



Committee: T&E
Committee Review: Completed
Staff: Keith Levchenko, Senior Legislative Analyst
Purpose: preliminary decisions – straw vote expected
Keywords: #WSSCCIP, Water and Sewer

AGENDA ITEM #2
 May 9, 2022
Worksession

SUBJECT

FY23-28 Capital Improvements Program – Washington Suburban Sanitary Commission (WSSCWater)

EXPECTED ATTENDEES (WSSCWATER)

- Howie Denis, Commission Vice Chair
- Fausto Bayonet, Commissioner
- Eloise Foster, Commissioner
- Carla Reid, General Manager/CEO
- Joe Beach, Deputy General Manager for Administration
- Jay Price, Deputy General Manager for Operations
- Crystal Knight-Lee, Chief of Staff
- Monica Marquina, Government Relations Manager
- Patti Colihan, Chief Financial Officer
- Letitia Carolina-Powell, Budget Division Manager
- Brian Halloran, Capital Budget Section Manager
- Fariha Babar, Budget Section Manager

EXPECTED ATTENDEES (EXECUTIVE BRANCH)

- Rafael Murphy, Fiscal & Policy Analyst, Office of Management and Budget

FISCAL SUMMARY

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

	Approved FY22	Six-Year Total	FY23	FY24	FY25	FY26	FY27	FY28
CIP + Information Only*								
Approved FY22-27	711,863	3,806,072	718,439	634,963	575,744	577,352	587,711	
Proposed FY23-28		4,248,332	735,985	761,140	727,631	724,979	688,258	610,339
Difference		442,260	17,546	126,177	151,887	147,627	100,547	
% Change		11.6%	2.4%	19.9%	26.4%	25.6%	17.1%	
Midcycle Update								
FY23-28 Change		(76,727)	(110,490)	(25,562)	14,279	33,226	1,861	9,959
FY23-28 Latest Proposed		4,171,605	625,495	735,578	741,910	758,205	690,119	620,298
Difference		365,533	(92,944)	100,615	166,166	180,853	102,408	
% Change		9.6%	-12.9%	15.8%	28.9%	31.3%	17.4%	

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

- **Original Proposed Six-Year CIP Total* plus “Information Only” projects = \$4.25 billion**
 - Increase of \$442.3 million (+11.6 percent) from the Approved CIP + Information Only
 - \$259.8 million increase (8.6 percent) without I-495/I-270 project
 - \$109.4 million increase (2.9 percent) without I-495/I-270 project and Blue Plains Project increases
 - 13 new projects - Six-Year Total = \$310 million in new spending
- **Largest Six-Year Increases in Projects:**
 - New Project: I-495/I-270 Traffic Relief Plan Pipeline Relocations (+\$182.4 million)
 - Blue Plains Project Increases (combined increase of \$150.4 million, +38.4 percent)
 - Water Reconstruction Program (+\$72.4 million, +10 percent)
 - Potomac WFP Main Zone Pipeline (+\$71.3 million, +194 percent)
 - Large Diameter Water Pipe Rehabilitation Program (+\$67.5 million, +14.3 percent)
 - New Project: Anacostia Depot Reconfiguration (+\$40.3 million)
- **Mid-Cycle Update**
 - Reduction from the Original Proposed CIP of \$76.7 million to lower WSSC Water’s debt leverage ratio and reduce debt service
 - Revised Six-Year Total of \$4.17 billion (+9.6 percent)
 - \$110.5 million reduction in FY23 (from the Original Proposed CIP)
 - 15 projects reduced/deferred in FY23
 - Water Reconstruction Program: -\$27.7 million in FY23
 - Large Diameter Water Pipe Rehabilitation Program: -\$18.6 million in FY23
 - Anacostia Depot Reconfiguration new project delayed one year

COMMITTEE RECOMMENDATION

- Support a revised project description form for the I-495/I-270 Traffic Relief Plan Pipeline Relocations project. The revisions include:
 - The funding schedule line has been revised to say "Contributions/Other" (instead of "State of Maryland Contribution") to avoid implying that Maryland taxpayers would pay for this project.
 - A sentence has been added saying: "Negotiations on a Framework Agreement to ensure this project poses no financial impact to ratepayers are underway."
- Support the other WSSCWATER CIP and “Information Only” Projects as proposed by WSSC (including WSSCWATER’s mid-cycle update).

This report contains:

- | | |
|--|----------------------------|
| • T&E Committee April 28, 2022 Council Staff Report:
I-495/I-270 Traffic Relief Plan Pipeline Relocations (Follow-up) | <u>Pages</u>
Pages 1-©2 |
| • T&E Committee March 17, 2022 Council Staff Report | Pages 1-©83 |

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Worksession

M E M O R A N D U M

April 26, 2022

TO: Transportation and Environment Committee

FROM: Keith Levchenko, Senior Legislative Analyst

SUBJECT: **Worksession: FY23-28 Capital Improvements Program: Washington Suburban Sanitary Commission (WSSC Water)¹ Discussion**

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

PURPOSE: To discuss the I-495/I-270 Traffic Relief Plan Pipeline Relocations project

Attachments to this memorandum include:

- I-495/I-270 Traffic Relief Plan Pipeline Relocations Project Description Form – Revised (©1-2)

At the Committee's March 17 review of the WSSCWater CIP, the Committee recommended approval of the FY23-28 WSSCWater CIP as proposed with the mid-cycle updates approved by the Commission. However, as part of that recommendation, the Committee tabled the I-494/I-270 Traffic Relief Plan Pipeline Relocations project pending further discussion about the project costs and assumed funding for the project.

As originally proposed by WSSCWater, the I-495/I-270 Traffic Relief Plan Pipeline Relocations Six-year total = \$182.4 million. 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. The completion dates of the pipeline relocations will be dependent on the developer schedules for the I-495 and I-270 work. The current total project cost estimate is \$182.6 million. The funding source is shown as "State of Maryland Contribution."

¹ Key words: #WSSCWATERCapitalBudget, Capital projects, Water and Sewer, WSSCWATER.

Based on feedback from the Committee members, WSSCWater staff prepared a revised project description form (attached on ©1-2). The revisions include the following:

- The funding schedule line has been revised to say “Contributions/Other” (instead of “State of Maryland Contribution”) to avoid implying that Maryland taxpayers would pay for this project.
- A sentence has been added saying: “Negotiations on a Framework Agreement to ensure this project poses no financial impact to ratepayers are underway.”

WSSCWater staff will be available at the Committee worksession to answer questions regarding this project.

Next Steps

If Committee members are supportive of this project based on the revised project description form, then this project (as revised) can be reviewed by the Full Council in early May as part of its review of the WSSCWater CIP. Final action on the WSSC Water CIP and Operating Budget will occur at the Bi-County meeting on May 12, 2022.

Attachment

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

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

PDF Date	October 1, 2022
Date Revised	

Pressure Zones	Cabin John 350A; Falls Road 552A; Montgomery High HG660A;
Drainage Basins	Cabin John 07; Muddy Branch 13; Rock Run 1; Watts Branch 16
Planning Areas	Gaithersburg & Vicinity PA 20; Potomac-Cabin John & Vicinity PA

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	23,490	120	61	23,309	2,630	6,993	6,881	4,549	2,256		
Land											
Construction	150,420	5		150,415	15,041	45,125	45,125	30,083	15,041		
Other	8,690		3	8,687	884	2,606	2,600	1,732	865		
Total	182,600	125	64	182,411	18,555	54,724	54,606	36,364	18,162		

C. Funding Schedule (000's)

State of Maryland -Contributions/Other	182,600	125	64	182,411	18,555	54,724	54,606	36,364	18,162		
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D. Description & Justification

DESCRIPTION <p>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.</p>
BENEFIT <p>Regulatory & Other Agreements: This project is required to meet regulatory requirements, multi-jurisdictional agreements, and/or consent decrees.</p>
JUSTIFICATION <p>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 I 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 I. 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 I 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 I. May 2021, Alternative 9: Phase I 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.</p> <p>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.</p>
COST CHANGE <p>Not applicable.</p>
OTHER <p>The present project scope was developed for the FY'23 CIP and has an estimated cost of \$182,600,000. The schedule and expenditure projections shown in Block B above are order of magnitude estimates based upon Alternative 9: Phase I 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.</p>
COORDINATION

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	
Present Cost Estimate	182,600
Approved Request Last FY	
Total Expense & Encumbrances	125
Approval Request Year 1	18,555

G. Status Information

Land Status	Not Applicable
Project Phase	Design
Percent Complete	0 %
Estimated Completion Date	TBD
Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

H. Man

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

MAP NOT APPLICABLE

Worksession

MEMORANDUM

March 14, 2022

TO: Transportation and Environment Committee

FROM: Keith Levchenko, Senior Legislative Analyst

SUBJECT: **Worksession: FY23-28 Capital Improvements Program: Washington Suburban Sanitary Commission (WSSC Water)**¹

PURPOSE: To review the WSSC Water FY23-28 CIP

Attachments to this memorandum include:

- County Executive's Recommended FY23-28 Capital Improvements Program (WSSC Water) (©1-6)
- WSSC Water's Spending Affordability Assumptions and Long-Range Financial Plan as presented in its Proposed FY23 Budget (©7)
- February 17 Letter from WSSC Water to Council President Albornoz Regarding WSSC Water's Mid-Cycle Update (©8-44)
- Excerpts from WSSC Water's Proposed FY23-28 CIP² (©45-83)

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

WSSC Water

- | | |
|---|--|
| • Howie Denis, Commission Vice-Chair | • Patti Colihan, Chief Financial Officer |
| • Fausto Bayonet, Commissioner | • Letitia Carolina-Powell, Budget Division Manager |
| • Eloise Foster, Commission Vice-Chair | • Brian Halloran, Capital Budget Section Manager |
| • Carla Reid, General Manager/CEO | • Karyn Riley, Director, Intergovernmental Relations |
| • Joe Beach, Deputy General Manager, Administration | • Hugh Sinclair, Manager, Asset Mngt Div. |
| • Monica Johnson, Deputy General Manager, Strategy and Partnerships | |
| • Amanda Conn, General Counsel | |

¹ Key words: #WSSCWATERCapitalBudget, Capital projects, Water and Sewer, WSSCWATER.

² Complete copies of WSSCWATER's FY23-28 Proposed CIP, Approved FY22-27 CIP, Approved FY22 Budget and Proposed FY23 Budget publications [are available for download here](#).

Executive Branch

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

CIP Overview

- **Original Proposed Six-Year CIP Total* plus “Information Only” projects = \$4.25 billion**
 - Increase of \$442.3 million (+11.6 percent) from the Approved CIP+Information Only
 - \$259.8 million increase (8.6 percent) without I-495/I-270 project
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 - Water Reconstruction Program: -\$27.7 million in FY23
 - Large Diameter Water Pipe Rehabilitation Program: -\$18.6 million in FY23
 - Anacostia Depot Reconfiguration new project delayed one year
- **Council Staff Recommendation:**
 - **Supports WSSCWATER’s Proposed FY23-28 CIP with its Mid-Cycle Update reductions/deferrals.** *NOTE: Council Staff suggests having further discussions with WSSC Water Staff and Prince George’s County Council Staff regarding the seven WWPS and FM project deferrals across both counties.*
- **Topics for Future Discussion**
 - 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) – Rate Increase Needs and Potential Changes to the Credit Program
 - Regional Water Resiliency Next Steps

BACKGROUND/TIMELINE

Under Md. Public Utilities Code Ann. §23-304, WSSC Water 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 WSSC Water CIP every year. Also, unlike other agencies, WSSC Water's CIP and Operating budgets are not included within the County's Spending Affordability processes. Instead, WSSC Water 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 FY23-28 WSSC Water CIP and Operating Budget Review Timeline

- September 24, 2021: WSSC Water transmitted its Proposed FY23-28 CIP
- October 26, 2021: Council approval of WSSC Water's FY23 Spending Control Limits
- January 18, 2021: County Executive's recommendations transmitted
- February 8,9, 2022: Council public hearings on the FY23 Capital Budget and FY23-28 CIP
- February 17, 2022: Mid-Cycle Update for the CIP transmitted to both Counties
- March 1, 2022: WSSC Water transmittal of its Proposed FY23 Budget
- **March 17, 2022: T&E Committee review of the WSSC Water CIP**
- TBD: Council review of the WSSC Water CIP
- April, 2022: T&E Committee review of the WSSC Water Proposed FY23 Budget
- Early May 2022: Council review of the WSSC Water Proposed FY23 Budget
- May 12, 2022: Bi-County meeting between Montgomery County and Prince George's County Councils on the WSSC Water CIP and Operating Budget, as well as any other Bi-County budget issues

COUNTY EXECUTIVE RECOMMENDATIONS

(See ©1-6)

The County Executive's recommendations for the FY23-28 WSSC Water CIP were transmitted on January 18. He does not recommend any changes to WSSC Water's Proposed CIP. The transmittal provides some discussion of priority areas for funding. The Executive has not provided a recommendation regarding WSSC Water's Mid-Cycle Update.

FISCAL OVERVIEW

Spending Control Limits/Affordability

WSSC Water's latest fiscal plan from the Proposed FY23 Budget is attached on ©7. WSSC continues to face fiscal pressures due to several factors including:

- high levels of debt service (approximately 37 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 also assumes to ramp up annual PAYGO levels substantially during the CIP period.
- continuing flat Water consumption (rate revenue makes up about 87 percent of WSSC's revenues),

- Reduced reconstruction debt service offset (REDO) available to cover operating expenses (balance is down to zero in FY25)
- Meeting fiscal policy targets such as
 - building up “days of operating reserve on hand” (target of 120 to 150 days based on industry standards)
 - Improving debt service coverage over the six-year period (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*)
- The current pandemic is also impacting revenues through a large increase in delinquent accounts.

The above trends result in the Fiscal Plan assuming significant rate increases in FY23 and FY24 but with rate increases moderating in the outyears.

Last October, the two Councils approved identical FY23 spending control limits for WSSC Water. Both Councils supported a rate increase limit of 6.5 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 FY23 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 WSSC Water Operating Budget and keep debt service as a percentage of total expenditures under the 40 percent spending affordability target.

Both the FY21-26 CIP and FY22-27 CIP included small increases in bond funding (1.0 percent and 1.8 percent increases respectively).

The FY23-28 Proposed CIP also includes increases in bond funding (2.9 percent) and PAYGO (22.1 percent). However, WSSC Water’s recent mid-cycle update, includes bond-funded reductions and deferrals in projects which are intended to improve WSSC Water’s debt service coverage and Fitch leverage ratio. With these cuts, the six-year bond funding increase is only 0.7 percent.

CIP Summary

The following chart presents WSSC Water’s original proposed versus approved expenditures for its CIP, as well as for its “Information Only” projects. The Mid-Cycle Update changes are also shown.

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

Grand Total	Approved FY22	Six-Year Total	FY23	FY24	FY25	FY26	FY27	FY28
CIP Total								
Approved FY22-27	466,879	2,084,564	458,043	365,984	282,965	260,418	250,275	
Proposed FY23-28		2,472,647	483,975	480,911	431,457	418,221	375,049	283,034
Difference		388,083	25,932	114,927	148,492	157,803	124,774	
% Change		18.6%	5.7%	31.4%	52.5%	60.6%	49.9%	
Information Only*								
Approved FY22-27	244,984	1,721,508	260,396	268,979	292,779	316,934	337,436	
Proposed FY23-28		1,775,685	252,010	280,229	296,174	306,758	313,209	327,305
Difference		54,177	(8,386)	11,250	3,395	(10,176)	(24,227)	
% Change		3.1%	-3.2%	4.2%	1.2%	-3.2%	-7.2%	
CIP + Information Only								
Approved FY22-27	711,863	3,806,072	718,439	634,963	575,744	577,352	587,711	
Proposed FY23-28		4,248,332	735,985	761,140	727,631	724,979	688,258	610,339
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% Change		11.6%	2.4%	19.9%	26.4%	25.6%	17.1%	
Midcycle Update								
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FY23-28 Latest Proposed		4,171,605	625,495	735,578	741,910	758,205	690,119	620,298
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% Change		9.6%	-12.9%	15.8%	28.9%	31.3%	17.4%	

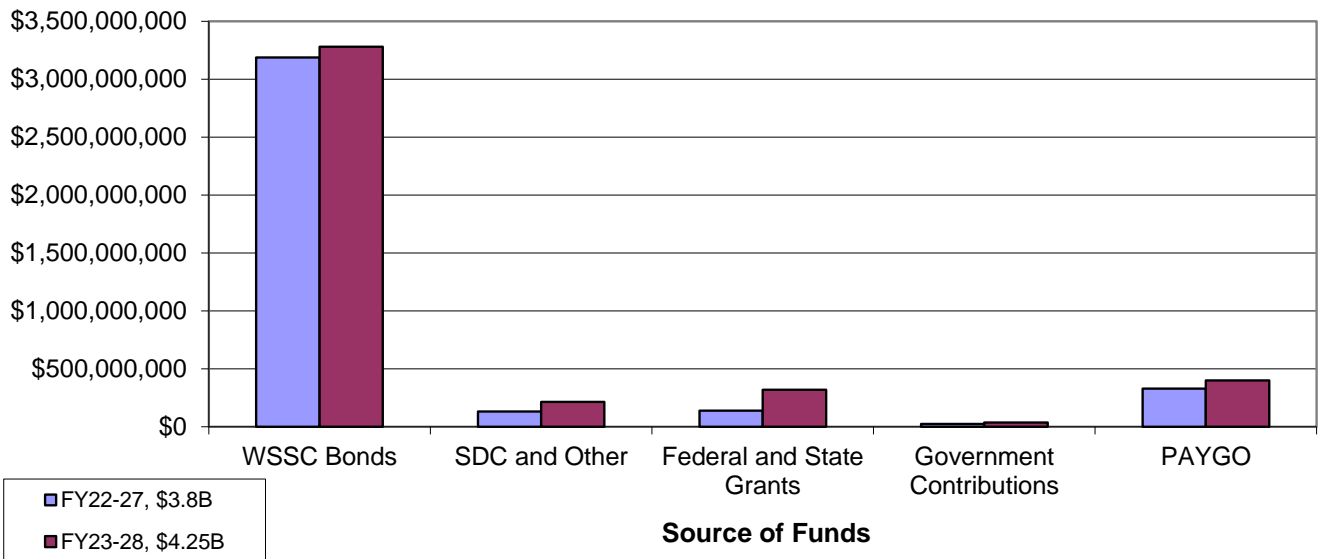
- Counting both WSSC Water’s Proposed CIP and “Information Only” projects,⁵ results in overall capital expenditures of \$4.25 billion (up \$442.3 million or 11.6 percent). However, with the mid-cycle update, the increase is \$365.5 million or 9.6 percent.
- Blue Plains projects total \$392.1 million for FY23-28 (an increase of \$150.4 million or 38.4 percent from the FY22-27 CIP).
- The Blue Plains projects plus three other Bi-County and “Information Only” projects (Water Reconstruction, Large Diameter Water Pipe Rehabilitation, and Sewer Reconstruction account for over 50 percent of WSSC Water’s Proposed FY23-28 expenditures.

Funding Sources

The following chart compares funding sources for the Approved FY22-27 CIP and the Proposed FY23-28 CIP (including “Information Only” projects) not including the Mid-Cycle Update.

⁵ “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.

WSSC CIP + Information Only Projects Funding by Source



Each of these funding sources, and how they relate to WSSC Water projects, is described on ©45. Bond funding has long been the dominant funding source (over 88 percent of funding in the Proposed CIP).⁹ The FY23-28 Proposed CIP + Information Only projects assumes bond funding would increase by \$93.5 million. PAYGO is also assumed to increase in the six-year period. Federal and State Grants are up because of a new project in the CIP (I-495/I-270 Traffic Relief Plan Pipeline Relocations) which is assumed to be fully funded (\$182.6 million) by the State. The System Development Charge (SDC), and federal/state grants make up the other major sources of funding.

GROWTH FUNDING (see ©45-47)

WSSC Water’s capital expenditures can be divided into three categories: growth, environmental regulations, and system improvements. While most of the capital expenditures are for system improvement (88 percent in FY23), about \$214.4 million (or 5.8 percent) of six-year proposed expenditures in the six-year period are needed to accommodate growth.

The major sources used to fund growth are:

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

⁹ 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 projects in the WSSC Water 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. WSSC Water estimates approximately \$171 million in revenue over the six-year period. Developer credits and SDC exemptions¹¹ reduce the net revenue to about \$144 million. For more background on the SDC, please see ©45-46.

The SDC Fund has a balance of approximately \$26.6 million (as of January 31, 2022).

Overall, WSSC Water estimates a \$65.1 million gap in growth funding versus expenditures over the six-year period of \$3.7 million, as shown on ©12. This gap is caused by a big increase in CIP Growth expenditures (\$214.4 million over six-years compared to \$129.9 million assumed at this time last year for the FY22-27 CIP). Most of the increase is from WSSC Water revising the scope of the Potomac WFP Main Zone Pipeline and allocating \$63.7 million in SDC funding to this project. The expanded scope will provide additional capacity and redundancy work to meet the projected 2040 maximum day demands of 210 million gallons per day.

WSSC Water's Proposed Operating Budget for FY23 assumes no change in SDC rates.¹² However, given the projected gap, this issue should be reviewed further by both Councils this spring.

WSSC Water staff lead 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.¹³ 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 WSSC Water. 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.

WSSC Water FY23-28 PROJECT HIGHLIGHTS

¹¹ 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. As of June 30, 2021, Montgomery County had \$7.8 million and Prince George's County had \$1.8 million in exemption capacity.

¹² 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.

¹³ WSSC Water 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.

For a full list of WSSC Water's projects included in the FY23-28 Proposed CIP, please see:

- Montgomery County Water Projects (©52)
- Montgomery County Sewer Projects (©53)
- Bi-County Water Projects (©59)
- Bi-County Sewer Projects (©67)
- Information Only Projects (©75)
- Prince George's County Water and Sewer Projects (©82-83)

New Projects

There are 13 new projects proposed (see ©50), including five new sewer projects in Montgomery County, a new Bi-County Water project related to the State's planned widening of I-495 and I-270) and two new Information Only projects. These projects are summarized below. WSSC Water Staff will be available at the T&E worksession to discuss these projects in more detail.

- Arcola Wastewater Pumping Station (WWPS) and Force Main (FM) (PDF on ©54) Six-year total = \$6.1 million. This project provides for modifications and rehabilitation of the pumping station (3.04 mgd capacity) and replacement of the 1,300 linear foot force main. Completion would be in April 2025.
- Reddy Branch WWPS and FM (PDF on ©55) Six-year total = \$24.3 million. This project provides for modifications and rehabilitation of the pumping station (maintaining the facility's 0.17 million gallons per day (mgd) capacity) and replacement of the 12,774 linear foot force main. Completion would be in June 2028.
- Sam Rice Manor WWPS and FM (PDF on ©56) (83% SDC) Six-year total = \$5.2 million. This project provides for the replacement of the pumping station (maintaining the facility's 0.12 million gallons per day (mgd) capacity) and replacement of the 3,521 linear foot force main. Completion would be in June 2028.
- Ashford Woods WWPS and FM (PDF on ©57) (developer-funded) Six-year total = \$3.2 million. This project provides for the construction of a 0.62 mgd pumping station and 2,160 linear feet of force main to serve the Egan property in Clarksburg. Completion is shown in FY26 but is developer dependent.
- Erickson Bethesda Sewer Main (PDF on ©58) (developer-funded) Six-year total = \$2.6 million. This project provides for the construction of 3,600 feet of 15-inch to 18-inch diameter sanitary sewer adjacent to the new development and 330 feet of 36-inch diameter sanitary sewer south of River Road to serve the Erickson Bethesda development. Completion is shown in FY26 but is developer dependent.
- I-495/I-270 Traffic Relief Plan Pipeline Relocations (PDF on ©65) (State of Maryland Contribution): Six-year total = \$182.4 million. 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. The completion dates of the pipeline relocations will be dependent on the developer schedules for the I-495 and I-270 work.

- Anacostia Depot Reconfiguration (PDF on ©80): Six-year total = \$40.3 million. This project provides for the planning, design, and construction of a reconfiguration of the Anacostia Depot to improve the efficiency of operations; to update to current building codes, regulations, and Americans with Disabilities Act (ADA) requirements; to improve the energy efficiency of the facilities; to address floodplain vulnerabilities due to climate change; and to replace assets that are at or beyond their useful lives. Completion would be in December 2025.
- RGH Building Upgrades (PDF on ©81): Six-year total = \$13.2 million. This project provides for the replacement of the primary 13.2 kV switchgear and associated equipment that supply power to the building; and replacement of the emergency generators and fuel tanks. Completion would be in February 2025.

There are five new WWPS and FM projects in the Prince George's County portion of the CIP.

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

NOTE: Multiple projects above would be affected by WSSC Water's mid-cycle update discussed later.

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. NOTE: The impact of the mid-cycle update is not included in this chart. The mid-cycle update is discussed later.

**Table 2:
FY23-28 Major Changes in 6 Year Costs (MC and Bi-County Only + Information Only)**

Six-Year Cost Change (in 000s)	Project	Comment
182,411	I-270/I-495 Traffic Relief Plan Pipeline Relocations	New: Assumes 100% State funding
150,440	Blue Plains Projects	Based on DCWater's latest budget assumptions
72,390	Water Reconstruction Program	increases after deferrals in work the past 2 years
71,302	Potomac WFP Main Zone Pipeline	Revised Scope adding additional redundancy measures and replacement of aging equipment
67,544	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
40,280	Anacostia Depot Reconfiguration	New project
24,323	Reddy Branch WWPS & FM	New Project to replace the existing pumping station and force main
18,570	Other Capital Programs	Ask WSSC
15,127	Anacostia #2 WWPS Upgrades	New project last year
13,200	RGH Building Upgrades	New project
5,837	Arcola WWPS & FM	New Project to replace the existing pumping station and force main
5,177	Sam Rice Manor WWPF & FM	New Project: Will replace existing facilities and add capacity. Mostly funded with SDC
4,000	Water Storage Facility Rehabilitation Program	Consistent with last year's increase in annual funding
3,540	Energy Performance Program	Based on current project schedule
3,192	Ashford Woods WWPS & FM	New Project: funded with developer contributions
2,577	Erickson Bethesda Sewer Main	New Project: funded with developer contributions
2,000	Engineering Support Program	Continuing the level of effort increase into FY28
1,397	Septage Discharge Facility Planning & Implementation	Inflationary increase
(2,121)	Regional Water Supply Resiliency	Federal Funds assumed. Inflationary increase in total project cost. Six-year cost down as project progresses through the CIP.
(6,300)	Shady Grove Station Sewer Augmentation	Project moving towards completion
(6,991)	Patuxent Raw Water Pipeline	Minor cost change
(23,104)	Trunk Sewer Reconstruction Program	Based on recommendations from the Buried Wastewater Assets System Asset Management Plan. SSO Consent Decree Schedule completion deadline of 2022.
(35,175)	Potomac WFP Consent Decree Program	Six-year cost down as project progresses through the CIP. Total project cost is down based on final design estimates.
(98,271)	Sewer Reconstruction Program	Big decrease as SSO Consent Decree Work is moving towards completion.
(109,625)	Piscataway Bioenergy	Based on project progressing through CIP

WSSC Water 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, and others are receiving inflationary increases. However, there are some other large fluctuations (up and down) in several major projects.

The single biggest increase is from the new I-495/I-270 Traffic Relief Plan Pipeline Relocations (\$182.4 million, assumed to be 100% funded by the State). The second largest increase involves the Blue Plains projects which combined result in an increase of \$150.4 million.

REVIEW OF SELECTED PROJECTS

Blue Plains Project Costs (PDFs on ©68-71)

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

	Approved FY22	Six-Year Total	FY23	FY23	FY23	FY23	FY23	FY23
Total Blue Plains Project Costs								
Approved FY22-27	54,635	392,118	60,308	63,153	64,774	74,616	74,632	
Proposed FY23-28		542,558	68,490	67,878	101,872	120,050	93,140	91,128
Difference		150,440	8,182	4,725	37,098	45,434	18,508	
% Change		38.4%	13.6%	7.5%	57.3%	60.9%	24.8%	

The Blue Plains projects make up a sizable portion (over 40 percent) of WSSC Water’s Sewer CIP (over 30 percent of WSSC Water’s Proposed CIP and about 13 percent of the Proposed CIP when including WSSC Water’s Information Only projects). WSSC Water’s Proposed CIP assumes \$542.6 million over the FY23-28 period. This is an increase of \$150.4 million (or 38.4 percent) from the FY22-27 CIP.

These projects reflect WSSC Water’s capital cost share¹⁴ for DCWater’s Blue Plains Wastewater Treatment Plant capital program as well as for capital work on sewer lines conveying WSSC Water 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 WSSC Water is building at its Piscataway plant) and also implemented enhanced nutrient removal (ENR) technologies (as has WSSC Water 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.

DCWater’s latest capital expenditure totals were approved by the DCWater Board of Directors after WSSC Water transmitted its CIP last fall. WSSC Water is still reviewing the DCWater budget cost share and expenditure projections. If significant changes are needed from what WSSC Water originally proposed, WSSC Water will transmit revised projects for the Council’s review.

Potomac WFP Consent Decree Program (PDF on ©62)

This project was created six 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 WSSC Water 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, WSSC Water has noted:

¹⁴ WSSC Water’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.

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 (MDE) approval of the long-term upgrade plan. WSSC Water 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 FY23-28 CIP assumes a total project cost decrease of \$20.7 million reduction (+10.2 percent) based on final design estimates. The six-year cost is also down as the project progresses through the CIP.

Large Diameter Water Pipe & Large Valve Rehabilitation Program (\$540.5 million over six years, PDF on ©63-64)

This project funds the rehabilitation of transmission mains (pipes greater than 16 inches in diameter) in lengths of 100 feet or greater. WSSC Water's transmission system (like the smaller Water distribution lines) is aging, and WSSC Water 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.

WSSC Water 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 have been avoided in recent years because of ramped up inspections and acoustic fiber optic monitoring.

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

The proposed six-year cost for this project is \$540.5 million (an increase of \$67.5 million or 14.3 percent). Work in FY23 is expected to provide about 6 miles of large pipe construction work as well as emergency response funding and work on redundancy projects.

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

NOTE: The mid-cycle update (discussed later) assumes substantial reductions from the proposed CIP (-\$18.6 million).

Trunk Sewer Reconstruction Program (PDF on ©74)

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), WSSC Water has spent about \$1.6 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, WSSC Water 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 WSSC Water Staff's [December 2021 SSO Consent Decree Briefing](#) to the Commissioners.

Proposed FY23-28 expenditures for this project are \$289.2 million (a decrease of \$23.1 million and 7.4 percent) from the Approved total of \$312.4 million).

Piscataway WRRF Bio-Energy Project (PDF on ©72-73)

This project represents WSSC Water's long-term solution to address its biosolids disposal. 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 WSSC Water biosolids with future accommodation of fats, oils, and grease (FOG). The project is scheduled for completion in November 2024.

Proposed FY23-28 expenditures for this project are \$113 million, a decrease of \$109.6 million as the project is under construction and expenditures cycle through the CIP. The overall cost of the project is up by \$6.0 million (1.9 percent) related to program management services, construction management services, and the Washington Gas Supply and Delivery Contract.

“Information Only” Projects (see ©75-81)

Table 4: Information-Only Projects

Project	Six-Year Total	FY23	FY24	FY25	FY26	FY27	FY28
Information Only Projects							
Water Reconstruction	798,916	99,336	111,186	131,975	145,058	152,624	158,737
Sewer Reconstruction	307,131	50,540	53,265	47,882	49,796	51,787	53,861
Anacostia Depot Reconfiguration		1,314	14,494	14,928	9,544	-	-
Laboratory Division Building Expansion	19,630	12,320	4,744	2,566	-	-	-
RGH Building Upgrades		1,100	8,470	3,630	-	-	-
Engineering Support Program	118,000	18,000	20,000	20,000	20,000	20,000	20,000
Energy Performance	15,617	5,717	2,475	550	2,750	2,750	1,375
Water Storage Facility Rehab Program	36,000	4,000	5,000	6,000	7,000	7,000	7,000
Speciality Valve Vault Rehab Program	4,716	1,691	1,462	745	339	405	74
Other Capital Programs	421,620	57,702	58,848	67,898	72,271	78,643	86,258
D'Arcy Park North Relief Sewer	575	290	285	-	-	-	-
Information Only Projects Total	1,775,685	252,010	280,229	296,174	306,758	313,209	327,305

NOTE: The Anacostia Depot Reconfiguration and the RGH Building Upgrades are both new projects and were discussed earlier.

Water Reconstruction Program (PDF on ©76-77)

This “Information Only” project funds small Water main replacement throughout the WSSC Water service area. The project does not include any funding for “major capital projects” as defined in state law.

The estimated six-year cost is \$798.9 million, which reflects an increase of \$72.4 million or 10 percent from the FY22-27 six-year total of \$726.5 million.

Over the past decade, WSSC Water 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, WSSC Water 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 WSSC Water Operating Budget.

After two straight years of budgeting for 25 miles to be replaced. WSSC Water increased work up to 31 miles per year in FY22. For FY23, the project assumes increasing the miles to be replaced up to 37. While this reflects a second straight year of increase, this is still far below WSSC's previous goal of a 100-year replacement cycle (or about 50 miles per year).

WSSC Water also continues to make investments in new technologies (such as pressure monitoring systems, and satellite and other leak detection tools). WSSC Water 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.

NOTE: The mid-cycle update (discussed later) assumes substantial reductions from the proposed CIP (-\$27.7 million) and a significant drop in miles to be designed and constructed.

Sewer Reconstruction Program (PDF on ©78-79)

This "Information Only" project funds comprehensive sewer system evaluations and rehabilitation programs. WSSC Water 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 \$307.1 million, which is down \$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 couple of 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.

Mid-Cycle Update

Last fall, WSSC Water received AAA ratings by the three rating agencies. However, one rating agency (Fitch) revised its outlook for WSSC Water from "Stable" to "Negative." While recognizing WSSC Water's "strong utility fundamentals" Fitch cited revenue pressures and WSSC Water's high debt leverage.

Also, last fall, as discussed earlier, the two Councils supported a 6.5 percent rate ceiling for WSSC Water's FY23 Budget. WSSC Water ultimately transmitted an FY23 Proposed Budget assuming a 7.0 percent rate increase while also developing a CIP midcycle update to address Fitch's debt concerns.

On February 17, WSSC Water transmitted the mid-cycle update to both counties (see transmittal letter on ©8). As shown in the following chart, this update involves reductions and/or deferrals to 15 projects (as compared to the Original Proposed WSSC Water CIP) to lower WSSC Water's debt leverage ratio¹⁷ and reduce debt service. These changes have the effect of reducing the Six-Year CIP by \$76.7 million and the FY23 CIP total by \$110.5 million.

Mid-Cycle Update - Changes from Original Proposed									
Project	FY23-28	FY23	FY24	FY25	FY26	FY27	FY28	B6Y	Change
A-100.01 Anacostia Depot Reconfiguration	-	(1,314)	(13,180)	(434)	5,384	9,544	-	-	One year delay
A-102.00 Engineering Support Program	(5,699)	(5,699)	-	-	-	-	-	-	One-time cut in FY23
A-110.00 Other Capital Programs	(7,194)	(5,229)	2,760	(1,491)	(2,383)	65	(916)	-	One-time cut plus adjustments
S-36.01 Arcola WWPS & FM	-	(690)	(1,610)	(547)	2,847	-	-	-	One year delay
S-61.02 Reddy Branch WWPS & FM	(11,276)	(275)	165	(583)	-	(10,583)	-	11,276	One year delay
S-63.08 Sam Rice Manor WWPS & FM	(2,990)	(173)	58	(59)	(401)	(575)	(1,840)	2,990	One year delay
S-68.02 Carlsdale WWPS & FM	-	(345)	(3,335)	2,415	1,265	-	-	-	One year delay
S-89.26 Colmar Manor WWPS & FM	(2,588)	(173)	58	(115)	(345)	(2,013)	-	2,588	One year delay
S-94.14 Spring Gardens WWPS Replacement	-	(132)	(583)	-	(3,630)	-	4,345	-	One year delay
S-113.13 Forest Heights WWPS & FM	(3,738)	(173)	115	(172)	(345)	(3,163)	-	3,738	One year delay
S-170.08 Septage Discharge Facility Planning & Implementation	-	(12,959)	-	10,079	(908)	-	3,788	-	One year delay
W-1.00 Water Reconstruction Program	(27,725)	(27,725)	-	-	-	-	-	-	One-time cut in FY23
W-84.05 Prince George's County 450A Zone Water Main	3,124	(14,410)	(10,010)	5,186	9,190	8,586	4,582	704	One-year delay & cost increase
W-137.03 South Potomac Supply Improvement, Phase 2	-	(22,552)	-	-	22,552	-	-	-	One year delay
W-161.01 Large Diameter Water Pipe & Large Valve Rehabilitation	(18,641)	(18,641)	-	-	-	-	-	-	One-time cut in FY23
Totals	(76,727)	(110,490)	(25,562)	14,279	33,226	1,861	9,959	21,296	

As shown in the following chart, these projects are mostly funded with WSSC Bonds.

Mid-Cycle Update Expenditure Changes by Funding Source								
Funding Source	FY23-28	FY23	FY24	FY25	FY26	FY27	FY28	B6Y
WSSC Bonds	(71,182)	(102,446)	(25,309)	14,469	28,642	4,931	8,531	15,751
System Development Charge (SDC)*	(5,545)	(8,044)	(253)	(190)	4,584	(3,070)	1,428	5,545
Totals	(76,727)	(110,490)	(25,562)	14,279	33,226	1,861	9,959	21,296
*3 WWPS & FM projects (Sam Rice Manor, Spring Gardens, and Forest Heights) plus the South Potomac Supply Improvement, Phase 2 project include SDC funding in addition to WSSC Bond funding.								

The changes reduce debt service in the six-year period by \$22.1 million and by \$2.7 million in FY23. Most importantly, the reduction improves WSSC Water's debt leverage ratio in FY23 from 10.2x to 9.8x. Fitch had noted in its letter that leverage sustained at or above 10x would likely result in a negative rating action. **Given the substantially higher cost to borrow if WSSC Water's rating is downgraded¹⁸, and the difficulty in ultimately getting the rating upgraded later, Council Staff agrees with WSSC Water's intent to stay within the Fitch debt leverage ratio guideline.**

The impacts from the mid-cycle update (as described in the letter to Council President Alborno) are significant and summarized below:

¹⁷ Fitch's "debt leverage ratio" is calculated as net adjusted debt divided by adjusted funds available for debt service (FADS). Net adjusted debt is comprised of several components, including long-term outstanding debt, fixed services expense, and net pension liability less unrestricted cash and investments. Adjusted FADS is also comprised of several components, including net operating revenue, connection fees, non-operating and miscellaneous revenues, and adjustments for fixed services and pension expenses. WSSC Water staff have noted that the leverage ratio used by Fitch for ratings decisions is based on a stress case in which debt issuance for capital expenditures is assumed to be 10% higher than planned.

¹⁸ WSSC Water's financial advisor estimates that (based on WSSC Water's average issuance size) the increased borrowing cost to WSSC Water would be 20 basis points resulting in costs in excess of \$200 million over 30 years.

- **Seven Wastewater Pumping Station (WWPS) and/or Force Main (FM) projects across both counties are delayed one year.** Six of the projects (Arcola, Reddy Branch, Sam Rice Manor, Carsondale, Colmar Manor, and Forest Heights) are newly requested projects. The Spring Gardens WWPS replacement project is in the Approved FY22-27 CIP.

Given the relatively low FY23 capital savings (less than \$2.0 million) across all seven of the WWPS and FM projects and that the six-year impact on debt service would be minimal since these projects would be delayed only (not cut), Council Staff suggests that further discussions with WSSC Water Staff and Prince George's County Council Staff occur to see if some of these projects in both counties can be returned to their proposed/approved schedules without significant impact on WSSC's debt metrics.

- **Anacostia Depot Reconfiguration project completion delayed one year.** This new project provides for the planning, design and construction of a reconfiguration of the Anacostia Depot to improve the efficiency of operations; to update to current building codes, regulations and Americans with Disabilities Act (ADA) requirements; to improve the energy efficiency of the facilities; to address floodplain vulnerabilities due to climate change; and to replace assets that are at or beyond their useful lives.
- **Septage Discharge Facility Planning & Implementation project completion delayed one year.** This project provides for the planning, design and construction of a new septage and fats, oils and grease (FOG) discharge facility at the abandoned Rock Creek Water Resource Recovery Facility (WRRF) and new septage discharge facilities at the Anacostia #2 WWPS and Piscataway WRRF.
- **Engineering Support (-\$5.7 million in FY23):** As noted by WSSC Water this project:

This program represents a consolidation of a diverse group of projects whose unified purpose is to support the extensive water and sewer infrastructure and numerous support facilities that are owned, operated and maintained by WSSC Water... The program does not include proposed "major projects" which, by law, must be programmed in WSSC Water's Capital Improvements Program or projects to serve new development.

The expected impacts from this reduction are detailed in the letter to Council President Alborno.

- **Other Capital Programs (-\$5.2 million in FY23 with other adjustments):** As noted by WSSC Water, this project:

includes miscellaneous capital projects, programs and expenditures for common, non-CIP, enterprise-wide activities such as relocations, new water and sewer house connections, purchases of water meters, paving and general construction of local lines. The program summarizes capital expenditures and allocated costs that are not already included in the CIP or in other Information Only projects. Due to budgetary constraints, the budget for this project in FY 2023 has been reduced by \$5.2 million. This is comprised of a reduction of \$10.0 million to paving, a reduction of \$3.8 million to purchases of water meters, and a net increase of \$8.6 million in allocated costs due to the reductions to other capital projects and programs and changes to the operating budget. Customers across WSSC Water's service area will be impacted by these reductions.

- **Water Reconstruction Program (-\$27.7 million in FY23):** According to the mid-cycle update transmittal, this reduction would:

Due to budgetary constraints, the budget for this project in FY 2023 has been reduced by \$27.7 million. This reduction will lower the targeted design mileage from 30 miles down to 10 miles and lower the targeted construction mileage from 37 miles down to 25 miles. However, the mileage impacts will be much larger than the stipulated figures. This is an ongoing program and the commencement of new work is a continual process throughout the year. Additionally, the replacement projects typically span multiple fiscal years. Consequently, the projects currently under construction or out to bid already constitute the full allotment of 25 miles for construction in FY 2023. The program will therefore be required to stop issuing tasks for new work, which will slow the work of the program and lead to impacts that exceed the stipulated 12 mile reduction to the construction target and extend into future fiscal years.

This program had been expanded over the past decade with a goal of achieving an approximate 100 year replacement cycle for its approximately 5,500 miles of pipes (approximately 55 miles per year). This reduction, on top of the reductions taken in recent years will mean WSSC Water's pipes will continue to age with the potential for more breaks to be experienced going forward.

- **Large Diameter Water Pipe & Large Valve Rehabilitation Program (-\$18.6 million in FY23):** According to the mid-cycle update transmittal, this reduction would:

lower the targeted construction mileage from 6 miles to 5 miles, reduce the funding available for PCCP carbon fiber and planned and emergency replacement work by \$10.7 million and eliminate funding for the water redundancy program in FY 2023. The PCCP funding is used for planned and emergency interventions on PCCP transmission mains throughout the system that are identified as requiring repair or replacement through the Acoustic Fiber Optic monitoring program...The water redundancy program provides for planning, design and construction of projects that improve the redundancy of the water system in order to improve service to customers when critical pipe segments are out of service. Projects are identified using a criticality analysis of WSSC Water's hydraulic model for the water system.

- **Prince George's County 450A Zone Water Main and South Potomac Supply Improvement, Phase 2:** Both these projects in Prince George's County would be delayed one year. The WSSC Water letter to Council President Albornozy provides more details regarding both projects.

All of these cuts/deferrals result in some risk to WSSC Water in terms of potential system failures or reduced redundancy in case of other failures. For the deferrals, the risks are extended one year. For the Water Reconstruction Program and Large Diameter Pipe project, the one-time cuts in FY23 result in WSSC Water falling further behind in its infrastructure refreshment. The large diameter pipe project in particular is a high priority of both counties given past large diameter PCCP failures and near failures prevented. However, a potential bond rating downgrade would have even greater impacts in the form of substantially higher costs of borrowing (further constraining the WSSC Water CIP).

Council Staff Recommendation

Council Staff recommends preliminary approval of WSSC Water's Proposed FY23-28 Capital Improvements Program (CIP) with its mid-cycle update reductions. Further discussion of the CIP may occur during the Committee's WSSC Water Operating Budget review in April. Final action on the WSSC Water CIP and Operating Budget will occur at the Bi-County meeting on May 12, 2022.

NOTE: Council Staff suggests that further discussions with WSSC Water Staff and Prince George's County Council Staff occur to see if some of the WWPS and FM projects in both counties can be returned to their proposed/approved schedules without significant impact on WSSC's debt metrics.

Attachments



Washington Suburban Sanitary Commission

AGENCY DESCRIPTION

The Washington Suburban Sanitary Commission (WSSC Water) is a bi-county agency directed by a board of six commissioners, three each from Prince George's County and Montgomery County. The commissioners are appointed by the respective jurisdiction's Executive and confirmed by its County Council.

WSSC Water is responsible for providing water and sanitary sewer service within the Washington Suburban Sanitary District, which includes most of Montgomery and Prince George's Counties and which, in Montgomery County, excludes the Town of Poolesville and portions of the City of Rockville.

PROGRAM DESCRIPTION AND OBJECTIVES

The principal objective of the Capital Improvements Program (CIP) is the programming of planning, design, land acquisition, and construction activities on a yearly basis for major water and sewerage facilities. These facilities may be necessary for system improvements and/or service to existing customers, to comply with Federal and/or State environmental mandates, and to support new development in accordance with the counties' approved plans and policies for orderly growth and development.

The CIP submission includes all major projects, defined as extensions, projects, or programs involving water and sewer facilities. Major projects include: water mains 16 inches in diameter or larger, sewer mains 15 inches in diameter or larger, water or sewage pumping stations, force mains, storage facilities, and other major facilities.

The section following this narrative ordinarily shows only the WSSC Water project description forms (PDFs) for which the Executive recommends changes to the Commission's request. Those PDFs would be preceded by project briefs which provide a description of the change and the Executive's rationale. The complete set of PDFs submitted by the Commission can be found on the WSSC Water website at <http://www.wsscwater.com>.

In addition, a report noting the Commission's request by project follows the same report outlining the County Executive's recommendation by project. For this year's proposed CIP budget, these additional documents will not follow this narrative given that the Executive is not recommending changes to the budget proposed by WSSC Water.

PROGRAM CONTACTS

Contact Brian Halloran of WSSC Water's Budget Division at 301.206.8214 or Rafael Pumarejo Murphy of the Office of Management and Budget at 240.777.2775 for more information regarding this agency's capital budget.

CAPITAL PROGRAM REVIEW

This narrative applies only to the Montgomery County and bi-county water and sewerage projects. Projects that serve only Prince George's County are not included.

Agency Request

The total of \$2.47 billion in six-year expenditures proposed by the WSSC Water for FY23-28 is \$388.1 million (18.6 percent) above the FY22-27 approved total of \$2.08 billion. The increase in six-year costs is the net result of: 1) cost changes in both the water and sewer projects; 2) prior deferral of CIP costs that were unaffordable in FY20, FY21, and FY22 which are now deferred into FY23-28;

and 3) new projects which focus on critical system and facility maintenance.

The FY23-28 CIP request includes 55 ongoing projects, 11 closeout projects, and 5 pending closeout projects. There are 13 new projects (including Information Only projects).

The following table compares the proportion of funding for Montgomery, Prince George's, and bi-county projects in the Commission's proposed CIP:

WSSC WATER PROPOSED FY23-28 CIP						
MONTGOMERY COUNTY/PRINCE GEORGE'S COUNTY/BI-COUNTY SPLIT						
	FY23		6-Year		Total Cost	
	\$ (000)	% of Total	\$ (000)	% of Total	\$ (000)	% of Total
Montgomery County Water Projects	2,621	0.5%	9,165	0.4%	9,237	0.2%
Montgomery County Sewer Projects	5,512	1.1%	64,133	2.6%	75,388	1.9%
Prince George's County Water Projects	63,887	13.2%	159,229	6.4%	220,139	5.6%
Prince George's County Sewer Projects	57,691	11.9%	220,426	8.9%	405,337	10.3%
Bi-County Water Projects	122,746	25.4%	997,880	40.4%	1,242,966	31.7%
Bi-County Sewer Projects	231,518	47.8%	1,021,814	41.3%	1,970,429	50.2%
TOTAL	483,975	100.0%	2,472,647	100.0%	3,923,496	100.0%
All Montgomery County Projects	8,133	1.7%	73,298	3.0%	84,625	2.2%
All Prince George's County Projects	121,578	25.1%	379,655	15.4%	625,476	15.9%
All Bi-County Projects	354,264	73.2%	2,019,694	81.7%	3,213,395	81.9%

Source: WSSC Water Proposed FY23-28 CIP

Executive Recommendation

The County Executive recommends adoption of the FY23-28 CIP as proposed by WSSC Water.

HIGHLIGHTS

- Add three new Montgomery County Sewer projects that upgrade critical waste water pump stations and force mains that are reaching the end of their functional life expectancy.
- Add two new information only projects that maintain WSSC Water's service capacity, including improving the resiliency of critical facilities to climate change impacts.
- Continue development of capital projects aimed to address long-term issues in water and sewer management.
- Continue construction of the Piscataway Bio Energy Project that addresses biosolids management while generating renewable energy.
- Continue water and sewer line infrastructure reconstruction, replacing and rehabilitating 37 miles of water mains and 26 miles of sewer main in FY23.
- Continue to address the consent decrees with the Maryland Department of the Environment (MDE) related to the Potomac Water Filtration Plant and the Trunk Sewer Reconstruction Program.
- Continue to support operations at DC Water's facility in Blue Plains. Support for Blue Plains projects represents 25.9% of the bi-county and Montgomery County's WSSC Water six-year CIP.

SPENDING CONTROL LIMITS

In order to reduce the magnitude of water and sewer rate increases, the Montgomery and Prince George's County Councils adopted a

spending affordability process in April 1994. The process requires the counties to set annual ceilings on WSSC Water's water and sewer rates and debt (both bonded indebtedness and debt service), and then to adopt corresponding limits on the size of the capital and operating budgets.

While the spending limits technically apply only to the first year of the six-year program, the purpose of the limits includes controlling debt, debt service, and rate increases over the longer term. The FY23 spending control limits adopted by the Montgomery County Council are shown below with their outyear projections. For FY23, while WSSC Water proposed a 9% rate increase and the County Executive recommended a 7% increase, the Montgomery and Prince George's County Councils set a 6.5% rate increase.

The chart below list the various spending control limits for FY23 and outyear projections for FY24-28.

FY23 WSSC WATER SPENDING CONTROL LIMITS ADOPTED BY THE MONTGOMERY COUNTY COUNCIL (AND OUTYEAR PROJECTIONS)						
	FY23	FY24	FY25	FY26	FY27	FY28
New Debt Requirement (\$000)	\$430,093	\$397,210	\$374,496	\$371,511	\$358,063	\$330,000
Total W/S Operating Budget (\$000)	\$859,374	\$927,362	\$992,035	\$1,043,393	\$1,080,019	\$1,135,776
Debt Service (\$000)	\$328,423	\$349,645	\$379,953	\$402,747	\$423,708	\$443,517
Average Rate Increase	6.5%	8.5%	6.0%	4.0%	4.0%	4.0%

Source: Montgomery County Council Resolution 19-1034 and WSSC Water Proposed FY23 SAG

WSSC WATER'S LEVEL OF BONDED INDEBTEDNESS

Debt Service

The County Executive and County Council monitor WSSC Water's bonded indebtedness and debt service level. Total outstanding water and sewer bond debt has risen 43.4 percent since FY17, and total water and sewer debt service is up 30.5 percent over the same period, as shown in the following table:

WSSC BONDED INDEBTEDNESS AND DEBT SERVICE						
(\$ in Millions)	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ESTIMATED
	FY17	FY18	FY19	FY20	FY21	FY22
End of Fiscal Year - Total Outstanding Bond Debt (Includes Bond Anticipation Notes)	\$2,813.4	\$3,202.4	\$3,339.9	\$3,423.1	\$3,640.3	\$3,887.0
Outstanding Water and Sewer Bond Debt	\$2,625.6	\$3,030.4	\$3,177.8	\$3,264.6	\$3,486.2	\$3,765.7
Total Debt Service - All Operating Funds	\$250.7	\$275.1	\$292.7	\$292.3	\$292.0	\$316.8
Debt Service as a % of Total Operating Exp.	36.3%	38.0%	37.6%	38.2%	39.0%	37.2%
Debt Service in Water/Sewer Operating Exp.	\$236.7	\$257.5	\$275.4	\$279.7	\$281.8	\$309.0
Water/Sewer Debt Service as a % of Total Water/Sewer Operating Expenditures	35.1%	36.5%	36.3%	37.2%	38.3%	36.7%

Source: WSSC Water Budget Division

The debt service ratio is projected to be 37.4 percent in FY23. The table below lists projected debt ratios for FY23-28.

PROJECTED WSSC DEBT SERVICE RATIO UNDER THE COUNTY'S APPROVED SPENDING CONTROL LIMITS						
	FY23	FY24	FY25	FY26	FY27	FY28
Debt Service as a % of Total Water and Sewer Operating Expenditures	37.4%	37.7%	38.3%	38.6%	39.2%	39.0%

Source: WSSC Water FY23 Proposed SAG

Debt Capacity

State law provides for the option of a tax levy against all assessable property in the Washington Suburban Sanitary District by Montgomery and Prince George's counties to pay for the principal and interest on WSSC Water bonds. This provision, which would be exercised only if requested by the WSSC Water, does not constitute a pledge of the full faith and credit of the two counties. The amount of debt that WSSC Water issues is therefore a factor in rating agency assessments of the credit worthiness of Montgomery County. In addition, increasing levels of debt service can lead to increases in the combined water and sewer rate.

"INFORMATION ONLY" PROJECTS

WSSC Water is obligated by State law to submit for CIP review and approval only major water and sewerage projects. However, the Commission undertakes other kinds of capital projects which are shown separately in the CIP. These "Information Only" projects may be included for a number of reasons, including: fiscal planning purposes; to improve the reader's understanding of the full scope of a specific set of projects; or in response to a request from one or both of the county governments. "Information Only" projects are subject to review and approval as part of the annual WSSC Water Operating and Capital Budgets, which are acted on by the Council in the spring.

The FY23-28 "Information Only" projects include the Water and Sewer Reconstruction projects, Engineering Support Program, Laboratory Division Building Expansion, Energy Performance Program, Specialty Valve Vault Rehabilitation Program, Other Capital Programs, D'Arcy Park North Relief Sewer, the Water Storage Facility Rehabilitation Program, RGH Building Upgrades, and Anacostia Depot Reconfiguration.

The total FY23-28 budget for the "Information Only" projects is \$2,023.3 million, a 3.5 percent increase from the \$1,955.0 million approved for the FY22-27 CIP. This increase is primarily the result of the addition of two new projects focused on maintenance and upgrades to WSSC Water's service infrastructure, including improving climate change resilience at key facilities.

Total proposed FY23-28 spending on the Water and Sewer Reconstruction "Information Only" projects will decrease by \$32.0 million (2.5 percent). The accompanying metrics for miles of water main replacement and sewer main rehabilitation can be seen below in the following table.

SMALL WATER AND SEWER MAIN RECONSTRUCTION INCLUDED IN WSSC'S PROPOSED FY21-26 CIP								
	Approved	FY21-26						FY23-28
	FY22	FY23	FY24	FY25	FY26	FY27	FY28	Total
Water Main Replacement (mi.)	31.4	37	40	47	50	50	50	274
Sewer Main Rehabilitation (mi.)	31	31	31	30	30	30	30	182

Source: WSSC Water Budget Division

PROGRAM FUNDING

The WSSC Water CIP is funded through a variety of sources described below.

WSSC Water Bonds

The WSSC Water raises revenue for CIP projects by issuing water and sewer bonds. These bonds are amortized through periodic charges to the users of water and sewer services. Bond funding for the FY23-28 six-year CIP, as recommended by the County Executive, is \$3,280.5 million.

PAYGO (Pay-As-You-Go)

WSSC Water uses current revenues to help fund the capital program and thereby reduce the need for debt financing. PAYGO funding for the FY23-28 six-year CIP, as recommended by the County Executive, is \$400.0 million.

System Development Charge

The System Development Charge (SDC) is a charge to new development to pay for the part of the CIP which is needed to accommodate growth. The WSSC Water collects SDC revenue from charges to builders based on the number and type of plumbing fixtures installed in new construction projects. The County Executive recommends that \$178.9 million in SDC funds be used to fund growth projects from FY23-28.

State Aid

The total State Aid budgeted for the FY23-28 six-year CIP and recommended by the County Executive is \$306.4 million. WSSC Water asserts that all Commission projects receiving State Aid conform to the requirements of local plans, as required by the Maryland Economic Growth, Resource Protection and Planning Act.

Federal Aid

The total Federal Aid budgeted for the FY23-28 six-year CIP and recommended by the County Executive is \$11.8 million.

Municipal Financing

The WSSC Water CIP contains projects in which neighboring jurisdictions such as the District of Columbia and the City of Rockville join the Commission in financing the construction of sewerage facilities serving the metropolitan area. These jurisdictions contribute an agreed-upon share of the project cost. A total of \$35.4 million in project expenditures is recommended to be financed by these jurisdictions during FY23-28.

Contributions

When the actual costs of water and sewerage facilities required to serve new development are estimated to exceed expected revenues, the difference may be financed by developers in the form of contributions. Contributions toward CIP projects are estimated at \$35.5 million from FY23-28.

STATUTORY AUTHORITY

The Montgomery County CIP review process for WSSC Water is governed by laws and regulations of the State of Maryland, the Charter of Montgomery County, and the Montgomery County Code. Relevant projects authorized for Montgomery County review include only Montgomery and bi-county water and sewer projects.

The Montgomery County Executive reviews relevant WSSC Water CIP proposals and includes them, along with comments and recommendations, in the Executive's Recommended Capital Improvements Program Budget. After a public hearing and subsequent committee work sessions, the Montgomery County Council approves by resolution WSSC Water's six year capital program and annual operating and capital budgets, with modifications as desired.

Bi-county projects are projects located completely or partially within Montgomery County or Prince George's County that are designed to provide service in whole or in substantial part to the other county. A proposed bi-county project may be disapproved only with the concurrence of the governing body of the county which is to receive the designated service. However, the county in which the project is to be physically located has the authority to direct modifications in project location and scheduling, provided that such modifications or changes do not prevent the service from being available when needed.

This authority to modify the project location may only be exercised during the year in which the project is first introduced. Thereafter, the authority to make modifications is limited to those changes that would not result in substantial net additional costs to WSSC Water, unless the county directing the modification reimburses WSSC Water for any additional net cost increases resulting from the

modification.

WSSC Water is responsible for constructing approved capital projects on a schedule as close as possible to the schedule set forth in the adopted CIP. The Commission is limited to undertaking only those projects which are scheduled in the first year of the program. However, it is not obligated to implement any project determined to be not financially feasible.

LONG-RANGE FINANCIAL PLAN FOR WATER AND SEWER OPERATING FUNDS

(\$ in thousands)	FY 2022 Approved	FY 2023 Proposed	FY 2024 Projected	FY 2025 Projected	FY 2026 Projected	FY 2027 Projected	FY 2028 Projected
New Water and Sewer Debt Issues	\$ 409,704	\$ 358,839	\$ 380,883	\$ 382,820	\$ 390,726	\$ 362,710	\$ 307,844
Water and Sewer Combined Rate Increase (Average)	5.9 %	7.0 %	8.5 %	6.0 %	4.0 %	4.0 %	4.0 %
Operating Revenues							
Consumption Charges	\$ 717,803	\$ 756,991	\$ 821,335	\$ 871,712	\$ 907,776	\$ 945,358	\$ 984,497
Account Maintenance Fees (AMF)	31,866	34,063	36,958	39,176	40,743	42,373	44,068
Infrastructure Investment Fees (IIF)	38,808	41,505	45,033	47,735	49,644	51,630	53,695
Plumbing and Inspection Fees	14,350	16,780	17,283	17,802	18,336	18,886	19,453
Rockville Sewer Use	3,100	3,100	3,100	3,100	3,100	3,100	3,100
Miscellaneous	21,600	19,000	19,190	19,382	19,576	19,771	19,969
Interest Income	1,000	2,800	2,800	2,800	2,800	2,800	2,800
Uncollectable	-	(6,000)	(6,000)	(6,000)	(6,000)	(6,000)	(6,000)
Cost Sharing Reimbursement	-	635	485	75	5,525	5,525	145
Total Operating Revenues	\$ 828,527	\$ 868,874	\$ 940,184	\$ 995,782	\$ 1,041,500	\$ 1,083,443	\$ 1,121,727
Other Credits and Transfers							
Reconstruction Debt Service Offset	6,000	4,000	2,000	-	-	-	-
SDC Debt Service Offset	5,772	5,772	5,772	5,772	5,772	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
Total Funds Available	\$ 842,299	\$ 883,146	\$ 949,956	\$ 1,003,554	\$ 1,049,272	\$ 1,091,191	\$ 1,129,475
Operating Expenses							
Salaries & Wages	133,039	136,410	142,548	148,963	155,666	162,671	169,991
Heat, Light & Power	18,493	18,817	19,569	18,776	18,014	18,861	19,521
Regional Sewage Disposal	59,160	60,343	61,550	62,781	64,037	65,317	66,624
All Other	294,977	294,099	299,681	304,861	321,880	328,122	323,729
Total Operating Expenses	\$ 505,669	\$ 509,669	\$ 523,348	\$ 535,381	\$ 559,597	\$ 574,971	\$ 579,865
Debt Service							
Bonds and Notes Principal and Interest	309,045	324,144	345,360	375,671	398,462	419,424	439,234
Other Transfers and Adjustments							
Additional and Reinstated	-	-	-	-	(5,000)	(7,500)	(7,500)
PAYGO	27,585	31,016	44,000	65,000	80,000	80,000	100,000
Total Expenses	\$ 842,299	\$ 864,829	\$ 912,708	\$ 976,052	\$ 1,033,059	\$ 1,066,895	\$ 1,111,599
Net Revenue (Loss)	\$ -	\$ 18,317	\$ 37,248	\$ 27,502	\$ 16,213	\$ 24,296	\$ 17,876
Beginning Fund Balance - July 1	\$ 168,897	\$ 169,317	\$ 187,634	\$ 224,882	\$ 252,384	\$ 268,597	\$ 292,893
Net Increase (Decrease) in Fund Balance	-	18,317	37,248	27,502	16,213	24,296	17,876
Adjustments	420	-	-	-	-	-	-
Ending Fund Balance - June 30	\$ 169,317	\$ 187,634	\$ 224,882	\$ 252,384	\$ 268,597	\$ 292,893	\$ 310,769
Debt Service Coverage (1.10 - 1.25 is Target)	1.04	1.11	1.21	1.23	1.22	1.23	1.25
Leverage Ratio - Credit Rating Preservation (<10.0)	n/a	9.8	9.0	8.5	8.5	8.2	7.8
Debt Service as a % of Total Expenses (< 40% is Target)	36.7 %	37.5 %	37.8 %	38.5 %	38.6 %	39.3 %	39.5 %
End Fund Balance as a % of Operating Revenue (min. 15%)	20.4 %	21.6 %	23.9 %	25.3 %	25.8 %	27.0 %	27.7 %
Days Operating Reserve-on-Hand (120-150 Days is Target)	73.4	126.7	144.7	153.4	154.5	165.1	168.7
Total Workyears (All Funds)	1,786	1,796	1,796	1,799	1,799	1,799	1,799

Assumptions:

- The FYs 2024-2028 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 2023 Proposed Budget. Data excludes General Construction Debt Service and General Construction Bonds.
- 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).
- Debt service for bonds and notes includes Maryland Water Quality Bonds and interfund debt service transfers.
- Adjustments to Consumption Charges, AMF and IIF for Water and Sewer Combined Rate Increase assumes rate increase is in effect for 12 months.
- Debt Service Coverage is Operating Revenues less Operating Expenses (excluding Debt Service and PAYGO) divided by the debt service on bonds and notes.
- Beginning FY 2023, Days Operating Reserve-on-Hand target was revised to provide a more robust reserve and to align with the rating agency calculations which do not include debt service as an operating expense.
- The FY 2022 adjustments reflect FY 2022 estimated Net Revenue.

February 17, 2022

The Honorable Gabe Albornoz
Montgomery County Council President
Stella B. Werner Office Building
100 Maryland Avenue
Rockville, MD, 20850

Dear Council President Albornoz:

The purpose of this letter is to transmit a mid-cycle update to the WSSC Water Proposed Fiscal Years 2023-2028 Capital Improvements Program transmitted on September 24, 2021. We hereby request you incorporate these changes into your annual comments, recommendations and amendments to the program. The mid-cycle update provides for revised expenditure schedules for certain projects in the Proposed CIP to align them with the revised capital program and resultant capital debt impact incorporated into the Fiscal Year 2023 Proposed Budget.

Reductions totaling \$110.5 million across 15 projects are required in order to reduce the FY 2023 Proposed Budget combined rate increase to 7.0% and to reduce projected bond requirements for capital projects to help lower our leverage ratio and address concerns raised by the ratings agencies.

Enclosed for your information are tables summarizing the impacts of the reductions by County Council district for each County, detailed impact statements for each project, a revised financial summary for the FYs 2023-2028 CIP, and revised project description forms for each of the projects.

Sincerely,

DocuSigned by:

Keith E. Bell
Chair

Enclosure

cc: Marlene Michaelson, Council Administrator
Montgomery County Council

Keith Levchenko, Legislative Analyst
Montgomery County Council

County/District/Project	Impact Statement	Communities Impacted	Department(s)	Detailed Impact
Montgomery County				
At-Large				
Anacostia Depot Reconfiguration	This project will be deferred one year. The existing buildings were generally built in the 1970s. The depot houses several critical functions for WSSC Water that support system-wide operations. Any disruptions to the Anacostia Depot due to flooding would be felt across the entire service area.	County-wide	Engineering & Construction General Services Production Utility Services	Bi-County/ Information Only Item A
Septage Discharge Facility Planning & Implementation	This project will be deferred one year. WSSC Water has been working with Montgomery County to address concerns with the traffic disruptions impacting the public at the Muddy Branch Road disposal site. The deferral will delay WSSC Water's ability to address these concerns.	County-wide Gaithersburg	Engineering & Construction Production Utility Services	Bi-County/ Information Only Item B
Water Reconstruction Program	The reductions to this program eliminate funding for 20 miles of design projects and 12 miles of construction projects. These projects replace existing water mains that have reached the end of their useful life and which are prone to failure. Failure of these pipes will cause temporary loss of water service to residents and businesses and community impacts due to emergency repairs. Due to the ongoing nature of this program, these reductions impact planned work in FYs 2022, 2023, 2024 and beyond.	Impacts throughout the County as detailed below by district	Engineering & Construction Utility Services	Bi-County/ Information Only Item C
Large Diameter Water Pipe & Large Valve Rehabilitation Program	The reductions to this program eliminate funding for 1 mile of large transmission water main construction, PCCP carbon fiber and planned and emergency replacement work, and the water redundancy program. Transmission mains are the backbone of the water system and failure of these mains will cause temporary loss of water service to residences and businesses across a large area.	Impacts throughout the County as detailed below by district	Engineering & Construction Production Utility Services	Bi-County/ Information Only Item D
Engineering Support Program	The reductions to this program eliminate funding for a diverse group of projects that support operations system-wide. The reductions will increase the likelihood of SSOs, increase the likelihood of water service outages, and delay response times to emergencies.	County-wide Silver Spring	Engineering & Construction General Services Production Utility Services	Bi-County/ Information Only Item E
Other Capital Programs	The reductions to this program reduce the funding available for paving activities and purchases of water meters. The paving reduction is related to the reduction in water main replacement. WSSC Water's water meter population is aging and is in need of replacement. Older meters are less likely to be accurate and delays to replacing the meters could result in more estimated bills and higher call volumes from customers.	County-wide	Engineering & Construction Utility Services	Bi-County/ Information Only Item F
District 1				
Water Reconstruction Program	Chevy Chase Village South Alt (Construction; 0.13 miles) Cheltenham WMR (Construction; 0.63 miles) Red Coat Lane WMR (Construction; 2.75 miles)	Chevy Chase Bethesda Potomac	Engineering & Construction Utility Services	Bi-County/ Information Only Item C
Large Diameter Water Pipe & Large Valve Rehabilitation Program	Burdette Road 20" WMR (Construction; 0.90 miles) West Cedar Lane WMR (Construction; 1.12 miles)	Bethesda Bethesda	Engineering & Construction Production Utility Services	Bi-County/ Information Only Item D
District 2				
Spring Gardens WWPS Replacement	This project will be deferred one year. The existing WWPS and FM were built in 1977 and serve approximately 620 households in the King Valley, King Valley Manor and Kingstead Knoll communities near Damascus. Failure of the WWPS or FM would result in an SSO.	Damascus	Engineering & Construction Production Utility Services	Montgomery County Item D
Water Reconstruction Program	Middleboro Drive WMR (Design; 2.16 miles)	Damascus	Engineering & Construction Utility Services	Bi-County/ Information Only Item C

County/District/Project	Impact Statement	Communities Impacted	Department(s)	Detailed Impact
District 3				
Water Reconstruction Program	Mill Creek Drive WMR (Design; 3.08 miles) Olde Mill Run WMR (Design; 1.44 miles) Trailway Drive WMR (Construction; 1.95 miles) Waterway Drive WMR (Construction; 2.10 miles) Haverford Drive WMR (Construction; 1.71 miles) Rock Creek Valley WMR (Construction; 1.63 miles)	Derwood Derwood Rockville Rockville Aspen Hill Rockville	Engineering & Construction Utility Services	Bi-County/ Information Only Item C
Large Diameter Water Pipe & Large Valve Rehabilitation Program	Redundancy Project - 560B Zone Pressure Reducing Valve	Germantown	Engineering & Construction Production Utility Services	Bi-County/ Information Only Item D
District 4				
Arcola WWPS & FM	This project will be deferred one year. The existing WWPS and FM were built in 1961 and serve approximately 130 households in the Arcola area, just west of the Wheaton Regional Park. Failure of the WWPS or FM would result in an SSO.	Silver Spring	Engineering & Construction Production Utility Services	Montgomery County Item A
Reddy Branch WWPS & FM	This project will be deferred one year. The existing WWPS and FM were built in 1971 and serve approximately 5,650 households in the Brookeville and Olney areas. Failure of the WWPS or FM would result in an SSO.	Brookeville Olney	Engineering & Construction Production Utility Services	Montgomery County Item B
Sam Rice Manor WWPS & FM	This project will be deferred one year. The existing WWPS and FM were built in 1977 and serve approximately 135 households in the Sam Rice Manor community near Ashton. Failure of the WWPS or FM would result in an SSO.	Ashton	Engineering & Construction Production Utility Services	Montgomery County Item C
Large Diameter Water Pipe & Large Valve Rehabilitation Program	Queen Elizabeth Drive 16" WMR (Construction; 1.18 miles)	Olney	Engineering & Construction Production Utility Services	Bi-County/ Information Only Item D
District 5				
Water Reconstruction Program	Meadowood WMR (Design; 1.02 miles) Beaufort Place 20" WMR (Design; 1.90 miles) Lemontree Lane WMR (Construction; 2.34 miles) Cantrell Road WMR (Construction; 1.80 miles) Montgomery Knolls WMR (Construction; 2.68 miles)	Silver Spring Silver Spring Silver Spring Silver Spring Silver Spring	Engineering & Construction Utility Services	Bi-County/ Information Only Item C

County/District/Project	Impact Statement	Communities Impacted	Department(s)	Detailed Impact
Prince George's County				
At-Large				
Anacostia Depot Reconfiguration	This project will be deferred one year. The existing buildings were generally built in the 1970s. The depot houses several critical functions for WSSC Water that support system-wide operations. Any disruptions to the Anacostia Depot due to flooding would be felt across the entire service area. The impacts would likely be most acutely felt by the areas in Prince George's County that are primarily served by the Anacostia Depot.	County-wide Beltsville Bowie College Park Glenarden Greenbelt Hyattsville Laurel	Engineering & Construction General Services Production Utility Services	Bi-County/ Information Only Item A
Septage Discharge Facility Planning & Implementation	This project will be deferred one year. The construction of these facilities is currently on hold while a plan is developed to address final dispatch of fats, oils and grease (FOG) waste.	County-wide	Engineering & Construction Production Utility Services	Bi-County/ Information Only Item B
Water Reconstruction Program	The reductions to this program eliminate funding for 20 miles of design projects and 12 miles of construction projects. These projects replace existing water mains that have reached the end of their useful life and which are prone to failure. Failure of these pipes will cause temporary loss of water service to residents and businesses and community impacts due to emergency repairs. Due to the ongoing nature of this program, these reductions impact planned work in FYs 2022, 2023, 2024 and beyond.	Impacts throughout the County as detailed below by district	Engineering & Construction Utility Services	Bi-County/ Information Only Item C
Large Diameter Water Pipe & Large Valve Rehabilitation Program	The reductions to this program eliminate funding for 1 mile of large transmission water main construction, PCCP carbon fiber and planned and emergency replacement work, and the water redundancy program. Transmission mains are the backbone of the water system and failure of these mains will cause temporary loss of water service to residences and businesses across a large area.	Impacts throughout the County as detailed below by district	Engineering & Construction Production Utility Services	Bi-County/ Information Only Item D
Engineering Support Program	The reductions to this program eliminate funding for a diverse group of projects that support operations system-wide. The reductions will increase the likelihood of SSOs, increase the likelihood of water service outages, and delay response times to emergencies.	County-wide District Heights Fort Washington Landover Oxon Hill Upper Marlboro	Engineering & Construction General Services Production Utility Services	Bi-County/ Information Only Item E
Other Capital Programs	The reductions to this program reduce the funding available for paving activities and purchases of water meters. The paving reduction is related to the reduction in water main replacement. WSSC Water's water meter population is aging and is in need of replacement. Older meters are less likely to be accurate and delays to replacing the meters could result in more estimated bills and higher call volumes from customers.	County-wide	Engineering & Construction Utility Services	Bi-County/ Information Only Item F
District 1				
Water Reconstruction Program	Shadetree Lane WMR (Construction; 2.11 miles)	Laurel	Engineering & Construction Utility Services	Bi-County/ Information Only Item C
District 2				
Water Reconstruction Program	Powhatan Street WMR (Construction; 1.73 miles)	Hyattsville	Engineering & Construction Utility Services	Bi-County/ Information Only Item C
District 3				
Water Reconstruction Program	Goucher Drive WMR (Construction; 2.25 miles)	College Park	Engineering & Construction Utility Services	Bi-County/ Information Only Item C
District 4				
Water Reconstruction Program	Locris Drive WMR (Construction; 3.10 miles) Newburg Drive (Construction; 1.56 miles)	Upper Marlboro Greenbelt	Engineering & Construction Utility Services	Bi-County/ Information Only Item C
Large Diameter Water Pipe & Large Valve Rehabilitation Program	Redundancy Project - Race Track Road	Bowie	Engineering & Construction Production Utility Services	Bi-County/ Information Only Item D

County/District/Project	Impact Statement	Communities Impacted	Department(s)	Detailed Impact
District 5				
Carsondale WWPS & FM	This project will be deferred one year. The existing WWPS and FM were built in 1960 and serve the Carsondale community southeast of the I-95 and Route 50 interchange near Lanham. Failure of the WWPS or FM would result in an SSO.	Lanham	Engineering & Construction Production Utility Services	Prince George's County Item A
Colmar Manor WWPS & FM	This project will be deferred one year. The existing WWPS and FM were built in 1956 and serve approximately 240 households in the Colmar Manor community. Failure of the WWPS or FM would result in an SSO.	Colmar Manor	Engineering & Construction Production Utility Services	Prince George's County Item B
Water Reconstruction Program	Cheverly WMR Phase I (Design; 1.61 miles) Cheverly WMR Phase 2 (Design; 2.31 miles)	Cheverly Cheverly	Engineering & Construction Utility Services	Bi-County/ Information Only Item C
District 6				
Water Reconstruction Program	Village in the Woods (Construction; 1.59 miles) Thurston WMR (Construction; 1.69 miles)	Landover Kettering	Engineering & Construction Utility Services	Bi-County/ Information Only Item C
District 7				
Water Reconstruction Program	Horizon Way WMR (Construction; 2.17 miles) Hillside/Cloviss Avenue WMR (Construction; 0.93 miles) Woodlark Park I WMR (Construction; 1.12 miles) Woodlark Park II WMR (Construction; 1.27 miles)	District Heights Capitol Heights District Heights District Heights	Engineering & Construction Utility Services	Bi-County/ Information Only Item C
District 8				
Forest Heights WWPS & FM	This project will be deferred one year. The existing WWPS and FM were built in 1946 and serve approximately 1,200 households in the Forest Heights community. Failure of the WWPS or FM would result in an SSO.	Forest Heights	Engineering & Construction Production Utility Services	Prince George's County Item C
Prince George's County 450A Zone Water Main	This project will be deferred one year. This delay will continue concerns of a transmission main failure that would create water service outages for 90,000 customers due to a lack of redundancy within this area of the water system.	Andrews Air Force Base Camp Springs District Heights Forestville Hillcrest Heights Suitland	Engineering & Construction Production Utility Services	Prince George's County Item D
South Potomac Supply Improvement, Phase 2	This project will be deferred one year. This delay will continue concerns of a transmission main failure that would create water service outages for 13,500 customers due to a lack of redundancy within this area of the water system.	National Harbor	Engineering & Construction Production Utility Services	Prince George's County Item E
Water Reconstruction Program	Larkwood WMR (Design; 2.35 miles) Fort Washington WMR (Design; 2.15 miles) Simmons Lane WMR (Construction; 1.49 miles) Leisure Drive (Construction; 2.74 miles) Vistula Drive WMR (Construction; 1.14 miles) Karla Road WMR (Construction; 1.45 miles) Alexandria Drive WMR (Construction; 1.65 miles)	Fort Washington Fort Washington Temple Hills Temple Hills Fort Washington Fort Washington Oxon Hill	Engineering & Construction Utility Services	Bi-County/ Information Only Item C
Large Diameter Water Pipe & Large Valve Rehabilitation Program	Allentown Road 16" WMR and Flow Control Valve (Construction; 1.09 miles)	Fort Washington	Engineering & Construction Production Utility Services	Bi-County/ Information Only Item D
District 9				
Water Reconstruction Program	Buckler Road WMR (Design; 2.20 miles) Edwards Drive WMR (Construction; 1.52 miles) Darlene Drive WMR (Construction; 1.63 miles)	Clinton Clinton Clinton	Engineering & Construction Utility Services	Bi-County/ Information Only Item C
Large Diameter Water Pipe & Large Valve Rehabilitation Program	Rosaryville 20" WMR (Construction; 0.61 miles)	Rosaryville	Engineering & Construction Production Utility Services	Bi-County/ Information Only Item D

FY 2023 CAPITAL IMPROVEMENTS PROGRAM REDUCTIONS TOTALING \$110.5 MILLION AND IMPACT STATEMENTS

Montgomery County Projects

- a. **\$690,000 - Arcola WWPS & FM** - This project provides for the planning, design and construction of the modifications to the Arcola Wastewater Pumping Station (WWPS) and replacement of the Arcola Force Main (FM). The rehabilitation will replace both pumps, maintaining the 0.17 million gallons per day (MGD) capacity of the WWPS. The existing 1,300 linear feet of 4" FM will be replaced. In addition, replacement of all electrical and mechanical components, piping assets and the heating, ventilation and air conditioning (HVAC) system are included.

The existing WWPS and FM serve approximately 130 households in the Arcola area, just west of the Wheaton Regional Park in Montgomery County. They were constructed in 1961 and have reached the end of their useful lives. Replacement of the existing FM is in accordance with an initiative to prioritize replacing FMs that have reached their anticipated life expectancy. This upgrade work was recommended as part of WSSC Water's Asset Management Program.

Due to budgetary constraints, this project will be deferred for one year. The delay could lead to failure of the WWPS or FM before the work is completed. Failure of the WWPS will cause a release of raw sewage into the park. Failure of the FM will cause a release of raw sewage onto the travelled roadways along its alignment and repairs will cause construction nuisances to the travelling public.

- b. **\$275,000 - Reddy Branch WWPS & FM** - This project provides for the planning, design and construction of the modifications to the Reddy Branch WWPS and replacement of the Reddy Branch FM. The work will maintain the 3.04 MGD capacity of the WWPS. The existing 12,774 linear feet of 16" FM will be replaced.

The existing WWPS and pre-stressed concrete cylinder pipe (PCCP) FM serve approximately 5,650 households in the Brookeville and Olney areas within Montgomery County. They were built in 1971 and have reached the end of their useful lives. Additionally, the existing site is immediately adjacent to Reddy Branch, which is experiencing streambank erosion that could soon encroach upon the facility. The WWPS is subject to flooding and there are safety concerns with equipment operation. Replacement of the existing FM is in accordance with an initiative to prioritize replacing FMs that have reached their anticipated life expectancy. This upgrade work was recommended as part of WSSC Water's Asset Management Program.

Due to budgetary constraints, this project will be deferred for one year. The delay could lead to failure of the WWPS or FM before the work is completed. Failure of the WWPS will cause a release of raw sewage into Reddy Branch. Much of the existing FM, which is prone to failure, is located within parkland and environmentally sensitive areas that would be impacted by the release of raw sewage in the event of failure of the FM.

**FY 2023 CAPITAL IMPROVEMENTS PROGRAM REDUCTIONS TOTALING \$110.5
MILLION AND IMPACT STATEMENTS (Continued)**

- c. **\$173,000 - Sam Rice Manor WWPS & FM** - This project provides for the planning, design and construction of the relocated Sam Rice Manor WWPS and replacement of the Sam Rice Manor FM. The capacity of the relocated WWPS will be 0.12 MGD. A new 3,521 linear foot FM will be constructed.

The relocated WWPS and FM will serve approximately 135 households in the Sam Rice Manor community near Ashton in Montgomery County. The existing WWPS and FM were originally installed in 1977 and have reached the end of their useful lives. The WWPS does not meet current standards and is in jeopardy from encroaching streambank erosion. Replacement of the existing FM is in accordance with an initiative to prioritize replacing FMs that have reached their expected life expectancy. This upgrade work was recommended as part of WSSC Water's Asset Management Program.

Due to budgetary constraints, this project will be deferred for one year. The delay could lead to failure of the WWPS or FM before the work is completed. Failure of the WWPS will cause a release of raw sewage into some tributaries to the Patuxent River. The existing FM, which is prone to failure, is within the backyards of numerous residences that would be impacted by the release of raw sewage in the event of failure of the FM, causing health hazards and nuisances to the property owners.

- d. **\$132,000 - Spring Gardens WWPS Replacement** - This project provides for the planning, design and construction of a new Spring Gardens WWPS and replacement of the Spring Gardens FM. The capacity of the new WWPS will be 1.30 MGD in order to accommodate build-out of the service area. A new 7,500 linear foot FM will be constructed. Additionally, 900 linear feet of gravity sewer will also be built.

The existing WWPS and FM serve approximately 620 households in the King Valley, King Valley Manor, and Kingstead Knoll communities near Damascus in Montgomery County. They were constructed in 1977 and have reached the end of their useful lives. Replacement of the existing FM is in accordance with an initiative to prioritize replacing FMs that have reached their anticipated life expectancy. This upgrade work was recommended as part of WSSC Water's Asset Management Program.

Due to budgetary constraints, this project will be deferred for one year. The delay could lead to failure of the WWPS or FM before the work is completed. Failure of the WWPS will cause a release of raw sewage into Little Bennett Creek and environmentally sensitive areas. The existing FM, which is prone to failure, follows the Little Bennett Creek streambed. Failure of the FM will cause a release of raw sewage into the creek.

FY 2023 CAPITAL IMPROVEMENTS PROGRAM REDUCTIONS TOTALING \$110.5 MILLION AND IMPACT STATEMENTS (Continued)

Prince George's County Projects

- a. **\$345,000 - Carsondale WWPS & FM** - This project provides for the planning, design and construction of the modifications to the Carsondale WWPS and replacement of the Carsondale FM. The rehabilitation will replace both pumps, maintaining the 0.60 MGD capacity of the WWPS. The existing 3,000 linear feet of 8" FM will be replaced. In addition, replacement of all electrical components, including the generator, replacement of the HVAC system, general upgrade to the WWPS building and grounds as needed and the addition of a restroom are included.

The existing WWPS and FM serve the Carsondale community southeast of the I-95 and Route 50 interchange near Lanham in Prince George's County. The WWPS is located adjacent to the local community park. The WWPS and FM were constructed in 1960 and have reached the end of their useful lives. Replacement of the existing FM is in accordance with an initiative to prioritize replacing FMs that have reached their anticipated life expectancy. This upgrade work was recommended as part of WSSC Water's Asset Management Program.

Due to budgetary constraints, this project will be deferred for one year. The delay could lead to failure of the WWPS or FM before the work is completed. Failure of the WWPS will cause a release of raw sewage into the local community park. Failure of the FM will cause a release of raw sewage onto the travelled roadways along its alignment and repairs will cause construction nuisances to the travelling public.

- b. **\$173,000 - Colmar Manor WWPS & FM** - This project provides for the planning, design and construction of the relocated Colmar Manor WWPS and replacement of the Colmar Manor FM. The capacity of the relocated WWPS will be 0.80 MGD. A new 726 linear foot FM will be constructed.

The relocated WWPS and FM will serve approximately 240 households in the Colmar Manor community in Prince George's County. The existing WWPS and FM were originally installed in 1956 and have reached the end of their useful lives. The WWPS is outdated and could be considered "piece-meal" due to a number of in-house modifications through the decades. Replacement of the existing FM is in accordance with an initiative to prioritize replacing FMs that have reached their expected life expectancy. This upgrade work was recommended as part of WSSC Water's Asset Management Program.

Due to budgetary constraints, this project will be deferred for one year. The delay could lead to failure of the WWPS or FM before the work is completed. The WWPS is located adjacent to the Anacostia River tributary and greenway. Failure of the WWPS or FM will cause a release of raw sewage into the tributary and greenway.

**FY 2023 CAPITAL IMPROVEMENTS PROGRAM REDUCTIONS TOTALING \$110.5
MILLION AND IMPACT STATEMENTS (Continued)**

- c. **\$173,000 - Forest Heights WWPS & FM** - This project provides for the planning, design and construction of the modifications to the Forest Heights WWPS and replacement of the Forest Heights FM. The work will maintain the 2.28 MGD capacity of the WWPS. The existing 1,940 linear feet of 14" FM will be replaced.

The existing WWPS and FM serve approximately 1,200 households in the Forest Heights community in Prince George's County. They were built in 1946 and have reached the end of their useful lives. Additionally, replacement parts are unavailable since the equipment is obsolete. The WWPS is located adjacent to the Forest Heights Elementary School ballfields and Oxon Run stream. Replacement of the existing FM is in accordance with an initiative to prioritize replacing FMs that have reached their expected life expectancy. This upgrade work was recommended as part of WSSC Water's Asset Management Program.

Due to budgetary constraints, this project will be deferred for one year. The delay could lead to failure of the WWPS or FM before the work is completed. Failure of the WWPS will cause a release of raw sewage onto the elementary school ballfields, into Oxon Run stream, and into other environmentally sensitive areas. The existing FM, which is prone to failure, is within the backyards of numerous residences that would be impacted by the release of raw sewage in the event of failure of the FM, causing health hazards and nuisances to the property owners.

- d. **\$14,410,000 - Prince George's County 450A Zone Water Main** - This project provides for a capacity and alignment study, design and construction of approximately 3.8 miles of new 48" diameter redundant transmission main for Prince George's high pressure zone HG450A. Portions of the transmission main that currently serve the HG450A and HG290B pressure zones will be out of service almost every year to meet the goals of the PCCP inspection program. When portions of the existing main are out of service, the remaining mains lack sufficient capacity and pumping against these restrictions can cause high pressure that may result in pipe failure. A redundant transmission main is required to continue to provide service to our customers while the existing transmission main is planned to be out of service and to provide service in case the existing main fails.

The new transmission main may parallel or replace existing mains as determined by modeling. The new main should be a minimum of 30" diameter, will start where the existing 54" diameter main inside the Beltway connects to an existing 30" diameter main just north of Pennsylvania Avenue and tie in to the new 30" diameter main to be constructed under the Old Branch Avenue Water Main project. This project benefits a large water pressure zone that includes the areas of Hillcrest Heights, Suitland, Forestville, District Heights, Andrews Air Force Base and Camp Springs.

Due to budgetary constraints, this project will be deferred for one year. This delay will continue concerns with lack of redundancy within this area of the water system. Failure of the existing main will create water outages for 90,000 customers. The delay will also impact the ability to adequately inspect the PCCP transmission mains in the water system, which are critical pipes that transmit high quantities of water and are prone to failure without adequate inspections that identify and remedy defects in a timely manner.

FY 2023 CAPITAL IMPROVEMENTS PROGRAM REDUCTIONS TOTALING \$110.5
MILLION AND IMPACT STATEMENTS (Continued)

- e. **\$22,552,000 - South Potomac Supply Improvement, Phase 2** - This project provides for the design and construction of 4.4 miles of 42" diameter ductile iron transmission main, 6.0 miles of distribution mains (diameters ranging from 10" to 16") and a new flow control valve and vault. The project will replace 3.5 miles of existing 42" diameter PCCP transmission main located within the Henson Creek corridor and will replace parallel aged distribution infrastructure located along the project limits.

During design of the 42" PCCP transmission main replacement under the South Potomac Supply Improvement, Phase I project, WSSC Water and the Maryland Department of the Environment discussed extensive requirements for stream restoration of Henson Creek. At that time, WSSC Water staff identified up to 3.5 miles of pipe south of the project area that is exposed along eroding stretches of Henson Creek. An alignment study began under this project to evaluate possible relocation of the existing 42" PCCP main between Rosecroft Drive and Indian Head Highway. The 3.5 miles of PCCP main will be relocated out of Henson Creek and into a roadway alignment between Temple Hills Road and Indian Head Highway, for a total of 4.4 miles of new 42" ductile iron pipe. The transmission main will be relocated out of the 290B pressure zone and into the 450A pressure zone. Phase 2 includes the installation of a flow control valve between pressure zones 450A and 290B. This project primarily benefits the National Harbor area in Prince George's County.

Due to budgetary constraints, this project will be deferred for one year. This delay will continue concerns of a transmission main failure. Failure of the existing main would impact 13,500 customers in the National Harbor area.

FY 2023 CAPITAL IMPROVEMENTS PROGRAM REDUCTIONS TOTALING \$110.5 MILLION AND IMPACT STATEMENTS (Continued)

Bi-County/Information Only Projects

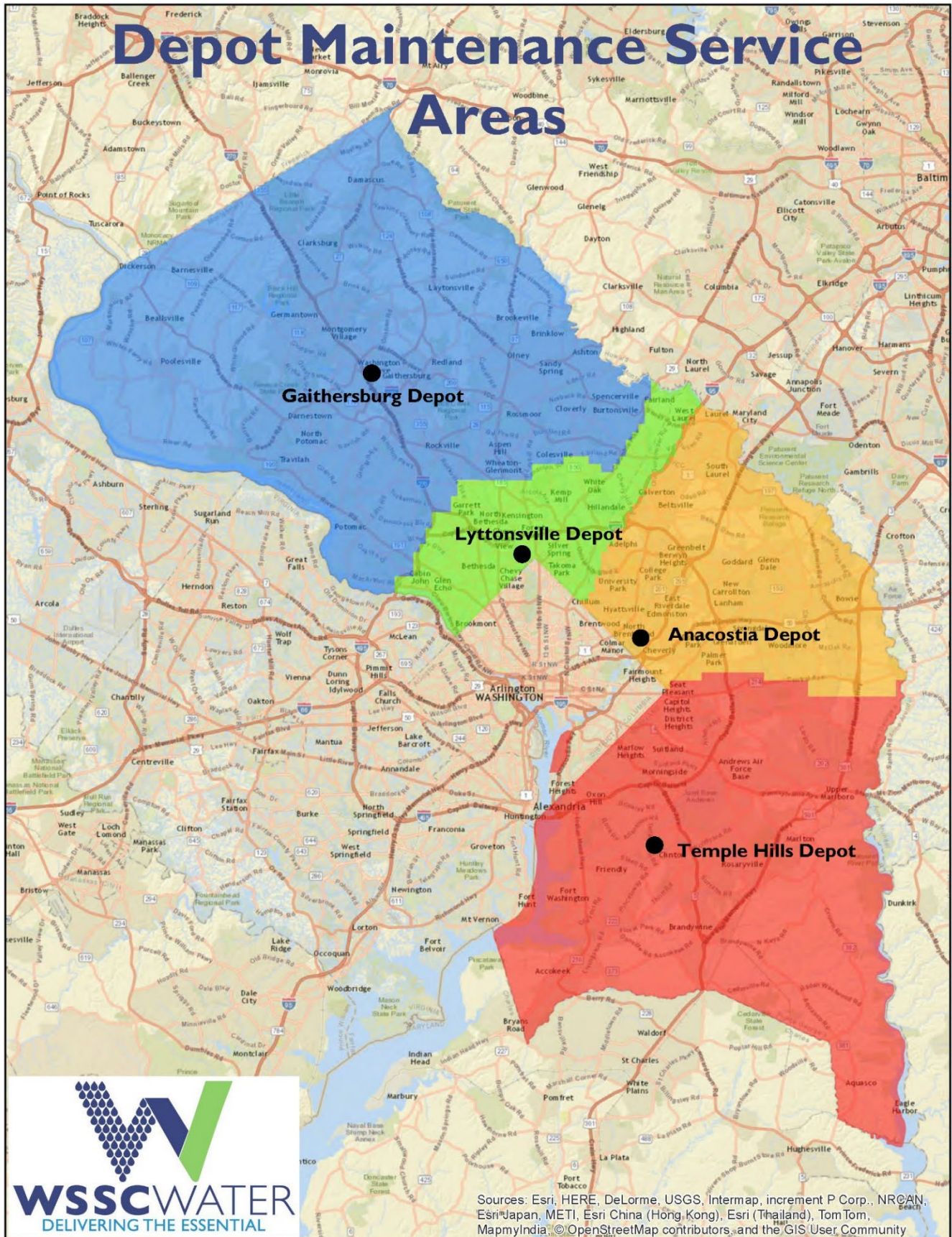
- a. **\$1,314,000 - Anacostia Depot Reconfiguration** - This project provides for the planning, design and construction of a reconfiguration of the Anacostia Depot to improve the efficiency of operations; to update to current building codes, regulations and Americans with Disabilities Act (ADA) requirements; to improve the energy efficiency of the facilities; to address floodplain vulnerabilities due to climate change; and to replace assets that are at or beyond their useful lives.

The Anacostia Depot is the largest of WSSC Water's four depots that support water and sewer field operations. The existing buildings were generally constructed in the 1970s. The depot houses several critical functions for WSSC Water, including the workshop and administrative space for the Facility Maintenance Division, the water meter testing and hydrant shop, the heavy equipment shop, the Fleet Services Division building and one of the fleet garages and the main warehouse. The depot is constrained by CSX railroad tracks that traverse the site, leading to operational inefficiencies when vehicles and staff must wait for trains to pass. The site also has floodplain vulnerabilities due to the effects of climate change.

A facility-wide condition assessment was undertaken in June 2019 to identify deficiencies in the existing facilities and provide a recommended course of action to remedy the issues. The study identified a significant number of deficiencies, including electrical, mechanical, accessibility and safety deficiencies. The study examined potential remedies, including renovation and new build scenarios. A facility master plan was subsequently commissioned to provide a more detailed analysis of the potential renovation and new build alternatives, which was finalized in June 2021.

Due to budgetary constraints, this project will be deferred for one year. This delay will impact addressing the electrical, mechanical, accessibility, safety and floodplain deficiencies of the facility. Many of the critical functions housed at the Anacostia Depot support system-wide operations. The beneficiaries of this project are all of WSSC Water's 1.9 million customers. Any disruptions to the Anacostia Depot due to flooding would be felt across the entire service area. The impacts would likely be most acutely felt in the areas serviced primarily by the Anacostia Depot. While the service areas differ depending on the function, the map on the next page shows the maintenance boundaries for the Anacostia Depot. As shown on the map, the Anacostia Depot maintenance service area encompasses the Beltsville, Bowie, College Park, Glenarden, Greenbelt, Hyattsville and Laurel communities in Prince George's County, among others.

FY 2023 CAPITAL IMPROVEMENTS PROGRAM REDUCTIONS TOTALING \$110.5 MILLION AND IMPACT STATEMENTS (Continued)



FY 2023 CAPITAL IMPROVEMENTS PROGRAM REDUCTIONS TOTALING \$110.5
MILLION AND IMPACT STATEMENTS (Continued)

- b. **\$12,959,000 - Septage Discharge Facility Planning & Implementation** - This project provides for the planning, design and construction of a new septage and fats, oils and grease (FOG) discharge facility at the abandoned Rock Creek Water Resource Recovery Facility (WRRF) and new septage discharge facilities at the Anacostia #2 WWPS and Piscataway WRRF. Currently, septage waste is collected at three locations: the Muddy Branch Road disposal site in Montgomery County and the Ritchie Road and Bladensburg disposal sites in Prince George's County. A fourth site on Temple Hills Road in Prince George's County was closed down on July 1, 2015. The types of waste collected are as follows: septic tank pump-out (sludge), waste holding tank discharge (gray water), grease trap pump-out (FOG), bus holding tank discharge (sewage and chemicals) and small food service providers (low volume FOG waste). FOG wastes should not be discharged to WSSC Water's sewerage system without treatment.

The design of the Rock Creek, Anacostia and Piscataway sites are complete. The construction of these facilities is currently on hold while a plan is developed to address final dispatch of FOG wastes. The Piscataway site will be coordinated with the construction schedule of other Piscataway facility projects.

Due to budgetary constraints, this project will be deferred for one year. While the construction of these facilities was already on hold, WSSC Water has been working with Montgomery County to address concerns with the traffic disruptions impacting the public at the existing Muddy Branch Road disposal site. The reductions will delay WSSC Water's ability to address these concerns.

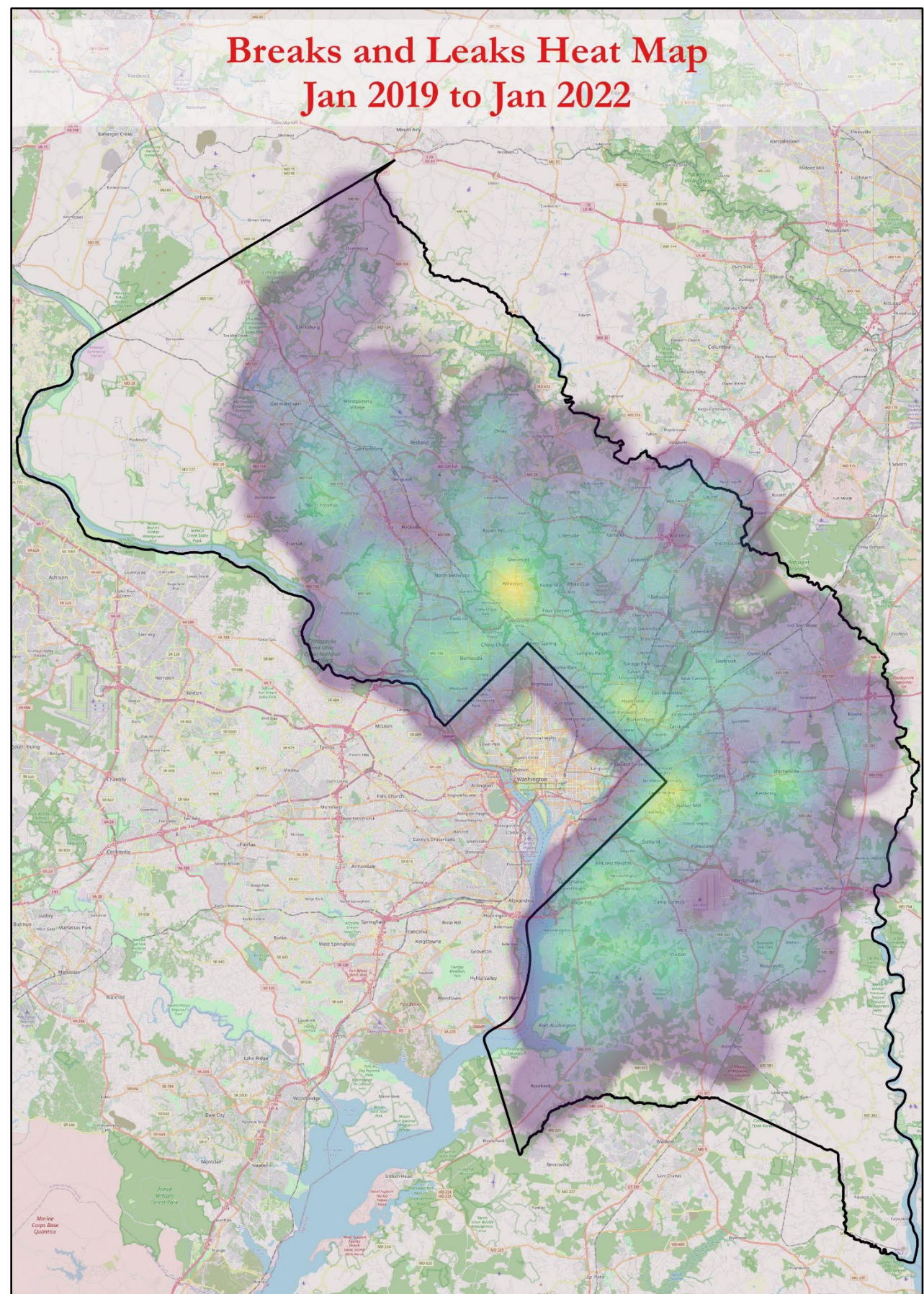
FY 2023 CAPITAL IMPROVEMENTS PROGRAM REDUCTIONS TOTALING \$110.5 MILLION AND IMPACT STATEMENTS (Continued)

- c. **\$27,725,000 - Water Reconstruction Program** - This program, which has been ongoing since 1979, renews and extends 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 pressure reducing valve vaults are replaced on an as needed basis when they have exceeded their useful life.

Due to budgetary constraints, the budget for this project in FY 2023 has been reduced by \$27.7 million. This reduction will lower the targeted design mileage from 30 miles down to 10 miles and lower the targeted construction mileage from 37 miles down to 25 miles. However, the mileage impacts will be much larger than the stipulated figures. This is an ongoing program and the commencement of new work is a continual process throughout the year. Additionally, the replacement projects typically span multiple fiscal years. Consequently, the projects currently under construction or out to bid already constitute the full allotment of 25 miles for construction in FY 2023. The program will therefore be required to stop issuing tasks for new work, which will slow the work of the program and lead to impacts that exceed the stipulated 12 mile reduction to the construction target and extend into future fiscal years.

Customers across WSSC Water's service area will be impacted by these reductions. The pipes replaced under this program are typically prone to failure. Failure of these pipes will cause temporary loss of water service to residences and businesses and repairs will cause construction nuisances to the travelling public. The heat map on the next page shows the historic location of water main breaks and leaks throughout the WSSC Water service area between January 2019 and January 2022. Generally speaking, the frequency of breaks and leaks has historically been highest in the communities closest to Washington D.C. The pipes in these areas are generally the oldest in the system and there is a higher concentration of pipes in these regions. The historic location of breaks and leaks is not necessarily a predictor of the location of future breaks and leaks, as water mains are replaced each year and other factors like soil conditions, transient pressures, and the temperature of the water in the pipes also impact the frequency and location of breaks and leaks.

FY 2023 CAPITAL IMPROVEMENTS PROGRAM REDUCTIONS TOTALING \$110.5 MILLION AND IMPACT STATEMENTS (Continued)



FY 2023 CAPITAL IMPROVEMENTS PROGRAM REDUCTIONS TOTALING \$110.5 MILLION AND IMPACT STATEMENTS (Continued)

- d. **\$18,641,000 - Large Diameter Water Pipe & Large Valve Rehabilitation Program** - This program plans, inspects, designs, and rehabilitates or replaces large diameter water transmission mains and large system valves that have reached the end of their useful lives. 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 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.

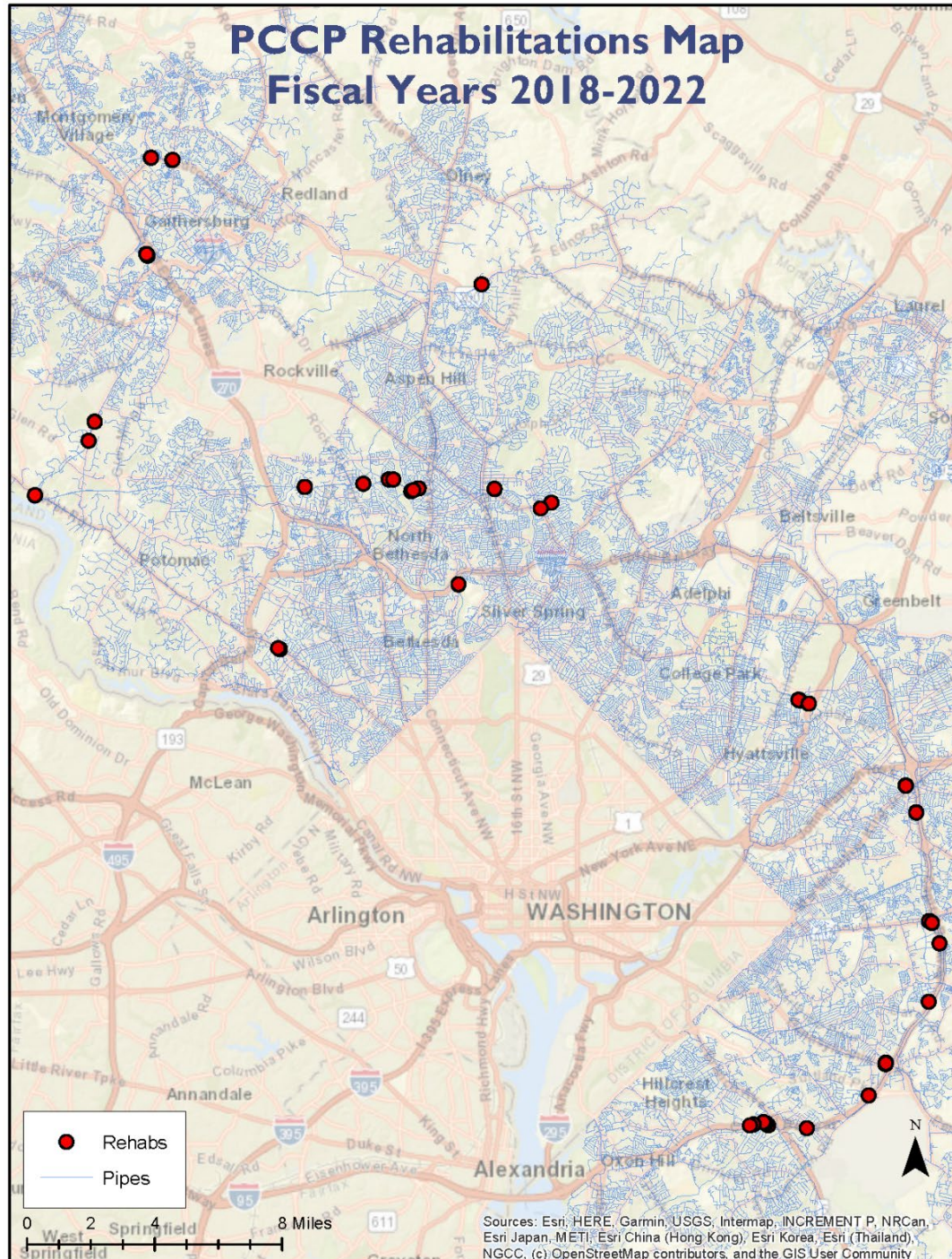
WSSC Water has approximately 1,031 miles of large diameter water main ranging from 16" to 96" in diameter. This includes 335 miles of cast iron, 326 miles of ductile iron, 35 miles of steel and 335 miles of PCCP. Internal inspection and condition assessment are performed on PCCP pipelines 36" and larger in diameter. Of the 335 miles of PCCP, 140 miles are 36" 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.

In July 2013, WSSC Water's Acoustic Fiber Optic monitoring system identified breaking wires in a 54" 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 reducing 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.

Due to budgetary constraints, the budget for this project in FY 2023 has been reduced by \$18.6 million. This reduction will lower the targeted construction mileage from 6 miles to 5 miles, reduce the funding available for PCCP carbon fiber and planned and emergency replacement work by \$10.7 million and eliminate funding for the water redundancy program in FY 2023. The PCCP funding is used for planned and emergency interventions on PCCP transmission mains throughout the system that are identified as requiring repair or replacement through the Acoustic Fiber Optic monitoring program. The map on the next page shows the historic location of PCCP rehabilitation throughout the WSSC Water service area in FYs 2018 through 2022. The historic location of interventions is not necessarily a predictor of the location of needs. The water redundancy program provides for planning, design and construction of projects that improve the redundancy of the water system in order to improve service to customers when critical pipe segments are out of service. Projects are identified using a criticality analysis of WSSC Water's hydraulic model for the water system.

FY 2023 CAPITAL IMPROVEMENTS PROGRAM REDUCTIONS TOTALING \$110.5 MILLION AND IMPACT STATEMENTS (Continued)

Customers across WSSC Water's service area will be impacted by these reductions. Transmission mains are the backbone of the water system, providing water service to large areas. The pipes replaced under this program are typically prone to failure or have been identified as at-risk of failure in the near future through the inspection, condition assessment and monitoring program. Failure of these pipes will cause temporary loss of water service to residences and businesses across a large area and repairs will cause construction nuisances to the travelling public.



FY 2023 CAPITAL IMPROVEMENTS PROGRAM REDUCTIONS TOTALING \$110.5 MILLION AND IMPACT STATEMENTS (Continued)

- e. **\$5,699,000 - Engineering Support Program** - This program represents a consolidation of a diverse group of projects whose unified purpose is to support the extensive water and sewer infrastructure and numerous support facilities that are owned, operated and maintained by WSSC Water. Engineering Support Program projects are identified primarily through WSSC Water's Asset Management Program. Engineering services are provided for planning, design and construction to meet a wide range of needs. As such, Engineering Support Program projects are diverse in scope and typically include work needed to upgrade operating efficiency, modify existing processes, satisfy regulatory requirements, improve safety and security or rehabilitate aging facilities. The program does not include proposed "major projects" which, by law, must be programmed in WSSC Water's Capital Improvements Program or projects to serve new development.

Due to budgetary constraints, the budget for this project in FY 2023 has been reduced by \$5.7 million. This reduction will impact the ability to execute projects through the program. Due to the diverse scope of projects implemented under this program, the impacts of the reduction will be felt by all of WSSC Water's 1.9 million customers. The following are some projects planned for execution under the Engineering Support Program that will be delayed due the budget reductions.

Northwest Branch Aerial Sewers Rehabilitation/Replacement Phase 2 - This project provides for the planning, design and construction to mitigate exposure to 5 aerial sewer pipelines and their supporting structures. Aerial sewers are elevated sewer pipelines supported by piers or pedestals that pass over geographical features such as streams and low-lying areas due to the inability or impracticability of burying the pipelines in that location. A condition assessment of the 5 aerial sewers identified existing or imminent risks posed by the site conditions, deterioration of the pipes and/or deterioration of the structural support systems. Failure of these pipes will cause a release of raw sewage into environmentally sensitive areas.

Village in the Woods Service Reliability Water Main Supply - During three planned shutdowns of the 42" PCCP transmission main along Brightseat Road in 2014, the Village in the Woods apartment complex was put out of water service for an extended period of time. Hydraulic analysis and a business case were performed to develop a long-term solution to this issue. The scope of work includes upsizing existing mains in the area, installing new mains and removing a dead-end by connecting it to another existing main. Delays to this work will extend the period of time that residents and businesses in the area are at risk of inadequate fire flow or loss of service in the event of a disruption to the 42" PCCP main.

Temple Hills Depot Renovation - A high portion of the assets at the Temple Hills Depot are in poor condition and there are safety concerns with the current condition of the facility. A renovation of the facility will: improve the efficiency of operations; address safety concerns; update the facility to current building codes, regulations and ADA requirements; and improve the energy efficiency of the facility. Delays to this work will extend of period of time that safety issues persist and lengthen the duration that the condition of the facility impairs efficient operations.

FY 2023 CAPITAL IMPROVEMENTS PROGRAM REDUCTIONS TOTALING \$110.5
MILLION AND IMPACT STATEMENTS (Continued)

- f. **\$5,229,000 - Other Capital Programs** - This program includes miscellaneous capital projects, programs and expenditures for common, non-CIP, enterprise-wide activities such as relocations, new water and sewer house connections, purchases of water meters, paving and general construction of local lines. The program summarizes capital expenditures and allocated costs that are not already included in the CIP or in other Information Only projects.

Due to budgetary constraints, the budget for this project in FY 2023 has been reduced by \$5.2 million. This is comprised of a reduction of \$10.0 million to paving, a reduction of \$3.8 million to purchases of water meters, and a net increase of \$8.6 million in allocated costs due to the reductions to other capital projects and programs and changes to the operating budget. Customers across WSSC Water's service area will be impacted by these reductions.

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

EXPENDITURE PROJECTIONS

	EST. TOTAL COST	EXPEND THRU 21	EST. EXPEND 22	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
					YR 1 23	YR 2 24	YR 3 25	YR 4 26	YR 5 27	YR 6 28		
Montgomery County Water Projects	9,237	49	23	9,165	2,621	1,045	2,577	2,738	92	92	0	1-1
Prince George's County Water Projects	220,139	35,041	12,933	162,353	26,925	41,686	41,687	37,205	9,713	5,137	9,812	5-1
Bi-County Water Projects	1,224,325	71,486	83,204	979,239	104,105	169,697	169,946	213,348	200,941	121,202	90,396	3-1
TOTAL WATER PROJECTS	1,453,701	106,576	96,160	1,150,757	133,651	212,428	214,210	253,291	210,746	126,431	100,208	
Montgomery County Sewer Projects	75,388	2,403	8,852	49,867	4,242	7,512	10,349	5,223	5,692	16,849	14,266	2-1
Prince George's County Sewer Projects	405,337	134,878	47,539	214,100	57,000	70,097	47,113	23,401	8,265	8,224	8,820	6-1
Bi-County Sewer Projects	1,970,429	552,940	213,348	1,021,814	218,559	175,732	175,989	166,531	142,598	142,405	182,327	4-1
TOTAL SEWER PROJECTS	2,451,154	690,221	269,739	1,285,781	279,801	253,341	233,451	195,155	156,555	167,478	205,413	
TOTAL CIP PROGRAM	3,904,855	796,797	365,899	2,436,538	413,452	465,769	447,661	448,446	367,301	293,909	305,621	
Total Information Only Projects	1,983,005	2,003	244,340	1,735,067	212,043	269,809	294,249	309,759	322,818	326,389	1,595	7-1
COMBINED PROGRAM	5,887,860	798,800	610,239	4,171,605	625,495	735,578	741,910	758,205	690,119	620,298	307,216	

FUNDING SOURCES

WSSC Bonds	4,420,005	504,841	533,878	3,209,272	500,878	559,075	563,473	570,879	536,533	478,434	172,014
PAYGO	537,601	0	27,585	400,016	31,016	44,000	65,000	80,000	80,000	100,000	110,000
State Grants/Contributions	572,969	246,143	20,456	306,370	39,514	76,224	76,106	56,364	38,162	20,000	0
System Development Charges	224,154	27,846	8,307	173,348	29,606	34,913	23,845	41,027	28,435	15,522	14,653
Contributions/Other	59,287	11,497	12,324	35,464	14,710	12,057	5,499	1,671	764	763	2
Government Contributions	57,370	7,903	3,569	35,351	5,486	5,024	6,380	6,657	6,225	5,579	10,547
Federal Grants	16,474	570	4,120	11,784	4,285	4,285	1,607	1,607	0	0	0
COMBINED PROGRAM	5,887,860	798,800	610,239	4,171,605	625,495	735,578	741,910	758,205	690,119	620,298	307,216

Arcola WWPS & FM

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised	February 16, 2022	Drainage Basins	Sligo Creek 06
S - 000036.01		Add			Planning Areas	Kensington-Wheaton PA 31

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	1,463	188	100	1,175		600	300	275			
Land											
Construction	3,900			3,900			1,700	2,200			
Other	777		15	762		90	300	372			
Total	6,140	188	115	5,837		690	2,300	2,847			

C. Funding Schedule (000's)

WSSC Bonds	6,140	188	115	5,837		690	2,300	2,847			
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D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of the modifications to the Arcola Wastewater Pumping Station and replacement of the Arcola Force Main. The rehabilitation will replace both pumps, maintaining the pumping station's 0.17 MGD capacity. The existing 1,300 linear feet of 4-inch force main will be replaced. In addition, replacement of all electrical and mechanical components, piping assets, and the HVAC system are included.

BENEFIT

Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life.

JUSTIFICATION

The existing pumping station and force main were constructed in 1961 and have reached the end of their useful lives. Replacement of the existing force main is in accordance with an initiative to prioritize replacing force mains that have reached their anticipated life expectancy. This upgrade work was recommended as part of WSSC Water's Asset Management Program (CNPV #183).

COST CHANGE

Due to budgetary constraints, this project has been deferred for one year.

OTHER

The present project scope was developed for the FY'23 CIP and has an estimated total cost of \$6,140,000. The schedule and expenditure projections shown in Block B above are based on preliminary planning level estimates and are expected to change based upon site conditions and design constraints. Preliminary planning work for the replacement and upgrade began in FY'21 under ESP S-616.01, Arcola Force Main Replacement and WWPS Upgrade.

COORDINATION

Coordinating Agencies: Maryland Department of Natural Resources; 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	\$355	26
Total Cost	\$355	26
Impact on Water and Sewer Rate		

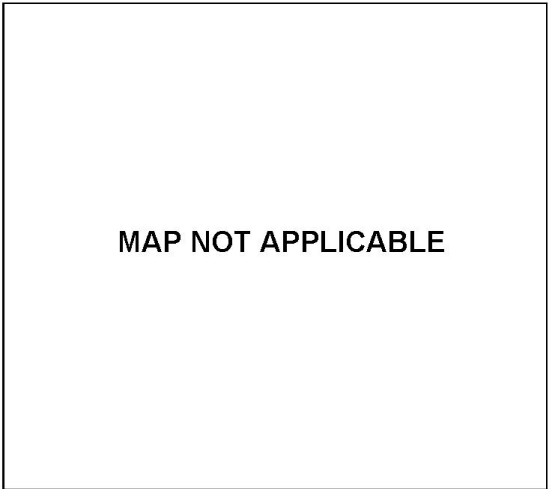
F. Approval and Expenditure Data (000's)

Date First in Program	FY'23
Date First Approved	FY'23
Initial Cost Estimate	6,140
Cost Estimate Last FY	
Present Cost Estimate	6,140
Approved Request Last FY	
Total Expense & Encumbrances	188
Approval Request Year 1	

G. Status Information

Land Status	Public/Agency owned land
Project Phase	Planning
Percent Complete	100 %
Estimated Completion Date	April 2025
Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	0.17 MGD

H. Map



Reddy Branch WWPS & FM

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000061.02		Add

PDF Date	October 1, 2021
Date Revised	February 16, 2022

Pressure Zones	
Drainage Basins	Rock Creek 05
Planning Areas	Olney & Vicinity PA 23

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	2,376	16	250	1,860		250	100	630	630	250	250
Land											
Construction	20,000			10,000						10,000	10,000
Other	2,238		25	1,187		25	10	63	63	1,026	1,026
Total	24,614	16	275	13,047		275	110	693	693	11,276	11,276

C. Funding Schedule (000's)

WSSC Bonds	24,614	16	275	13,047		275	110	693	693	11,276	11,276
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D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of the modifications to the existing 3.04 MGD wastewater pumping station and replacement of approximately 12,774 feet of existing force main.

BENEFIT

Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life.

JUSTIFICATION

The existing pumping station and 16-inch diameter PCCP force main were built in 1971 and have reached the end of their useful lives. The station is subject to flooding and there are safety concerns with equipment operation. Replacement of the existing force main is in accordance with an initiative to prioritize replacing force mains that have reached their anticipated life expectancy. This upgrade work was recommended as part of WSSC Water's Asset Management Program (CNPV #200).

COST CHANGE

Due to budgetary constraints, this project has been deferred for one year.

OTHER

The present project scope was developed for the FY'23 CIP and has an estimated total cost of \$24,614,000. The schedule and expenditure projections shown in Block B above are based on preliminary planning level estimates and are expected to change based upon site conditions and design constraints. Preliminary planning work for the upgrade began in FY'21 under ESP S-611.04, Reddy Branch WWPS Upgrade. Future land costs are included in project S-203.00.

COORDINATION

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

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$1,423	29
Total Cost	\$1,423	29
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	24,614
Cost Estimate Last FY	
Present Cost Estimate	24,614
Approved Request Last FY	
Total Expense & Encumbrances	16
Approval Request Year 1	

G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	Planning
Percent Complete	0 %
Estimated Completion Date	June 2028

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	3.04 MGD

H. Map



Sam Rice Manor WWPS & FM

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised	February 16, 2022	Drainage Basins	Lower Anacostia 9
S - 000063.08		Add			Planning Areas	Patuxent PA 15

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	1,586	36	250	1,100		150	100	150	500	200	200
Land											
Construction	3,200			800						800	2,400
Other	715		38	287		23	15	24	75	150	390
Total	5,501	36	288	2,187		173	115	174	575	1,150	2,990

C. Funding Schedule (000's)

WSSC Bonds	937	6	49	373		29	20	30	98	196	509
SDC	4,564	30	239	1,814		144	95	144	477	954	2,481

D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of a 0.12 MGD wastewater pumping station and 3,521 linear feet of force main. The relocated wastewater pumping station and force main will provide service to the existing and future Ashton Service Area.

BENEFIT

Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life.; System Capacity: This project will enhance existing infrastructure by building additional capacity in order to meet existing and/or future demand.

JUSTIFICATION

The existing pumping station was originally installed in 1977 and has reached the end of its useful life. The station does not meet current standards and is in jeopardy from encroaching streambank erosion. Replacement of the existing force main is in accordance with an initiative to prioritize replacing force mains that have reached their anticipated life expectancy. This upgrade work was recommended as part of WSSC Water's Asset Management Program (CNPV #191).

COST CHANGE

Due to budgetary constraints, this project has been deferred for one year.

OTHER

The present project scope was developed for the FY'23 CIP and has an estimated total cost of \$5,501,000. The schedule and expenditure projections shown in Block B above are based on preliminary planning level estimates and are expected to change based upon site conditions and design constraints. Preliminary planning work for the rehabilitation began in FY'21 under ESP S-625.02, Sam Rice Manor WWPS Rehabilitation. Future land costs are included in project S-203.00.

COORDINATION

Coordinating Agencies: Maryland Department of Natural Resources; Maryland State Highway Administration; 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	\$54	29
Total Cost	\$54	29
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	5,501
Cost Estimate Last FY	
Present Cost Estimate	5,501
Approved Request Last FY	
Total Expense & Encumbrances	36
Approval Request Year 1	

G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	Planning
Percent Complete	0 %
Estimated Completion Date	June 2028
Growth	83%
System Improvement	17%
Environmental Regulation	
Population Served	
Capacity	0.12 MGD

H. Map

MAP NOT APPLICABLE

Spring Gardens WWPS Replacement

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised	February 16, 2022	Drainage Basins	Monocacy 25
S - 000094.14	382003	Change			Planning Areas	Damascus & Vicinity PA 11

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	2,821	301	400	2,120		120	650	650	350	350	
Land											
Construction	7,200			7,200					3,600	3,600	
Other	972		40	932		12	65	65	395	395	
Total	10,993	301	440	10,252		132	715	715	4,345	4,345	

C. Funding Schedule (000's)

WSSC Bonds	3,517	96	141	3,280		42	229	229	1,390	1,390	
SDC	7,476	205	299	6,972		90	486	486	2,955	2,955	

D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of a 1.3 MGD wastewater pumping station, 7,500 linear feet of force main, and 900 linear feet of gravity sewer. The relocated wastewater pumping station and force main will provide service to the existing and future Spring Gardens service area.

BENEFIT

Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life.; System Capacity: This project will enhance existing infrastructure by building additional capacity in order to meet existing and/or future demand.; Environmental Sustainability: This project supports WSSC Water's commitment to protect the natural environment of Prince George's and Montgomery Counties.

JUSTIFICATION

The existing pumping station and force main are over 41 years old and have reached the end of their useful lives. Additionally, the existing capacity of the pumping station must be increased to accommodate build-out of the service area and therefore it must be replaced with a new facility rated at 1.3 MGD. This replacement work was recommended by various business case evaluations undertaken as part of WSSC Water's Asset Management Program.

COST CHANGE

Due to budgetary constraints, this project has been deferred for one year.

OTHER

The project scope has remained the same. The schedule and expenditure projections shown in Block B above are preliminary planning level estimates and are expected to change based upon site conditions and design constraints. Planning work began in FY'18 under ESP project S-602.26, Spring Gardens WWPS Replacement. Future land costs are included in project S-203.00.

COORDINATION

Coordinating Agencies: Maryland Department of the Environment; Maryland State Highway Administration; Maryland-National Capital Park & Planning Commission; Montgomery County Department of Public Works and Transportation; Montgomery County Government
Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$75	28
Debt Service	\$203	28
Total Cost	\$278	28
Impact on Water and Sewer Rate		

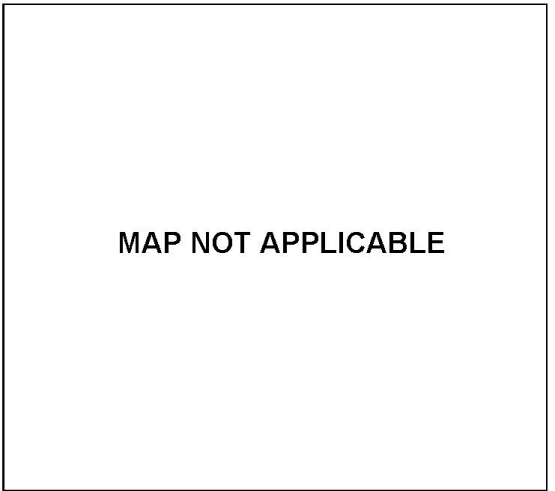
F. Approval and Expenditure Data (000's)

Date First in Program	FY'20
Date First Approved	FY'20
Initial Cost Estimate	10,180
Cost Estimate Last FY	10,665
Present Cost Estimate	10,993
Approved Request Last FY	110
Total Expense & Encumbrances	301
Approval Request Year 1	

G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	Planning
Percent Complete	5 %
Estimated Completion Date	June 2027
Growth	67%
System Improvement	33%
Environmental Regulation	
Population Served	
Capacity	1.3 MGD

H. Map



Large Diameter Water Pipe & Large Valve Rehabilitation Program

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised	February 16, 2022	Drainage Basins	
W - 000161.01	113803	Change			Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	65,872		7,240	58,632	7,607	9,350	9,764	10,518	10,528	10,865	
Land											
Construction	458,111		42,328	415,783	33,915	58,844	61,505	83,393	92,975	85,151	
Other	52,400		4,957	47,443	4,153	6,821	7,126	9,391	10,351	9,601	
Total	576,383		54,525	521,858	45,675	75,015	78,395	103,302	113,854	105,617	

C. Funding Schedule (000's)

WSSC Bonds	576,383		54,525	521,858	45,675	75,015	78,395	103,302	113,854	105,617	
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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'23 Water Network Asset Management Plan (May 2021).

COST CHANGE

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$34,410	
Total Cost	\$34,410	
Impact on Water and Sewer Rate	\$0.07	

F. Approval and Expenditure Data (000's)

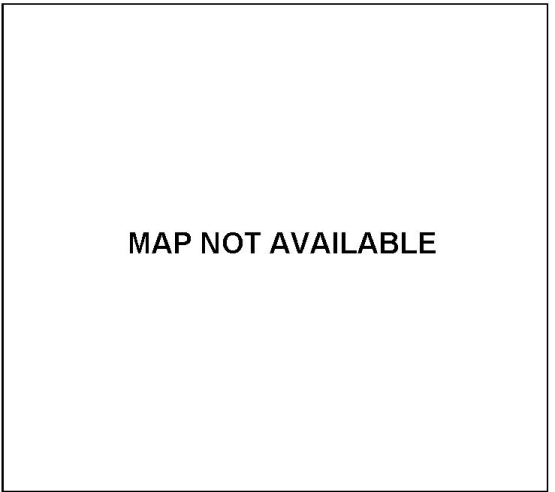
Date First in Program	FY'11
Date First Approved	FY'11
Initial Cost Estimate	
Cost Estimate Last FY	518,952
Present Cost Estimate	576,383
Approved Request Last FY	61,681
Total Expense & Encumbrances	
Approval Request Year 1	45,675

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



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

Due to budgetary constraints, the budget for this project in FY'23 has been reduced by \$18.6 million

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

Septage Discharge Facility Planning & Implementation

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised	February 16, 2022	Drainage Basins	
S - 000170.08	103802	Change			Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	5,288	3,317	208	1,763		583	583	129	234	234	
Land											
Construction	33,320	2,015		31,305		11,198	11,198	2,489	3,210	3,210	
Other	3,327		21	3,306		1,178	1,178	262	344	344	
Total	41,935	5,332	229	36,374		12,959	12,959	2,880	3,788	3,788	

C. Funding Schedule (000's)

WSSC Bonds	41,935	5,332	229	36,374		12,959	12,959	2,880	3,788	3,788	
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D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of a new Septage and Fats, Oils, and Grease (FOG) discharge facility at the abandoned Rock Creek WRRF and new Septage discharge facilities at the Anacostia #2 WWPS and Piscataway WRRF.

BENEFIT

Environmental Sustainability: This project supports WSSC Water's commitment to protect the natural environment of Prince George's and Montgomery Counties.; Innovation: This project utilizes new ideas, methods, and/or research to streamline processes, enhance services, and reduce costs.

JUSTIFICATION

Currently septage waste is collected at three locations: Muddy Branch Road Disposal Site in Montgomery County; and Ritchie Road Disposal Site and Bladensburg Disposal Site in Prince George's County (the Temple Hills Road site was closed down on July 1, 2015). The types of waste collected are as follows: Septic Tank Pump-Out (Sludge); Waste Holding Tank Discharge (Gray Water); Grease Trap Pump Out (FOG); Bus Holding Tank Discharge (Sewage and Chemicals); and Small Food Service Providers (Low Volume FOG Waste). FOG wastes should not be discharged to WSSC Water's sewerage system without treatment.

Septage Discharge Facility Study for Montgomery County: Final Report, JMT (July 2012); Septage Discharge Facility Study for Prince George's County: Final Report, JMT (July 2012).

COST CHANGE

Due to budgetary constraints, this project has been deferred for one year.

OTHER

The project scope has remained the same. The schedule and expenditure projections shown in Block B above are design level estimates and may change based upon actual bids. The design of the Rock Creek, Anacostia, and Piscataway sites are complete. The construction of these facilities is currently on hold while a plan is developed to address final dispatch of FOG wastes. The Piscataway site will be coordinated with the construction schedule of other Piscataway facility projects.

COORDINATION

Coordinating Agencies: Maryland Department of Natural Resources; Maryland Department of the Environment; Maryland-National Capital Park & Planning Commission;(Mandatory Referral); Montgomery County Department of Environmental Protection; Montgomery County Government; Prince George's County Department of Environmental Resources; Prince George's County Government
Coordinating Projects: S - 000096.14 - Piscataway WRRF Facility Upgrades; S - 000103.02 - Piscataway Bioenergy

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other	\$446	28
Maintenance	\$124	28
Debt Service	\$2,425	28
Total Cost	\$2,995	28
Impact on Water and Sewer Rate	\$0.01	28

F. Approval and Expenditure Data (000's)

Date First in Program	FY'10
Date First Approved	FY'10
Initial Cost Estimate	10,835
Cost Estimate Last FY	40,048
Present Cost Estimate	41,935
Approved Request Last FY	12,461
Total Expense & Encumbrances	5,332
Approval Request Year 1	

G. Status Information

Land Status	Public/Agency owned land
Project Phase	Design
Percent Complete	100 %
Estimated Completion Date	June 2027
Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

H. Map

MAP NOT APPLICABLE

Prince George's County 450A Zone Water Main

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	Prince George's High HG450A
Agency Number	Project Number	Update Code	Date Revised	February 16, 2022	Drainage Basins	
W - 000084.05		Change			Planning Areas	Prince George's County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	3,869	2,724	600	430		100	100	100	65	65	115
Land											
Construction	41,865			41,340		3,380	13,000	12,480	8,320	4,160	525
Other	4,302		60	4,178		348	1,310	1,258	839	423	64
Total	50,036	2,724	660	45,948		3,828	14,410	13,838	9,224	4,648	704

C. Funding Schedule (000's)

WSSC Bonds	50,036	2,724	660	45,948		3,828	14,410	13,838	9,224	4,648	704
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D. Description & Justification

<p>DESCRIPTION</p> <p>This project provides for a capacity and alignment study, design, and construction of approximately 3.8 miles of new 48-inch diameter redundant transmission main for Prince George's High Pressure Zone HG450A. Portions of the transmission main that currently serve the HG450A and HG290B Pressure Zones will be out of service almost every year to meet the goals of the PCCP inspection program. A redundant transmission main is required to continue to provide service to our customers while the existing transmission main is planned to be out of service and to provide service in case the existing main fails.</p> <p>BENEFIT</p> <p>System Reliability: This project will improve service reliability through fewer and shorter service interruptions.</p> <p>JUSTIFICATION</p> <p>When portions of the existing main are out of service, the remaining mains lack sufficient capacity and pumping against these restrictions can cause high pressure that may result in pipe failure. The new transmission main may parallel or replace existing mains as determined by modeling. The new main should be a minimum of 30-inch diameter and will start where the existing 54-inch diameter main inside the beltway connects to an existing 30-inch diameter main just north of Pennsylvania Avenue and tie in to the new 30-inch diameter main to be constructed under project W-34.02.</p> <p>COST CHANGE</p> <p>Due to budgetary constraints, this project has been deferred for one year.</p> <p>OTHER</p> <p>The project scope has remained the same. The schedule and expenditure projections shown in Block B above are preliminary design level estimates and are expected to change based upon site conditions and design constraints. An alignment and capacity study has been performed and final alignment and pipeline diameter has been selected. Northern alignment change required due SHA permitting requirements change. This design change also required the relocation of an existing PRV (May 2021). Future land costs are included in project W-202.00.</p> <p>COORDINATION</p> <p>Coordinating Agencies: Maryland Department of Natural Resources; Maryland Historical Trust; Maryland State Highway Administration; Maryland-National Capital Park & Planning Commission;(Mandatory Referral Process); National Park Service; Prince George's County Department of Public Works and Transportation; Prince George's County Government; Prince George's County Department of Permitting Inspection and Enforcement; U.S. Army Corps of Engineers;Joint Base Andrews military base; Washington Metropolitan Area Transit Authority</p> <p>Coordinating Projects: W - 000034.02 - Old Branch Avenue Water Main; W - 000137.03 - South Potomac Supply Improvement, Phase 2</p>
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E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$594	29
Debt Service	\$2,894	29
Total Cost	\$3,488	29
Impact on Water and Sewer Rate	\$0.01	29

F. Approval and Expenditure Data (000's)	
Date First in Program	FY'13
Date First Approved	FY'13
Initial Cost Estimate	374
Cost Estimate Last FY	47,778
Present Cost Estimate	50,036
Approved Request Last FY	13,805
Total Expense & Encumbrances	2,724
Approval Request Year 1	

G. Status Information	
Land Status	Land and R/W to be acquired
Project Phase	Design
Percent Complete	90 %
Estimated Completion Date	July 2027
Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	



South Potomac Supply Improvement, Phase 2

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000137.03		Change

PDF Date	October 1, 2021
Date Revised	February 16, 2022

Pressure Zones	Potomac 290B; Prince George's High HG450A; Rosecroft
Drainage Basins	
Planning Areas	Henson Creek PA 76B

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	3,613	2,723	728	162		54	54	54			
Land											
Construction	64,272			64,272		21,424	21,424	21,424			
Other	3,258		36	3,222		1,074	1,074	1,074			
Total	71,143	2,723	764	67,656		22,552	22,552	22,552			

C. Funding Schedule (000's)

WSSC Bonds	46,953	1,797	504	44,652		14,884	14,884	14,884			
SDC	24,190	926	260	23,004		7,668	7,668	7,668			

D. Description & Justification

DESCRIPTION

This project provides for the design and construction of 4.4 miles of 42-inch diameter ductile iron transmission main, 6.0 miles of distribution mains (diameters ranging from 10 to 16-inches), and a new flow control valve and vault. The project will replace 3.5 miles of existing 42-inch diameter PCCP transmission main located within the Henson Creek corridor and will replace parallel aged distribution infrastructure located along the project limits.

BENEFIT

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.; System Capacity: This project will enhance existing infrastructure by building additional capacity in order to meet existing and/or future demand.

JUSTIFICATION

During design of the 42-inch PCCP transmission main replacement under CIP W-137.02, South Potomac Supply Improvement, Phase 1, WSSC Water and the Maryland Department of the Environment discussed extensive requirements for stream restoration of Henson Creek. At that time, WSSC Water staff identified up to 3.5 miles of pipe south of the project area that is exposed along eroding stretches of Henson Creek. An alignment study began under CIP W-137.03, South Potomac Supply Improvement, Phase 2, to evaluate possible relocation of the existing 42-inch PCCP main between Rosecroft Drive and Indian Head Highway. The 3.5 miles of PCCP main will be relocated out of Henson Creek and into a roadway alignment between Temple Hill Road and Indian Head Highway, for a total of 4.4 miles of new 42-inch ductile iron pipe. The transmission main will be relocated out of the 290B pressure zone and into the 450A pressure zone. Phase 2 includes the installation of a flow control valve between pressure zones 450A and 290B.

Concept Finalization Report, O'Brien & Gere Engineers Inc. (January 2014); Alignment Study - Final: Henson Creek 42-Inch Water Main Replacement, O'Brien & Gere Engineers Inc. (April 2017).

COST CHANGE

Due to budgetary constraints, this project has been deferred for one year.

OTHER

The project scope has remained the same. The Phase 1 alignment study was completed in April 2017. Notice to Proceed for Phase 2 (Design) was issued in February 2018. The schedule and expenditure projections for Phase 2 are preliminary design estimates and are expected to change based upon design constraints, site-specific conditions, and stream restoration requirements for Henson Creek. Future land costs are included in project W-202.00.

COORDINATION

Coordinating Agencies: Maryland Department of Natural Resources; Maryland Department of the Environment; Maryland-National Capital Park & Planning Commission; Prince George's County Government; Prince George's County Department of Permitting Inspection and Enforcement; U.S. Army Corps of Engineers; Washington Gas Light Company
Coordinating Projects: W - 000034.02 - Old Branch Avenue Water Main; W - 000084.05 - Prince George's County 450A Zone Water Main

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$1,078	26
Debt Service	\$2,715	26
Total Cost	\$3,793	26
Impact on Water and Sewer Rate	\$0.01	26

F. Approval and Expenditure Data (000's)

Date First in Program	FY'18
Date First Approved	FY'07
Initial Cost Estimate	53,374
Cost Estimate Last FY	67,875
Present Cost Estimate	71,143
Approved Request Last FY	21,685
Total Expense & Encumbrances	2,723
Approval Request Year 1	

G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	Design
Percent Complete	70 %
Estimated Completion Date	June 2025
Growth	34%
System Improvement	66%
Environmental Regulation	
Population Served	
Capacity	

H. Map



Carsondale WWPS & FM

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones						
Agency Number	Project Number	Update Code	Date Revised	February 16, 2022	Drainage Basins	Beaverdam Branch 3					
S - 000068.02		Add			Planning Areas	Landover & Vicinity PA 72					

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	1,190	240	100	850		300	450	100			
Land											
Construction	3,750			3,750			2,750	1,000			
Other	705		15	690		45	480	165			
Total	5,645	240	115	5,290		345	3,680	1,265			

C. Funding Schedule (000's)

WSSC Bonds	5,645	240	115	5,290		345	3,680	1,265			
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D. Description & Justification

<p>DESCRIPTION</p> <p>This project provides for the planning, design, and construction of the modifications to the Carsondale Wastewater Pumping Station and replacement of the Carsondale Force Main. The rehabilitation will replace both pumps maintaining the pumping station's 0.6 MGD capacity. The existing 3,000 linear feet of 8-inch force main will be replaced. In addition, replacement of all electrical components, including the generator, replacement of the HVAC system, general upgrade to the pump station building and grounds as needed, and the addition of a restroom are included.</p> <p>BENEFIT</p> <p>Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life.</p> <p>JUSTIFICATION</p> <p>The existing pumping station and force main were built in 1960. In 1989 the pump station and meter vault were modified to the current configuration and have reached the end of their useful life. Replacement of the existing force main is in accordance with an initiative to prioritize replacing force mains that have reached their anticipated life expectancy.</p> <p>Hydraulics Analysis Memorandum (July 2019).</p> <p>COST CHANGE</p> <p>Due to budgetary constraints, this project has been deferred for one year.</p> <p>OTHER</p> <p>The present project scope was developed for the FY'23 CIP and has an estimated total cost of \$5,645,000. The schedule and expenditure projections shown in Block B above are planning level estimates and are expected to change based upon site conditions and design constraints. Preliminary planning work for the upgrades began in FY'21 under ESP S-642.25, Carsondale WWPS Upgrades with Forcemain.</p> <p>COORDINATION</p> <p>Coordinating Agencies: Maryland Department of Natural Resources; Maryland Department of the Environment</p> <p>Coordinating Projects: Not Applicable</p>

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$326	26
Total Cost	\$326	26
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	5,647
Cost Estimate Last FY	
Present Cost Estimate	5,645
Approved Request Last FY	
Total Expense & Encumbrances	240
Approval Request Year 1	

G. Status Information	
Land Status	Public/Agency owned land
Project Phase	Planning
Percent Complete	100 %
Estimated Completion Date	April 2025
Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	0.6 MGD

H. Map
MAP NOT APPLICABLE

Colmar Manor WWPS & FM

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised	February 16, 2022	Drainage Basins	Lower Anacostia 9
S - 000089.26		Add			Planning Areas	Hyattsville-Riverdale-Mount Rainier PA 68

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	1,710	10	250	1,200		150	100	200	500	250	250
Land											
Construction	4,000			2,000						2,000	2,000
Other	857		38	481		23	15	30	75	338	338
Total	6,567	10	288	3,681		173	115	230	575	2,588	2,588

C. Funding Schedule (000's)

WSSC Bonds	6,567	10	288	3,681		173	115	230	575	2,588	2,588
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D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of a 0.799 MGD wastewater pumping station and 726 linear feet of force main. The relocated wastewater pumping station and force main will provide service to the existing and future Spring Gardens service area.

BENEFIT

Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life.

JUSTIFICATION

The existing pumping station and force main were installed in 1956 and have reached the end of their useful lives. The station is outdated and could be considered "piece-meal" due to a number of in-house modifications through the decades. Replacement of the existing force main is in accordance with an initiative to prioritize replacing force mains that have reached their anticipated life expectancy. This upgrade work was recommended as part of WSSC Water's Asset Management Program (CNPV #189).

COST CHANGE

Due to budgetary constraints, this project has been deferred for one year.

OTHER

The present project scope was developed for the FY'23 CIP and has an estimated total cost of \$6,567,000. The schedule and expenditure projections shown in Block B above are preliminary planning level estimates and are expected to change based upon site conditions and design constraints. Preliminary planning work for the upgrades began in FY'21 under ESP S-636.75, Colmar Manor WWPS Upgrade with Forcemain. Future land costs are included in project S-203.00.

COORDINATION

Coordinating Agencies: Maryland-National Capital Park & Planning Commission
Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$380	29
Total Cost	\$380	29
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	6,567
Cost Estimate Last FY	
Present Cost Estimate	6,567
Approved Request Last FY	
Total Expense & Encumbrances	10
Approval Request Year 1	

G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	Planning
Percent Complete	0 %
Estimated Completion Date	June 2028

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	0.799 MGD

H. Map



Forest Heights WWPS & FM

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000113.13		Add

PDF Date	October 1, 2021
Date Revised	February 16, 2022

Pressure Zones	
Drainage Basins	Oxon Run 18
Planning Areas	The Heights PA 76A

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	1,823	273	150	1,150		150	50	200	500	250	250
Land											
Construction	6,000			3,000						3,000	3,000
Other	1,135		23	624		23	8	30	75	488	488
Total	8,958	273	173	4,774		173	58	230	575	3,738	3,738

C. Funding Schedule (000's)

WSSC Bonds	1,614	49	31	860		31	10	41	104	674	674
SDC	7,344	224	142	3,914		142	48	189	471	3,064	3,064

D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of the modifications to the existing 2.28 MGD wastewater pumping station and replacement of approximately 1,940 feet of existing force main.

BENEFIT

Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life.; System Capacity: This project will enhance existing infrastructure by building additional capacity in order to meet existing and/or future demand.

JUSTIFICATION

The existing pumping station and 14-inch diameter cast iron force main were built in 1946 and have reached the end of their useful life. In addition, replacement parts are unavailable since the equipment is obsolete. Replacement of the existing force main is in accordance with an initiative to prioritize replacing force mains that have reached their anticipated life expectancy. This upgrade work was recommended as part of WSSC Water's Asset Management Program (CNPV #192).

COST CHANGE

Due to budgetary constraints, this project has been deferred for one year.

OTHER

The present project scope was developed for the FY'23 CIP and has an estimated total cost of \$8,958,000. The schedule and expenditure projections shown in Block B above are based on preliminary planning level estimates and are expected to change based upon site conditions and design constraints. Preliminary planning work for the upgrades and improvements began in FY'21 under ESP S-650.25, Forest Heights WWPS Upgrades/Improvements. Future land costs are included in project S-203.00.

COORDINATION

Coordinating Agencies: Maryland Department of Natural Resources; Maryland Department of the Environment; Maryland-National Capital Park & Planning Commission
Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$93	29
Total Cost	\$93	29
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	8,958
Cost Estimate Last FY	
Present Cost Estimate	8,958
Approved Request Last FY	
Total Expense & Encumbrances	273
Approval Request Year 1	

G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	Planning
Percent Complete	10 %
Estimated Completion Date	June 2028

Growth	82%
System Improvement	18%
Environmental Regulation	
Population Served	
Capacity	2.28 MGD

H. Map



Water Reconstruction Program

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	Bi-County
Agency Number	Project Number	Update Code	Date Revised	February 16, 2022	Drainage Basins	
W - 000001.00		Change			Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	122,498		11,671	110,827	8,059	15,535	18,688	20,908	23,351	24,286	
Land											
Construction	635,193		61,664	573,529	54,521	82,920	98,564	108,126	112,448	116,950	
Other	96,983		10,148	86,835	9,031	12,731	14,723	16,024	16,825	17,501	
Total	854,674		83,483	771,191	71,611	111,186	131,975	145,058	152,624	158,737	

C. Funding Schedule (000's)

WSSC Bonds	854,674		83,483	771,191	71,611	111,186	131,975	145,058	152,624	158,737	
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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 fire fighting. 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'23 are as follows: design and construction of main replacement and associated water house connection renewals, 25 miles - \$52.2M; cathodic protection - \$1.8M; design and construction of large water service replacements - \$11.6M; emergency contracts at depots - \$5.4M; 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'22 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'23 Enterprise Asset Management Plan (May 2021).

COST CHANGE

Program costs reflect the latest expenditure and schedule estimates based on the recommendations from the FY'23 Enterprise Asset Management Plan (May 2021).

Due to budgetary constraints, the budget for this project in FY'23 has been reduced by \$27.7 million.

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'20 summarize the magnitude of the reconstruction effort: 1,952 miles rehabilitated or replaced; 317 large water service/meters replaced. It is anticipated water reconstruction activity will be a perpetual element of future work programs.

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$51,029	
Total Cost	\$51,029	
Impact on Water and Sewer Rate	\$0.11	

F. Approval and Expenditure Data (000's)

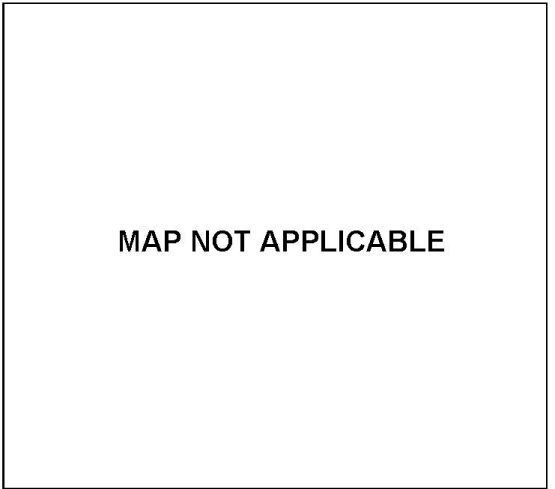
Date First in Program	
Date First Approved	
Initial Cost Estimate	
Cost Estimate Last FY	798,631
Present Cost Estimate	854,674
Approved Request Last FY	83,563
Total Expense & Encumbrances	
Approval Request Year 1	71,611

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



COORDINATION

Coordinating Agencies: Local Community Civic Associations; 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
Coordinating Projects: W - 000161.01 - Large Diameter Water Pipe & Large Valve Rehabilitation Program

Anacostia Depot Reconfiguration

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised	February 16, 2022	Drainage Basins	
A - 000100.01		Add			Planning Areas	Landover & Vicinity PA 72

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	5,410	10	2,316	3,084		1,194	738	760	392		
Land											
Construction	33,532			33,532			12,438	12,810	8,284		
Other	3,896		232	3,664		120	1,318	1,358	868		
Total	42,838	10	2,548	40,280		1,314	14,494	14,928	9,544		

C. Funding Schedule (000's)

WSSC Bonds	42,838	10	2,548	40,280		1,314	14,494	14,928	9,544		
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D. Description & Justification

<p>DESCRIPTION</p> <p>This project provides for the planning, design, and construction of a reconfiguration of the Anacostia Depot to improve the efficiency of operations; to update to current building codes, regulations, and Americans with Disabilities Act (ADA) requirements; to improve the energy efficiency of the facilities; to address floodplain vulnerabilities due to climate change; and to replace assets that are at or beyond their useful lives.</p> <p>BENEFIT</p> <p>Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life.; Workplace Optimization: This project supports WSSC Water's commitment to provide a productive work environment for its employees and secure its critical infrastructure.; Employee Safety: This project includes components that help protect the health and safety of employees.</p> <p>JUSTIFICATION</p> <p>The Anacostia Depot is the largest of WSSC Water's four depots that support water and sewer field operations. The existing buildings were generally constructed in the 1970s. The depot houses several critical functions for WSSC Water, including the workshop and administrative space for the Facility Maintenance Division, the water meter testing and hydrant shop, the heavy equipment shop, the Fleet Services Division building and one of the fleet garages, and the main warehouse. The depot is constrained by CSX railroad tracks that traverse the site, leading to operational inefficiencies when vehicles and staff must wait for trains to pass. The site also has floodplain vulnerabilities due to the effects of climate change.</p> <p>A facility-wide condition assessment was undertaken in June 2019 to identify deficiencies in the existing facilities and provide a recommended course of action to remedy the issues. The study identified a significant number of deficiencies, including electrical, mechanical, accessibility, and safety deficiencies. The study examined potential remedies, including renovation and new build scenarios. A facility master plan was subsequently commissioned to provide a more detailed analysis of the potential renovation and new build alternatives, which will be finalized in June 2021. Anacostia Depot Facility Condition Assessment, Louis Berger (July 2020); Anacostia Depot Master Plan, Samaha Associates (June 2021).</p> <p>COST CHANGE</p> <p>Due to budgetary constraints, this project has been deferred for one year.</p> <p>OTHER</p> <p>The present project scope was developed for the FY'23 CIP and has an estimated total cost of \$42,838,000. The schedule and expenditure projections shown in Block B above are preliminary planning level estimates and are expected to change based upon site conditions and design constraints. Preliminary planning work began under ESP project A-859.11, Anacostia Depot Reconfiguration.</p> <p>COORDINATION</p> <p>Coordinating Agencies: Montgomery County Government; Prince George's County Government Coordinating Projects: Not Applicable</p>

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$2,477	27
Total Cost	\$2,477	27
Impact on Water and Sewer Rate	\$0.01	27

F. Approval and Expenditure Data (000's)	
Date First in Program	FY'23
Date First Approved	FY'23
Initial Cost Estimate	42,838
Cost Estimate Last FY	
Present Cost Estimate	42,838
Approved Request Last FY	
Total Expense & Encumbrances	10
Approval Request Year 1	

G. Status Information	
Land Status	Public/Agency owned land
Project Phase	Planning
Percent Complete	5 %
Estimated Completion Date	December 2025
Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

H. Map
MAP NOT APPLICABLE

Engineering Support Program

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	Bi-County
Agency Number	Project Number	Update Code	Date Revised	February 16, 2022	Drainage Basins	Bi-County 30
A - 000102.00		Change			Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	2,100		2,100								
Land											
Construction	114,835		13,900	100,935	10,935	18,000	18,000	18,000	18,000	18,000	
Other	13,366		2,000	11,366	1,366	2,000	2,000	2,000	2,000	2,000	
Total	130,301		18,000	112,301	12,301	20,000	20,000	20,000	20,000	20,000	

C. Funding Schedule (000's)

WSSC Bonds	130,301		18,000	112,301	12,301	20,000	20,000	20,000	20,000	20,000	
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D. Description & Justification

DESCRIPTION

The Engineering Support Program (ESP) represents a consolidation of a diverse group of projects whose unified purpose is to support the extensive water and sewer infrastructure and numerous support facilities that are owned, operated, and maintained by WSSC Water.

*EXPENDITURES FOR ENGINEERING SUPPORT ARE EXPECTED TO CONTINUE INDEFINITELY.

BENEFIT

Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life.; Workplace Optimization: This project supports WSSC Water's commitment to provide a productive work environment for its employees and secure its critical infrastructure.; Employee Safety: This project includes components that help protect the health and safety of employees.

JUSTIFICATION

ESP projects are identified primarily through WSSC Water's Asset Management Program. Engineering services are provided for planning, design, and construction to meet a wide range of needs. As such, ESP projects are diverse in scope and typically include work needed to upgrade operating efficiency, modify existing processes, satisfy regulatory requirements, improve safety and security, or rehabilitate aging facilities. The ESP does not include proposed "major projects" which, by law, must be programmed in WSSC Water's Six-Year Capital Improvements Program or projects to serve new development.

Asset Management Implementation Plan, Stearns & Wheeler (April 2008); FY 2023 Enterprise Asset Management Plan (May 2021).

COST CHANGE

Due to budgetary constraints, the budget for this project in FY'23 has been reduced by \$5.7 million.

OTHER

The ESP process provides a stable funding level for projects that require engineering support. Each year, the requested projects will be prioritized and then initiated subject to the available funding for the fiscal year.

COORDINATION

Coordinating Agencies: Not Applicable
Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$7,865	
Total Cost	\$7,865	
Impact on Water and Sewer Rate	\$0.02	

F. Approval and Expenditure Data (000's)

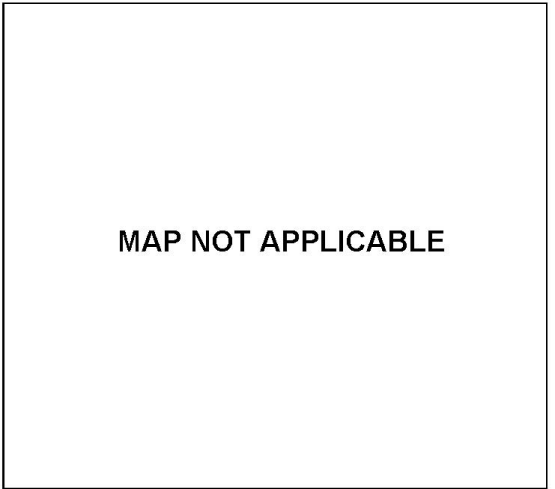
Date First in Program	FY'87
Date First Approved	FY'87
Initial Cost Estimate	
Cost Estimate Last FY	125,000
Present Cost Estimate	130,301
Approved Request Last FY	18,000
Total Expense & Encumbrances	
Approval Request Year 1	12,301

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



Other Capital Programs

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised	February 16, 2022	Drainage Basins	
A - 000110.00		Change			Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	63,976		7,286	56,690	8,962	9,146	9,337	9,538	9,745	9,962	
Land											
Construction	292,426		40,856	251,570	28,185	41,781	43,061	43,600	47,144	47,799	
Other	122,314		16,148	106,166	15,326	10,681	14,009	16,750	21,819	27,581	
Total	478,716		64,290	414,426	52,473	61,608	66,407	69,888	78,708	85,342	

C. Funding Schedule (000's)

WSSC Bonds	478,716		64,290	414,426	52,473	61,608	66,407	69,888	78,708	85,342	
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D. Description & Justification

DESCRIPTION

Other Capital Programs (OCP) includes miscellaneous capital projects, programs, and expenditures for common, non-CIP, enterprise-wide activities such as relocations, new water and sewer house connections, purchase of water meters, paving, and general construction of local lines.

*EXPENDITURES FOR OTHER CAPITAL PROGRAMS ARE EXPECTED TO CONTINUE INDEFINITELY.

BENEFIT

Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life.

JUSTIFICATION

The OCP does not include proposed "major projects" which, by law, must be programmed in WSSC Water's Six-Year Capital Improvements Program (CIP) or projects to serve new development.

COST CHANGE

Due to budgetary constraints, the budget for this project in FY'23 has been reduced by \$5.2 million.

OTHER

The OCP summarizes capital expenditures and allocated costs that are not already included in the CIP or in other Information Only projects. Expenditures for the budget year are estimated during the annual CIP update cycle each summer for the Proposed CIP document. The estimates will be revised and updated during the annual budget update cycle each fall for the Proposed Operating & Capital Budget document. Future years are Order of Magnitude estimates and are expected to change with each update cycle.

COORDINATION

Coordinating Agencies: Not Applicable
Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$28,080	
Total Cost	\$28,080	
Impact on Water and Sewer Rate	\$0.06	

F. Approval and Expenditure Data (000's)

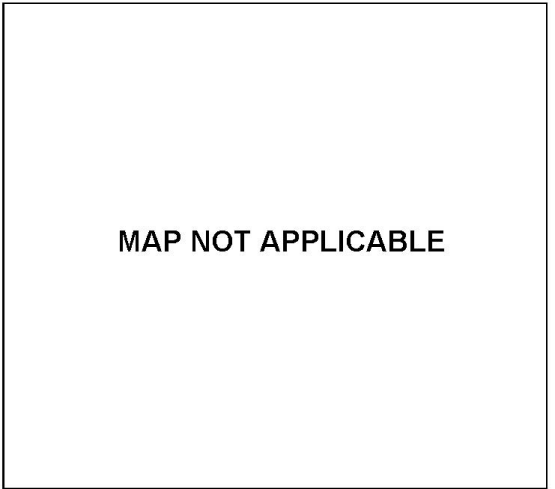
Date First in Program	FY'21
Date First Approved	FY'21
Initial Cost Estimate	
Cost Estimate Last FY	466,502
Present Cost Estimate	478,716
Approved Request Last FY	53,738
Total Expense & Encumbrances	
Approval Request Year 1	52,473

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



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 \$214.4 million, which equals 5% of the six-year total expenditures, and \$52.4 million or 7% of the FY'23 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'94. 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'22, the Montgomery County and Prince George's Councils increased the maximum allowable charge by the 1.6% increase in the CPI-U but maintained the current rate of \$203 per fixture unit. The Commissioners adopted the Councils' actions by Resolution Number 2021-2287 dated June 16, 2021. 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 \$65.1 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 65% 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'23	FY'24	FY'25	FY'26	FY'27	FY'28	Total 6 Years
CIP GROWTH EXPENDITURES	\$ 52.4	\$ 47.2	\$ 29.5	\$ 38.1	\$ 32.3	\$ 14.9	\$ 214.4
Expenditures Adjusted for Completion	33.6	48.4	36.4	36.0	34.4	20.3	209.1
FUNDING SOURCES							
Privately Funded Projects	8.9	13.0	8.3	3.2	1.2	0.8	35.4
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	\$ 26.0	\$ 30.1	\$ 26.4	\$ 21.3	\$ 20.3	\$ 19.9	\$ 144.0
FUNDING SURPLUS/(SHORTFALL) ADJUSTED FOR COMPLETION	\$ (7.6)	\$ (18.3)	\$ (10.0)	\$ (14.7)	\$ (14.1)	\$ (0.4)	\$ (65.1)

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 \$7.8 million for Montgomery County and \$1.8 million for Prince George's County through June 30, 2021.

Expenditures

The Proposed FYs 2023-2028 Combined Program includes 62 CIP and 11 Information Only projects for a grand total of \$5.9 billion. The grand total is \$362.4 million greater than the Adopted FYs 2022-2027 Combined Program primarily due to the addition of 13 new projects in FY'23. Expenditures for the six-year program period are estimated at \$4.2 billion. FY'23 expenditures are estimated at \$736.0 million, of which \$189.3 million is for the Water Program, \$294.7 million is for the Sewerage Program, and \$252.0 million is for the Information Only projects. System Extension Process (SEP) growth projects are estimated at \$39.1 million in the six-year program with approximately \$11.2 million programmed in FY'23. There are 13 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 2022-2027 CIP to the Proposed FYs 2023-2028 CIP follows:

CIP COMPARISON

(In Thousands)

CIP	Combined Program	Total 6 Years	Budget Years
Adopted FYs 2022-2027	\$ 5,584,388	\$ 3,806,072	\$ 711,863
Proposed FYs 2023-2028	5,946,771	4,248,332	735,985
Change	\$ 362,383	\$ 442,260	\$ 24,122

The six-year expenditures for the Combined Program are estimated at \$4.2 billion, with approximately \$1.2 billion for the Water Program, \$1.3 billion for the Sewerage Program, and \$1.8 billion for the Information Only projects. This is a \$442.3 million increase from the six-year total for the Combined Program in the Adopted FYs 2022-2027 CIP. The overall increase is primarily due to the addition of 13 new projects.

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

	EST. TOTAL COST	EXPEND THRU 21	EST. EXPEND 22	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
					YR 1 23	YR 2 24	YR 3 25	YR 4 26	YR 5 27	YR 6 28		
Montgomery County Water Projects	9,237	49	23	9,165	2,621	1,045	2,577	2,738	92	92	0	1-1
Prince George's County Water Projects	220,139	35,041	16,761	159,229	63,887	51,696	36,501	5,463	1,127	555	9,108	5-1
Bi-County Water Projects	1,242,966	71,486	83,204	997,880	122,746	169,697	169,946	213,348	200,941	121,202	90,396	3-1
TOTAL WATER PROJECTS	1,472,342	106,576	99,988	1,166,274	189,254	222,438	209,024	221,549	202,160	121,849	99,504	
Montgomery County Sewer Projects	75,388	2,403	8,852	64,133	5,512	9,482	11,538	6,407	16,850	14,344	0	2-1
Prince George's County Sewer Projects	405,337	134,878	47,539	220,426	57,691	73,259	44,985	22,826	13,441	8,224	2,494	6-1
Bi-County Sewer Projects	1,970,429	552,940	213,348	1,021,814	231,518	175,732	165,910	167,439	142,598	138,617	182,327	4-1
TOTAL SEWER PROJECTS	2,451,154	690,221	269,739	1,306,373	294,721	258,473	222,433	196,672	172,889	161,185	184,821	
TOTAL CIP PROGRAM	3,923,496	796,797	369,727	2,472,647	483,975	480,911	431,457	418,221	375,049	283,034	284,325	
Total Information Only Projects	2,023,275	2,003	243,992	1,775,685	252,010	280,229	296,174	306,758	313,209	327,305	1,595	7-1
COMBINED PROGRAM	5,946,771	798,800	613,719	4,248,332	735,985	761,140	727,631	724,979	688,258	610,339	285,920	

FUNDING SOURCES

WSSC Bonds	4,478,916	504,841	537,358	3,280,454	603,324	584,384	549,004	542,237	531,602	469,903	156,263
PAYGO	537,601	0	27,585	400,016	31,016	44,000	65,000	80,000	80,000	100,000	110,000
State Grants/Contributions	572,969	246,143	20,456	306,370	39,514	76,224	76,106	56,364	38,162	20,000	0
System Development Charges	224,154	27,846	8,307	178,893	37,650	35,166	24,035	36,443	31,505	14,094	9,108
Contributions/Other	59,287	11,497	12,324	35,464	14,710	12,057	5,499	1,671	764	763	2
Government Contributions	57,370	7,903	3,569	35,351	5,486	5,024	6,380	6,657	6,225	5,579	10,547
Federal Grants	16,474	570	4,120	11,784	4,285	4,285	1,607	1,607	0	0	0
COMBINED PROGRAM	5,946,771	798,800	613,719	4,248,332	735,985	761,140	727,631	724,979	688,258	610,339	285,920

WSSC WATER FYS 2023 - 2028 COMBINED PROGRAM
NEW PROJECT LISTING
 (ALL FIGURES IN THOUSANDS)

Agency Number	Project Name	Total Project Cost	6 Year Program Cost	Budget Year Cost	% of Growth
<u>Montgomery County Sewer Projects</u>					
S- 36.01	Arcola WWPS & FM	\$6,140	\$5,837	\$690	0%
S- 61.02	Reddy Branch WWPS & FM	24,614	24,323	275	0%
S- 63.08	Sam Rice Manor WWPS & FM	5,501	5,177	173	83%
S- 83.07	Ashford Woods WWPS & FM	3,591	3,192	1,237	100%
S- 151.02	Erickson Bethesda Sewer Main	2,740	2,577	518	100%
<u>Bi-County Water Projects</u>					
W- 161.02	I-495/I-270 Traffic Relief Plan Pipeline Relocations	182,600	182,411	18,555	0%
<u>Prince George's County Sewer Projects</u>					
S- 68.02	Carsondale WWPS & FM	5,645	5,290	345	0%
S- 75.23	Brandywine Woods WWPS & FM	3,515	3,192	1,237	100%
S- 87.20	Freeway Airport WWPS & FM	3,533	3,192	1,237	100%
S- 89.26	Colmar Manor WWPS & FM	6,567	6,269	173	0%
S- 113.13	Forest Heights WWPS & FM	8,958	8,512	173	82%
<u>Information Only Projects</u>					
A- 100.01	Anacostia Depot Reconfiguration	42,838	40,280	1,314	0%
A- 101.06	RGH Building Upgrades	13,750	13,200	1,100	0%
TOTALS		<u>\$309,992</u>	<u>\$303,452</u>	<u>\$27,027</u>	

13 New Projects

WSSC WATER FYS 2023 - 2028 COMBINED PROGRAM
PENDING CLOSE-OUT PROJECT LISTING
 (ALL FIGURES IN THOUSANDS)

Agency Number	Project Name	Estimated Total Cost	Expenditures Thru FY'21	Estimated Expenditures FY'22	Remarks
<u>Bi-County Water Projects</u>					
W- 73.22	Potomac WFP Pre-Filter Chlorination & Air Scour Improvements	\$20,581	\$20,438	\$143	Project completion expected in October 2021.
<u>Bi-County Sewer Projects</u>					
S- 22.10	Blue Plains WWTP: Enhanced Nutrient Removal	426,355	426,355	\$0	Project completion expected in June 2021.
<u>Prince George's County Water Projects</u>					
W-120.14	Timothy Branch Water Main	2,466	557	1,909	Project completion expected in FY'22.
<u>Prince George's County Sewer Projects</u>					
S- 77.20	Parkway North Substation Replacement	9,532	9,405	127	Project completion expected in August 2021.
S- 89.25	Little Anacostia WWPS & FM	9,821	8,607	1,214	Project completion expected in October 2021.
TOTALS		<u>\$468.755</u>	<u>\$465.362</u>	<u>\$3.393</u>	

5 Projects Pending Close-Out

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

MONTGOMERY COUNTY WATER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 21	EST. EXPEND 22	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 23	YR 2 24	YR 3 25	YR 4 26	YR 5 27	YR 6 28		
W-46.26	Pleasant's Property Water Main Extension	2,082	19	0	2,063	1,857	206	0	0	0	0	0	1-2
W-113.20	White Oak Water Mains Augmentation	5,306	30	23	5,253	23	377	2,300	2,553	0	0	0	1-3
W-113.21	Viva White Oak Water Main	1,849	0	0	1,849	741	462	277	185	92	92	0	1-4
	TOTALS	9,237	49	23	9,165	2,621	1,045	2,577	2,738	92	92	0	

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

MONTGOMERY COUNTY SEWER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 21	EST. EXPEND 22	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 23	YR 2 24	YR 3 25	YR 4 26	YR 5 27	YR 6 28		
S-36.01	Arcola WWPS & FM	6,140	188	115	5,837	690	2,300	2,847	0	0	0	0	2-3
S-61.02	Reddy Branch WWPS & FM	24,614	16	275	24,323	275	110	693	693	11,276	11,276	0	2-4
S-63.08	Sam Rice Manor WWPS & FM	5,501	36	288	5,177	173	115	174	575	1,150	2,990	0	2-5
S-83.07	Ashford Woods WWPS & FM	3,591	111	288	3,192	1,237	1,149	662	144	0	0	0	2-6
S-84.67	Milestone Center Sewer Main	700	137	0	563	538	25	0	0	0	0	0	2-7
S-85.21	Shady Grove Station Sewer Augmentation	7,482	868	6,606	8	8	0	0	0	0	0	0	2-8
S-85.22	Shady Grove Neighborhood Center	2,010	242	452	1,316	658	658	0	0	0	0	0	2-9
S-94.13	Damascus Town Center WWPS Replacement	10,057	399	330	9,328	660	3,157	5,269	242	0	0	0	2-10
S-94.14	Spring Gardens WWPS Replacement	10,993	301	440	10,252	132	715	715	4,345	4,345	0	0	2-11
S-118.09	Viva White Oak Sewer Main	1,560	0	0	1,560	623	390	235	155	79	78	0	2-12
S-151.02	Erickson Bethesda Sewer Main	2,740	105	58	2,577	518	863	943	253	0	0	0	2-13
TOTALS		75,388	2,403	8,852	64,133	5,512	9,482	11,538	6,407	16,850	14,344	0	

Arcola WWPS & FM

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised		Drainage Basins	Sligo Creek 06
S - 000036.01		Add			Planning Areas	Kensington-Wheaton PA 31

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	1,463	188	100	1,175	600	300	275				
Land											
Construction	3,900			3,900		1,700	2,200				
Other	777		15	762	90	300	372				
Total	6,140	188	115	5,837	690	2,300	2,847				

C. Funding Schedule (000's)

WSSC Bonds	6,140	188	115	5,837	690	2,300	2,847				
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D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of the modifications to the Arcola Wastewater Pumping Station and replacement of the Arcola Force Main. The rehabilitation will replace both pumps, maintaining the pumping station's 0.17 MGD capacity. The existing 1,300 linear feet of 4-inch force main will be replaced. In addition, replacement of all electrical and mechanical components, piping assets, and the HVAC system are included.

BENEFIT

Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life.

JUSTIFICATION

The existing pumping station and force main were constructed in 1961 and have reached the end of their useful lives. Replacement of the existing force main is in accordance with an initiative to prioritize replacing force mains that have reached their anticipated life expectancy. This upgrade work was recommended as part of WSSC Water's Asset Management Program (CNPV #183).

COST CHANGE

Not applicable.

OTHER

The present project scope was developed for the FY'23 CIP and has an estimated total cost of \$6,140,000. The schedule and expenditure projections shown in Block B above are based on preliminary planning level estimates and are expected to change based upon site conditions and design constraints. Preliminary planning work for the replacement and upgrade began in FY'21 under ESP S-616.01, Arcola Force Main Replacement and WWPS Upgrade.

COORDINATION

Coordinating Agencies: Maryland Department of Natural Resources; 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	\$355	26
Total Cost	\$355	26
Impact on Water and Sewer Rate		

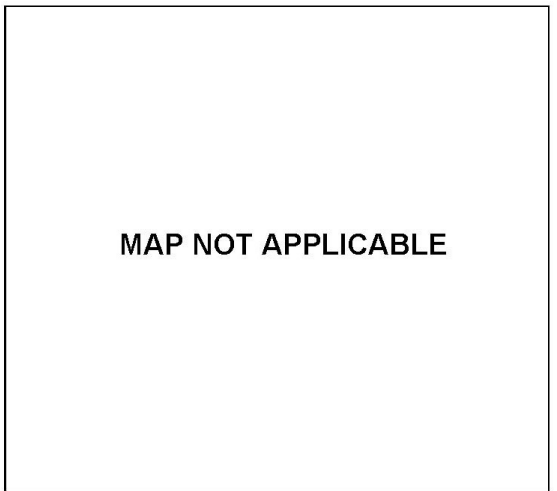
F. Approval and Expenditure Data (000's)

Date First in Program	FY'23
Date First Approved	FY'23
Initial Cost Estimate	6,140
Cost Estimate Last FY	
Present Cost Estimate	6,140
Approved Request Last FY	
Total Expense & Encumbrances	188
Approval Request Year 1	690

G. Status Information

Land Status	Public/Agency owned land
Project Phase	Planning
Percent Complete	100 %
Estimated Completion Date	April 2025
Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	0.17 MGD

H. Map



Reddy Branch WWPS & FM

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000061.02		Add

PDF Date	October 1, 2021
Date Revised	

Pressure Zones	
Drainage Basins	Rock Creek 05
Planning Areas	Olney & Vicinity PA 23

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	2,376	16	250	2,110	250	100	630	630	250	250	
Land											
Construction	20,000			20,000					10,000	10,000	
Other	2,238		25	2,213	25	10	63	63	1,026	1,026	
Total	24,614	16	275	24,323	275	110	693	693	11,276	11,276	

C. Funding Schedule (000's)

WSSC Bonds	24,614	16	275	24,323	275	110	693	693	11,276	11,276	
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D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of the modifications to the existing 3.04 MGD wastewater pumping station and replacement of approximately 12,774 feet of existing force main.

BENEFIT

Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life.

JUSTIFICATION

The existing pumping station and 16-inch diameter PCCP force main were built in 1971 and have reached the end of their useful lives. The station is subject to flooding and there are safety concerns with equipment operation. Replacement of the existing force main is in accordance with an initiative to prioritize replacing force mains that have reached their anticipated life expectancy. This upgrade work was recommended as part of WSSC Water's Asset Management Program (CNPV #200).

COST CHANGE

Not applicable.

OTHER

The present project scope was developed for the FY'23 CIP and has an estimated total cost of \$24,614,000. The schedule and expenditure projections shown in Block B above are based on preliminary planning level estimates and are expected to change based upon site conditions and design constraints. Preliminary planning work for the upgrade began in FY'21 under ESP S-611.04, Reddy Branch WWPS Upgrade. Future land costs are included in project S-203.00.

COORDINATION

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

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$1,423	29
Total Cost	\$1,423	29
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	24,614
Cost Estimate Last FY	
Present Cost Estimate	24,614
Approved Request Last FY	
Total Expense & Encumbrances	16
Approval Request Year 1	275

G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	Planning
Percent Complete	0 %
Estimated Completion Date	June 2028
Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	3.04 MGD

H. Map



Sam Rice Manor WWPS & FM

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised		Drainage Basins	Lower Anacostia 9
S - 000063.08		Add			Planning Areas	Patuxent PA 15

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	1,586	36	250	1,300	150	100	150	500	200	200	
Land											
Construction	3,200			3,200					800	2,400	
Other	715		38	677	23	15	24	75	150	390	
Total	5,501	36	288	5,177	173	115	174	575	1,150	2,990	

C. Funding Schedule (000's)

WSSC Bonds	937	6	49	882	29	20	30	98	196	509	
SDC	4,564	30	239	4,295	144	95	144	477	954	2,481	

D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of a 0.12 MGD wastewater pumping station and 3,521 linear feet of force main. The relocated wastewater pumping station and force main will provide service to the existing and future Ashton Service Area.

BENEFIT

Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life.; System Capacity: This project will enhance existing infrastructure by building additional capacity in order to meet existing and/or future demand.

JUSTIFICATION

The existing pumping station was originally installed in 1977 and has reached the end of its useful life. The station does not meet current standards and is in jeopardy from encroaching streambank erosion. Replacement of the existing force main is in accordance with an initiative to prioritize replacing force mains that have reached their anticipated life expectancy. This upgrade work was recommended as part of WSSC Water's Asset Management Program (CNPV #191).

COST CHANGE

Not applicable.

OTHER

The present project scope was developed for the FY'23 CIP and has an estimated total cost of \$5,501,000. The schedule and expenditure projections shown in Block B above are based on preliminary planning level estimates and are expected to change based upon site conditions and design constraints. Preliminary planning work for the rehabilitation began in FY'21 under ESP S-625.02, Sam Rice Manor WWPS Rehabilitation. Future land costs are included in project S-203.00.

COORDINATION

Coordinating Agencies: Maryland Department of Natural Resources; Maryland State Highway Administration; 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	\$54	29
Total Cost	\$54	29
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	5,501
Cost Estimate Last FY	
Present Cost Estimate	5,501
Approved Request Last FY	
Total Expense & Encumbrances	36
Approval Request Year 1	173

G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	Planning
Percent Complete	0 %
Estimated Completion Date	June 2028
Growth	83%
System Improvement	17%
Environmental Regulation	
Population Served	
Capacity	0.12 MGD

H. Map

MAP NOT APPLICABLE

Ashford Woods WWPS & FM

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000083.07		Add

PDF Date	October 1, 2021
Date Revised	

Pressure Zones	
Drainage Basins	Seneca Creek 15
Planning Areas	Clarksburg & Vicinity PA 13

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	839	111	250	478	277	101	75	25			
Land											
Construction	2,298			2,298	799	898	501	100			
Other	454		38	416	161	150	86	19			
Total	3,591	111	288	3,192	1,237	1,149	662	144			

C. Funding Schedule (000's)

Contributions/Other	3,591	111	288	3,192	1,237	1,149	662	144			
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D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of a 0.62 MGD wastewater pumping station and 2,160 feet of force main to serve the Egan property.

BENEFIT

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

JUSTIFICATION

Ashford Woods Hydraulic Planning Analysis (January 2021).

COST CHANGE

Not applicable.

OTHER

The present project scope was developed for the FY'23 CIP and has an estimated total cost of \$3,591,000. 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 Natural Resources; 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	\$46	24
Debt Service		
Total Cost	\$46	24
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	3,591
Cost Estimate Last FY	
Present Cost Estimate	3,591
Approved Request Last FY	
Total Expense & Encumbrances	111
Approval Request Year 1	1,237

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	0.62 MGD

H. Map



Erickson Bethesda Sewer Main

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised		Drainage Basins	Cabin John 07
S - 000151.02		Add			Planning Areas	North Bethesda PA 30

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	395	105	50	240	150	50	20	20			
Land											
Construction	2,000			2,000	300	700	800	200			
Other	345		8	337	68	113	123	33			
Total	2,740	105	58	2,577	518	863	943	253			

C. Funding Schedule (000's)

Contributions/Other	2,740	105	58	2,577	518	863	943	253			
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D. Description & Justification

DESCRIPTION
This project provides for the planning, design, and construction of 3,600 feet of 15-inch to 18-inch diameter sanitary sewer adjacent to the new development and 330 feet of 36-inch diameter sanitary sewer south of River Road to serve the Erickson Bethesda development.

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

JUSTIFICATION
Erickson Bethesda Hydraulic Planning Analysis (March 2021).

COST CHANGE
Not applicable.

OTHER
The present project scope was developed for the FY'23 CIP and has an estimated total cost of \$2,740,000. 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.

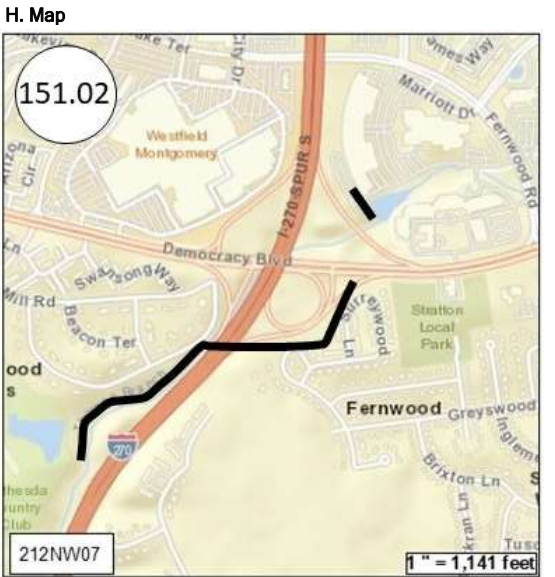
COORDINATION
Coordinating Agencies: Maryland State Highway Administration; Maryland-National Capital Park & Planning Commission; Montgomery County Government
Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$83	
Debt Service		
Total Cost	\$83	
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	2,738
Cost Estimate Last FY	
Present Cost Estimate	2,740
Approved Request Last FY	
Total Expense & Encumbrances	105
Approval Request Year 1	518

G. Status Information	
Land Status	Not Applicable
Project Phase	Planning
Percent Complete	30 %
Estimated Completion Date	Developer Dependent

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	



FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

BI-COUNTY WATER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 21	EST. EXPEND 22	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 23	YR 2 24	YR 3 25	YR 4 26	YR 5 27	YR 6 28		
W-73.30	Potomac WFP Submerged Channel Intake	94,144	4,348	0	0	0	0	0	0	0	0	89,796	3-4
W-73.32	Potomac WFP Main Zone Pipeline	111,184	1,931	1,208	108,045	1,155	4,620	4,620	41,580	41,580	14,490	0	3-5
W-73.33	Potomac WFP Consent Decree Program	182,298	30,048	12,600	139,650	25,200	29,400	29,400	29,400	26,250	0	0	3-7
W-161.01	Large Diameter Water Pipe & Large Valve Rehabilitation Program	595,024	0	54,525	540,499	64,316	75,015	78,395	103,302	113,854	105,617	0	3-8
W-161.02	I-495/I-270 Traffic Relief Plan Pipeline Relocations	182,600	125	64	182,411	18,555	54,724	54,606	36,364	18,162	0	0	3-10
W-172.07	Patuxent Raw Water Pipeline	30,766	14,596	7,249	8,921	8,140	558	223	0	0	0	0	3-11
W-175.05	Regional Water Supply Resiliency	15,904	0	4,120	11,784	4,285	4,285	1,607	1,607	0	0	0	3-12
W-202.00	Land & Rights-of-Way Acquisition - Bi-County Water	10,465	0	3,295	6,570	1,095	1,095	1,095	1,095	1,095	1,095	600	3-13
	Projects Pending Close-Out	20,581	20,438	143	0	0	0	0	0	0	0	0	3-14
TOTALS		1,242,966	71,486	83,204	997,880	122,746	169,697	169,946	213,348	200,941	121,202	90,396	

Potomac WFP Main Zone Pipeline

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000073.32	133800	Change

PDF Date	October 1, 2021
Date Revised	

Pressure Zones	Montgomery Main 495A; Prince George's High HG450A;
Drainage Basins	
Planning Areas	Potomac-Cabin John & Vicinity PA 29

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	22,981	1,931	1,150	19,900	1,100	4,400	4,400	3,600	3,600	2,800	
Land											
Construction	83,000			83,000				36,000	36,000	11,000	
Other	5,203		58	5,145	55	220	220	1,980	1,980	690	
Total	111,184	1,931	1,208	108,045	1,155	4,620	4,620	41,580	41,580	14,490	

C. Funding Schedule (000's)

WSSC Bonds	45,586	792	495	44,299	474	1,894	1,894	17,048	17,048	5,941	
SDC	65,598	1,139	713	63,746	681	2,726	2,726	24,532	24,532	8,549	

D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of redundant finished water discharge mains, water pumping station upgrades, and other process improvements at the Potomac Water Filtration Plant (WFP) to ensure a safe and reliable water supply. This work includes the following: two new 54-inch discharge pipes from the Main Zone and High Zone pumping stations that will feed into a new 84-inch discharge main that runs to the 96-inch and 66-inch main wye connections on River Road; the addition of two new pumps in the High Zone pumping station to serve the Main Zone; a new 66-inch suction pipe to serve the new pumps in the High Zone pumping station; other modifications to the High Zone pumping station, including surge protection modifications and electrical upgrades; and replacement of the existing 78-inch and 48-inch PCCP discharge mains, which are nearing the end of their useful lives, after the new 84-inch redundant discharge main is in place.

BENEFIT

System Reliability: This project will improve service reliability through fewer and shorter service interruptions.; Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life.

JUSTIFICATION

The primary purpose of this project is to provide redundancy to facilitate extended shutdowns for periodic maintenance, inspections, and repairs and to mitigate the risk to plant operations due to failure of any one of the finished water mains. The existing 78-inch PCCP main, which was installed in 1967, is the primary feed to the 96-inch Montgomery County Main Zone pipeline and the 66-inch River Road pipeline. The existing 48-inch PCCP main, which was installed in 1962, serves as only a partial backup to the 78-inch line, since it is not adequately sized to meet the current summer season demands. Furthermore, the existing mains are nearing the end of their useful lives and the 78-inch main alone cannot meet the projected 2040 maximum day demands of 210 MGD. The 78-inch main and the 48-inch main together could convey 210 MGD; however, relying on both pipes to meet future demands would decrease the redundancy and reliability of WSSC Water's system. The redundancy, process improvement, and rehabilitation/replacement work recommended by the Potomac WFP Main Zone Redundancy Business Case Evaluation (CDM Smith, May 2021), undertaken as part of WSSC Water's Asset Management Program, provides value to the customer by minimizing the risk of failure and ensuring a safe and reliable supply of up to 210 MGD of water in order to meet the current and future needs of the WSSD.

COST CHANGE

The schedule and expenditure projections have been updated to reflect the revised scope of the project.

OTHER

The project scope has been revised to include additional redundancy measures, rehabilitation/replacement of aging equipment, and other process improvements that were identified and validated through WSSC Water's Asset Management Program. The schedule and expenditure projections shown in Block B above are order of magnitude estimates and are expected to change based upon site conditions and design constraints. The schedule may change with the construction of the 78-inch and 48-inch replacement pipes after FY'28, once the 84-inch discharge main is in place.

COORDINATION

Coordinating Agencies: Maryland Department of Natural Resources; Maryland Department of the Environment; Maryland State Highway Administration;

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$44	29
Debt Service	\$2,636	29
Total Cost	\$2,680	29
Impact on Water and Sewer Rate	\$0.01	29

F. Approval and Expenditure Data (000's)

Date First in Program	FY'13
Date First Approved	FY'13
Initial Cost Estimate	330
Cost Estimate Last FY	39,069
Present Cost Estimate	111,184
Approved Request Last FY	913
Total Expense & Encumbrances	1,931
Approval Request Year 1	1,155

G. Status Information

Land Status	Public/Agency owned land
Project Phase	Planning
Percent Complete	95 %
Estimated Completion Date	June 2028
Growth	59%
System Improvement	41%
Environmental Regulation	
Population Served	
Capacity	210 MGD

H. Map

MAP NOT AVAILABLE

Potomac WFP Consent Decree Program

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	Potomac WFP HGPOWF
Agency Number	Project Number	Update Code	Date Revised		Drainage Basins	
W - 000073.33	173801	Change			Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	33,021	14,021	4,000	15,000	3,000	3,000	3,000	3,000	3,000		
Land	1,000	1,000									
Construction	141,027	15,027	8,000	118,000	21,000	25,000	25,000	25,000	22,000		
Other	7,250		600	6,650	1,200	1,400	1,400	1,400	1,250		
Total	182,298	30,048	12,600	139,650	25,200	29,400	29,400	29,400	26,250		

C. Funding Schedule (000's)

WSSC Bonds	182,298	30,048	12,600	139,650	25,200	29,400	29,400	29,400	26,250		
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D. Description & Justification

DESCRIPTION <p>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.</p>
BENEFIT <p>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.</p>
JUSTIFICATION <p>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.</p>
COST CHANGE <p>The expenditure projections were revised based upon final design estimates.</p>
OTHER <p>The project scope has remained the same. The schedule and expenditure projections shown in Block B above are 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.</p>
COORDINATION <p>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</p>

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$10,542	28
Total Cost	\$10,542	28
Impact on Water and Sewer Rate	\$0.02	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	203,007
Present Cost Estimate	182,298
Approved Request Last FY	10,500
Total Expense & Encumbrances	30,048
Approval Request Year 1	25,200

G. Status Information	
Land Status	Land Acquired
Project Phase	Design
Percent Complete	100 %
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			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised		Drainage Basins	
W - 000161.01	113803	Change			Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	67,227		7,240	59,987	8,962	9,350	9,764	10,518	10,528	10,865	
Land											
Construction	473,703		42,328	431,375	49,507	58,844	61,505	83,393	92,975	85,151	
Other	54,094		4,957	49,137	5,847	6,821	7,126	9,391	10,351	9,601	
Total	595,024		54,525	540,499	64,316	75,015	78,395	103,302	113,854	105,617	

C. Funding Schedule (000's)

WSSC Bonds	595,024		54,525	540,499	64,316	75,015	78,395	103,302	113,854	105,617	
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D. Description & Justification

<p>DESCRIPTION</p> <p>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.</p> <p>*EXPENDITURES FOR LARGE DIAMETER WATER PIPE REHABILITATION ARE EXPECTED TO CONTINUE INDEFINITELY.</p> <p>BENEFIT</p> <p>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.</p> <p>JUSTIFICATION</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>Utility Wide Master Plan (December 2007); 30 Year Infrastructure Plan (2007); FY'23 Water Network Asset Management Plan (May 2021).</p> <p>COST CHANGE</p>

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$34,410	
Total Cost	\$34,410	
Impact on Water and Sewer Rate	\$0.07	

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	518,952
Present Cost Estimate	595,024
Approved Request Last FY	61,681
Total Expense & Encumbrances	
Approval Request Year 1	64,316

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			PDF Date	October 1, 2021	Pressure Zones	Cabin John 350A; Falls Road 552A; Montgomery High					
Agency Number	Project Number	Update Code	Date Revised		Drainage Basins	Cabin John 07; Muddy Branch 13; Rock Run 1; Watts Branch					
W - 000161.02		Add			Planning Areas	Gaithersburg & Vicinity PA 20; Potomac-Cabin John & Vicinity					

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	23,490	120	61	23,309	2,630	6,993	6,881	4,549	2,256		
Land											
Construction	150,420	5		150,415	15,041	45,125	45,125	30,083	15,041		
Other	8,690		3	8,687	884	2,606	2,600	1,732	865		
Total	182,600	125	64	182,411	18,555	54,724	54,606	36,364	18,162		

C. Funding Schedule (000's)

State of Maryland Contribution	182,600	125	64	182,411	18,555	54,724	54,606	36,364	18,162		
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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.

COST CHANGE

Not applicable.

OTHER

The present project scope was developed for the FY'23 CIP and has an estimated cost of \$182,600,000. 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)

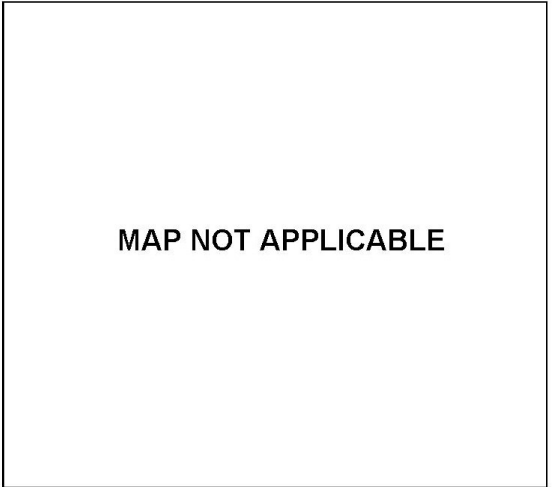
Date First in Program	FY'23
Date First Approved	FY'23
Initial Cost Estimate	182,600
Cost Estimate Last FY	
Present Cost Estimate	182,600
Approved Request Last FY	
Total Expense & Encumbrances	125
Approval Request Year 1	18,555

G. Status Information

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

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

H. Map



Regional Water Supply Resiliency

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000175.05	382101	Change

PDF Date	October 1, 2021
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	Montgomery County PA

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	15,904		4,120	11,784	4,285	4,285	1,607	1,607			
Land											
Construction											
Other											
Total	15,904		4,120	11,784	4,285	4,285	1,607	1,607			

C. Funding Schedule (000's)

Federal Aid	15,904		4,120	11,784	4,285	4,285	1,607	1,607			
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D. Description & Justification

DESCRIPTION

This project includes planning, preliminary engineering, community outreach, and coordination with elected officials for a regional raw water supply reservoir and raw water conveyance system to serve the long-range water supply needs of the Washington metropolitan region. A new regional reservoir is needed to mitigate against drought and contamination events in the Potomac River which could curtail or halt withdrawal from the river for days to months. This project will include the performance of a business case to evaluate conveyance alternatives and provide a recommendation for subsequent preliminary design.

BENEFIT

System Reliability: This project will improve service reliability through fewer and shorter service interruptions.

JUSTIFICATION

Justification for the project is based in part on two independent studies. A study conducted by the Metropolitan Washington Council of Governments (COG) in 2016 concluded that the Washington metropolitan region needed, among other capital projects and initiatives, an off-river raw water storage reservoir to provide the necessary resiliency for water quantity and quality in the region in the event of a contamination in the Potomac River. A separate study conducted by the Interstate Commission for the Potomac River Basin (ICPRB) in 2017 concluded that the region needed additional off-river raw water reservoir capacity as part of the regional water supply system to ensure adequate water supply to the region in the event of a drought. A value engineering planning evaluation for the proposed project was conducted by the USACE in 2020.

COST CHANGE

Not applicable.

OTHER

This project will be contingent upon receipt of federal grant funding and the execution of other relevant cost sharing agreements between WSSC Water and other ICPRB CO-OP Operations Committee members. Placement of the proposed work in the CIP will enable WSSC Water to solicit funding opportunities in a timely fashion.

COORDINATION

Coordinating Agencies: Federal and State Grant Agencies; Interstate Commission on the Potomac River Basin; Local Community Civic Associations; Maryland Department of the Environment; Maryland-National Capital Park & Planning Commission; Montgomery County Department of Environmental Protection; Montgomery County Government; National Park Service; Prince George's County Government; Prince George's County Department of Permitting Inspection and Enforcement; U.S. Army Corps of Engineers
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)

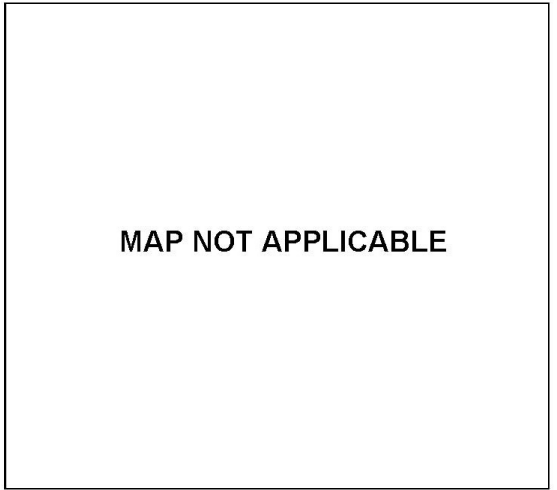
Date First in Program	FY'21
Date First Approved	FY'21
Initial Cost Estimate	15,000
Cost Estimate Last FY	15,450
Present Cost Estimate	15,904
Approved Request Last FY	4,120
Total Expense & Encumbrances	
Approval Request Year 1	4,285

G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	Planning
Percent Complete	0 %
Estimated Completion Date	TBD

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	1,800,000
Capacity	7.5 BG

H. Map



FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

BI-COUNTY SEWER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 21	EST. EXPEND 22	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 23	YR 2 24	YR 3 25	YR 4 26	YR 5 27	YR 6 28		
S-22.06	Blue Plains WWTP: Liquid Train Projects, Part 2	354,275	0	18,963	225,238	26,124	20,930	33,089	48,892	48,373	47,830	110,074	4-3
S-22.07	Blue Plains WWTP: Biosolids Management, Part 2	90,043	0	15,321	47,361	15,287	9,652	7,592	3,699	5,009	6,122	27,361	4-4
S-22.09	Blue Plains WWTP: Plant-wide Projects	114,208	0	9,891	90,367	13,365	18,984	24,553	13,872	7,660	11,933	13,950	4-5
S-22.11	Blue Plains: Pipelines & Appurtenances	220,994	0	10,460	179,592	13,714	18,312	36,638	53,587	32,098	25,243	30,942	4-6
S-89.24	Anacostia #2 WWPS Upgrades	42,473	774	3,211	38,488	17,475	16,100	4,913	0	0	0	0	4-7
S-103.02	Piscataway Bioenergy	333,269	120,479	99,813	112,977	74,708	28,702	9,462	105	0	0	0	4-8
S-170.08	Septage Discharge Facility Planning & Implementation	41,935	5,332	229	36,374	12,959	12,959	2,880	3,788	3,788	0	0	4-10
S-170.09	Trunk Sewer Reconstruction Program	344,412	0	55,165	289,247	56,891	49,698	46,588	43,301	45,475	47,294	0	4-11
S-203.00	Land & Rights-Of-Way Acquisition - Bi-County Sewer	2,465	0	295	2,170	995	395	195	195	195	195	0	4-13
	Projects Pending Close-Out	426,355	426,355	0	0	0	0	0	0	0	0	0	4-14
TOTALS		1,970,429	552,940	213,348	1,021,814	231,518	175,732	165,910	167,439	142,598	138,617	182,327	

Blue Plains WWTP: Liquid Train Projects, Part 2

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised		Drainage Basins	Bi-County 30
S - 000022.06	954811	Change			Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision											
Land											
Construction	350,766		18,775	223,007	25,865	20,723	32,761	48,408	47,894	47,356	108,984
Other	3,509		188	2,231	259	207	328	484	479	474	1,090
Total	354,275		18,963	225,238	26,124	20,930	33,089	48,892	48,373	47,830	110,074

C. Funding Schedule (000's)

WSSC Bonds	334,828		17,922	212,874	24,690	19,781	31,273	46,208	45,717	45,205	104,032
City of Rockville	19,447		1,041	12,364	1,434	1,149	1,816	2,684	2,656	2,625	6,042

D. Description & Justification

<p>DESCRIPTION</p> <p>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 23 projects that have been identified and prioritized by DC Water in their capital program plus 2 projects (E8 & FG) that were formerly budgeted for in S-22.10. Projects with significant spending in FY'23 include: upgrades to the grit, screening, and primary treatment systems (BQ); upgrading effluent filters (IY); replacing/upgrading the primary clarifier mechanical components (J2); and improvements to the headworks influent structures (BC).</p> <p>BENEFIT</p> <p>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.</p> <p>JUSTIFICATION</p> <p>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'22 Capital Improvements Program.</p> <p>COST CHANGE</p> <p>Increased estimates beginning in FY'25 reflect programmed costs for renewal and replacement of major process components expected to have reached the end of their useful life, including mechanical treatment components and some structural rebuilds of tanks and filters. Notable projects include: on-going work on the upgrades to the effluent filters (IY); nitrification reactors/sedimentation basins - 20 year rebuild (LF); rehabilitating liquid processes (RN); and long-term concrete repairs (RW) and upgrades to secondary treatment facilities (FG) to maintain enhanced nitrogen removal under higher flows.</p> <p>OTHER</p> <p>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.</p> <p>COORDINATION</p> <p>Coordinating Agencies: City of Rockville;(responsible for a share of funding); DC Water;(responsible for design and construction) Coordinating Projects: S - 000022.10 - Blue Plains WWTP: Enhanced Nutrient Removal</p>

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$19,363	
Total Cost	\$19,363	
Impact on Water and Sewer Rate	\$0.04	

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	261,738
Present Cost Estimate	354,275
Approved Request Last FY	18,847
Total Expense & Encumbrances	
Approval Request Year 1	26,124

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			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised		Drainage Basins	Bi-County 30
S - 000022.07	954812	Change			Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision											
Land											
Construction	89,150		15,169	46,891	15,136	9,556	7,517	3,662	4,959	6,061	27,090
Other	893		152	470	151	96	75	37	50	61	271
Total	90,043		15,321	47,361	15,287	9,652	7,592	3,699	5,009	6,122	27,361

C. Funding Schedule (000's)

WSSC Bonds	85,100		14,480	44,761	14,448	9,122	7,175	3,496	4,734	5,786	25,859
City of Rockville	4,943		841	2,600	839	530	417	203	275	336	1,502

D. Description & Justification

<p>DESCRIPTION</p> <p>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 10 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'23 anticipated spending include: gravity thickener facility upgrades phase II (BX); biosolids blending development center (I3); and additional centrifuges for pre-digestion dewatering (LD).</p> <p>BENEFIT</p> <p>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.</p> <p>JUSTIFICATION</p> <p>This project is needed to implement a set of facilities which will provide a permanent bio-solids management 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'22 Capital Improvements Program.</p> <p>COST CHANGE</p> <p>Increased cost estimates are due to the increased costs in biosolids management in FY'28 and beyond for two projects: biosolids rehab (RM) and DAF thickeners facility upgrade (XY).</p> <p>OTHER</p> <p>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.</p> <p>COORDINATION</p> <p>Coordinating Agencies: City of Rockville;(responsible for a share of funding); DC Water;(responsible for design and construction)</p> <p>Coordinating Projects: Not Applicable</p>

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$4,921	
Total Cost	\$4,921	
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	76,311
Present Cost Estimate	90,043
Approved Request Last FY	15,321
Total Expense & Encumbrances	
Approval Request Year 1	15,287

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			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised		Drainage Basins	Bi-County 30
S - 000022.09	023805	Change			Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision											
Land											
Construction	113,078		9,793	89,473	13,233	18,796	24,310	13,735	7,584	11,815	13,812
Other	1,130		98	894	132	188	243	137	76	118	138
Total	114,208		9,891	90,367	13,365	18,984	24,553	13,872	7,660	11,933	13,950

C. Funding Schedule (000's)

WSSC Bonds	107,939		9,348	85,407	12,631	17,942	23,205	13,111	7,240	11,278	13,184
City of Rockville	6,269		543	4,960	734	1,042	1,348	761	420	655	766

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 29 DC Water capital program projects covered by the WSSC Water capital project. Current projects include: electrical system upgrades (TZ); floodwall construction (JF); plant-side 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'22 Capital Improvements Program.

COST CHANGE

Cost increases are attributed to upgrades to the electrical monitoring systems (IC) and electrical switchgear (TZ).

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	\$6,242	
Total Cost	\$6,242	
Impact on Water and Sewer Rate	\$0.01	

F. Approval and Expenditure Data (000's)

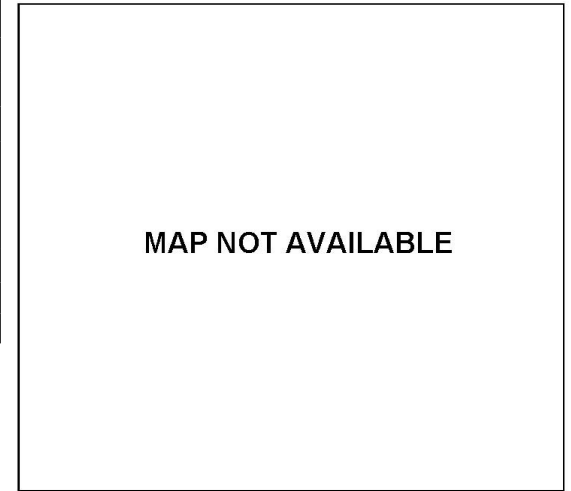
Date First in Program	FY'95
Date First Approved	FY'02
Initial Cost Estimate	
Cost Estimate Last FY	100,521
Present Cost Estimate	114,208
Approved Request Last FY	9,891
Total Expense & Encumbrances	
Approval Request Year 1	13,365

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



Blue Plains: Pipelines & Appurtenances

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised		Drainage Basins	Bi-County 30
S - 000022.11	113804	Change			Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision											
Land											
Construction	218,805		10,356	177,813	13,578	18,131	36,275	53,056	31,780	24,993	30,636
Other	2,189		104	1,779	136	181	363	531	318	250	306
Total	220,994		10,460	179,592	13,714	18,312	36,638	53,587	32,098	25,243	30,942

C. Funding Schedule (000's)

WSSC Bonds	205,065		9,542	166,818	12,460	17,091	34,185	50,578	29,224	23,280	28,705
City of Rockville	15,929		918	12,774	1,254	1,221	2,453	3,009	2,874	1,963	2,237

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 65 projects from the DC Water capital program under this project. Major projects in FY'23 include: rehabilitation of various portions of the Potomac Interceptor (LZ); reactivation of the Anacostia FM/GS; and construction associated with the Combined Sewer Overflow (CSO) Long Term Control Plan - for the Potomac Tunnel (CZ).

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'22 Capital Improvements Program.

COST CHANGE

Substantial work is required on some of the largest sewers of the collection system that carries WSSC Water sewage to Blue Plains. Significant increases in forecasted spending will occur starting in FY'25 at which time several of the projects are planned to be on-going simultaneously including: on-going construction of the Potomac Tunnel; rehabilitation of the Potomac Interceptor and the AFM/GS, Rock Creek Main Interceptor, and Oxon Run Interceptor; rehab of the Main Outfall sewers; and upgrades to various pumping stations.

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	\$11,859	
Total Cost	\$11,859	
Impact on Water and Sewer Rate	\$0.03	

F. Approval and Expenditure Data (000's)

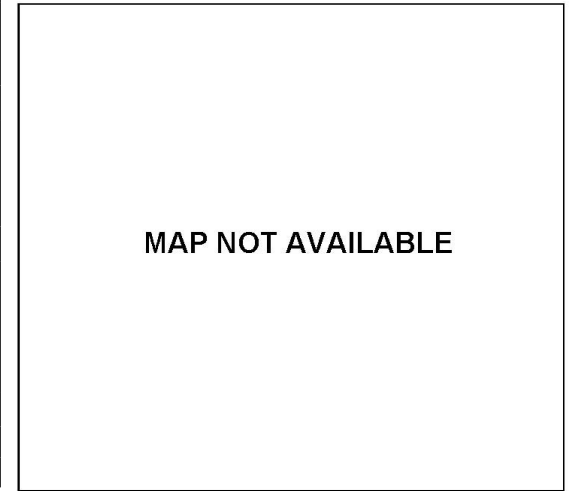
Date First in Program	FY'11
Date First Approved	FY'02
Initial Cost Estimate	
Cost Estimate Last FY	176,853
Present Cost Estimate	220,994
Approved Request Last FY	10,460
Total Expense & Encumbrances	
Approval Request Year 1	13,714

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



Piscataway Bioenergy

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000103.02	153802	Change

PDF Date	October 1, 2021
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	57,658	45,208	4,500	7,950	4,300	2,000	1,550	100			
Land	61	61									
Construction	265,416	75,210	90,560	99,646	66,850	25,335	7,461				
Other	10,134		4,753	5,381	3,558	1,367	451	5			
Total	333,269	120,479	99,813	112,977	74,708	28,702	9,462	105			

C. Funding Schedule (000's)

WSSC Bonds	329,348	119,909	99,813	109,626	74,357	27,202	7,962	105			
Federal Aid	570	570									
State Aid	3,351			3,351	351	1,500	1,500				

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 based on a Thermal Hydrolysis/Mesophilic Anaerobic Digestion/Combined Heat & Power (TH/MAD/CHP) process supplemented by restaurant grease fuel design was recommended.

The environmental benefits are estimated as follows: recover approximately 2 MW of renewable energy from wastewater biomass; reduce greenhouse gas production by 11,800 tons/year; reduce biosolids output by 50 - 55% of current output; reduce lime demand by 4,100 tons/year; 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 by ~ \$500,000/year; hedge against rising costs of power fuel and chemicals; and provide a net payback over time.

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		
Maintenance		
Debt Service	\$19,046	26
Total Cost	\$19,046	26
Impact on Water and Sewer Rate	\$0.04	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	327,208
Present Cost Estimate	333,269
Approved Request Last FY	97,864
Total Expense & Encumbrances	120,479
Approval Request Year 1	74,708

G. Status Information

Land Status	Public/Agency owned land
Project Phase	Construction
Percent Complete	24 %
Estimated Completion Date	November 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

The expenditure projections have been revised based upon cost increases related to program management services, construction management services, and the Washington Gas Supply and Delivery Contract.

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 anaerobic 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 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 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 was negotiated.

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			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised		Drainage Basins	Bi-County 30
S - 000170.09	113805	Change			Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	53,070		8,900	44,170	9,528	7,383	6,271	6,791	6,959	7,238	
Land											
Construction	260,034		41,250	218,784	42,192	37,797	36,082	32,574	34,382	35,757	
Other	31,308		5,015	26,293	5,171	4,518	4,235	3,936	4,134	4,299	
Total	344,412		55,165	289,247	56,891	49,698	46,588	43,301	45,475	47,294	

C. Funding Schedule (000's)

WSSC Bonds	344,412		55,165	289,247	56,891	49,698	46,588	43,301	45,475	47,294	
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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	\$19,917	
Total Cost	\$19,917	
Impact on Water and Sewer Rate	\$0.05	

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	348,442
Present Cost Estimate	344,412
Approved Request Last FY	58,565
Total Expense & Encumbrances	
Approval Request Year 1	56,891

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

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

INFORMATION ONLY PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 21	EST. EXPEND 22	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 23	YR 2 24	YR 3 25	YR 4 26	YR 5 27	YR 6 28		
W-1.00	Water Reconstruction Program	882,399	0	83,483	798,916	99,336	111,186	131,975	145,058	152,624	158,737	0	7-3
S-1.01	Sewer Reconstruction Program	366,920	0	59,789	307,131	50,540	53,265	47,882	49,796	51,787	53,861	0	7-5
A-100.01	Anacostia Depot Reconfiguration	42,838	10	2,548	40,280	1,314	14,494	14,928	9,544	0	0	0	7-7
A-101.04	Laboratory Division Building Expansion	27,288	1,993	5,665	19,630	12,320	4,744	2,566	0	0	0	0	7-8
A-101.06	RGH Building Upgrades	13,750	0	550	13,200	1,100	8,470	3,630	0	0	0	0	7-9
A-102.00	Engineering Support Program	136,000	0	18,000	118,000	18,000	20,000	20,000	20,000	20,000	20,000	0	7-10
A-103.00	Energy Performance Program	21,074	0	5,457	15,617	5,717	2,475	550	2,750	2,750	1,375	0	7-11
W-105.00	Water Storage Facility Rehabilitation Program	39,000	0	3,000	36,000	4,000	5,000	6,000	7,000	7,000	7,000	0	7-12
W-107.00	Specialty Valve Vault Rehabilitation Program	7,594	0	1,283	4,716	1,691	1,462	745	339	405	74	1,595	7-13
A-110.00	Other Capital Programs	485,562	0	63,942	421,620	57,702	58,848	67,898	72,271	78,643	86,258	0	7-14
S-300.01	D'Arcy Park North Relief Sewer	850	0	275	575	290	285	0	0	0	0	0	7-15
TOTALS		2,023,275	2,003	243,992	1,775,685	252,010	280,229	296,174	306,758	313,209	327,305	1,595	

Water Reconstruction Program

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	Bi-County
Agency Number	Project Number	Update Code	Date Revised		Drainage Basins	
W - 000001.00		Change			Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	127,735		11,671	116,064	13,296	15,535	18,688	20,908	23,351	24,286	
Land											
Construction	655,161		61,664	593,497	74,489	82,920	98,564	108,126	112,448	116,950	
Other	99,503		10,148	89,355	11,551	12,731	14,723	16,024	16,825	17,501	
Total	882,399		83,483	798,916	99,336	111,186	131,975	145,058	152,624	158,737	

C. Funding Schedule (000's)

WSSC Bonds	882,399		83,483	798,916	99,336	111,186	131,975	145,058	152,624	158,737	
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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 fire fighting. 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'23 are as follows: design and construction of main replacement and associated water house connection renewals, 37 miles - \$79.9M; cathodic protection - \$1.8M; design and construction of large water service replacements - \$11.6M; emergency contracts at depots - \$5.4M; 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'22 Enterprise Asset Management Plan, the number of miles of water main replacement will begin to ramp back up 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'23 Enterprise Asset Management Plan (May 2021).

COST CHANGE

Program costs reflect the latest expenditure and schedule estimates based on the recommendations from the FY'23 Enterprise Asset Management Plan (May 2021).

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'20 summarize the magnitude of the reconstruction effort: 1,952 miles rehabilitated or replaced; 317 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	\$51,029	
Total Cost	\$51,029	
Impact on Water and Sewer Rate	\$0.11	

F. Approval and Expenditure Data (000's)

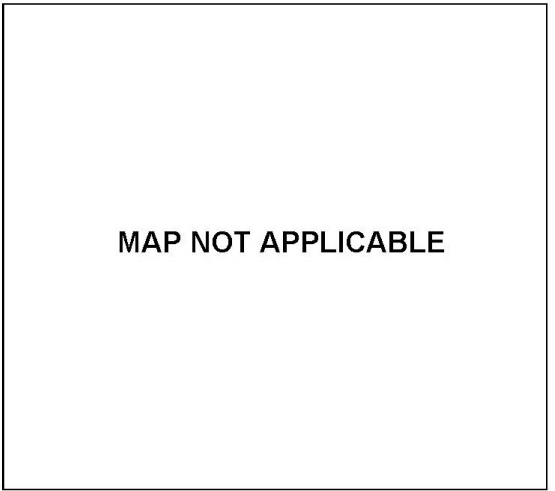
Date First in Program	
Date First Approved	
Initial Cost Estimate	
Cost Estimate Last FY	798,631
Present Cost Estimate	882,399
Approved Request Last FY	83,563
Total Expense & Encumbrances	
Approval Request Year 1	99,336

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



Sewer Reconstruction Program

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised		Drainage Basins	Bi-County 30
S - 000001.01		Change			Planning Areas	Bi-County

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	40,796		8,610	32,186	7,747	8,058	3,857	4,012	4,173	4,339	
Land											
Construction	292,771		45,744	247,027	38,199	40,365	39,671	41,259	42,907	44,626	
Other	33,353		5,435	27,918	4,594	4,842	4,354	4,525	4,707	4,896	
Total	366,920		59,789	307,131	50,540	53,265	47,882	49,796	51,787	53,861	

C. Funding Schedule (000's)

WSSC Bonds	226,920		39,789	187,131	30,540	33,265	27,882	29,796	31,787	33,861	
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'23 are as follows: 20 miles of mainline design & construction - \$29.3M; 6 miles of lateral line construction and associated sewer house connection renewals - \$7.7M; emergency repairs - \$2.4M; Piscataway rehabilitation - \$11.2M. 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'23 Enterprise Asset Management Plan (May 2021).

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, the rehabilitation work in the Piscataway Basin, 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. 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.

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$13,123	
Total Cost	\$13,123	
Impact on Water and Sewer Rate	\$0.03	

F. Approval and Expenditure Data (000's)

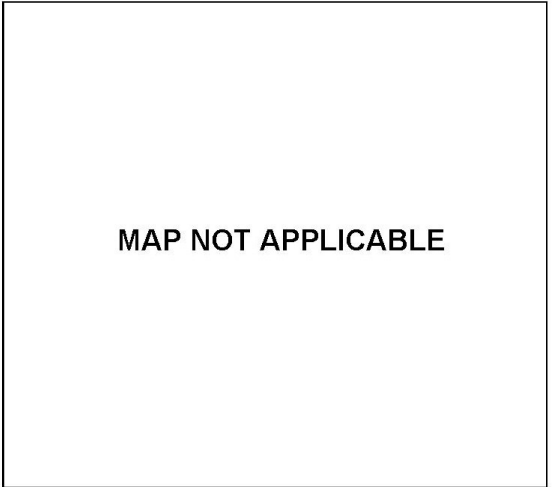
Date First in Program	
Date First Approved	
Initial Cost Estimate	
Cost Estimate Last FY	482,660
Present Cost Estimate	366,920
Approved Request Last FY	71,083
Total Expense & Encumbrances	
Approval Request Year 1	50,540

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



COORDINATION

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

Anacostia Depot Reconfiguration

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised		Drainage Basins	
A - 000100.01		Add			Planning Areas	Landover & Vicinity PA 72

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	5,410	10	2,316	3,084	1,194	738	760	392			
Land											
Construction	33,532			33,532		12,438	12,810	8,284			
Other	3,896		232	3,664	120	1,318	1,358	868			
Total	42,838	10	2,548	40,280	1,314	14,494	14,928	9,544			

C. Funding Schedule (000's)

WSSC Bonds	42,838	10	2,548	40,280	1,314	14,494	14,928	9,544			
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D. Description & Justification

<p>DESCRIPTION</p> <p>This project provides for the planning, design, and construction of a reconfiguration of the Anacostia Depot to improve the efficiency of operations; to update to current building codes, regulations, and Americans with Disabilities Act (ADA) requirements; to improve the energy efficiency of the facilities; to address floodplain vulnerabilities due to climate change; and to replace assets that are at or beyond their useful lives.</p> <p>BENEFIT</p> <p>Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life.; Workplace Optimization: This project supports WSSC Water's commitment to provide a productive work environment for its employees and secure its critical infrastructure.; Employee Safety: This project includes components that help protect the health and safety of employees.</p> <p>JUSTIFICATION</p> <p>The Anacostia Depot is the largest of WSSC Water's four depots that support water and sewer field operations. The existing buildings were generally constructed in the 1970s. The depot houses several critical functions for WSSC Water, including the workshop and administrative space for the Facility Maintenance Division, the water meter testing and hydrant shop, the heavy equipment shop, the Fleet Services Division building and one of the fleet garages, and the main warehouse. The depot is constrained by CSX railroad tracks that traverse the site, leading to operational inefficiencies when vehicles and staff must wait for trains to pass. The site also has floodplain vulnerabilities due to the effects of climate change.</p> <p>A facility-wide condition assessment was undertaken in June 2019 to identify deficiencies in the existing facilities and provide a recommended course of action to remedy the issues. The study identified a significant number of deficiencies, including electrical, mechanical, accessibility, and safety deficiencies. The study examined potential remedies, including renovation and new build scenarios. A facility master plan was subsequently commissioned to provide a more detailed analysis of the potential renovation and new build alternatives, which will be finalized in June 2021. Anacostia Depot Facility Condition Assessment, Louis Berger (July 2020); Anacostia Depot Master Plan, Samaha Associates (June 2021).</p> <p>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</p> <p>The present project scope was developed for the FY'23 CIP and has an estimated total cost of \$42,838,000. The schedule and expenditure projections shown in Block B above are preliminary planning level estimates and are expected to change based upon site conditions and design constraints. Preliminary planning work began under ESP project A-859.11, Anacostia Depot Reconfiguration.</p> <p>COORDINATION</p> <p>Coordinating Agencies: Montgomery County Government; Prince George's County Government Coordinating Projects: Not Applicable</p>
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E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$2,477	27
Total Cost	\$2,477	27
Impact on Water and Sewer Rate	\$0.01	27

F. Approval and Expenditure Data (000's)	
Date First in Program	FY'23
Date First Approved	FY'23
Initial Cost Estimate	42,838
Cost Estimate Last FY	
Present Cost Estimate	42,838
Approved Request Last FY	
Total Expense & Encumbrances	10
Approval Request Year 1	1,314

G. Status Information	
Land Status	Public/Agency owned land
Project Phase	Planning
Percent Complete	5 %
Estimated Completion Date	December 2025
Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

<p>H. Map</p> <p>MAP NOT APPLICABLE</p>

RGH Building Upgrades

A. Identification and Coding Information			PDF Date	October 1, 2021	Pressure Zones	
Agency Number	Project Number	Update Code	Date Revised		Drainage Basins	
A - 000101.06		Add			Planning Areas	Northwestern Area PA 60

B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'21	Estimate FY'22	Total 6 Years	Year 1 FY'23	Year 2 FY'24	Year 3 FY'25	Year 4 FY'26	Year 5 FY'27	Year 6 FY'28	Beyond 6 Years
Planning, Design & Supervision	2,500		500	2,000	1,000	700	300				
Land											
Construction	10,000			10,000		7,000	3,000				
Other	1,250		50	1,200	100	770	330				
Total	13,750		550	13,200	1,100	8,470	3,630				

C. Funding Schedule (000's)

WSSC Bonds	13,750		550	13,200	1,100	8,470	3,630				
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D. Description & Justification

<p>DESCRIPTION</p> <p>This program provides for the planning, design, and construction of projects to replace and upgrade assets at the Richard G. Hocevar (RGH) Building that have reached the end of their useful life. The program will maintain or enhance existing operating conditions and reliability of the building systems. The work includes the following: replacement of the primary 13.2 kV switchgear and associated equipment that supply power to the building; and replacement of the emergency generators and fuel tanks.</p> <p>BENEFIT</p> <p>Employee Safety: This project includes components that help protect the health and safety of employees.; Infrastructure Reinvestment: This project replaces existing infrastructure that has exceeded its useful life.</p> <p>JUSTIFICATION</p> <p>Most of the electrical equipment at the RGH Building was installed during the initial building construction in 1990 and has reached the end of its useful life. Parts are not readily available in most cases and are increasingly more difficult to find. There is an increasing risk of critical system failure and prolonged outage recovery. The emergency generators are needed for building life safety systems, the Systems Control Center, and backup power to the Data Center systems in the event primary power is lost.</p> <p>This work was recommended as part of WSSC Water's Asset Management Program (CNPV #149 and CNPV #178).</p> <p>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</p> <p>The present project scope was developed for the FY'23 CIP and has an estimated total cost of \$13,750,000. The schedule and expenditure projections shown in Block B above are preliminary planning level estimates and are expected to change based upon site conditions and design constraints. Preliminary planning work began under ESP project A-890.63, RGH Switchgear and Generator Replacement.</p> <p>COORDINATION</p> <p>Coordinating Agencies: Montgomery County Government; Prince George's County Government</p> <p>Coordinating Projects: Not Applicable</p>
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E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$795	26
Total Cost	\$795	26
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	13,750
Cost Estimate Last FY	
Present Cost Estimate	13,750
Approved Request Last FY	
Total Expense & Encumbrances	
Approval Request Year 1	1,100

G. Status Information	
Land Status	Public/Agency owned land
Project Phase	Planning
Percent Complete	50 %
Estimated Completion Date	February 2025
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 21	EST. EXPEND 22	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 23	YR 2 24	YR 3 25	YR 4 26	YR 5 27	YR 6 28		
W-12.02	Prince George's County HG415 Zone Water Main	4,172	622	1,183	2,367	2,358	9	0	0	0	0	0	5-2
W-34.02	Old Branch Avenue Water Main	22,990	3,102	5,830	14,058	5,830	5,830	2,398	0	0	0	0	5-3
W-34.04	Branch Avenue Water Transmission Improvements	44,748	21,901	1,280	21,567	14,645	6,006	586	330	0	0	0	5-4
W-34.05	Marlboro Zone Reinforcement Main	4,414	540	627	3,247	2,022	1,225	0	0	0	0	0	5-5
W-62.06	Rosaryville Water Storage Facility	9,108	0	0	0	0	0	0	0	0	0	9,108	5-6
W-84.03	Smith Home Farms Water Main	3,806	1,950	630	1,226	449	408	369	0	0	0	0	5-7
W-84.04	Westphalia Town Center Water Main	1,834	673	48	1,113	373	438	302	0	0	0	0	5-8
W-84.05	Prince George's County 450A Zone Water Main	50,036	2,724	4,488	42,824	14,410	13,838	9,224	4,648	638	66	0	5-9
W-93.01	Konterra Town Center East Water Main	2,497	230	0	2,267	788	899	580	0	0	0	0	5-10
W-105.01	Marlton Section 18 Water Main, Lake Marlton Avenue	2,925	19	2	2,904	460	491	490	485	489	489	0	5-11
W-137.03	South Potomac Supply Improvement, Phase 2	71,143	2,723	764	67,656	22,552	22,552	22,552	0	0	0	0	5-12
	Projects Pending Close-Out	2,466	557	1,909	0	0	0	0	0	0	0	0	5-13
	TOTALS	220,139	35,041	16,761	159,229	63,887	51,696	36,501	5,463	1,127	555	9,108	

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

PRINCE GEORGE'S COUNTY SEWER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 21	EST. EXPEND 22	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 23	YR 2 24	YR 3 25	YR 4 26	YR 5 27	YR 6 28		
S-27.08	Westphalia Town Center Sewer Main	1,632	874	521	237	161	62	14	0	0	0	0	6-3
S-28.18	Konterra Town Center East Sewer	6,872	4,674	0	2,198	0	2,198	0	0	0	0	0	6-4
S-28.20	Pumpkin Hill WWPS & FM	4,542	184	575	3,783	1,221	1,748	814	0	0	0	0	6-5
S-68.01	Landover Mall Redevelopment	1,397	0	109	1,286	668	426	48	48	48	48	2	6-6
S-68.02	Carsondale WWPS & FM	5,645	240	115	5,290	345	3,680	1,265	0	0	0	0	6-7
S-75.21	Mattawoman WWTP Upgrades	20,758	0	3,983	14,877	3,553	2,998	3,171	2,921	1,663	571	1,898	6-8
S-75.23	Brandywine Woods WWPS & FM	3,515	35	288	3,192	1,237	1,149	662	144	0	0	0	6-9
S-77.21	Parkway WRRF Facility & Electrical Upgrades	20,859	0	1,008	19,851	5,152	6,401	4,751	2,551	721	275	0	6-10
S-86.19	Southlake Subdivision Sewer	843	758	75	10	10	0	0	0	0	0	0	6-11
S-87.19	Horsepen WWPS & FM	36,461	1,675	2,095	32,691	5,923	13,204	7,951	5,613	0	0	0	6-12
S-87.20	Freeway Airport WWPS & FM	3,533	53	288	3,192	1,237	1,150	661	144	0	0	0	6-13
S-89.26	Colmar Manor WWPS & FM	6,567	10	288	6,269	173	115	230	575	2,588	2,588	0	6-14
S-96.14	Piscataway WRRF Facility Upgrades	172,441	96,631	29,610	46,200	22,995	17,115	6,090	0	0	0	0	6-15
S-113.13	Forest Heights WWPS & FM	8,958	273	173	8,512	173	58	230	575	3,738	3,738	0	6-16
S-118.10	Viva White Oak Sewer Augmentation	1,126	0	0	1,126	450	282	169	113	56	56	0	6-17
S-131.05	Pleasant Valley Sewer Main, Part 2	1,000	49	228	723	451	185	87	0	0	0	0	6-18
S-131.07	Pleasant Valley Sewer Main, Part 1	1,957	73	530	1,354	1,104	250	0	0	0	0	0	6-19
S-131.11	Calm Retreat Sewer Main	1,020	70	17	933	852	81	0	0	0	0	0	6-20
S-131.12	Swan Creek WWPS & FM	14,136	9,043	363	4,730	1,540	3,080	110	0	0	0	0	6-21
S-157.02	Western Branch WRRF Process Train Improvements	72,722	2,224	5,932	63,972	10,446	19,077	18,732	10,142	4,627	948	594	6-22
	Projects Pending Close-Out	19,353	18,012	1,341	0	0	0	0	0	0	0	0	6-23
TOTALS		405,337	134,878	47,539	220,426	57,691	73,259	44,985	22,826	13,441	8,224	2,494 (83)	