T&E COMMITTEE #1
February 27, 2023

Worksession

M E M O R A N D U M

February 22, 2023

TO: Transportation and Environment Committee

FROM: Keith Levchenko, Senior Legislative Analyst

SUBJECT: **Worksession: FY24-29 Capital Improvements Program: Washington Suburban Sanitary Commission (WSSCWater)**[1]

PURPOSE: To review the WSSCWater FY24-29 CIP

Attachments to this memorandum include:

- County Executive's Recommendations: FY24-29 Capital Improvements Program (WSSCWater) (©1-3)
- WSSCWater's Spending Affordability Assumptions and Long-Range Financial Plan as presented in its Proposed FY23 Budget (©4-7)
- WSSCWater CIP Public Hearings 9/7 and 9/8/22 Presentation Slides (©8-26)
- Excerpts from WSSCWater's Proposed FY24-29 CIP[2] (©27-63)

The following officials and staff from WSSCWater and the Executive Branch are expected to attend this meeting:

WSSCWater

- Fausto Bayonet, Commission Chair
- Howie Denis, Commissioner
- Eloise Foster, Commissioner
- Kishia L. Powell, General Manager/CEO
- Cristi Bickham, Chief Administrative Officer
- Chrystal Knight-Lee, Chief of Staff
- Joe Beach, Deputy General Manager, Administration
- Jay Price, Deputy General Manager, Operations
- Mike Harmer, Chief Engineer
- Guy Andes, Acting Director, Intergovernmental Relations
- Letitia Carolina-Powell, Acting Chief Financial Officer
- Brian Halloran, Capital Budget Section Manager
- Guy Andes, Acting Director, Intergovernmental Relations

[1] Key words: #WSSCWATERCapitalBudget, Capital projects, Water and Sewer, WSSCWATER.
[2] Complete copies of WSSCWATER's FY24-29 Proposed CIP, Approved FY23-28 CIP, Approved FY23 Budget and Proposed FY24 Budget publications are available for download here.

Executive Branch

- Steve Shofar, Division Chief, Intergovernmental Affairs, Department of Environmental Protection
- Veronica Jaua, Fiscal & Policy Analyst, Office of Management and Budget

CIP Overview

- **Proposed Six-Year CIP Total plus "Information Only"[3] projects = $4.5 billion**
  - Increase of $334.2 million (+8.0 percent) from the Approved CIP+Information Only
  - Three new projects - Six-Year Total = $7.5 million
  - Inflation rate assumption = 6.0 percent (had previously been 4.0 percent)
  - Prior deferrals and reductions ($110.5 million) made in the Approved FY23-28 CIP (from WSSCWater's Proposed FY23-28 CIP) are restored in the Proposed FY24-29 CIP
  - Project costs updated based on actual construction bids and unit costs
  - Updated scopes of work in selected projects

- **Largest Six-Year Increases in Projects:**
  - Large Diameter Water Pipe Rehabilitation Program (+$213.1 million, +40.8 percent)
  - Sewer Reconstruction Program (+$72.9 million, +23.7 percent)
  - Water Reconstruction Program (+$65.2 million, +8.5 percent)
  - Trunk Sewer Reconstruction Program (+$32.8 million, +11.3 percent)

- **Council Staff Recommendation**:
  - **Supports WSSCWATER's Proposed FY24-29 CIP**

- **Topics for Future Discussion**
  - Affordability Issues/Cost of Service Study/Potential Changes to Fixed Fees
  - Bi-County Workgroup Report on Sewer Extension Needs for Unserved & Underserved Neighborhoods within the Planned Sewer Envelope
  - Advanced Metering Infrastructure/Meter Replacement Program
  - Update on Sanitary Sewer Overflows (SSO) Consent Decree Completion
  - Update on Potomac Solids Handling Consent Decree Status
  - System Development Charge (SDC) – No rate increase assumed in the FY24 Proposed Operating Budget
  - Regional Water Resiliency Next Steps
  - Per- and Polyfluoroalkyl Substances (PFAS) monitoring

BACKGROUND/TIMELINE

Under Md. Public Utilities Code Ann. §23-304, WSSCWater must prepare and submit a six-year CIP proposal to the County Executives and County Councils of Montgomery and Prince George's Counties by October 1 of each year.

Unlike other County agency CIP proposals that are reviewed biennially, Montgomery County reviews the WSSCWater CIP every year. Also, unlike other agencies, WSSCWater's CIP and Operating

[3] Section 23-301 of the Public Utilities Article of the Annotated Code of Maryland defines major projects for inclusion in the CIP as water mains at least 16 inches in diameter, sewer mains at least 15 inches in diameter, water or sewage pumping stations, force mains, storage facilities, and other major facilities. "Information Only" projects do not meet the State definition for capital projects. However, they are included with the CIP since the projects are debt-financed.

budgets are not included within the County's Spending Affordability processes. Instead, WSSCWater is subject to a separate affordability process, with both Montgomery and Prince George's County Council review approval of spending control limits each fall.

The FY24-29 WSSCWater CIP and Operating Budget Review Timeline

- September 29, 2022: WSSCWater transmitted its Proposed FY24-29 CIP
- November 1, 2022: Council approval of WSSCWater's FY24 Spending Control Limits
- January 17, 2022: County Executive's recommendations transmitted
- February 7 and 9, 2023: Council public hearings on the FY24 Capital Budget, and FY24-29 WSSCWater CIP
- **February 27, 2023: T&E Committee review of the WSSCWater CIP**
- March 1, 2023: Deadline for WSSCWater transmittal of its Proposed FY24 Budget
- Late March: Council review of the WSSCWater CIP
- April, 2023: T&E Committee review of the WSSCWater Proposed FY24 Budget
- Early May 2022: Council review of the WSSCWater Proposed FY24 Budget
- May 11, 2023: Bi-County meeting between Montgomery County and Prince George's County Councils on the WSSCWater CIP and Operating Budget, as well as the Washington Suburban Transit Commission and the Central Administrative Services (CAS) portion of the M-NCPPC budget.

COUNTY EXECUTIVE RECOMMENDATIONS

(See ©1-3)

The County Executive's recommendations for the FY24-29 WSSCWater CIP were transmitted on January 17. He does not recommend any changes to WSSCWater's Proposed CIP. The transmittal provides some discussion of priority areas for funding.

FISCAL OVERVIEW

Spending Control Limits/Affordability

As part of the fall Spending Control Limits process, both Councils supported a 7.0 percent rate increase for WSSCWater. WSSCWater's latest fiscal plan from its Preliminary Proposed FY24 Budget is attached on ©4-7. The Preliminary Proposed Budget and the fiscal plan continue to assume a 7.0 percent rate increase in FY24. However, WSSC continues to face fiscal pressures due to multiple factors including:

- high levels of debt service (approximately 38 percent of total expenses; the target level is <40 percent) primarily due to increased spending on infrastructure work over the past decade as well as environmental mandates. The Financial Plan assumes to ramp up annual PAYGO levels substantially during the CIP period to help moderate debt service increases and meet various financial metrics.
- continuing flat water consumption (rate revenue makes up about 85 percent of WSSCWater's revenues),
- Higher than typical inflationary cost increases for capital projects and operating programs.
- Meeting fiscal policy targets such as
    - building up "days of operating reserve on hand" (current target of 120 to 150 days is being changed to 250 days based on industry standards)

    - Improving debt service coverage over the six-year period up to 1.5 (current target is 1.10 to 1.25). *(Debt service coverage is Operating Revenues less Operating Expenses (excluding Debt Service and PAYGO) divided by the debt service on bonds and notes)*
    - Staying under 10 percent for the Fitch Leverage Ratio *(net adjusted debt divided by adjusted funds available for debt service)*
- Continued higher than typical delinquent accounts (both in number and total amounts owed) resulting from the impacts of the pandemic. The numbers have declined somewhat from their peak, but still remain well above pre-pandemic levels.

The above trends will continue to put pressure on WSSCWater rates going forward even as WSSCWater works to keep up with aging infrastructure.

In early February, WSSCWater received AAA bond ratings from all three rating agencies. However, Fitch retained a negative outlook based on leverage that may exceed or remain near 10.0x for the next couple of years.

Last fall, the two Councils approved identical FY24 spending control limits for WSSCWater. Both Councils supported a rate increase limit of 7.0 percent, along with agreed-upon ceilings for New Water and Sewer Debt, Total Water and Sewer Debt Service, and Total Water/Sewer Operating Expenses. For additional information, please see the Council Staff Report from the Council's worksession/action on FY24 Spending Control Limits.

Both the FY19-24 CIP and FY20-25 CIP's included bond-funded cuts totaling over $183 million. These cuts were made to reduce debt service impacts on the WSSCWater Operating Budget and keep debt service as a percentage of total expenditures under the 40 percent spending affordability target.

The FY21-26, FY22-27, and FY23-28 CIPs included small increases in bond funding (1.0 percent, 1.8 percent, and 0.7 percent increases respectively) with many projects experiencing cuts or delays to address debt service concerns and other affordability metrics.

The FY24-29 Proposed CIP includes a more substantial increase in bond funding (6.7 percent) along with increases in PAYGO (19.7 percent).

The following chart presents WSSCWater's original proposed versus approved expenditures for its CIP, as well as for its "Information Only" projects.

Table 1:
Total WSSC Capital Expenditures (CIP+Information Only)
Proposed FY23-28 CIP versus Approved FY22-27 CIP
($s in 000s)

	Approved FY23	Six-Year Total	FY24	FY25	FY26	FY27	FY28	FY29
CIP Total								
Approved FY23-28	413,452	**2,436,538**	465,769	447,661	448,446	367,301	293,909	
Proposed FY24-29		**2,629,268**	441,682	494,845	461,226	482,074	401,365	348,076
Difference		**192,730**	**(24,087)**	**47,184**	**12,780**	**114,773**	**107,456**	
% Change		**7.9%**	**-5.2%**	**10.5%**	**2.8%**	**31.2%**	**36.6%**	
Information Only*								
Approved FY23-28	212,043	**1,735,067**	269,809	294,249	309,759	322,818	326,389	
Proposed FY24-29		**1,876,515**	262,973	296,175	311,547	308,138	335,711	361,971
Difference		**141,448**	(6,836)	1,926	1,788	(14,680)	9,322	
% Change		**8.2%**	**-2.5%**	**0.7%**	**0.6%**	**-4.5%**	**2.9%**	
CIP + Information Only*								
Approved FY23-28	625,495	**4,171,605**	735,578	741,910	758,205	690,119	620,298	
Proposed FY24-29		**4,505,783**	704,655	791,020	772,773	790,212	737,076	710,047
Difference		**334,178**	(30,923)	49,110	14,568	100,093	116,778	
% Change		**8.0%**	**-4.2%**	**6.6%**	**1.9%**	**14.5%**	**18.8%**	

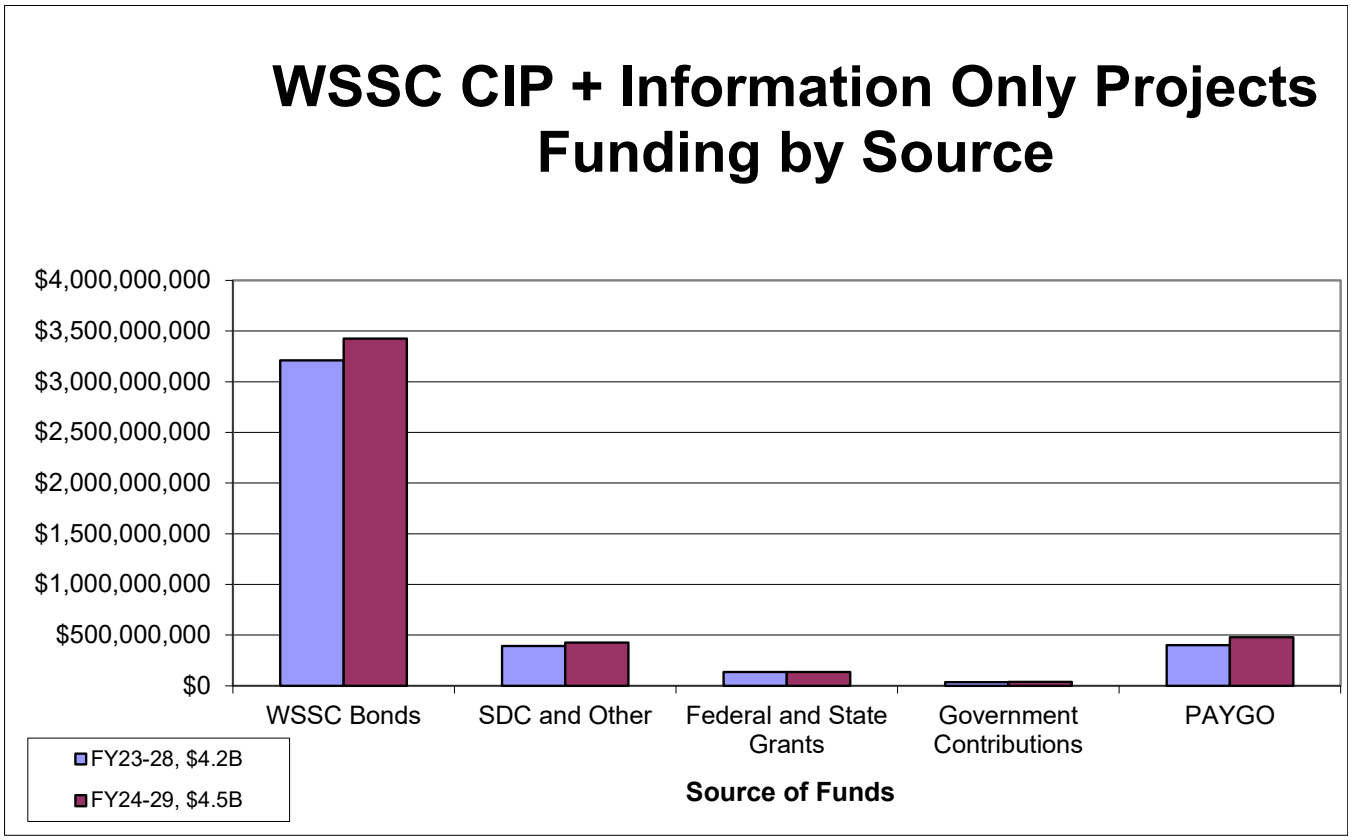
*Information Only projects are multi-year projects which do not meet the State definition for inclusion in the CIP.

- Counting both WSSCWater's Proposed CIP and "Information Only" projects,[6] results in overall capital expenditures of $4.5 billion (up $334.2 million or 8.0 percent).

Funding Sources

The following chart compares funding sources for the Approved FY23-28 CIP and the Proposed FY24-29 CIP (including "Information Only" projects).

[6] "Information Only" projects (which are presented in the CIP but are not formally part of the CIP) continue to represent a large portion of WSSCWATER's infrastructure-related work. FY23-28 expenditures for these projects are proposed to be $1.78 billion.



Each of these funding sources, and how they relate to WSSCWater projects, is described on ©45. Bond funding has long been the dominant funding source (76 percent of funding in the Proposed CIP).[10] The FY24-29 Proposed CIP + Information Only projects assumes bond funding would increase by $216.1 million. PAYGO is also assumed to increase in the six-year period. Federal and State Grants funding are about the same and related mostly to the I-495/I-270 Traffic Relief Plan Pipeline Relocations project which is assumed to be fully funded ($193.1 million) by the State. The System Development Charge (SDC), and federal/state grants make up the other major sources of funding.

GROWTH FUNDING (see ©31-33)

WSSCWater's capital expenditures can be divided into three categories: growth, environmental regulations, and system improvements. While most of the six-year capital expenditures are for system improvement (90 percent), about $233 million (or 5.0 percent) of proposed six-year expenditures is needed to accommodate growth, and $238 million (or 5.0 percent) is needed for environmental regulations.

The major sources used to fund growth are:

- System Development Charge (SDC)
- Direct Developer Contributions; and
- Payments by Applicants.

[10] The resulting debt service from WSSCWATER's bond funding in the CIP makes up more than one-third of WSSCWATER's annual Water and Sewer Operating Expenses.

Many of the Montgomery County Water and Sewer projects in the WSSCWater CIP are funded with the above-mentioned sources. For instance, Water and sewer projects needed to accommodate growth in Clarksburg are funded with these sources.

The SDC is a major source of funding for much of the new Water/sewer infrastructure built in the County. WSSCWater estimates approximately $177.7 million in revenue over the six-year period. Developer credits and SDC exemptions[12] reduce the net revenue to about $150.7 million. For more background on the SDC, please see ©31-32.

Overall, WSSCWater estimates a $75 million gap in growth funding versus expenditures over the six-year period (with a $6.4 million gap in FY24 and a $22.3 million gap in FY25), as shown on ©33. This gap is caused by ongoing CIP Growth expenditures ($233 million over six-years, compared to $214.4 million projected at this time last year) that exceed the projected revenues noted earlier.

The SDC Fund balance was approximately $38 million at the end of FY22, so WSSCWater has sufficient funds to cover the estimated shortfall in FY24 and probably FY25 as well. WSSCWater can also issue debt paid for with SDC revenue if necessary to cover shortfalls.

WSSCWater's Preliminary Proposed Operating Budget for FY23 assumes no change in SDC rates.[13] However, given the projected gaps in each of the next six years, this issue should be reviewed by both Councils this spring during its Operating Budget reviews.

WSSCWater staff led an SDC Bi-County workgroup consisting of staff from the County Council and Executive Branches of both Montgomery and Prince George's Counties. The group looked at potential changes to how developers are reimbursed for capital-sized improvements made to WSSC's infrastructure. Currently, developers are eligible to be paid back for these improvements over 20 years. However, the payback is not guaranteed.[14] It is contingent upon sufficient SDC revenues being collected by WSSC from properties within the same sewer basin being received during that time. The workgroup looked at eliminating the geographic requirement for the revenue reimbursement and guaranteeing the payback over a set period. However, these changes would require substantial increases in the SDC rates to cover this increased liability to WSSCWater. Based on discussions with business groups, while there was interest in providing a guaranteed payback, the group was concerned about the increases in rates required.

[12] For purposes of projecting future SDC balances, WSSCWATER assumes Montgomery and Prince George's counties utilize the full $1.0 million in exemptions each fiscal year. Any amounts within each county's $500,000 share not used in each year carry over to the next fiscal year.

[13] NOTE: For many years (and as proposed for FY22), WSSCWATER has increased the maximum allowable charge (as permitted under State law) but has left the actual rate charged unchanged.

[14] WSSCWater has noted that to date no developers have failed to be paid back for eligible water and sewer improvement costs paid for by the developer.

WSSCWater FY24-29 PROJECT HIGHLIGHTS

For a full list of WSSCWater's projects included in the FY24-29 Proposed CIP, please see:

- Montgomery County Water Projects (©38)
- Montgomery County Sewer Projects (©39)
- Bi-County Water Projects (©42)
- Bi-County Sewer Projects (©47)
- Information Only Projects (©58)
- Prince George's County Water and Sewer Projects (©64-65)

New Projects

There are 3 new projects proposed (see ©36), including two new sewer projects in Montgomery County and one new sewer project in Prince George's County. All of these projects are 100 percent developer-funded, and the schedules are developer dependent. These projects are summarized below. WSSCWater Staff will be available at the T&E worksession to discuss these projects in more detail.

- Johns Hopkins Medical Research Park Sewer Main (PDF on ©40) Six-year total = $6.5 million (100% developer contributions) This project provides for the planning, design, and construction of 12,390 feet of 15-nch diameter sewer main to serve the Johns Hopkins Medical Research Park and vicinity. Completion is assumed in FY26 but is developer dependent.

- Rose Village Sewer Main (PDF on ©41) Six-year total = $1.9 million (100% developer contributions) This project provides for the planning, design, and construction of 1,728 feet of 30-inch to 33-inch diameter sewer main to serve the Rose Village development. Completion is assumed in FY27 but is developer dependent.

- National Capital Business Park Sewer (PDF on ©57) Six-year total = $1.8 million (100% developer contributions) This project provides for the planning, design, and construction of 2,200 feet of 15-inch diameter sewer main to serve the National Capital Business Park. Completion is assumed in FY27 but is developer dependent.

Council Staff does not have any issues with these new projects. WSSCWater staff will be available to discuss these projects with the Committee.

Montgomery County and Bi-County Projects

Each Council generally focuses on the projects within its county and the Bi-County projects. The following table presents the major six-year cost changes (both increases and decreases) for the Montgomery County and Bi-County projects.

FY24-29 Major Changes in 6 Year Costs (MC and Bi-County Only + Information Only)

Six-Year Cost Change (in 000s)	Project	Comment
213,056	Large Diameter Water Pipe Rehabilitation Program	Six-year cost increase reflects latest expenditure and schedule estimates based on WSSC's Buried Water Asset Systems Asset Management Plan
72,896	Sewer Reconstruction Program	Assumes 25 miles of sewer mains and lateral lines plus SSO Consent Decree Phase 2 work continues.
65,216	Water Reconstruction Program	Increase in mileage (from 25 to 27 miles) plus inflationary increases and doubling of and increases in cost for house connection renewals
32,767	Trunk Sewer Reconstruction Program	Based on recommendations from the Buried Wastewater Assets System Asset Management Plan. SSO Consent Decree Phase 2 work is ongoing
14,545	Specialty Valve Vault Rehabilitation Program	Large cost increase to address additional valves and piping
12,695	Anacostia #2 WWPS Upgrades	Large cost increase
11,936	Blue Plains Projects	Based on DCWater's latest budget assumptions
10,892	Water Storage Facility Rehabilitation Program	Consistent accelerated schedule from two years ago.
10,697	I-270/I-495 Traffic Relief Plan Pipeline Relocations	New project last year, 100% State funding assumed. Total cost increase of 6.0 percent
7,699	Engineering Support Program	Continuing the level of effort increase into FY29
5,810	Anacostia Depot Reconfiguration	New project last year
5,355	Potomac WFP Main Zone Pipeline	Inflationary Increase
3,987	Johns Hopkins Medical Research Park Sewer Main	New Project
3,714	Sam Rice Manor WWPF & FM	Project added last year to replace the existing pumping station and force main. Revised cost estimate
1,731	Rose Village Sewer Main	New Project
1,076	Reddy Branch WWPS & FM	Project added last year to replace the existing pumping station and force main. Total project cost increase = 6.4%
1,001	RGH Building Upgrades	New project last year
706	Regional Water Supply Resiliency	Federal Funds assumed. Inflationary increase in total project cost.
(2,675)	Energy Performance Program	Based on current project schedule
(4,173)	Laboratory Division Building Expansion	Six-year cost down as project progresses through the CIP. Total project cost is up by 34.7 percent based on actual bids
(6,300)	Septage Discharge Facility Planning & Implementation	Project removed from the CIP
(8,360)	Patuxent Raw Water Pipeline	Six-year cost down as project progresses through the CIP. Total project cost is up by 8.5 percent
(10,500)	Potomac WFP Consent Decree Program	Six-year cost down as project progresses through the CIP. Total project cost is up by 6.8 percent reflecting actual bids
(29,763)	Other Capital Programs	Includes costs not already allocated elsewhere in the CIP
(76,353)	Piscataway Bioenergy	Based on project progressing through CIP

WSSCWater Staff will be available at the T&E worksession to discuss these and any other projects of interest to the Committee.

Several projects are seeing cost drops as they move through construction, while many are experiencing significant inflationary increases, increases in unit costs, and or catch-up in work from prior year delays. The largest increase by far is in the Large Diameter Water Pipe Rehabilitation Program

(+$2313.1 million. The sewer and water reconstruction projects and the Trunk Sewer Reconstruction Program have the next largest increases.

REVIEW OF SELECTED PROJECTS

Blue Plains Project Costs (See ©48-52)

Table 4: Blue Plains Projects: Expenditures (in $000s)

	Approved FY23	Six-Year Total	FY24	FY25	FY26	FY27	FY28	FY29
Total Blue Plains Project Costs								
Approved FY23-28	68,606	**545,630**	68,807	102,878	120,050	93,140	92,149	
Proposed FY24-29		**557,566**	70,987	73,421	100,122	130,337	102,772	79,927
Difference		**11,936**	2,180	(29,457)	(19,928)	37,197	10,623	
% Change		**2.2%**	**3.2%**	**-28.6%**	**-16.6%**	**39.9%**	**11.5%**	

The Blue Plains projects make up a sizable portion (over 40 percent) of WSSCWater's Sewer CIP (over 20 percent of WSSCWater's Proposed CIP and about 12.4 percent of the Proposed CIP when including WSSCWater's Information Only projects). WSSCWater's Proposed CIP assumes $557.6 million in spending on Blue Plains projects over the FY24-29 period. This is an increase of $11.9 million (or 2.2 percent) from the FY23-28 CIP.

These projects reflect WSSCWater's capital cost share[15] for DCWater's Blue Plains Wastewater Treatment Plant capital program as well as for capital work on sewer lines conveying WSSCWater sewage to Blue Plains.

The Blue Plains Plant began to undergo substantial upgrades 20 to 30 years ago. More recently, DCWater constructed a new biosolids management system (similar to what WSSCWater is building at its Piscataway plant) and also implemented enhanced nutrient removal (ENR) technologies (as has WSSCWater at its wastewater treatment plants). Those costs have worked their way through the Blue Plains CIP. Now, the Blue Plains CIP reflects cost increases to address lifecycle replacement work. There are also costs associated with the rehabilitation of major sewer pipelines serving the Blue Plains plant.

Potomac WFP Consent Decree Program (PDF on ©43)

This project was created seven years ago to provide for the short- and long-term work required as a result of the Potomac Water Filtration Plant Consent Decree entered by the U.S. District Court on April 15, 2016. The Consent Decree requires WSSCWater to pursue both short-term operational and capital improvements to significantly reduce the pounds per day of solids discharged to the Potomac River and long-term improvements to meet future MDE permit requirements.

The required short-term upgrades were completed prior to the April 2020 deadline. The deadline for completion of the long-term improvements is January 2026. The design of the long-term plan improvements is complete.

Regarding, the completion of the long-term improvements, WSSCWater has noted:

> *The current project schedule shows substantial completion by January 2026. The project did experience a delay related to receipt of the Maryland Department of the Environment*

[15] WSSCWater's capital cost share, per the 2012 Intermunicipal Agreement, is based on its capacity allocation of 169.6mgd (45.8 percent) out of the total Blue Plains Plant capacity of 370mgd.

(MDE) approval of the long-term upgrade plan. WSSCWater believes it is entitled to a significant time extension under the terms of the Consent Decree. If it is determined that an extension is needed, our General Counsel's Office would negotiate the terms of any agreement.

The six-year cost is down (-$10.5 million) as the project progresses through the CIP. However, the total project cost has increased by $7.6 million (+6.8 percent) based on actual bids received for the sedimentation basin upgrades.

Large Diameter Water Pipe & Large Valve Rehabilitation Program ($734.9 million over six years, PDF on ©44-45)

This project funds the rehabilitation of transmission mains (pipes greater than 16 inches in diameter) in lengths of 100 feet or greater. WSSCWater's transmission system (like the smaller Water distribution lines) is aging, and WSSCWater moved to a more systematic inspection, repair, and replacement approach as a result. The inspections, fiber optic monitoring, and repairs on shorter sections of pipe remain in the Operating Budget.

WSSCWater has over 1,000 miles of large diameter Water main (mains ranging in size from 16 inches to 96 inches in diameter), of which 335 miles are pre-cast concrete cylinder pipe (PCCP), 335 miles are cast iron, 326 miles are ductile iron, and 35 miles are steel. PCCP pipe is the highest priority for inspection, monitoring, repair, and replacement because PCCP pipe can fail in a more catastrophic manner than pipes made out of other materials, such as iron or steel. Both counties have experienced large PCCP pipe failures. Montgomery County experienced large pipe failures in June 2008 (Derwood), December 2008 (River Road), and March 2013 (Chevy Chase Lake). Dozens of other failures were avoided in recent years because of ramped up inspections and acoustic fiber optic monitoring.

This project also includes WSSCWater's large valve inspection and repair program.. WSSCWater estimates that it has nearly 1,500 large diameter (greater than 16-inch diameter) valves.

The proposed six-year cost for this project is $734.9 million (an increase of $213.1 million or **36.5 percent). WSSCWater Staff provided the following information regarding the cost increase:**

About 5% of the $213.1 million increase is attributable to restoration of cuts made as part of the CIP reductions last year. Of the remainder, approximately one-third is related to changes in the number of units planned and about two-thirds is related to inflation assumption and unit cost assumption changes.

Outside of inflationary changes, the two biggest changes were to targets for the number of miles of PCCP replacement and cost estimates for ferrous pipe replacements. In the Adopted FY 2023 CIP, PCCP replacement was 4.5 miles over the 6-year period. Based on the latest schedules, that increased to 10.9 miles in the FY 2024 CIP, an increase of about $90 million (including +/- $10 million that could be attributed to inflation). For ferrous pipes, we segmented the cost estimates in the FY 2024 CIP by pipe size to better capture unit costs based on our recent experience on actual projects. This resulted in an increase of about $75 million (including +/- $20 million that could be attributed to inflation).

WSSCWater's Large Diameter Water Pipe Rehabilitation Program continues to be a high priority for Montgomery County (and for Prince George's County), given the potential catastrophic impacts if and when these large pipes fail (especially PCCP).

Trunk Sewer Reconstruction Program (PDF on ©55-56)

This project was added over a decade ago to address Consent Decree requirements to eliminate sanitary sewer overflows (SSOs). Under the terms of the Consent Decree (signed in December 2005 with the United States Environmental Protection Agency (EPA), the State of Maryland, and four conservation groups), WSSCWater has spent about $1.5 billion to date across 24 sewer-shed basins with over 7,000 assets over a 1,000 square mile area. Rehabilitation work was supposed to be completed within 10 years (2015). Because of delays in acquiring environmental permits, WSSCWater received a deadline extension to February 2022 for program completion. All basins had work either completed or underway by the 2015 deadline. For more information on this project please see WSSCWater Staff's December 2021 SSO Consent Decree Briefing to the Commissioners.

Proposed FY24-29 expenditures for this project are $322 million (an increase of $32.8 million or 11.3 percent) from the Approved total of $289.2 million). The increase is mostly due to inflationary increases and updates to unit costs.

Piscataway WRRF Bio-Energy Project (PDF on ©53-54)

This project represents WSSCWater's long-term solution to address its biosolids disposal. At a total estimated cost of $334.8 million, it is the largest single project[18] in the WSSCWater CIP. This project provides for a comprehensive design, construction, maintenance, monitoring, and verification effort to generate approximately 2.0 MW of electricity and reduce biosolids by 50 to 55 percent of current output through an anaerobic digestion/Combined Heat & Power process. This project is expected to provide energy savings, reduced biosolids disposal costs, and reduced chemical costs totaling about $3.7 million in savings per year. The project will also avoid the need for capital work at other facilities estimated at $67.4 million. The project is sized for WSSCWater biosolids with future accommodation of fats, oils, and grease (FOG). The project is scheduled for completion in December 2024.

Proposed FY23-28 expenditures for this project are $113 million, a decrease of $76.4 million as the project is under construction and expenditures cycle through the CIP. The overall cost of the project is up slightly ($1.6 million or 0.5 percent)

I-495/I-270 Traffic Relief Plan Pipeline Relocations (PDF on ©46)

This project, new to the CIP last year, provides for the planning, design, and construction of water and sewer pipe relocations necessitated by the State of Maryland's plans to expand I-495 and I-270. The completion dates of the pipeline relocations will be dependent on the developer schedules for the I-495 and I -270 work. The project assumes outside contributions (i.e., no funding from WSSCWater ratepayers). The total project cost has been increased by 6.0 percent (consistent with WSSCWater's CIP inflation assumptions) with a six-year cost of $193.1 million (10.7 million increase from the Approved CIP).

[18] Not including WSSCWater's level of effort projects such as its Water and Sewer reconstruction projects.

"Information Only" Projects (see ©58-63)

Table 5: Information-Only Projects

Project	Six-Year Total	FY24	FY25	FY26	FY27	FY28	FY29
Information Only Projects							
Water Reconstruction	**836,407**	87,182	103,946	124,506	148,982	173,369	198,422
Sewer Reconstruction	**380,027**	65,439	58,959	60,345	63,233	64,059	67,992
Anacostia Depot Reconfiguration	**46,090**	1,870	29,260	14,960			
Laboratory Division Building Expansion	**15,457**	10,726	2,011	2,720			
RGH Building Upgrades		5,038	8,327	836			
Engineering Support Program	**120,000**	20,000	20,000	20,000	20,000	20,000	20,000
Energy Performance	**12,942**	4,079	1,243	3,048	3,048	1,524	
Water Storage Facility Rehab Program	**46,892**	6,692	12,225	12,425	4,850	7,950	2,750
Speciality Valve Vault Rehab Program	**19,261**	3,072	5,650	9,673	360	429	77
Other Capital Programs	**384,663**	58,585	54,269	63,034	67,665	68,380	72,730
D'Arcy Park North Relief Sewer	**575**	290	285				
Information Only Projects Total	**1,876,515**	**262,973**	**296,175**	**311,547**	**308,138**	**335,711**	**361,971**

Water Reconstruction Program (PDF on ©59-60)

This "Information Only" project funds small Water main replacement throughout the WSSCWater service area. The project does not include any funding for "major capital projects" as defined in state law. The estimated six-year cost is $836.4 million, which reflects an increase of $65.2 million or 6.8 percent from the FY23-28 six-year total of $771.2 million. $87.2 million is included in FY24.

Over the past decade, WSSCWater had ramped up the annual number of miles of pipe to be replaced. Beginning with the Approved FY10-15 CIP, budgeted and actual replacement miles began to increase steadily. The budget level for FY10 was 27 miles per year. The following years saw increases, with 55 miles of replacement budgeted in FY18 (although 48 miles were completed). For FY19, WSSCWater had 45 miles budgeted. Cuts in this program were approved for FY19 (and projected in FY20 through FY24) to help reduce debt service impacts on the WSSCWater Operating Budget.

After two straight years of budgeting for 25 miles to be replaced. WSSCWater increased work up to 31 miles per year in FY22 and 37 miles in FY23. However, for fiscal reasons, WSSCWater is assuming to drop the miles back down to 27 miles in FY24. This is far below WSSC's previous goal of a 100-year replacement cycle (or about 50 miles of replacement per year).

WSSCWater also continues to make investments in new technologies (such as pressure monitoring systems, and satellite and other leak detection tools). WSSCWater had also done a substantial amount of catch-up in this project over the past decade. Combined with these new technologies, a longer replacement cycle (at least in the short-term) appears reasonable. However, the miles to be replaced per year will need to go up in future years.

Sewer Reconstruction Program (PDF on ©61-62)

This "Information Only" project funds comprehensive sewer system evaluations and rehabilitation programs. WSSCWater has approximately 5,500 miles of sewer pipe. The project continues to assume the rehabilitation of about 20 miles of sewer main per year.

The six-year cost is $380 million, which is up $72.9 million (+23.7 percent) after a decrease in FY23 of $98.3 million (-24.2 percent) from the FY22-27 level of $405.4 million. The proposed costs

reflect the current plan for the completion of Phase 2 Consent Decree work and holistic rehabilitation work in the Piscataway Basin (initiated a few years ago) progressing through the CIP. As with the Water Reconstruction Program above, the sewer reconstruction project does not include funding for "major capital projects" as defined in state law. Capital-size projects that are identified in this project become stand-alone projects or are dealt with in the Trunk Sewer Rehabilitation project.

Council Staff recommends preliminary approval of WSSCWater's Proposed FY24-29 Capital Improvements Program (CIP). Further discussion of the CIP may occur during the Committee's WSSCWater Operating Budget review in April. Final action on the WSSCWater CIP and Operating Budget will occur at the Bi-County meeting on May 11, 2023.

Attachments

MEMORANDUM

January 17, 2023

TO: Evan Glass, President
Montgomery County Council

FROM: Marc Elrich, County Executive

SUBJECT: Washington Suburban Sanitary Commission
FY24-29 Capital Improvements Program (CIP) and FY24 CIP Expenditures

I am pleased to transmit to you, in accordance with State law, my recommended FY24-29 CIP and FY24 CIP expenditures for the Washington Suburban Sanitary Commission (WSSC Water).

WSSC Water's Proposed FY24-29 CIP totals $2,629,268,000 of which $2,230,365,000 is for Montgomery County and Bi-county projects. The latter is an increase of $170,280,000, or 8.3 percent, above the FY23-28 Adopted Six-Year Program of $2,060,085,000. The impact of significant cost increases observed in recent project bids has been offset, in part, by implementation delays resulting from supply chain challenges.

Spending Control Limits

I concur with the recommendation of the Montgomery County Council Transportation & Environment Committee, which the Council adopted, on FY24 Spending Control Limits that included a Maximum Average Rate increase of 7.0 percent for the FY24 Operating and Capital Budgets. This rate increase would represent a 5.6 percent increase in operating expenses from the FY23 approved budget.

Under the 7.0 percent rate increase allowed by the Council adopted Spending Control Limits, WSSC Water will have $8.1 million less in revenue compared to the Base Case rate limit of 8.0 percent. According to WSSC Water staff, this adjustment is unlikely to impact capital spending.

New Projects

I support the two new Montgomery County sewer projects entering the CIP program this year totaling $8.4 million. These projects are John's Hopkins Medical Research Park Sewer Main ($6.5 million) and Rose Village Sewer Main ($1.9 million). These projects will be funded by developer contributions and provide improved sewer access to serve these communities.

I fully support WSSC Water's Montgomery County and Bi-County Sewer projects and Montgomery County and Bi-County Water projects as requested. I understand WSSC Water may continue to examine adjustments to the CIP program. I encourage the Commission to continue to prioritize critical infrastructure projects and to strike a balance between making the investments to ensure the long-term stability of our utility infrastructure and the impact on ratepayers.

As always, Executive Branch staff are available to assist you in your deliberations. I look forward to collaborating with you on any policy matters or major resource allocation issues that arise this spring.

ME:sw

Enclosure: Agency Request Compared to Executive Recommended

cc: Marlene Michaelson, Executive Director, Montgomery County Council
Richard S. Madaleno, Chief Administrative Officer, Office of the County Executive
Jennifer Bryant, Director, Office of Management and Budget
Adriana Hochberg, Director, Department of Environmental Protection
Mary Beck, Capital Projects Manager, Office of Management and Budget
Stan Edwards, Division Chief, Department of Environmental Protection
Kishia L. Powell, General Manager/CEO, Washington Suburban Sanitary Commission
Letitia Carolina-Powell, Chief Financial Officer, Washington Suburban Sanitary Commission

FY 24-29 EXECUTIVE RECOMMENDED CIP
Agency Request Compared to Executive Recommended
WSSC

Project Name (Project Number)	Agency Request	Executive Recommended
Sewerage Bi-County		
Anacostia #2 WWPS Upgrades (P382204)	24,555	24,555
Blue Plains WWTP: Biosolids Mgmt PT2 (P954812)	15,521	15,521
Blue Plains WWTP: Liquid Train PT 2 (P954811)	23,800	23,800
Blue Plains WWTP:Plant Wide Projects (P023805)	15,214	15,214
Blue Plains: Pipelines and Appurtenances (P113804)	16,452	16,452
Land & Rights-of-Way Acquisition - Bi-County (S) (P163800)	195	195
Piscataway WRRF Bio-Energy Project (P063808)	29,253	29,253
Trunk Sewer Reconstruction Program (P113805)	55,176	55,176
Sewerage Montgomery County		
Arcola WWPS & FM (P382301)	806	806
Ashford Woods WWPS & FM (P382304)	1,287	1,287
Damascus Town Center WWPS Replacement (P382002)	3,002	3,002
Erickson Bethesda Sewer Main (P382305)	945	945
Johns Hopkins Medical Research Park Sewer Main (P382401)	828	828
Reddy Branch WWPS & FM (P382302)	292	292
Rose Village Sewer Main (P382402)	897	897
Sam Rice Manor WWPS & FM (P382303)	305	305
Shady Grove Neighborhood Center (P382102)	698	698
Spring Gardens WWPS Replacement (P382003)	385	385
Viva White Oak Sewer Main (P382203)	661	661
Water Bi-County		
I-495/I-270 Traffic Relief Plan Pipeline Relocations (P382306)	-	-
Land & Rights-of-Way Acquisition - Bi-County (P983857)	1,095	1,095
Large Diameter Water Pipe Rehabilitation Program (P113803)	79,326	79,326
Patuxent Raw Water Pipeline (P063804)	561	561
Potomac WFP Consent Decree Program (P173801)	32,550	32,550
Potomac WFP Main Zone Pipeline (P133800)	4,725	4,725
Potomac WFP Submerged Channel Intake (P033812)	-	-
Regional Water Supply Resiliency (P382101)	4,542	4,542
Water Montgomery County		
Pleasant's Property Water Main Extension (P382201)	1,949	1,949
Viva White Oak Water Main (P382202)	784	784
White Oak Water Mains Augmentation (P382001)	400	400

SPENDING AFFORDABILITY AND LONG-RANGE FINANCIAL PLAN

In May 1993, the Montgomery and Prince George's County Councils created the Bi-County Working Group on WSSC Spending Controls (Working Group) to review WSSC Water's finances and recommend spending control limits. The Working Group's January 1994 report recommended "the creation of a spending affordability process that requires the Counties to set annual ceilings on the WSSC's rates and debt (debt in this context means both bonded indebtedness and debt service), and then place corresponding limits on the size of the capital and operating budgets of the Commission."

Each year, the spending affordability process focuses debate, analysis and evaluation on balancing affordability considerations against the provision of resources necessary to serve existing customers (including infrastructure replacement/rehabilitation), meet environmental mandates and maintain operating and capital budgets and debt service at prudent and sustainable levels.

The FY 2024 Spending Affordability Guidelines (SAG) rate increase recommended by the two County Councils is 7.0% for both water and sewer volumetric and ready-to-serve charges. The agency prepared the proposed budget based on the 7.0% water and sewer rate increase meets the recommended limits established by both the Counties.

A long-range financial plan (the Plan) complements the spending affordability process by utilizing approved SAG limits to forecast outer year implications and strategize potential problems and opportunities which may impact WSSC Water's work program. The Plan is the agency's roadmap and reflects financial strategic intent, as well as imposing discipline by highlighting the cumulative effects of decisions. Addressing issues earlier not only protects WSSC Water's long-term financial condition, but also ensures that necessary actions and/or changes are properly communicated to our customers, County Councils and other stakeholders.

MAJOR ASSUMPTIONS, WORKLOAD INDICES AND DEMAND PROJECTIONS

Below is a summary of the budget outcomes from the FY 2024 SAG process.

- Fund Balance – It was assumed for the purpose of preparing the FY 2024 Proposed Budget that, at the end of FY 2023, accumulated net revenues for the water and sewer operating funds would total $266.6 million. For FY 2024, the total water and sewer operating revenues are $923.6 million; therefore, at least $138.5 million will be held in accumulated net revenues in adherence to WSSC Water's 15% reserve policy (see Fiscal Guidelines page 6-1). The budgeted accumulated net revenue of $274.8 million exceeds the reserve target and is 30.0% of the total operating revenues.

- Revenues – The estimated FY 2024 revenues from water consumption and sewer use charges are $355.1 million and $435.0 million, respectively. Water production is assumed to be 162.0 million gallons per day (MGD) in FY 2024 and water consumption is projected to slightly increase from 124.5 MGD in FY 2023 to 124.7 MGD in FY 2024.

- Capital Budget – The capital budget includes expenditure estimates for all projects for which work is reasonably expected to be accomplished. This provides management with maximum flexibility to proceed on the many and diverse projects approved each year in the budget. The FY 2024 Capital Budget is $671.3 million.

- Debt Service – The debt service estimates for FY 2024 assume that $191.4 million in Water Supply bonds and $188.6 million in Sewage Disposal bonds will be issued in FY 2024, in addition to repayment of existing debt. The water and sewer issues will be 30-year bonds with an estimated 4.5% average interest rate.

- Reconstruction Debt Service Offset (REDO) – There will be no transfer in FY 2024 as the fund balance has been spent down as planned.

- Workforce and Compensation – Forty additional authorized workyears are included. A marker is included for salary enhancements in the FY 2024 budget.

MAJOR ASSUMPTIONS, WORKLOAD INDICES AND DEMAND PROJECTIONS (Continued)

The following table presents data used during the SAG process to develop the FY 2024 Proposed Budget.

Workload Data	Actual					Projected	
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Water and Sewer Combined Rate Increase (%)	3.5	4.5	5.0	6.0	5.9	6.5	7.0
Population to be Served (000s)*	1,777	1,801	1,910	1,915	1,939	1,945	1,952
Customer Accounts (000s): **	460	461	464	467	469	475	477
Residential (%)	95.7	95.5	95.4	95.4	94.4	94.4	94.4
Commercial and Industrial (%)	3.7	3.7	3.8	3.7	4.7	4.7	4.7
Government and Other (%)	0.6	0.8	0.8	0.9	0.9	0.9	0.9
Water Program:							
Water Production (Average MGD)	163.9	161.7	162.6	162.8	161.2	163.0	162.0
Water Consumption (Average MGD)	126.6	123.2	128.6	126.4	127.2	124.5	124.7
Water Mains Maintained (Miles)	5,768	5,816	5,844	5,869	5,884	6,000	6,000
Water House Connections Maintained (000s)	465	469	471	473	476	479	482
Sewer Program:							
Sewage Treated (Average MGD)	172.8	218.7	188.3	204.1	184.3	196.9	194.4
Sewer Use (Average MGD)	116.3	113.3	116.0	114.6	114.6	112.7	112.3
Sewer Mains Maintained (Miles)	5,578	5,604	5,624	5,615	5,624	5,700	5,700
Sewer House Connections Maintained (000s)	438	441	443	445	446	449	451
House Connections added:							
Water	2,931	3,480	2,410	2,553	2,622	2,700	2,800
Sewer	2,500	3,152	1,868	1,869	1,869	2,100	2,100
New Water & Sewer Bond & Notes Debt Issues ($ in millions)	459	390	234	350	327	359	380
Average Annual Interest Rate for New Bond Issuance (%)	3.3	3.6	2.6	2.0	2.3	4.0	4.5

* FY 2020 population served is based on the decennial census which is conducted by the U.S. Census Bureau every 10-years.

** Beginning FY 2020, the data source for the customer accounts is based on the Customer-to-Meter (C2M) billing system

PENSION OBLIGATIONS AND OTHER UNFUNDED LIABILITY

WSSC Water makes continued funding contributions as part of its operating budget planning to remedy unfunded liabilities. While these liabilities will continue to persist over the long-term, WSSC Water's management is committed to making substantial forward progress in addressing these liabilities as part of our long-term financial plan, while balancing such need within the context of actuarial review, reasonableness, and affordability. If market and/or actuarial changes reflect a need for more strict and rapid progress in addressing these liabilities, WSSC Water management will consider appropriate action and make course changes as necessary.

Pension

Benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Pension costs are impacted by fluctuations in the market affecting actual and projected investment income and related deferred outflows or inflows. Investment activities are reported as non-operating revenues, therefore pension costs are allocated amongst operating and non-operating costs and/or revenues.

WSSC Water's net pension liability as of December 2021 is $24,681,000 and the net pension liability is 2.4% of the total pension liability. The actuarial assumptions for pension are: 2.5% inflation factor, 2.75%-7.5% salary increase, and 7.0% investment rate of return.

Other Post-Employment Benefits (OPEB)

WSSC Water employees are eligible to continue group insurance coverage after retirement provided that retiring employees have had coverage in effect for two years prior to retirement.

WSSC Water's net OPEB liability as of December 2021 is $37,223,000 and net OPEB liability is 15.0% of the total OPEB liability. The actuarial assumptions for OPEB are: 2.5% inflation factor, a salary increase, and 7.0% investment rate of return.

More information can be found within WSSC Water's Annual Financial Report or on our website at the following https://wsscwater.com/financereports.

LONG-RANGE FINANCIAL PLAN FOR WATER AND SEWER OPERATING FUNDS

($ in thousands)	FY 2023 Approved	FY 2024 Proposed	FY 2025 Projected	FY 2026 Projected	FY 2027 Projected	FY 2028 Projected	FY 2029 Projected
New Water and Sewer Debt Issues	$ 358,840	$ 379,960	$ 388,352	$ 393,030	$ 426,305	$ 374,416	$ 354,053
Water and Sewer Combined Rate Increase (Average)	6.5 %	7.0 %	7.0 %	6.5 %	6.5 %	6.5 %	6.5 %
Operating Revenues							
Consumption Charges	$ 746,450	$ 790,142	$ 845,452	$ 900,406	$ 958,933	$ 1,021,263	$ 1,087,645
Account Maintenance Fees (AMF)	33,887	36,259	38,797	41,319	44,005	46,865	49,911
Infrastructure Investment Fees (IIF)	41,290	44,180	47,273	50,346	53,618	57,103	60,815
Plumbing and Inspection Fees	16,780	20,380	20,991	21,621	22,270	22,938	23,626
Rockville Sewer Use	3,100	3,100	3,100	3,100	3,100	3,100	3,100
Miscellaneous	19,000	28,722	25,452	25,707	25,962	26,222	26,486
Interest Income	2,800	8,000	5,500	5,500	5,500	5,500	5,500
Uncollectible	(6,000)	(7,901)	(8,454)	(9,004)	(9,589)	(10,213)	(10,876)
Cost Sharing Reimbursement	635	743	7,013	12,860	12,860	7,158	7,004
Total Operating Revenues	**$ 857,942**	**$ 923,625**	**$ 985,124**	**$ 1,051,855**	**$ 1,116,659**	**$ 1,179,936**	**$ 1,253,211**
Other Credits and Transfers							
Reconstruction Debt Service Offset	4,000	-	-	-	-	-	-
SDC Debt Service Offset	5,772	5,772	5,772	5,772	5,748	5,748	5,748
Premium Transfer	2,500	-	-	-	-	-	-
Underwriters Discount Transfer	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Miscellaneous Offset	-	1,200	-	-	-	-	-
Total Funds Available	**$ 872,214**	**$ 932,597**	**$ 992,896**	**$ 1,059,627**	**$ 1,124,407**	**$ 1,187,684**	**$ 1,260,959**
Operating Expenses							
Salaries & Wages	133,765	141,179	148,238	154,908	161,879	169,164	176,776
Heat, Light & Power	18,817	27,373	26,263	25,198	26,382	27,305	28,261
Regional Sewage Disposal	60,343	64,201	65,485	66,794	68,130	69,493	70,883
All Other	290,160	319,132	331,589	341,537	351,783	362,336	373,206
Total Operating Expenses	**$ 503,085**	**$ 551,885**	**$ 571,575**	**$ 588,437**	**$ 608,174**	**$ 628,298**	**$ 649,126**
Debt Service							
Bonds and Notes Principal and Interest	321,844	328,467	366,169	391,029	414,536	436,628	451,693
Other Transfers and Adjustments							
Additional and Reinstated	-	-	(9,848)	-	-	-	-
PAYGO	31,016	44,000	65,000	80,000	80,000	100,000	110,000
Total Expenses	**$ 855,945**	**$ 924,352**	**$ 992,896**	**$ 1,059,466**	**$ 1,102,710**	**$ 1,164,926**	**$ 1,210,819**
Net Revenue (Loss)	**$ 16,269**	**$ 8,245**	**$ -**	**$ 161**	**$ 21,697**	**$ 22,758**	**$ 50,140**
Beginning Fund Balance - July 1	$ 242,554	$ 266,601	$ 274,846	$ 274,846	$ 275,007	$ 296,704	$ 319,462
Net Increase (Decrease) in Fund Balance	16,269	8,245	-	161	21,697	22,758	50,140
Adjustments	7,778	-	-	-	-	-	-
Ending Fund Balance - June 30	**$ 266,601**	**$ 274,846**	**$ 274,846**	**$ 275,007**	**$ 296,704**	**$ 319,462**	**$ 369,602**
Debt Service Coverage (1.10 - 1.25 is Target)	1.10	1.13	1.16	1.19	1.23	1.26	1.34
Leverage Ratio - Credit Rating Preservation (<10.0)	n/a	9.6	8.8	8.4	7.9	7.5	6.9
Debt Service as a % of Total Expenses (< 40% is Target)	37.6 %	35.5 %	36.9 %	36.9 %	37.6 %	37.5 %	37.3 %
End Fund Balance as a % of Operating Revenue (min. 15%)	31.1 %	29.8 %	27.9 %	26.1 %	26.6 %	27.1 %	29.5 %
Days Operating Reserve-on-Hand (120-150 Days is Target)	118.0	114.0	108.1	102.5	105.9	109.5	122.5
Total Workyears (All Funds)	1,796	1,836	1,836	1,836	1,836	1,836	1,836

Assumptions:

1. The FYs 2025-2029 projections reflect WSSC Water's multi-year forecast and assumptions. The projected expenditures, revenues and fund balances for these years may be based on changes to rates, fees, usage, inflation, future labor agreements and other factors not assumed in the FY 2024 Proposed Budget. Data excludes General Bond Debt Service.
2. Leverage ratio is calculated as net adjusted debt (debt outstanding less cash and cash equivalent) to adjusted funds available for debt service (Operating Revenues less Operating Expenses excluding depreciation plus adjustments for miscellaneous revenues and expenses).
3. Debt service for bonds and notes includes Maryland Water Quality Bonds and interfund debt service transfers.
4. Adjustments to Consumption Charges, AMF and IIF for Water and Sewer Combined Rate Increase assumes rate increase is in effect for 12 months.
5. Debt Service Coverage is Operating Revenues less Operating Expenses (Operating Expenses do not include Debt Service and PAYGO) divided by the debt service on bonds and notes.
6. Days Operating Reserve-on-Hand is Ending Fund Balance times 365 days divided by Total Expenses less PAYGO.
7. The FY 2023 adjustments reflect the FY 2023 estimated increase in Net Revenue.

WSSCWATER

DELIVERING THE ESSENTIAL

FY 2024 CIP Public Hearings

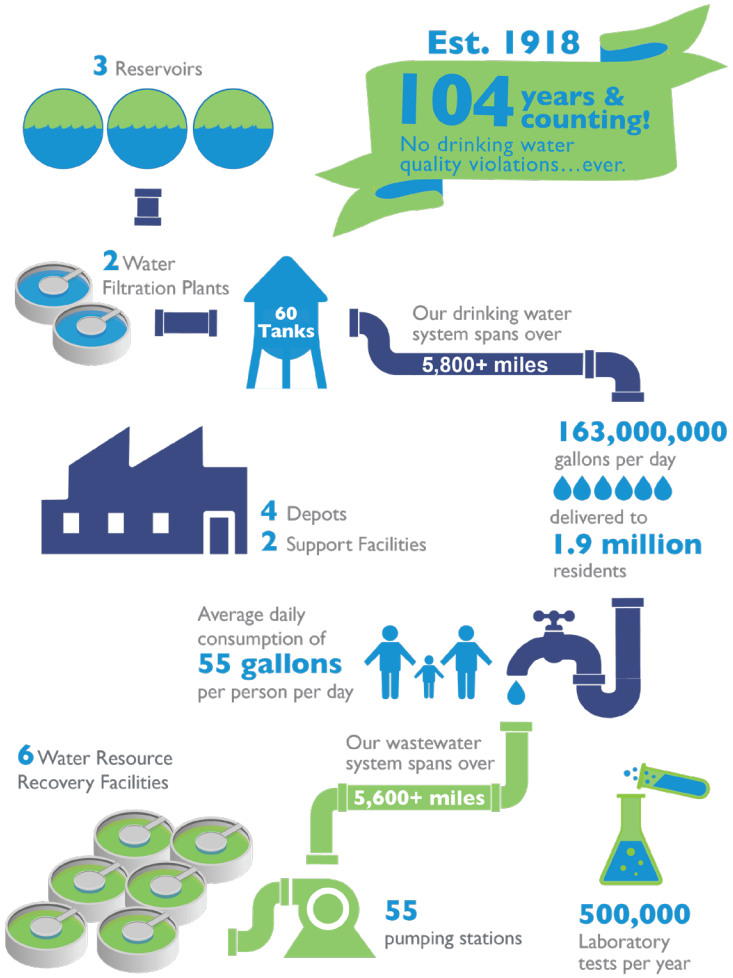
Brian Halloran, *Budget Division*

September 7-8, 2022

Agenda

- WSSC Water system overview
- Capital Improvements Program (CIP) review process
- CIP benefits
- Capital budget policy guidelines
- Capital budget affordability
- FY 2024 CIP overview and highlights

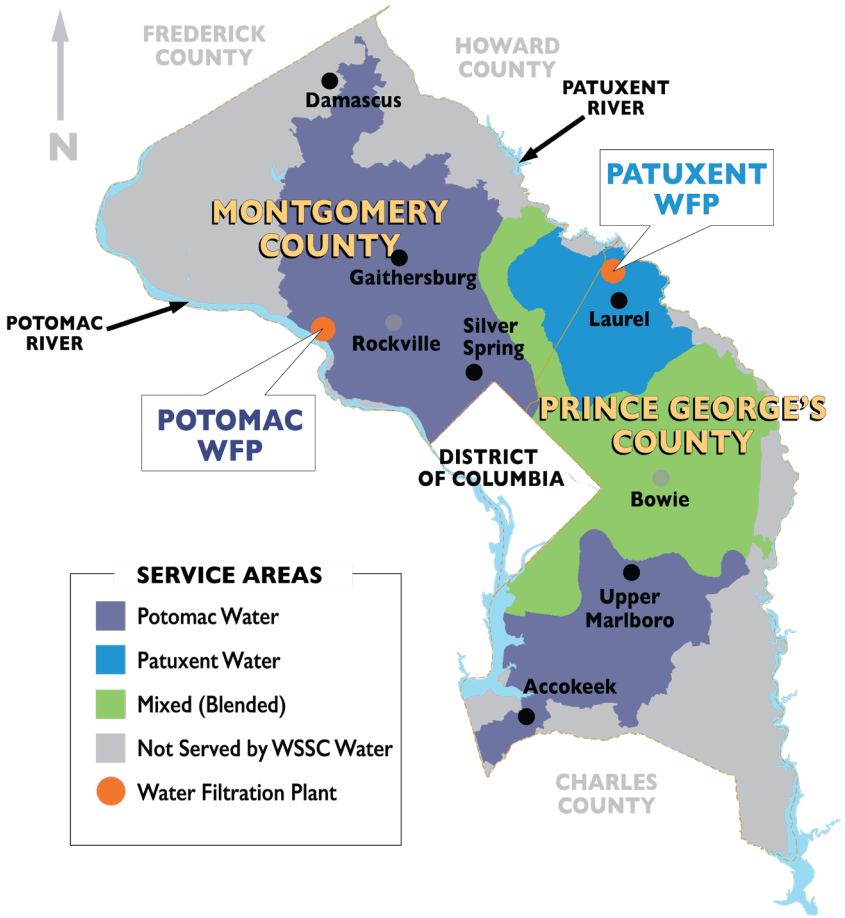
WSSC Water System Overview



System	Total 6-Year Program Cost	Share
Reservoirs/Source Water Protection	18,490	0.4%
Water Filtration Plants	265,611	5.9%
Water Tanks	46,892	1.0%
Water Pipes	2,253,641	50.0%
Sewer Pipes	994,380	22.1%
Wastewater Pumping Stations/Force Mains	175,820	3.9%
Water Resource Recovery Facilities	595,201	13.2%
Support Facilities	140,291	3.1%
Lab	15,457	0.4%
Total	**4,505,783**	**100.0%**

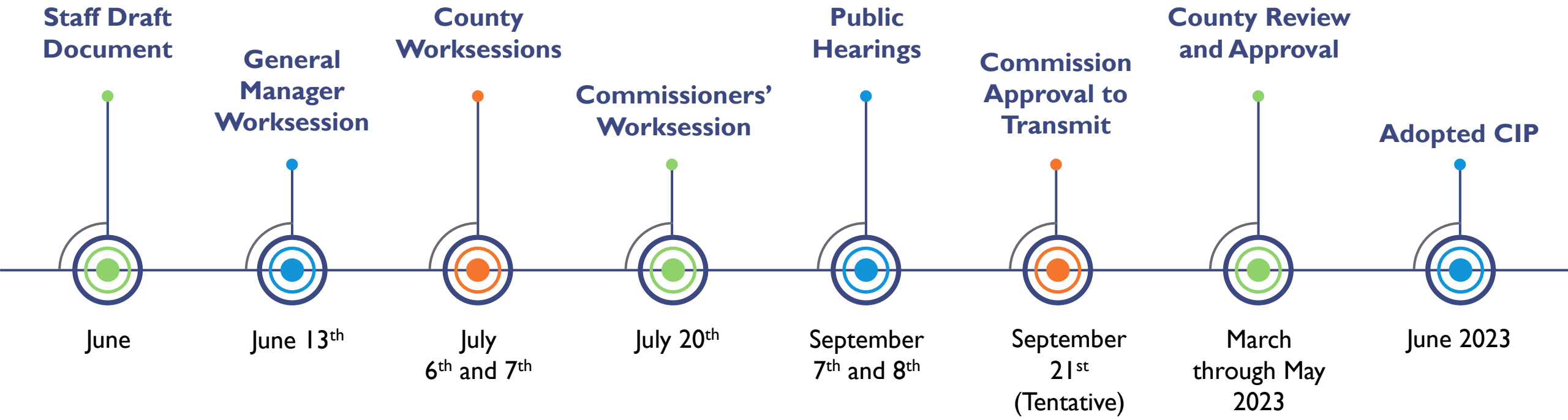
WSSCWATER
DELIVERING THE ESSENTIAL

WSSC Water System Overview



WSSCWATER
DELIVERING THE ESSENTIAL

CIP Review Process



WSSCWATER
DELIVERING THE ESSENTIAL

CIP Benefits

The CIP supports the following WSSC Water strategic priorities:

Optimize Infrastructure

- Achieve industry-leading reliability and asset integrity
- Expand resilience and balance risk

Spend Customer Dollars Wisely

- Improve operational efficiency
- Improve fixed asset utilization
- Improve financial process efficiency and fiscal sustainability

Enhance Customer Experience

- Deliver safe, reliable and consistent service
- Provide timely response to customer queries
- Be a good citizen within our communities

Protect Our Resources

- Resolve and learn from past incidents
- Maintain best-in-class operating environment safety for employees
- Plan proactively with community stakeholders
- Secure the Commission's critical infrastructure

Capital Budget Policy Guidelines

Attain goal of a sustainable and affordable CIP through:

- Key financial metrics to assess debt service levels while balancing rate and operating growth
  - New debt issuance and related debt service expense must stay within the following Chief Financial Officer (CFO) guidelines:
    - Debt service coverage: 1.10 – 1.25
    - Debt service as a percentage of total expenditures: < 40%
  - Set bond issuance limits over the capital planning period to smooth out demands

Capital Budget Affordability

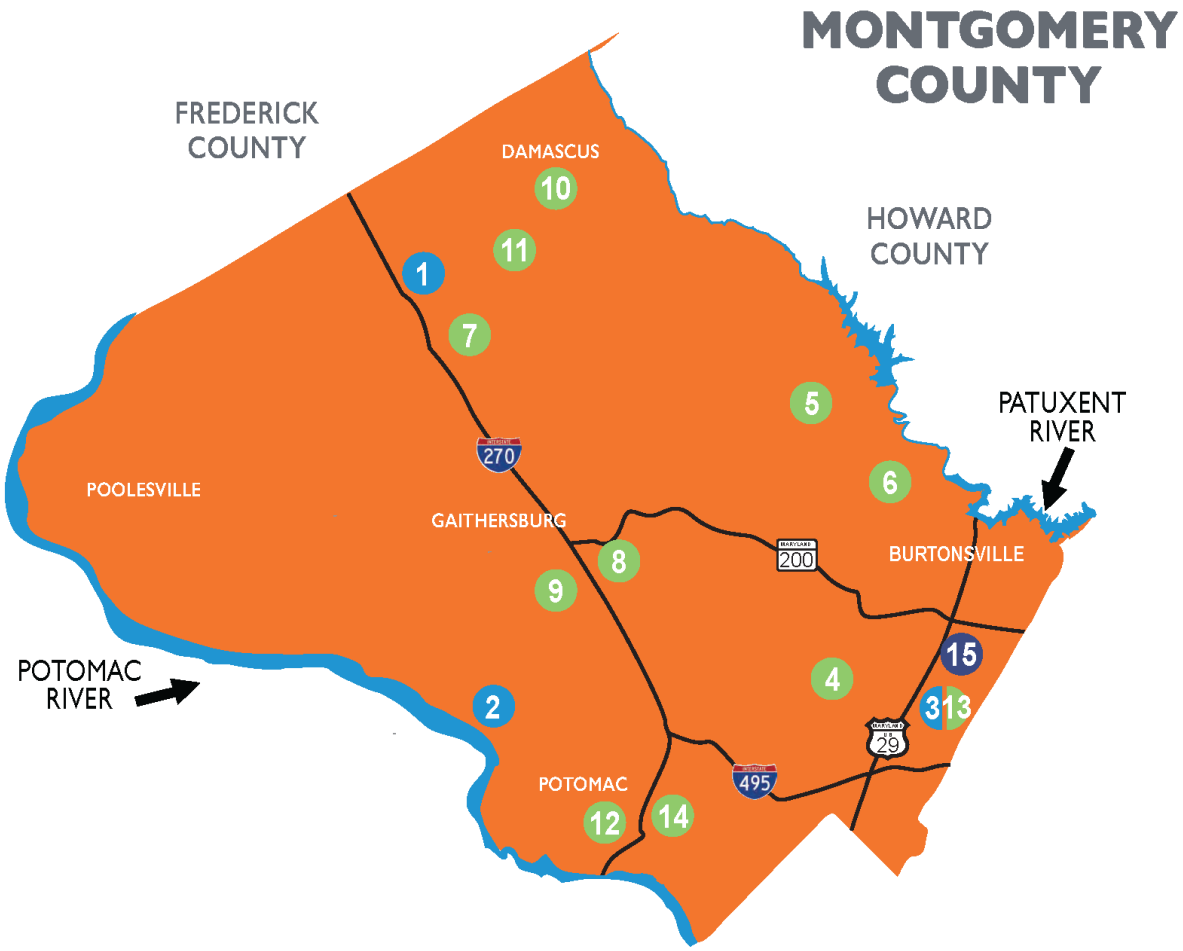
- Momentum of capital budget
  - FY 2010 capital budget of $371.1 million has grown to $604.8 million in FY 2023
  - FY 2024 CIP of $704.7 million; Estimated FY 2024 capital budget of $683.1 million after adjustment for developer contributions
- Outstanding debt growth of +186%, from $1.36 billion in FY 2010 to $3.89 billion in FY 2022
  - Higher borrowing costs due to growth in capital budget and interest rates
- Without constraints, debt service as a percentage of total expenditures could exceed 40% threshold
  - Restricts operating budget flexibility and program enhancements
  - Monitor opportunities for refunding outstanding debt

Capital Budget Affordability

A fiscally responsible CIP results in:

- Maintaining our AAA credit rating
  - Adhering to financial metrics and guidelines
- An affordable CIP
  - Fits within rate increases as proposed
  - Aligns anticipated bond issuance limits over the six-year program
  - Keeps project funding in line with what is affordable
- Increased importance on prioritization of projects for inclusion, elimination, scale-down, or deferral
- Increased use of PAYGO to lower debt service expense and improve metric results - especially with rate risk

FY 2024 CIP Overview and Highlights



WATER

1. Pleasant's Property Water Main Extension (W-46.26)
2. Potomac WFP Submerged Channel Intake (W-73.30)
   Potomac WFP Main Zone Pipeline (W-73.32)
   Potomac WFP Consent Decree Program (W-73.33)
   Regional Water Supply Resiliency (W-175.05)
3. White Oak Water Mains Augmentation (W-113.20)
   Viva White Oak Water Main (W-113.21)

SEWER

4. Arcola WWPS & FM (S-36.01)
5. Reddy Branch WWPS & FM (S-61.02)
6. Sam Rice Manor WWPS & FM (S-63.08)
7. Ashford Woods WWPS & FM (S-83.07)
8. Shady Grove Neighborhood Center (S-85.22)
9. Johns Hopkins Medical Research Park Sewer Main (S-85.23)
10. Damascus Town Center WWPS Replacement (S-94.13)
11. Spring Gardens WWPS Replacement (S-94.14)
12. Rose Village Sewer Main (S-103.17)
13. Viva White Oak Sewer Main (S-118.09)
14. Erickson Bethesda Sewer Main (S-151.02)

OTHER
Shown on Map

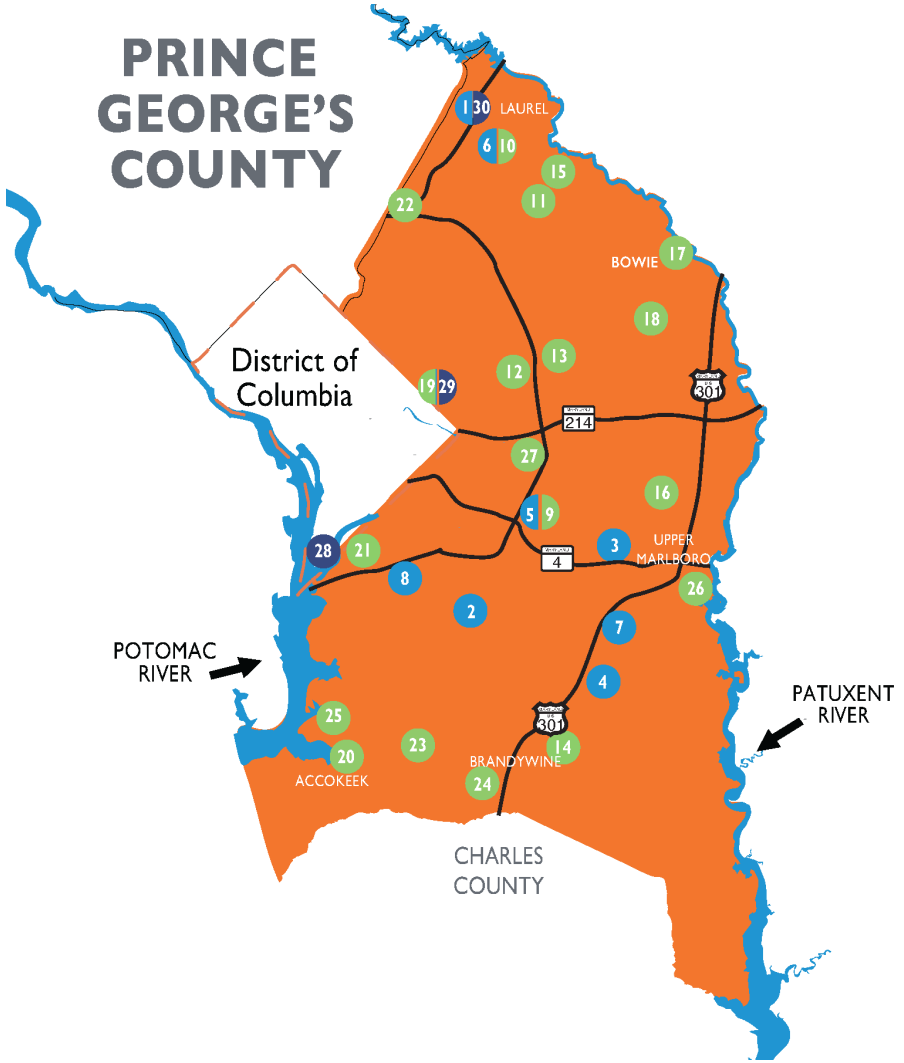
15. Laboratory Division Building Expansion (A-101.04)

OTHER
Not Shown on Map

16. Water Reconstruction Program (W-1.00)
17. Water Storage Facility Rehabilitation Program (W-105.00)
18. Specialty Valve Vault Rehabilitation Program (W-107.00)
19. Large Diameter Water Pipe & Large Valve Rehabilitation Program (W-161.01)
20. I-495/I-270 Traffic Relief Plan Pipeline Relocations (W-161.02)
21. Land & Rights-of-Way Acquisition – Bi-County Water (W-202.00)
22. Sewer Reconstruction Program (S-1.01)
23. Trunk Sewer Reconstruction Program (S-170.09)
24. Land & Rights-of-Way Acquisition – Bi-County Sewer (S-203.00)
25. Engineering Support Program (A-102.00)
26. Energy Performance Program (A-103.00)
27. Other Capital Programs (A-110.00)

WSSCWATER
DELIVERING THE ESSENTIAL

FY 2024 CIP Overview and Highlights



WATER

1. Prince George's County HG415 Zone Water Main (W-12.02)
   Patuxent Raw Water Pipeline (W-172.07)
2. Old Branch Avenue Water Main (W-34.02)
   Branch Avenue Water Transmission Improvements (W- 34.04)
3. Marlboro Zone Reinforcement Main (W-34.05)
4. Rosaryville Water Storage Facility (W-62.06)
5. Smith Home Farms Water Main (W-84.03)
   Westphalia Town Center Water Main (W-84.04)
   Prince George's County 450A Zone Water Main (W-84.05)
6. Konterra Town Center East Water Main (W-93.01)
7. Marlton Section 18 Water Main, Lake Marlton Avenue (W-105.01)
8. South Potomac Supply Improvement, Phase 2 (W-137.03)

SEWER

9. Westphalia Town Center Sewer Main (S-27.08)
10. Konterra Town Center East Sewer (S-28.18)
11. Pumpkin Hill WWPS & FM (S-28.20)
12. Landover Mall Redevelopment (S-68.01)
13. Carsondale WWPS & FM (S-68.02)
14. Brandywine Woods WWPS & FM (S-75.23)
15. Parkway WRRF Facility & Electrical Upgrades (S-77.21)
16. National Capital Business Park Sewer (S-86.20)
17. Horsepen WWPS & FM (S-87.19)
18. Freeway Airport WWPS & FM (S-87.20)
19. Anacostia #2 WWPS Upgrades (S-89.24)
    Colmar Manor WWPS & FM (S-89.26)
20. Piscataway WRRF Facility Upgrades (S-96.14)
    Piscataway Bioenergy (S-103.02)
21. Forest Heights WWPS & FM (S-113.13)
22. Viva White Oak Sewer Augmentation (S-118.10)
23. Pleasant Valley Sewer Main, Part 2 (S-131.05)
    Pleasant Valley Sewer Main, Part 1 (S-131.07)
24. Calm Retreat Sewer Main (S-131.11)

SEWER

25. Swan Creek WWPS & FM (S-131.12)
26. Western Branch WRRF Process Train Improvements (S-157.02)
27. D'Arcy Park North Relief Sewer (S-300.01)

OTHER

Shown on Map

28. Blue Plains WWTP: Liquid Train Projects, Part 2 (S-22.06)
    Blue Plains WWTP: Biosolids Management, Part 2 (S-22.07)
    Blue Plains WWTP: Plant-Wide Projects (S-22.09)
    Blue Plains: Pipelines & Appurtenances (S-22.11)
29. Anacostia Depot Reconfiguration (A-100.01)
30. RGH Building Upgrades (A-101.06)

OTHER

Not Shown on Map

31. Water Reconstruction Program (W-1.00)
32. Water Storage Facility Rehabilitation Program (W-105.00)
33. Specialty Valve Vault Rehabilitation Program (W-107.00)
34. Large Diameter Water Pipe & Large Valve Rehabilitation Program (W-161.01)
35. I-495/I-270 Traffic Relief Plan Pipeline Relocations (W-161.02)
36. Land & Rights-of-Way Acquisition – Bi-County Water (W-202.00)
37. Sewer Reconstruction Program (S-1.01)
38. Mattawoman WWTP Upgrades (S-75.21)
39. Trunk Sewer Reconstruction Program (S-170.09)
40. Land & Rights-of-Way Acquisition – Bi-County Sewer (S-203.00)
41. Engineering Support Program (A-102.00)
42. Energy Performance Program (A-103.00)
43. Other Capital Programs (A-110.00)

WSSCWATER
DELIVERING THE ESSENTIAL

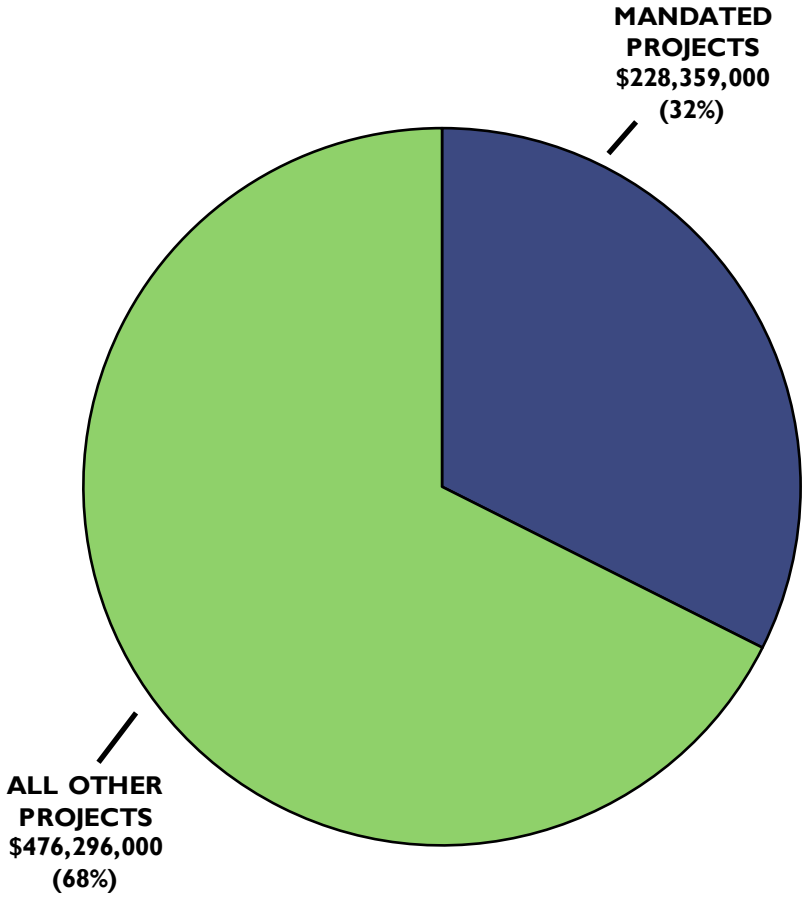
FY 2024 CIP Overview and Highlights

FY 2024 – FY 2029 CIP

- Six-year program cost of $4.51 billion
  - Bond funded $3.43 billion (plus PAYGO of $479.0 million)
  - Mandated projects $1.41 billion (31%)
    - Blue Plains $557.6 million
    - Consent Decree $831.2 million
    - Other Regulatory & Agreement $17.7 million
- FY 2024 budget year cost of $704.7 million
  - Bond funded $555.4 million (plus PAYGO of $44.0 million)
  - Mandated projects $228.4 million (32%)

WSSCWATER
DELIVERING THE ESSENTIAL

FY 2024 CIP Overview and Highlights



FY 2024 BUDGET YEAR TOTAL
$704,655,000

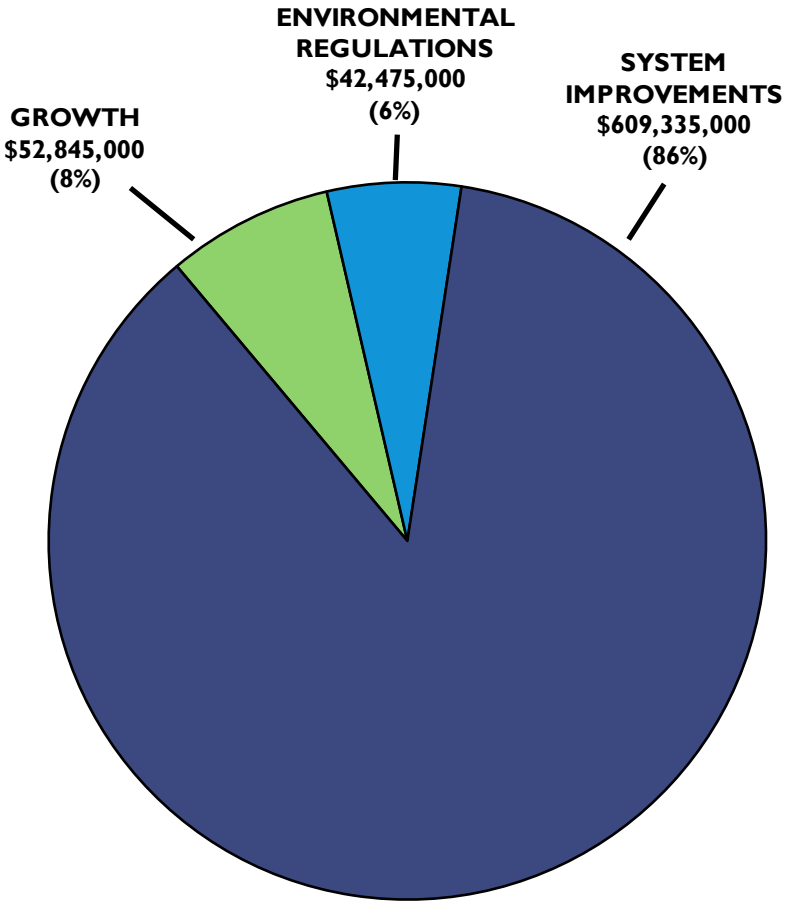
32%

of the planned spending in the FY 2024 combined program is mandated by existing multi-jurisdictional agreements or by consent decrees

Mandated Projects	FY 2024 Amount
Consent Decrees	153,165,000
Blue Plains	70,987,000
Other Agreements	4,207,000
Total	**228,359,000**

WSSCWATER
DELIVERING THE ESSENTIAL

FY 2024 CIP Overview and Highlights



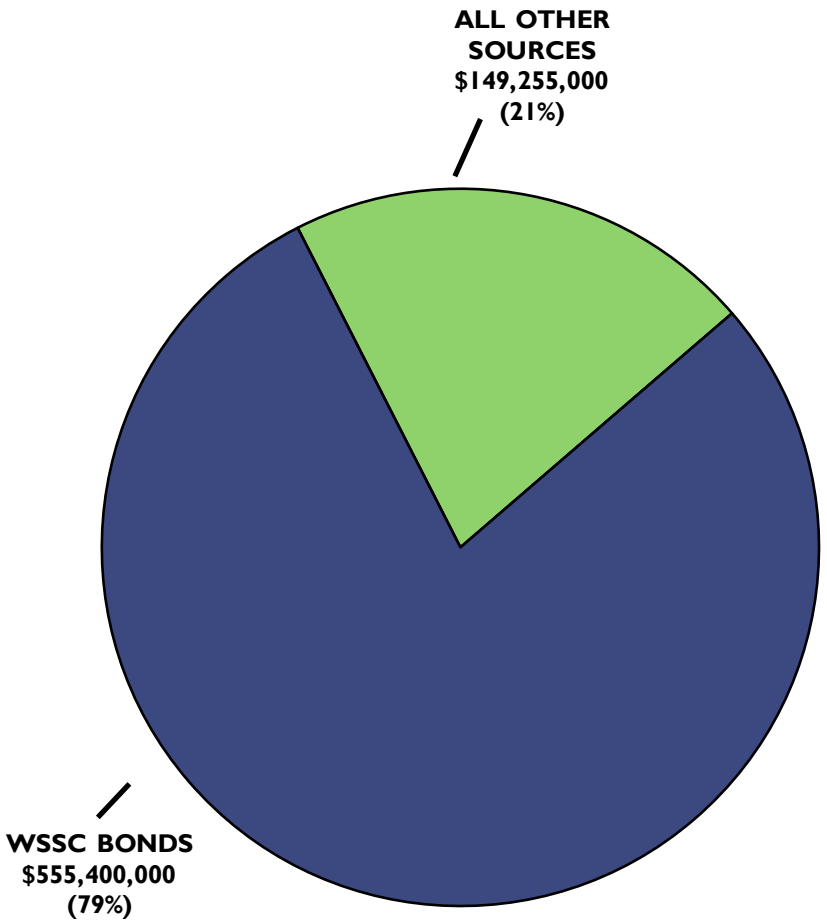
FY 2024 BUDGET YEAR TOTAL
$704,655,000

86%
of the FY 2024 combined program is for reinvestment in our system infrastructure

Major Category	FY 2024 Amount
Growth	52,845,000
System Improvements	609,335,000
Environmental Regulations	42,475,000
Total	**704,655,000**

WSSCWATER
DELIVERING THE ESSENTIAL

FY 2024 CIP Overview and Highlights



FY 2024 BUDGET YEAR TOTAL
$704,655,000

79%
of the FY 2024 combined program is funded through long-term debt

Funding Source	FY 2024 Amount
WSSC Bonds	555,400,000
PAYGO	44,000,000
SDC & Others	73,785,000
Federal & State Grants	25,142,000
Local Government Contributions	6,328,000
Total	**704,655,000**

WSSCWATER
DELIVERING THE ESSENTIAL

FY 2024 CIP Overview and Highlights

Water Reconstruction Programs

- WSSC Water maintains 6,000 miles of water mains ranging from 4” to 96” in diameter
- Rehabilitated on average more than 50 miles per year over the past 10 years
- Continuing investments in new technologies and tools to develop a more efficient and effective program
- Over 100 miles of Pre-stressed Concrete Cylinder Pipe (PCCP) inspected and monitored 24/7; avoided 45 imminent pipe failures
- FY 2024 program: 27 miles of distribution (<16”) and 6.5 miles of transmission (≥16”) mains
- FY 2024 budget: $166.5 million

FY 2024 CIP Overview and Highlights

Sewer Reconstruction Programs

- WSSC Water maintains 5,700 miles of sewer mains
- Includes replacement of pipe, relining of pipe, pipeline protections, and rehabilitation of manholes
- Sanitary Sewer Overflow (SSO) Consent Decree Priority I rehabilitation work in Article 6 was completed by the February 2022 deadline
- Funding via Maryland Department of the Environment (MDE) low-interest loans and Bay grants
- FY 2024 program: 35 miles of sewer rehabilitation
- FY 2024 budget: $120.6 million

FY 2024 CIP Overview and Highlights

Water Filtration Plants (WFPs)

- WSSC Water owns and operates two WFPs, the Potomac WFP and the Patuxent WFP
- The two plants produced an average of 161.2 million gallons of water per day (MGD) in FY 2022

Potomac WFP Consent Decree Program

- The project is entering construction
- Total cost estimate: $194.6 million
- FY 2024 budget: $32.6 million

Patuxent Raw Water Pipeline

- New raw water pipeline to plant to increase capacity up to 110 MGD
- Project is in construction
- FY 2024 budget: $0.6 million

WSSCWATER
DELIVERING THE ESSENTIAL

FY 2024 CIP Overview and Highlights

Water Resource Recovery Facilities (WRRFs)

- WSSC Water owns and operates six WRRFs that treated an average of 67.1 MGD of sewage in FY 2022

Piscataway Bioenergy

- Innovative project that will transform sewage into renewable energy
- Recover 2-3 megawatts of renewable energy
- Treat biosolids from 5 WRRFs
- Reduce greenhouse gas emissions
- Protect the Chesapeake Bay
- Projected economic benefit of $3.7 million per year
- Phase 1 completed in December 2020
- Phase 2 started in June 2020
- FY 2024 budget is $29.3 million

WSSC WATER
PROPOSED CAPITAL IMPROVEMENTS PROGRAM
FISCAL YEARS 2024-2029

LEGAL AUTHORITY AND RESPONSIBILITY

Statutory Basis

Under Section 23-304 of the Public Utilities Article of the Annotated Code of Maryland, the Washington Suburban Sanitary Commission (WSSC Water) is responsible for annually preparing a Six-Year Capital Improvements Program (CIP) for major water and sanitary sewerage facilities and transmitting it to the County Council and the County Executive of Montgomery County and the County Executive of Prince George's County by October 1 each year. WSSC Water, where required by the two County Councils' final action on the program, must revise the same and then, prior to the commencement of the first fiscal year of the six-year program, adopt the CIP.

Section 23-301 defines major projects for inclusion in the CIP as water mains at least 16 inches in diameter, sewer mains at least 15 inches in diameter, water or sewage pumping stations, force mains, storage facilities, and other major facilities. Project information presented in this document complies with all legal requirements of the 10-year water and sewerage plans and is in direct support of the two Counties' approved land use plans and policies for orderly growth and development. By Resolution No. 2022-2317 dated June 15, 2022, the Commissioners adopted the FYs 2023-2028 CIP.

WSSC Water's Role

Established as a bi-county agency more than 100 years ago, in 1918, by an act of the Maryland General Assembly, WSSC Water is responsible for planning, designing, constructing, operating, and maintaining water and sewerage systems, and acquiring facility sites and rights-of-way in order to provide potable water and sanitary sewer services to residents, businesses, and federal, state, and local municipalities within the Washington Suburban Sanitary District (WSSD). The WSSD encompasses nearly all of Montgomery and Prince George's Counties and provides water and sewer service to approximately 1.9 million customers in an area of nearly 1,000 square miles. A board of six Commissioners directs WSSC Water, three appointed by the County Executive of Prince George's County and confirmed by the Prince George's County Council, and three appointed by the County Executive of Montgomery County and confirmed by the Montgomery County Council. Commissioners serve four-year staggered terms.

WSSC Water's Mission

We are entrusted by our community to provide safe and reliable water, life's most precious resource, and return clean water to our environment, all in an ethical, sustainable, and financially responsible manner.

WSSC Water's Responsibilities

Primary responsibilities include:

- protecting the health and safety of the residents of both Counties by providing an adequate supply of safe drinking water;
- meeting fire-fighting requirements;
- collecting and treating wastewater before it is returned to the waters of the State of Maryland;
- managing and safeguarding the watershed and the water supply by implementing sound forestation and land use practices;
- monitoring the collection and treatment of wastewater;
- discharging an effluent cleansed of nutrients, pollutants, and hazardous materials;
- managing treated wastewater biosolids responsibly and cost effectively;
- maintaining the existing water and wastewater infrastructures;
- planning for the orderly growth of the sanitary district and WSSC Water services to meet the needs of the communities we serve;
- monitoring adherence to all plumbing and gas-fitting standards and ensuring proper coordination with other public utilities; and
- managing operations to provide efficient service to its customers while keeping costs as low as possible.

The projects contained in this CIP represent WSSC Water's plan to successfully meet its responsibilities. WSSC Water strives to maintain a balance between the use of valuable resources and the public's demand for clean water. Meeting these responsibilities helps ensure that we fulfill our core mission and strengthen our local economies while assuring that we maintain fair, ethical, and equitable contracting practices. This will allow us to secure high quality and competitively priced goods and services from our diverse and talented local businesses in Prince George's and Montgomery Counties.

PROGRAM OVERVIEW

Objective

The principal objective of the CIP is the six-year programming of planning, design, land acquisition, and construction activities for major water and sewerage infrastructure projects and programs. These projects and programs may be necessary for system improvements for service to existing customers, to comply with federal and/or state environmental mandates, or to support new development in accordance with the Counties' approved plans and policies for orderly growth and development.

The water supply and sewage disposal bonds are repaid to bond holders over a 30-year period by annual principal and interest payments (debt service). In this manner, the initial high cost of capital improvements is spread over time and paid for by future customers who will benefit from the facilities, as well as by current customers. The annual debt service on outstanding bonds is paid from operating funds. The primary funding source for the repayment of debt is the revenue generated by water consumption and sewer use charges. Water and sewer charges are set on an annual basis to cover both operational and debt service costs (associated with the water supply and sewage disposal bonds). It is through this capital project financing process that the size of the CIP impacts the size of water and sewer bond issues, the associated debt service costs, and, ultimately, our customers' water and sewer bills.

Several capital spending and funding practices are noteworthy. WSSC Water:

- continues an aggressive program to rehabilitate or replace the older portions of our 6,000 miles of water main and 5,700 miles of sewer main infrastructure;
- funds capital facilities needed to accommodate growth with the System Development Charge (SDC). This charge is reviewed annually by the County Councils. (Refer to Appendices A and B for details. A comparison of SDC revenues and estimated growth spending for the six-year program period is displayed on the table titled "Growth Funding" in the Funding Growth section of this document.);
- uses PAYGO (Pay-As-You-Go): the practice of using current revenues, when budgeted, to the extent practical to help fund the capital program, thereby reducing the need for debt financing;
- maximizes and manages the collection of funding from alternative sources including state and federal grants, and payments from other jurisdictions for projects which specifically benefit them. The amount of these collections varies from year to year. WSSC Water's reliance on rate-supported debt to build the capital program is reduced to the extent that these sources are available to help fund capital projects; and

- does not allow the use of rate-supported debt to fund CIP-sized water and sewer projects requested by Applicants in support of new development. These projects, identified as System Extension Process (SEP) projects, may only proceed if built at the Applicant's expense. (An explanation of the SEP process is included in the System Extension Process section of this document.) However, since these projects are eligible for SDC credits (to the extent that SDC funds are available), the Applicants should eventually recoup their costs. (Refer to Appendix B for definitions and details.)

In May 1993, the Montgomery and Prince George's County Councils created the Bi-County Working Group on WSSC Spending Controls (Working Group) to review WSSC Water finances and recommend spending control limits. The Working Group's January 1994 report recommended "the creation of a spending affordability process that requires the Counties to set annual ceilings on WSSC Water's rates and debt (debt in this context means both bonded indebtedness and debt service), and then place corresponding limits on the size of the capital and operating budgets of the Commission." The objective of this process is to create a framework for controlling costs and achieving low or moderate water/sewer bill increases, as well as slowing the rate at which WSSC Water is incurring debt, thus reducing the portion of WSSC Water water/sewer bills dedicated to paying off debt. This valuable, annual process focuses debate on the need to balance affordability considerations against providing the resources necessary to serve existing customers, meet environmental mandates, and provide the facilities needed for growth.

WSSC Water has submitted a CIP and budget, which generally conforms to the Spending Affordability Guidelines (SAG) established by both County governments every year since 1994. Through FY 2023, projects were reduced or deferred by nearly $383 million. For FY 2024, CIP and Information Only combined spending was within guidelines as submitted.

The FY 2024 combined expenditures (CIP & Information Only projects) are estimated at $704.7 million, which represents an increase of approximately $79.2 million above the approved funding level for FY 2023. The increase is primarily due to the deferrals and reductions totaling $110.5 million that were made to the FY 2023 funding level as part of the budget process last year.

Funding Sources

The projects included in this Combined Program are funded primarily by issuance of water and sewer rate-supported debt (WSSC Bonds). To a lesser degree, projects may also be funded by the following:

- State Grants – a share of the support provided on a local level. The State of Maryland provides funding under a separate grants program for enhanced nutrient removal at existing wastewater treatment plants (water resource recovery facilities) and for the rehabilitation of sewer mains as part of the Chesapeake Bay Program;
- Federal Grants – Department of Energy grants related to the Energy Performance Program and Piscataway Bioenergy projects to promote and develop green energy sources;
- Local Government Contributions – payments to WSSC Water for co-use of regional facilities, or funding provided by County governments for projects they are sponsoring;
- PAYGO – when budgeted, the practice of using current revenues to the extent practical to help fund the capital program, thereby reducing the need for debt financing;
- SDC – anticipated revenue from the System Development Charge; and
- Contribution/Other – projects funded by Applicants for growth projects where the County Councils have directed that no WSSC Water rate-supported debt be used to pay for the project.

(Please refer to Figure 3 near the end of this section, which displays the funding allocations for the major funding sources.)

Funding Growth

The portion of the Combined Program needed to accommodate growth is approximately $233.4 million, which equals 5% of the six-year total expenditures, and $54.1 million or 8% of the FY 2024 budget. The funding sources for this part of the program are SDC revenues and payments by Applicants. In the event that growth costs are greater than the income generated by growth funding sources, either SDC supported or rate-supported water/sewer bonds may be used to close any gap.

The Maryland General Assembly, in 1993, first approved legislation authorizing the Montgomery and Prince George's County Councils to establish, and WSSC Water to impose, a System Development Charge. This is a charge on new development to pay for that part of the CIP needed to accommodate growth in WSSC Water's customer base. In accordance with the enabling legislation,

the Councils approved, and WSSC Water began to phase in, this charge beginning in FY 1994. The SDC was approved at the maximum rate of $160 per fixture unit by Commission Resolution No. 95-1457, adopted May 24, 1995, and became effective July 1, 1995. In the 1998 legislative session, the General Assembly modified the charge by passage of House Bill 832 setting the fee at $200 per fixture unit with a provision for annual inflation adjustments. Subsequent resolutions have established a process for approving partial and full exemptions for elderly housing and biotechnology properties, as well as exemptions for properties in designated economic revitalization areas and properties used primarily for recreational and educational programs and services to youth. For FY 2023, the Montgomery and Prince George's County Councils increased the maximum allowable charge by the 6.4% increase in the CPI-U but maintained the current rate of $203 per fixture unit. The Commissioners adopted the Councils' actions by Resolution Number 2022-2314 dated June 15, 2022. Policies and other information associated with the SDC are included in this document in Appendices A through D.

It is estimated that there will be an overall growth funding shortfall of $75.0 million over the six-year program period. The surplus or shortfall between growth funding sources (SDC, developer contributions, and Applicant payments under System Extension Permits) and the estimated growth-related expenditures vary over the six-year period. If growth-related expenditures were to exceed the available SDC account balance in any given fiscal year, it is anticipated that new SDC-supported debt would be issued to cover this temporary gap. The debt will be repaid through future SDC collections, as allowed by state law. Further, it is currently anticipated that no significant additional growth projects will evolve in the later years of the six-year period. (A listing of SDC-eligible projects is included in Appendix D.)

An estimate of the surplus or shortfall for each fiscal year is presented in the table on the following page. To estimate the surplus or shortfall for an individual fiscal year, it is assumed that approximately 63% of the eligible expenditures will actually be incurred in a given year due to scheduling and other delays. The projected surplus or shortfall is the difference between the eligible expenditures adjusted for completion and the sum of the various funding sources.

GROWTH FUNDING
(In Millions)

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Total 6 Years
CIP GROWTH EXPENDITURES	$ 53.9	$ 55.9	$ 38.4	$ 36.6	$ 28.7	$ 19.4	$ 232.9
Expenditures Adjusted for Completion	33.9	55.0	45.2	37.5	31.5	22.6	225.7
FUNDING SOURCES							
Privately Funded Projects	10.4	15.6	10.3	3.9	1.1	0.8	42.1
Estimated SDC Revenue	22.6	22.6	22.6	22.6	22.6	22.6	135.6
Less SDC Developer Credits	(4.5)	(4.5)	(3.5)	(3.5)	(2.5)	(2.5)	(21.0)
Less SDC Exemptions [1]	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(6.0)
Total Funding Sources	$ 27.5	$ 32.7	$ 28.4	$ 22.0	$ 20.2	$ 19.9	$ 150.7
FUNDING SURPLUS/(SHORTFALL) ADJUSTED FOR COMPLETION	**$ (6.4)**	**$ (22.3)**	**$ (16.8)**	**$ (15.5)**	**$ (11.3)**	**$ (2.7)**	**$ (75.0)**

[1] Each County may grant SDC exemptions, as identified in Appendix A, totaling up to $500,000 per fiscal year as provided for in Maryland state law (Public Utilities Article, Section 25-403(b)). Unused exemption amounts are available for use in future fiscal years. Cumulative unused SDC exemptions totaled approximately $8.3 million for Montgomery County and $2.3 million for Prince George's County through June 30, 2022.

Expenditures

The Proposed FYs 2024-2029 Combined Program includes 61 CIP and 11 Information Only projects for a grand total of $5.9 billion. The grand total is $10.9 million greater than the Adopted FYs 2023-2028 Combined Program primarily due to recent inflationary trends. Expenditures for the six-year program period are estimated at $4.5 billion. FY 2024 expenditures are estimated at $704.7 million, of which $185.0 million is for the Water Program, $256.7 million is for the Sewerage Program, and $263.0 million is for the Information Only projects. System Extension Process (SEP) growth projects are estimated at $42.4 million in the six-year program with approximately $16.9 million programmed in FY 2024. There are 3 new projects this cycle. New projects are shown on the New Projects Listing near the end of this section.

A table comparing the Adopted FYs 2023-2028 CIP to the Proposed FYs 2024-2029 CIP follows:

CIP COMPARISON
(In Thousands)

CIP	Combined Program	Total 6 Years	Budget Years
Adopted FYs 2023-2028	$ 5,887,860	$ 4,171,605	$ 625,495
Proposed FYs 2024-2029	5,898,789	4,505,783	704,655
Change	$ 10,929	$ 334,178	$ 79,160

The six-year expenditures for the Combined Program are estimated at $4.5 billion, with approximately $1.4 billion for the Water Program, $1.3 billion for the Sewerage Program, and $1.9 billion for the Information Only projects. This is a $334.2 million increase from the six-year total for the Combined Program in the Adopted FYs 2023-2028 CIP. The overall increase is primarily due to recent inflationary trends and the deferrals and reductions totaling $110.5 million that were made to the FY 2023 funding level as part of the budget process last year.

Expenditure Categories

Expenditures are divided into three main categories: projects needed for growth, projects needed to implement environmental regulations, and projects needed for system improvements. The categories are defined as follows:

- Growth – any project, or part of a project, that increases the demand for treatment and delivery of potable water and/or increases system requirements to collect and treat more sewage in response to new, first time, service hookups to the existing customer base.
- Environmental Regulations – any project which is required to meet changes in federal regulations, such as the Clean Water Act, or in response to more stringent state operating permit requirements, but does not increase system capacity. Any part of this type of a project that provides for additional capacity is for growth.
- System Improvements – any project which improves or replaces components of existing water and sewerage systems or provides for mainline relocations required in response to County or state transportation department road or transit projects where the intended purpose is not to increase the capacity of any system components. This category also includes program-sized water main extensions for which the primary function is to provide water supply redundancy to pressure zones or smaller areas in the WSSD or for system loops to improve maintainability and reliability. Any part of this type of a project not dictated by maintenance or rehabilitation needs and that provides for additional capacity is for growth. (Please refer to Figure 4 near the end of this section, which displays funding allocations for all three categories.)

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

EXPENDITURE PROJECTIONS

SECTION	EST. TOTAL COST	EXPEND THRU 22	EST. EXPEND 23	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
					YR 1 24	YR 2 25	YR 3 26	YR 4 27	YR 5 28	YR 6 29		
Montgomery County Water Projects	9,734	67	23	9,644	3,133	3,142	2,977	196	99	97	-	1-1
Prince George's County Water Projects	231,618	37,734	15,799	168,430	39,443	56,975	36,189	30,869	3,110	1,844	9,655	5-1
Bi-County Water Projects	1,446,875	61,870	99,023	1,190,193	142,441	195,428	214,382	239,646	217,366	180,930	95,789	3-1
TOTAL WATER PROJECTS	**1,688,227**	**99,671**	**114,845**	**1,368,267**	**185,017**	**255,545**	**253,548**	**270,711**	**220,575**	**182,871**	**105,444**	
Montgomery County Sewer Projects	88,689	9,802	4,569	61,146	10,106	14,154	7,644	2,544	7,254	19,444	13,172	2-1
Prince George's County Sewer Projects	442,037	144,306	63,222	230,498	66,393	72,989	44,032	25,849	14,984	6,251	4,011	6-1
Bi-County Sewer Projects	1,571,417	242,178	207,099	969,357	180,166	152,157	156,002	182,970	158,552	139,510	152,783	4-1
TOTAL SEWER PROJECTS	**2,102,143**	**396,286**	**274,890**	**1,261,001**	**256,665**	**239,300**	**207,678**	**211,363**	**180,790**	**165,205**	**169,966**	
TOTAL CIP PROGRAM	**3,790,370**	**495,957**	**389,735**	**2,629,268**	**441,682**	**494,845**	**461,226**	**482,074**	**401,365**	**348,076**	**275,410**	
Total Information Only Projects	2,108,419	3,765	226,448	1,876,515	262,973	296,175	311,547	308,138	335,711	361,971	1,691	7-1
COMBINED PROGRAM	**5,898,789**	**499,722**	**616,183**	**4,505,783**	**704,655**	**791,020**	**772,773**	**790,212**	**737,076**	**710,047**	**277,101**	

FUNDING PROJECTIONS

SOURCE	EST. TOTAL COST	EXPEND THRU 22	EST. EXPEND 23	TOTAL SIX YEARS	FUNDING SCHEDULE						BEYOND SIX YEARS
					YR 1 24	YR 2 25	YR 3 26	YR 4 27	YR 5 28	YR 6 29	
WSSC Bonds	4,555,754	449,419	533,347	3,425,388	555,400	577,701	568,138	605,733	562,587	555,829	147,600
PAYGO	620,016	-	31,016	479,000	44,000	65,000	80,000	80,000	100,000	110,000	110,000
State Grants	144,351	-	20,400	123,951	20,600	23,351	20,000	20,000	20,000	20,000	-
System Development Charges	245,732	30,224	14,438	190,402	36,945	40,920	31,120	34,855	27,988	18,574	10,668
Contributions/Other	263,069	19,318	7,638	236,111	36,840	73,118	65,095	40,239	20,025	794	2
Government Contributions	52,440	191	4,977	38,441	6,328	6,388	6,717	7,682	6,476	4,850	8,831
Federal Grants	17,427	570	4,367	12,490	4,542	4,542	1,703	1,703	-	-	-
COMBINED PROGRAM	**5,898,789**	**499,722**	**616,183**	**4,505,783**	**704,655**	**791,020**	**772,773**	**790,212**	**737,076**	**710,047**	**277,101**

WSSC WATER FYs 2024 - 2029 COMBINED PROGRAM

NEW PROJECT LISTING

(ALL FIGURES IN THOUSANDS)

AGENCY NUMBER	PROJECT NAME	TOTAL PROJECT COST	SIX YEAR PROGRAM COST	BUDGET YEAR COST	% GROWTH
Montgomery County Sewer Projects					
S - 000085.23	Johns Hopkins Medical Research Park Sewer Main	6,545	3,987	828	100%
S - 000103.17	Rose Village Sewer Main	1,864	1,731	897	100%
Prince George's County Sewer Projects					
S - 000086.20	National Capital Business Park Sewer	1,795	1,731	897	100%
	TOTAL	**10,204**	**7,449**	**2,622**	

3 New Projects

WSSC WATER FYs 2024 - 2029 COMBINED PROGRAM

PENDING CLOSE-OUT PROJECT LISTING

(ALL FIGURES IN THOUSANDS)

AGENCY NUMBER	PROJECT NAME	ESTIMATED TOTAL COST	EXPENDITURES THRU FY 22	ESTIMATED EXPENDITURES FY 23	REMARKS
Montgomery County Sewer Projects					
S - 000084.67	Milestone Center Sewer Main	-	-	-	No longer requires CIP-sized pipes.
S - 000085.21	Shady Grove Station Sewer Augmentation	7,652	7,627	25	Project completion expected in FY 23.
Prince George's County Sewer Projects					
S - 000086.19	Southlake Subdivision Sewer	775	682	93	Project completion expected in FY 22.
Bi-County Sewer Projects					
S - 000170.08	Septage Discharge Facility Planning & Implementation	5,332	5,332	-	Staff recommended that the project be closed.
	TOTAL	**13,759**	**13,641**	**118**	

4 Projects Pending Close-Out

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

MONTGOMERY COUNTY WATER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 22	EST. EXPEND 23	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 24	YR 2 25	YR 3 26	YR 4 27	YR 5 28	YR 6 29		
W - 000046.26	Pleasant's Property Water Main Extension	2,207	42	-	2,165	1,949	216	-	-	-	-	-	1-2
W - 000113.20	White Oak Water Mains Augmentation	5,567	25	23	5,519	400	2,436	2,683	-	-	-	-	1-3
W - 000113.21	Viva White Oak Water Main	1,960	-	-	1,960	784	490	294	196	99	97	-	1-4
	TOTALS	9,734	67	23	9,644	3,133	3,142	2,977	196	99	97	-	

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

MONTGOMERY COUNTY SEWER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 22	EST. EXPEND 23	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 24	YR 2 25	YR 3 26	YR 4 27	YR 5 28	YR 6 29		
S - 000036.01	Arcola WWPS & FM	6,498	188	-	6,310	806	2,490	3,014	-	-	-	-	2-3
S - 000061.02	Reddy Branch WWPS & FM	26,187	112	-	14,123	292	292	117	735	735	11,952	11,952	2-4
S - 000063.08	Sam Rice Manor WWPS & FM	7,276	155	-	5,901	305	122	230	610	1,830	2,804	1,220	2-5
S - 000083.07	Ashford Woods WWPS & FM	3,740	120	299	3,321	1,287	1,197	689	148	-	-	-	2-6
S - 000085.22	Shady Grove Neighborhood Center	2,131	257	478	1,396	698	698	-	-	-	-	-	2-7
S - 000085.23	Johns Hopkins Medical Research Park Sewer Main	6,545	75	2,483	3,987	828	1,337	1,822	-	-	-	-	2-8
S - 000094.13	Damascus Town Center WWPS Replacement	10,475	422	743	9,310	3,002	5,980	328	-	-	-	-	2-9
S - 000094.14	Spring Gardens WWPS Replacement	11,765	597	-	11,168	385	55	758	758	4,606	4,606	-	2-10
S - 000103.17	Rose Village Sewer Main	1,864	73	60	1,731	897	536	171	127	-	-	-	2-11
S - 000118.09	Viva White Oak Sewer Main	1,654	-	-	1,654	661	414	248	166	83	82	-	2-12
S - 000151.02	Erickson Bethesda Sewer Main	2,902	176	481	2,245	945	1,033	267	-	-	-	-	2-13
	Projects Pending Close-Out	7,652	7,627	25	-	-	-	-	-	-	-	-	2-14
	TOTALS	88,689	9,802	4,569	61,146	10,106	14,154	7,644	2,544	7,254	19,444	13,172	

Johns Hopkins Medical Research Park Sewer Main

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000085.23		Add

PDF Date	October 1, 2022
Date Revised	

Pressure Zones	
Drainage Basins	Muddy Branch 13
Planning Areas	Gaithersburg & Vicinity PA 20

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'22	Estimate FY'23	Total 6 Years	Year 1 FY'24	Year 2 FY'25	Year 3 FY'26	Year 4 FY'27	Year 5 FY'28	Year 6 FY'29	Beyond 6 Years
Planning, Design & Supervision	1,013	75	360	578	120	194	264				
Land											
Construction	4,688		1,799	2,889	600	969	1,320				
Other	844		324	520	108	174	238				
Total	**6,545**	**75**	**2,483**	**3,987**	**828**	**1,337**	**1,822**				

C. Funding Schedule (000's)

Contributions/Other	6,545	75	2,483	3,987	828	1,337	1,822				

D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of approximately 12,390 feet of 15-inch diameter or larger sewer mains to serve the Johns Hopkins Medical Research Park and vicinity. This work will extend service to the new development and replace existing sewer mains downstream of the development.

BENEFIT

Economic Development: This growth project supports the economic development goals of the Counties

JUSTIFICATION

Johns Hopkins Medical Research Park Hydraulic Planning Analysis (February 2022).

COST CHANGE

Not applicable.

OTHER

The present project scope was developed for the FY'24 CIP and has an estimated total cost of $6,545,000. The schedule and expenditure projections shown in Block B above are based upon information provided by the developer. The estimated completion date is developer dependent. No WSSC Water rate supported debt will be used for this project.

COORDINATION

Coordinating Agencies: City of Gaithersburg; Maryland-National Capital Park & Planning Commission; Montgomery County Government
Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	$264	
Debt Service		
Total Cost	$264	
Impact on Water and Sewer Rate		

F. Approval and Expenditure Data (000's)

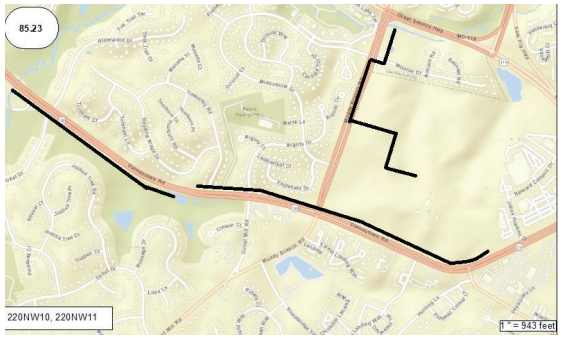
Date First in Program	FY'24
Date First Approved	FY'24
Initial Cost Estimate	6,545
Cost Estimate Last FY	
Present Cost Estimate	6,545
Approved Request Last FY	
Total Expense & Encumbrances	75
Approval Request Year 1	828

G. Status Information

Land Status	Not Applicable
Project Phase	Planning
Percent Complete	0 %
Estimated Completion Date	Developer Dependent

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	

H. Map



Rose Village Sewer Main

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000103.17		Add

PDF Date	October 1, 2022
Date Revised	

Pressure Zones	
Drainage Basins	Cabin John 07
Planning Areas	Potomac-Cabin John & Vicinity PA 29

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'22	Estimate FY'23	Total 6 Years	Year 1 FY'24	Year 2 FY'25	Year 3 FY'26	Year 4 FY'27	Year 5 FY'28	Year 6 FY'29	Beyond 6 Years
Planning, Design & Supervision	695	73	52	570	313	206	40	11			
Land											
Construction	935			935	467	260	109	99			
Other	234		8	226	117	70	22	17			
Total	**1,864**	**73**	**60**	**1,731**	**897**	**536**	**171**	**127**			

C. Funding Schedule (000's)

Contributions/Other	1,864	73	60	1,731	897	536	171	127			

D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of approximately 1,728 feet of 30-inch to 33-inch diameter sewer main to serve the Rose Village development. These sewers will replace existing sewer mains.

BENEFIT

Economic Development: This growth project supports the economic development goals of the Counties

JUSTIFICATION

Rose Village Hydraulic Planning Analysis (January 2022).

COST CHANGE

Not applicable.

OTHER

The present project scope was developed for the FY'24 CIP and has an estimated total cost of $1,864,000. The schedule and expenditure projections shown in Block B above are based upon information provided by the developer. The estimated completion date is developer dependent. No WSSC Water rate supported debt will be used for this project.

COORDINATION

Coordinating Agencies: Maryland Department of the Environment; Maryland-National Capital Park & Planning Commission; Montgomery County Government
Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service		
Total Cost		
Impact on Water and Sewer Rate		

F. Approval and Expenditure Data (000's)

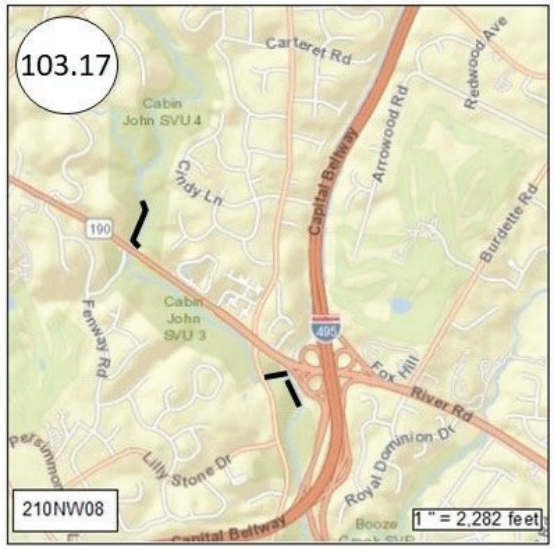
Date First in Program	FY'24
Date First Approved	FY'24
Initial Cost Estimate	1,864
Cost Estimate Last FY	
Present Cost Estimate	1,864
Approved Request Last FY	
Total Expense & Encumbrances	73
Approval Request Year 1	897

G. Status Information

Land Status	Not Applicable
Project Phase	Planning
Percent Complete	0 %
Estimated Completion Date	Developer Dependent

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	50,915
Capacity	

H. Map



FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

BI-COUNTY WATER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 22	EST. EXPEND 23	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 24	YR 2 25	YR 3 26	YR 4 27	YR 5 28	YR 6 29		
W - 000073.30	Potomac WFP Submerged Channel Intake	97,456	2,267	-	-	-	-	-	-	-	-	95,189	3-3
W - 000073.32	Potomac WFP Main Zone Pipeline	115,702	1,987	315	113,400	4,725	4,725	18,900	34,125	34,125	16,800	-	3-4
W - 000073.33	Potomac WFP Consent Decree Program	194,642	35,042	30,450	129,150	32,550	32,550	32,550	31,500	-	-	-	3-6
W - 000161.01	Large Diameter Water Pipe & Large Valve Rehabilitation Program	786,477	-	51,563	734,914	79,326	94,582	102,325	132,727	162,919	163,035	-	3-7
W - 000161.02	I-495/I-270 Traffic Relief Plan Pipeline Relocations	193,557	381	68	193,108	19,642	57,934	57,809	38,496	19,227	-	-	3-9
W - 000172.07	Patuxent Raw Water Pipeline	33,369	22,193	10,615	561	561	-	-	-	-	-	-	3-10
W - 000175.05	Regional Water Supply Resiliency	16,857	-	4,367	12,490	4,542	4,542	1,703	1,703	-	-	-	3-11
W - 000202.00	Land & Rights-of-Way Acquisition - Bi-County Water	8,815	-	1,645	6,570	1,095	1,095	1,095	1,095	1,095	1,095	600	3-12
	TOTALS	1,446,875	61,870	99,023	1,190,193	142,441	195,428	214,382	239,646	217,366	180,930	95,789	

Potomac WFP Consent Decree Program

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000073.33	173801	Change

PDF Date	October 1, 2022
Date Revised	

Pressure Zones	Potomac WFP HGPOWF
Drainage Basins	
Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'22	Estimate FY'23	Total 6 Years	Year 1 FY'24	Year 2 FY'25	Year 3 FY'26	Year 4 FY'27	Year 5 FY'28	Year 6 FY'29	Beyond 6 Years
Planning, Design & Supervision	36,373	17,373	4,000	15,000	4,000	4,000	4,000	3,000			
Land	1,000	1,000									
Construction	149,669	16,669	25,000	108,000	27,000	27,000	27,000	27,000			
Other	7,600		1,450	6,150	1,550	1,550	1,550	1,500			
Total	**194,642**	**35,042**	**30,450**	**129,150**	**32,550**	**32,550**	**32,550**	**31,500**			

C. Funding Schedule (000's)

WSSC Bonds	194,642	35,042	30,450	129,150	32,550	32,550	32,550	31,500			

D. Description & Justification

DESCRIPTION

The Potomac WFP Consent Decree Program provides for the planning, design, and construction required for the implementation of Short-Term Operational and Long-Term Capital Improvements at the Potomac Water Filtration Plant (WFP) to allow WSSC Water to meet the new discharge limitations identified in the Consent Decree.

BENEFIT

Regulatory & Other Agreements: This project is required to meet regulatory requirements, multi-jurisdictional agreements, and/or consent decrees; Environmental Sustainability: This project supports WSSC Water's commitment to protect the natural environment of Prince George's and Montgomery Counties

JUSTIFICATION

The Consent Decree (CD) was Entered by the U.S. District Court of Maryland on April 15, 2016. Under the terms of the CD WSSC Water is required to "undertake short-term operational changes and capital improvements at the Potomac WFP that will enable WSSC Water to reduce significantly the pounds per day of solids discharged to the River" (CD Section II. Paragraph 6.i); and to plan, design, and implement long-term "upgrades to the existing Plant or to design and construct a new plant to achieve the effluent limits, conditions, and waste load allocations established by the Maryland Department of the Environment (the Department) and/or in this Consent Decree, and incorporated in a new discharge permit to be issued by the Department" (CD Section II. Paragraph 6.ii). The CD required WSSC Water to submit a Draft Audit Report and Draft Long-Term Upgrade Plan to the Citizens and the Department by November 15, 2016, and final reports to the Citizens and the Department by January 1, 2017. The Final Audit and Long-Term Upgrade Plan Reports were submitted to the Citizens and the Department on December 29, 2016. The Department reviews the Audit Report and selects recommended improvements in operations, monitoring, and waste tracking, along with select capital projects that can be completed no later than April 1, 2020 and that are necessary to achieve the goals identified in CD Section IV. Paragraph 24. Additionally, the work required to implement the Long-Term Capital Improvements Project(s) shall be fully implemented in accordance with the schedule set forth in the Long-Term Upgrade Plan. WSSC Water shall be subject to a lump-sum stipulated penalty in accordance with the CD for failure to implement the Long-Term Capital Improvement Project(s) by January 1, 2026.

COST CHANGE

The expenditure projections were updated to reflect actual bids for the sedimentation basin upgrades.

OTHER

The project scope has remained the same. The schedule and expenditure projections shown in Block B above are a mix of actual bids and design level estimates and include $1,000,000 for Supplemental Environmental Projects included under CD Section IX. Paragraph 50. WSSC Water Green Bonds will be utilized to fund a portion of this project. The reduction in suspended solids discharged into the Potomac River will address the following International Capital Market Association (ICMA) Green Bond Principles 2016 categories: Pollution prevention/control; and Terrestrial and aquatic biodiversity conservation.

COORDINATION

Coordinating Agencies: Maryland Department of the Environment; Montgomery County Government; National Park Service; Prince George's County Government; U.S. Environmental Protection Agency, Region III
Coordinating Projects: W - 000073.30 - Potomac WFP Submerged Channel Intake; W - 000073.32 - Potomac WFP Main Zone Pipeline

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	$12,662	28
Total Cost	$12,662	28
Impact on Water and Sewer Rate	$0.03	28

F. Approval and Expenditure Data (000's)

Date First in Program	FY'17
Date First Approved	FY'16
Initial Cost Estimate	27,250
Cost Estimate Last FY	182,298
Present Cost Estimate	194,642
Approved Request Last FY	25,200
Total Expense & Encumbrances	35,042
Approval Request Year 1	32,550

G. Status Information

Land Status	Land Acquired
Project Phase	Construction
Percent Complete	0 %
Estimated Completion Date	January 2027

Growth	
System Improvement	
Environmental Regulation	100%
Population Served	
Capacity	

H. Map

MAP NOT AVAILABLE

Large Diameter Water Pipe & Large Valve Rehabilitation Program

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000161.01	113803	Change

PDF Date	October 1, 2022
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'22	Estimate FY'23	Total 6 Years	Year 1 FY'24	Year 2 FY'25	Year 3 FY'26	Year 4 FY'27	Year 5 FY'28	Year 6 FY'29	Beyond 6 Years
Planning, Design & Supervision	63,403		6,921	56,482	7,673	8,291	8,812	9,549	10,310	11,847	
Land											
Construction	651,577		39,953	611,624	64,441	77,693	84,211	111,115	137,798	136,366	
Other	71,497		4,689	66,808	7,212	8,598	9,302	12,063	14,811	14,822	
Total	**786,477**		**51,563**	**734,914**	**79,326**	**94,582**	**102,325**	**132,727**	**162,919**	**163,035**	

C. Funding Schedule (000's)

WSSC Bonds	786,477		51,563	734,914	79,326	94,582	102,325	132,727	162,919	163,035	

D. Description & Justification

DESCRIPTION

The purpose of this program is to plan, inspect, design, and rehabilitate or replace large diameter water transmission mains and large system valves that have reached the end of their useful life. Condition assessment and/or corrosion monitoring is performed on metallic pipelines, including ductile iron, cast iron, and steel, to identify lengths of pipe requiring replacement or rehabilitation and cathodic protection. The PCCP Inspection and Condition Assessment and Monitoring Program identifies individual pipe segments that require repair or replacement to assure the continued safe and reliable operation of the pipeline. The program also identifies extended lengths of pipe that require the replacement of an increased number of pipe segments in varying stages of deterioration that are most cost effectively accomplished by the replacement or rehabilitation of long segments of the pipeline or the entire pipeline. Rehabilitation or replacement of these mains provides value to the customer by minimizing the risk of failure and ensuring a safe and reliable water supply. The program includes installation of Acoustic Fiber Optic Monitoring equipment in order to accomplish these goals in PCCP mains.

*EXPENDITURES FOR LARGE DIAMETER WATER PIPE REHABILITATION ARE EXPECTED TO CONTINUE INDEFINITELY.

BENEFIT

Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life; System Reliability: This project will improve service reliability through fewer and shorter service interruptions; Environmental Sustainability: This project supports WSSC Water's commitment to protect the natural environment of Prince George's and Montgomery Counties

JUSTIFICATION

WSSC Water has approximately 1,031 miles of large diameter water main ranging from 16-inches to 96-inches in diameter. This includes 335 miles of cast iron, 326 miles of ductile iron, 35 miles of steel, and 335 miles of PCCP. Internal inspection and condition assessment is performed on PCCP pipelines 36-inches and larger in diameter. Of the 335 miles of PCCP, 140 miles are 36-inch diameter and larger. The inspection program includes internal visual and sounding, sonic/ultrasonic testing, and electromagnetic testing to establish the condition of each pipe section and determine if maintenance repairs, rehabilitation, or replacement are needed.

The planning and design phase evaluates the alignment, hydraulic capacity, and project coordination, among other factors, in an effort to re-engineer these pipelines to meet today's design standards. The design effort includes the preparation of bid ready contract documents including all needed rights-of-way acquisitions and regulatory permits. The constructed system is inspected and an as-built plan is produced to serve as the renewed asset record.

In July 2013, WSSC Water's Acoustic Fiber Optic monitoring system identified breaking wires in a 54-inch diameter PCCP water transmission main in the Forestville area of Prince George's County. Upon attempting to close nearby valves to isolate the failing pipe for repair, WSSC Water crews encountered an inoperable valve with a broken gear, requiring the crew to drop back to the next available valve. This dropping-back to another valve would block one of the major water mains serving Prince George's County, significantly enlarging the shutdown area and reduce our capacity to supply water to over 100,000 residents. In order to minimize the risk associated with inoperable large valves and possible water outages, the large valve inspection and repair program was initiated to systematically inspect, exercise, repair, or replace any of the nearly 1,500 large diameter valves and vaults located throughout the system.

Utility Wide Master Plan (December 2007); 30 Year Infrastructure Plan (2007); FY'24 Water Network Asset Management Plan (May 2022).

COST CHANGE

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	$51,161	
Total Cost	$51,161	
Impact on Water and Sewer Rate	$0.11	

F. Approval and Expenditure Data (000's)

Date First in Program	FY'11
Date First Approved	FY'11
Initial Cost Estimate	
Cost Estimate Last FY	576,383
Present Cost Estimate	786,477
Approved Request Last FY	45,675
Total Expense & Encumbrances	
Approval Request Year 1	79,326

G. Status Information

Land Status	Not Applicable
Project Phase	On-Going
Percent Complete	0 %
Estimated Completion Date	On-Going

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

H. Map

MAP NOT AVAILABLE

Program costs reflect the latest schedule and expenditure estimates based upon the recommendations from the Buried Water Assets System Asset Management Plan.

OTHER

The project scope has remained the same. The schedule and expenditure projections shown in Block B above are order of magnitude estimates and are expected to change based upon the results of the on-going inspections and condition assessments. Additional costs associated with PCCP inspection/condition assessment, large valve inspection/repairs, and emergency repairs are included in the Operating Budget. WSSC Water Green Bonds will be utilized to fund a portion of this project. The annual replacement work for large diameter water mains will address the following International Capital Market Association (ICMA) Green Bond Principles 2016 category: Sustainable water management.

COORDINATION

Coordinating Agencies: Local Community Civic Associations; Maryland State Highway Administration; Maryland-National Capital Park & Planning Commission; Montgomery County Department of Public Works and Transportation; Montgomery County Government;(including localities where work is to be performed); Prince George's County Government;(including localities where work is to be performed); Prince George's County Department of Permitting Inspection and Enforcement
Coordinating Projects: W - 000001.00 - Water Reconstruction Program; W - 000107.00 - Specialty Valve Vault Rehabilitation Program

I-495/I-270 Traffic Relief Plan Pipeline Relocations

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000161.02	382306	Change

PDF Date	October 1, 2022
Date Revised	

Pressure Zones	Cabin John 350A; Falls Road 552A; Montgomery High
Drainage Basins	Cabin John 07; Muddy Branch 13; Rock Run 1; Watts Branch
Planning Areas	Gaithersburg & Vicinity PA 20; Potomac-Cabin John & Vicinity

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'22	Estimate FY'23	Total 6 Years	Year 1 FY'24	Year 2 FY'25	Year 3 FY'26	Year 4 FY'27	Year 5 FY'28	Year 6 FY'29	Beyond 6 Years
Planning, Design & Supervision	25,115	374	65	24,676	2,784	7,403	7,285	4,816	2,388		
Land											
Construction	159,242	7		159,235	15,922	47,772	47,771	31,847	15,923		
Other	9,200		3	9,197	936	2,759	2,753	1,833	916		
Total	**193,557**	**381**	**68**	**193,108**	**19,642**	**57,934**	**57,809**	**38,496**	**19,227**		

C. Funding Schedule (000's)

Contributions/Other	193,557	381	68	193,108	19,642	57,934	57,809	38,496	19,227		

D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of water and sewer pipe relocations necessitated by the State of Maryland's plans to expand I-495 and I-270.

BENEFIT

Regulatory & Other Agreements: This project is required to meet regulatory requirements, multi-jurisdictional agreements, and/or consent decrees

JUSTIFICATION

In September 2017, the Maryland Department of Transportation (MDOT) State Highway Administration (SHA) announced a proposed highway improvement project to widen I-495 and I-270 in Montgomery and Prince George's Counties. January 2020, the Maryland Board of Public Works set a condition that the process start with Phase 1 of the project, which focuses on I-495 from the George Washington Memorial Parkway in Virginia to I-270 in Maryland and on I-270 from I-495 to I-70. February 2020, MDOT SHA issued a request for qualifications for preliminary development activities for Phase 1. July 2020, the Federal Highway Administration (FHWA) and MDOT SHA completed the draft environmental impact statement (DEIS). December 2020, a request for proposals was issued by MDOT and the Maryland Transportation Authority (MDTA) for a Phase 1 developer. January 2021, MDOT SHA recommended that Alternative 9 be identified as the preferred alternative in the DEIS. February 2021, MDOT and MDTA announced the selection of Accelerate Maryland Partners, LLC to lead the predevelopment work on Phase 1. May 2021, Alternative 9: Phase 1 South was announced as the new recommended preferred alternative by FHWA and MDOT SHA. This alternative focuses on adding two high occupancy toll (HOT) managed lanes in each direction for I-495 from the George Washington Memorial Parkway in Virginia to east of MD 187 in Maryland, for I-270 from I-495 to I-370, and on the I-270 eastern spur from east of MD 187 to I-270. This alternative includes the construction of a new American Legion Bridge.

The preliminary plans indicate that the proposed MDOT SHA project will impact water and sewer assets owned by WSSC Water that are located in the I-495 and I-270 corridors within the WSSD. The impacted pipes range from 6 to 96-inches in diameter. WSSC Water has an existing memorandum of understanding (MOU) agreement with MDOT SHA to review and coordinate potential impacts to existing WSSC Water infrastructure to accommodate MDOT SHA highway improvement projects. Negotiations on a Framework Agreement to ensure this project poses no financial impact to ratepayers are underway.

COST CHANGE

Not applicable.

OTHER

The project scope has remained the same. The schedule and expenditure projections shown in Block B above are order of magnitude estimates based upon Alternative 9: Phase 1 South and are expected to change based upon site conditions and design constraints. The estimated completion date is developer dependent. No WSSC Water rate supported debt will be used for this project.

COORDINATION

Coordinating Agencies: Maryland State Department of Transportation; Maryland State Highway Administration; Maryland-National Capital Park & Planning Commission; Montgomery County Government; Prince George's County Government
Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service		
Total Cost		
Impact on Water and Sewer Rate		

F. Approval and Expenditure Data (000's)

Date First in Program	FY'23
Date First Approved	FY'23
Initial Cost Estimate	182,600
Cost Estimate Last FY	182,600
Present Cost Estimate	193,557
Approved Request Last FY	18,555
Total Expense & Encumbrances	381
Approval Request Year 1	19,642

G. Status Information

Land Status	Not Applicable
Project Phase	Planning
Percent Complete	0 %
Estimated Completion Date	TBD

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

H. Map

MAP NOT APPLICABLE

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

BI-COUNTY SEWER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 22	EST. EXPEND 23	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 24	YR 2 25	YR 3 26	YR 4 27	YR 5 28	YR 6 29		
S - 000022.06	Blue Plains WWTP: Liquid Train Projects, Part 2	326,696	-	26,124	218,619	23,800	26,514	34,378	50,205	45,556	38,166	81,953	4-3
S - 000022.07	Blue Plains WWTP: Biosolids Management, Part 2	97,319	-	15,287	52,423	15,521	10,269	5,846	5,935	7,175	7,677	29,609	4-4
S - 000022.09	Blue Plains WWTP: Plant-wide Projects	128,926	-	13,365	99,443	15,214	18,192	22,766	22,528	8,806	11,937	16,118	4-5
S - 000022.11	Blue Plains: Pipelines & Appurtenances	225,898	-	13,714	187,081	16,452	18,446	37,132	51,669	41,235	22,147	25,103	4-6
S - 000089.24	Anacostia #2 WWPS Upgrades	64,087	2,727	10,177	51,183	24,555	23,254	3,374	-	-	-	-	4-7
S - 000103.02	Piscataway Bioenergy	334,835	234,119	64,092	36,624	29,253	7,161	210	-	-	-	-	4-8
S - 000170.09	Trunk Sewer Reconstruction Program	386,144	-	64,130	322,014	55,176	47,726	51,701	52,438	55,585	59,388	-	4-10
S - 000203.00	Land & Rights-of-Way Acquisition - Bi-County Sewer	2,180	-	210	1,970	195	595	595	195	195	195	-	4-12
	Projects Pending Close-Out	5,332	5,332	-	-	-	-	-	-	-	-	-	4-13
	TOTALS	1,571,417	242,178	207,099	969,357	180,166	152,157	156,002	182,970	158,552	139,510	152,783	

BLUE PLAINS WASTEWATER TREATMENT PLANT PROJECTS

(COSTS IN THOUSANDS)

AGENCY NUMBER	PROJECT NAME	ADOPTED FY'23 TOTAL COST	PROPOSED FY'24 TOTAL COST	CHANGE $	CHANGE %	SIX-YEAR COST	COMPLETION DATE (est)
S-22.06	Blue Plains WWTP: Liquid Train Projects, Part 2	$354,275	$326,696	($27,579)	-7.8%	$218,619	On-Going
S-22.07	Blue Plains WWTP: Biosolids Management, Part 2	90,043	97,319	7,276	8.1%	52,423	On-Going
S-22.09	Blue Plains WWTP: Plant-wide Projects	114,208	128,926	14,718	12.9%	99,443	On-Going
S-22.11	Blue Plains: Pipelines & Appurtenances	220,994	225,898	4,904	2.2%	187,081	On-Going
	TOTALS	**$779,520**	**$778,839**	**($681)**	**-0.1%**	**$557,566**	

Summary: These four projects, with an estimated total cost of $778.8 million, provide funding for the upgrade, expansion, and enhancement of wastewater treatment and solids handling facilities at the regional Blue Plains Wastewater Treatment Plant, located in the District of Columbia. Whereas typical WSSC Water projects encompass planning, design, construction, and start-up for a single project, with defined starting and ending dates, the Blue Plains projects are comprised of many sub-projects and are "open-ended." As the Blue Plains Facility Plans move forward and new sub-projects are approved, the costs of these new sub-projects are added to the appropriate existing Blue Plains project. The expenditures displayed represent WSSC Water's calculated share. There are four main funding divisions: liquid treatment train (S-22.06); biosolids management (S-22.07); plant-wide projects (S-22.09); and, pipelines & appurtenances (S-22.11).

Cost Impact: These four Blue Plains projects, which comprise one of the largest groups of expenditures in the CIP, represent 21% of the Six-Year WSSC Water CIP program. The figures shown above are derived from the latest available spending projections provided by the District of Columbia Water and Sewer Authority (DCWASA). Spending at the DCWASA staff-proposed rate in future years may challenge the WSSC Water's ability to stay within County-established spending affordability limits. It is, therefore, recommended that the coordination of development and approval of the DCWASA's and WSSC Water's CIPs be sustained in order that the economic development and environmental objectives of the region be met, without causing a rapid increase in WSSC Water customers' bills.

Blue Plains WWTP: Liquid Train Projects, Part 2

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000022.06	954811	Change

PDF Date	October 1, 2022
Date Revised	

Pressure Zones	
Drainage Basins	Bi-County 30
Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'22	Estimate FY'23	Total 6 Years	Year 1 FY'24	Year 2 FY'25	Year 3 FY'26	Year 4 FY'27	Year 5 FY'28	Year 6 FY'29	Beyond 6 Years
Planning, Design & Supervision											
Land											
Construction	323,461		25,865	216,454	23,564	26,251	34,038	49,708	45,105	37,788	81,142
Other	3,235		259	2,165	236	263	340	497	451	378	811
Total	**326,696**		**26,124**	**218,619**	**23,800**	**26,514**	**34,378**	**50,205**	**45,556**	**38,166**	**81,953**

C. Funding Schedule (000's)

WSSC Bonds	308,763		24,690	206,619	22,494	25,059	32,491	47,449	43,055	36,071	77,454
City of Rockville	17,933		1,434	12,000	1,306	1,455	1,887	2,756	2,501	2,095	4,499

D. Description & Justification

DESCRIPTION

This project provides funding for WSSC Water's share of Blue Plains liquid train projects for which construction began after June 30, 1993. This project is comprised of 24 projects that have been identified and prioritized by DC Water in their capital program. Projects with significant spending in FY'24 include: upgrades to the grit, screening, and primary treatment systems (BQ); upgrading effluent filters (IY); replacing/upgrading the primary clarifier mechanical components (J2); improvements to the headworks influent structures (BC); and nitrification reactors/sedimentation upgrades (PE).

BENEFIT

Regulatory & Other Agreements: This project is required to meet regulatory requirements, multi-jurisdictional agreements, and/or consent decrees; Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life

JUSTIFICATION

This is a continuation of the DC Water's upgrading of the Blue Plains Wastewater Treatment Plant.
Blue Plains Inter-Municipal Agreement of 2012; DCWASA Master Plan (1998); Blue Plains Facilities Master Plan (2016); and DC Water FY'23 Capital Improvements Program.

COST CHANGE

The schedule and expenditure projections were updated to reflect the latest estimates available from DC Water for the constituent Blue Plains joint-use projects as of May 2022.

OTHER

The project scope has remained the same. Project costs are derived from the DC Water Capital & Operating Budget 10-year forecast of spending and DC Water's latest project management data, and fully reflect DC Water's current cost estimates and expenditure schedules. Given the open-ended nature of the Blue Plains projects, this PDF does not fully reflect the total project costs. These projects are, in fact, expected to continue indefinitely. As new sub-projects are added to the Blue Plains facility plans, the associated costs will be added to this project. The funding schedule also indicates the calculated Rockville share of the cost.

COORDINATION

Coordinating Agencies: City of Rockville;(responsible for a share of funding); DC Water;(responsible for design and construction)
Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	$20,085	
Total Cost	$20,085	
Impact on Water and Sewer Rate	$0.05	

F. Approval and Expenditure Data (000's)

Date First in Program	FY'95
Date First Approved	FY'95
Initial Cost Estimate	
Cost Estimate Last FY	354,275
Present Cost Estimate	326,696
Approved Request Last FY	26,124
Total Expense & Encumbrances	
Approval Request Year 1	23,800

G. Status Information

Land Status	Not Applicable
Project Phase	On-Going
Percent Complete	0 %
Estimated Completion Date	On-Going

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	169.6 / 370 MGD

H. Map

MAP NOT AVAILABLE

Blue Plains WWTP: Biosolids Management, Part 2

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000022.07	954812	Change

PDF Date	October 1, 2022
Date Revised	

Pressure Zones	
Drainage Basins	Bi-County 30
Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'22	Estimate FY'23	Total 6 Years	Year 1 FY'24	Year 2 FY'25	Year 3 FY'26	Year 4 FY'27	Year 5 FY'28	Year 6 FY'29	Beyond 6 Years
Planning, Design & Supervision											
Land											
Construction	96,355		15,136	51,903	15,367	10,167	5,788	5,876	7,104	7,601	29,316
Other	964		151	520	154	102	58	59	71	76	293
Total	**97,319**		**15,287**	**52,423**	**15,521**	**10,269**	**5,846**	**5,935**	**7,175**	**7,677**	**29,609**

C. Funding Schedule (000's)

WSSC Bonds	91,977		14,448	49,545	14,669	9,705	5,525	5,609	6,781	7,256	27,984
City of Rockville	5,342		839	2,878	852	564	321	326	394	421	1,625

D. Description & Justification

DESCRIPTION

This project provides funding for WSSC Water's share of the Blue Plains biosolids processes for which construction began after June 30, 1993. There are 9 projects from the DC Water capital program that are covered by the WSSC Water capital project. The projects that make up the majority of the FY'24 anticipated spending include: gravity thickener facility upgrades phase II (BX); biosolids blending development center (I3); additional centrifuges for pre-digestion dewatering (LD); biosolids process rehabilitation (RM); and upgrades to the solids processing building/DSLF (XZ). Starting in FY'28 are planned upgrades to the DAF facility (XY).

BENEFIT

Regulatory & Other Agreements: This project is required to meet regulatory requirements, multi-jurisdictional agreements, and/or consent decrees; Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life

JUSTIFICATION

This project is needed to implement, upgrade, expand and rehabilitate various facilities that provide treatment and management of the Class A bio-solids program for Blue Plains. Blue Plains Inter-Municipal Agreement of 2012; DCWASA Master Plan (1998); EPMC IV Facility Plan, CH2MHILL (2001); Bio-solids Management at DCWASA Blue Plains Wastewater Treatment Plant Phase II - Design and Cost Considerations for Treatment Alternatives Report (December 2007); Blue Plains Facilities Master Plan (2016); and DC Water FY'23 Capital Improvements Program.

COST CHANGE

The schedule and expenditure projections were updated to reflect the latest estimates available from DC Water for the constituent Blue Plains joint-use projects as of May 2022.

OTHER

The project scope has remained the same. Project costs are derived from the DC Water Capital & Operating Budget 10-year forecast of spending and DC Water's latest project management data, and fully reflect DC Water's current cost estimates and expenditure schedules. Given the open-ended nature of the Blue Plains projects, this PDF does not fully reflect the total project costs. These projects are, in fact, expected to continue indefinitely. As new sub-projects are added to the Blue Plains facility plans, the associated costs will be added to this project. Portions of the program have been financed by low interest loans through the Maryland Department of the Environment's Water Quality Administration State Revolving Loan Program. The funding schedule also indicates the calculated Rockville share of the cost.

COORDINATION

Coordinating Agencies: City of Rockville;(responsible for a share of funding); DC Water;(responsible for design and construction)
Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	$5,983	
Total Cost	$5,983	
Impact on Water and Sewer Rate	$0.01	

F. Approval and Expenditure Data (000's)

Date First in Program	FY'95
Date First Approved	FY'95
Initial Cost Estimate	
Cost Estimate Last FY	90,043
Present Cost Estimate	97,319
Approved Request Last FY	15,287
Total Expense & Encumbrances	
Approval Request Year 1	15,521

G. Status Information

Land Status	Not Applicable
Project Phase	On-Going
Percent Complete	0 %
Estimated Completion Date	On-Going

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	169.6 / 370 MGD

H. Map

MAP NOT AVAILABLE

Blue Plains WWTP: Plant-wide Projects

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000022.09	023805	Change

PDF Date	October 1, 2022
Date Revised	

Pressure Zones	
Drainage Basins	Bi-County 30
Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'22	Estimate FY'23	Total 6 Years	Year 1 FY'24	Year 2 FY'25	Year 3 FY'26	Year 4 FY'27	Year 5 FY'28	Year 6 FY'29	Beyond 6 Years
Planning, Design & Supervision											
Land											
Construction	127,650		13,233	98,459	15,063	18,012	22,541	22,305	8,719	11,819	15,958
Other	1,276		132	984	151	180	225	223	87	118	160
Total	**128,926**		**13,365**	**99,443**	**15,214**	**18,192**	**22,766**	**22,528**	**8,806**	**11,937**	**16,118**

C. Funding Schedule (000's)

WSSC Bonds	121,848		12,631	93,984	14,379	17,193	21,516	21,291	8,323	11,282	15,233
City of Rockville	7,078		734	5,459	835	999	1,250	1,237	483	655	885

D. Description & Justification

DESCRIPTION

This project provides funding for WSSC Water's share of Blue Plains plant-wide projects for which construction began after June 30, 1993. There are 25 DC Water capital program projects covered by the WSSC Water capital project. Current projects with significant spending in FY'24 include: electrical system upgrades (TZ); floodwall construction (JF); plant-site drainage improvements (OE); process computer control system (IV and LX); and other miscellaneous projects.

BENEFIT

Regulatory & Other Agreements: This project is required to meet regulatory requirements, multi-jurisdictional agreements, and/or consent decrees; Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life

JUSTIFICATION

This is a continuation of DC Water's upgrading of the Blue Plains Wastewater Treatment Plant.
Blue Plains Inter-Municipal Agreement of 2012; DCWASA Master Plan (1998); Blue Plains Facilities Master Plan (2016); and DC Water FY'23 Capital Improvements Program.

COST CHANGE

The schedule and expenditure projections were updated to reflect the latest estimates available from DC Water for the constituent Blue Plains joint-use projects as of May 2022.

OTHER

The project scope has remained the same. Project costs are derived from the DC Water Capital & Operating Budget 10-year forecast and latest project management data, and reflect DC Water's current expenditure estimates and schedules. Given the open-ended nature of the project, this PDF does not fully reflect the total project costs. These projects are, in fact, expected to continue indefinitely. As new sub-projects are added to the Blue Plains facility plans, the associated costs will be added to this project. The funding schedule also indicates the calculated Rockville share of the cost.

COORDINATION

Coordinating Agencies: City of Rockville;(responsible for a share of funding); DC Water;(responsible for design and construction)
Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	$7,926	
Total Cost	$7,926	
Impact on Water and Sewer Rate	$0.02	

F. Approval and Expenditure Data (000's)

Date First in Program	FY'95
Date First Approved	FY'02
Initial Cost Estimate	
Cost Estimate Last FY	114,208
Present Cost Estimate	128,926
Approved Request Last FY	13,365
Total Expense & Encumbrances	
Approval Request Year 1	15,214

G. Status Information

Land Status	Not Applicable
Project Phase	On-Going
Percent Complete	0 %
Estimated Completion Date	On-Going

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	169.6 / 370 MGD

H. Map

MAP NOT AVAILABLE

Blue Plains: Pipelines & Appurtenances

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000022.11	113804	Change

PDF Date	October 1, 2022
Date Revised	

Pressure Zones	
Drainage Basins	Bi-County 30
Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'22	Estimate FY'23	Total 6 Years	Year 1 FY'24	Year 2 FY'25	Year 3 FY'26	Year 4 FY'27	Year 5 FY'28	Year 6 FY'29	Beyond 6 Years
Planning, Design & Supervision											
Land											
Construction	223,660		13,578	185,228	16,289	18,263	36,764	51,157	40,827	21,928	24,854
Other	2,238		136	1,853	163	183	368	512	408	219	249
Total	**225,898**		**13,714**	**187,081**	**16,452**	**18,446**	**37,132**	**51,669**	**41,235**	**22,147**	**25,103**

C. Funding Schedule (000's)

WSSC Bonds	208,262		12,460	172,521	14,840	16,659	34,111	48,306	38,137	20,468	23,281
City of Rockville	17,636		1,254	14,560	1,612	1,787	3,021	3,363	3,098	1,679	1,822

D. Description & Justification

DESCRIPTION

This project provides funding for WSSC Water's share of Blue Plains-associated projects which are generally situated "outside the fence" of the treatment plant. There are 48 projects from the DC Water capital program under this project. Major projects in FY'24 include: rehabilitation of various portions of the Potomac Interceptor (LZ); reactivation of the Anacostia FM/GS (PJ); on-going construction associated with the Combined Sewer Overflow (CSO) Long Term Control Plan - for the Northeast Boundary Tunnel (CY) and the Potomac River Tunnel (CZ); rehabilitation of the BP Influent Sewers (HS); and modifications to the historic building that houses the Main PS (SD).

BENEFIT

Regulatory & Other Agreements: This project is required to meet regulatory requirements, multi-jurisdictional agreements, and/or consent decrees; Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life; Environmental Sustainability: This project supports WSSC Water's commitment to protect the natural environment of Prince George's and Montgomery Counties

JUSTIFICATION

This is a continuation of DC Water's upgrading of the Blue Plains-associated projects outside the fence.
Blue Plains Inter-Municipal Agreement of 2012; DCWASA Master Plan (1998); Technical Memorandum No. 1, Multi-Jurisdictional Use Facilities Capital Cost Allocation (June 2013); and DC Water FY'23 Capital Improvements Program.

COST CHANGE

The schedule and expenditure projections were updated to reflect the latest estimates available from DC Water for the constituent Blue Plains joint-use projects as of May 2022.

OTHER

The project scope has remained the same. Project costs are derived from the DC Water Capital & Operating Budget 10-year forecast and project management data, and reflect DC Water's expenditure estimates and schedules. Given the open-ended nature of the project, this PDF does not fully reflect the total project costs. These projects are, in fact, expected to continue indefinitely. As new sub-projects are added to the Blue Plains facility plans, the associated costs will be added to this project. The funding schedule also indicates the calculated Rockville share of the cost which varies by project based on the City's relative share of WSSC Water's flow as derived in the Multi-Jurisdiction Use Facilities Study.

COORDINATION

Coordinating Agencies: City of Rockville;(responsible for a share of funding); DC Water;(responsible for design and construction)
Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	$13,548	
Total Cost	$13,548	
Impact on Water and Sewer Rate	$0.03	

F. Approval and Expenditure Data (000's)

Date First in Program	FY'11
Date First Approved	FY'02
Initial Cost Estimate	
Cost Estimate Last FY	220,994
Present Cost Estimate	225,898
Approved Request Last FY	13,714
Total Expense & Encumbrances	
Approval Request Year 1	16,452

G. Status Information

Land Status	Not Applicable
Project Phase	On-Going
Percent Complete	0 %
Estimated Completion Date	On-Going

Growth	
System Improvement	45%
Environmental Regulation	55%
Population Served	
Capacity	

H. Map

MAP NOT AVAILABLE

Piscataway Bioenergy

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000103.02	063808	Change

PDF Date	October 1, 2022
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'22	Estimate FY'23	Total 6 Years	Year 1 FY'24	Year 2 FY'25	Year 3 FY'26	Year 4 FY'27	Year 5 FY'28	Year 6 FY'29	Beyond 6 Years
Planning, Design & Supervision	64,545	51,695	7,030	5,820	4,860	950	10				
Land	61	61									
Construction	265,433	182,363	54,010	29,060	23,000	5,870	190				
Other	4,796		3,052	1,744	1,393	341	10				
Total	**334,835**	**234,119**	**64,092**	**36,624**	**29,253**	**7,161**	**210**				

C. Funding Schedule (000's)

WSSC Bonds	330,914	233,549	64,092	33,273	29,253	3,810	210				
Federal Aid	570	570									
State Aid	3,351			3,351		3,351					

D. Description & Justification

DESCRIPTION

This project will develop a comprehensive program for the engineering, design, construction, maintenance, monitoring, and verification necessary to add sustainable energy equipment and systems to produce biogas and electricity at Piscataway WRRF. It will provide a reduction in operations, maintenance, chemicals, biosolids transportation, and biosolids disposal costs. It will also enhance existing operating conditions and reliability while continuing to meet all permit requirements, and ensure a continued commitment to environmental stewardship at WSSC Water sites. The scope of work includes, but is not limited to, the addition of anaerobic digestion equipment; thermal hydrolysis pretreatment equipment; gas cleaning, storage, and upgrade systems; tanks; piping; valves; pumps; biosolids pre- and post-dewatering; cake receiving and blending; cake storage; effluent disinfection systems; instrumentation; flow metering; power measurement; and combined heat and power generation systems.

BENEFIT

Environmental Sustainability: This project supports WSSC Water's commitment to protect the natural environment of Prince George's and Montgomery Counties; Financial Efficiency: This project is expected to increase revenues, decrease expenses, or both; Innovation: This project utilizes new ideas, methods, and/or research to streamline processes, enhance services, and reduce costs

JUSTIFICATION

In March 2009, WSSC Water received approval for a federal Department of Energy grant of $570,900 for the feasibility study/conceptual design phase. On June 16, 2010, WSSC Water awarded the study contract to AECOM Technical Services, Inc., of Laurel, Maryland. The study was completed in December 2011, and the Thermal Hydrolysis/Mesophilic Anaerobic Digestion/Combined Heat & Power facility was recommended to be constructed and was presented to WSSC Water in April 2012.

The EPA is urging wastewater utilities to utilize this commercially available technology (anaerobic digestion) to produce power at a cost below retail electricity, displace purchased fuels for thermal needs, produce renewable fuel for green power programs, enhance power reliability for the wastewater treatment plant to prevent sanitary sewer overflows, reduce biosolids production and improve the health of the Chesapeake Bay, and reduce greenhouse gas (GHG) and other air pollutants. In April 2009, the EPA announced that greenhouse gases contributed to air pollution that may endanger public health or welfare, and began proceedings to regulate CO2 under the Clean Air Act. In June 2014, the EPA announced a proposed rule to reduce carbon emissions from power plants by 30% by 2030, compared to the levels in 2005. Based on AECOM's feasibility study work as of May 2011, a regional/centralized plant design based on a Thermal Hydrolysis/Mesophillic Anaerobic Digestion/Combined Heat & Power (TH/MAD/CHP) process supplemented by restaurant grease fuel was recommended.

The environmental benefits are estimated as follows: recover approximately 2 MW of renewable energy from wastewater biomass; reduce geenhouse gas production; reduce biosolids output; reduce lime demand; maintain permitted nutrient load limits to the Chesapeake Bay; reduce 5 million gallons/year of grease discharge to sewers; and produce pathogen-free Class A Biosolids.

The economic benefits are estimated as follows: recover more than $1.5 million of renewable energy costs/year; reduce biosolids disposal costs by ~ $1.7 million/year; reduce chemical costs; hedge against rising costs of power fuel and chemicals.

Plans & Studies: Appel Consultants, Urban Waste Grease Resource Assessment-NREL (November 1998); Environmental Protection Agency (EPA), Opportunities For and Benefits Of Combined Heat and Power at Wastewater Treatment Facilities (December 2006); Brown & Caldwell, Anaerobic Digestion

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other	$1,865	26
Maintenance		
Debt Service	$21,526	26
Total Cost	$23,391	26
Impact on Water and Sewer Rate	$0.05	26

F. Approval and Expenditure Data (000's)

Date First in Program	FY'15
Date First Approved	FY'10
Initial Cost Estimate	345
Cost Estimate Last FY	333,269
Present Cost Estimate	334,835
Approved Request Last FY	74,708
Total Expense & Encumbrances	234,119
Approval Request Year 1	29,253

G. Status Information

Land Status	Public/Agency owned land
Project Phase	Construction
Percent Complete	50 %
Estimated Completion Date	December 2024

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

H. Map

MAP NOT AVAILABLE

and Electric Generation Options for WSSC (November 2007); Metcalf & Eddy, WSSC Sludge Digestion Study for Piscataway and Seneca (December 2007); Black & Veatch, WSSC Digester Scope and Analysis (December 2007); JMT, Prince George's County Septage (FOG) Discharge Facility Study (February 2008); JMT, Western Research Institute (WRI) Biogas Feasibility Study Scope of Work - WSSC (April 2008); JMT, Montgomery County Septage (FOG) Discharge Facility Study (January 2010); Facility Plan for the Rock Creek Wastewater Treatment Plant (January 2010); AECOM Technical Services, Inc., Anaerobic Digestion/Combined Heat & Power Study (December 2011, Executive Summary Revised May 2013); HDR Inc. Design Development Report (March 2017).

COST CHANGE

Not applicable.

OTHER

The project scope has remained the same. WSSC Water has a defined scope and estimated capital cost, and is able to proceed with the detailed design and construction of the anerobic digestion, biomass, and combined heat and power generation system facilities for treating all biosolids from WSSC Water's Damascus, Seneca, Parkway, Western Branch, and Piscataway WRRFs. The Montgomery and Prince George's County Councils were briefed and approved the project by resolution on November 25, 2014 and September 9, 2014, respectively. In June 2017 WSSC Water was approved for a $3 million grant through the Maryland Department of the Environment's Energy Water Infrastructure Program (EWIP). WSSC Water will continue to apply for other available funding sources. WSSC Water retained the following consulting services: in 2015 - Hawkins, Delafield and Wood - procurement; Raftelis Financial Consultants - financial; in 2016 - HDR Engineering, Inc. for program management and construction management for the Bioenergy project. In September 2017 WSSC Water issued a Request for Proposals (RFP) to two design-build entities for a progressive design-build delivery of the Bioenergy project. Transporting biosolids from Western Branch WRRF to Piscataway was included in the FY'19 program update. A portion of this project will be financed by low interest loans through the Maryland Department of the Environment's Water Quality Administration State Revolving Loan Program. In June 2018 WSSC Water awarded a Progressive Design-Build Contract to PC Construction for the Bioenergy project. In FY'19 the Solids Screenings at Four Remote WRRFs, Contract No. CD6630A19, was incorporated. In January 2020, the Maryland Energy Administration notified WSSC Water of approval of grant funding up to $351,750 for Combined Heat & Power. WSSC Water has also applied for grants from SMECO, a local power utility. In December 2020 Phase 1 of the Bioenergy project was completed. A Gas Supply and Delivery Contract with Washington Gas Light for natural gas delivery to and from the Piscataway WRRF in the amount of $8,510,000 was negotiated and executed on May 10, 2021.

COORDINATION

Coordinating Agencies: Chesapeake Bay Critical Areas; Maryland Department of the Environment; Maryland Energy Administration; Maryland-National Capital Park & Planning Commission;(Mandatory Referral Process); Montgomery County Department of Environmental Protection; Montgomery County Government; Prince George's County Government; SMECO; Washington Gas Light Company
Coordinating Projects: S - 000096.14 - Piscataway WRRF Facility Upgrades; S - 000170.08 - Septage Discharge Facility Planning & Implementation

Trunk Sewer Reconstruction Program

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000170.09	113805	Change

PDF Date	October 1, 2022
Date Revised	

Pressure Zones	
Drainage Basins	Bi-County 30
Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'22	Estimate FY'23	Total 6 Years	Year 1 FY'24	Year 2 FY'25	Year 3 FY'26	Year 4 FY'27	Year 5 FY'28	Year 6 FY'29	Beyond 6 Years
Planning, Design & Supervision	85,765		12,940	72,825	11,312	11,859	11,367	11,892	12,606	13,789	
Land											
Construction	265,273		45,360	219,913	38,848	31,528	35,634	35,778	37,925	40,200	
Other	35,106		5,830	29,276	5,016	4,339	4,700	4,768	5,054	5,399	
Total	**386,144**		**64,130**	**322,014**	**55,176**	**47,726**	**51,701**	**52,438**	**55,585**	**59,388**	

C. Funding Schedule (000's)

WSSC Bonds	386,144		64,130	322,014	55,176	47,726	51,701	52,438	55,585	59,388	

D. Description & Justification

DESCRIPTION

The Trunk Sewer Reconstruction Program provides for the inspection, evaluation, planning, design, and construction required for the rehabilitation of sewer mains and their associated manholes in environmentally sensitive areas (ESAs). This includes both trunk sewers 15-inches in diameter and greater, along with associated smaller diameter pipe less than 15-inches in diameter. The smaller diameter pipe is included due to its location within the ESA. The program also includes planning, design, and construction for the prioritized replacement of force mains.

BENEFIT

Regulatory & Other Agreements: This project is required to meet regulatory requirements, multi-jurisdictional agreements, and/or consent decrees; Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life; Environmental Sustainability: This project supports WSSC Water's commitment to protect the natural environment of Prince George's and Montgomery Counties

JUSTIFICATION

Under the terms of the Consent Decree the WSSC Trunk Sewer Inspection Program inspected all required sewers in 21 basins by December 2010 and completed Sewer System Evaluation Surveys (SSES) for 9 basins. WSSC Water shall conduct rainfall, groundwater, and flow monitoring to determine Inflow/Infiltration (I/I) rates and identify areas of limited capacity through collection system modeling. Where appropriate, WSSC Water shall use additional means to identify sources of I/I, including CCTV, smoke, and/or dye testing. All the Trunk Sewer Inspections, SSES work, and other related collection system evaluations are complete. Due to the delay in receiving permits, as well as Right-of-Entry permissions and subcontractor availability, trunk sewer reconstruction work has been delayed. All USACE and MDE permits have been received. WSSC Sanitary Sewer Overflow Consent Decree (December 7, 2005). Second Amendment to WSSC Sanitary Sewer Overflow Consent Decree (December 4, 2015).

COST CHANGE

Program costs reflect the latest schedule and expenditure estimates based upon the recommendations from the Buried Wastewater Assets System Asset Management Plan.

OTHER

The project scope has remained the same. Reconstruction work will include: reduction of I/I; replacement of substandard sewer segments; in situ lining of sewer segments; pipeline and manhole protection; rebuilding of manholes; and correction of structural defects and poor alignment. The reconstruction work in each sewer basin will be prioritized to most effectively prevent SSOs and backups. A Second Amendment to the Consent Decree extending WSSC Water's deadline to FY'22 was agreed to by the U.S. Environmental Protection Agency, U.S. Department of Justice, and Maryland Department of the Environment and was entered by the U.S. District Court. All construction contracts for ESA work have been awarded and the approved amounts have been utilized in the current budget projections. As actual construction progresses the projections may be updated. Most of the upfront costs are associated with the construction of access roads and by-pass pumping. After completion of a majority of the Priority 1 construction activities associated with the Consent Decree, Phase 2 work (Priority 2 & 3 plus any newly identified Priority 1) is programmed at roughly eight miles per year beginning in FY'25. Future land costs are included in project S-203.00.

COORDINATION

Coordinating Agencies: Maryland Department of Natural Resources; Maryland Department of the Environment; Maryland Historical Trust; Maryland State Highway Administration; Maryland-National Capital Park & Planning Commission; Montgomery County Department of Public Works and Transportation;

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	$25,119	
Total Cost	$25,119	
Impact on Water and Sewer Rate	$0.06	

F. Approval and Expenditure Data (000's)

Date First in Program	FY'11
Date First Approved	FY'11
Initial Cost Estimate	
Cost Estimate Last FY	344,412
Present Cost Estimate	386,144
Approved Request Last FY	56,891
Total Expense & Encumbrances	
Approval Request Year 1	55,176

G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	On-Going
Percent Complete	0 %
Estimated Completion Date	On-Going

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

H. Map

MAP NOT APPLICABLE

National Park Service; Prince George's County Department of Permitting Inspection and Enforcement; U.S. Army Corps of Engineers; U.S. Environmental Protection Agency, Region III
Coordinating Projects: S - 000001.01 - Sewer Reconstruction Program

National Capital Business Park Sewer

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000086.20		Add

PDF Date	October 1, 2022
Date Revised	

Pressure Zones	
Drainage Basins	Western Branch 14
Planning Areas	Upper Marlboro & Vicinity PA 79

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'22	Estimate FY'23	Total 6 Years	Year 1 FY'24	Year 2 FY'25	Year 3 FY'26	Year 4 FY'27	Year 5 FY'28	Year 6 FY'29	Beyond 6 Years
Planning, Design & Supervision	626	4	52	570	313	206	40	11			
Land											
Construction	935			935	467	260	109	99			
Other	234		8	226	117	70	22	17			
Total	**1,795**	**4**	**60**	**1,731**	**897**	**536**	**171**	**127**			

C. Funding Schedule (000's)

Contributions/Other	1,795	4	60	1,731	897	536	171	127			

D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of 2,200 feet of 15-inch sanitary sewer main to serve the National Capital Business Park.

BENEFIT

Economic Development: This growth project supports the economic development goals of the Counties

JUSTIFICATION

National Capital Business Park Hydraulic Planning Analysis (May 2022).

COST CHANGE

Not applicable.

OTHER

The present project scope was developed for the FY'24 CIP and has an estimated total cost of $1,795,000. The schedule and expenditure projections shown in Block B above are based upon information provided by the developer. The estimated completion date is developer dependent. No WSSC Water rate supported debt will be used for this project.

COORDINATION

Coordinating Agencies: Maryland Department of the Environment; Prince George's County Government
Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	$47	
Debt Service		
Total Cost	$47	
Impact on Water and Sewer Rate		

F. Approval and Expenditure Data (000's)

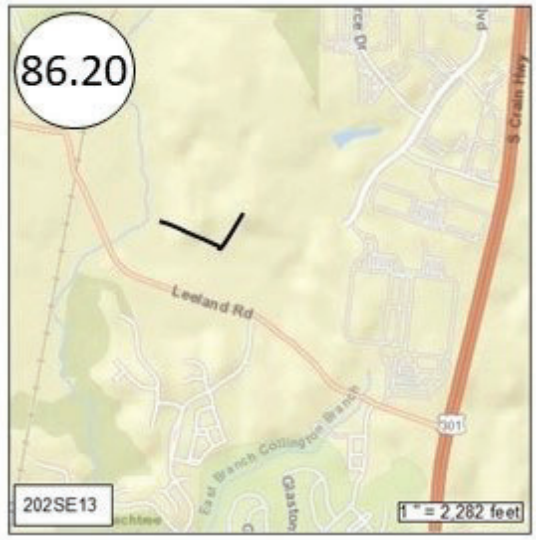
Date First in Program	FY'24
Date First Approved	FY'24
Initial Cost Estimate	1,795
Cost Estimate Last FY	
Present Cost Estimate	1,795
Approved Request Last FY	
Total Expense & Encumbrances	4
Approval Request Year 1	897

G. Status Information

Land Status	Not Applicable
Project Phase	Design
Percent Complete	0 %
Estimated Completion Date	Developer Dependent

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	2.0 MGD

H. Map



FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

INFORMATION ONLY PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 22	EST. EXPEND 23	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 24	YR 2 25	YR 3 26	YR 4 27	YR 5 28	YR 6 29		
W - 000001.00	Water Reconstruction Program	913,101	-	76,694	836,407	87,182	103,946	124,506	148,982	173,369	198,422	-	7-2
S - 000001.01	Sewer Reconstruction Program	437,820	-	57,793	380,027	65,439	58,959	60,345	63,233	64,059	67,992	-	7-4
A - 000100.01	Anacostia Depot Reconfiguration	46,674	584	-	46,090	1,870	29,260	14,960	-	-	-	-	7-6
A - 000101.04	Laboratory Division Building Expansion	36,745	3,004	18,284	15,457	10,726	2,011	2,720	-	-	-	-	7-7
A - 000101.06	RGH Building Upgrades	14,763	177	385	14,201	5,038	8,327	836	-	-	-	-	7-8
A - 000102.00	Engineering Support Program	132,301	-	12,301	120,000	20,000	20,000	20,000	20,000	20,000	20,000	-	7-9
A - 000103.00	Energy Performance Program	16,717	-	3,775	12,942	4,079	1,243	3,048	3,048	1,524	-	-	7-10
W - 000105.00	Water Storage Facility Rehabilitation Program	51,213	-	4,321	46,892	6,692	12,225	12,425	4,850	7,950	2,750	-	7-11
W - 000107.00	Specialty Valve Vault Rehabilitation Program	22,795	-	1,843	19,261	3,072	5,650	9,673	360	429	77	1,691	7-12
A - 000110.00	Other Capital Programs	435,440	-	50,777	384,663	58,585	54,269	63,034	67,665	68,380	72,730	-	7-13
S - 000300.01	D'Arcy Park North Relief Sewer	850	-	275	575	290	285	-	-	-	-	-	7-14
	TOTALS	2,108,419	3,765	226,448	1,876,515	262,973	296,175	311,547	308,138	335,711	361,971	1,691	

Water Reconstruction Program

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000001.00		Change

PDF Date	October 1, 2022
Date Revised	

Pressure Zones	Bi-County
Drainage Basins	
Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'22	Estimate FY'23	Total 6 Years	Year 1 FY'24	Year 2 FY'25	Year 3 FY'26	Year 4 FY'27	Year 5 FY'28	Year 6 FY'29	Beyond 6 Years
Planning, Design & Supervision	120,727		8,159	112,568	11,543	13,291	16,238	21,157	24,254	26,085	
Land											
Construction	694,409		59,451	634,958	65,752	79,277	94,902	112,112	131,055	151,860	
Other	97,965		9,084	88,881	9,887	11,378	13,366	15,713	18,060	20,477	
Total	**913,101**		**76,694**	**836,407**	**87,182**	**103,946**	**124,506**	**148,982**	**173,369**	**198,422**	

C. Funding Schedule (000's)

WSSC Bonds	913,101		76,694	836,407	87,182	103,946	124,506	148,982	173,369	198,422	

D. Description & Justification

DESCRIPTION

The purpose of this program is to renew and extend the useful life of water mains, house connections, and large water services. Portions of the water system are more than 80 years old. Bare cast iron mains, installed generally before 1965, permit the build-up of tuberculation which can reduce flow and cause discoloration at the customer's tap. Selected replacement is necessary to supply water in sufficient quantity, quality, and pressure for domestic use and firefighting. As the system ages, water main breaks are increasing. Selected mains are chronically breaking, and other mains are undersized for the current flow standards. Replacement, rehabilitation via structural lining, and the addition of cathodic protection to these mains provides added value to the customer. Galvanized, copper, and cast-iron water mains, as well as all other water main appurtenances including meter and PRV vaults are replaced on an as needed basis when they have exceeded their useful life.

*EXPENDITURES FOR WATER RECONSTRUCTION ARE EXPECTED TO CONTINUE INDEFINITELY.

BENEFIT

Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life; System Reliability: This project will improve service reliability through fewer and shorter service interruptions; Water Quality: This project supports WSSC Water's mission to provide safe, clean water by improving the quality and/or safety of drinking water

JUSTIFICATION

The program's projected work units and expenditure levels for FY'24 are as follows: design and construction of main replacement and associated water house connection renewals, 27 miles - $69.3M; cathodic protection - $2.9M; design and construction of large water service replacements - $8.9M; emergency contracts at depots - $5.5M; pipe armoring - $0.6M. Note: The specific mix and type of water main reconstruction may vary in any given year depending on the nature and priority of the work to be addressed. The program level may be adjusted in future years based upon the results of the Asset Management Plan. Based upon the prioritization and recommendations in the FY'24 Enterprise Asset Management Plan, the number of miles of water main replacement should begin to ramp back up by approximately 5 miles per year.

Flow studies, water system modeling, and field surveys are routinely conducted. The annual Buried Water Assets System Asset Management Plan identifies the business risk exposure of the water distribution system. FY'24 Enterprise Asset Management Plan (May 2022).

COST CHANGE

Program costs reflect the latest expenditure and schedule estimates based on the recommendations from the FY'24 Enterprise Asset Management Plan (May 2022).

OTHER

The water reconstruction program has been ongoing since 1979. Funding in the six-year program period is subject to Spending Affordability Guideline limits. The following work accomplishments through FY'21 summarize the magnitude of the reconstruction effort: 1,982 miles rehabilitated or replaced; 347 large water service/meters replaced. It is anticipated water reconstruction activity will be a perpetual element of future work programs.

COORDINATION

Coordinating Agencies: Local Community Civic Associations; Maryland State Highway Administration; Montgomery County Department of Public Works and

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	$59,399	
Total Cost	$59,399	
Impact on Water and Sewer Rate	$0.13	

F. Approval and Expenditure Data (000's)

Date First in Program	
Date First Approved	
Initial Cost Estimate	
Cost Estimate Last FY	854,674
Present Cost Estimate	913,101
Approved Request Last FY	71,611
Total Expense & Encumbrances	
Approval Request Year 1	87,182

G. Status Information

Land Status	Not Applicable
Project Phase	On-Going
Percent Complete	0 %
Estimated Completion Date	On-Going

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

H. Map

MAP NOT APPLICABLE

Transportation; Montgomery County Government; Prince George’s County Government; Prince George's County Department of Permitting Inspection and Enforcement
Coordinating Projects: W - 000161.01 - Large Diameter Water Pipe & Large Valve Rehabilitation Program

Sewer Reconstruction Program

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000001.01		Change

PDF Date	October 1, 2022
Date Revised	

Pressure Zones	
Drainage Basins	Bi-County 30
Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'22	Estimate FY'23	Total 6 Years	Year 1 FY'24	Year 2 FY'25	Year 3 FY'26	Year 4 FY'27	Year 5 FY'28	Year 6 FY'29	Beyond 6 Years
Planning, Design & Supervision	34,531		5,315	29,216	5,186	5,261	4,448	4,550	4,700	5,071	
Land											
Construction	363,369		47,224	316,145	54,283	48,315	50,380	52,899	53,528	56,740	
Other	39,920		5,254	34,666	5,970	5,383	5,517	5,784	5,831	6,181	
Total	**437,820**		**57,793**	**380,027**	**65,439**	**58,959**	**60,345**	**63,233**	**64,059**	**67,992**	

C. Funding Schedule (000's)

WSSC Bonds	297,820		37,793	260,027	45,439	38,959	40,345	43,233	44,059	47,992	
State Aid	140,000		20,000	120,000	20,000	20,000	20,000	20,000	20,000	20,000	

D. Description & Justification

DESCRIPTION

This program provides for comprehensive sewer system rehabilitation in residential areas of sewer mains less than 15-inches in diameter and sewer house connections, addressing infiltration and inflow control, and exposed pipe problems. This program does not include any major capital projects (e.g. CIP size relief or replacement sewers). These are funded separately in the CIP.

*EXPENDITURES FOR SEWER RECONSTRUCTION ARE EXPECTED TO CONTINUE INDEFINITELY.

BENEFIT

Regulatory & Other Agreements: This project is required to meet regulatory requirements, multi-jurisdictional agreements, and/or consent decrees; Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life; Environmental Sustainability: This project supports WSSC Water's commitment to protect the natural environment of Prince George's and Montgomery Counties

JUSTIFICATION

The projected work units and expenditure levels for FY'24 are as follows: 25 miles of main and lateral design & construction - $50.2M; sewer house connection renewals - $9.6M; enhanced grouting - $3.3M; emergency repairs - $2.4M. Note: The specific mix and type of sewer reconstruction may vary in any given year depending on identified system defects. Projections are based on historical experience with regards to timing of design and construction work and availability of authorized contractors.

Comprehensive Basin Studies, Sewer System Evaluation Surveys, Line Blockage Assessments, field surveys, closed-circuit TV inspections, and/or other activities investigating specific portions of the collection system. Annual Buried Wastewater Assets System Asset Management Plan. FY'24 Enterprise Asset Management Plan (May 2022).

COST CHANGE

Program costs reflect the latest schedule and expenditure estimates based upon the current plan for the completion of Phase 2 (Priority 2 and Priority 3) Consent Decree work and the recommendations from the Buried Wastewater Assets System Asset Management Plan.

OTHER

The project scope has remained the same. The schedule and expenditure projections shown in Block B above reflect the terms of the Sanitary Sewer Overflow Consent Decree between WSSC Water, Maryland Department of the Environment (MDE), and the EPA, entered into on December 7, 2005. WSSC Water has applied for low interest loans through the MDE's Water Quality Administration State Revolving Loan Program and grant funding from the MDE Bay Restoration Fund for portions of this program. The sewer reconstruction program was established in 1979. Some expenditures for grouting repairs are included in the operating budget. The following work accomplishments through FY'21 summarize the magnitude of this reconstruction effort: sewer main reconstruction, 549 miles; and sewer house connection renewals, 23,380. It is anticipated that sewer reconstruction activity will be a perpetual element of future work programs.

COORDINATION

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	$19,374	
Total Cost	$19,374	
Impact on Water and Sewer Rate	$0.04	

F. Approval and Expenditure Data (000's)

Date First in Program	
Date First Approved	
Initial Cost Estimate	
Cost Estimate Last FY	366,920
Present Cost Estimate	437,820
Approved Request Last FY	50,540
Total Expense & Encumbrances	
Approval Request Year 1	65,439

G. Status Information

Land Status	Not Applicable
Project Phase	On-Going
Percent Complete	0 %
Estimated Completion Date	On-Going

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

H. Map

MAP NOT APPLICABLE

Coordinating Agencies: Local Community Civic Associations; Maryland Department of the Environment; Maryland State Highway Administration; Montgomery County Department of Public Works and Transportation; Montgomery County Government; Prince George's County Government; Prince George's County Department of Permitting Inspection and Enforcement; U.S. Environmental Protection Agency, Region III
Coordinating Projects: S - 000170.09 - Trunk Sewer Reconstruction Program

Water Storage Facility Rehabilitation Program

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000105.00		Change

PDF Date	October 1, 2022
Date Revised	

Pressure Zones	Bi-County
Drainage Basins	
Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'22	Estimate FY'23	Total 6 Years	Year 1 FY'24	Year 2 FY'25	Year 3 FY'26	Year 4 FY'27	Year 5 FY'28	Year 6 FY'29	Beyond 6 Years
Planning, Design & Supervision	12,494		2,157	10,337	2,542	1,989	2,170	1,409	1,227	1,000	
Land											
Construction	34,063		1,771	32,292	3,542	9,125	9,125	3,000	6,000	1,500	
Other	4,656		393	4,263	608	1,111	1,130	441	723	250	
Total	**51,213**		**4,321**	**46,892**	**6,692**	**12,225**	**12,425**	**4,850**	**7,950**	**2,750**	

C. Funding Schedule (000's)

WSSC Bonds	51,213		4,321	46,892	6,692	12,225	12,425	4,850	7,950	2,750	

D. Description & Justification

DESCRIPTION

The Water Storage Facility Rehabilitation Program provides for the comprehensive rehabilitation of WSSC Water's more than 60 water storage facilities located throughout the WSSC Water service area, holding over 200 million gallons of finished drinking water. The program provides for structural metal and concrete foundation repairs, equipment upgrades to meet current OSHA standards, lead paint removal, security upgrades, advanced mixing systems to improve water quality, and altitude valve vault and supply pipe replacements.

BENEFIT

Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life; Water Quality: This project supports WSSC Water's mission to provide safe, clean water by improving the quality and/or safety of drinking water; Employee Safety: This project includes components that help protect the health and safety of employees

JUSTIFICATION

Currently, there are more than 20 steel tanks whose last painting contract was finished 10 or more years ago. Many older tanks have accumulated significant layers of paint which have lost their bonding strength to the steel. Old coatings will be completely removed and costly lead abatement techniques will be required in many cases. The recommended practice is to do this extra work every third re-coating to extend the service life of the structure. Modern coating systems should extend the length of service between coatings from the current 10 years to somewhere between 15 to 20 years.

COST CHANGE

Program costs reflect the latest schedule and expenditure projections based on the plan for the water storage facilities currently included in the program.

OTHER

The project scope has remained the same. The schedule and expenditure projections shown in Block B above are a mix of planning, design, and construction level estimates and are expected to change based upon site conditions and design constraints. Tanks are prioritized based on the condition of the existing coating and structural integrity issues. The program plan for FY'24 will include the following water storage facilities: North Woodside Standpipe, Pointer Ridge Elevated Tank, Greenbelt Standpipe, Andrews Elevated Tank, Wall Lane Standpipe, Brink Elevated Tank, Bradley Hills 1 and 2, and Cedar Heights Reservoir.

COORDINATION

Coordinating Agencies: Maryland Department of the Environment; Montgomery County Government; Prince George's County Government
Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	$3,331	
Total Cost	$3,331	
Impact on Water and Sewer Rate	$0.01	

F. Approval and Expenditure Data (000's)

Date First in Program	FY'09
Date First Approved	FY'09
Initial Cost Estimate	
Cost Estimate Last FY	39,000
Present Cost Estimate	51,213
Approved Request Last FY	4,000
Total Expense & Encumbrances	
Approval Request Year 1	6,692

G. Status Information

Land Status	Public/Agency owned land
Project Phase	On-Going
Percent Complete	0 %
Estimated Completion Date	On-Going

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

H. Map

MAP NOT APPLICABLE

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

PRINCE GEORGE'S COUNTY WATER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 22	EST. EXPEND 23	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 24	YR 2 25	YR 3 26	YR 4 27	YR 5 28	YR 6 29		
W - 000012.02	Prince George's County HG415 Zone Water Main	3,938	1,976	1,840	122	115	7	-	-	-	-	-	5-2
W - 000034.02	Old Branch Avenue Water Main	34,276	4,246	11,165	18,865	11,110	7,755	-	-	-	-	-	5-3
W - 000034.04	Branch Avenue Water Transmission Improvements	50,796	22,205	1,265	27,326	17,668	8,814	811	33	-	-	-	5-4
W - 000034.05	Marlboro Zone Reinforcement Main	4,727	569	692	3,466	2,140	1,326	-	-	-	-	-	5-5
W - 000062.06	Rosaryville Water Storage Facility	9,655	-	-	-	-	-	-	-	-	-	9,655	5-6
W - 000084.03	Smith Home Farms Water Main	4,142	2,052	675	1,415	515	472	428	-	-	-	-	5-7
W - 000084.04	Westphalia Town Center Water Main	2,158	887	52	1,219	408	480	331	-	-	-	-	5-8
W - 000084.05	Prince George's County 450A Zone Water Main	41,130	2,744	99	38,287	5,555	12,760	9,598	6,435	2,602	1,337	-	5-9
W - 000093.01	Konterra Town Center East Water Main	2,713	302	9	2,402	836	952	614	-	-	-	-	5-10
W - 000105.01	Marlton Section 18 Water Main, Lake Marlton Avenue	3,039	19	2	3,018	476	511	511	505	508	507	-	5-11
W - 000137.03	South Potomac Supply Improvement, Phase 2	75,044	2,734	-	72,310	620	23,898	23,896	23,896	-	-	-	5-12
	TOTALS	231,618	37,734	15,799	168,430	39,443	56,975	36,189	30,869	3,110	1,844	9,655	

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

PRINCE GEORGE'S COUNTY SEWER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 22	EST. EXPEND 23	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 24	YR 2 25	YR 3 26	YR 4 27	YR 5 28	YR 6 29		
S - 000027.08	Westphalia Town Center Sewer Main	1,768	944	542	282	192	74	16	-	-	-	-	6-3
S - 000028.18	Konterra Town Center East Sewer	7,742	5,320	93	2,329	-	2,329	-	-	-	-	-	6-4
S - 000028.20	Pumpkin Hill WWPS & FM	8,072	521	1,510	6,041	3,781	1,955	305	-	-	-	-	6-5
S - 000068.01	Landover Mall Redevelopment	1,397	-	109	1,286	668	426	48	48	48	48	2	6-6
S - 000068.02	Carsondale WWPS & FM	5,987	258	-	5,729	366	3,056	2,307	-	-	-	-	6-7
S - 000075.21	Mattawoman WWTP Upgrades	25,302	-	3,553	17,740	4,207	3,370	3,623	3,174	2,197	1,169	4,009	6-8
S - 000075.23	Brandywine Woods WWPS & FM	3,718	27	305	3,386	1,312	1,218	703	153	-	-	-	6-9
S - 000077.21	Parkway WRRF Facility & Electrical Upgrades	23,920	426	2,860	20,634	2,563	7,205	6,204	3,355	1,307	-	-	6-10
S - 000086.20	National Capital Business Park Sewer	1,795	4	60	1,731	897	536	171	127	-	-	-	6-11
S - 000087.19	Horsepen WWPS & FM	36,150	2,406	3,991	29,753	4,376	11,781	7,986	5,610	-	-	-	6-12
S - 000087.20	Freeway Airport WWPS & FM	3,758	68	305	3,385	1,311	1,219	702	153	-	-	-	6-13
S - 000089.26	Colmar Manor WWPS & FM	7,030	385	-	6,645	305	244	610	2,743	2,743	-	-	6-14
S - 000096.14	Piscataway WRRF Facility Upgrades	191,193	119,042	34,477	37,674	25,085	10,085	2,504	-	-	-	-	6-15
S - 000113.13	Forest Heights WWPS & FM	9,402	380	-	9,022	183	61	244	610	3,962	3,962	-	6-16
S - 000118.10	Viva White Oak Sewer Augmentation	1,193	-	-	1,193	475	299	179	120	60	60	-	6-17
S - 000131.05	Pleasant Valley Sewer Main, Part 2	1,009	-	242	767	478	197	92	-	-	-	-	6-18
S - 000131.07	Pleasant Valley Sewer Main, Part 1	2,053	55	562	1,436	1,171	265	-	-	-	-	-	6-19
S - 000131.11	Calm Retreat Sewer Main	749	209	420	120	120	-	-	-	-	-	-	6-20
S - 000131.12	Swan Creek WWPS & FM	14,633	9,340	550	4,743	1,543	3,087	113	-	-	-	-	6-21
S - 000157.02	Western Branch WRRF Process Train Improvements	94,391	4,239	13,550	76,602	17,360	25,582	18,225	9,756	4,667	1,012	-	6-22
	Projects Pending Close-Out	775	682	93	-	-	-	-	-	-	-	-	6-23
	TOTALS	442,037	144,306	63,222	230,498	66,393	72,989	44,032	25,849	14,984	6,251	4,011	