



THE PRINCE GEORGE'S COUNTY GOVERNMENT

(301) 952-3700

MEMORANDUM

County Council

APR 11 2018

TO: Todd M. Turner, Chair
Transportation, Housing and the Environment (THE) Committee

THRU: Robert J. Williams *RJW.*
Council Administrator

FROM: Canjor D. Reed, Senior Auditor *CDR*
Office of Audits and Investigations

RE: **WSSC Fiscal Year (FY) 2019 - 2024 Proposed Capital Improvements Program Staff Report**

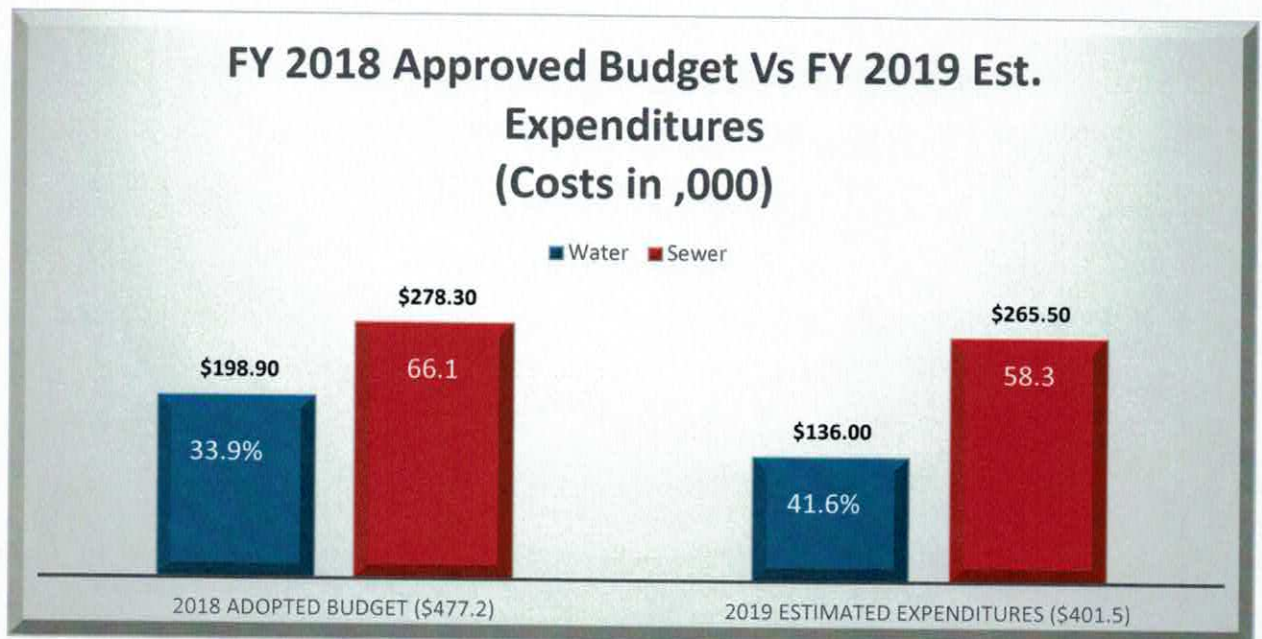
The Washington Suburban Sanitary Commission (WSSC) provides water and wastewater services to over 1.8 million residents over an area of approximately 1,000 square miles and maintains more than 10,000 miles of water and sewer mains. WSSC's Capital Improvements Program (CIP), the subject of this report, provides funding for the ongoing operation of 4 reservoirs, 2 water filtration plants, and 6 wastewater treatment plants.

The summary and information included in this report reflects the Mid-Cycle Update to the Proposed FY 2019 – FY 2024 CIP transmitted by WSSC on February 21, 2018. Staff recommendations are included in Section V of this report.

The FY 2019 – 2024 Capital Improvement Plan includes 70 projects, totaling \$3.6 billion dollars in total project costs expended thru FY 2017, including estimates for FY 2018. The only new WSSC project planned for FY 2019 is located in Prince George's County, Maryland. The proposed \$3.6 billion total CIP budget is \$221 million greater than the Adopted FY 2018 – 2023 CIP. This increase is primarily due to updating the Potomac Water Filtration Plant (WFP) Consent Decree project to reflect the findings from the audit and long-term upgrade report. Also, the updated cost estimate for the Piscataway Bio-Energy project shall be partially offset by a decrease in the Trunk Sewer Reconstruction Program.

A summary listing of WSSC projects is included in Attachment A, Total WSSC CIP (dated 2/21/18).

The six-year program total is approximately \$2.0 billion in expenditures.



The FY 2019 CIP budget includes \$136.0 million in water projects, and \$265.5 million in sewer projects.

A detailed summary of the Proposed CIP for Fiscal Years 2019 - 2024 with emphasis on year one of the six year program (FY 2019) is discussed below.

I. SUMMARY

A. Expenditures

WSSC's proposed FY 2019 CIP totals \$401.5 million, which represents \$75.7 million less as compared to the approved CIP funding level for FY 2018. This decrease is primarily due to the projected decrease in the Trunk Sewer Reconstruction Program **(-\$64M)** as the work moves past the peak of construction, and the construction progress projected for the Blue Plains Enhanced Nutrient Removal project (BP ENR) **(-\$23M)**, and the Patuxent Expansion **(-\$8M)** begins winding down by FY 2019.

The Blue Plains project accounts for \$360 million of the FY 2019 – 2024 Proposed CIP, which is an increase of \$43 million above the Adopted FY 2018 – FY 2023 CIP. The

Blue Plains project accounts for 18% of WSSC's six-year CIP program and 32% of WSSC's sewer projects.

There are eleven (11) projects closing out in FY 2019, including one Information Only project. The total cost of projects closed out is \$180.4 million.

The anticipated in-service dates are as follows:

<i>Project Name</i>	<i>In-Service Dates</i>
Waste Water Facilities	
Broad Creek WWPS Augmentation	FY 2020
Clarksburg WWPS	FY 2021
Septage Discharge Facility Planning	FY 2021
Piscataway WWTP Bio Energy Project	July, 2022
Piscataway WWTP Facility Upgrades	FY 2023
Brandywine Woods WWPS	Developer Dependent
Cabin Branch WWPS	Developer Dependent
Water Facilities	
Collington Elevated Water Storage	March, 2018
Patuxent WFP Phase II Expansion	August, 2018
St. Barnabas Elevated Tank Replacement	August, 2018
Shady Grove Standpipe Replacement	January, 2019
Duckett & Brighton Dam Upgrades	April, 2019
Olney Standpipe Replacement	July, 2019
Rocky Gorge Pump Station Upgrade	August, 2019
Clarksburg Elevated Water Storage	FY 2019
Clinton Zone Water Storage Facility	FY 2020
Potomac WFP Submerged Channel Intake	FY 2024

Approximately one-third of the total projects in the FY 2019 CIP budget are designated Development Services Process (DSP) growth projects. This CIP budget includes seven (7) Prince George's County water projects, eight (8) Prince George's County sewer projects and eight (8) Montgomery County water/sewer projects.

B. Sources of Funds

WSSC bonds are the principal capital project funding source. In keeping with policy objectives, the Commission uses several other funding sources especially for growth projects. Those additional sources of funds include:

- Federal and State Grants
- Local Government Contributions
- PAYGO (when budgeted)
- System Development Charges (SDC)
- Contributions/Other

A chart of "funding by source" is included in this report as Attachment B, WSSC Proposed FY 2019-2024 CIP.

C. Funding Growth & the Growth Funding Gap

The portion of CIP needed to accommodate growth is approximately \$153 million (approximately 8% of the expenditures under the six-year program). The major funding sources for this part of the program are System Development Charge (SDC) revenues and payments by Applicants. In FY 2018, the Councils of Prince George's and Montgomery increased the maximum allowable charge by 1.2%, but maintained the current rate of \$203 per fixture unit. In FY 2019, WSSC is recommending the maximum allowable charge be increased by 1.6%, but still maintain the current rate of \$203 per fixture unit.

If growth related expenditures were to exceed the available SDC account balance in any given fiscal year, it is anticipated that WSSC would issue new SDC supported debt to cover this temporary gap rather than increasing the SDC. The FY 2019 CIP budget projects a growth funding gap of \$25.6 million. This projected gap is the difference between the eligible expenditures adjusted for completion and the sum of the various funding sources.

An increase in the SDC rate, at this time, does not appear to be justified to cover a short-term funding gap. WSSC is proposing to issue debt to cover any shortfall that may occur in the next few years and then repay the debt service through future SDC collections, as allowed by State Law. Further, each County may grant \$500,000 of narrowly defined exemptions per year. Unused portions accumulate and are available for future fiscal years. Through June 30, 2017, Prince George's County's unused cumulative SDC exemptions total was \$2.9 million as compared to Montgomery County's balance of \$6.2 million.

A financial listing of "SDC eligible projects" is included in this report as Attachment C, WSSC Proposed FY 2019-2024 CIP SDC Eligible Projects Summary.

II. NEW PROJECTS

The FY 2019 CIP budget includes one (1) new sewer project located in Prince George's County, **Parkway North Substation Replacement**. The total estimated cost is \$5 million of which \$2.65 million is planned to be expensed in FY 2019.

A financial listing of this new project is attached to this report in Attachment D, Prince George's County Sewer Projects – New Project Listing.

III. BI-COUNTY PROJECTS

A. Water

- **Potomac Water Filtration Plant (WFP) Projects.** These 6 projects are all operational improvements to the Potomac WFP and are funded with WSSC bonds. The revised proposed total cost is projected to be \$335 million cumulatively, which is an increase of \$120 million (55.8%) over the Adopted FY 2018 budget. The increase in cost is due to several factors:
 - Performance issues related to additional concrete and equipment repair work in the basins.
 - Replacement of all thirty-two (32) filter under drains.
 - The Potomac WFP Consent Decree was increased significantly based on estimates from the December 2016 Audit and Long Term Upgrade Report.

Additionally, the following projects are system improvements and 100% funded with WSSC bonds:

- **Duckett & Brighton Dam Upgrades.** This project was included per request of the Maryland Department of the Environment (MDE) to meet current dam safety standards, including the maximum probable flood criteria and maximum credible earthquake loading. The FY 2019 total cost decreased by approximately \$4.7 million based on the actual bids for the recently awarded Brighton Dam Upgrade construction project under the FY 2018 Approved CIP Budget.
- **Large Diameter Water Pipe Rehabilitation Program.** This project will rehabilitate or replace large diameter water transmission mains and valves. Overall program costs were increased for inflation and to reflect higher construction unit costs for pipe replacement due to

the current requirements to fill or remove abandoned pipes. The FY 2019 total costs increased by approximately \$19.7 million over the FY 2018 Approved CIP Budget.

- **Patuxent Water Filtration Plant – Phase II Expansion.** This project provides for the addition of a 6th treatment train, and new electrical substation, residuals handling facility, ultra-violet (UV) disinfection facilities, as well as upgrades to existing yard piping, chemical facilities and feed systems; and a new relief sewer to accommodate the residual facility. The FY 2019 total costs decreased by approximately \$315 thousand under the FY 2018 Approved CIP Budget.
- **Patuxent Water Filtration Plant Projects – Raw Water Pipeline.** This project provides for the construction of approximately 2.5 miles of 48-inch diameter raw water pipeline from the Rocky Gorge pumping station to the Patuxent Water Filtration Plant; cleaning of the existing water lines; and, the replacement of valves. These improvements will give the plant a firm capacity of 72 million gallons per day (MGD), with an emergency capacity of 110 MGD. The FY 2019 total costs increased by approximately \$731 thousand over the FY 2018 Approved CIP Budget. Currently, the Rocky Gorge valve replacement and the cleaning of the existing raw water pipelines are 100% complete. The new raw water pipeline is in design. The expenditure and scheduled estimates increased due to design and permitting constraints.
- **Rocky Gorge Pump Station.** This project provides the needed modifications and expansion to allow the pumping station to deliver up to 110 MGD of raw water to the Patuxent WFP. The FY 2019 total costs increased by approximately \$385 thousand over the FY 2018 Approved CIP Budget.
- **Land & Rights of Way Acquisition.** This project is a consolidated estimate of land and right of way purchases for previously approved capital projects. The FY 2019 total costs decreased by approximately \$834 thousand under the FY 2018 Approved CIP Budget.

*A list of **Bi-County water projects** is attached to this report in Attachment E, Financial Summary, Bi-County Water Projects.*

B. Sewer

- **Piscataway Waste Water Treatment Plant (WWTP) Bio-Energy Project.** A comprehensive long-term bio-solids management project to construct new centralized anaerobic digestion, biomass and combined heat & power generation system facilities to treat all bio-solids from Piscataway, Western Branch, Parkway, Seneca, and Damascus wastewater treatment plants. This system is funded by both WSSC Bonds at \$244.6 million and State & Federal Aid at \$4.1 million. The FY 2019 total costs increased by approximately \$87 million over the FY 2018 Approved CIP Budget, primarily to reflect early design level estimates and the inclusion of the FOG (fats, oils and grease) facility and utility water upgrades from the Piscataway WWTP and bio-solids transported from the Western Branch WWTP. The economic benefits highlights are as follows:
 - Recovery of more than \$1.5 million of renewable energy costs per year
 - Reduce bio solids disposals by approximately \$1.7 million per year
 - Reduce chemical costs by approximately \$500,000 per year
 - Hedge against rising costs of power fuel and chemicals
 - Provide a net payback between 20 - 30 years.
- **Blue Plains Wastewater Treatment Plant Projects.** This group of 5 projects represents one of the largest group of expenditures in the proposed CIP at 16% of the FY 2019 Program expenditures or 18% of the Six-Year Program. This provides for WSSC's share of funding for the upgrade, expansion and enhancement of wastewater treatment and solids handling at the Regional Blue Plains WWTP located in Washington, DC. These projects are funded by WSSC Bonds at approximately \$ 58.0 million, City of Rockville at \$ 3.0 million and State Aid at \$4.0 million. The FY 2019 total costs increased by approximately \$107.8 million (13.7%) over the FY 2018 Approved CIP Budget.
 - Note: District of Columbia Water and Sewer Authority (DCWASA) staff proposed rate in future years may challenge the WSSC's ability to stay within County established spending affordability limits.
- **Septage Discharge Facility.** This project is 100% WSSC bond funded and provides for the planning, design and construction of a new septage and FOG discharge facility at the abandoned Rock Creek WWTP as well as a new septage discharge facility and

Anacostia and Piscataway WWTP. The estimated cost of construction of the three (3) facilities has increased significantly based upon the final submitted design. The FY 2019 total costs increased by approximately \$16 million over the FY 2018 Approved CIP Budget.

- **Trunk Sewer Reconstruction Program.** This project is 100% WSSC bond funded and will rehabilitate large diameter sewer mains including the associated manholes in environmentally sensitive areas. All trunk sewer inspections, sewer system evaluation survey work and other related collection system evaluations are complete. Due to the delay in permits, right-of-way permissions, and the availability of subcontractors. The trunk sewer reconstruction work has been delayed. The Consent Decree deadline for this project has been extended to FY 2022. The FY 2019 total costs decreased by approximately \$ 64.4 million under the FY 2018 Approved CIP Budget.
- **Land & Rights of Way Acquisition.** This project provides for a consolidated estimate of funding for the acquisition of land and rights-of-ways for sewer projects. This project is funded by WSSC Bonds at approximately \$80 thousand and Contribution/Other at \$15 thousand.

A financial list of Bi-County water projects is attached to this report in Attachment F, Financial Summary, Bi-County Sewer Projects.

IV. PRINCE GEORGE'S COUNTY PROJECTS

A. Water

There are 21 Prince George's County water projects at a cost of \$49.4 million in FY 2019.

- **Prince George's County HG415 Zone Water Main.** This project is 100% WSSC bond funded and provides for 1,500 feet of 24-inch diameter water main construction and new isolation valves, pressure relief valves with flow control in order to enhance system reliability by improving the flexibility of the delivery system. The FY 2019 total costs increased by approximately \$200 thousand over the FY 2018 Approved CIP Budget due to more complex design requirements.
- **Old Branch Avenue Water Main.** This project is 50% WSSC bond funded and 50% SDC funded. It provides for the planning, design

and construction of approximately 16,000 feet of 30-inch diameter water main and a new flow control valve. This project will provide the needed redundancy to a large area of Prince George's County. The FY 2019 total costs increased by approximately \$700 thousand over the FY 2018 Approved CIP Budget due to the engineer's final design. Five properties have been acquired.

- **Water Transmission Improvements 385 Pressure Zone.** This project provides for 24,000 feet of 24-inch diameter new water transmission main that will improve system reliability through the 385 and 345 pressure zones. The existing transmission mains have been stressed by recent development in southern Prince George's County. The FY 2019 total costs decreased by approximately \$ 7.0 million under the FY 2018 Approved CIP Budget based upon the final design estimates.
- **Branch Avenue Water Transmission Improvements.** This project provides for the planning, design and construction of approximately 21,800 feet of 42-inch, and 5,400 feet of 30-inch diameter water transmission main and flow control valve along Branch Avenue in the Clinton area. The new water main will serve as a primary feed for the new Brandywine tank. The FY 2019 total costs increase by approximately \$ 6.3 million over the FY 2018 Approved CIP Budget due to the re-design of the Phase IV alignment.
- **Marlboro Zone Reinforcement Main.** This project provides for the planning, design and construction of approximately 4,000 feet of 16-inch diameter transmission main and flow control valve along Old Marlboro Pike in the Clinton area. This new water main will provide system reliability and redundancy by connecting the 365 B and 280A pressure zones. The FY 2019 total costs are approximately the same as the FY 2018 Approved CIP Budget.
- **Clinton Zone Water Storage Facility Implementation.** This project provides for the design and construction of approximately 4.0 million gallons (MG) of water storage to serve the Clinton Pressure Zone. WSSC plans to construct a 2.0 MG water tank in the Brandywine area by FY 2020. A future tank will be constructed in Rosaryville area by FY 2026 to meet the demands. The FY 2019 total costs are approximately the same as the FY 2018 Approved CIP Budget. This system is funded through 100% SDC.
- **St. Barnabas Elevated Tank Replacement.** This project is 50% WSSC bond funded and 50% SDC funded. This project provides for the design and construction of approximately 2.5 million gallons

(MG) of water storage to serve Prince George's High Pressure Zone HG450A and also includes the demolition of the existing St. Barnabas elevated water storage tank. The FY 2019 total costs decrease by approximately \$600 thousand under the FY 2018 Approved CIP Budget.

- **Ritchie Marlboro Road Transmission Main & PRV.** This project provides for the planning, design and construction of approximately 13,100 feet of 24 inch diameter water transmission main and pressure reducing valve to serve the Westphalia area. The FY 2019 total costs decrease by approximately \$5.9 million under the FY 2018 Approved CIP Budget based upon actual bids. This system is funded through 100% SDC.
- **Prince George's County 450A Zone Water Main.** This project provides for the planning, design and construction of approximately 3.8 miles of new 48-inch redundant water transmission main for the 450A zone in Prince Georges County. The FY 2019 total costs increase by approximately \$44 million over the FY 2018 Approved CIP Budget based upon the final selected alignment and preliminary design estimates. This system is funded through 100% WSSC bond funded.
- **Hillmeade Road Water Main.** This project provides for the planning, design and construction of 7,300 feet of 24-inch water main in Hillmeade at Daisy Lane. The FY 2019 total costs are relatively the same as the FY 2018 Approved CIP Budget. This system is funded through 100% SDC.
- **John Hanson Highway Water Main, Part 1.** This project provides for the planning, design and construction of 9,300 feet of 36-inch water main construction project that supports 100% growth. The project provides service and redundancy to the growing area of Bowie and to the low pressure area north of Route 50. The FY 2019 total costs decreased by approximately \$530 thousand under the FY 2018 Approved CIP Budget. This system is funded through 100% SDC.
- **Oak Grove/Leeland Roads Water Main, part 2.** This project provides for the planning, design and construction of 16,805 feet of 24-inch and 1,240 feet of 16-inch water main in the Upper Marlboro. Area. The FY 2019 total costs increase by approximately \$224 thousand over the FY 2018 Approved CIP Budget based upon the actual bid. This project is 50% WSSC bond funded and 50% SDC funded.

- **South Potomac Supply Improvement Phase 2.** Phase 2 of this project provides for the design and construction of 4.4 miles of 42-inch ductile iron pipe and a new flow control valve vault to replace 3.5 miles of 42-inch PCCP water transmission main. Phase 1 has been completed. The FY 2019 total costs increase by approximately \$1.3 million over the FY 2018 Approved CIP Budget due to the addition of a new 10-inch diameter water main at Tucker Road and an additional valve as well as an additional 500 feet of 42-inch PCCP pipe replacement. This project is 66% WSSC bond funded and 34% SDC funded.
- **Collington Elevated Water Storage Facility.** This project provides site selection, design and construction of up to 4 million gallons of elevated storage to serve the intermediate zone. It also includes modifications at the existing Central Avenue Water Pumping Station to add an additional pump and upgrade the existing pump in order to utilize the new Collington tanks and provide redundancy in the affected zones. The FY 2019 total costs decreased by approximately \$1.1 million under the FY 2018 Approved CIP Budget. This project is 50% WSSC bond funded and 50% SDC funded.
- **Development Services Process (DSP) Projects.** Included in the Prince George's County water section are seven (7) projects which serve new development areas. These projects, listed below and in attachment F are funded and constructed by the Developers.

Project Name	Phase	% Complete
Villages of Timothy -Part I	Planning	100%
Villages of Timothy - Part II	Planning	100%
Marlton Section 18 – Water main	Design	20%
Old Marlboro Pike Water Main	Construction	80%
Smith Home Farms Water Main	Construction	75%
Westphalia Town Center Water Main	Construction	40%
Konterra Town Center East Water Main	Construction	30%

A financial list of Prince George's County water projects is attached to this report in Attachment G, Financial Summary – PGC Water Projects.

B. Sewer

There are 14 Prince George's County sewer projects at a total cost of \$426.8 million.

- **Broad Creek Waste Water Pumping Station (WWPS) Augmentation.** This project supports 83% growth to eliminate overflows at the Broad Creek Wastewater Pumping Station, modifications will be made to the pumping station and the force main. Pumping station modifications construction phase started in January 2017 with expected completion in summer 2020. The FY 2019 total costs increase by approximately \$6.5 million over the FY 2018 Approved CIP Budget due to inflation and to address issues with yard piping and vault construction due to potentially high ground water at the site. This project is 17% WSSC bond funded and 83% SDC funded.
- **Western Branch Facility Upgrade** which provides for improvements required to rehabilitate aging systems and to meet the terms of its NPDES discharge permit; The FY 2019 total costs increase by approximately \$2.5 million over the FY 2018 Approved CIP Budget based on the updated construction supervision cost estimate due to construction schedule delays. This system upgrade is 100% WSSC bond funded.
- **Mattawoman WWTP Upgrades.** The costs represent WSSC's share of capital projects to upgrade and repair Charles County's Mattawoman Inceptor Wastewater Treatment Plant. The FY 2019 total costs increase by approximately \$3.3 million over the FY 2018 Approved CIP Budget to include a new project to add primary clarifiers, demolition costs, evaluation of the pump station, and repairs to the clarifier and thickener systems. This system upgrade is 100% WSSC bond funded.
- **Piscataway WWTP Facility Upgrades.** This project is a 100% system improvement and provides improvements required to prevent plant overflows or permit violations which can occur during significant rainfalls. The FY 2019 total costs increase by approximately \$25 million over the FY 2018 Approved CIP Budget due to the required electrical upgrades, the raw wastewater pumping station and secondary clarifiers. Note: the costs associated with the plant utility water upgrade has been moved from this project to the Piscataway WWTP Bio-Energy Project.
- **Fort Washington Forest No.1 WWPS Augmentation.** This project provides for planning, design and construction of the rehabilitation

work required for the Fort Washington Forest No. 1 WWPS and replace a 900-foot segment of a failing 4-inch diameter force main with an 8-inch diameter main. In addition, 2,700 feet of downstream 8-inch diameter gravity sewer will be upsized to 12-inch diameter to accommodate the additional flow. The rehabilitation will more than double the pumping station's capacity. The existing Fort Washington Estates WWPS will be rehabilitated and will upsize the force main with a new 8-inch diameter gravity sewer. The FY 2019 total costs decreased by approximately \$112 thousand under the FY 2018 Approved CIP Budget. This system upgrade is 100% WSSC bond funded.

- **Development Services Process (DSP) Projects.** Also included in the Prince George's County sewer section are eight (8) projects which serve new development. These projects, listed in attachment H, are funded and constructed by the Developer.

Project Name	Phase	% Complete
Brandywine Woods Wastewater Pumping Station	Planning	100%
Brandywine Woods WWPS Force Mains	Planning	100%
Landover Mall Redevelopment	Planning	20%
Karrington Subdivision Sewer	Design	100%
Pleasant Valley Sewer Main, Part 1	Design	80%
Pleasant Valley Sewer Main, Part 2	Design	60%
Konterra Town Center East Sewer	Construction	40%
Westphalia Town Center Sewer Main	Construction	40%

A financial list of Prince George's County sewer projects is attached to this report in Attachment H, Financial Summary, PGC Sewer Projects.

V. RECOMMENDATIONS

- Concur with WSSC to maintain SDC fees at current levels but increase the maximum ceiling on this charge as is consistent with State Law.
- Concur with the addition of one new sewer project in Prince George's County.
- Concur with WSSC on all other FY 2019 – 2024 CIP projects as reflected in the Mid-Cycle Update transmitted on February 21, 2018.

VI. ATTACHMENTS

- A.** *Total WSSC CIP (dated 2/21/18)*
- B.** *WSSC Proposed FYS 2019-24 CIP*
- C.** *WSSC Proposed FY 2019-2024 CIP, SDC Eligible Projects Summary*
- D.** *Prince George's County Sewer Projects, New Project Listing.*
- E.** *Financial Summary, Bi-County Water Projects*
- F.** *Financial Summary, Bi-County Sewer Projects*
- G.** *Financial Summary, PGC Water Projects.*
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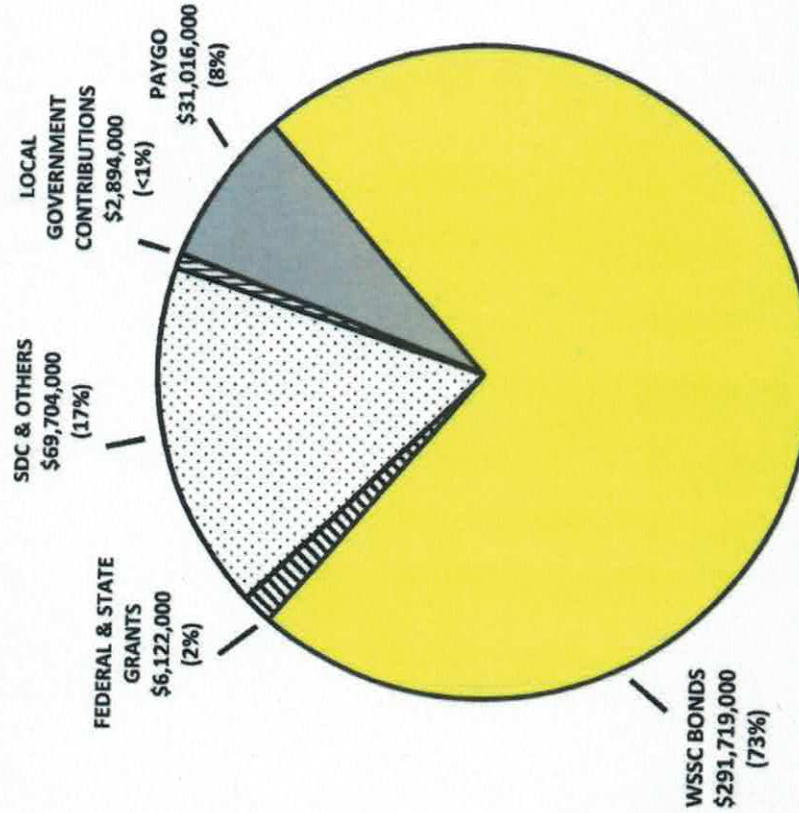
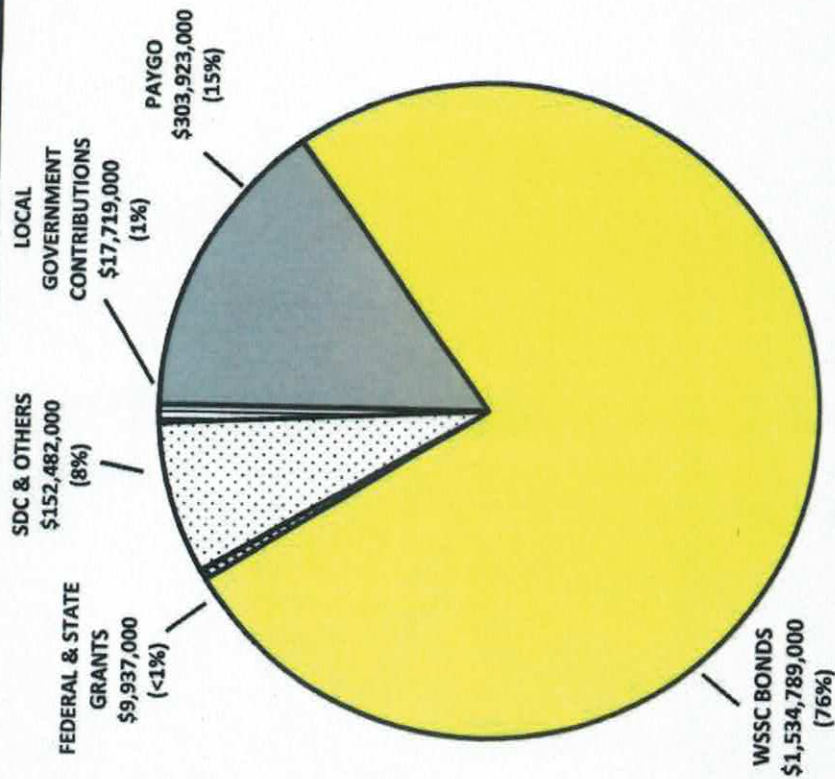
FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

TOTAL WSSC CIP	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 17	EST. EXPEND 18	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 19	YR 2 20	YR 3 21	YR 4 22	YR 5 23	YR 6 24		
	Montgomery County Water Projects	52,122	15,226	20,692	18,204	13,869	1,674	661	0	0	0	0	1-1
	Prince George's County Water Projects	368,958	74,898	54,690	214,539	49,408	45,971	41,452	27,196	26,914	23,698	22,729	5-1
	Bi-County Water Projects	1,067,152	275,599	98,030	684,123	72,690	90,219	134,141	138,661	122,061	106,351	29,400	3-1
	TOTAL WATER PROJECTS	1,488,230	365,723	173,412	894,966	135,967	137,864	176,254	165,857	148,975	130,049	52,129	
	Montgomery County Sewerage Projects	41,380	12,615	2,951	25,814	12,537	10,317	2,960	0	0	0	0	2-1
	Prince George's County Sewerage Projects	426,845	212,888	32,821	180,558	60,397	52,596	26,871	26,216	13,549	927	580	6-1
	Bi-County Sewerage Projects	1,615,832	352,145	227,111	917,514	192,554	214,120	209,121	131,962	94,329	75,428	119,062	4-1
	TOTAL SEWERAGE PROJECTS	2,084,057	577,648	262,883	1,123,884	265,488	277,033	238,952	158,178	107,878	76,355	119,642	
	TOTAL WSSC PROGRAM	3,570,287	943,371	436,295	2,018,850	401,455	414,897	415,206	324,035	256,853	206,404	171,771	
	Total Information Only Projects	1,574,989	29,853	223,482	1,320,281	226,136	232,051	229,128	208,061	210,798	214,107	1,363	7-1

WSSC PROPOSED FYS 2019-24 CIP

FUNDING BY SOURCE



WASHINGTON SUBURBAN SANITARY COMMISSION
PROPOSED FYS 2019 - 2024 CIP
SDC ELIGIBLE PROJECTS
SUMMARY
(In Thousands)

PROGRAM NAME	TOTAL COST	FY 2017	FY 2018	FY TOTAL 6 YEARS	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	BEYOND 6 YEARS
MONTGOMERY COUNTY WATER PROJECTS											
Total Project Costs *	\$13,359	\$4,120	\$5,662	\$3,577	\$2,604	\$554	\$419	\$0	\$0	\$0	\$0
SDC Eligible Costs	\$13,359	\$4,120	\$5,662	\$3,577	\$2,604	\$554	\$419	\$0	\$0	\$0	\$0
BI-COUNTY WATER PROJECTS											
Total Project Costs *	\$3,695	\$0	\$777	\$2,918	\$1,300	\$1,570	\$18	\$10	\$10	\$10	\$0
SDC Eligible Costs	\$614	\$0	\$405	\$209	\$209	\$0	\$0	\$0	\$0	\$0	\$0
PRINCE GEORGE'S COUNTY WATER PROJECTS											
Total Project Costs *	\$257,156	\$55,801	\$51,494	\$145,021	\$43,611	\$36,638	\$27,830	\$13,574	\$13,292	\$10,076	\$4,840
SDC Eligible Costs	\$188,282	\$39,614	\$44,986	\$98,842	\$38,769	\$29,998	\$16,480	\$5,084	\$4,802	\$3,709	\$4,840
TOTAL WATER PROJECT COSTS	\$274,210	\$59,921	\$57,933	\$151,516	\$47,515	\$38,762	\$28,267	\$13,584	\$13,302	\$10,086	\$4,840
TOTAL WATER SDC ELIGIBLE COSTS	\$202,255	\$43,734	\$51,053	\$102,628	\$41,582	\$30,552	\$16,899	\$5,084	\$4,802	\$3,709	\$4,840
MONTGOMERY COUNTY SEWERAGE PROJECTS											
Total Project Costs *	\$30,324	\$1,559	\$2,951	\$25,814	\$12,537	\$10,317	\$2,960	\$0	\$0	\$0	\$0
SDC Eligible Costs	\$30,324	\$1,559	\$2,951	\$25,814	\$12,537	\$10,317	\$2,960	\$0	\$0	\$0	\$0
BI-COUNTY SEWERAGE PROJECTS											
Total Project Costs *	\$490	\$0	\$320	\$170	\$95	\$15	\$15	\$15	\$15	\$15	\$0
SDC Eligible Costs	\$262	\$0	\$180	\$82	\$47	\$7	\$7	\$7	\$7	\$7	\$0
PRINCE GEORGE'S COUNTY SEWERAGE PROJECTS											
Total Project Costs *	\$195,593	\$148,857	\$18,975	\$27,761	\$18,158	\$8,223	\$133	\$41	\$683	\$523	\$0
SDC Eligible Costs	\$164,570	\$124,518	\$16,030	\$24,022	\$15,570	\$7,072	\$133	\$41	\$683	\$523	\$0
TOTAL SEWERAGE PROJECT COSTS	\$226,407	\$150,416	\$22,246	\$53,745	\$30,790	\$18,555	\$3,108	\$56	\$698	\$538	\$0
TOTAL SEWERAGE SDC ELIGIBLE COSTS	\$195,156	\$126,077	\$19,161	\$49,918	\$28,154	\$17,396	\$3,100	\$48	\$690	\$530	\$0
TOTAL PROJECT COSTS	\$500,617	\$210,337	\$80,179	\$205,261	\$78,305	\$57,317	\$31,375	\$13,640	\$14,000	\$10,624	\$4,840
TOTAL SDC ELIGIBLE COSTS	\$397,411	\$169,811	\$70,214	\$152,546	\$69,736	\$47,948	\$19,999	\$5,132	\$5,492	\$4,239	\$4,840

* Total Project Costs - This is the total cost for all projects needed to support growth. SDC Eligible Costs - That portion of Total Project Costs specifically for growth. (i.e. if a project supports 50% Growth and 50% System Improvements, SDC Eligible Costs refer only to the 50% Growth portion).

Prince George's County Sewer Projects
New Projects Listing
(costs in thousands)

Agency Number	Project Name	Total Project Cost	Budget Year Cost	Page Number
S-77.20	Parkway North Substation Replacement	\$5,003	\$2,650	6-11
	TOTALS	\$5,003	\$2,650	

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

DATE: October 1, 2017
REVISED: February 21, 2018

BI-COUNTY WATER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 17	EST. EXPEND 18	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 19	YR 2 20	YR 3 21	YR 4 22	YR 5 23	YR 6 24		
W-73.19	Potomac WFP Outdoor Substation No. 2 Replacement	15,052	14,450	580	22	22	0	0	0	0	0	0	3-3
W-73.21	Potomac WFP Corrosion Mitigation	17,280	15,600	1,615	65	65	0	0	0	0	0	0	3-4
W-73.22	Potomac WFP Pre-Filter Chlorination & Air Scour Improvements	24,961	7,751	4,786	12,424	7,883	4,518	23	0	0	0	0	3-5
W-73.30	Potomac WFP Submerged Channel Intake	83,104	4,322	525	78,257	70	3,917	24,255	24,150	19,950	5,915	0	3-6
W-73.32	Potomac WFP Main Zone Pipeline	37,470	950	550	35,870	1,100	660	19,030	15,180	0	0	0	3-7
W-73.33	Potomac WFP Consent Decree Program	157,480	1,500	5,430	121,150	9,850	10,500	19,950	27,300	28,350	25,200	29,400	3-8
W-139.02	Duckett & Brighton Dam Upgrades	30,754	14,066	8,142	8,546	7,801	745	0	0	0	0	0	3-9
W-161.01	Large Diameter Water Pipe & Large Valve Rehabilitation Program	435,594	0	53,208	382,386	40,661	57,862	62,865	72,021	73,751	75,226	0	3-10
W-172.05	Patuxent WFP Phase II Expansion	63,889	56,594	6,229	1,078	1,076	0	0	0	0	0	0	3-13
W-172.07	Patuxent Raw Water Pipeline	33,683	12,705	4,202	18,756	378	8,378	8,000	0	0	0	0	3-14
W-172.08	Rocky Gorge Pump Station Upgrade	22,584	7,037	10,974	4,553	2,484	2,069	0	0	0	0	0	3-15
W-202.00	Land & Rights-of-Way Acquisition - Bi-County Water	3,695	0	777	2,918	1,300	1,570	18	10	10	10	0	3-16
	Projects Pending Close-Out	141,636	140,624	1,012	0	0	0	0	0	0	0	0	3-17
TOTALS		1,067,152	275,599	98,030	664,123	72,690	90,219	134,141	138,661	122,061	106,351	29,400	

DATE: October 1, 2017
REVISED: February 21, 2018

FINANCIAL SUMMARY (ALL FIGURES IN THOUSANDS)

BI-COUNTY SEWER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 17	EST. EXPEND 18	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 19	YR 2 20	YR 3 21	YR 4 22	YR 5 23	YR 6 24		
S-22.06	Blue Plains WWTP: Liquid Train Projects, Part 2	192,823	0	10,500	122,401	17,471	21,282	21,635	25,189	20,068	16,756	59,922	4-3
S-22.07	Blue Plains WWTP: Biosolids Management, Part 2	40,688	0	6,355	33,623	7,890	10,274	8,660	4,964	1,106	729	710	4-4
S-22.09	Blue Plains WWTP: Plant-wide Projects	110,265	0	6,616	82,112	8,206	9,815	17,829	18,969	16,660	10,633	21,537	4-5
S-22.10	Blue Plains WWTP: Enhanced Nutrient Removal	404,480	340,782	30,335	13,779	8,345	1,563	869	758	1,159	1,085	19,584	4-6
S-22.11	Blue Plains: Pipelines & Appurtenances	147,842	0	22,173	108,360	23,393	14,408	22,805	17,104	16,064	14,586	17,308	4-7
S-103.02	Piscataway WWTP Bio-Energy Project	248,677	6,871	8,873	232,933	40,310	76,251	73,553	34,566	8,253	0	0	4-8
S-170.08	Septage Discharge Facility Planning & Implementation	30,494	4,492	382	25,620	5,229	15,136	5,255	0	0	0	0	4-10
S-170.09	Trunk Sewer Reconstruction Program	440,073	0	141,557	298,516	81,615	65,376	58,500	30,397	31,004	31,624	0	4-11
S-203.00	Land & Rights-Of-Way Acquisition - Bi-County Sewer	490	0	320	170	95	15	15	15	15	15	0	4-12
TOTALS		1,615,832	352,145	227,111	917,514	192,554	214,120	209,121	131,962	94,329	75,428	119,062	

DATE: October 1, 2017

FINANCIAL SUMMARY (ALL FIGURES IN THOUSANDS)

PRINCE GEORGE'S COUNTY WATER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 17	EST. EXPEND 18	TOTAL SIX YEARS	EXPENDITURE SCHEDULE	YR 1 19	YR 2 20	YR 3 21	YR 4 22	YR 5 23	YR 6 24	BEYOND SIX YEARS	PDF PAGE NUM
W-12.02	Prince George's County HG415 Zone Water Main	3,644	418	965	2,261		2,077	184	0	0	0	0	0	5-2
W-34.02	Old Branch Avenue Water Main	24,240	2,812	198	21,230		6,820	8,690	5,720	0	0	0	0	5-3
W-34.03	Water Transmission Improvements 385B Pressure Zone	23,253	1,203	8,830	13,220		6,620	4,400	2,200	0	0	0	0	5-4
W-34.04	Branch Avenue Water Transmission Improvements	60,377	8,295	13,825	38,257		14,751	17,741	5,765	0	0	0	0	5-5
W-34.05	Marlboro Zone Reinforcement Main	4,228	380	810	3,036		3,036	0	0	0	0	0	0	5-6
W-82.05	Clinton Zone Water Storage Facility Implementation	15,527	2,087	2,002	6,598		5,993	605	0	0	0	0	0	5-7
W-85.10	St. Barnabas Elevated Tank Replacement	10,784	4,346	6,016	422		422	0	0	0	0	0	4,840	5-8
W-84.02	Ritchie Marlboro Road Transmission & PRV	6,897	2,002	3,105	1,780		1,780	0	0	0	0	0	0	5-9
W-84.03	Smith Home Farms Water Main	2,603	801	570	1,232		414	412	406	0	0	0	0	5-10
W-84.04	Westphalia Town Center Water Main	1,532	556	43	933		313	367	253	0	0	0	0	5-11
W-94.05	Prince George's County 450A Zone Water Main	84,540	1,509	821	64,321		684	9,149	13,622	13,622	13,622	13,622	17,889	5-12
W-93.01	Konterra Town Center East Water Main	1,581	43	651	887		61	350	194	282	429	429	0	5-13
W-105.01	Marlton Section 18 Water Main, Lake Marlton Avenue	2,581	29	1	2,551		406	429	429	429	429	429	0	5-14
W-111.05	Hillmeade Road Water Main	5,438	1,002	1,760	2,676		2,676	0	0	0	0	0	0	5-15
W-119.01	John Hanson Highway Water Main, Part 1	13,970	6,078	7,282	610		610	0	0	0	0	0	0	5-16
W-120.14	Villages of Timothy Water Main, Part 1	1,069	54	540	475		475	0	0	0	0	0	0	5-17
W-120.15	Villages of Timothy Water Main, Part 2	337	18	170	149		149	0	0	0	0	0	0	5-18
W-123.14	Old Marlboro Pike Water Main	1,755	1,269	118	368		202	166	0	0	0	0	0	5-19
W-123.20	Oak Grove/Leeland Roads Water Main, Part 2	14,668	9,642	4,796	230		230	0	0	0	0	0	0	5-20
W-137.03	South Potomac Supply Improvement, Phase 2	54,632	30	1,313	53,289		1,575	3,478	12,863	12,863	12,863	9,647	0	5-21
W-147.00	Collington Elevated Water Storage Facility	15,942	15,534	274	134		134	0	0	0	0	0	0	5-22
	Projects Pending Close-Out	17,350	16,790	600	0		0	0	0	0	0	0	0	5-23
	TOTAL PRINCE GEORGE'S COUNTY WATER PROJECTS	366,953	74,898	54,680	214,839		49,408	45,971	41,452	27,196	26,914	23,698	22,729	

DATE: October 1, 2017

FINANCIAL SUMMARY (ALL FIGURES IN THOUSANDS)

PRINCE GEORGE'S COUNTY SEWER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 17	EST. EXPEND 18	TOTAL SIX YEARS	YR 1 19	YR 2 20	YR 3 21	YR 4 22	YR 5 23	YR 6 24	BEYOND SIX YEARS	PDF PAGE NUM
S-27.08	Westphalia Town Center Sewer Main	850	207	460	183	124	47	12	0	0	0	0	6-3
S-28.18	Konterra Town Center East Sewer	7,211	5,189	0	2,022	513	385	0	0	642	482	0	6-4
S-43.02	Broad Creek WWPS Augmentation	182,490	143,172	17,325	21,993	15,225	6,768	0	0	0	0	0	6-5
S-57.92	Western Branch Facility Upgrade	56,419	50,905	2,128	3,386	3,150	236	0	0	0	0	0	6-6
S-68.01	Landover Mall Redevelopment	1,305	24	98	1,182	618	397	44	41	41	41	0	6-7
S-75.19	Brandywine Woods Wastewater Pumping Station	315	7	177	131	67	64	0	0	0	0	0	6-8
S-75.20	Brandywine Woods WWPS Force Main	123	15	41	67	67	0	0	0	0	0	0	6-9
S-75.21	Mattawoman WWTP Upgrades	19,449	0	5,911	12,858	4,049	2,783	1,928	1,897	1,897	404	580	6-10
S-77.20	Parkway North Substation Replacement	5,003	15	1,175	3,813	2,650	1,163	0	0	0	0	0	6-11
S-86.19	Karlington Subdivision Sewer	672	102	210	360	181	179	0	0	0	0	0	6-12
S-96.14	Piscataway WWTP Facility Upgrades	143,294	8,241	4,290	130,763	31,115	39,591	24,810	24,278	10,969	0	0	6-13
S-131.05	Pleasant Valley Sewer Main, Part 2	877	43	196	635	393	165	77	0	0	0	0	6-14
S-131.07	Pleasant Valley Sewer Main, Part 1	1,750	98	464	1,188	970	218	0	0	0	0	0	6-15
S-131.10	Fort Washington Forest No. 1 WWPS Augmentation	4,775	2,558	342	1,875	1,275	600	0	0	0	0	0	6-16
	Projects Pending Close-Out	2,312	2,312	0	0	0	0	0	0	0	0	0	6-17
	TOTAL PRINCE GEORGE'S COUNTY SEWER PROJECTS	428,845	212,888	32,821	180,556	60,397	52,596	26,871	26,216	13,549	927	580	