component of our ratepayers regardless of the ultimate rate structure, resulting in substantial increases in customer dollars paid for wastewater services. Significant federal or other outside assistance would allow for a more rapid implementation schedule, while mitigating the impact on our ratepayers.

In FY 2003, we received a Congressional appropriation of $49.7 million for initial funding of the LTCP. In addition, the proposed House FY 2004 District Appropriations bill includes an additional $35 million in funding, while the proposed Senate District Appropriations bill includes $25 million in funding (while the appropriations are technically made in one year, project and grant disbursements will occur over a multi-year timeframe as the projects are implemented.) Because it is very unlikely that this outside funding would have been appropriated without a commitment to long term implementation of the proposed LTCP, beginning in last year's CIP, we added the early years of the proposed 40 year LTCP to our ten-year CIP and ten-year financial plan (totaling approximately $190 million with inflation), as well as continuing to move forward with those projects that were already in the CIP. Similarly, we have added projected grant funding to our ten-year financial plan. It

is important to note that the projected LTCP disbursements are based on a forty-year implementation schedule; the majority of LTCP costs, approximately $2.3 billion with inflation, are not reflected in the current ten-year CIP and financial plan.

While provisions have been made in this budget and the CSO plan to begin preliminary LTCP work, it is recommended that no funds beyond the $143 million incorporated in the current CIP be committed or spent until such time as the following is accomplished:

1. EPA & DOJ approve the final LTCP in a manner that is acceptable to the Board;
2. EPA, DOJ, and WASA agree on the implementation plan and schedule;
3. A Board-approved financing plan is adopted; and
4. A judicially enforceable agreement is executed between EPA, DOJ, and WASA governing the implementation of the LTCP.

Stormwater Service Area: We are entering our third year as administrator of the District's Stormwater Compliance Enterprise Fund, which includes coordination of work among the District's Departments of Health, Transportation and Public Works to ensure compliance with the District's stormwater permit. The primary activity this year is the renewal of the District's current permit, which technically expired in April 2003, but remains in effect until a new permit is issued. The District recently received a new draft permit, and the stormwater task force is currently analyzing it to determine financial and operating impacts. 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. Other major efforts included development of a detailed management and implementation plan.

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 $43 million (disbursements basis) 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.

Sewer Service Area: Capital projects in this service area, in combination with the CSO service area, will be an integral part of compliance with the EarthJustice Consent Decree. Pumping station rehabilitations totaling $20.2 million at Rock Creek, Upper Anacostia, and Earl Place will continue in design phase in FY 2004, and construction is scheduled to be completed by FY 2008.

During FY 2004, WASA will continue the comprehensive evaluation of the sanitary and combined sewer systems, which will be accomplished through the services of an engineering project management consultant. The project is scheduled to be completed over several phases between FY 2004 and FY 2007. In addition to evaluation of the sanitary sewer system, the engineering project management consultant will assist the Authority with compliance with the consent decree.

Water Service Area: In summer 2002, through our water quality monitoring program, we determined that the lead content sampled at some customers' taps was above the action level specified by the EPA. This has triggered new operating and capital requirements for WASA,

including distribution of public education materials and the replacement of seven percent of its existing lead service lines annually until the lead content levels drop below the EPA standards (Approximately 22,000 of WASA's 124,000 service lines are lead, and approximately 1,600 will need to be replaced annually). WASA can meet the replacement requirement either through physical replacement or additional testing, and we have developed a plan to replace up to 600 service lines and to test additional service lines. In FY 2003, we dramatically accelerated our sampling and replacement efforts to meet stringent EPA deadlines, replacing approximately 400 service lines and meeting the balance of the requirement through sampling. Because of lack of flexibility in EPA's timing requirements, the replacements we completed in FY 2003 were often grouped geographically rather than with regard to highest recorded lead concentration. In FY 2004 and FY 2005, we plan to pursue these replacements in a more logical manner, giving priority to lines with higher recorded concentrations while also giving attention to opportunities provided by street reconstruction and WASA capital improvement program initiatives. The total cost of the program for FY 2004 and FY 2005 is projected at $27 million. Additional costs will be added to future plans depending on testing results in FY 2004 and FY 2005.

The residential installation phase of the Automated Meter Reading (AMR) project was virtually completed in FY 2003, and WASA currently receives more than 100,000 accurate meter readings per day from the new system. The commercial installation phase will continue in FY 2004 and FY 2005, but as the mid-point of the project is reached, installations are becoming increasingly difficult due to the quality of piping, valves, and other infrastructure surrounding the larger commercial meters. The condition of these facilities is resulting in more ancillary work than expected or budgeted, and approximately $2 million has been added to the budget for the additional installation work that is required.

Washington Aqueduct: The Washington Aqueduct is facing a significant regulatory issue regarding disposal of solids from the treatment process, as described in more detail below. WASA and its partners in Northern Virginia are actively involved in the identification alternative approaches to the issues that have been raised. Our interactive and cooperative efforts on this critical project are one example of the strong supplier-customer relationship we now have with the Aqueduct due to the implementation of the new operating agreement in FY 1997.

Currently, solids that settle out from water at the Dalecarlia Treatment Plan and Georgetown Reservoir are periodically discharged to the Potomac River during high river flow conditions. The NPDES permit received by the Aqueduct requires development of a plan to remove 85 percent of incoming sediments and not return them to the Potomac River. The Aqueduct, WASA and the other wholesale customers are working with the EPA to identify technological alternatives available to meet this requirement. The Aqueduct has tentatively identified projects to address this requirement, with costs totaling approximately $51 million (WASA share only), with design beginning in FY 2004, and construction scheduled to begin in FY 2007. This projected cost has been included in our CIP. The costs and schedule for improvements are dependent on the final design of this project.

Capital Equipment Service Area: For the past several years, WASA has been committed to upgrading the obsolete technology infrastructure that existed when the Authority was created in 1996. Projects completed include a new customer information and billing system, a new financial management system, a new payroll and human resources system, and a new maintenance management system. After a year of study, we are ready to move forward with an asset management system that will not only integrate all of these upgraded systems, but will also incorporate water and sewer infrastructure asset management. This system, which will integrate our existing customer information,

maintenance management, process computer control system (PCCS) / supervisory control and data acquisition system (SCADA), and other systems, will assist WASA in better managing our water and sewer infrastructure. It will allow us to better track specific asset performance and related repairs, and perform more preventive maintenance. For our customers, it will mean better work order scheduling, which will improve service call response times, and ultimately fewer service calls as preventive maintenance activities reduce the number of service issues. This project is projected to cost $9.5 million over four years.

FUTURE CONSIDERATIONS

The CIP and the proposed CSO LTCP continue to be the primary drivers of our long-term financial picture and projected rate increases for our customers. While the proposed CIP is comprehensive in its scope, we also closely monitor emerging issues (such as potential regulatory changes) that could require significant adjustments in our CIP and operations. We also have in place extensive planning tools that help us identify issues and projects that extend beyond the current ten-year period. These emerging issues include:

The Chesapeake Bay Program, an initiative of EPA, is currently evaluating the costs and benefits of increasing the targeted level of nutrient removals, and making these reductions mandatory instead of voluntary.

- The 1987 **Chesapeake Bay Agreement**, which calls for a voluntary 40 percent nitrogen reduction by its signatories by 2000. The District of Columbia was the first signatory in the region to meet this voluntary commitment due to the implementation by WASA of the biological nitrogen removal project at Blue Plains. Currently, the Chesapeake Bay program, an initiative of EPA, is evaluating the benefits and costs of increasing the level of nutrient removal and making these reductions mandatory instead of voluntary. If these new targets are implemented, WASA could be required to invest an estimated $300 to $500 million in capital improvements at Blue Plains, assuming voluntary compliance. If mandatory compliance is required through inclusion in a future NPDES permit, these estimated costs could double.

- **Clean Air Act –**Blue Plains is working with EPA and the District to be classified as a minor source of air pollutants under the Clean Air Act. The new digesters and associated improvements are being carefully evaluated to gauge the impact on air emissions and potential air permits and any resulting impact on capital expenditures. The reclassification of the District of Columbia as a “severe” non-attainment area for ozone heightens the need to carefully consider the impact of future improvements on air emissions at Blue Plains.

- **Facilities Master Plan & New Projects** – WASA has developed a Facilities Master Plan that covers a twenty-year planning horizon, stretching ten years beyond the current ten-year CIP. This plan serves as a framework and planning guide for the CIP, and identifies potential long-term projects and issues that may result in additional capital projects. The Facilities Master Plan was prepared in FY1998 and identifies a number of significant projects that will need to be undertaken in the years following the current ten-year planning period, including:

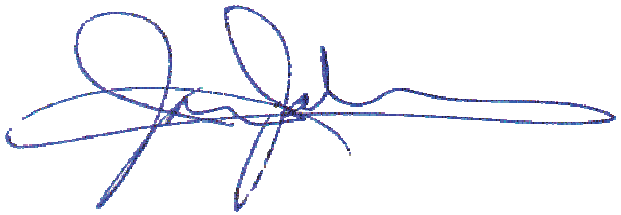
- **Blue Plains projects** – In FY 2013 – 2015, we have identified $382 million in additional projects that will be added to the CIP as these years fall into the ten-year planning period. The largest of these projects are heat drying improvements, at a cost of $198 million; spent wastewater treatment, which would remove solids from the spent wastewater recycle, totaling $41 million and beginning in FY 2013; renovation and reconstruction of existing prefabricated metal buildings as needed ($37 million beginning in FY 2014); and upgrade of the raw wastewater pump stations, at a cost of $34 million. Many of these projects will be contingent in part on the new permit requirements.

- **Sewer system assessment –** In FY 2003, we initiated our first comprehensive assessment of the sewer system. While we have included limited funding in the CIP (approximately $5 million annually beginning in FY 2005), the results of this study will allow us to identify specific projects and a spending plan for improvements to the sewer system. It is anticipated that sewer system rehabilitation will require an increasing level of future investment.

ACKNOWLEDGEMENTS

I would like to extend a special thanks to the WASA employees who have prepared the CIP. Special thanks go to staff in the Departments of Engineering and Technical Services, Information Technology, Public Affairs, and Office of the Chief Financial Officer for their hard work and dedication that made this document possible.

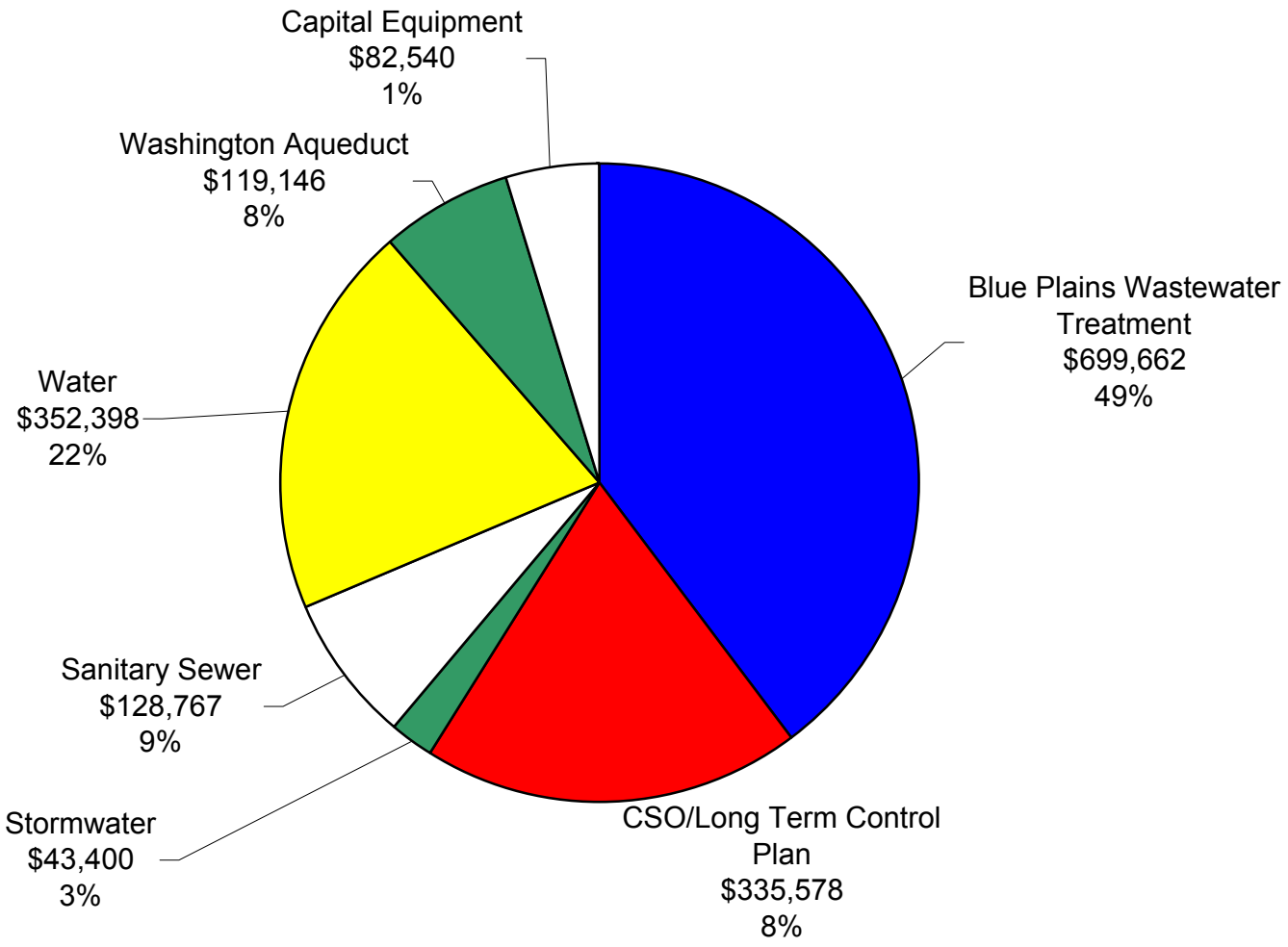
Sincerely,



Jerry N. Johnson
General Manager

FY 2003 - FY 2012 Capital Improvement Program

($ in 000's)



FY 2003 – 2012
CAPITAL IMPROVEMENT PROGRAM OVERVIEW

MAJOR CHANGES & INITIATIVES

FY 2003 has been marked by unprecedented capital spending, particularly on upgrading the Blue Plains Advanced Wastewater Treatment Plant. For the first time ever, WASA surpassed its capital spending target, spending 101 percent of the revised FY 2003 budget. This success is due in large part to the direction provided by the Board, particularly through the detailed reviews performed by the Operations and Finance and Budget Committees.

WASA's ten-year capital improvement program (CIP) totals $1.76 billion (cash disbursements basis), approximately $200 million more than last year's plan. As discussed in Section I, near term increases are due to accelerated project completion schedules and lead service line replacements. Increases in the later years of the plan are due to inclusion of the FY 2012 disbursements for the Long Term Control Plan in the amount of $86.5 million, and new projects in the Water Services Area in FY 2012.

This is the second year that we have included the early years of the LTCP in the 10-year plan. This plan was completed and presented to the U.S. Environmental Protection Agency in August 2002, and totals $1.265 billion in 2001 dollars, or $2.6 billion in inflated dollars, assuming a forty-year implementation schedule. In FY 2003, the Authority received a $49.7 million appropriation from the U.S. Congress for initial funding of the LTCP, and there are indications that an appropriation of $25 million to $35 million will be received in FY 2004. It is highly unlikely that this outside funding will continue without a commitment to the implementation of the proposed LTCP, so we have included it in our lifetime and disbursements budgets. It is important to note that the projected LTCP disbursements are based on a 40-year implementation schedule, so the majority of LTCP costs are not reflected in the current 10-year CIP and financial plan. WASA does not intend to begin any additional LTCP work beyond the $143 million (cash disbursements basis) of projects previously included in the CIP until a Board-approved financing plan is in place, as discussed in Section 1 of this document.

The following sections summarize major projects and changes in each service area, with additional details for each project included in each service area section. Additional details by project are included in the separate CIP document. Please note that all dollar amounts are presented on a project lifetime basis, except where noted otherwise.

WASTEWATER TREATMENT

The lifetime budget for the Wastewater Treatment Service Area is $1.2 billion dollars, reflecting no change from last year's plan. The 10-year disbursement budget is $699.7 million, an increase of $20.7 million over last year's plan, attributable to project budget increases for the filtration/disinfection facility ($12.9 million), plant access upgrades and other facility and security improvements ($7.7 million), and a new project for automated sampling ($1 million).

Major projects under construction in FY 2003 included Additional Chemical Systems, Alternate Disinfection Facilities, Additional Dewatering Facilities, Primary and Secondary Treatment Facilities, Process Control Computer System, Gravity Thickener Facilities, and Grit and Screen Facilities.

Construction is scheduled to start in FY 2004 for the Nitrification/Denitrification Facilities Upgrade and the Filtration/Disinfection Facility construction has been accelerated to the end of FY 2004. Plant access upgrades and other facility upgrades are also scheduled for the upcoming year.

COMBINED SEWER

The lifetime budget for the Combined Sewer Service Area is $2.6 billion, consistent with last year's lifetime budget. This includes the proposed CSO LTCP, assuming a 40-year implementation schedule. The proposed CSO LTCP was included in the lifetime budget due to the receipt of funding from the U.S. Congress; because receipt of this and future funding would have been unlikely without a commitment to eventually implement the LTCP, we have added the LTCP to the lifetime budget. On a disbursements basis, we have only included the early years of the LTCP, totaling $189.8 million; the majority of the LTCP costs on a disbursements basis are not reflected in the current CIP or rates projections. WASA does not intend to begin any additional LTCP work beyond previously planned and budgeted projects until an EPA and Board-approved plan is in place.

We have begun implementation of the $143 million (disbursements basis) of previously planned and budget CSO-related projects, including fabridam replacement and pumping station rehabilitation. It is important to note that these projects alone are projected to result in a forty percent reduction in combined sewer overflow when completed over the next six years.

STORMWATER

The lifetime budget for the Stormwater Service Area is $94.7 million, an increase of $2.4 million over last year. Stormwater initiatives include projects for large diameter storm sewers and pumping station force sewer replacement and rehabilitation, totaling $21.1 million. These projects include replacing undersized, aged, or deteriorated sewers, as well as installation of new sewers to serve new development. Rehabilitation of 15 existing stormwater pumping stations, totaling $24.6 million, has been deferred, pending discussions with the District of Columbia regarding responsibility for this infrastructure. A portion of WASA's stormwater work is coordinated with the District's Department of Transportation (DDOT) when projects are made necessary by DDOT's work in the streets that often requires relocation of storm sewers, inlets, or other structures. The lifetime budget for these projects is $28.5 million, with DDOT paying the costs of repaving.

SANITARY SEWER

Lifetime budgets in the Sanitary Sewer Service Area total $193 million, compared to $177 million in last year's plan. This increase is due primarily to projected cost increases for pumping station upgrades based on more detailed designs that were completed in FY 2003 and increased costs of the Potomac Interceptor permanent odor control structures. The 10-year disbursements plan in this service area is $128.8 million, a $1.5 million increase over the FY 2002 – FY 2011 plan. A major area of activity is upgrading pumping stations, with lifetime budgets of $20.2 million. These upgrades are included in the EarthJustice Consent Decree.

Design for reconstructing portions of the Potomac Interceptor, which provides wastewater conveyance from areas of Virginia and Maryland, will be completed and construction is scheduled to begin on this project in FY 2004. Included in this project will be permanent odor control structures. The lifetime budget for this project is $25.1 million.

Construction will start in FY 2004 for the East Side Interceptor rehabilitation and the Citywide Inflow/Infiltration project. Also during FY2004, WASA will continue the evaluation of the sewer system to determine its condition, verify adequate capacity, and to develop new capital projects, as appropriate. The lifetime budget for Sanitary Sewer program management is $14.9 million.

WATER

The lifetime budget for the Water Service Area is $566 million, an increase of $64 million over last year's $502 million lifetime budget. Disbursements for the 10-year plan have increased from $323.3 million to $352.4 million. These increases are attributable to lead service line replacements being included in the budget in FY 2004 and FY 2005 and large and small watermain repair projects in FY 2012.

A major rehabilitation of the Bryant Street pumping station, with a lifetime budget of $58.5 million will continue in FY 2004. The Automated Meter Reading project, which began in FY 2002, will continue in FY 2004 and FY 2005 with the replacement of the largest commercial meters. To date, over 106,000 residential and small commercial meters have been installed. The lifetime budget for this project is $46 million, which includes ongoing upgrades of $0.3 to $0.5 million annually after initial implementation.

WASHINGTON AQUEDUCT

The FY 2003 – FY 2012 disbursements budget for WASA's share of Washington Aqueduct projects total $119.1 million, or $7.6 million less than last year's plan. The decrease is due to the elimination of a previously planned project, backwash treatment.

CAPITAL EQUIPMENT

The FY 2005 proposed lifetime budget for Capital Equipment is $97 million, compared to $85.6 million in last year's plan. With the exception of some systems projects, lifetime budgets for capital equipment begin with FY 2002 actual disbursements and end with projected FY 2013 disbursements due to the annual nature of the purchases that are made in this service area. The increase in the lifetime budget is attributable to the proposed asset management system and to the purchase of photocopying equipment.

CIP DEVELOPMENT AND APPROVAL PROCESS

WASA's capital budget review process begins each year in the spring, as part of both our capital and operating budget review process. This process includes a review of major accomplishments, priorities, status of major projects and emerging regulatory and related issues impacting the capital program. Projections of changes in project lifetime budgets are also included. The review process involves the WASA departments with responsibility for managing the capital projects as well as finance and budget staff and executive management. The CIP is integrated into WASA's ten-year financial plan; because of its size, it is the primary driver of WASA's projected rate increases over the next ten years.

This review process lasts over several months and culminates with the presentation of the updated CIP to WASA's Board of Directors' Operations and Finance & Budget Committees in October. The Committees complete their review from October through December. The operating budgets, capital improvement program, and ten-year financial plan are then forwarded to the full Board for its consideration in January.

After adoption by the Board of Directors, WASA is required to submit its annual operating and capital budgets to the Mayor and the District of Columbia Council for its review and comment; however, neither has power to change WASA's annual budgets. Final operating and capital budget numbers, along with the capital authority request will be forwarded to the District for inclusion in the District of Columbia's budget submission to Congress. WASA's request for capital authority is ultimately made to and approved by the U.S. Congress.

FACILITIES MASTER PLAN AND OTHER FACILITIES PLANNING TOOLS

The Water and Sewer Facilities Master Plan provides a twenty-year framework for developing, analyzing and evaluating changes to the CIP and includes projects currently in the ten-year CIP as well as proposed projects projected to begin after completion of the current ten-year planning period. It describes current conditions and presents a vision of the needs for the water and sewer systems and the actions planned to meet those needs. This plan is scheduled to be updated in FY 2004.

WASA has also developed more detailed facilities plans for specific areas including; a Biosolids Management Plan for dealing specifically with biosolids issues, and Water Systems and Liquid Processing Facilities Plans for use as project planning tools in those areas.

DISBURSEMENTS AND PROJECT LIFETIME BUDGETS

As in the past, we have presented the CIP on both a project lifetime basis and cash disbursement basis. During the CIP review process, we perform an extensive review of the total project, or "lifetime" budgets, which also reflect historical spending prior to the current ten-year period, projected spending beyond the current ten-year period and project contingencies. Project lifetime budgets are our primary area of focus in budget development and day-to-day monitoring. In addition to lifetime budgets, we also develop a cash disbursements forecast. Actual cash disbursements are critical to forecasting the anticipated level of rate increases and the amount and timing of capital financings. While cash disbursements are a function of project lifetime budgets, they reflect a more realistic projection of actual "cash out the door" excluding contingencies and taking into account historical and projected completion rates.

Changes have been made to some of the project lifetime budgets approved from last year due to a change in project scope, engineering cost estimates, site changes and 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. Also, this year's lifetime budget reflects the close-out of some older projects that had not been previously closed. These projects were completed and placed into service in earlier years, but due to invoicing or other contract close-out issues, had not been officially closed out in our project management and financial systems. Going forward, projects will be closed and dropped from the CIP in the fiscal year following the end of project activity.

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 2005 request totals $274.3 million, and reflects the following:

- Remaining authority from prior years' appropriations
- Projected commitments in FY 2004 and FY 2005
- The first six months of planned FY 2006 commitments to ensure adequate authority exists, in the event that 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.

The combined sewer projects' authority request is zero, as existing and previously requested capital authority in this service area is in excess of projected commitments in FY 2004, FY 2005 and the first half of FY 2006. (These commitments cover only those projects historically included in WASA's CIP and do not reflect any new projects related to the CSO LTCP.) However, we may revise

this request prior to Board approval in January based on the status of negotiations on the proposed LTCP with the EPA and Department of Justice, potential new funding from the federal government, or other related issues.

MAJOR ASSUMPTIONS

Inflation: All project costs are inflated at three percent annually to the mid-point of construction; personnel services are inflated at three percent per year throughout the 10-year plan

Contingency: WASA capital projects include project contingencies ranging from 5 – 15 percent, based on the size of the project.

PROJECT PAGES

This document contains individual sections for each of WASA's seven service areas. Each service area is made up of specific projects. Within each service area section in this document, there are individual project sheets for each current capital project in that section. The capital project sheets contain general information for each project. The following information is included:

Service Area Title – currently, there are seven defined project service areas in WASA's CIP. The seven areas are: Wastewater Treatment, Combined Sewer Overflow / LTCP, Stormwater, Sanitary Sewer, Water, Washington Aqueduct and Capital Equipment. The service area categorization groups together like projects based on facility location and type of work being done in the project. Congressional capital authority is requested at this level.

Program Title – is a further categorization within the Service Area and groups projects by type of process. For example, in the Wastewater Treatment Service Area, there are three programs: Liquid Processing, Plantwide projects and Solids Processing.

Activity Group/Project Title – The activity group is the level at which WASA manages and monitors projects, including in the financial system and project management system. The project title reflects the descriptive name given to the project.

Service Area Manager – lists which department or organization manages the project. The majority of the projects in WASA's CIP are managed by an internal WASA operating department. WASA's CIP also includes some projects which are managed by outside organizations. It is advantageous for WASA to coordinate some of its capital work on the water and sewer infrastructure with the District's Department of Transportation (DDOT). The funding required for WASA's work is included in the CIP, but those projects are managed by DDOT. Approximately 75 percent of the Washington Aqueduct's capital program is funded by WASA, but the U.S. Army Corps of Engineers actually manages those projects.

Priority – WASA engages in and prioritizes capital projects based on specific criteria. The following is a list of definitions of the priorities shown on the individual project sheets:

National Pollutant Discharge Elimination (NPDES) Permit – The Blue Plains Wastewater Treatment Plant operates under the guidelines and restrictions of its NPDES permit issued by the EPA. This permit also includes provisions relating to the operation and improvement of the combined sewer system. It is anticipated that implementation of any approved CSO plan will be addressed in the NPDES permit and other legally enforceable agreements.

Administrative Order and Stipulated Agreement – WASA is under an administrative order dating back to 1996 relating to water quality. The projects that were created as a result of this order will be completed by the end of FY 2003, including cross-connection removal and storage facility rehabilitation.

Consent Decree – This 1995 Consent Decree required a variety of operational reviews as well as implementation of pilot Biological Nitrogen Removal (BNR) and Return Sludge Chlorination projects at Blue Plains. Both of these projects have been completed. Although WASA is planning additional BNR Improvements that are still budgeted in this CIP, we are currently awaiting action by the federal government to terminate this agreement which related to the already completed projects.

Stipulated Agreement & Order – Wastewater Treatment Plant **–** This 1996 agreement required various operational activities and completion of upgrades to the Secondary Metal Salts facilities. This project was completed in FY 2002, and we are awaiting action by the federal government to terminate this agreement.

Good Engineering Practices – This category includes projects that are needed for rehabilitation and upgrading of facilities and pipelines required in order for WASA to fulfill its mission, as well as projects needed to resolve operational issues and inefficiencies (for example, the Process Computer Control System). Such projects utilize state of the art technology, will improve operations, and in some cases, will reduce operating costs.

Public Health and Safety – these are projects that are required to eliminate or mitigate a threat to human health or safety. These projects are also required to ensure that there is not a failure to comply with WASA's NPDES permit requirements.

District of Columbia Department of Transportation (Highway Projects) – projects managed by the D.C. Department of Transportation.

Project Description – general description of the work to be done within the project.

Impact on Operations – describes the anticipated impact on WASA's operations when the project is completed.

Design / Construction / Project Completion Dates– anticipated dates are shown.

Funding by User – lists the anticipated project funding, by source and is based on the current Intermunicipal Agreement and anticipates EPA funding where grants have been previously approved or in anticipation of that approval.

Life Budget – the full project budget is approved and reviewed each year by WASA's Board of Directors. Proposed increases or decreases to the total project life budget are shown, if applicable. Lifetime budgets for program management have been reduced, and project budgets increased, to reflect the allocation of costs for program management services at the conclusion of the prior fiscal year.

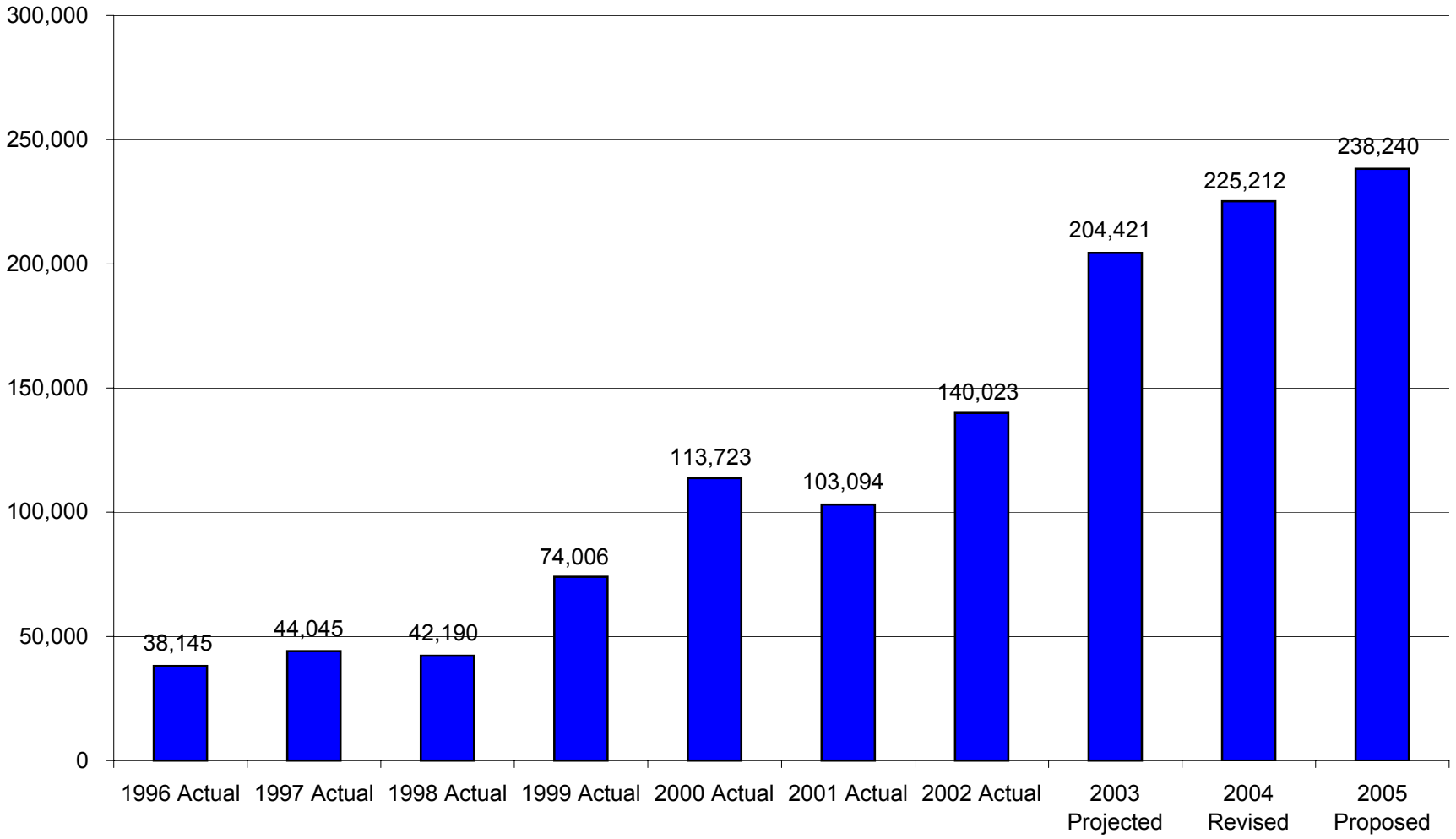
Disbursements / Commitments Budgets – projected project disbursements and commitments are shown by fiscal year in which they are anticipated. Commitments budgets are based on total project budgets, which reflect the fully loaded, anticipated costs of a project, including project contingencies. Contingencies are not included when calculating disbursement budgets.

CAPITALIZATION POLICY

WASA's capitalization policy determines how expenditures will be recognized and accounted for. Because we also match the financing to the projected useful life of the item, it also determines how projects will be financed. The following guidelines are used to categorize items as capital, capital equipment or operating (maintenance):

- Maintenance related items – are routine, cost under $5,000, and do not extend the life of the item more than 3 years,
- Capital Equipment – has a life of at least 3 years, a cost exceeding $5,000 and is financed with short-term debt or cash,
- Capital Project – has a long life (average of 30 years), a minimum cost of $500,000, and is financed with 30 year bonds.

Historical and Projected Capital Spending
FY 1996 - FY 2005
($000's)



FY 2003 - FY 2012 PROJECTED CAPITAL IMPROVEMENT PLAN - DISBURSEMENTS BASIS ($000's)

	FY 2003 Projected	FY 2004 Revised	FY 2005 Proposed	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	Total FY '03-'12
Wastewater Treatment											
Liquid Processing Projects	37,499	50,675	57,253	66,318	35,714	7,358	789	495	566	1,917	258,584
Plantwide Projects	48,770	29,655	16,552	10,323	7,883	7,459	1,049	618	590	4,733	127,632
Solids Processing Projects	39,110	30,563	30,486	53,003	78,624	56,781	23,177	964	356	477	313,541
Sub-total	**125,379**	**110,893**	**104,291**	**129,644**	**122,221**	**71,598**	**25,015**	**2,077**	**1,512**	**7,127**	**699,757**
Stormwater											
Stormwater Extensions/Local Drainage	206	436	2,251	246	-	-	-	-	-	-	3,139
Stormwater On-Going Program	289	97	222	222	224	229	239	279	340	356	2,497
Stormwater Pumping Facilities	181	360	765	674	701	4,221	4,082	1,119	-	-	12,103
DPW Stormwater Program	450	635	1,135	998	1,024	1,097	1,210	1,357	1,504	1,531	10,941
Stormwater Projects Program Management	299	284	1,212	1,158	839	398	241	118	112	80	4,741
Stormwater Trunk/Force Sewers	1,304	1,731	1,175	1,113	978	1,028	1,116	1,533	-	-	9,978
Sub-total	**2,729**	**3,543**	**6,760**	**4,411**	**3,766**	**6,973**	**6,888**	**4,406**	**1,956**	**1,967**	**43,399**
Sanitary Sewer											
Sanitary Collection Sewers	400	3,532	1,723	628	525	285	-	-	-	-	7,093
Sanitary On-Going Projects	2,100	4,265	3,575	4,088	3,717	3,777	3,020	4,705	5,292	4,894	39,433
Sanitary Pumping Facilities	-	1,047	968	7,092	4,792	32	-	-	-	-	13,931
Sanitary Sewer Projects Program Management	605	1,892	2,792	2,326	1,533	601	374	495	430	334	11,382
Sanitary Interceptor/Trunk Force Sewers	1,982	4,472	13,567	11,287	4,159	6,266	5,669	6,054	3,471	-	56,927
Sub-total	**5,087**	**15,208**	**22,625**	**25,421**	**14,726**	**10,961**	**9,063**	**11,254**	**9,193**	**5,228**	**128,766**
Water											
Water Distribution Systems	7,193	14,947	26,546	25,732	8,699	17,581	14,045	11,214	11,140	13,965	151,062
Water On-Going Projects	2,619	5,087	3,403	3,840	3,717	3,390	3,552	3,805	3,036	3,393	35,842
Water Pumping Facilities	10,868	14,593	13,885	12,702	9,943	337	-	-	-	-	62,328
DPW Water Projects	1,954	3,088	1,856	2,205	2,273	2,433	2,290	2,616	2,910	3,052	24,677
Water Storage Facilities	1,159	297	310	3,099	1,736	3,520	4,822	7,544	1,475	-	23,962
Water Projects Program Management	3,843	3,080	2,481	2,630	2,160	2,252	1,785	152	-	-	18,383
Meter Replacement /AMR Installation	16,741	10,000	6,103	300	500	500	500	500	500	500	36,144
Sub-total	**44,377**	**51,092**	**54,584**	**50,508**	**29,028**	**30,013**	**26,994**	**25,831**	**19,061**	**20,910**	**352,398**
Washington Aqueduct	**5,520**	**14,774**	**12,007**	**6,977**	**16,598**	**15,914**	**15,504**	**18,514**	**6,635**	**6,703**	**119,146**
Capital Equipment	**9,532**	**14,373**	**14,496**	**8,430**	**5,641**	**7,677**	**6,513**	**5,025**	**5,471**	**4,875**	**82,033**
Sub-total	**192,624**	**209,883**	**214,763**	**225,391**	**191,980**	**143,136**	**89,977**	**67,107**	**43,828**	**46,810**	**1,425,499**
Combined Sewer Overflow / Long Term Control Plan											
CSO Program Management	1,195	1,167	506	112	-	-	-	-	-	-	2,980
Combined Sewer Projects	10,744	12,925	16,231	38,370	34,364	16,249	4,691	4,666	4,628	-	142,868
Long-Term Control Plan (see note)	-	730	6,740	770	17,270	26,610	20,460	21,080	9,650	86,470	189,780
Sub-total	**11,939**	**14,822**	**23,477**	**39,252**	**51,634**	**42,859**	**25,151**	**25,746**	**14,278**	**86,470**	**335,628**
Total FY 2005 WASA Capital Improvement Program	**204,563**	**224,705**	**238,240**	**264,643**	**243,614**	**185,995**	**115,128**	**92,853**	**58,106**	**133,280**	**1,761,127**

Note: As discussed in Section 1 of this document, the CSO Long Term Control Plan (LTCP) was approved by the Board of Directors and forwarded to the EPA in August 2002. The total cost of the proposed plan is $2.6 billion, assuming implementation over 40 years and annual inflation of three percent. WASA's CIP previously included approximately $146.5 million for various CSO-related projects, including pumping station, fabridam, and other related improvements. These were the only CSO-related projects included in the CIP (excluding CSO program management and plan development), pending input from stakeholders, finalization of a Board-approved plan for submission to the EPA, and development of a financing plan. In FY 2003, WASA received a $50 million appropriation from the U.S. Congress (with a 100 percent match) for initial funding of the LTCP, and there are preliminary indications that an additional $25-$35 million will be appropriated in FY 2004. It is highly unlikely that this outside funding will continue to be appropriated without ultimate implementation of the proposed LTCP. Therefore, we have added the $2.6 billion LTCP to the lifetime CIP, although because of the 40-year implementation schedule, only $189 is projected to be disbursed in the current 10-year planning period. In addition, while we have added the LTCP to the CIP to accommodate the potential receipt of future grants, WASA does not intend to undertake any additional LTCP work beyond those $146.5 million of projects previously included in the CIP until completion of an EPA and Board-approved LTCP, including a financing plan.

FY 2003 - FY 2012 Capital Improvement Plan
Project Lifetime Budgets by Program Area ($000's)

	FY 2004	FY 2005	Variance
Wastewater Treatment			
Liquid Processing Projects	433,016	436,807	3,791
Plantwide Projects	302,350	288,577	(13,773)
Solids Processing Projects	471,609	459,835	(11,774)
Sub-total	**1,206,976**	**1,185,219**	**(21,757)**
Stormwater			
Stormwater Extensions/Local Drainage	6,219	6,599	380
Stormwater On-Going Program	6,188	6,718	530
Stormwater Pumping Facilities	26,169	24,550	(1,619)
DDOT Stormwater Program	25,804	28,507	2,703
Stormwater Projects Program Management	6,415	7,260	845
Stormwater Trunk/Force Sewers	21,461	21,081	(380)
Sub-total	**92,256**	**94,715**	**2,459**
Sanitary Sewer			
Sanitary Collection Sewers	15,475	15,231	(244)
Sanitary On-Going Projects	58,729	60,569	1,840
Sanitary Pumping Facilities	15,205	20,171	4,966
Sanitary Sewer Projects Program Management	13,696	14,930	1,234
Sanitary Interceptor/Trunk Force Sewers	74,071	82,100	8,030
Sub-total	**177,175**	**193,001**	**15,826**
Water			
Water Distribution Systems	230,602	291,707	61,105
Water On-Going Projects	47,830	52,085	4,255
Water Pumping Facilities	79,251	83,053	3,802
DDOT Water Projects	33,325	40,256	6,931
Water Storage Facilities	38,957	36,663	(2,294)
Water Projects Program Management	28,627	25,044	(3,583)
Meter Replacement /AMR Installation	43,409	46,000	2,591
Sub-total	**502,000**	**574,808**	**72,808**

FY 2003 - FY 2012 Capital Improvement Plan
Project Lifetime Budgets by Program Area ($000's)

	FY 2004	FY 2005	Variance
Washington Aqueduct	**197,867**	**204,570**	**6,703**
Capital Equipment	**85,566**	**101,449**	**15,883**
Sub-total	**2,261,840**	**2,353,762**	**91,922**
Combined Sewer Overflow			
CSO Program Management	18,729	15,254	(3,475)
Combined Sewer Projects	142,148	150,176	8,028
Long-Term Control Plan (see note 1)	2,457,000	2,457,000	-
Sub-total	**2,617,877**	**2,622,430**	**4,553**
Total WASA CIP Lifetime (see notes)	**4,879,717**	**4,976,192**	**96,475**

Notes:

1 As discussed in Section 1 of this document, the CSO Long-Term Control Plan (LTCP) was approved by the Board of Directors and forwarded to the EPA in August 2002. The total cost of the proposed plan is $2.6 billion, assuming implementation over 40 years and annual inflation of three percent. WASA's CIP previously included approximately $143 million (cash disbursements basis) for various CSO-related projects. These include pumping station rehabilitations, fabridams, and other related improvements. These were the only CSO-related projects included in the CIP (excluding CSO program management and plan development), pending input from stakeholders, finalization of a Board-approved plan for submission to the EPA, and development of a financing plan. WASA received $49.7 million in FY 2003, with a 100 percent match, and has received preliminary indications that an additional $25 - $35 million may be received in FY 2004 for initial funding of the LTCP. Because it is highly unlikely that this outside funding will continue to be appropriated without ultimate implementation of the proposed LTCP, we have added the $2.6 billion LTCP to the lifetime CIP, although because of the 40-year implementation schedule, only $189.8 million is projected to be disbursed in the current 10-year planning period. In addition, while we have added the LTCP to the CIP to accommodate the potential receipt of these grants, WASA does not intend to undertake any additional LTCP work beyond those $143 million (cash disbursements basis) of projects previously included in the CIP) until completion of an EPA and Board-approved LTCP.

2 Lifetime budgets shown here represent total budgets for projects that are active during the current 10-year CIP. Lifetime budgets include historical spending prior to the beginning of the current 10-year plan, spending during the 10-year plan, and projected spending beyond the current 10-year plan. Projects completed in FY 2003 will be dropped from the CIP next year.

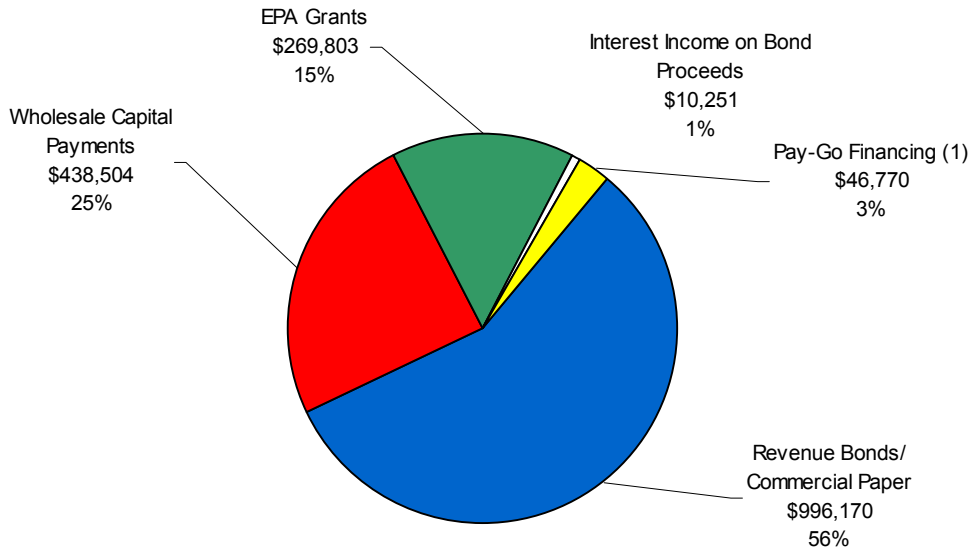
3 These budgets do not include inhouse labor costs, which historically have averaged $6 to $8 million annually and are applicable primarily to time charged to capital projects by employees in the Departments of Engineering, Sewer Services, and Water Services.

Fiscal Year 2005 Capital Authority Request
($000's)

Program Areas	Fiscal Year 2005 Capital Authority Request
Blue Plains Wastewater Treatment	134,850
Sewer Collection System	32,812
Combined Sewer Projects [1]	0
Stormwater	0
Water System	92,750
Washington Aqueduct (WASA share)	0
Capital Equipment	13,839
Total	274,251

[1] The combined sewer projects' authority request is zero, as existing, previously requested, capital authority in this service area is in excess of projected commitments in FY 2005, FY 2005, and the first half of FY 2006. We may revise this request prior to Board approval in January, based on the status of negotiations on the proposed LTCP with the EPA Department of Justice, potential new funding from the federal government, or other related issues.

FY 2003 - 2012 CAPITAL IMPROVEMENT PROGRAM
Sources of Funds
(In $000's)



(1) Pay-go financing is any funds available after funding the 180 day, or approximately $95.5 million in FY 2004, operating and maintenance reserve. These transfers are first used to pay down higher cost debt (such as U.S. Treasury notes for interim financing of Washington Aqueduct improvements), and then used to reduce the amount of revenue bond/commercial paper issuance.

Capital Improvement Program
Dropped or Closed Project Listing

Activity Group	Project Title	Service Area	Budget
Closed Projects:			
YQ	Blue Plains Mechanical Upgrades	Wastewater Treatment	$2,211,287
YG	Centrifuge Repair Service	Wastewater Treatment	2,268,610
BC	Blue Plains Landscaping	Wastewater Treatment	0
N2	Interactive O&M Manual (Blue Plains)	Wastewater Treatment	2,088,862
UE	Secondary Metal Salts Addition	Wastewater Treatment	3,702,149
YE	Plantwide Demolition and Salvage	Wastewater Treatment	819,216
YI	Roof Replacement	Wastewater Treatment	1,526,046
YJ	Plantwide Power Cables	Wastewater Treatment	1,013,743
YK	Nitrification Sodium Hydroxide Facility	Wastewater Treatment	2,937,801
ZB	Paved Surfaces Upgrades	Wastewater Treatment	33,000
ZC	Door and Window Upgrades	Wastewater Treatment	32,532
ZD	Chlorine Building 1 and 2 Rehabilitations	Wastewater Treatment	1,891,579
C2	FY2002 - DSS Storm Sewer Project	Stormwater	389,563
M2	Elimination of Cross Connections Contract 4	Water	1,706,810
M3	Elimination of Cross Connections Contract 5	Water	475,627
MM	Citywide Cleaning and Lining Watermains Contract 2	Water	3,934,536
QV	Citywide Valve Replacements	Water	1,290,273
RF	Citywide Cleaning and Lining Watermains Contract 1	Water	2,928,750
RL	Citywide Small Valve Replacement Contract 2	Water	1,280,380
Dropped Projects:			
A0	Improvements to Secondary Treatment	Wastewater Treatment	$17,332,531
TV	Filter Diversion Drop Shafts	Wastewater Treatment	2,820,212
YL	Nitrification Facility Main Power Cable	Wastewater Treatment	469,597
YM	Nitrification Facility Air System/Expansion Joing	Wastewater Treatment	2,165,546
YP	Filtration/Disinfection Backwash	Wastewater Treatment	2,158,407
TX	Chemical Building Metal Salts Storage	Wastewater Treatment	523,025
TY	Blue Plains Facility Plan	Wastewater Treatment	2,365,001
UG	Return Sludge Chlorination Facility	Wastewater Treatment	1,405,986
O5	Direct Sludge Loading Station	Wastewater Treatment	3,692,024
YH	Floatation Thickener Facility 1	Wastewater Treatment	6,122,508
YO	Dewatered Sludge Conveyors	Wastewater Treatment	2,949,554
G3	Foxhall and Canal Road Sanitary Extension	Sewer	243,536
Q0	FY2000 - DSS Sanitary Sewer Projects	Sewer	2,945,000
MD	Elimination of Cross Connections Contract 3	Water	2,103,227
RI	Citywide Elimination of Cross Connections Phase 1	Water	2,022,620
MI	Rehabilitation of Fort Stanton Reservoirs 1 and 2	Water	2,460,275
MN	Water Quality Studies	Water	818,169

WASTEWATER TREATMENT

WASA operates the Blue Plains Advanced Wastewater Treatment Plant, the world's largest advanced wastewater treatment facility. At 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 process facilities that provide treatment for both sanitary wastewater flows and peak storm flows, along with solids processing facilities that treat the residual solids removed by the liquid 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 a peak flow rate of 740 MGD through the complete treatment process for up to four hours, and continuous peak complete treatment flows of 511 MGD thereafter. The plant treats these flows to a level that meets one of the most stringent NPDES discharge permits in the United States. Additionally, up to 336 MGD storm water flow must receive partial treatment, resulting in a total plant capacity of 1,076 MGD.

Overview of the Wastewater Treatment Process

The first wastewater treatment phase begins as debris and grit are removed by screens and grit chambers 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 the secondary treatment process 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 in each biological process. The water is percolated down through dual-media effluent filters, removing most of the remaining suspended solids. The water is disinfected and then treated to remove residual chlorine and discharged into the Potomac. The solids from primary sedimentation tanks go to gravity thickening process units where the dense sludge settles to the bottom and thickens. Biological solids from the secondary and nitrification reactors are thickened separately using flotation 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 $1.2 billion, or 57 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 and produce a consistent, high-quality dewatered solids product for land application. In addition to meeting permit requirements, WASA strives to reduce biosolids odors, and both onsite and in the final product leaving Blue Plains.

In general, interim improvements to the plant necessary to ensure plant process performance have been completed over the last five years. Twenty-seven interim construction projects with a combined value of $48 million were complete or nearing completion late in FY 2003. A major project that included rebuilding the two primary sedimentation tanks, upgrading the sludge blending tanks to

improve dewatering performance, and providing a means of loading contractor-produced sludge cake into the storage facilities, was completed in FY 2002. Long-term upgrade projects now under construction include:

- Area Substation 5 – a new electrical substation will replace an out-of-date facility, and will service gravity thickening and digestion facilities, and the Solids Processing, Chemical, and Central Maintenance buildings
- Additional Chemical Systems. Phases I and 2 – new centralized chemical receiving and storage facilities will be constructed, as well as pipe chases and galleries to contain chemical piping
- Alternate Disinfection – construction of facilities to replace use of chlorine and sulfur dioxide with sodium hypochlorite and sodium bisulfite in the disinfection process, providing safety for plant workers and neighborhoods surrounding the plant
- Additional Dewatering Facilities – construction of seven new centrifuge dewatering units
- Primary Treatment Facilities – rehabilitation of east and west primary sedimentation tanks, control house upgrades and new pumps
- Process Control Computer System – system will provide automated monitoring and control for processes throughout the plant, and will improve treatment, control and optimize chemical and power costs, and increase reliability of the facilities
- Secondary Treatment Facilities, Phases I and 2 – concrete basin structures will replace deteriorated structures, new sludge and scum collection equipment will be provided, and aeration blowers and motors will be rehabilitated
- Gravity Thickener Facilities – replacement of thickener mechanisms, pumps, and piping to improve process efficiency and reliability of the facilities
- Grit and Screen Facilities – upgrade grit chamber buildings, influent screens, grit chambers, and conveyance and loading systems to facilitate off-site grit disposal

These projects, which have a combined cost of $350 million, will rebuild significant portions of the plant and add new sludge dewatering capability.

Liquid Processing Program -- $437.3 million *(project pages begin on page III-8)*

Projects in this program area encompass upgrading and rehabilitating facilities 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 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 1 Upgrade $7.4 million* – This project will rehabilitate pumping equipment and appurtenances in one of the two stations that pump incoming wastewater into the plant. Design was started in FY 2002.
- *Influent Screening Facilities Upgrade $35.3 million* – 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. The project was bid in conjunction with the Grit Chamber Facilities Upgrade. Construction bids were received in September 2001. However only one bid, substantially higher than the project budget, was received. Upon rebidding the project in conjunction with the West Grit Chamber Facilities Upgrade, satisfactory bids were received and construction began in early FY 2003.
- *Grit Chamber Facilities Upgrade $64.7 million* **–** 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 manual cleaning of each grit tank and lowered maintenance costs of tanks and pumps. The project was bid in conjunction with the Influent Screening Facilities Upgrade. Construction bids were received in September 2001. However only one bid, substantially higher than the project budget, was received. Upon re-bidding the project in conjunction with the West Grit Chamber Facilities Upgrade, satisfactory bids were received and construction began in early FY 2003. The East Grit Chamber Facilities Upgrade was re-bid in FY 2003 and construction is now underway.
- *Primary Treatment Facilities Upgrade $38.2 million* -- 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. Construction began in early FY 2002 and is scheduled to be complete in early FY 2006.
- *Secondary Treatment Facilities Upgrade Phase I $66.2 million (for phases I and II)* -- Rehabilitation of the East Secondary Treatment facilities, and rehabilitation of support equipment and facilities are included in this project. This project will result in lowered maintenance costs. Construction started in FY 2002 and is scheduled to be complete in late FY 2004.
- *Secondary Treatment Facilities Upgrade Phase II* -- This project includes the rehabilitation of the West Secondary Sedimentation Basins (basins number 1-12) and the West Secondary Reactors. This will result in improved process efficiency, lowered chemical usage and lower maintenance costs. Construction started in FY 2003 and is scheduled to be complete in late FY 2007.
- *Nitrification/Denitrification Facilities Upgrade $76 million* – This project is comprised of two liquid processing projects, one for rehabilitation and upgrade of nitrification facilities and one for improvement of denitrification-related process components. This project will result in lowered maintenance and energy costs due to improved efficiency. Final design will be completed and the project will be advertised for construction bids in FY 2004.
- *Filtration and Disinfection Facilities Upgrade $56.0 million* – 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. This project was split into two contracts in order to expedite the full rehabilitation of the facility, which has experienced filter failures. The first contract will result in all of the filters being restored to operability with new filter blocks and media. The second contract will improve backwashing controls and instrumentation. Design started in FY 2002 and the first construction contract was advertised for bidding in FY 2003. Design for the second contract is scheduled to be done in FY2004.

Solids Processing Program -- $459.8 million *(project pages begin on page III-26)*

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 processes, digestion of all biosolids streams, dewatering by centrifuge or belt press and lime stabilization. Dewatered biosolids are conveyed to the Dewatered Sludge Loading Facility for outloading to tractor-trailers for hauling to offsite land application sites, silviculture, and land reclamation sites. 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.

A detailed facilities plan for this program has been prepared with a total cost of approximately $440 million. These costs are primarily included in the Solids Processing Program, although some costs, such as the second phase of the process control computer system, are included in the Plantwide Facilities Program. The centerpiece of the program is design and construction of 36 million gallon total capacity egg-shaped digesters, sized for the total biosolids production of the plant. The permitting and public acceptance process has begun.

Specific major projects under this program include:

- *Egg-Shaped, Anaerobic Digestion Facilities $257 million* – This project entails the replacement of the existing digesters, with substantially increased digester capacity. When the new digesters are operational in FY 2008, operating costs, particularly hauling and chemical purchases, will be substantially reduced. This facility will result in an end product which is far less odorous, more consistent, lower in volume and more acceptable for agricultural use. Design work started in August 2002 and construction is scheduled to begin in late 2004 or early 2005.
- *Additional Dewatering Facilities $79.4 million* – This project provides additional centrifuge dewatering equipment and modification of existing centrifuges to reduce dewatered solids generation. Impacts on operational costs include reductions in hauling and contract dewatering costs. It also includes first-in/first-out silos for biosolids cake storage to minimize odors that occur from

biosolids being stored for extended periods. Construction commenced in December 2001 and is scheduled for completion in FY 2005.

- *Biological Sludge Thickening Facilities $52.1 million* - This project will evaluate the potential for upgrading the existing dissolved air flotation thickening units along with the provision of mechanical thickening equipment. Improvements are expected to reduce sludge processing and chemical costs through improved efficiency. A design study commenced in late FY 2003.
- *Gravity Thickening Facility Upgrade $19.8 million* -- This project includes the rehabilitation of gravity thickeners 1-6 and all sludge and scum pumping systems. Also planned are the rehabilitation of equipment in the degritting and grinding facility and the addition of the ability to add chemicals to the influent flow for odor control. Design is complete, the project has been bid and construction is expected to start early in FY 2004.

Plantwide Facilities Program – $289.4 million *(project pages begin on page III-35)*

This program provides for upgrading, rehabilitating, or installing 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. Support facilities projects include the rehabilitation of the Central Operations Facility and the Central Maintenance Facility. Specific projects under this program include:

- *Nitrification Sodium Hydroxide Facility $3 million* – In FY 2002, WASA completed 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 include higher chemical costs and lowered facilities maintenance costs.
- *Additional Chemical Systems - Phase I $73.5 million (for both phases I and II)* - This project replaces all of the chemical storage, transmission, and feed facilities at Blue Plains that are used for metal salts. Construction of this project was initiated in April 2001 and is scheduled to be completed in FY 2004.
- *Additional Chemical Systems – Phase II* – This project involves installation of new centralized bulk dry 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. The construction contract was initiated in August 2002 and is scheduled to be completed in FY 2004.
- *Alternate Disinfection Facilities $16.3 million* – This project replaces the current interim facilities that use liquid sodium hypochlorite (concentrated bleach) and liquid sodium bisulfite. In the past, chlorine and sulfur dioxide were shipped to Blue Plains in 90-ton railcars, and have historically posed handling and safety concerns. In response to the events of September 11, 2001, an interim system was put into place in December 2001, which allowed the removal of the highly hazardous

chlorine and sulfur dioxide chemicals from Blue Plains. As part of our safety initiatives, WASA accelerated this project for permanent replacement of the chlorine facility, and it will be completed before the end of calendar year 2003.

- *Process Control and Computer System (Phases 1, 2 and 3) $51.7 million* – This new system allows for automation of a significant number of plant processes at Blue Plains, and better management of processes that are currently manually monitored. Operating savings are anticipated from lowered chemical usage and electricity consumption, due to minimizing peak demand, as well as lower staffing levels. This project is critical to achieving the goals presented in the Blue Plains Internal Improvement Plan. The new system is being implemented in three phases, beginning with the grit chambers, primary and secondary treatment facilities, and dewatering processes. Phase II will include nitrification, filtration, disinfection facilities, and Phase III will add the solids processing facilities. WASA has selected an equipment vendor and construction began in August 2002 and will continue through 2009.

Changes in Service Area Budget in FY 2004

The proposed FY 2003 – FY 2012 plan for the Wastewater Treatment Service Area has increased by $22.2 million compared to last year's plan. This is attributable to project budget increases for the filtration/disinfection facility ($12.9 million), plant access upgrades and other facility and security improvements ($7.7 million), and a new project for automated sampling ($1 million).

COMBINED SEWER

Similar to many older communities in the Mid-Atlantic, Northeast, and Midwest portions of the country, a portion of the District of Columbia is served by a combined sewer system. Approximately one-third of the system is combined, mostly in the downtown and older parts of the city. 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 spills into the waterways of the District of Columbia. This discharge is called Combined Sewer Overflow (CSO). There are 60 permitted CSO outfalls in the District.

In FY 2003, WASA completed negotiations for a consent decree with a group of citizens and the United States government to settle a lawsuit alleging that the Authority was in violation of the Nine Minimum Control (NMC) provisions of the federal CSO Policy. This EarthJustice consent decree is pending approval by a federal judge. The purpose of the NMC projects is to reduce CSO's through proper operation and maintenance of the existing CSO control facilities. WASA had already undertaken a number of projects to comply with the NMC requirements. Under the terms of the consent decree, these projects must be completed by specific dates negotiated as part of the settlement agreement. The projects are identified in the CIP as the NMC projects. Among these are the CSO dry-weather overflow control structure upgrade project and the CSO event indicator project. A subset of the NMC projects, the pump station upgrade projects, are also part of the combined sewer system Long Term Control Plan. Under the consent decree, WASA has agreed to fund a supplemental environmental project, to be approved by U.S. Environmental Protection Agency (EPA).

As required by the EPA's CSO policy, WASA developed its Long Term Control Plan (LTCP), which was submitted to the EPA on August 1, 2002. Prior to submission to the EPA, the planning process included a comprehensive public information program, including the creation of a stakeholder advisory panel comprised of environmental organizations and others, presentation of the plan at a number of public meetings, and conducting a public hearing.

Among the benefits of the proposed plan, EPA requirements will be met or surpassed for both the average numbers of overflow events yearly and the percentage of combined sewage that is captured for treatment in the combined sewer system. When fully implemented, CSO overflows will be reduced by a projected 96 percent overall, (98 percent reduction on the Anacostia River), resulting in improved water quality and less debris in our nation's capital waterways. Overflow events would be reduced to two per year in the Anacostia River, four per year on the Potomac and Rock Creek, and one per year at Piney Branch.

Key components of the plan include:

- Four large storage tunnels, which will allow the storage of CSO flows from storm events until they can be gradually sent to Blue Plains for treatment (with two tunnels located near the Anacostia River, one near the Potomac River and one near Rock Creek)
- Targeted separation of combined sewers in several sections of the District
- Consolidation and elimination of 13 of 59 outfalls, including four outfalls on the Anacostia River
- Low impact development (LID) at WASA facilities and to encourage LID across the District

Recommendations have been included in the LTCP to address LID encouragement through a public education program and proposed changes in development / redevelopment regulations, such as building code provisions. WASA has begun the first phase of installation of several LID projects at the Bryant Street Pumping Station. In the next phase, LID opportunities at other WASA facilities will be identified. The purpose of these projects is to reduce CSO by delaying storm water runoff into the combined sewer system.

The final LTCP submitted to the EPA recommended projects costing $1.265 billion in FY 2001 dollars, or $2.6 billion in inflated dollars, assuming a 40-year implementation schedule. In FY 2003, the Authority received a $50 million appropriation from the U.S. Congress, with a 100 percent WASA match, for initial funding of the LTCP. There are preliminary indications that an additional $25 million to $35 million will be appropriated in FY 2004. Because it is unlikely that this outside funding will continue without implementation of the LTCP, the early year budgets have been included in the 10-year capital disbursement plan. Disbursements for LTCP projects have increased by $86.5 million, compared to last year's plan, due to projects scheduled to be underway during the current ten-year budget period. It is important to note that the projected disbursements are based on a 40-year implementation schedule, and therefore the majority of LTCP costs are not reflected in the current CIP and financial plan. Until a Board-approved financing plan is in place, WASA does not intend to begin LTCP work beyond $143 million of projects that were included in the CIP prior to the plan being submitted to the EPA.

Some of the LTCP projects included in the $143 million are:

- Potomac Pumping Station rehabilitation, with a lifetime budget of $17.5 million, includes replacing pump motors, motor controls, adding variable speed drives, upgrading the electrical system and electrical feeders, and modifying the existing wet-wells and influent channels.
- Main & "O" Street Pumping Stations rehabilitation has a project lifetime budget of $72.2 million, and includes rebuilding and upgrading sanitary pumps, upgrading electrical and ventilation systems, replacing screens and installing a screening handling system, and installing odor control systems.
- East Side Pumping Station rehabilitation, with a lifetime budget totaling $18.5 million, provides for a new, above grade pumping station.
- Poplar Point Pumping Station rehabilitation has a lifetime budget of $4.4 million, and provides for improvements that include structural and architectural repairs, HVAC upgrades, the addition of an odor control system, and electrical and lighting upgrades.

The work planned on the pump stations is required to maintain the stations at their rated capacities, improve station efficiency and will reduce combined sewer overflow to area rivers.

Additional CSO projects include:

- Improvement and Modifications to Combined Sewer System Structures – Under this project, a number of CSO outfall structures will be improved and/or modified to eliminate dry weather overflow of CSO. A construction contract was awarded and work has begun with completion scheduled for mid-2004. This effort has a lifetime budget of $7.8 million.
- Anacostia Sewer Separation – This is one of the early action projects proposed under the final LTCP. The project involves separating a small area on the east of the Anacostia River. The result will be two separate conveyance system, one for sanitary sewer and one for storm sewer, and elimination of CSO Outfall 006. Engineering design work on the project began in FY 2003. Lifetime budget for this work totals $3.5 million.

STORMWATER

WASA is responsible for the design, construction and maintenance of public facilities that convey stormwater runoff to the Anacostia and Potomac Rivers, Rock Creek, 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.

District of Columbia Stormwater Permit and Enterprise Fund

In April 2000, the District received its stormwater management and discharge permit from the U.S. Environmental Protection Agency. In June 2001, D.C. City Council promulgated the Stormwater Compliance Act of 2000. The Act designated WASA as the stormwater administrator, and identified the D.C. Department of Public Health, and the D.C. Department of Public Works, along with WASA, as responsible for complying with the provisions of the D.C. Municipal Separate Storm Sewer System (MS4) National Pollution Discharge Elimination (NPDES) permit issued by EPA, Region III. A task force was created with the participating agencies to coordinate required activities. In addition the Act created a Stormwater Advisory Panel consisting of the Mayor, Chairman of the City Council, WASA's General Manager, and heads of the participating agencies. In 2002, District Department of Transportation (DDOT), and the D.C. Chief Financial Officer were added to the task force and the advisory panel. The Stormwater Compliance Act also established a stormwater fee and a separate stormwater fund to finance the activities required to comply with the MS4 NPDES permit. This fee is collected by WASA as part of its water and sewer billing process. Since 2001, the District, due to the efforts of all participating agencies, has complied with all permit requirements.

Control of oil and grease discharges from six stormwater outfalls into Hickey Run, which flows through the National Arboretum, remains an issue. The MS4 permit limits oil and grease discharge to 11.9 pounds per day, and this limit was to be met in April 2003. An end-of-pipe treatment device has been proposed, to be funded by the District's Department of Health and the U.S. Department of Agriculture, and maintained by WASA using MS4 funds. A memorandum of understanding between the National Arboretum and the MS4 task force has not been finalized. However, the discharge of oil and grease into Hickey Run has not exceeded the stipulated limit.

In FY2004, a new draft permit will be reviewed and open for public comments. WASA will continue to comply with the existing permit until the new draft permit is final. During FY 2003, alternatives were developed for stormwater cost recovery, including charges based on impervious area, and WASA is planning to submit recommendations to the City Council in FY 2004 for a new stormwater rate structure.

Stormwater Program Management -- $7.3 million *(project pages begin on page V-5)*

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 consultant for work associated with the storm sewer system.

Trunk/Force Sewers -- $21.1 million *(project pages begin on page V-6)*

This program includes large diameter storm sewers and pumping station force sewers that serve new development, replace undersized sewers, or replace or rehabilitate storm sewers that have reached their useful life or have experienced structural deterioration. Currently the capital improvement program contains two significant active projects in this area

- Northeast Boundary Local Area Flooding - This project will mitigate long standing local flooding problems in six areas in the northeast quadrant of the city. The project design is complete, and construction will take place from winter 2003 through summer 2004.

- Future Stormwater Projects – Under the new sewer assessment program, it is anticipated that several new jobs will be added under this project in FY2004. Additional projects will be developed based on the results of ongoing system evaluation, being performed by the engineering project management consultant over the next five years.

Pumping Facilities – $24.6 million *(project pages begin on page V-10)*

This program includes projects for the rehabilitation or replacement of 15 existing stormwater pumping stations. Detailed design of these improvements is dependent on the outcome of negotiations with DDOT regarding ownership of the stations.

Extension/Local Drainage Projects -- $ 6.6 million *(project pages begin on page V-11)*

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. Two projects to highlight in this year's CIP include:

- Sewer lining at 22nd & P Streets, NW - This project will correct a drainage and flooding problem. The engineering study to define the design parameters was completed in FY2003 after receipt of a National Park Service (NPS) permit. Design will be competed during FY2004, and is scheduled to begin in FY2005.

- Dumbarton Oaks – This project will separate a storm sewer currently discharging into a combined sewer, thereby reducing localized flooding and extraneous flow to Blue Plains. Additionally, this project will alleviate maintenance issues for WASA and the NPS. Approximately $1.1 million is currently budgeted from FY 2002 to FY 2005 for design and construction of this project. Design has been delayed pending an environmental assessment required by the NPS, and is currently scheduled for winter 2003 through spring 2004. Construction is planned for summer 2004 through spring 2005.

On-Going Stormwater Projects – $6.7 million *(project pages begin on page V-17)*

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

DDOT Storm Projects – $28.5 million *(project pages begin on page V-30)*

This program funds projects associated with DDOT road projects, which often require relocation of storm sewers, inlets or other structures. Budget requirements are projected based on the best available information from DDOT. Recent negotiations may lead to DDOT assuming full responsibility for such relocation costs.

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 sewer system includes approximately 600 miles of large interceptor sewers and smaller gravity collection sewers. 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 System, 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 brick and concrete, vitrified clay and concrete, reinforced concrete, ductile iron, plastic, steel, brick, cast iron, cast in place concrete, and even fiberglass.

During FY2004, WASA will continue the evaluation of the sewer system to determine its condition, verify adequate capacity, and to develop new capital projects, as appropriate. A five-year contract was signed in early 2003 with a new engineering project management consultant (EPMC) to provide services for the comprehensive assessment, and this work continues in FY 2004. Funding is included in this 10-year CIP for the new capital projects that may come out of the assessment.

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, the current 10-year plan 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 – $14.9 million (*project pages begin on page VI-6*)

During FY2004, WASA will continue the comprehensive evaluation of the sanitary and combined sewer systems, as well as design management for sewer pumping station rehabilitations, as described in more detail below.

- Sanitary Sewer Program Management & Planning (EPMC-IIIA) - This planning allows WASA to assess the sewer system to determine if it is in adequate structural condition, and has sufficient capacity to meet current service demands and planned growth. The planning effort required to comply with the current National Pollutant Discharge Elimination System (NPDES) permit, the three-party consent decree, and pending federal regulations addressing sanitary sewer overflows is also included in this initiative.

- Design Management for Sanitary Sewer Pumping Stations - This ongoing project began in 2001, and provides for the management of the design of three small sanitary sewage pumping stations requiring major rehabilitation or replacement. A project design engineer has been selected and the design will be finalized in FY2004.

Collection Sewer Projects – $15.2 million (*project pages begin on page VI-7*)

This program includes studies and projects to effectively eliminate stormwater, groundwater, and other infiltration and inflow to the sewer system, to separate stormwater flows, and to reduce other extraneous flows to Blue Plains. This category also includes projects to rehabilitate collection system sewers as well as projects that serve existing properties and new development. Noteworthy projects are:

- East Side Interceptor Rehabilitation – The portion of the sewer that traverses the National Arboretum has significant structural distress. Design is underway for the rehabilitation of the sewer, which will be completed in early FY2004. Construction is scheduled to start in the summer of 2004.

- Infiltration/Inflow City Wide (excluding National Park Service areas) – This project corrects infiltration/inflow problems throughout the City that have been identified as cost effective. This project was recently bid and awarded, with construction expected to be completed during FY2004.

Interceptor/Trunk Sewer/Force Sewers – $82.1 million (*project pages begin on page VI-10*)

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 $7 million in FY2004 for initial funding of capital projects that may be identified as part of the comprehensive assessment of the sewer system.

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

- Potomac Interceptor Rehabilitation – The Potomac Interceptor Sewer System is a 50-mile long sewer that provides conveyance of wastewater from areas in Virginia, Maryland and the District 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 integrity of this major sewer, including:

    - Potomac Interceptor Rehabilitation in Fairfax and Loudoun Counties – The capital improvement program includes $8.7 million to design and reconstruct portions of the interceptor in Fairfax and Loudoun Counties that are seriously deteriorated due to hydrogen sulfide corrosion. Design began in spring 2003, with construction beginning in the FY2004 and extending through FY2006.
    - General Potomac Interceptor Rehabilitation Projects – $1.3 million is included to repair other segments of the Potomac Interceptor as determined by a study that was completed to assess the condition of the pipeline. This includes manhole

replacement and rehabilitation of miscellaneous structures along the length of the line. The design and bid documents are complete and construction will take place in FY2004.

- Odor Control Projects:

  - Interim Odor Controls – 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. These interim controls are continually maintained until the implementation of the permanent odor controls.
  - Permanent Odor Controls – WASA plans to install a permanent odor control system that includes a forced air/activated carbon filter system. This project will cost approximately $10 million. The conceptual design was completed in FY2003. During the past three years, WASA has been seeking the requisite National Park Service permit, performing associated environmental assessments, and coordinating with the community. It is expected that the National Park Service will issue a Finding of No Significant Impact in early FY2004. The current schedules call for construction to begin in FY2004 and to be completed in FY2005.

- Additional Tide Gate Structure Replacements – This new project recommends the study, design, and replacement of five additional tide gates at various locations that are impacted by high tides. Similar to the previous tide gate improvements project, this project involves the replacement of existing gates with elastomeric-type gates that more positively ensure closure. This design of this project is anticipated to start in FY2005, and construction would be completed in 2007.

- Upper Potomac Interceptor Rehabilitation – This project involves the repair of a major portion of the trunk sewer. This project was delayed due to the National Park Service delays in permit issuance. The permit was received in FY 2003, and detailed design will start in FY2004.

Pumping Facilities – $20.2 million (*project pages begin on page VI-17*)

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). The conceptual design of these pumping stations is completed, and the detailed design will take place in FY2004 and FY2005. Construction is expected to begin in FY2005 and be completed in FY2008.

Ongoing Sanitary Sewer Projects – $60.6 million *(project pages begin on page VI-20)*

This area includes capital projects managed by the Department of Sewer Services including the replacement of sewer laterals and related capital improvements. The program also includes funding for the District of Columbia Department of Transportation (DDOT) road projects, which often require the relocation of sewers. Budget requirements are projected based on the best available information from DDOT.

WATER

Projects in the Water Service Area are required to rehabilitate, replace or 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 replace water service lines and water meters. As in last year's program, the current 10-year plan reflects the substantial costs of street repaving due to street repair and restoration regulations required of WASA and other area utilities by the District.

The water distribution system includes appurtenances necessary for proper system operation, inspection, and repair. WASA's system includes over 36,000 valves of various sizes. A variety of valve types allow flow control, prevent air entrapment, allow watermain draining, permit flow in only one direction, and allow water transfer between service areas during emergencies. The system also includes more than 8,800 hydrants and approximately 130,000 meters.

A major issue in the water distribution system emerged in FY 2003. The results of the lead sampling and testing program indicated that the system exceeded the U.S. Environmental Protection Agency's (EPA) Lead Action Level at the end of FY 2002 and in FY 2003. It is expected that the distribution system will again exceed the Lead Action Level in FY 2004. As a result, the federal Lead and Copper Rule requires that seven percent of lead service lines must be replaced annually as long as the system exceeds the Lead Action Level. Through a combination of service line replacements and sampling, WASA met the replacement requirement in FY 2003, and additional replacements are included in the current 10-year plan to meet the replacement requirements in FY 2004 and FY 2005.

Highlights of this year's CIP are:

Water Service Area Management -- $25 million *(project page on page VII-7)*

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

Water Pumping Facilities -- $83.1 million *(project pages begin on page VII-8)*

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

- The Bryant Street Pumping Station is undergoing a major rehabilitation to meet current code requirements and maintain the reliability of the water distribution system. Work includes replacing 11 high lift pumps, architectural improvements to the building, replacing heating, cooling and ventilating system, site improvements, replacing water mains, cathodic protection of a 48-inch steel water main, rehabilitating the warehouse and shop buildings, upgrading SCADA for the water distribution system, and an electronic security system. Construction is underway and will be completed in winter 2006 at a total cost of $58.5 million.
- The Fort Reno Pumping Station will be upgraded to improve pressures in the fourth high service area in the northwest quadrant of the District. Design completion was extended to fall 2004 to coordinate this project with construction of a water tank in the fourth high service area. Construction is currently scheduled for spring 2005 through spring 2006 at a total project cost of $2.5 million.
- The Anacostia Pumping Station will be replaced on the same site it presently occupies, and will include booster pumps and a 30-inch transmission main to increase pressures in the southern portion of the Anacostia first high service area. Design will take place in 2004 with construction beginning in fall 2005 at a total project cost of $19.4 million.

Water Storage Facilities -- $36.7 million *(project pages begin on page VII-13)*

Studies have identified the need for several new storage facilities to support population growth and development, to provide additional water pressure to certain areas of the District, and to provide emergency backup service. The most immediate need is for two million gallons of elevated storage in the southern portion of the Anacostia first high service area. Agreements have been reached to site the facility at St. Elizabeth's Hospital, and necessary approvals and permits are being pursued, with design expected to start in 2004. Also, scheduled for 2004 is the start of a study to locate a site for a two million elevated storage tank in the fourth high service area in the northwest quadrant of the District.

Water Distribution System -- $291.7 million *(project pages begin on page VII-20)*

This program provides for rehabilitation, replacement or extension of the water distribution system through several categories of projects. With the exception of replacing 12-inch water main in Wisconsin Avenue, the water distribution work performed under the Georgetown Joint Utility Project has been completed. The Georgetown Joint Utility Project is scheduled for completion in FY 2005.

Highlights of the work under this program by project category includes:

- *Valve Replacements* - This involves replacing defective valves throughout the water distribution system. Operable valves are necessary to complete the annual flushing program, for routine and emergency system repairs, and for support of capital projects that require valve operation to isolate portions of the system. Three contracts for the replacing 40 large valves (16-inch and larger) are under construction, and four more contracts to replace approximately 100 large valves are under design and

construction bids will be advertised in FY 2004 and FY 2005. Additionally, design is underway for replacing small diameter (12-inch and smaller) single- and multi-stem valves at 177 sites throughout the District, and the construction contract will be advertised in FY 2004.

- *Cross Connection Elimination* - This project entails eliminating potential cross connections between the water distribution system and the sewer system by removing the connections of fire hydrant drains and blow-offs to the sewer system. Six construction contracts for eliminating cross connections have been completed, and the last construction contract will be completed in FY 2004. All the work required by the EPA's Administrative Order and Consent Decree III-96-001-DS was completed on schedule.

- *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. Eliminating 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 is underway with construction scheduled to begin in FY 2005. Design for the second contract is scheduled for FY 2004.

- *Lead Service Line Replacements* – This project entails annual sampling and replacement of seven percent of lead water service lines annually, according to EPA mandate as described above. In FY 2004, $9.7 million has been added to the disbursements budget for this work, $10.4 million has been included in FY 2005.

- *Main Extension and Replacement* - Extension and replacement of water mains is required to provide service to new developments, or to replace undersized or defective mains in the system. Two contracts, one to replace 14,600 linear feet of 12-inch diameter and smaller water main at different locations, and other to replace 3,500 linear feet of 12-inch water main at Livingston Road, S.E. are under construction. Design for replacing 5,000 linear feet of undersized mains is underway, with construction procurement scheduled for FY 2005.

- *Large Diameter Water Main Rehabilitation* - 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 cleaning and lining water mains, if necessary, and replacing or rehabilitating smaller segments of water mains. Work also includes the relocation of water mains from underneath private property when necessary. Design to rehabilitate a 48-inch water main in the third high service area near the Bryant Street pumping station and a 42-inch concrete pipe water main in the second high service area in the northeast quadrant of the District is under construction. Internal Joint Repair Contract 2, involving approximately 48,000 linear feet of water main, is under design with construction procurement scheduled for FY 2004.

- *Distribution/Transmission Mains* - These projects include replacing and constructing distribution and transmission mains in the system. A contract to replace 5,000 linear feet of a 20-inch Anacostia first high water main was advertised in 2003. Additionally, design is underway for replacing 6,100 linear feet of 20-inch water main in Minnesota Avenue S.E. with a 30-inch water main, for installing approximately 5,300 linear feet of 24-inch water main to reinforce the supply to the Fort Stanton Reservoirs, and for installing approximately 4,600 linear feet of 16-inch water main in Michigan Avenue NE to reinforce the supply to the McMillan Water Treatment Plant. These three construction contracts will be advertised in FY 2004.

- *Small Diameter Water Main Rehabilitation* - Work includes rehabilitating small diameter (12-inch diameter and smaller) water mains to improve water pressure, system reliability and flows in the system, as well as to maintain water quality. Based on pipe condition assessments, the objective is to identify small diameter mains in need of rehabilitation, and to replace or clean and line the mains. Also, included is elimination of dead ends in the system and replacement of associated valves, fire hydrants and house services. Four construction contracts are scheduled for design in FY 2004. A project for the Small Diameter Water Main Rehabilitation program with a total cost of $18.2 million was added to the CIP in FY 2012.

- *Cleaning & Lining Large Diameter Water Mains* – Three previously proposed construction contracts for cleaning and lining large diameter water mains (16-inch diameter and larger) with a total cost of $8.9 million were removed from the current 10-year plan, based on hydraulic modeling results. It has been determined that there is minimal hydraulic benefit to cleaning and lining the large diameter mains, and cleaning and lining does not protect the water main from external corrosion. WASA is re-evaluating the rehabilitation program for large diameter water mains and it is likely that alternative rehabilitation or replacement methods will be proposed in the future.

On-Going Water Projects -- $52.1 million *(project pages begin on page VII-57)*

WASA's Department of Water Services manages projects in this program area. The ongoing program includes small projects for extension of water mains to service new development in the District of Columbia, repairing water main breaks, replacing valves and fire hydrants, replacing water service connections, and other minor water main rehabilitation work. As in last year's program, project budget reflect the substantial costs of street repaving due to the street repair and restoration regulations required of WASA and other area utilities.

DDOT Water Program -- $40.3 million *(project pages begin on page VII-70)*

This program includes projects for relocation, rehabilitation, replacement and extension of water mains, for which the work is completed under District Department of Transportation (DDOT) construction contracts for street paving or reconstruction.

Metering -- $46 million *(project page on page VII-83)*

The residential phase of the Automated Meter Reading (AMR) project was essentially completed by the end of FY 2003, with more than 96,000 residential meters installed. Installation of small commercial meters (2 inches or less) began in May 2003, and by the end of the fiscal year, more than 8,000 meters were in place. After the meter "rightsizing" initiative is completed, large commercial installations (3 inches or larger) will begin early in FY 2004.

Large commercial installations will be more complex than residential installations due to the poor quality of surrounding piping and valves, as well as the size of meter vaults. These commercial installations will require more ancillary work than originally anticipated or budgeted, and the lifetime budget for the AMR project has been increased by approximately $2.0 million to accommodate this additional work. The large commercial phase of the AMR project is scheduled to be completed in FY 2005. Large commercial installations will produce the most significant impact on WASA's revenues, with approximately 50 percent of retail revenues are attributable to the largest 2,500 commercial accounts.

WASHINGTON AQUEDUCT

The Washington Aqueduct, managed by the U.S. Army Corps of Engineers, provides wholesale water treatment services to WASA and its partners in Northern Virginia, Arlington County and Falls Church. WASA purchases approximately 75 percent of the water produced by the Aqueduct's two treatment facilities, the Dalecarlia and McMillan treatment plants, and thus is responsible for 75 percent of the Aqueduct's operating and capital costs. Under federal legislation and a memorandum of understanding enacted in 1997, WASA and its Northern Virginia partners have a much greater role in oversight of the Aqueduct's operations and its capital improvement program.

The FY 2003 – 2012 proposed disbursements budget for WASA's share of Washington Aqueduct projects totals $119.1 million, or $7.6 million less than last year's 10-year plant of $126.7 million.

Major projects underway in this year's plan include:

- *McMillan Water Treatment Plant Improvements* – This includes a variety of projects at the McMillan plant, which is adjacent to WASA's Bryant St. pumping station, including elevator and crane replacements and building renovations. Over ten years, projects at this facility will total approximately $16.1 million (WASA share.)
- *Transmission & Storage Facility Improvements* – This includes a variety of projects including renovation of the booster pumping station, replacement of sluice gates, improvements to the Georgetown Reservoir, transmission main rehabilitation, and improvements to the Little Falls pumping station. WASA's share of costs over ten years totals approximately $16.4 million.
- *Dalecarlia Water Treatment Plant Improvements*– This includes a variety of projects at the Dalecarlia plan, including building, roadway and security improvements and clearwell cleaning and disinfection. Over ten years, projects at this facility will total approximately $15.6 million (WASA share.)

Near-term projects include Georgetown Reservoir improvements, including rehabilitation of the dividing wall and sluice gates, and renovation of the laboratory and chemical buildings which will renovate the four existing, forty-year old labs.

In addition to these projects, the Aqueduct has identified a project that could occur depending on the outcome of permit negotiations and other regulatory changes that are being considered by the EPA. Currently, solids that settle out from water in the Dalecarlia and Georgetown Reservoirs are periodically discharged into the Potomac River during high river flow conditions. The draft NPDES permit received by the Aqueduct requires development of a plan to remove 85 percent of incoming sediments and not return them to the Potomac River. The Aqueduct, WASA and the other wholesale customers are working with the EPA to better understand this

requirement and to identify the technological alternatives available to meet this requirement. The Aqueduct has tentatively identified projects to address this requirement, with costs totaling approximately $51 million (WASA share only).

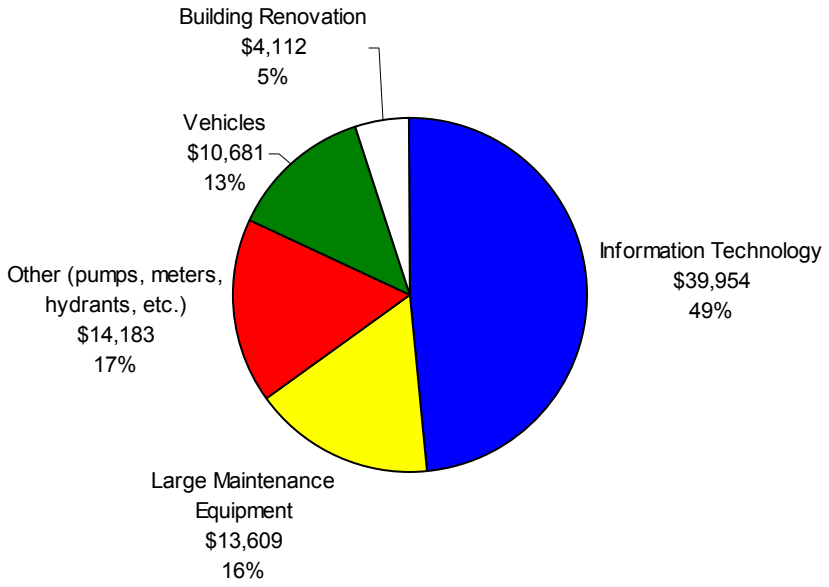
Currently, WASA finances its Washington Aqueduct projects in two ways: 1) taxable U.S. Treasury notes; and 2) pay-as-you-go financing. Most of the projects financed with U.S. Treasury notes are nearing completion, leaving virtually all of the out-year projects to be financed with WASA pay-as-you-go financing. For the pay-as-you-go projects, the U.S. Corps of Engineers currently requires WASA to remit cash in an amount equal to the total project cost in advance of advertising contracts, and 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, these projects are beginning to increase in size and scope, becoming an unreasonable cost for WASA's customers to bear. We have made good progress over the last six months on this issue, including discussions with senior management at the Corps, the Aqueduct, Congressional staff, and the U.S. Office of Management and Budget. In addition, we are pursuing options to transfer dollars on a phased basis or to provide 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.

CAPITAL EQUIPMENT

WASA's lifetime capital equipment budget totals $97 million, compared to a lifetime budget of $85.6 million in the FY 2002 – FY 2011 plan. This increase is primarily attributable to the inclusion of a new asset management system in the capital equipment plan, with a lifetime budget of $10.3 million. Also, a decision has been made to purchase, rather than lease, photocopiers beginning in FY 2004, for a lifetime increase of $2.6 million. The 10-year disbursements budget for capital equipment is $82.5 million, compared to the FY 2002 – FY 2011 capital equipment budget of $78.6 million, also due to the projects and purchases mentioned previously. The increases for these new projects are partially offset by FY 2003 disbursements that were $4.4 million less than budget, as well as a downward revision of $3.2 million in the vehicle replacement budget, reflecting ongoing efforts to "rightsize" the Authority's fleet over the next several years.

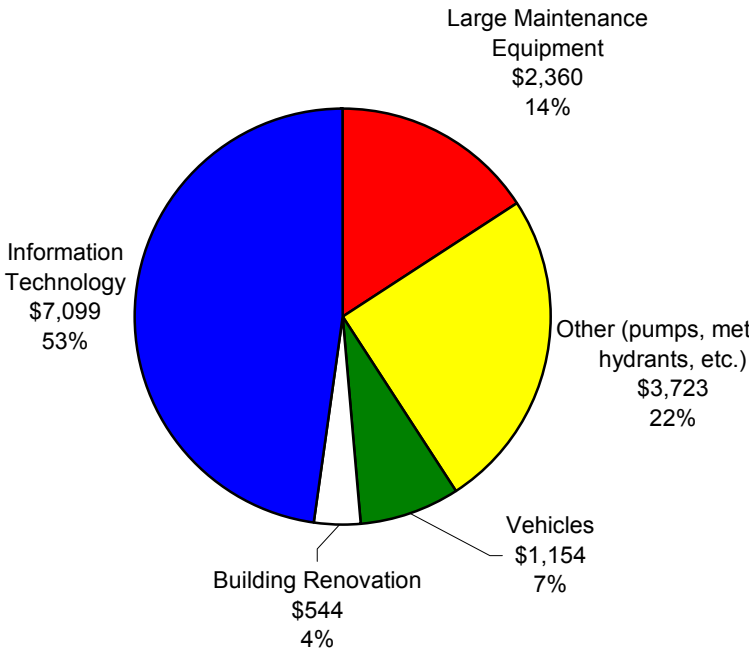
The FY 2004 revised disbursement budget has increased by $4.8 million over the FY 2004 approved budget. Again, this increase is driven by the first year implementation cost of the asset management system, $1.3 million for photocopiers, increases in several systems budgets, and disbursements for radios and water system security being pushed from FY 2003 into FY 2004.

CAPITAL EQUIPMENT DISBURSEMENTS BY MAJOR EXPENDITURE CATEGORIES
FY 2003 – FY 2012
($ in 000's)

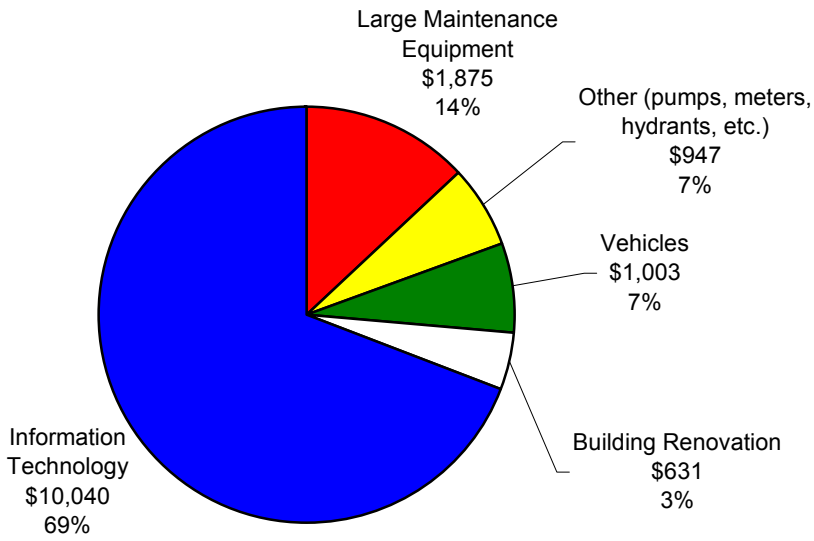


Capital Equipment
($ in 000's)

FY 2004 Revised



FY 2005 Proposed



Capital equipment is defined by a purchase price greater than $5,000 and an item that has a useful life of more than three years, or will extend the life of an asset by more than three years. Capital equipment expenditures fall into two broad categories: equipment purchases and ongoing projects. Purchases include items such as fire hydrants, catch basin components, water meters, vehicles, and computers. Budgets for equipment purchases are closed out at the end of each fiscal year. Ongoing projects extend over multiple years and are largely technology-related.

Equipment Purchases

Equipment purchases are made by the Departments of Wastewater Treatment, Water Services, Sewer Services, Customer Service, Fleet Management, Facilities and Security, Information Technology, and Maintenance Services. Amounts shown below are 10-year disbursement totals.

Department of Wastewater Treatment - $0.8 million

Capital equipment expenditures for this department are for laboratory equipment purchases to maintain a certified laboratory. Metering and recording device purchases are planned beginning in FY 2004. Revising the virtual tour of the Blue Plains Advanced Wastewater Treatment Plant is a new activity planned for FY 2004. The plant model was completed in FY 2002, and includes chlorine treatment. Chlorine was removed from the plant shortly after September 11, 2001, and the model will be revised to show the sodium hypochlorite treatment that has replaced chlorine.

Department of Water Services - $7.2 million

The Department of Water Services is responsible for replacing deteriorated or damaged fire hydrants, water system valves, and system appurtenances. These purchases are separate from Capital Improvement Program activities for the systematic replacement of valves, rather they are for interim replacement of these items as individual needs are encountered by field crews. Activities in the FY 2004 revised and FY 2005 proposed budgets remain the same as those carried out by the department in previous years.

Department of Sewer Services - $3.1 million

This department is responsible for replacing catch basins, manhole covers and frames, and rehabilitating regulators and outfall gates. Design for the South Capitol Street outfall gate was started in FY 2002, and construction completion is scheduled for FY 2004. During FY 2003, conceptual design for the floatable visitors' center was completed. A budget increase to this project has resulted in a minor increase in the department's 10-year disbursement plan.

Customer Service Department - $0.5 million

In FY 2004, the Authority's dispatch function will be consolidated within the Customer Service Department, in conjunction with the deployment of the 800 MHz frequency radio project. Construction of the dispatch center will be completed in a short time frame at the beginning of FY 2004. This consolidation has resulted in moving 13 positions from the Water Services and Sewer Services Departments to the Customer Service Department.

Department of Fleet Management - $13.3 million

A major emphasis will be placed on coordinating equipment purchases with the realigned needs of the Authority as Internal Improvement Plans continue to be carried out in FY 2004. The result of this effort, begun in FY 2003, is a $3.9 million decrease in the 10-year disbursement plan. Purchases of alternative fuel vehicles are a priority of the department. Additionally, vehicle replacement evaluation processes will be enhanced to assure continued cost effective management of WASA's fleet.

Department of Facilities and Security - $8.9 million

A new initiative in FY 2004 is to purchase, rather than lease, photocopying equipment. The purchase is budgeted at $1.3 million in FY 2004, and again in FY 2009, but offers potential savings in operating costs. Other capital equipment activities for this department in FY 2004 include HVAC system upgrades at various locations, and fencing and rollup door replacements.

Department of Information Technology - $ 10.4 million

In addition to managing WASA-wide technology projects, the Department of Information Technology is responsible for computer, printer, and other hardware purchases. The department has additional responsibilities for installing telecommunications equipment throughout the Authority, and for replacing copper cabling with fiber cabling. The 10-year spending plan for the Information Technology Department includes a new project for a wireless technology survey.

Department of Maintenance Service - $16.2 million

This department is responsible for rehabilitating and replacing large process equipment throughout the Authority, including pumps, screens, variable frequency drives, and large motors. A major emphasis has been placed on the High Priority Rehab Program over the past several years, which ensures that large equipment will function properly until its scheduled replacement in the Capital Improvement Program. Beginning in FY 2004, dollars budgeted for this activity begin to decrease as the CIP progresses.

Capital Equipment Technology Projects

In addition to carrying out its own technology projects, such as Web Development and Network Renewal, the Department of Information Technology supports technology projects that are managed by departments throughout the Authority. Projects completed in FY 2003 included the maintenance management system, and the swipe card entry timekeeping component of the Payroll/HR system, and deployment of the new 800 MHz radio program. Continuing into FY 2004 are enhancements to the customer information and billing system, which offer a variety of payment options and make real time, online information available to our customers.

The major initiative for FY 2004 will be the beginning phase of an Asset Management System implementation, described in more detail below.

Asset Management System - $10.3 million

The Asset Management System will be a major WASA-wide undertaking, beginning in FY 2004. This project was originally planned to be a water and sewer infrastructure asset management system that would complement the recently implemented maintenance management system. After a full year of assessment in FY 2003, this system is now envisioned to encompass the entire organization and integrate technology already in place at WASA (customer information and billing, maintenance management, financial management systems), as well as technology planned for the future, such as geographic information, electronic maps, and process control computer systems. Implementation and integration will span four years.

EMAP Phases I and II - $0.4 million

In order to prepare for integration into the asset management system, WASA's as-built maps and drawings need to be brought up to date and totally incorporated into an electronic environment. Phase I addresses as-builts for all of WASA's infrastructure outside of Blue Plains will be addressed, and Phase II encompasses as-builts at the treatment plant.

e-Contract Management - $0.1 million

This is automated procurement system that will manage and track activity, data, and statistics on annual and multi-year contracts such as contract values, contract terms, contract changes orders, and contractor performance history

Maintenance Management System - $2.3 million

This system, needed to replace an obsolete materiel management system, went online in FY 2003 and will be an integral component of the asset management system. There will be ongoing enhancements throughout the 10-year plan, and in FY 2004, the Department of Facilities and Security has $50,000 budgeted in order to integrate their system needs within the maintenance management system.

Radios - $1 million

In FY 2003, WASA deployed new radios for use with the District's 800 MHz system, replacing a 20-year old system. This system has increased geographic coverage, and allows departments to communicate with each other across the Authority. As previously described, the consolidated dispatch center for the radio program will be located in the Customer Service Department.

Document Management System - $0.04 million

Planning level money is included in the FY 2004 disbursement plan. A thorough assessment of document storage needs for the entire Authority will be made during the coming year, and depending on the outcome of this study, implementation monies may be budgeted in future years.

Financial Management System - $1.2 million

This project is managed by the Office of the Chief Financial Officer, with the support of the Information Technology Department. A system upgrade is planned for FY 2004, in order to maintain full support of all system components by the vendor.

Payroll/Human Resources System - $1.0 million

This project is also managed by the Office of the Chief Financial Officer, with the support of the Information Technology Department. In FY 2003, timed card swipe entry to WASA facilities was implemented as part of this system. This has led to increased accuracy and efficiency in payroll preparation. FY 2004 improvements to the system include kiosks throughout WASA facilities that will allow employees remote access to leave and benefit information.

Customer Information and Billing System - $4.4 million

The Customer Service Department manages the customer information and billing system project, supported by the Information Technology Department. The system went into service in June 2001, and many new options were added during the past year, including recurring credit card payments and budget billing. A system upgrade is planned for FY 2004, and WASA's water and sewer bill will be redesigned. In support of the customer assistance program, a bill roundup option will be introduced in the coming year, with proceeds used to help low income customers.

Systems Security - $0.5 million

Post September 11, 2001 security concerns extend from WASA's physical assets to its technology infrastructure. FY 2003 was the first year that systems security was budgeted, and the 10-year plan includes an increase of approximately $400,000 so the additional security measures can be installed for data and communication systems.

Redundant Data Center - $1.4 million

A disaster recovery analysis of WASA's mission critical systems was completed in FY 2003, and phased implementation of recommended solutions will occur in FY 2004 and FY 2005.

Web Development - $1.4 million

In FY 2003, a major improvement to WASA's vendors was the introduction of the Vendor Portal. This allows vendors to register and be notified when a solicitation relating to an area they provide services for is posted. Vendors are automatically notified by email when a solicitation is posted and emailed again when any amendments are attached to it and made. In FY 2004, a new graphic framework will be developed, and an invoice submission module will be deployed to allow vendors to more efficiently do business with the Authority.

Note:

On the project pages that follow, lifetime budgets prior to FY 2003 reflect only FY 2002 actual disbursements, with the exceptions of the maintenance management, customer information and billing systems, and the web development project. Additionally, out year budgets show only FY 2012 expected spending. This is due to the generally annual nature of purchases and projects occurring in the Capital Equipment service area of WASA's capital program.

FY 2003 - FY 2012 Capital Equipment Disbursements
($ in 000's)

Department	Equipment Type	FY 2003 Projected	FY 2004 Revised	FY 2005 Proposed	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	Total
Wastewater Treatment												
	Laboratory Equipment	$24	$42	$34	$34	$27	$27	$25	$25	$32	$32	$302
	Safety Equipment	0	0	0	16	14	13	19	19	16	20	117
	Metering and Recording Devices	0	20	18	16	15	13	12	10	10	10	124
	Plant Model	21	50	0	0	0	0	0	0	0	0	71
Total		**$45**	**$112**	**$52**	**$66**	**$56**	**$53**	**$56**	**$54**	**$58**	**$62**	**$614**
Water Services												
	Fire Hydrant Replacements	$169	$195	$267	$250	$250	$250	$250	$250	$250	$250	$2,381
	System Valve Replacements	0	114	150	73	81	89	98	100	100	100	905
	Water Service Replacement	233	349	250	300	300	300	300	300	300	300	2,932
Total		**$402**	**$658**	**$667**	**$623**	**$631**	**$639**	**$648**	**$650**	**$650**	**$650**	**$6,218**
Sewer Services												
	Sewer Pipes/Fittings	$0	$30	$30	$30	$30	$30	$30	$30	$30	$30	$270
	Regulator and Gate Rehabilitation	0	10	10	10	10	10	10	10	10	10	90
	Sewer Cleaning and Repair Equipment	173	20	55	55	55	55	55	55	55	55	633
	Portable Pumps	0	15	15	15	15	15	15	15	15	15	135
	Flow Meters/Sensor Replacements	0	25	25	25	25	25	25	25	25	25	225
	Manhole Covers/Frames	0	33	33	33	33	33	33	33	33	33	297
	Catch Basin Tops/Frames/Covers	0	60	60	60	60	60	60	60	60	60	540
	Outfall Gates	36	414	0	0	0	0	0	0	0	0	450
	Visitors' Center	87	0	0	0	0	0	0	0	0	0	87
Total		**$296**	**$607**	**$228**	**$228**	**$228**	**$228**	**$228**	**$228**	**$228**	**$228**	**$2,727**
Customer Service												
	Command Center	$0	$507	$0	$0	$0	$0	$0	$0	$0	$0	$507
Total		**$0**	**$507**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$507**
Fleet Management												
	Customer Service	$0	$340	$340	$0	$0	$0	$0	$0	$0	$0	$680
	Vehicles	1,005	814	663	1,027	1,050	1,091	1,053	1,098	1,100	1,100	10,001
Total		**$1,005**	**$1,154**	**$1,003**	**$1,027**	**$1,050**	**$1,091**	**$1,053**	**$1,098**	**$1,100**	**$1,100**	**$10,681**

FY 2003 - FY 2012 Capital Equipment Disbursements
($ in 000's)

Department	Equipment Type	FY 2003 Projected	FY 2004 Revised	FY 2005 Proposed	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	Total
Facilities and Security												
	Water System Electronic Security	$978	$489	$0	$0	$0	$0	$0	$0	$0	$0	$1,467
	HVAC at Various Locations	128	288	300	0	0	0	0	0	0	0	716
	Fencing at Various Locations	0	175	25	0	0	0	0	0	0	0	200
	Signage	0	0	25	0	0	0	0	0	0	0	25
	Rollup Doors	0	81	81	81	81	81	0	0	0	0	405
	Fleet Building Rehab	63	0	0	0	0	0	0	0	0	0	63
	Photocopier Purchase	0	1,300	0	0	0	0	1,300	0	0	0	2,600
	Facilities Improvements	53	0	200	350	350	350	350	350	350	350	2,703
Total		**$1,222**	**$2,333**	**$631**	**$431**	**$431**	**$431**	**$1,650**	**$350**	**$350**	**$350**	**$8,179**
Risk Management												
	Owner Controlled Insurance Program Study	$0	$50	$0	$0	$0	$0	$0	$0	$0	$0	$50
Total		**$0**	**$50**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$50**
Information Technology												
	Asset Management System	$100	$1,500	$5,812	$2,180	$150	$100	$100	$100	$100	$100	$10,242
	EMAP Phases I and II	0	225	197	0	0	0	0	0	0	0	422
	Engineering Plotters/Scanners	0	50	50	50	0	0	63	0	0	0	213
	Field Laptops	0	75	0	0	0	0	0	0	0	0	75
	e-Contract Management System	0	100	0	0	0	0	0	0	0	0	100
	TV Camera Equipment	0	130	0	0	0	0	130	0	0	0	260
	Maintenance Management System	618	50	50	50	50	50	50	50	50	50	1,068
	Radios	38	644	30	30	30	30	30	30	30	30	922
	Document Management System	0	40	0	0	0	0	0	0	0	0	40
	Financial Management System	105	250	100	100	100	100	100	100	100	100	1,155
	Payroll/HR System	472	300	30	30	30	30	30	30	30	30	1,012
	Customer Information System	1,067	950	674	100	100	100	100	100	100	100	3,391
	Automated Call Distribution	0	200	0	0	0	0	0	0	0	0	200
	Automated Dispatch System	0	0	0	0	100	1,900	50	50	50	50	2,200
	Interactive Voice Response	0	150	20	20	20	20	20	20	20	20	310
	Facilities Management System	0	50	0	0	0	0	0	0	0	0	50
	Wireless Technology Survey	0	0	100	0	0	0	0	0	0	0	100
	Network Systems Security	37	150	100	30	30	30	30	30	30	30	497
	Intranet	20	50	50	50	50	50	50	50	50	50	470
	Handheld Inventory	0	0	300	50	50	50	50	50	50	50	650
	Software Applications/Licenses	78	150	150	150	150	150	150	150	150	150	1,428

FY 2003 - FY 2012 Capital Equipment Disbursements
($ in 000's)

Department	Equipment Type	FY 2003 Projected	FY 2004 Revised	FY 2005 Proposed	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	Total
Information Technology - continued												
	Redundant Data Center	35	400	382	200	60	60	60	60	60	60	1,377
	Web Development	340	250	75	75	75	75	75	75	75	75	1,190
	Network System Renewal	133	200	650	150	150	650	150	150	650	150	3,033
	Desktop Replacements	438	500	500	500	500	500	500	500	500	500	4,938
	Cable Renewal	178	200	200	200	200	200	200	200	200	200	1,978
	Telephone System Renewal/Replacement	90	425	350	450	100	100	100	100	100	100	1,915
	Lotus Notes Migration	0	30	80	10	70	10	10	70	10	10	300
	Windows NT Migration	38	30	140	30	30	30	30	30	30	30	418
Total		**$3,787**	**$7,099**	**$10,040**	**$4,455**	**$2,045**	**$4,235**	**$2,078**	**$1,945**	**$2,385**	**$1,885**	**$39,954**
Maintenance Services												
	Shop Equipment	$0	$30	$75	$0	$0	$0	$0	$0	$0	$0	$105
	Centrifuge Repair/Replace	0	200	200	200	200	200	200	200	200	200	1,800
	Plant Lighting	0	30	0	0	0	0	0	0	0	0	30
	VFD Replacement-Nitrification Pumping	811	0	0	0	0	0	0	0	0	0	811
	Pump Repair/Replacement	528	500	400	400	400	400	200	200	200	200	3,428
	Large Electric Motors	834	900	500	500	300	200	200	200	200	200	4,034
	High Priority Rehab Program	601	700	700	500	300	200	200	100	100	0	3,401
Total		**$2,774**	**$2,360**	**$1,875**	**$1,600**	**$1,200**	**$1,000**	**$800**	**$700**	**$700**	**$600**	**$13,609**
Total Capital Equipment		**$9,531**	**$14,880**	**$14,496**	**$8,430**	**$5,641**	**$7,677**	**$6,513**	**$5,025**	**$5,471**	**$4,875**	**$82,539**

Capital Equipment Program
Closed Activity Listing

Activity Group	Project Title	Department	Budget
Closed Projects:			
EX5	Fire Alarm/Sprinkler Systems	Facilities and Security	28,000
EC9	Help Desk System	Informaton Technology	26,000
EC6	Audio Video System	Information Technology	100,000
EX3	Turbine Aerators	Maintenance Services	892,000