

*Investing in our Future*



**PROPOSED CIP**  
**Capital Improvements Program**  
**FYs 2021-2026**



# Washington Suburban Sanitary Commission

## Proposed Six-Year Capital Improvements Program Fiscal Years 2021 - 2026

**October 1, 2019**

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**T. Eloise Foster, Vice Chair**  
**Fausto R. Bayonet, Commissioner**

**Howard A. Denis, Commissioner**

**Carla A. Reid, General Manager/CEO**  
**ATTEST: Sheila R. Finlayson, Esq., Corporate Secretary**

***Investing in The Future***

*On our cover: Local middle school students participate in WSSC Water's Sewer Science educational program. With simulated laboratory activities, this hands-on initiative helps build the future water workforce by teaching the next generation about careers in the water sector. WSSC Water offers a wide range of targeted outreach programs focused on science, technology, engineering and math to cultivate and attract potential future employees of diverse genders, ethnicities, and perspectives from the communities we proudly serve.*

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**WASHINGTON SUBURBAN SANITARY COMMISSION  
PROPOSED CAPITAL IMPROVEMENTS PROGRAM  
FISCAL YEARS 2021-2026**

**LEGAL AUTHORITY AND RESPONSIBILITY**

**Statutory Basis**

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

Section 23-303 defines major projects for inclusion in the CIP as water mains at least 16 inches in diameter, sewer mains at least 15 inches in diameter, water or sewage pumping stations, force mains, storage facilities, and other major facilities. Project information presented in this document complies with all legal requirements of the ten-year water and sewerage plans and is in direct support of the two counties' approved land use plans and policies for orderly growth and development. By WSSC Resolution No. 2019-2228 dated June 19, 2019, the Commission adopted the FYs 2020-2025 CIP.

**WSSC's Role**

The Commission is a bi-county agency established more than 100 years ago, in 1918, by an act of the Maryland General Assembly. The WSSC is responsible for planning, designing, constructing, operating, and maintaining water and sewerage systems, and acquiring facility sites and rights-of-way in order to provide potable water and sanitary sewer services to residents, businesses, and federal, state, and local municipalities within the Washington Suburban Sanitary District (WSSD). The WSSD encompasses nearly all of Montgomery and Prince George's Counties and provides water and sewer service to approximately 1.8 million customers in an area of nearly 1,000 square miles. A board of six commissioners directs the WSSC, three appointed by the County Executive of Prince George's County and confirmed by the Prince George's County Council, and three appointed by the Montgomery County Executive and confirmed by the Montgomery County Council. Commissioners serve four-year staggered terms.

## **WSSC's Mission**

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

## **WSSC's Responsibilities**

The WSSC's primary responsibilities include:

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

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

## **PROGRAM OVERVIEW**

### **Objective**

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

### **Spending Affordability and Fiscal Implications**

Projects in this CIP are primarily financed with funds from the Water Supply and Sewage Disposal Bond Funds. The Commission largely finances these projects with the proceeds from the sale of long-term debt. Water supply bonds are issued to finance the planning, design, and construction of major water treatment, storage, and transmission facilities. Sewage disposal bonds are issued to finance the planning, design, and construction of major sewage collection, treatment, and disposal facilities.

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

Several capital spending and funding practices are noteworthy. The Commission:

- continues an aggressive program to rehabilitate or replace the older portions of the Commission's 5,700 miles of water main and 5,600 miles of sewer main infrastructure;
- funds capital facilities needed to accommodate growth with the System Development Charge (SDC). This charge is reviewed annually by the County Councils. (Refer to Appendices A and B for details. A comparison of SDC revenues and estimated growth spending for the six-year program period is displayed on the table titled "Growth Funding Gap" in the Funding Growth section of this document.);

- uses PAYGO (Pay-As-You-Go): the practice of using current revenues, when budgeted, to the extent practical to help fund the capital program, thereby reducing the need for debt financing;
- maximizes and manages the collection of funding from alternative sources including state and federal grants, and payments from other jurisdictions for projects which specifically benefit them. The amount of these collections varies from year to year. The WSSC's reliance on rate-supported debt to build the capital program is reduced to the extent that these sources are available to help fund capital projects; and
- does not allow the use of rate-supported debt to fund CIP-sized water and sewer projects requested by Applicants in support of new development. These projects, identified as Development Services Process (DSP) projects, may only proceed if built at the Applicant's expense. (An explanation of the DSP process is included in the Development Services Process section of this document.) However, since these projects are eligible for SDC credits (to the extent that SDC funds are available), the Applicants should eventually recoup their costs. (Refer to Appendix B for definitions and details.)

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

The Commission has submitted a CIP and budget, which generally conforms to the Spending Affordability Guidelines (SAG) established by both county governments every year since 1994. Through FY'20, projects were reduced or deferred by nearly \$272 million. For FY'21, CIP and Information Only combined spending was within guidelines as submitted.

The FY'21 combined expenditures (CIP & Information Only projects) are estimated at \$624.3 million, which represents an increase of approximately \$54.6 million above the approved funding level for FY'20. The increase is primarily due to including the new Other Capital project in the Information Only section, the programmed increase in pipe replacements in the Large Diameter Water Pipe Reconstruction Program, and the 3.8 mile Prince George's County 450A Zone Water Main project entering into the construction phase in FY'21.

## **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 WSSC's Energy Performance Program and Piscataway Bioenergy projects to promote and develop green energy sources;
- Local Government Contributions – payments to the WSSC 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 (SDC); and
- Contribution/Other – projects funded by Applicants for growth projects where the County Councils have directed that no WSSC 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 \$84.6 million, which equals 2% of all expenditures in the combined six-year program, and \$25.7 million or 4% of the FY'21 budget. The funding sources for this part of the program are System Development Charge (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 the WSSC to impose, a System Development Charge. This is a charge on new development to pay for that part of the Commission's Capital Improvements Program needed to accommodate growth in the WSSC's customer base. In accordance with the enabling legislation, the Councils approved, and the Commission began to phase in, this charge beginning in FY'94. The SDC charge 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'20, the Montgomery County and Prince George's Councils increased the maximum allowable charge by the 1.5% increase in the CPI-U but maintained the current rate of \$203 per fixture unit. The Commission adopted the Councils' actions by Resolution Number 2019-2225 dated June 19, 2019. Policies and other information associated with the System Development Charge are included in this document in Appendices A through D.

It is estimated that there will be an overall growth funding surplus of \$60.1 million over the six-year program period. The gap or surplus 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 WSSC would issue new SDC supported debt 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 gap or surplus for each fiscal year is presented in the table that follows. To estimate the gap/surplus for an individual fiscal year, it is assumed that approximately 80% of the eligible expenditures will actually be incurred in a given year due to scheduling and other delays. The projected gap/surplus is the difference between the eligible expenditures adjusted for completion and the sum of the various funding sources.

**GROWTH FUNDING GAP**  
**(In Millions)**

	<u>FY'21</u>	<u>FY'22</u>	<u>FY'23</u>	<u>FY'24</u>	<u>FY'25</u>	<u>FY'26</u>	<u>6 YEAR TOTAL</u>
<b>CIP GROWTH EXPENDITURES</b>	\$25.8	\$27.4	\$19.2	\$11.1	\$0.5	\$0.7	\$84.7
Expenditures Adjusted for Completion	20.6	27.1	20.9	12.7	2.6	0.7	84.6
<b>FUNDING SOURCES</b>							
Privately Funded Projects	13.0	7.1	2.1	0.7	0.5	0.5	23.9
Estimated SDC Revenue	23.3	23.3	24.3	24.3	24.3	25.3	144.8
Less SDC Developer Credits	(5.0)	(4.0)	(3.0)	(2.0)	(2.0)	(2.0)	(18.0)
Less SDC Exemptions <sup>1</sup>	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(6.0)
<b>TOTAL FUNDING SOURCES</b>	\$30.3	\$25.4	\$22.4	\$22.0	\$21.8	\$22.8	\$144.7
<b>FUNDING GAP/(SURPLUS)</b>							
<b>ADJUSTED FOR COMPLETION</b>	<b>(\$9.7)</b>	<b>\$1.7</b>	<b>(\$1.5)</b>	<b>(\$9.3)</b>	<b>(\$19.2)</b>	<b>(\$22.1)</b>	<b>(\$60.1)</b>

<sup>1</sup> 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 \$6.9 million for Montgomery County and \$3.9 million for Prince George's County through June 30, 2019.

**Expenditures**

The Proposed FYs 2021-2026 combined program includes 55 CIP and 10 Information Only projects for a grand total of \$5.6 billion dollars. The grand total is \$498 million greater than the Adopted FYs 2020-2025 combined program primarily due to the inclusion of the Other Capital project which was added this cycle so as to reflect all capital expenditures, not just CIP and Information Only projects, in the document. Expenditures for the combined six-year program period are estimated at \$3.7 billion. FY'21 expenditures are estimated at \$624.3 million of which, \$123.6 million is for the Water Program, \$251.5 million is for the Sewerage Program, and \$249.2 million is for the Information Only Projects. System Extension Process (SEP) growth projects are estimated at \$23.4 million in the six-year program with approximately \$15.9 million programmed in FY'21. There are four 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 2020-2025 CIP to the Proposed FYs 2021-2026 CIP follows:

## WSSC CIP - COMPARISON

(In Thousands)

	<u>COMBINED PROGRAM</u>	<u>TOTAL SIX-YEAR</u>	<u>BUDGET YEARS COMPARISON</u>
Adopted FYs 2020-2025	\$5,059,114	\$3,229,062	\$569,664
Proposed FYs 2021-2026	5,557,072	3,712,427	624,302
Change	\$497,958	\$483,365	\$54,638

Combined six-year program expenditures are estimated at approximately \$3.7 billion, \$865.8 million for the Water Program, \$1.1 billion for the Sewerage Program, and \$1.7 billion for the Information Only Projects. This is a \$483.4 million increase from the combined six-year total in the Adopted FYs 2020-2025 CIP. The overall increase is primarily due to including the new Other Capital project in the Information Only section and the programmed increase in pipe replacements in the Large Diameter Water Pipe Reconstruction Program.

### 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 WSSC’s 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 Sanitary District 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.)



## **CIP Development Schedule**

The CIP production cycle spans 13 months, beginning in May of each year. The organizational units responsible for project initiation submit project description forms (commonly referred to as PDFs) to the WSSC's Finance Office (Budget Division). The expenditures, and schedules displayed on each PDF represent the WSSC's best estimate of the cost and the time it will take to plan, design, and construct a project. These submittals are comprehensively reviewed with the General Manager/CEO and Senior Staff each June to assess the addition of new projects, changes in cost or scope, criticality, priority, environmental sensitivity, adherence to county growth and public outreach policies, construction schedule changes, and spending affordability considerations.

Following this comprehensive review, worksessions are conducted by the WSSC Budget Division with the Prince George's and Montgomery County Governments, Maryland-National Capital Park and Planning Commission (M-NCP&PC), and local municipality representatives to solicit their input, and a draft document is presented to the WSSC's Commissioners for their consideration. Draft CIP Public Hearing documents are published and distributed each August and the Commissioners' host public hearings in each County in September. The hearings are advertised in a major newspaper circulated in Prince George's and Montgomery Counties, through our webpage and social media, and special notices are sent to the Prince George's and Montgomery Counties' State Senators and Delegates, County Executives, County Council members and County Government staff. In addition, a notice is included with each water bill mailed to WSSC customers throughout the months of June, July, and August inviting them to participate in the public hearings. After considering all relevant comments, the Commissioners approve the Proposed CIP document for transmittal to both county governments before October 1, in accordance with state law.

After January of the following year, the Prince George's and Montgomery County Executives transmit their recommendations to their respective County Councils. Each County Council conducts separate public hearings and worksessions to consider additional modifications to the Proposed CIP. On or before May 15<sup>th</sup>, the County Councils meet jointly to agree on required changes, and on or before June 1st each year, enact formal resolutions identifying project modifications and approving the addition of new projects. The WSSC then adopts these changes and additions before the beginning of the new fiscal year on July 1. If the Councils do not jointly agree on changes by June 1, under law, the CIP is approved as proposed by the WSSC.

## **Program Description**

Individual project information is displayed on the project description forms (PDF). The content of these PDFs, as prescribed under Section 23-301 of the Public Utilities Article of the Annotated Code of Maryland, includes as applicable: estimated diameter, length, and location of pipelines; design capacity; population and area to be served; project justification; project expenditure schedule showing the estimated cost and funding sources; and, where applicable, a map. PDFs are organized within the following major sections: Montgomery County Water, Montgomery County Sewer, Bi-County Water, Bi-County Sewer, Prince George's County Water, Prince George's County Sewer, and Information Only Projects. A financial summary of expenditures by major section is included at the end of this narrative. Project number prefixes indicate a water (W-), sewerage (S-), or administrative (A-) project. Administrative projects are included in the Information Only section and refer to projects that may be attributable to both water and sewerage. Each major section includes a financial summary for the projects in that section, a list of new projects, a PDF for each project, and a list of projects that are being closed out in the section.







Anticipated land, rights-of-way and any watershed buffer property projected acquisition costs are consolidated onto composite PDFs (W-202.00 and S-203.00). This format provides flexibility in expending funds in a specific fiscal year and permits the WSSC to respond to the uncertainty of implementation schedules, unpredictable delays, unanticipated rights-of-way requirements, and the need to assure the WSSC an equitable negotiation position by avoiding project-specific cost displays prior to contacting property owners. When a land purchase has been concluded, this cost is transferred back to the individual project.

A Projects Pending Close-Out list is included at the end of each major section when required. Each list contains projects which were approved and included in the prior adopted CIP, but which do not appear in this program for reasons such as expected construction completion or project cancellation.

This document also contains an Information Only projects section. Projects in this section are not required to be in the program under Section 23-303 of the Public Utilities Article of the Annotated Code of Maryland but may be included for any number of reasons such as: fiscal planning purposes; the reader's improved understanding of the full scope of a specific set of projects; or responding to requests from county governments. Expenditures for Information Only projects, shown separately on the financial summary, are not included as part of the CIP six-year program costs. The Combined Program is the sum of the CIP and Information Only projects.

Expenditure projections for the first year of the six-year program, as shown on each PDF in Block B, column Year 1, are included in the Commission's capital and operating budgets. In addition to adopting a six-year CIP, the Montgomery and Prince George's County Governments also annually review and approve the WSSC's capital and operating budget.

The following symbols are used on the individual project maps to represent different types of water and sewerage system components:

- Water Main/Gravity Sewer 
- Water/Wastewater Pumping Station 
- Sewage Force Main 
- Water/Sewage Storage Facility 
- Water Filtration Plant 
- Water Resource Recovery Facility 

## **CIP PLANNING PROCESS**

### **Water Treatment/Distribution Systems**

The provision of potable water involves three major areas: supply, treatment, and distribution. The Potomac and Patuxent Rivers are the two sources of water supply for the Washington Suburban Sanitary District (WSSD), with the majority of water coming from the Potomac. Raw water is taken directly from the natural flow of the Potomac River into the Potomac Water Filtration Plant in Montgomery County. Water from the Patuxent River is impounded in two reservoirs by the Brighton and T. Howard Duckett Dams, which are the sources of supply to the Patuxent Water Filtration Plant in northern Prince George's County. The Triadelphia and T. Howard Duckett reservoirs have a combined storage capacity of approximately 10.2 billion gallons of water. The two filtration plants have produced an average of 163.2million gallons of potable water per day over the last five fiscal years.

The natural flow in the Potomac River can be augmented during low flow conditions by two other reservoirs. The Jennings Randolph Reservoir, impounding 13.0 billion gallons of emergency raw water supply, is located on the North Fork of the Potomac River in West Virginia, and is owned and operated by the U.S. Army Corps of Engineers. Little Seneca Lake in Montgomery County provides an additional 3.8 billion gallons of useable raw water storage, and is owned and operated by the WSSC. Both reservoirs are shared by users in the Washington Metropolitan area, including the U.S. Army Corps of Engineers, the Fairfax County Water Authority, and the WSSC. Withdrawal during low flow conditions is governed by the terms of the Potomac Low Flow Allocation Agreement of 1981, as amended, and is administered by the Interstate Commission on the Potomac River Basin.

As raw water enters a plant, it goes through several stages of filtration and purification. Much of the finished water produced at the WSSC's plants has to be pumped into the distribution system. Water pumping stations are strategically located throughout the Sanitary District to move water to higher topographic elevations to maintain adequate system pressure. The WSSD is divided into 17 major pressure zones that represent hydraulically separated segments of the water system. The pipelines within each of the zones must be designed to serve not only customers within the confines of that zone, but also customers in adjacent interconnected zones. Water to zones at higher elevations must be pumped; water to lower elevations must be closely controlled with pressure regulating valves. A system under pressure enables the pipes to be laid uphill or downhill, with the flow direction independent of the slope of the ground. The design and operation of a water system is a complex task which requires detailed knowledge of the interrelationships between the source of supply, the location of pumping stations, pump characteristics, pressure reducing valves, storage facilities, pipe diameters and capacity characteristics, consumption patterns throughout the day, operating techniques and costs, and location of our 1.8 million customers spread out over our 1,000 square mile service area.

More than 40 elevated tanks, standpipes, and ground-level storage structures in the distribution system are filled with finished, filtered water to meet daily peak customer demand and to provide reserves for fire protection and emergencies. A network of more than 5,700 miles of underground water pipeline delivers water to homes, apartments, schools, hospitals, businesses, and all other types of buildings where water meters measure the amount of water used. All customer accounts are metered and billed based upon individual usage. For the past 100 years, these facilities have been operated and maintained by the WSSC 24 hours a day, 7 days a week, including holidays, in order to provide safe and reliable service to our customers.

### **Water Resource Recovery Facilities/Wastewater Collection Systems**

The WSSC's water resource recovery facilities have been nationally recognized as a Utility of the Future Today by the National Association of Clean Water Agencies (NACWA), the Water Environment Federation (WEF), the Water Research Foundation (WRF) and the WaterReuse Association, with input from the U.S. Environmental Protection Agency (EPA), for transformational work in community engagement, watershed stewardship, and recovery of resources such as water, energy, and nutrients. The Utility of the Future Today designation recognizes water utilities that have transformed from the traditional wastewater treatment system to a resource recovery center and leader in the overall sustainability and resilience of the communities they serve, recovering resources from wastewater, engaging in their community, forming unique partnerships, and building an internal culture of innovation. As one of the country's most effective pollution control networks, WSSC facilities go beyond conventional, second-stage treatment to provide "tertiary treatment," which is an advanced treatment process. All of the WSSC's facilities employ state of the art, integrated, enhanced nutrient removal processes that significantly reduce the amount of nitrogen and phosphorous reaching the Chesapeake Bay. These features ensure that the quality of the effluent (treated wastewater discharged from the facilities) is better than the natural waters into which it is returned.

Wastewater operations are divided into two functions: treatment and conveyance of sewage. Sewage treatment is accomplished through a network of facilities, the base of which is the regional water resource recovery facility. The WSSC owns and operates six water resource recovery facilities, which receive and process waste from residences, businesses (where waste is a by-product of the manufacturing process), restaurants, hospitals, and other commercial and industrial users. During the water resource recovery process, solid material is removed, harmful organisms are destroyed, and excess disinfection products are neutralized before the remaining liquid, the effluent, is returned to the waters of Maryland.

The WSSC's six facilities have a combined capacity of 95 million gallons per day (mgd). The six facilities are Piscataway, Western Branch, Parkway, Seneca, Damascus, and Hyattstown. Unlike the water system, operation of the sewerage system is highly dependent upon other area jurisdictions and, for this reason, the WSSC has purchased 169.6 mgd of treatment capacity at the Blue Plains Regional Wastewater Treatment Plant located in the District of Columbia, 3 mgd of capacity at the Mattawoman Wastewater Treatment plant located in northern Charles County, and 20,000 gallons per day of capacity in the Town of Poolesville's wastewater treatment plant. The capital costs of the Blue Plains and Mattawoman plants are shared among the users based upon treatment capacity allocations. The WSSC also pays to the District of Columbia and Charles County a

share of the operating, maintenance, and overhead costs at each plant, in proportion to actual flows. These cost-sharing arrangements were agreed to in the Intermunicipal Agreement of 2012 and the Mattawoman Agreement of 1980, respectively. Sewer capacity purchased by the WSSC in the Poolesville plant is in accordance with the May 1984 agreement between the WSSC, the Town of Poolesville, and the Montgomery County Government.

The other function of the sewerage system is to convey waste flows from the point of origin (for example, from a customer's home) to a point of treatment. The sewerage network contains more than 5,600 miles of pipeline, with pipe sizes ranging from 6 to 102 inches in diameter and is predominantly a gravity system. This means the flow travels in a downhill direction without any other help and, therefore, sewers generally flow along streambeds towards the lowest elevation in a basin. The sewers in one drainage basin are independent of those in other basins. There are 13 major drainage basins in the Sanitary District.

The largest diameter pipelines (interceptor sewers) run up from the treatment plant to the major lines (trunk lines) within individual drainage basins. Smaller diameter pipelines (outfall) run up sub-basins from the major lines. Even smaller lines (lateral), usually built in or along subdivision streets to provide service to abutting properties, lead up to hundreds of thousands of individual service connections (hookups from the pipe in the street to a private home or building) to be served by the remainder of the conveyance system. Ideally, the entire system would provide for the gravitational flow of waste from the individual houses, businesses, and other sources through the lateral subdivision lines to the outfall pipelines to the larger diameter interceptors pipelines to the water resource recovery facility. Because gravity cannot always be used to accomplish this ideal pattern of flow, the WSSC has more than 40 wastewater pumping stations in operation, and others in standby status, throughout the Sanitary District. These pumping stations range from 0.08 to 306 mgd in capacity. Pumping stations lift wastewater through a pressure line called a force main, over ridges or from stream valleys that have no continuous trunk sewer, into the gravity-flow system of an adjacent drainage basin that contains existing pipeline and water resource recovery facilities. All WSSC wastewater flows through enclosed trunk line systems and is completely separate and independent from the storm drain system. For the past 100 years, these facilities have been operated and maintained by the WSSC 24 hours a day, 7 days a week, including holidays, in order to provide safe and reliable service to all of our customers.

In addition, small pressure systems exist throughout the Sanitary District. A typical system is comprised of a grinder pump (one for each dwelling unit grouped in a small residential development) contained in a sump pumping through a plastic force main, and then connecting to a gravity sewer line located nearby. This type of system is limited in size and is necessary to overcome minor changes in topography to avoid the construction of a conventional gravity line in another direction where the distance to an existing sewer would be considerably greater and less cost effective.

Approximately 63% of all wastewater originating in Montgomery County and central Prince George's County follows the Anacostia, Rock Creek, and Potomac River Valleys, to the Blue Plains Wastewater Treatment Plant. The WSSC's proportionate share of capital costs at Blue Plains, to meet suburban Maryland's treatment requirements, have represented some of the most significant planned expenditures in this document. The

purpose of the projects contained in this document and their associated cost is to expand, replace, or rehabilitate the existing water and sewerage systems; to continue a very high level of continuous service and reliability; and to protect the health of current and new customers, while mitigating impacts on the environment.

### **Environmental Concerns**

The Commission is committed to protecting the natural environment of Prince George's and Montgomery Counties as it carries out its mandate to provide sanitary sewer and drinking water services. This commitment focuses on those unique natural and manmade features (waterways, woodlands, and wetlands, as well as parklands, historical sites, and residential areas) that have been indicated by federal, state, and local environmental protection laws and regulations. Specific impact information is included in the evaluation of alternatives during the Commission's Asset Management Process, if the environment features will be affected by the proposed construction of a project. Six primary areas are addressed as appropriate:

- Stream Valleys – identify the classification of the stream and, in general terms, the published water quality. From published maps, show the topography including the 100-year floodplain;
- Wetlands (Tidal and Non-tidal) – using published maps, show the locations of these and give their classification;
- Woodlands or Forested Areas – using aerial photographs or published maps, show the location of these and identify their type;
- Parklands – using published maps, show the location of all land holdings of the Maryland-National Capital Park & Planning Commission, the Department of Natural Resources, and the National Park Service;
- Steep Slopes – using published maps, show all slopes greater than 15%; and,
- Historical/Archaeological Sites – the Maryland Geological Survey (State Archaeologist) and Maryland Historical Trust will provide information on sites near the project alternatives. The Maryland-National Capital Park & Planning Commission or county government may provide additional information of local interest.

A further extension of these protections has been funded by the approximately \$242 million included in the Combined six-year program which is attributable to meeting environmental regulations. These projects, currently estimated at 7.0% of the combined six-year costs in this CIP, are mandated by the U.S. Environmental Protection Agency under the Clean Water Act through the State of Maryland Department of the Environment in response to pollution controls in the form of more stringent state discharge permit requirements. The environmental component is allocated among the projects listed on the following page, and project details can be found on the individual project description forms included elsewhere in this document.

## **Environmental Spending**

	<u>(Dollars in Millions)</u>
• W-73.33, Potomac WFP Consent Decree Program	160.1
• S-22.10, Blue Plains WWTP: Enhanced Nutrient Removal	21.5
• S-22.11, Blue Plains: Pipelines & Appurtenances	60.8
 Combined Six-Year Program Expenditures Allocated to Environmental Regulations	 \$242.4

## **Public Outreach**

The Commission's proactive Project Outreach program is an integral part of our process to include early public involvement in projects. The objective is to inform affected communities about the WSSC's plans, actively seek their input, and respond to their concerns. The WSSC's planning approach is an open process, receptive to public comment and involvement. Residents of Prince George's and Montgomery Counties are given the opportunity to review clear, accessible documents that describe the rationale behind program planning and project decisions. The overall outreach goals are to:

- identify community and public policy issues early in the planning stage;
- address the known community concerns and environmental issues that are within the reasonable context of the planning effort;
- promote community understanding of system needs and demands, and the planning process used by the WSSC to maintain public health standards and water quality protection;
- provide constructive forums for community involvement and information throughout the planning process;
- provide a clear understanding of the decision-making process;
- address potential health and environmental risks; and
- establish and maintain open lines of communication.



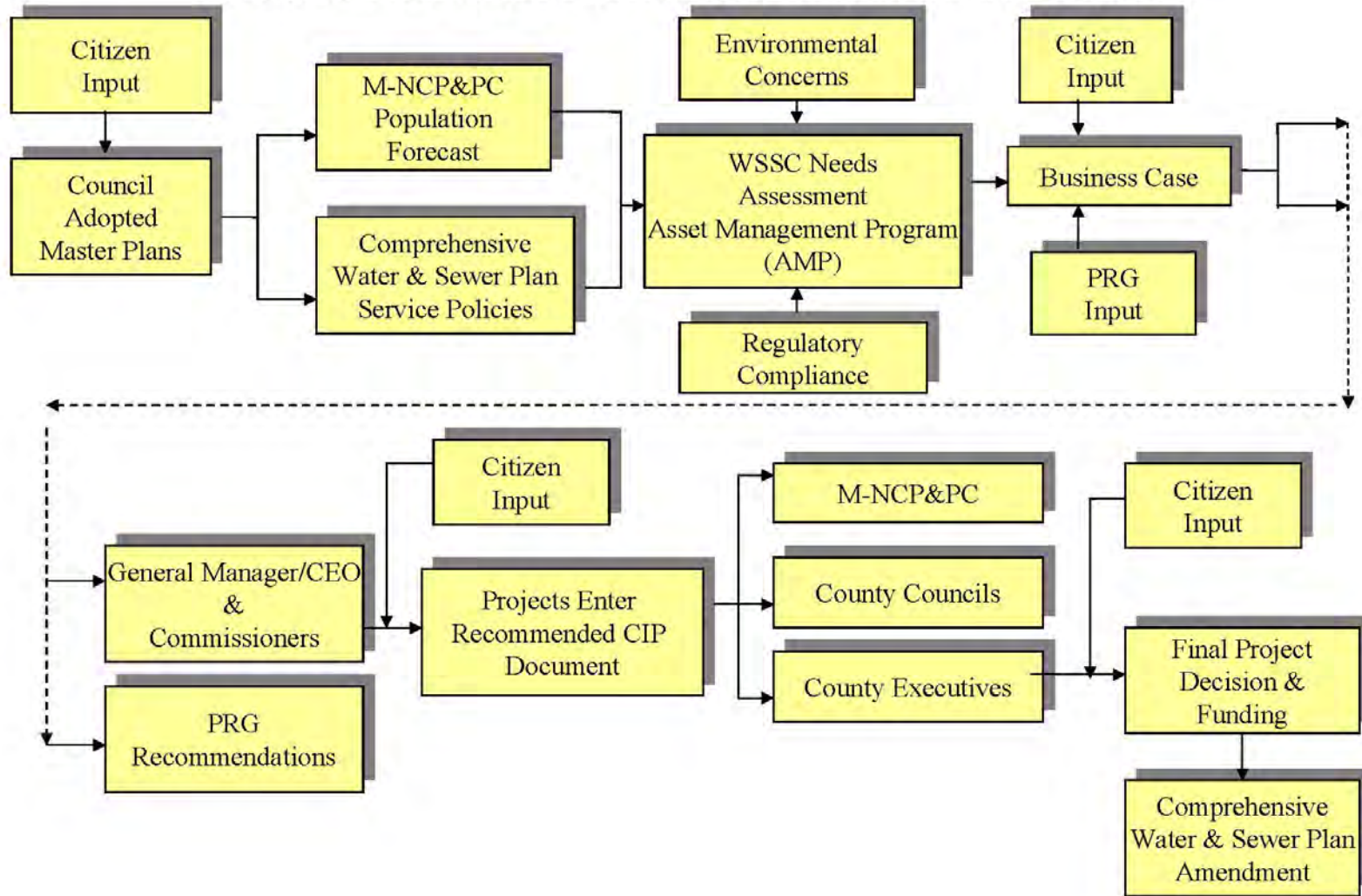
The Project Outreach program advocates achieving planning goals through a collaborative effort among WSSC staff, technical experts, citizens and/or organizations, and public officials. Fostering community involvement allows the WSSC to be responsive and sensitive to community concerns, to define the best approach to address customers' concerns, and to garner community support while meeting public health objectives.

### **The Planning Process**

At WSSC, the planning process incorporates engineering data, environmental requirements, economic factors, and public interaction to establish a sound basis for making decisions, for efficiently conducting and documenting specific work tasks, and for successfully implementing needed solutions. The WSSC's planning process utilizes Business Case Studies to identify needs, develop and evaluate options, and identify a preferred solution. An important goal in the process is to produce a result that is acceptable to citizens, elected officials, regulatory agencies, and the WSSC at a reasonable cost.

A number of outside influences affect the WSSC's project planning process. Water and sewer projects are essentially an infrastructure response to land use decisions made by the two county governments and demographic information (population forecasts) provided by the Washington Council of Governments and the Maryland-National Capital Park & Planning Commission. These elements are used by the WSSC to calculate projected water and sewerage demands. The WSSC must also consider environmental consequences and compliance with federal and state regulations such as the Clean Water Act and Safe Drinking Water Act. The WSSC's needs analysis process also incorporates both county governments' guidance on service policies as contained in the Comprehensive Ten-Year Water and Sewerage Plans. Generally stated, the goals, purposes, and concepts provided by the Prince George's and Montgomery County Governments require that the water and sewerage systems be consistent with officially-approved local and general plans, and provide adequate capacity to accommodate the foreseeable development of the area served based upon population and employment projections. This requirement corresponds with what has always been Commission policy: to provide utility service to the type and location of development that each county governing body has approved, if economically and otherwise feasible. Figure 1, on the following page, displays the overall project planning and approval process.

**FIGURE 1  
PROJECT DEVELOPMENT & APPROVAL PROCESS**



**WSSC Asset Management Program**

To address WSSC’s Strategic Priorities, to Optimize Infrastructure and Spend Customer Dollars Wisely, the objective of the Asset Management Program (AMP) is to identify infrastructure needs and investment strategies for the next 30 years, or more, and develop and implement an asset management framework for optimal investment decision making. A key task is to identify the existing and future capacity, regulatory, and rehabilitation/repair/replacement requirements for the next 30 years. The AMP provides input to the Commission’s multi-year financial forecasting and develops and refines a 30-year capital investment projection based on the following requirements: regulatory, capacity, maintenance, rehabilitation/replacement, process control, energy conservation, efficiency and reliability.

**How Projects Enter the CIP**

The Asset Management Program systematically identifies and validates water and wastewater needs and is the primary source of new projects. Figure 2 depicts some of the key elements of the WSSC Asset Management Program.

**FIGURE 2**

<b>Overview of WSSC AMP Process</b>		
<b>Genesis and Validation</b>	<b>Business Case Development</b>	<b>Review and Approval</b>
Asset Management Plans • Establishment of Need • Need Validation • Funding	Technical Analysis and Documentation • Coordination • Community Outreach • Project Validation • Solution Recommendation	• Project Prioritization • Public Comment • County Governments • WSSC CIP
<b>Implementation</b>		

The WSSC’s needs assessments may identify other potential projects. A project may be added in response to relocation requirements due to road or transit improvements or the need to construct a segment of pipe in advance of paving. Projects may also be included at the request of either county government, usually to provide service to a planned county service facility, or in response to a request for service from an Applicant for new development. Projects may also enter the CIP when they are split from previously approved projects. Projects may be split either at the request of the Applicant or by WSSC for administrative reasons such as to afford better project management or to provide greater clarity to the reader.

## **System Extension Process (SEP)**

System Extension Process (SEP) projects are undertaken by developers to support future growth. Service to properties approved under the SEP almost always require the extension of small diameter subdivision lines and may involve program-sized pipes that must be included in the WSSC's CIP. This document includes only the portion of an Applicant's total pipe extension or pumping facility requirements and associated costs that conform to the definition provided in the section titled "Statutory Basis" at the beginning of this narrative.

To initiate a project, the Applicant will submit preliminary subdivision plans to the Planning Department of the Maryland-National Capital Park and Planning Commission (M-NCP&PC) for their County. WSSC will review these submittals for water and/or sewer service, including a determination if the property to be served is located within the appropriate "service category." (Service category designations are a staging tool employed by and strictly administered in the Comprehensive Ten-Year Water and Sewerage Plans by both county governments. If the property is not in the correct service category, the Applicant must contact the appropriate County office to begin a County Ten-Year Plan amendment process for reconsideration of the service area designation currently assigned to the property. If a designation change is approved later by the County Council, the Applicant may proceed with the construction of the project.) Once it has been determined that the property to be served is located within the appropriate service category, and a request for Hydraulic Planning Analysis (HPA) is made and completed, the WSSC issues a Letter of Findings (LOF) which specifies the project conditions that must be met prior to the start of construction. The need for a CIP-sized project is identified by WSSC during the HPA review. WSSC will perform a review of the design plans for compliance with WSSC requirements. Construction can begin when design plans have been approved, all necessary permits and rights-of-way have been obtained, and the Applicant has satisfied all other project conditions. Approximately one third of the projects in this document are SEP-related.

For those projects serving one new residence or providing relief from a residential health hazard, the Applicant may hire an engineer to follow the System Extension Process or can opt to follow the WSSC Built Process. Each step in the WSSC Built Process is done at the Applicant's expense. In this case, the Applicant will prepare a feasibility study for review and for WSSC to issue a Feasibility Letter of Findings. The Letter of Findings will again specify any project conditions and advise the Applicant of their cost responsibilities. If the Applicant elects to proceed with the WSSC Built Process, WSSC will prepare the design plans. Once the Applicant has met all the project conditions from the Letter of Findings, the design plans are approved, and all permits and rights-of-way are acquired, the WSSC will proceed with the construction of the project at the Applicant's expense. However, such projects rarely include CIP-sized mains.

## **Project Development Criteria**

It has been the WSSC's policy to have facilities in service when, or before, they are needed so that new development demands on the system do not result in a reduction of the level of service provided to existing customers. This policy provides for unrestricted water supply and no sewage overflows and avoids a water or sewer connection moratorium. This general service policy guides the planning and sizing of the WSSC's systems

and requires that both the water and wastewater systems are sized to handle the peak or maximum demands, adjusted for weather-related usage. The task is to balance cost and spending affordability limits with environmental consequences, risk and system reliability.

Water and wastewater systems are composed of functionally different sub-systems: treatment, transmission, distribution, collection, and storage. Ideally, the capacity of each component should match the capacity of the other parts of the system. An example of a real situation from the past is the comparison of the Blue Plains Wastewater Treatment Plant to the Muddy Branch and Seneca Creek wastewater transmission systems. The plant had enough capacity but, in contrast, probable peak flows in the sewers exceeded pipeline capacity. These were part of the same network, yet one of the sub-systems had excess capacity, while other parts, although connected, were deficient. Transmission projects to correct this imbalance were completed in these basins, ensuring capacity to handle future flows in the conveyance systems.

For most facilities, the WSSC plans enough capacity to last 20 years or more. When it seems clear that adding capacity incrementally will not be economical, feasible, or is significantly disruptive, longer range planning is done. A pipeline is sized for full development, or “build out” of its service area, to avoid repeated environmental and community disruption caused by construction. In most cases, this results in a service life that extends beyond 20 years. Since the weather-related usage and future population projections are broad-based estimates of future conditions used in the calculation of future flow demands, the rate at which predicted flows increase or decrease in a pipeline system is somewhat variable, but still useful in providing a long-range target for timing the WSSC’s project construction. The WSSC conservatively estimates the lead time required to plan, design, and construct a facility, and projects enter the CIP on that basis. It is not unusual for 10 or more years to elapse before a major facility project, such as a treatment plant, is finished following its initial appearance in this document.

Twenty-year estimates of increases in customer demand are based on the most recent M-NCP&PC demographic forecasts of population, dwelling units, and employment. Estimates of full development demands are based on the most current land use and zoning information available from the M-NCP&PC. This data is organized by Traffic Analysis Zones in Montgomery County and by Policy Analysis Zones in Prince George’s County. The information is then disaggregated by sub-basins for use in the planning and sizing of projects.

### **Project Estimates**

Pipeline cost estimates are developed through the use of a detailed checklist of cost elements. The comprehensiveness and uniformity of planning-level cost estimates is significantly improved through the inclusion of more site-specific details, previously not considered until advanced stages of design. Through this process the number of projects with cost increases that typically occur when a project transitions from the preliminary planning phase to the design phase is greatly reduced.

Actual design plans and profiles, if available, are analyzed together with United States Geological Survey soil maps. Additional factors such as site access, excessive traffic, known jurisdictional constraints, presence of rock or running sand, work through existing neighborhoods or open

fields, and proximity to other existing utility lines are taken into consideration. The base prices upon which the estimates are predicated are derived from both historical cost data and the most recent bid information. The specific final unit prices are increased or decreased, dependent upon factors such as those listed above. In addition, all environmental mitigation costs for efforts such as reforestation are already included in the individual project costs. Regardless of the extensive checklist, some additional costs may be required by permitting agencies to reflect unpredictable requirements for things such as changes in alignment, more complex traffic management plans, or for changes in permit requirements for more stringent erosion protection measures at construction sites. The need for these kinds of features is project specific and is identified on individual project description forms (PDFs) when appropriate.

Order of magnitude cost estimates for major facility projects (e.g., treatment plants and pumping stations) are first derived from Business Case Studies in the planning stage and further refined in the design phase based on estimates developed by consulting engineers. The WSSC requires that projects be re-evaluated by consulting engineers at the 30% and 70% stages of design. Estimated construction costs, reflecting any modifications, are identified on the individual PDFs, if applicable. Because the costs displayed in the CIP are estimates and not actual costs, construction contingencies may be added.

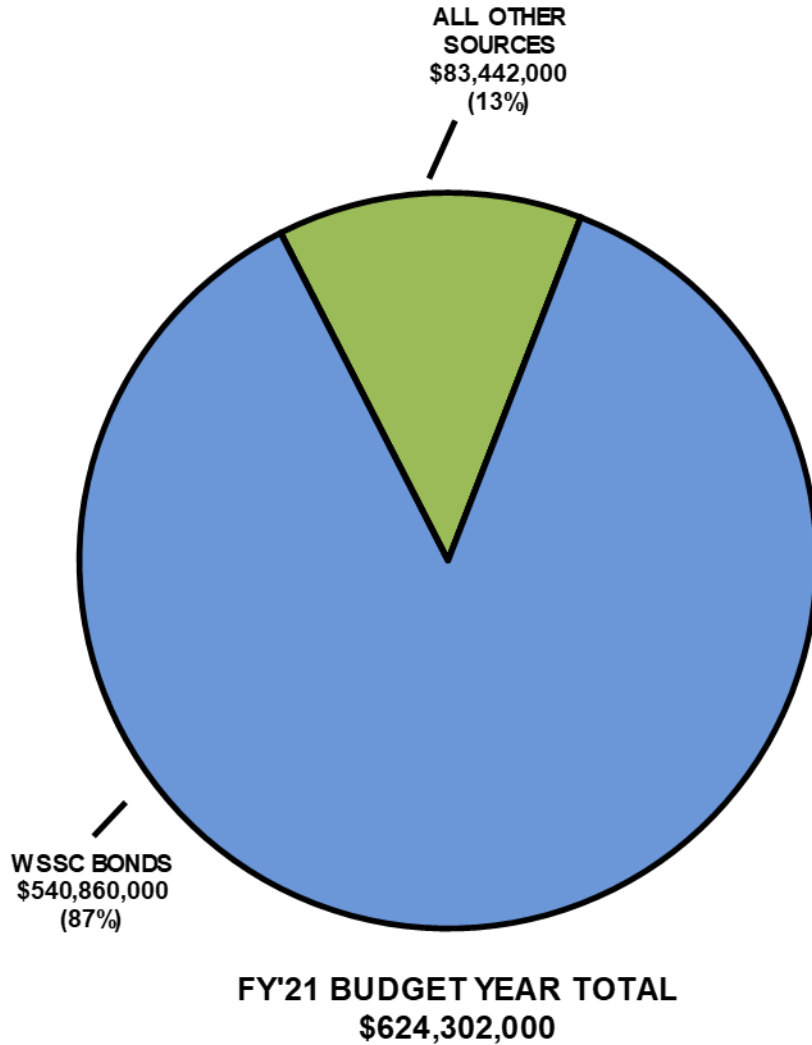
The “Other” cost element, displayed in Block B, in the Expenditure Schedule on each PDF, is a broad estimate of the direct and indirect expenses associated with the implementation of each project and is not covered by the other major cost categories. These costs include direct support costs for a project such as salaries, wages, and related personnel costs (social security, retirement), and services, rentals, supplies, mileage, and other expenses. This element is estimated for the majority of the projects in this document by multiplying the sum of the project’s Planning, Design and Supervision, and Construction cost elements in each column on the PDF by a constant 15%. There are exceptions: a value, based upon 1%, is applied to Blue Plains project costs; a constant of 10% is used to more realistically estimate these expenses for projects with a total estimated cost of \$10 to \$49 million; and, a constant of 5% is used for projects with a total estimated cost of \$50 million or more.

A project’s previous expenditures, which include all direct, indirect and overhead costs, are shown on the PDF in the Block B Expenditure Schedule in the “Thru” Column. These expenditures are accessed from the WSSC’s financial information system through the period ending March 31<sup>st</sup> of each year. End of the fiscal year expenditures were not available in time for the development of project expenditure schedules and are estimated.

FIGURE 3

# WSSC PROPOSED FYS 2021-2026 CIP

## COMBINED PROGRAM FUNDING BY SOURCE



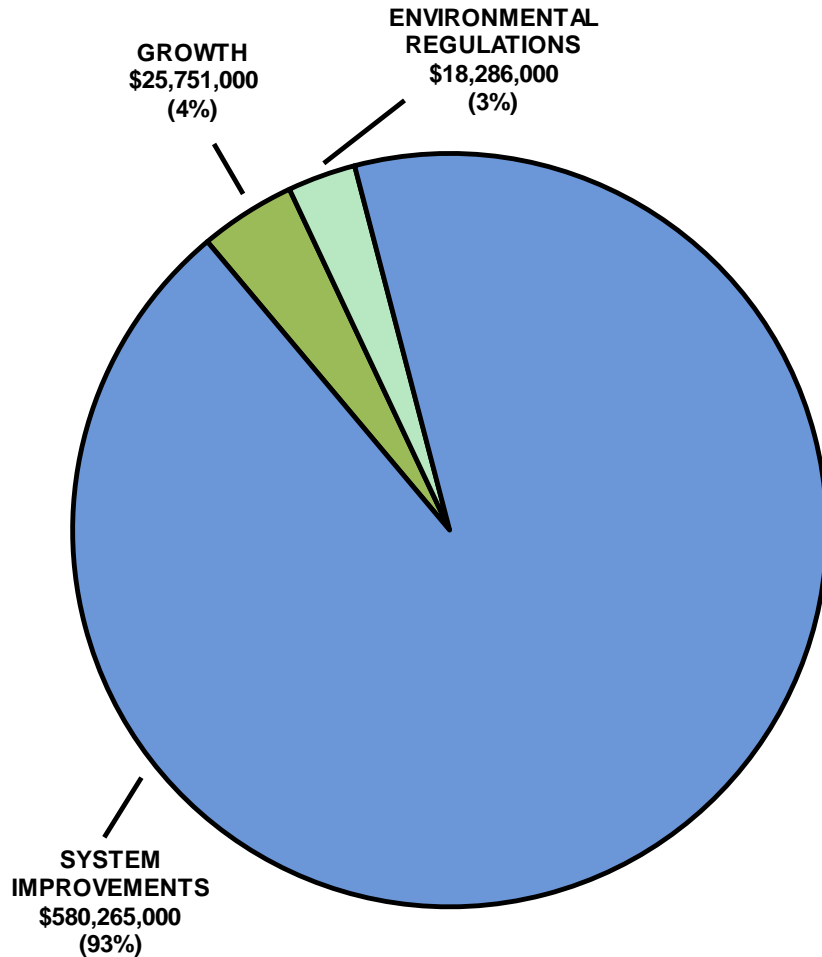
Nearly 90% of the FY'21 Capital Budget is funded through long-term debt.

Funding Source	FY'21 Amount
Federal & State Grants	23,000,000
SDC & Others	25,750,600
Local Government Contributions	3,675,000
WSSC Bonds	540,860,400
PAYGO	31,016,000
<b>Total</b>	<b>624,302,000</b>

FIGURE 4

# WSSC PROPOSED FYS 2021-2026 CIP

## COMBINED PROGRAM BY MAJOR CATEGORY



**FY'21 BUDGET YEAR TOTAL**  
**\$624,302,000**

Over 90% of the FY'21 Capital Budget is for reinvestment in our system infrastructure.

Major Category	FY'21 Amount
System Improvements	580,265,050
Growth	25,750,950
Environmental	18,286,000
<b>Total</b>	<b>624,302,000</b>



## FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

### EXPENDITURE PROJECTIONS

	EST. TOTAL COST	EXPEND THRU 19	EST. EXPEND 20	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
					YR 1 21	YR 2 22	YR 3 23	YR 4 24	YR 5 25	YR 6 26		
Montgomery County Water Projects	55,801	38,090	11,630	6,081	1,821	325	2,278	1,657	0	0	0	1-1
Prince George's County Water Projects	293,581	82,483	20,625	182,193	36,484	55,457	40,853	35,064	7,380	6,955	8,280	5-1
Bi-County Water Projects	960,670	94,088	82,065	677,513	85,314	111,620	125,584	124,445	116,415	114,135	107,004	3-1
<b>TOTAL WATER PROJECTS</b>	<b>1,310,052</b>	<b>214,661</b>	<b>114,320</b>	<b>865,787</b>	<b>123,619</b>	<b>167,402</b>	<b>168,715</b>	<b>161,166</b>	<b>123,795</b>	<b>121,090</b>	<b>115,284</b>	
Montgomery County Sewerage Projects	55,371	19,663	6,676	29,032	9,637	6,633	10,468	2,294	0	0	0	2-1
Prince George's County Sewerage Projects	464,580	267,948	61,701	133,215	38,756	46,691	34,227	6,504	4,304	2,733	1,716	6-1
Bi-County Sewerage Projects	1,777,847	447,382	180,190	957,138	203,061	212,224	180,015	134,432	101,528	125,878	193,137	4-1
<b>TOTAL SEWERAGE PROJECTS</b>	<b>2,297,798</b>	<b>734,993</b>	<b>248,567</b>	<b>1,119,385</b>	<b>251,454</b>	<b>265,548</b>	<b>224,710</b>	<b>143,230</b>	<b>105,832</b>	<b>128,611</b>	<b>194,853</b>	
<b>TOTAL CIP PROGRAM</b>	<b>3,607,850</b>	<b>949,654</b>	<b>362,887</b>	<b>1,985,172</b>	<b>375,073</b>	<b>432,950</b>	<b>393,425</b>	<b>304,396</b>	<b>229,627</b>	<b>249,701</b>	<b>310,137</b>	
Total Information Only Projects	1,949,222	1,092	218,904	1,727,255	249,229	279,817	296,233	291,261	297,428	313,287	1,971	7-1
<b>COMBINED PROGRAM</b>	<b>5,557,072</b>	<b>950,746</b>	<b>581,791</b>	<b>3,712,427</b>	<b>624,302</b>	<b>712,767</b>	<b>689,658</b>	<b>595,657</b>	<b>527,055</b>	<b>562,988</b>	<b>312,108</b>	

### FUNDING SOURCES

WSSC Bonds	4,480,446	448,110	494,215	3,276,917	540,860	624,206	610,699	526,097	469,915	505,140	261,204
PAYGO	248,128	0	31,016	186,096	31,016	31,016	31,016	31,016	31,016	31,016	31,016
State Grants	382,481	238,190	21,291	123,000	21,500	21,500	20,000	20,000	20,000	20,000	0
System Development Charge	315,523	224,205	22,325	60,713	9,530	22,555	17,801	10,597	0	230	8,280
Contribution/Other	66,115	32,072	10,109	23,934	16,221	4,812	1,397	500	502	502	0
Government Contributions	48,809	7,599	2,835	26,767	3,675	4,678	4,745	3,447	4,122	6,100	11,608
Federal Grants	15,570	570	0	15,000	1,500	4,000	4,000	4,000	1,500	0	0
<b>COMBINED PROGRAM</b>	<b>5,557,072</b>	<b>950,746</b>	<b>581,791</b>	<b>3,712,427</b>	<b>624,302</b>	<b>712,767</b>	<b>689,658</b>	<b>595,657</b>	<b>527,055</b>	<b>562,988</b>	<b>312,108</b>

**WSSC FYS 2021 - 2026 CIP  
NEW PROJECTS LISTING  
(ALL FIGURES IN THOUSANDS)**

Agency Number	Project Name	Total Project Cost	6 Year Program Cost	Budget Year Cost	% of Growth
<b><u>Montgomery County Sewer Projects</u></b>					
S-85.22	Shady Grove Neighborhood Center	\$3,391	\$2,733	\$1,367	100%
<b><u>Bi-County Water Projects</u></b>					
W-175.05	Regional Water Supply Resiliency	15,000	15,000	1,500	0%
<b><u>Information Only Projects</u></b>					
A-101.04	Laboratory Division Building Expansion	21,844	20,580	1,276	0%
A-110.00	Other Capital Programs	500,045	431,183	70,610	0%
<b>TOTALS</b>		<b><u>\$540,280</u></b>	<b><u>\$469,496</u></b>	<b><u>\$74,753</u></b>	

**WSSC FYS 2021 - 2026 CIP**  
**ALL PROJECTS PENDING CLOSE-OUT**  
 (ALL FIGURES IN THOUSANDS)

Agency Number	Project Name	Estimated Total Cost	Expenditures Thru FY'19	Estimated Expenditures FY'20	Remarks
<b><u>Montgomery County Water Projects</u></b>					
W-3.02	Olney Standpipe Replacement	\$8,019	\$7,608	\$411	Project completion expected in FY'20.
W-46.15	Clarksburg Elevated Water Storage Facility	7,208	7,024	184	Project completion expected in FY'20.
W-138.02	Shady Grove Standpipe Replacement	12,052	11,644	408	Project completion expected in FY'20.
<b><u>Montgomery County Sewer Projects</u></b>					
S-84.60	Cabin Branch Wastewater Pumping Station	3,435	2,099	1,336	Project completion expected in FY'20.
S-84.61	Cabin Branch WWPS Force Main	542	289	253	Project completion expected in FY'20.
S-84.69	Clarksburg WWPS Force Main	-	-	-	Project combined with S-84.68.
S-103.16	Cabin John Trunk Sewer Relief	14,516	14,516	-	Project completed.
<b><u>Prince George's County Water Projects</u></b>					
W-34.03	Water Transmission Improvements 385B Pressure Zone	14,320	13,765	555	Project completion expected in FY'20.
W-62.05	Clinton Zone Water Storage Facility Implementation	10,036	9,681	355	Project completion expected in FY'20.
W-65.10	St. Barnabas Elevated Tank Replacement	12,318	12,136	182	Project completion expected in FY'20.
<b><u>Prince George's County Sewer Projects</u></b>					
S-57.92	Western Branch Facility Upgrade	52,672	52,437	235	Project completion expected in FY'20
S-75.19	Brandywine Woods Wastewater Pumping Station	-	-	-	Project canceled
S-75.20	Brandywine Woods WWPS Force Main	12	12	-	Project canceled
<b>TOTALS</b>		<b><u>\$135,130</u></b>	<b><u>\$131,211</u></b>	<b><u>\$3,919</u></b>	

13 Projects Pending Close-Out

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## Section 1 - Montgomery County Water Projects

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## FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

### MONTGOMERY COUNTY WATER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 19	EST. EXPEND 20	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 21	YR 2 22	YR 3 23	YR 4 24	YR 5 25	YR 6 26		
W-46.24	Clarksburg Area Stage 3 Water Main, Part 4	4,515	3,798	278	439	439	0	0	0	0	0	0	1-3
W-46.25	Clarksburg Area Stage 3 Water Main, Part 5	2,845	450	1,987	408	408	0	0	0	0	0	0	1-4
W-90.04	Brink Zone Reliability Improvements	16,192	7,566	8,007	619	619	0	0	0	0	0	0	1-5
W-113.20	White Oak Water Mains Augmentation	4,970	0	355	4,615	355	325	2,278	1,657	0	0	0	1-6
	Projects Pending Close-Out	27,279	26,276	1,003	0	0	0	0	0	0	0	0	1-7
	<b>TOTALS</b>	55,801	38,090	11,630	6,081	1,821	325	2,278	1,657	0	0	0	

**GERMANTOWN/CLARKSBURG AREA PROJECTS**  
**(ALL FIGURES IN THOUSANDS)**

AGENCY NUMBER	PROJECT NAME	ADOPTED FY'20 TOTAL COST	PROPOSED FY'21 TOTAL COST	CHANGE \$	CHANGE %	SIX-YEAR COST	COMPLETION DATE (est)
W-46.24	Clarksburg Area Stage 3 Water Main, Part 4	4,088	4,515	427	10.4%	439	Developer Dependent
W-46.25	Clarksburg Area Stage 3 Water Main, Part 5	2,712	2,845	133	4.9%	408	Developer Dependent
	<b>TOTALS</b>	<b>\$6,800</b>	<b>\$7,360</b>	<b>\$560</b>	<b>8.2%</b>	<b>\$847</b>	

**Summary:** These projects are in response to the growth in the up-county area including Germantown and Clarksburg. Clarksburg Area Stage 3 Water Main, Part 4 project (W-46.24) and Clarksburg Area Stage 3 Water Main, Part 5 (W-46.25) will serve the areas designated as "Stage 3" in the Clarksburg Master Plan and Hyattstown Special Study Area.

**Cost Impact:** The cost for project W-46.24 Clarksburg Area Stage 3 Water Main, Part 4 and project W-46.25 Clarksburg Area Stage 3 Water Main, Part 5 have increased based upon updated information provided by the developer.

# Clarksburg Area Stage 3 Water Main, Part 4

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000046.24	113800	Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	Brink HG760A
Drainage Basins	
Planning Areas	Clarksburg & Vicinity PA 13

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	542	480	32	30	30						
Land											
Construction	3,879	3,318	210	351	351						
Other	94		36	58	58						
<b>Total</b>	<b>4,515</b>	<b>3,798</b>	<b>278</b>	<b>439</b>	<b>439</b>						

### C. Funding Schedule (000's)

Contributions/Other	4,515	3,798	278	439	439						
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### D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This project provides for the design and construction of 3,580 feet of 24-inch diameter water main along Brink Road and Route 355 and 2,920 feet of 24-inch diameter water main along West Old Baltimore Road.</p> <p><b>JUSTIFICATION</b></p> <p>This water main is planned to serve the area designated as "Stage 3" in the Clarksburg Master Plan and Hyattstown Special Study Area, approved and adopted in June 1994. General Plan and M-NCP&amp;PC Round 6 growth forecasts.</p> <p><b>COST CHANGE</b></p> <p>Cost and schedule updated based upon information provided by the developer.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. Expenditure and schedule projections shown in Block B are based on information provided by the developer. Design and construction of this project will be performed by the developer under System Extension Permits. The estimated completion date is developer dependent. No WSSC rate supported debt will be used for this project.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: Maryland State Highway Administration; Maryland-National Capital Park &amp; Planning Commission; Montgomery County Government          Coordinating Projects: W - 000046.15 - Clarksburg Elevated Water Storage Facility; W - 000046.25 - Clarksburg Area Stage 3 Water Main, Part 5</p>
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E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$192	
Debt Service		
Total Cost	\$192	
Impact on Water and Sewer Rate		

F. Approval and Expenditure Data (000's)	
Date First in Program	FY 11
Date First Approved	FY 97
Initial Cost Estimate	1,954
Cost Estimate Last FY	4,088
Present Cost Estimate	4,515
Approved Request Last FY	271
Total Expense & Encumbrances	3,798
Approval Request Year 1	439

G. Status Information	
Land Status	Not Applicable
Project Phase	Construction
Percent Complete	75 %
Estimated Completion Date	Developer Dependent

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	

### H. Map



# Clarksburg Area Stage 3 Water Main, Part 5

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000046.25	163801	Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	Brink HG760A
Drainage Basins	
Planning Areas	Clarksburg & Vicinity PA 13

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	220	215	5								
Land											
Construction	2,280	235	1,690	355	355						
Other	345		292	53	53						
<b>Total</b>	<b>2,845</b>	<b>450</b>	<b>1,987</b>	<b>408</b>	<b>408</b>						

### C. Funding Schedule (000's)

Contributions/Other	2,845	450	1,987	408	408						
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### D. Description & Justification

<p><b>DESCRIPTION</b> This project provides for the design and construction of 2,700 feet of 24-inch diameter water main along Route 355 and West Old Baltimore Road.</p> <p><b>JUSTIFICATION</b> This water main is planned to serve the area designated as "Stage 3" in the Clarksburg Master Plan and Hyattstown Special Study Area, approved and adopted in June, 1994. General Plan and M-NCPPC Round 6 growth forecasts.</p> <p><b>COST CHANGE</b> Not applicable.</p> <p><b>OTHER</b> The project scope has remained the same. Pending area road projects had resulted in the need to accelerate portions of the 24-inch water project separate from project W-46.24. The project will be completed by the developer under a System Extension permit and in conjunction with Montgomery County and Maryland State Highway Administration road projects. No WSSC rate supported debt will be used for this project.</p> <p><b>COORDINATION</b> Coordinating Agencies: Maryland State Highway Administration; Maryland-National Capital Park &amp; Planning Commission; Montgomery County Department of Public Works and Transportation; Montgomery County Government Coordinating Projects: W - 000046.24 - Clarksburg Area Stage 3 Water Main, Part 4</p>
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E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$80	
Debt Service		
Total Cost	\$80	
Impact on Water and Sewer Rate		

### F. Approval and Expenditure Data (000's)

Date First in Program	FY 16
Date First Approved	FY 97
Initial Cost Estimate	1,624
Cost Estimate Last FY	2,712
Present Cost Estimate	2,845
Approved Request Last FY	397
Total Expense & Encumbrances	450
Approval Request Year 1	408

### G. Status Information

Land Status	Not Applicable
Project Phase	Construction
Percent Complete	70 %
Estimated Completion Date	Developer Dependent

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	

### H. Map





# Brink Zone Reliability Improvements

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000090.04	143800	Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	Brink HG760A; Cedar Heights HG836A; Clarksburg HG740B;
Drainage Basins	
Planning Areas	Gaithersburg & Vicinity PA 20

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	1,767	1,337	396	34	34						
Land											
Construction	13,641	6,229	6,883	529	529						
Other	784		728	56	56						
<b>Total</b>	<b>16,192</b>	<b>7,566</b>	<b>8,007</b>	<b>619</b>	<b>619</b>						

## C. Funding Schedule (000's)

WSSC Bonds	16,192	7,566	8,007	619	619						
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## D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This project provides for the planning, design, and construction of a new water pumping station and pipeline to increase reliability and redundancy to the Montgomery County High Zone water transmission system.</p> <p><b>JUSTIFICATION</b></p> <p>The Neelsville Water Pumping Station is the sole delivery of water from the Montgomery County High Zone (HG660) through a single 24-inch diameter PCCP Water Transmission Main that crosses 2 miles to the Brink Elevated Tank (HG760). The new pumping station will effectively deliver water to the Brink Elevated Tank and, in turn, the Cedar Heights (HG836), Damascus (HG960), and dependent pressure zones.</p> <p>Business Case Evaluation: Brink Reliability Assessment, Black &amp; Veatch (June 2013).</p> <p><b>COST CHANGE</b></p> <p>Not applicable.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. Expenditure and schedule projections shown in Block B are based upon actual bid.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: Maryland Department of the Environment; Maryland-National Capital Park &amp; Planning Commission; Montgomery County Department of Environmental Protection; Montgomery 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	\$1,053	22
Total Cost	\$1,053	22
Impact on Water and Sewer Rate		

## F. Approval and Expenditure Data (000's)

Date First in Program	FY 14
Date First Approved	FY 14
Initial Cost Estimate	345
Cost Estimate Last FY	16,700
Present Cost Estimate	16,192
Approved Request Last FY	6,085
Total Expense & Encumbrances	7,566
Approval Request Year 1	619

## G. Status Information

Land Status	Not Applicable
Project Phase	Construction
Percent Complete	45 %
Estimated Completion Date	August 2020

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	13 MGD

## H. Map



# White Oak Water Mains Augmentation

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000113.20	382001	Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	Montgomery Main 495A
Drainage Basins	
Planning Areas	Fairland-Beltsville (PG) PA 61; Langley Park & Vicinity PA 65

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	823		309	514	309	103	51	51			
Land											
Construction	3,500			3,500		180	1,930	1,390			
Other	647		46	601	46	42	297	216			
<b>Total</b>	<b>4,970</b>		<b>355</b>	<b>4,615</b>	<b>355</b>	<b>325</b>	<b>2,278</b>	<b>1,657</b>			

## C. Funding Schedule (000's)

SDC	4,970		355	4,615	355	325	2,278	1,657			
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## D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction required for the replacement of 7,650 feet of 4-inch to 20-inch diameter water main along Cherry Hill Road, Gracefield Road, and Powder Mill Road/Perimeter Road to serve three planned projects in the White Oak area: Washington Adventist Hospital, VIVA Global LifeSci Village, and Food & Drug Administration White Oak Master Plan.

**JUSTIFICATION**  
 The existing mains in these areas will be upsized to provide adequate capacity to serve domestic and fire flow needs for the three new developments. The mains will also provide additional looping and redundancy to the 495A Pressure Zone. MWCOG Round 8.0 growth forecasts; WSSC Memorandum dated November 21, 2017; Capital Needs Process Validation #122 submitted December 4, 2017.

**COST CHANGE**  
 Not applicable.

**OTHER**  
 The schedule and expenditures shown in Block B above are preliminary planning level estimates and are expected to change once the project moves into design.

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

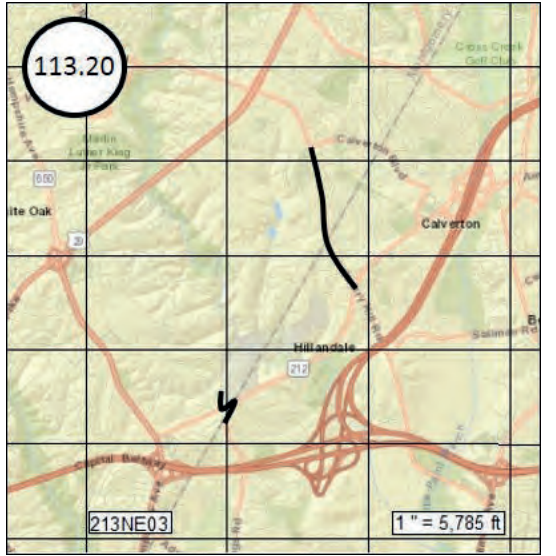
E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$226	25
Debt Service		
Total Cost	\$226	25
Impact on Water and Sewer Rate		

F. Approval and Expenditure Data (000's)	
Date First in Program	FY 20
Date First Approved	FY 20
Initial Cost Estimate	4,380
Cost Estimate Last FY	4,830
Present Cost Estimate	4,970
Approved Request Last FY	345
Total Expense & Encumbrances	
Approval Request Year 1	355

G. Status Information	
Land Status	Not Applicable
Project Phase	Planning
Percent Complete	10 %
Estimated Completion Date	April 2024

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	

## H. Map



**PROJECTS PENDING CLOSE-OUT**  
**Montgomery County Water Projects**  
 (ALL FIGURES IN THOUSANDS)

<b>Project Number</b>	<b>Agency Number</b>	<b>Project Name</b>	<b>Estimated Total Cost</b>	<b>Expenditures Thru FY'19</b>	<b>Estimated Expenditures FY'20</b>	<b>Remarks</b>
063801	W-3.02	Olney Standpipe Replacement	\$8,019	\$7,608	\$411	Project completion expected in FY'20.
973819	W-46.15	Clarksburg Elevated Water Storage Facility	7,208	7,024	184	Project completion expected in FY'20.
093801	W-138.02	Shady Grove Standpipe Replacement	12,052	11,644	408	Project completion expected in FY'20.
		<b>TOTALS</b>	\$27,279	\$26,276	\$1,003	

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## Section 2 - Montgomery County Sewer Projects

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### FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

#### MONTGOMERY COUNTY SEWER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 19	EST. EXPEND 20	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM	
						YR 1 21	YR 2 22	YR 3 23	YR 4 24	YR 5 25	YR 6 26			
S-84.67	Milestone Center Sewer Main	834	288	0	546	522	24	0	0	0	0	0	0	2-3
S-84.68	Clarksburg Wastewater Pumping Station & Sewer Improvements	4,954	1,254	3,082	618	618	0	0	0	0	0	0	0	2-4
S-85.21	Shady Grove Station Sewer Augmentation	6,982	519	353	6,110	5,773	244	93	0	0	0	0	0	2-5
S-85.22	Shady Grove Neighborhood Center	3,391	0	658	2,733	1,367	1,366	0	0	0	0	0	0	2-6
S-94.13	Damascus Town Center WWPS Replacement	9,669	215	534	8,920	652	2,901	5,129	238	0	0	0	0	2-7
S-94.14	Spring Gardens WWPS Replacement	11,048	483	460	10,105	705	2,098	5,246	2,056	0	0	0	0	2-8
	Projects Pending Close-Out	18,493	16,904	1,589	0	0	0	0	0	0	0	0	0	2-9
	<b>TOTALS</b>	<b>55,371</b>	<b>19,663</b>	<b>6,676</b>	<b>29,032</b>	<b>9,637</b>	<b>6,633</b>	<b>10,468</b>	<b>2,294</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**Montgomery County Sewer Projects**  
**New Projects Listing**  
 (ALL FIGURES IN THOUSANDS)

<b>Agency Number</b>	<b>Project Name</b>	<b>Total Project Cost</b>	<b>Budget Year Cost</b>	<b>Page Number</b>
S-85.22	Shady Grove Neighborhood Center	\$3,391	\$1,367	2-6
	<b>TOTALS</b>	\$3,391	\$1,367	

# Milestone Center Sewer Main

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000084.67	173804	Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	Seneca Creek 15
Planning Areas	Germantown & Vicinity PA 19

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	418	288		130	130						
Land											
Construction	345			345	324	21					
Other	71			71	68	3					
<b>Total</b>	<b>834</b>	<b>288</b>		<b>546</b>	<b>522</b>	<b>24</b>					

## C. Funding Schedule (000's)

Contributions/Other	834	288		546	522	24					
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## D. Description & Justification

<b>DESCRIPTION</b>
This project provides for the planning, design, and construction of approximately 1,860 feet of 18-inch diameter sewer main to serve the new Milestone development.
<b>JUSTIFICATION</b>
Milestone Development Amended Hydraulic Planning Analysis and Letter of Findings #2 (January 2016).
<b>COST CHANGE</b>
Not applicable.
<b>OTHER</b>
The project scope has remained the same. The expenditures and schedule projection shown in Block B are based upon information provided by the developer. Estimated completion date is developer dependent. No WSSC rate supported debt will be used for this project.
<b>COORDINATION</b>
Coordinating Agencies: 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	\$38	
Debt Service		
Total Cost	\$38	
Impact on Water and Sewer Rate		

## F. Approval and Expenditure Data (000's)

Date First in Program	FY 18
Date First Approved	FY 18
Initial Cost Estimate	504
Cost Estimate Last FY	657
Present Cost Estimate	834
Approved Request Last FY	507
Total Expense & Encumbrances	288
Approval Request Year 1	522

## G. Status Information

Land Status	Not Applicable
Project Phase	Design
Percent Complete	0 %
Estimated Completion Date	Developer Dependent
Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	2.83 MGD

## H. Map



# Clarksburg Wastewater Pumping Station & Sewer Improvements

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000084.68	173802	Change

PDF Date	October 1, 2019
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'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	1,305	1,088	180	37	37						
Land	166	166									
Construction	3,000		2,500	500	500						
Other	483		402	81	81						
<b>Total</b>	<b>4,954</b>	<b>1,254</b>	<b>3,082</b>	<b>618</b>	<b>618</b>						

**C. Funding Schedule (000's)**

SDC	4,954	1,254	3,082	618	618						
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**D. Description & Justification**

**DESCRIPTION**  
 This project provides for the planning, design, and construction of a 0.94 MGD wastewater pumping station and 1,270 feet of force main. The new wastewater pumping station and force main will provide service to the Miles property and the Clarksburg Historic District.

**JUSTIFICATION**  
 Clarksburg Master Plan & Hyattstown Special Study Area (Approved and Adopted, June 1994). Ten Mile Creek Area Limited Amendment to Clarksburg Master Plan and Hyattstown Special Study Area (Approved July 2014). Clarksburg - Ten Mile Creek Area Sewer Facility Study Business Case, CDM Smith (March 2015).

**COST CHANGE**  
 The projected cost of the combined Clarksburg Wastewater Pumping Station and the Clarksburg WWPS Force Main projects has decreased significantly due to revisions in the estimated construction cost based on the final design.

**OTHER**  
 The project scope has been revised to include the Clarksburg WWPS Force Main project. The schedule and expenditure projections shown in Block B above are based on the final design estimate and may change based upon actual bid. Planning work for this project began in FY '17 under ESP project S-602.61, Clarksburg - Ten Mile Creek Area Study. The Montgomery County Planning Board endorsed the Study recommendation Alternative 12 on May 26, 2016. The Montgomery County Council adopted a resolution supporting the Study recommendation on July 12, 2016. No WSSC rate supported debt will be used for this project.

**COORDINATION**  
 Coordinating Agencies: Maryland-National Capital Park & Planning Commission; Montgomery County Department of Environmental Protection; Montgomery County Government  
 Coordinating Projects: S - 000084.69 - Clarksburg WWPS Force Main

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 18
Date First Approved	FY 18
Initial Cost Estimate	4,542
Cost Estimate Last FY	5,824
Present Cost Estimate	4,954
Approved Request Last FY	1,357
Total Expense & Encumbrances	1,254
Approval Request Year 1	618

**G. Status Information**

Land Status	Land Acquired
Project Phase	Construction
Percent Complete	0 %
Estimated Completion Date	August 2020

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	0.94 MGD

**H. Map**





# Shady Grove Station Sewer Augmentation

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000085.21	153800	Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	Rock Creek 05
Planning Areas	Gaithersburg & Vicinity PA 20

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	574	511	30	33	20	12	1				
Land											
Construction	5,565	8	277	5,280	5,000	200	80				
Other	843		46	797	753	32	12				
<b>Total</b>	<b>6,982</b>	<b>519</b>	<b>353</b>	<b>6,110</b>	<b>5,773</b>	<b>244</b>	<b>93</b>				

### C. Funding Schedule (000's)

Contributions/Other	6,982	519	353	6,110	5,773	244	93				
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### D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of approximately 3,600 feet of 15-inch to 18-inch diameter sewers. These sewers will replace an existing 10-inch diameter sewer main near Crabbs Branch Creek and CSX Railroad and terminate at a manhole approximately 300 feet southeast of Redland Road.

**JUSTIFICATION**  
 The new 15-inch and 18-inch diameter sewers will serve the area encompassed by Shady Grove Road, I-370, and CSX Railroad. Due to the development density proposed in DA5409Z12, the projected peak wastewater flow exceeds the capacity of existing sewers.

**COST CHANGE**  
 The current schedule and expenditure estimates reflect updated information provided by the developer.

**OTHER**  
 The project scope has remained the same. The expenditures and schedule projections shown in Block B are based upon information provided by the developer. Design and construction will be performed by the developer under a Systems Extension Permit. Estimated completion date is developer dependent. No WSSC rate supported debt will be used for this project.

**COORDINATION**  
 Coordinating Agencies: 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)

Staff & Other		FY of Impact
Maintenance	\$73	
Debt Service		
Total Cost	\$73	
Impact on Water and Sewer Rate		

### F. Approval and Expenditure Data (000's)

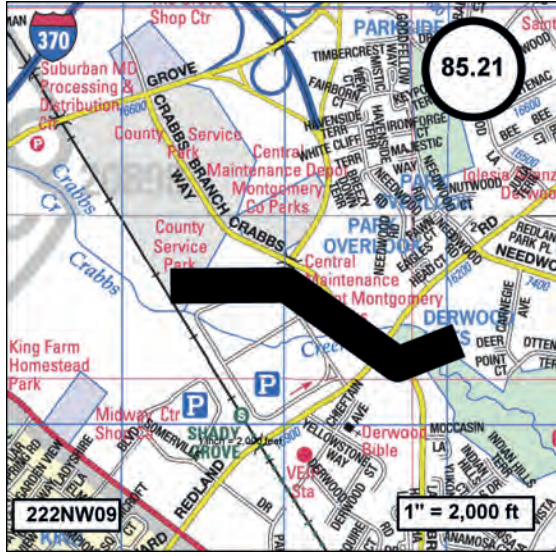
Date First in Program	FY 15
Date First Approved	FY 15
Initial Cost Estimate	2,254
Cost Estimate Last FY	2,538
Present Cost Estimate	6,982
Approved Request Last FY	1,245
Total Expense & Encumbrances	519
Approval Request Year 1	5,773

### G. Status Information

Land Status	Not Applicable
Project Phase	Design
Percent Complete	50 %
Estimated Completion Date	Developer Dependent

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	5,500
Capacity	1.0 - 3.0 MGD

### H. Map



# Shady Grove Neighborhood Center

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000085.22		Add

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	Watts Branch 16
Planning Areas	Gaithersburg & Vicinity PA 20

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	527		350	177	89	88					
Land											
Construction	2,493		293	2,200	1,100	1,100					
Other	371		15	356	178	178					
<b>Total</b>	<b>3,391</b>		<b>658</b>	<b>2,733</b>	<b>1,367</b>	<b>1,366</b>					

### C. Funding Schedule (000's)

Contributions/Other	3,391		658	2,733	1,367	1,366					
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### D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This project provides for the planning, design and construction of 3,600 feet of 15-inch sewer main and 875 feet of 18-inch sewer main to serve the Shady Grove Neighborhood Center Subdivision.</p> <p><b>JUSTIFICATION</b></p> <p>Shady Grove Neighborhood Center Planning Analysis (March, 2019). The existing sewer system cannot handle the projected flows that will be generated by the Shady Grove Neighborhood Center. The timing and scheduling of this project is dependent on the developer.</p> <p><b>COST CHANGE</b></p> <p>Not applicable.</p> <p><b>OTHER</b></p> <p>The present project scope was developed for the FY2021 CIP and has an estimated total cost of \$3,391,000. The expenditures and schedule projections shown in Block B are based on information provided by the developer. The estimated completion date is developer dependent. No WSSC rate supported debt will be used for this project.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: Maryland Department of the Environment; Maryland-National Capital Park &amp; Planning Commission; Montgomery County Government</p> <p>Coordinating Projects: Not Applicable</p>
---

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$90	
Debt Service		
Total Cost	\$90	
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	
Cost Estimate Last FY	
Present Cost Estimate	3,391
Approved Request Last FY	
Total Expense & Encumbrances	
Approval Request Year 1	1,367

### G. Status Information

Land Status	Not Applicable
Project Phase	Planning
Percent Complete	40 %
Estimated Completion Date	Developer Dependent
Growth	100%
System Improvement	
Environmental Regulation	
Population Served	7,000
Capacity	1.40 to 2.45 MGD

### H. Map



# Damascus Town Center WWPS Replacement

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000094.13	382002	Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	Patuxent North 26; Seneca Creek 15
Planning Areas	Damascus & Vicinity PA 11

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	1,658	215	464	979	567	180	180	52			
Land											
Construction	6,778			6,778		2,343	4,280	155			
Other	1,233		70	1,163	85	378	669	31			
<b>Total</b>	<b>9,669</b>	<b>215</b>	<b>534</b>	<b>8,920</b>	<b>652</b>	<b>2,901</b>	<b>5,129</b>	<b>238</b>			

### C. Funding Schedule (000's)

WSSC Bonds	6,768	150	374	6,244	456	2,031	3,590	167			
SDC	2,901	65	160	2,676	196	870	1,539	71			

### D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This project provides for the planning, design and construction of a 0.416 MGD wastewater pumping station (WWPS), approximately 2,100 LF of gravity sewer and 2,100 LF of force main (FM). The new WWPS and associated FM and gravity sewer will provide service to the existing and future Damascus Town Center service area.</p> <p><b>JUSTIFICATION</b></p> <p>The existing pumping station, which is over thirty-five years old, was originally built as a privately owned facility and did not conform to WSSC standards. The pumping station was taken over by WSSC in the late 1970s. It has reached the end of its useful life and replacement parts are obsolete. Additionally, the capacity of the pumping station must be increased to accommodate the future service area in accordance with the Maryland National Capital Park and Planning Commission Damascus Master Plan. The Asset Management Office Business Case CNPV7 recommended the pumping station replacement.</p> <p><b>COST CHANGE</b></p> <p>Not applicable.</p> <p><b>OTHER</b></p> <p>The project scope remained the same. The schedule and expenditure projections shown in Block B above are preliminary planning level estimates and may change based upon site conditions and design constraints. Planning work began in FY'18 under ESP project S-602.01, Damascus Town Center WWPS Replacement. Land costs are included in WSSC project S-203.00.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: Maryland Department of the Environment; Maryland-National Capital Park &amp; Planning Commission; Montgomery County Department of Environmental Protection; Montgomery County Department of Public Works and Transportation; Montgomery 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	\$440	25
Total Cost	\$440	25
Impact on Water and Sewer Rate		

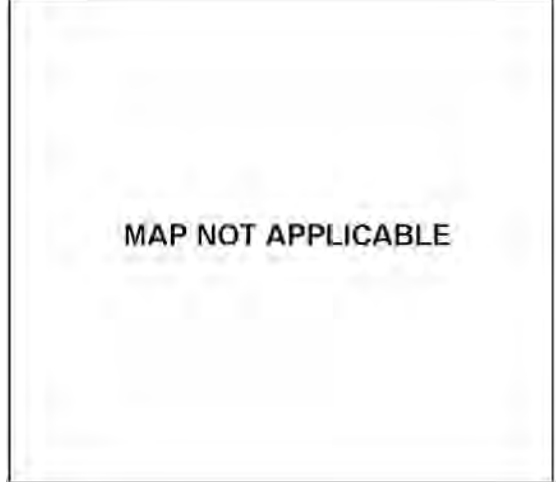
### F. Approval and Expenditure Data (000's)

Date First in Program	FY20
Date First Approved	FY20
Initial Cost Estimate	9,460
Cost Estimate Last FY	9,460
Present Cost Estimate	9,669
Approved Request Last FY	520
Total Expense & Encumbrances	215
Approval Request Year 1	652

### G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	Planning
Percent Complete	5 %
Estimated Completion Date	June 2024
Growth	30%
System Improvement	70%
Environmental Regulation	
Population Served	854
Capacity	0.416 MGD

### H. Map



# Spring Gardens WWPS Replacement

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000094.14	382003	Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	Monocacy 25
Planning Areas	Damascus & Vicinity PA 11

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	2,710	343	400	1,967	613	824	412	118			
Land	140	140									
Construction	6,901			6,901		1,000	4,150	1,751			
Other	1,297		60	1,237	92	274	684	187			
<b>Total</b>	<b>11,048</b>	<b>483</b>	<b>460</b>	<b>10,105</b>	<b>705</b>	<b>2,098</b>	<b>5,246</b>	<b>2,056</b>			

### C. Funding Schedule (000's)

WSSC Bonds	3,646	159	152	3,335	233	693	1,731	678			
SDC	7,402	324	308	6,770	472	1,405	3,515	1,378			

### D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This project provides for the planning, design, and construction of a 1.3 MGD wastewater pumping station, 7,500 LF of force main, and 900 LF of gravity sewer. The relocated wastewater pumping station and force main will provide service to the existing and future Spring Gardens service area.</p> <p><b>JUSTIFICATION</b></p> <p>The existing pumping station and force main are over forty-one 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. The Asset Management Office Business Case CNPV6 recommended the pumping station replacement.</p> <p><b>COST CHANGE</b></p> <p>Not applicable.</p> <p><b>OTHER</b></p> <p>The project scope remained the same. The schedule and expenditure projections shown in Block B above are preliminary planning level estimates and may change based upon site conditions and design constraints. Planning work began in FY'18 under ESP project S-602.26, Spring Gardens WWPS Replacement.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: Maryland Department of the Environment; Maryland State Highway Administration; Maryland-National Capital Park &amp; Planning Commission; Montgomery County Department of Public Works and Transportation; Montgomery 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	\$170	25
Debt Service	\$237	25
Total Cost	\$407	25
Impact on Water and Sewer Rate		

### F. Approval and Expenditure Data (000's)

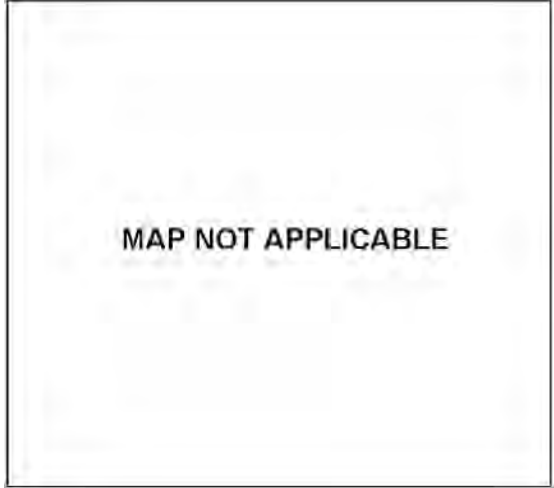
Date First in Program	FY 20
Date First Approved	FY 20
Initial Cost Estimate	10,180
Cost Estimate Last FY	10,320
Present Cost Estimate	11,048
Approved Request Last FY	921
Total Expense & Encumbrances	483
Approval Request Year 1	705

### G. Status Information

Land Status	Land Acquired
Project Phase	Planning
Percent Complete	5 %
Estimated Completion Date	June 2024

Growth	67%
System Improvement	33%
Environmental Regulation	
Population Served	
Capacity	1.3 MGD

### H. Map



**PROJECTS PENDING CLOSE-OUT**  
**Montgomery County Sewer Projects**  
 (ALL FIGURES IN THOUSANDS)

Project Number	Agency Number	Project Name	Estimated Total Cost	Expenditures Thru FY'19	Estimated Expenditures FY'20	Remarks
23807	S-84.60	Cabin Branch Wastewater Pumping Station	\$3,435	\$2,099	\$1,336	Project completion expected in FY'20.
23808	S-84.61	Cabin Branch WWPS Force Main	542	289	253	Project completion expected in FY'20.
173803	S-84.69	Clarksburg WWPS Force Main	0	0	0	Project combined with S-84.68
153801	S-103.16	Cabin John Trunk Sewer Relief	14,516	14,516	0	Project completed.
		<b>TOTALS</b>	\$18,493	\$16,904	\$1,589	

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## Section 3 - Bi-County Water Projects

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### FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

#### BI-COUNTY WATER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 19	EST. EXPEND 20	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM	
						YR 1 21	YR 2 22	YR 3 23	YR 4 24	YR 5 25	YR 6 26			
W-73.22	Potomac WFP Pre-Filter Chlorination & Air Scour Improvements	24,404	12,700	8,713	2,991	2,991	0	0	0	0	0	0	0	3-4
W-73.30	Potomac WFP Submerged Channel Intake	88,177	4,348	0	0	0	0	0	0	0	0	83,829	3-5	
W-73.32	Potomac WFP Main Zone Pipeline	37,745	1,400	880	35,465	688	7,387	13,640	10,340	3,410	0	0	3-6	
W-73.33	Potomac WFP Consent Decree Program	202,032	8,307	11,025	160,125	10,500	26,250	31,500	30,975	30,450	30,450	22,575	3-7	
W-139.02	Duckett & Brighton Dam Upgrades	41,942	31,909	10,011	22	22	0	0	0	0	0	0	3-8	
W-161.01	Large Diameter Water Pipe & Large Valve Rehabilitation Program	489,509	0	43,301	446,208	58,139	67,803	76,426	79,120	81,045	83,675	0	3-9	
W-172.07	Patuxent Raw Water Pipeline	33,788	13,476	4,582	15,730	9,570	6,160	0	0	0	0	0	3-12	
W-172.08	Rocky Gorge Pump Station Upgrade	24,980	21,948	2,640	392	392	0	0	0	0	0	0	3-13	
W-175.05	Regional Water Supply Resiliency	15,000	0	0	15,000	1,500	4,000	4,000	4,000	1,500			3-14	
W-202.00	Land & Rights-of-Way Acquisition - Bi-County Water	3,093	0	913	1,580	1,512	20	18	10	10	10	600	3-15	
<b>TOTALS</b>		960,670	94,088	82,065	677,513	85,314	111,620	125,584	124,445	116,415	114,135	107,004		

**Bi-County Water Projects**  
**New Projects Listing**  
 (ALL FIGURES IN THOUSANDS)

<b>Agency Number</b>	<b>Project Name</b>	<b>Total Project Cost</b>	<b>Budget Year Cost</b>	<b>Page Number</b>
W-175.05	Regional Water Supply Resiliency	\$15,000	\$1,500	3-14
	<b>TOTALS</b>	\$15,000	\$1,500	



**POTOMAC WATER FILTRATION PLANT PROJECTS**  
**(ALL FIGURES IN THOUSANDS)**

AGENCY NUMBER	PROJECT NAME	ADOPTED FY'20 TOTAL COST	PROPOSED FY'21 TOTAL COST	CHANGE \$	CHANGE %	SIX-YEAR COST	COMPLETION DATE (est)
W-73.22	Potomac WFP Pre-Filter Chlorination & Air Scour Improvements	\$25,275	\$24,404	(\$871)	-3.4%	\$2,991	June 2021
W-73.30	Potomac WFP Submerged Channel Intake	85,603	88,177	2,574	3.0%	0	TBD
W-73.32	Potomac WFP Main Zone Pipeline	38,102	37,745	(357)	-0.9%	35,465	June 2025
W-73.33	Potomac WFP Consent Decree Program	163,823	202,032	38,209	23.3%	160,125	January 2027
	<b>TOTALS</b>	<b>\$312,803</b>	<b>\$352,358</b>	<b>\$39,555</b>	<b>12.6%</b>	<b>\$198,581</b>	

**Summary:** This group of projects represents operational improvements to the Potomac Water Filtration Plant (WFP) in Montgomery County. The Potomac WFP Pre-Filter Chlorination & Air Scour Improvements project (W-73.22) provides for a pre-filter chlorination system, evaluation of retrofitting an air scour system, and the replacement of existing plant filters to improve the performance of the underdrain system. The Potomac WFP Submerged Channel Intake project (W-73.30) will provide an additional barrier against drinking water contamination, enhance reliability, and reduce treatment costs by drawing water from a location with a cleaner, more stable water quality. The Potomac WFP Main Zone Pipeline project (W-73.32) provides an 84-inch diameter redundancy main from the Main Zone pumping station to the 96-inch diameter and 66-inch diameter main wye connections on River Road. The Potomac WFP Consent Decree Program project (W-73.33) 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 the Commission to meet the new discharge limitations identified in the Consent Decree.

**Cost Impact:** Due to budgetary constraints, the Potomac WFP Submerged Channel Intake project (W-73.30) has been deferred to beyond six years. Estimates for the Potomac WFP Consent Decree Program (W-73.33) were increased for inflation and are based on recommendations in the approved revised LTUP Report dated September 2018.

# Potomac WFP Pre-Filter Chlorination & Air Scour Improvements

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000073.22	143803	Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	Bi-County

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	1,749	782	720	247	247						
Land											
Construction	21,591	11,918	7,201	2,472	2,472						
Other	1,064		792	272	272						
<b>Total</b>	<b>24,404</b>	<b>12,700</b>	<b>8,713</b>	<b>2,991</b>	<b>2,991</b>						

### C. Funding Schedule (000's)

WSSC Bonds	24,404	12,700	8,713	2,991	2,991						
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### D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of a pre-filter chlorination system and filter air scour system for the Potomac Water Filtration Plant. It also includes the replacement of all 32 filter underdrains.

**JUSTIFICATION**  
 Due to numerous separate incidents of catastrophic filter underdrain failures since October 2006, an investigation was conducted by WSSC and ITT Leopold, suppliers of the failed underdrain systems. The investigation revealed that the ITT Leopold underdrain system with an Integral Media Support (IMS) cap is not compatible with the biologically active filters at the Potomac WFP. Engineering Standard - I. M. S. Cap Monitoring Operation, and Maintenance Instructions, ITT Water & Wastewater, Leopold, Inc., (April 2009). Memo from John Geibel, P.E., Sr. Product Engineer @ ITT Water & Wastewater, Leopold, Inc. - Potomac Filtration Plant Visit April 2009 - to Joseph Johnson, Potomac Plant Superintendent, (May 2010).

**COST CHANGE**  
 Not applicable.

**OTHER**  
 The project scope has remained the same. The Potomac Water Filtration Plant experienced fourteen separate incidents of catastrophic filter underdrain failure from October 2006 through FY '17, including three filters that failed twice. The failure rate accelerated with six of the fourteen filter failures taking place during the spring and summer of 2016. The construction for Pre-Filter Chlorination and Underdrain Replacement have been completed. Expenditure and schedule projections shown in Block B above include design level estimates for Air Scour (which may change based on actual bids). The original plan was to design and construct both pre-filter chlorination and air scour systems as one deliverable at the same time. However, due to the more critical need to implement pre-filter chlorination at the Potomac plant, this portion of the project was placed on an accelerated schedule for design and construction, separate from that of the air scour system.

**COORDINATION**  
 Coordinating Agencies: 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	\$1,588	22
Total Cost	\$1,588	22
Impact on Water and Sewer Rate		

### F. Approval and Expenditure Data (000's)

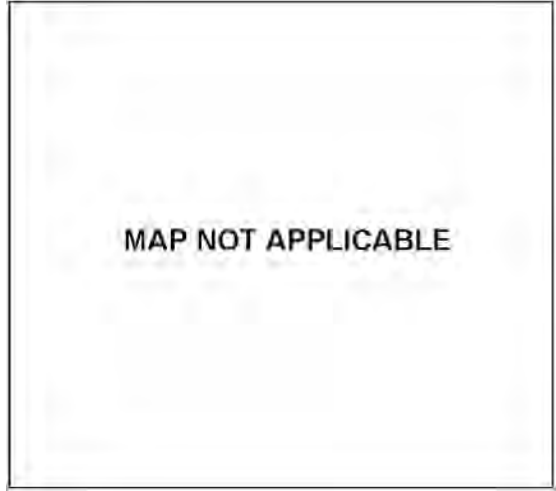
Date First in Program	FY 14
Date First Approved	FY 14
Initial Cost Estimate	5,602
Cost Estimate Last FY	25,275
Present Cost Estimate	24,404
Approved Request Last FY	8,000
Total Expense & Encumbrances	12,700
Approval Request Year 1	2,991

### G. Status Information

Land Status	Not Applicable
Project Phase	Design
Percent Complete	100 %
Estimated Completion Date	June 2021

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

### H. Map



# Potomac WFP Submerged Channel Intake

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000073.30	033812	Change

PDF Date	October 1, 2019
Date Revised	

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

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	11,181	4,228									6,953
Land											
Construction	73,004	120									72,884
Other	3,992										3,992
<b>Total</b>	<b>88,177</b>	<b>4,348</b>									<b>83,829</b>

### C. Funding Schedule (000's)

WSSC Bonds	88,177	4,348									83,829
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### D. Description & Justification

**DESCRIPTION**  
 This project includes planning, which involves community outreach and coordination with elected officials, design, and construction of a submerged channel intake to provide an additional barrier against drinking water contamination (particularly Giardia cysts and Cryptosporidium oocysts), as well as to enhance reliability and reduce treatment costs by drawing water from a location with cleaner, more stable water quality.

**JUSTIFICATION**  
 The project is expected to pay for itself over time based upon the reduced chemical and solids handling costs resulting from the cleaner raw water source. It also provides for a more reliable supply by eliminating the current problems associated with ice and vegetation blocking the existing bank withdrawal. This project is consistent with the industry's recommended multiple barrier approach. "Technical Memorandum No. 2 Water Quality Needs Assessment", O'Brien & Gere Engineers, Inc. (November 2001); "Draft Source Water Assessment Study", Maryland Department of the Environment (April 2003); "Potomac WFP Facility Plan", O'Brien & Gere Engineers, Inc. (September 2002; "Draft Feasibility Study Report", Black & Veatch (November 2013).

**COST CHANGE**  
 Due to budgetary constraints the project was deferred to beyond six years.

**OTHER**  
 The project scope has remained the same. Significant outreach activities occurred as part of the planning phase of this project. The National Environmental Policy Act (NEPA) process was concluded in January 2018 when the National Park Service (NPS) approved the Environmental Assessment and transmitted its record of decision and the Finding of No Significant Impact. A series of briefings with State legislators, County Council members, County Executive staff, and County Council staff will be undertaken prior to commencement of further engineering work. Both Councils will review the results of the detailed study and must approve continuing with the project before design and construction may proceed. Land costs are included in WSSC Project W-202.00.

**COORDINATION**  
 Coordinating Agencies: Maryland Department of Natural Resources; 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 Department of Environmental Resources; Prince George's County Government; U.S. Army Corps of Engineers  
 Coordinating Projects: W - 000073.33 - Potomac WFP Consent Decree Program

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$5,736	
Total Cost	\$5,736	
Impact on Water and Sewer Rate	\$0.01	

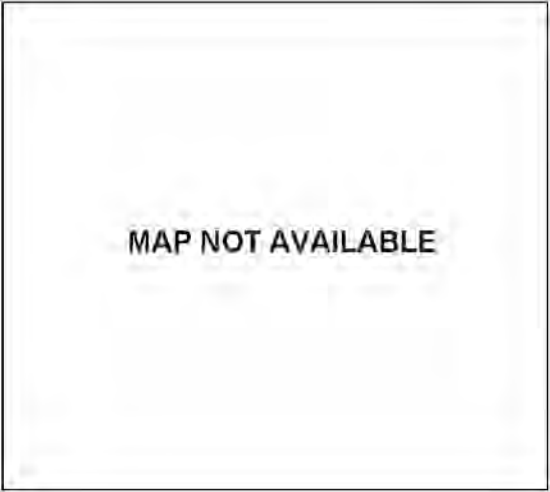
### F. Approval and Expenditure Data (000's)

Date First in Program	FY 04
Date First Approved	FY 03
Initial Cost Estimate	936
Cost Estimate Last FY	85,603
Present Cost Estimate	88,177
Approved Request Last FY	
Total Expense & Encumbrances	4,348
Approval Request Year 1	

### G. Status Information

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

### H. Map



# 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, 2019
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'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	3,540	1,400	800	1,340	625	415	100	100	100		
Land											
Construction	30,900			30,900		6,300	12,300	9,300	3,000		
Other	3,305		80	3,225	63	672	1,240	940	310		
<b>Total</b>	<b>37,745</b>	<b>1,400</b>	<b>880</b>	<b>35,465</b>	<b>688</b>	<b>7,387</b>	<b>13,640</b>	<b>10,340</b>	<b>3,410</b>		

## C. Funding Schedule (000's)

WSSC Bonds	37,745	1,400	880	35,465	688	7,387	13,640	10,340	3,410		
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## D. Description & Justification

### DESCRIPTION

This project provides for the planning, design, and construction of approximately 1,500 feet of 84-inch diameter redundancy main from the Main Zone pumping station to the 96-inch diameter and 66-inch diameter main wye connections on River Road. The project may include a rock tunnel segment.

### JUSTIFICATION

The existing 78-inch diameter PCCP pipeline is the major feed to the 96-inch diameter Montgomery County Main Zone pipeline and the 66-inch diameter River Road pipeline. The primary purpose of this project is to provide redundancy for the existing line. The Business Case recommended a new 84-inch diameter main be installed from the Main Zone pumping station to the 66-inch diameter and 96-inch diameter wye connection. In addition the wye connection will be replaced as part of this project.

E-mail from M. Woodcock to C. Fricke and E. Betanzo dated April 27, 2011; "Business Case Evaluation for Potomac Water Treatment Plan - 78 inch finished water main redundancy", O'Brien and Gere Engineers, Inc. (October 2013)

### COST CHANGE

Not applicable.

### OTHER

The project scope has remained the same. Expenditure and schedule projections shown in Block B above are Order of Magnitude estimates and may change based upon site specific conditions and design constraints.

### COORDINATION

Coordinating Agencies: Maryland Department of Natural Resources; 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; U.S. Army Corps of Engineers

Coordinating Projects: W - 000073.33 - Potomac WFP Consent Decree Program

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$44	26
Debt Service	\$2,455	26
Total Cost	\$2,499	26
Impact on Water and Sewer Rate	\$0.01	26

## F. Approval and Expenditure Data (000's)

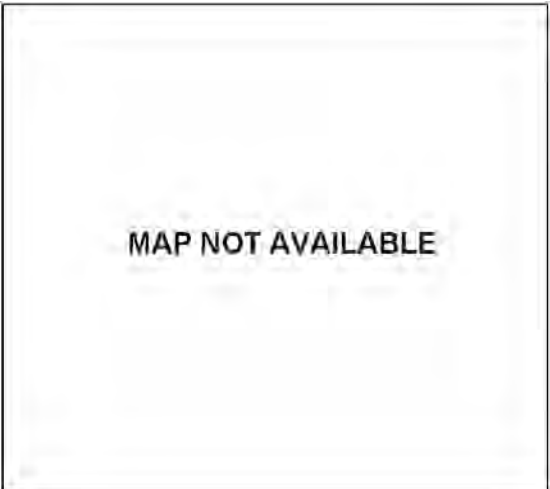
Date First in Program	FY 13
Date First Approved	FY 13
Initial Cost Estimate	330
Cost Estimate Last FY	38,102
Present Cost Estimate	37,745
Approved Request Last FY	460
Total Expense & Encumbrances	1,400
Approval Request Year 1	688

## G. Status Information

Land Status	Not Applicable
Project Phase	Planning
Percent Complete	25 %
Estimated Completion Date	June 2025

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	Approx. 200 MGD

## H. Map



# Potomac WFP Consent Decree Program

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

PDF Date	October 1, 2019
Date Revised	

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

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	40,154	6,154	3,500	26,500	4,000	5,000	5,000	4,500	4,000	4,000	4,000
Land	1,000	1,000									
Construction	151,653	1,153	7,000	126,000	6,000	20,000	25,000	25,000	25,000	25,000	17,500
Other	9,225		525	7,625	500	1,250	1,500	1,475	1,450	1,450	1,075
<b>Total</b>	<b>202,032</b>	<b>8,307</b>	<b>11,025</b>	<b>160,125</b>	<b>10,500</b>	<b>26,250</b>	<b>31,500</b>	<b>30,975</b>	<b>30,450</b>	<b>30,450</b>	<b>22,575</b>

### C. Funding Schedule (000's)

WSSC Bonds	202,032	8,307	11,025	160,125	10,500	26,250	31,500	30,975	30,450	30,450	22,575
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### D. Description & Justification

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

**JUSTIFICATION**  
 The Consent Decree (CD) was Entered by the U.S. District Court of Maryland on April 15, 2016. Under the terms of the CD the Commission is required to “undertake short-term operational changes and capital improvements at the Potomac WFP that will enable WSSC 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 the Commission 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. The Commission shall be subject to a lump-sum stipulated penalty in accordance with the CD for failure to implement the Long-Term Capital Improvement Project(s) by January 1, 2026.

### COST CHANGE

Costs were increased for inflation and are based on recommendations in the approved revised LTUP Report dated September 2018.

### OTHER

The project scope has remained the same. Expenditure and schedule projections shown above are Order of Magnitude level estimates. The expenditure and schedule projections shown above also include \$1,000,000 for Supplemental Environmental Projects included under CD Section IX. Paragraph 50. Preliminary planning work began in FY '16 under ESP project W-708.48, Potomac WFP Consent Decree Projects; operational requirements identified in CD Section IV. Interim Performance Measures and Plant Improvements are currently underway under ESP project W-708.47, Potomac WFP Turbidity Monitoring.

### COORDINATION

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

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$13,142	28
Total Cost	\$13,142	28
Impact on Water and Sewer Rate	\$0.03	28

### F. Approval and Expenditure Data (000's)

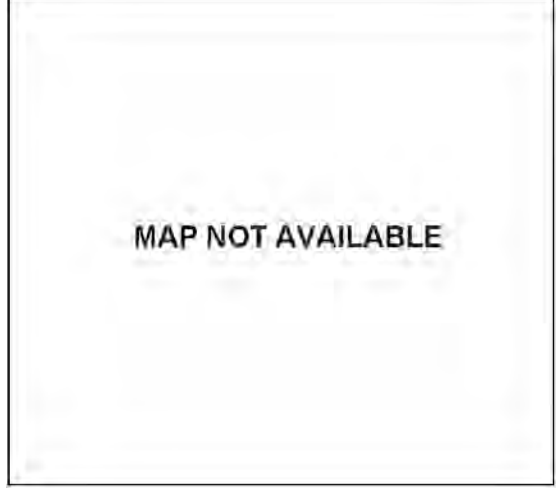
Date First in Program	FY 17
Date First Approved	FY 16
Initial Cost Estimate	27,250
Cost Estimate Last FY	163,823
Present Cost Estimate	202,032
Approved Request Last FY	9,975
Total Expense & Encumbrances	8,307
Approval Request Year 1	10,500

### G. Status Information

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

Growth	
System Improvement	
Environmental Regulation	100%
Population Served	
Capacity	

### H. Map



# Duckett & Brighton Dam Upgrades

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000139.02	073802	Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	Bi-County

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	8,195	7,448	747								
Land											
Construction	32,835	24,461	8,354	20	20						
Other	912		910	2	2						
<b>Total</b>	<b>41,942</b>	<b>31,909</b>	<b>10,011</b>	<b>22</b>	<b>22</b>						

### C. Funding Schedule (000's)

WSSC Bonds	41,942	31,909	10,011	22	22						
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### D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This project provides for the planning, design, and construction of the upgrades required to enable the T. Howard Duckett Dam to meet current Maryland Department of the Environment (MDE) dam safety standards including the Probable Maximum Flood (PMF) criteria and maximum credible earthquake loadings. The upgrades include parapet walls on both embankments of the dam and three foot thick scour slabs tied into the rock on the downstream side of the dam. The project also includes work at the Brighton Dam to assure continued safe operation, e.g., spillway resurfacing, new stairs, and intake repairs.</p> <p><b>JUSTIFICATION</b></p> <p>The MDE requested that WSSC perform a safety analysis of the T. Howard Duckett Dam to ensure that the dam can safely pass the Probable Maximum Flood criteria. MDE also requested that the evaluation include an analysis of the dam's ability to withstand the maximum credible earthquake loadings. The safety analysis includes geotechnical and structural evaluations. December 13, 2004 letter from MDE; "Comprehensive Safety Evaluation of the T. Howard Duckett Dam", URS Corporation (January 2007); June 28, 2007 letter from MDE.</p> <p><b>COST CHANGE</b></p> <p>Not applicable.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. Expenditures and schedule projections shown in Block B above reflect the actual bid for the Brighton Dam Upgrades construction. Construction work at Duckett Dam is complete. Brighton Dam Upgrades construction project is currently under construction.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: City of Laurel; Howard County Government; Maryland Department of the Environment; Maryland State Highway Administration; Montgomery County Government; Prince George's County Government; U.S. Army Corps of Engineers Coordinating Projects: W - 000172.08 - Rocky Gorge Pump Station Upgrade</p>
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E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$2,728	21
Total Cost	\$2,728	21
Impact on Water and Sewer Rate	\$0.01	21

### F. Approval and Expenditure Data (000's)

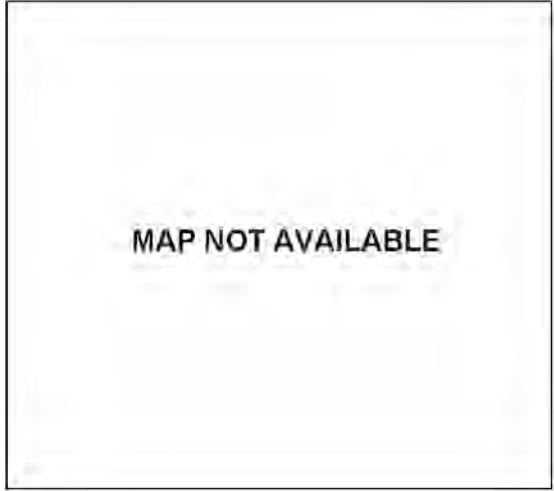
Date First in Program	FY 07
Date First Approved	FY 07
Initial Cost Estimate	575
Cost Estimate Last FY	40,291
Present Cost Estimate	41,942
Approved Request Last FY	6,838
Total Expense & Encumbrances	31,909
Approval Request Year 1	22

### G. Status Information

Land Status	Not Applicable
Project Phase	Construction
Percent Complete	57 %
Estimated Completion Date	February 2020

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

### H. Map



# Large Diameter Water Pipe & Large Valve Rehabilitation Program

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

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	Bi-County

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	58,925		6,472	52,453	8,301	8,314	8,826	9,154	8,708	9,150	
Land											
Construction	386,082		32,893	353,189	44,552	53,324	60,651	62,773	64,970	66,919	
Other	44,502		3,936	40,566	5,286	6,165	6,949	7,193	7,367	7,606	
<b>Total</b>	<b>489,509</b>		<b>43,301</b>	<b>446,208</b>	<b>58,139</b>	<b>67,803</b>	<b>76,426</b>	<b>79,120</b>	<b>81,045</b>	<b>83,675</b>	

### C. Funding Schedule (000's)

WSSC Bonds	489,509		43,301	446,208	58,139	67,803	76,426	79,120	81,045	83,675
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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.

**JUSTIFICATION**

WSSC has approximately 1,031 miles of large diameter water main ranging from 16-inch to 96-inch 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-inch 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 amongst 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'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 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 2021 Water Network Asset Management Plan (May 2019).

### COST CHANGE

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

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- .
- .

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$31,843	
Total Cost	\$31,843	
Impact on Water and Sewer Rate	\$0.07	

### F. Approval and Expenditure Data (000's)

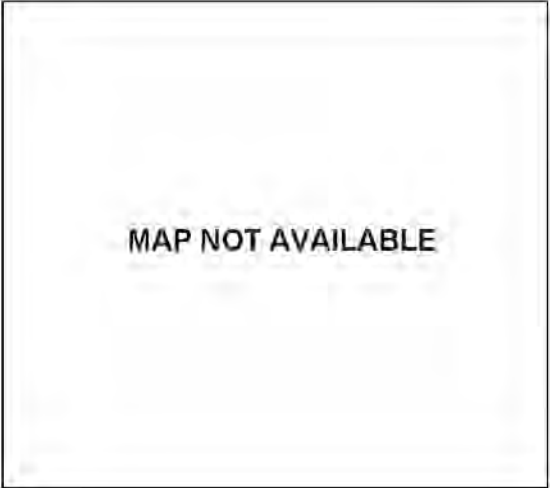
Date First in Program	FY 11
Date First Approved	FY 11
Initial Cost Estimate	
Cost Estimate Last FY	433,056
Present Cost Estimate	489,509
Approved Request Last FY	40,385
Total Expense & Encumbrances	
Approval Request Year 1	58,139

### 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**

The project scope has remained the same. Expenditure and schedule projections shown in Block B above are Order of Magnitude estimates and are expected to change based upon the results of the ongoing 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.

**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



**PATUXENT WATER FILTRATION PLANT PROJECTS**  
(ALL FIGURES IN THOUSANDS)

AGENCY NUMBER	PROJECT NAME	ADOPTED FY'20 TOTAL COST	PROPOSED FY'21 TOTAL COST	CHANGE \$	CHANGE %	SIX-YEAR COST	COMPLETION DATE (est)
W-172.07	Patuxent Raw Water Pipeline	\$34,439	\$33,788	(\$651)	-1.9%	\$15,730	June 2022
W-172.08	Rocky Gorge Pump Station Upgrade	23,241	24,980	1,739	7.5%	392	August 2020
	<b>TOTALS</b>	<b>\$57,680</b>	<b>\$58,768</b>	<b>\$1,088</b>	<b>1.9%</b>	<b>\$16,122</b>	

**Summary** the Patuxent Raw Water Pipeline project (W-172.07) and the Rocky Gorge Pump Station Upgrade project (W-172.08) provide for a new raw water pipeline and the necessary modification/expansion to the pumping station to allow the delivery of up to 110 million gallons per day (MGD) of raw water to the Patuxent WFP.

**Cost Impact:** Costs for Rocky Gorge Station Upgrade (W-172.08) were increased due to current construction contract change orders, replacement of substation batteries, and expected engineering contract increases due to construction delays.

# Patuxent Raw Water Pipeline

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000172.07	063804	Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	Prince George's Main HG320A
Drainage Basins	
Planning Areas	Bi-County

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	3,525	3,125	100	300	200	100					
Land	306	306									
Construction	28,110	10,045	4,065	14,000	8,500	5,500					
Other	1,847		417	1,430	870	560					
<b>Total</b>	<b>33,788</b>	<b>13,476</b>	<b>4,582</b>	<b>15,730</b>	<b>9,570</b>	<b>6,160</b>					

## C. Funding Schedule (000's)

WSSC Bonds	33,788	13,476	4,582	15,730	9,570	6,160					
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## D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This project provides for the planning, design, and construction of approximately 2.5 miles of new 48-inch diameter raw water pipeline from the Rocky Gorge Raw Water Pumping Station to the Patuxent Water Filtration Plant, cleaning of the existing water lines, and replacement of valves.</p> <p><b>JUSTIFICATION</b></p> <p>The existing raw water supply facilities are hydraulically limited to 72 MGD with all pumps running at the Rocky Gorge Pumping Station. In order to convey more than 72 MGD of raw water, a new raw water pipeline is required. A fourth raw water pipeline from the Rocky Gorge Pumping Station to the Patuxent Plant and modification/expansion of the Rocky Gorge Pumping Station will provide a firm raw water pumping transmission capacity of 110 MGD. These improvements, in conjunction with expansion of the Patuxent Water Filtration Plant, will give the Plant a firm nominal capacity of 72 MGD, with an emergency capacity of 110 MGD.</p> <p>Patuxent WFP Facility Plan (April 1997); In-House Study (April 2002).</p> <p><b>COST CHANGE</b></p> <p>Not applicable.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. The Rocky Gorge Valve Replacement and the cleaning of existing raw water pipelines are 100% complete. The new raw water pipeline is currently in design. Expenditure and schedule estimates for the new raw water pipeline may change based upon design constraints and permitting issues. The project has been delayed due to a lengthy permit and right-of-way acquisition process. Due to county permitting requirements the project design and construction schedule was split into two phases. As with any construction project, areas disturbed by construction will be restored. This restoration includes paving of impacted roads in accordance with Prince George's County Policy and Specifications for Utility Installation and Maintenance Manual (Section 4.7.2).</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: Baltimore Gas &amp; Electric; Interstate Commission on the Potomac River Basin; Local Community Civic Associations;(West Laurel Civic Association); Maryland Department of the Environment; Maryland-National Capital Park &amp; Planning Commission; Montgomery County Government; Prince George's County Government</p> <p>Coordinating Projects: W - 000172.08 - Rocky Gorge Pump Station Upgrade</p>
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E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$389	23
Debt Service	\$2,198	23
Total Cost	\$2,587	23
Impact on Water and Sewer Rate	\$0.01	23

## F. Approval and Expenditure Data (000's)

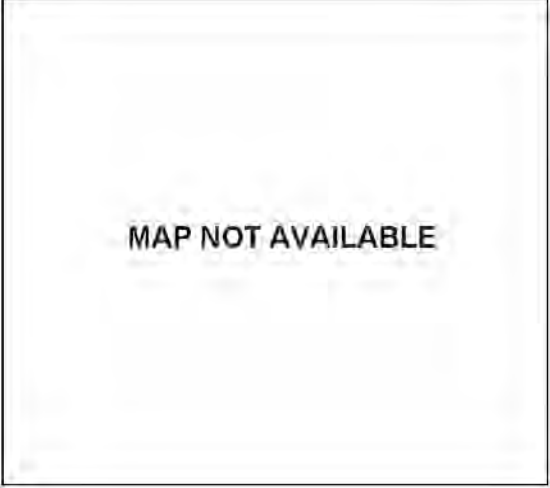
Date First in Program	FY 06
Date First Approved	FY 03
Initial Cost Estimate	18,750
Cost Estimate Last FY	34,439
Present Cost Estimate	33,788
Approved Request Last FY	8,580
Total Expense & Encumbrances	13,476
Approval Request Year 1	9,570

## G. Status Information

Land Status	Land Acquired
Project Phase	Design
Percent Complete	98 %
Estimated Completion Date	June 2022

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

## H. Map



# Rocky Gorge Pump Station Upgrade

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000172.08	063805	Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	Bi-County

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	6,205	5,105	900	200	200						
Land											
Construction	18,499	16,843	1,500	156	156						
Other	276		240	36	36						
<b>Total</b>	<b>24,980</b>	<b>21,948</b>	<b>2,640</b>	<b>392</b>	<b>392</b>						

## C. Funding Schedule (000's)

WSSC Bonds	24,980	21,948	2,640	392	392						
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## D. Description & Justification

**DESCRIPTION**  
 This project provides for the modification and expansion of the Rocky Gorge Pump Station to allow the station to provide up to 110 MGD of raw water to the Patuxent Water Filtration Plant.

**JUSTIFICATION**  
 The modification and expansion of the Rocky Gorge Raw Water Pumping Station will provide a firm raw water pumping capacity of 110 MGD. The improvements to the pump station, along with a fourth water pipeline (W-172.07) and expansion of the Patuxent Plant (W-172.05) will give the Patuxent Plant a firm nominal capacity of 72 MGD, with emergency capacity of 110 MGD. Patuxent WFP Facility Plan (April 1997); In-House Study (April 2002).

**COST CHANGE**  
 Costs were increased due to current construction contract change orders, replacement of substation batteries, and expected engineering contract increases due to construction delays.

**OTHER**  
 The project scope remains the same. Expenditure and schedule projections shown in Block B above are based on contracts in place.

**COORDINATION**  
 Coordinating Agencies: Baltimore Gas & Electric; Maryland Department of the Environment; Maryland State Highway Administration; Montgomery County Government; Prince George's County Government  
 Coordinating Projects: W - 000139.02 - Duckett & Brighton Dam Upgrades; W - 000172.07 - Patuxent Raw Water Pipeline

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$1,625	22
Total Cost	\$1,625	22
Impact on Water and Sewer Rate		

## F. Approval and Expenditure Data (000's)

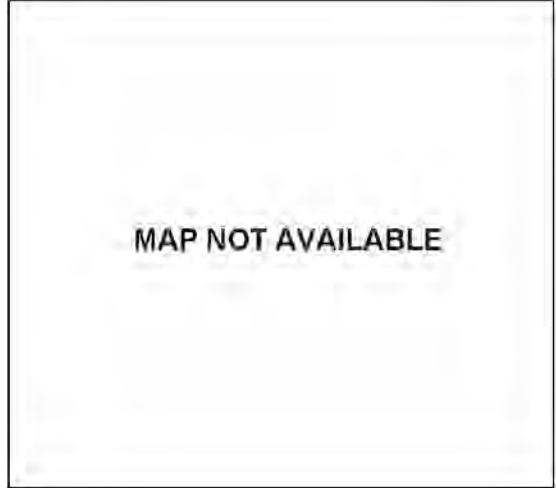
Date First in Program	FY 06
Date First Approved	FY 03
Initial Cost Estimate	12,930
Cost Estimate Last FY	23,241
Present Cost Estimate	24,980
Approved Request Last FY	1,025
Total Expense & Encumbrances	21,948
Approval Request Year 1	392

## G. Status Information

Land Status	Public/Agency owned land
Project Phase	Construction
Percent Complete	77 %
Estimated Completion Date	August 2020

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	110 MGD

## H. Map



# Regional Water Supply Resiliency

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

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	Montgomery County PA

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	15,000			15,000	1,500	4,000	4,000	4,000	1,500		
Land											
Construction											
Other											
<b>Total</b>	<b>15,000</b>			<b>15,000</b>	<b>1,500</b>	<b>4,000</b>	<b>4,000</b>	<b>4,000</b>	<b>1,500</b>		

### C. Funding Schedule (000's)

Federal Aid	15,000			15,000	1,500	4,000	4,000	4,000	1,500		
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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.

**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.

### COST CHANGE

Not applicable.

### OTHER

The present project scope was developed for the FY'21 CIP and has an estimated cost of \$15,000,000.

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

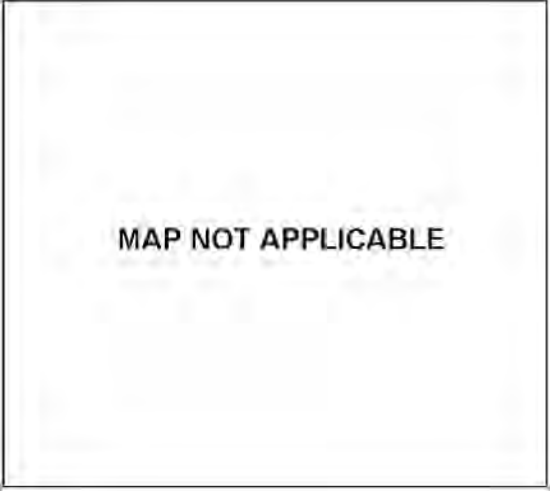
### F. Approval and Expenditure Data (000's)

Date First in Program	FY 21
Date First Approved	FY 21
Initial Cost Estimate	15,000
Cost Estimate Last FY	
Present Cost Estimate	15,000
Approved Request Last FY	
Total Expense & Encumbrances	
Approval Request Year 1	1,500

### 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



# Land & Rights-of-Way Acquisition - Bi-County Water

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000202.00	983857	Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	Bi-County

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision											
Land	3,093		913	1,580	1,512	20	18	10	10	10	600
Construction											
Other											
<b>Total</b>	<b>3,093</b>		<b>913</b>	<b>1,580</b>	<b>1,512</b>	<b>20</b>	<b>18</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>600</b>

### C. Funding Schedule (000's)

WSSC Bonds	2,884		791	1,493	1,425	20	18	10	10	10	600
SDC	209		122	87	87						

### D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This PDF provides a consolidated estimate of funding for the acquisition of land and rights-of-way for water projects and for easement and land acquisitions for watershed protection. Expenditures are programmed based upon anticipated schedules and are required for the completion of those specific projects. These costs do not include purchases which have already been completed.</p> <p><b>JUSTIFICATION</b></p> <p>Consolidation of expenditures for land and rights-of-way acquisitions provides flexibility in expending funds in a specific fiscal year and permits the WSSC to respond to the uncertainty of project-specific implementation schedules. Other considerations include the accommodation of unpredictable delays which impact the timing of a planned purchase, unanticipated rights-of-way requirements due to minor alignment changes identified late in the design phase, and the need to assure the WSSC an equitable negotiation position by avoiding project-specific cost displays prior to contacting property owners.</p> <p>Acquisition needs are determined by the WSSC and are based upon facility planning efforts, alignment studies, field surveys, realignments required by other agencies, or requirements identified within the Development Services Process (DSP).</p> <p><b>COST CHANGE</b></p> <p>Not applicable.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. Expenditure and schedule projections shown in Block B are Order of Magnitude estimates only and may change based upon actual negotiations. When purchases are complete, the actual cost will be displayed in the expenditure schedule on the appropriate project.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: Not Applicable Coordinating Projects: Not Applicable</p>
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E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$188	
Total Cost	\$188	
Impact on Water and Sewer Rate		

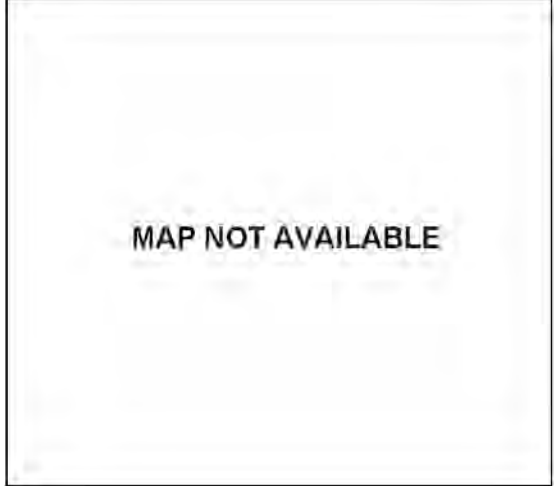
### F. Approval and Expenditure Data (000's)

Date First in Program	FY 98
Date First Approved	FY 98
Initial Cost Estimate	
Cost Estimate Last FY	3,598
Present Cost Estimate	3,093
Approved Request Last FY	1,720
Total Expense & Encumbrances	
Approval Request Year 1	1,512

### G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	On-Going
Percent Complete	0 %
Estimated Completion Date	Not Applicable
Growth	7%
System Improvement	93%
Environmental Regulation	
Population Served	
Capacity	

### H. Map



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## Section 4 - Bi-County Sewer Projects

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**FINANCIAL SUMMARY**

(ALL FIGURES IN THOUSANDS)

**BI-COUNTY SEWER PROJECTS**

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 19	EST. EXPEND 20	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 21	YR 2 22	YR 3 23	YR 4 24	YR 5 25	YR 6 26		
S-22.06	Blue Plains WWTP: Liquid Train Projects, Part 2	310,880	0	22,831	166,285	23,432	28,827	20,859	22,116	23,339	47,712	121,764	4-3
S-22.07	Blue Plains WWTP: Biosolids Management, Part 2	75,220	0	10,164	59,673	11,347	12,840	17,303	8,670	7,300	2,213	5,383	4-4
S-22.09	Blue Plains WWTP: Plant-wide Projects	111,706	0	10,487	85,492	10,811	14,584	22,288	13,912	9,577	14,320	15,727	4-5
S-22.10	Blue Plains WWTP: Enhanced Nutrient Removal	440,738	412,789	1,507	21,469	294	319	1,844	1,900	5,794	11,318	4,973	4-6
S-22.11	Blue Plains: Pipelines & Appurtenances	172,974	0	17,117	110,567	13,622	15,964	19,068	22,609	20,895	18,409	45,290	4-7
S-103.02	Piscataway Bioenergy	281,208	29,189	39,709	212,310	61,320	69,720	49,770	31,500	0	0	0	4-8
S-170.08	Septage Discharge Facility Planning & Implementation	40,381	5,404	12,461	22,516	12,461	2,769	0	3,643	3,643	0	0	4-10
S-170.09	Trunk Sewer Reconstruction Program	343,807	0	65,864	277,943	69,491	67,081	48,763	29,962	30,860	31,786	0	4-11
S-203.00	Land & Rights-Of-Way Acquisition - Bi-County Sewer	933	0	50	883	283	120	120	120	120	120	0	4-12
	<b>TOTALS</b>	<b>1,777,847</b>	<b>447,382</b>	<b>180,190</b>	<b>957,138</b>	<b>203,061</b>	<b>212,224</b>	<b>180,015</b>	<b>134,432</b>	<b>101,528</b>	<b>125,878</b>	<b>193,137</b>	

**BLUE PLAINS WASTEWATER TREATMENT PLANT PROJECTS**  
(ALL FIGURES IN THOUSANDS)

AGENCY NUMBER	PROJECT NAME	ADOPTED FY'20 TOTAL COST	PROPOSED FY'21 TOTAL COST	CHANGE \$	CHANGE %	SIX-YEAR COST	COMPLETION DATE (est)
S-22.06	Blue Plains WWTP: Liquid Train Projects, Part 2	\$247,693	\$310,880	\$63,187	25.5%	\$166,285	On-Going
S-22.07	Blue Plains WWTP: Biosolids Management, Part 2	41,472	75,220	33,748	81.4%	59,673	On-Going
S-22.09	Blue Plains WWTP: Plant-wide Projects	117,624	111,706	(5,918)	-5.0%	85,492	On-Going
S-22.10	Blue Plains WWTP: Enhanced Nutrient Removal	394,543	440,738	46,195	11.7%	21,469	Jun-26
S-22.11	Blue Plains: Pipelines & Appurtenances	152,284	172,974	20,690	13.6%	110,567	On-Going
	<b>TOTALS</b>	<b>\$953,616</b>	<b>\$1,111,518</b>	<b>\$157,902</b>	<b>16.6%</b>	<b>\$443,486</b>	

**Summary:** These five projects, with an estimated total cost of \$1.1 billion, provide funding for the upgrade, expansion, and enhancement of wastewater treatment and solids handling facilities at the Regional Blue Plains Wastewater Treatment Plant, located in the District of Columbia. Whereas typical WSSC projects encompass planning, design, construction, and start-up for a single project, with defined starting and ending dates, the Blue Plains projects are comprised of many sub-projects and are "open-ended." As the Blue Plains Facility Plans move forward and new sub-projects are approved, the costs of these new sub-projects are added to the appropriate existing Blue Plains project. The expenditures displayed represent the WSSC's calculated share. There are four main funding divisions: liquid treatment train (S-22.06); biosolids management (S-22.07); plant-wide projects (S-22.09); and, pipelines & appurtenances (S-22.11). Project S-22.10 Enhanced Nutrient Removal (ENR) will achieve nutrient removal levels surpassing Biological Nutrient Removal (BNR) as determined in the Tributary Strategy process of 2005 in order to meet Chesapeake Bay water quality targets.

**Cost Impact:** These five Blue Plains projects, which comprise one of the largest groups of expenditures in the CIP, represent 22% of the Six-Year WSSC CIP program. The figures shown above are derived from the latest available spending projections provided by the District of Columbia Water and Sewer Authority (DCWASA). Spending at the DCWASA staff-proposed rate in future years may challenge the WSSC's ability to stay within County-established spending affordability limits. It is, therefore, recommended that the coordination of development and approval of the DCWASA's and WSSC's CIPs be sustained in order that the economic development and environmental objectives of the region be met, without causing a rapid increase in WSSC customers' bills. An explanation of the cost changes for each project is included on the individual project description forms that immediately follow this summary page.



# Blue Plains WWTP: Liquid Train Projects, Part 2

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

PDF Date	October 1, 2019
Date Revised	

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

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision											
Land											
Construction	307,802		22,605	164,639	23,200	28,542	20,653	21,897	23,108	47,239	120,558
Other	3,078		226	1,646	232	285	206	219	231	473	1,206
<b>Total</b>	<b>310,880</b>		<b>22,831</b>	<b>166,285</b>	<b>23,432</b>	<b>28,827</b>	<b>20,859</b>	<b>22,116</b>	<b>23,339</b>	<b>47,712</b>	<b>121,764</b>

### C. Funding Schedule (000's)

WSSC Bonds	293,816		21,578	157,158	22,146	27,245	19,714	20,902	22,058	45,093	115,080
City of Rockville	17,064		1,253	9,127	1,286	1,582	1,145	1,214	1,281	2,619	6,684

### D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This project provides funding for WSSC's share of Blue Plains liquid train projects for which construction began after June 30, 1993. Major projects include: Filtration/Disinfection Facilities Phases I &amp; II, upgrading influent screening, and upgrading effluent filters.</p> <p><b>JUSTIFICATION</b></p> <p>This is a continuation of the DCWASA's upgrading of the Blue Plains Wastewater Treatment Plant. The Blue Plains Intermunicipal Agreement of 2012; the DCWASA Master Plan (1998); Blue Plains Facilities Master Plan (2016), and the DCWASA Approved FY 2020 Capital Improvements Program.</p> <p><b>COST CHANGE</b></p> <p>Costs in Year 6 and beyond reflect programmed costs for renewal and replacement of components expected to have reached the end of their useful life, including mechanical treatment components and some structural rebuilds of tanks and filters.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. Project costs are derived from the DCWASA Capital &amp; Operating Budget 10-year forecast of spending and DCWASA's latest project management data, and fully reflect DCWASA'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><b>COORDINATION</b></p> <p>Coordinating Agencies: City of Rockville;(responsible for a share of funding); District of Columbia Water and Sewer Authority;(responsible for design and construction)</p> <p>Coordinating Projects: S - 000022.10 - Blue Plains WWTP: Enhanced Nutrient Removal</p>
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E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$19,113	
Total Cost	\$19,113	
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	247,693
Present Cost Estimate	310,880
Approved Request Last FY	22,831
Total Expense & Encumbrances	
Approval Request Year 1	23,432

### 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 WWTP: Biosolids Management, Part 2

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

PDF Date	October 1, 2019
Date Revised	

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

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision											
Land											
Construction	74,474		10,063	59,081	11,234	12,713	17,132	8,584	7,227	2,191	5,330
Other	746		101	592	113	127	171	86	73	22	53
<b>Total</b>	<b>75,220</b>		<b>10,164</b>	<b>59,673</b>	<b>11,347</b>	<b>12,840</b>	<b>17,303</b>	<b>8,670</b>	<b>7,300</b>	<b>2,213</b>	<b>5,383</b>

### C. Funding Schedule (000's)

WSSC Bonds	71,090		9,606	56,396	10,724	12,135	16,353	8,194	6,899	2,091	5,088
City of Rockville	4,130		558	3,277	623	705	950	476	401	122	295

### D. Description & Justification

**DESCRIPTION**  
 This project provides funding for WSSC's share of the Blue Plains biosolids handling projects for which construction began after June 30, 1993. Major projects include: Gravity Thickener Facility upgrades; and Solids Processing Building/Dewatered Sludge Loading Facility.

**JUSTIFICATION**  
 This project is needed to implement a set of facilities which will provide a permanent biosolids management program for Blue Plains. The Blue Plains Intermunicipal Agreement of 2012; the DCWASA Master Plan (1998); EPMC IV Facility Plan, CH2MHILL (2001); the Biosolids Management at DCWASA Blue Plains Wastewater Treatment Plant Phase II - Design and Cost Considerations for Treatment Alternatives Report (December2007); Blue Plains Facilities Master Plan (2016); and the DCWASA Approved FY 2020 Capital Improvement Program.

**COST CHANGE**  
 Cost increase in FY'22 through FY'25 reflects two major initiatives: 1) to rehabilitate and upgrade the gravity thickeners; 2) to rehabilitate the Class A biosolids process facilities.

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

**COORDINATION**  
 Coordinating Agencies: City of Rockville;(responsible for a share of funding); District of Columbia Water and Sewer Authority;(responsible for design and construction)  
 Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$4,625	
Total Cost	\$4,625	
Impact on Water and Sewer Rate	\$0.01	

### F. Approval and Expenditure Data (000's)

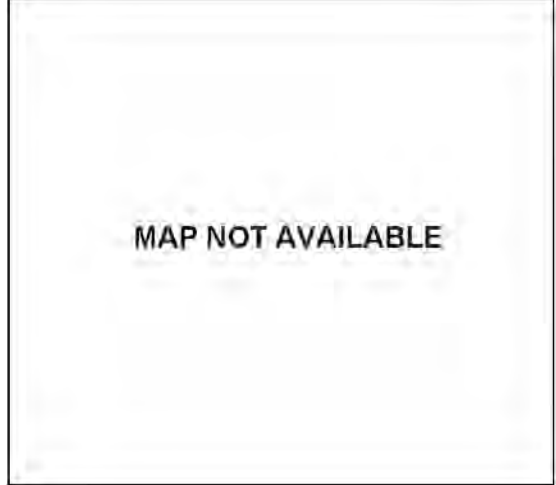
Date First in Program	FY 95
Date First Approved	FY 95
Initial Cost Estimate	
Cost Estimate Last FY	41,472
Present Cost Estimate	75,220
Approved Request Last FY	10,164
Total Expense & Encumbrances	
Approval Request Year 1	11,347

### 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 WWTP: Plant-wide Projects

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

PDF Date	October 1, 2019
Date Revised	

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

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision											
Land											
Construction	110,599		10,383	84,644	10,704	14,439	22,067	13,774	9,482	14,178	15,572
Other	1,107		104	848	107	145	221	138	95	142	155
<b>Total</b>	<b>111,706</b>		<b>10,487</b>	<b>85,492</b>	<b>10,811</b>	<b>14,584</b>	<b>22,288</b>	<b>13,912</b>	<b>9,577</b>	<b>14,320</b>	<b>15,727</b>

## C. Funding Schedule (000's)

WSSC Bonds	105,573		9,911	80,798	10,218	13,783	21,064	13,148	9,051	13,534	14,864
City of Rockville	6,133		576	4,694	593	801	1,224	764	526	786	863

## D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This project provides funding for WSSC's share of Blue Plains plant-wide projects for which construction began after June 30, 1993. Major projects include: Electrical system upgrades, Floodwall construction, Lighting upgrades, Chemical system upgrades, Process Computer Control system, and Miscellaneous projects.</p> <p><b>JUSTIFICATION</b></p> <p>This is a continuation of the DCWASA's upgrading of the Blue Plains Wastewater Treatment Plant. The Blue Plains Intermunicipal Agreement of 2012; the WASA Master Plan (1998); Blue Plains Facilities Master Plan (2016), and the DCWASA Approved FY 2020 Capital Improvement Program.</p> <p><b>COST CHANGE</b></p> <p>Not applicable.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. Project costs are derived from the DCWASA Capital &amp; Operating Budget 10-year forecast and latest project management data, and reflect DCWASA'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.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: City of Rockville;(responsible for a share of funding); District of Columbia Water and Sewer Authority;(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	\$6,868	
Total Cost	\$6,868	
Impact on Water and Sewer Rate	\$0.02	

## F. Approval and Expenditure Data (000's)

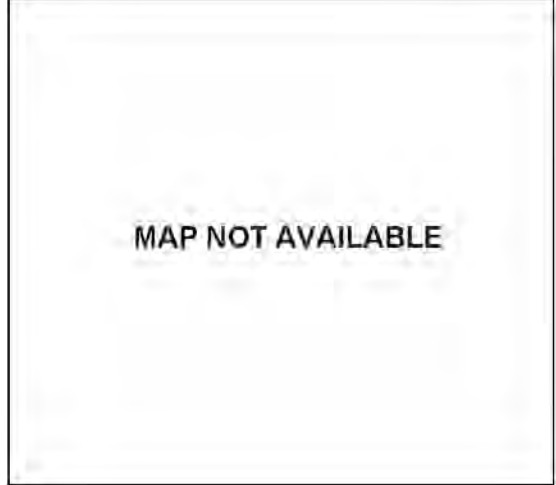
Date First in Program	FY 95
Date First Approved	FY 02
Initial Cost Estimate	
Cost Estimate Last FY	117,624
Present Cost Estimate	111,706
Approved Request Last FY	10,487
Total Expense & Encumbrances	
Approval Request Year 1	10,811

## 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 WWTP: Enhanced Nutrient Removal

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000022.10	083800	Change

PDF Date	October 1, 2019
Date Revised	

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

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision											
Land											
Construction	440,462	412,789	1,492	21,257	291	316	1,826	1,881	5,737	11,206	4,924
Other	276		15	212	3	3	18	19	57	112	49
<b>Total</b>	<b>440,738</b>	<b>412,789</b>	<b>1,507</b>	<b>21,469</b>	<b>294</b>	<b>319</b>	<b>1,844</b>	<b>1,900</b>	<b>5,794</b>	<b>11,318</b>	<b>4,973</b>

## C. Funding Schedule (000's)

WSSC Bonds	192,669	167,000	677	20,292	278	302	1,743	1,796	5,476	10,697	4,700
State Aid	238,981	238,190	791								
City of Rockville	9,088	7,599	39	1,177	16	17	101	104	318	621	273

## D. Description & Justification

### DESCRIPTION

This project provides funding for WSSC's share of the Blue Plains Enhanced Nutrient Removal projects required to achieve nutrient removal to levels below BNR levels to meet the Chesapeake Bay water quality targets determined in the 2005 Tributary Strategies Process and DC Water's 2010 NPDES permit. Major projects to achieve enhanced nutrient removal have been completed and are operational. Additional projects are required to ensure NPDES permit compliance, as flows and levels to the plant increase. The projects will include ongoing program management upgrades to the secondary treatment facilities.

### JUSTIFICATION

The funding schedule reflects the final cost sharing agreement with the Maryland Department of the Environment. Chesapeake Bay Program Tributary Strategies Process (2005); Blue Plains Strategic Process Study, Metcalf & Eddy (2005); Selection of the Enhanced Nitrogen Removal Process Alternative for the Blue Plains Advanced Wastewater Treatment Facility, Metcalf & Eddy (2009); Blue Plains Facilities Master Plan (2016); DCWASA Approved FY2020 Capital Improvement Program; and the Blue Plains Intermunicipal Agreement of 2012.

### COST CHANGE

ENR upgrades are substantially complete. Future upgrades are planned for secondary treatment to provide full nitrification under future flow conditions.

### OTHER

The project scope has remained the same. Project costs are derived from the DCWASA Capital & Operating Budget 10-year forecast and latest project management data, and reflect DCWASA's current expenditure estimates and schedules. Total Nitrogen Secondary Treatment Upgrades are scheduled to be initiated in FY23 or later. At this time there are no additional BRF grant funds approved for this project. Projects extending beyond those supported by State Aid include rehabilitation and upgrades to older projects. Portions of the program have been financed by low interest loans through the Maryland Department of the Environment's Water Quality Administration State Revolving Loan Program. The funding schedule also indicates the calculated Rockville share of the cost.

### COORDINATION

Coordinating Agencies: City of Rockville;(responsible for a share of funding); District of Columbia Water and Sewer Authority;(responsible for design and construction); Maryland Department of the Environment; U.S. Environmental Protection Agency, Region III  
Coordinating Projects: S - 000022.06 - Blue Plains WWTP: Liquid Train Projects, Part 2

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$12,533	28
Total Cost	\$12,533	28
Impact on Water and Sewer Rate	\$0.03	28

## F. Approval and Expenditure Data (000's)

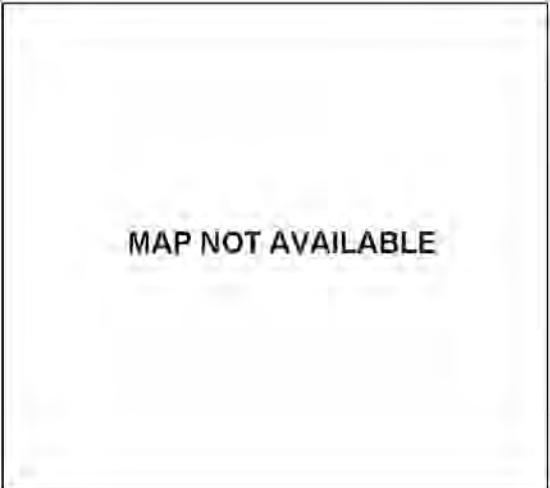
Date First in Program	FY 08
Date First Approved	FY 07
Initial Cost Estimate	648
Cost Estimate Last FY	394,543
Present Cost Estimate	440,738
Approved Request Last FY	1,507
Total Expense & Encumbrances	412,789
Approval Request Year 1	294

## G. Status Information

Land Status	Not Applicable
Project Phase	Construction
Percent Complete	96 %
Estimated Completion Date	July 2026

Growth	
System Improvement	
Environmental Regulation	100%
Population Served	
Capacity	169.2 / 370 MGD

## H. Map



# Blue Plains: Pipelines & Appurtenances

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

PDF Date	October 1, 2019
Date Revised	

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

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision											
Land											
Construction	171,260		16,948	109,471	13,487	15,805	18,879	22,385	20,688	18,227	44,841
Other	1,714		169	1,096	135	159	189	224	207	182	449
<b>Total</b>	<b>172,974</b>		<b>17,117</b>	<b>110,567</b>	<b>13,622</b>	<b>15,964</b>	<b>19,068</b>	<b>22,609</b>	<b>20,895</b>	<b>18,409</b>	<b>45,290</b>

## C. Funding Schedule (000's)

WSSC Bonds	160,580		16,708	102,075	12,465	14,391	17,743	21,720	19,299	16,457	41,797
City of Rockville	12,394		409	8,492	1,157	1,573	1,325	889	1,596	1,952	3,493

## D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This project provides funding for WSSC's share of Blue Plains-associated projects which are "outside the fence" of the treatment plant. Major projects include: Potomac Interceptor Rehabilitation; Upper Potomac Interceptor; Potomac Sewage Pumping Station Rehabilitation; Main Sewage Pumping Station intermediate repairs; Renovations to the central operations facility; Rehabilitation of the Anacostia and Potomac force mains; Influent Sewers Rehabilitation; and projects associated with the Combined Sewer Overflow (CSO) Long Term Control Plan (Clean Rivers Program) (Anacostia and Potomac Tunnels).</p> <p><b>JUSTIFICATION</b></p> <p>This is a continuation of DCWASA's upgrading of the Blue Plains-associated projects outside the fence. The Blue Plains Intermunicipal Agreement of 2012; the WASA Master Plan (1998); Technical Memorandum No. 1, Multi-Jurisdictional Use Facilities Capital Cost Allocation, (June 2013); and the DCWASA Approved FY2020 Capital Improvement Program.</p> <p><b>COST CHANGE</b></p> <p>Not applicable.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. Project costs are derived from the DC-WASA Capital &amp; Operating Budget 10-year forecast and project management data, and reflect WASA'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's flow as derived in the Multijurisdiction Use Facilities Study.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: City of Rockville;(responsible for a share of funding); District of Columbia Water and Sewer Authority;(responsible for design and construction)</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	\$10,446	
Total Cost	\$10,446	
Impact on Water and Sewer Rate	\$0.02	

## F. Approval and Expenditure Data (000's)

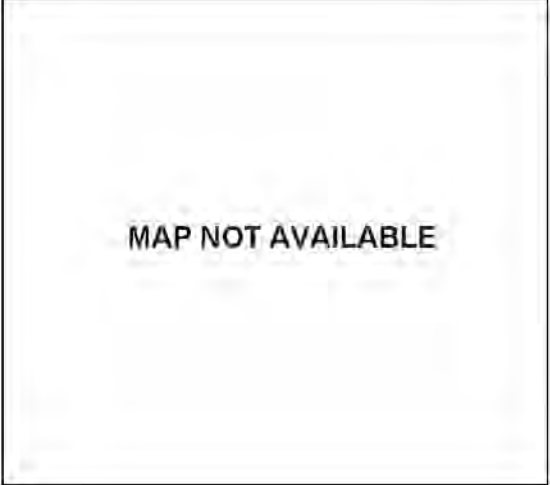
Date First in Program	FY 11
Date First Approved	FY 02
Initial Cost Estimate	
Cost Estimate Last FY	152,284
Present Cost Estimate	172,974
Approved Request Last FY	17,117
Total Expense & Encumbrances	
Approval Request Year 1	13,622

## 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, 2019
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	Bi-County

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	48,397	28,379	10,818	9,200	2,400	2,400	2,400	2,000			
Land											
Construction	220,810	810	27,000	193,000	56,000	64,000	45,000	28,000			
Other	12,001		1,891	10,110	2,920	3,320	2,370	1,500			
<b>Total</b>	<b>281,208</b>	<b>29,189</b>	<b>39,709</b>	<b>212,310</b>	<b>61,320</b>	<b>69,720</b>	<b>49,770</b>	<b>31,500</b>			

## C. Funding Schedule (000's)

WSSC Bonds	277,138	28,619	39,209	209,310	59,820	68,220	49,770	31,500			
Federal Aid	570	570									
State Aid	3,500		500	3,000	1,500	1,500					

## D. Description & Justification

### DESCRIPTION

This project will develop a comprehensive program for the engineering, design, construction, maintenance, and 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 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.

### JUSTIFICATION

In March 2009, the WSSC received approval for a federal Department of Energy grant of \$570,900 for the feasibility study/conceptual design phase. On June 16, 2010, the WSSC 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 the Commission 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 to 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; 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; 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 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

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$18,028	25
Total Cost	\$18,028	25
Impact on Water and Sewer Rate	\$0.04	25

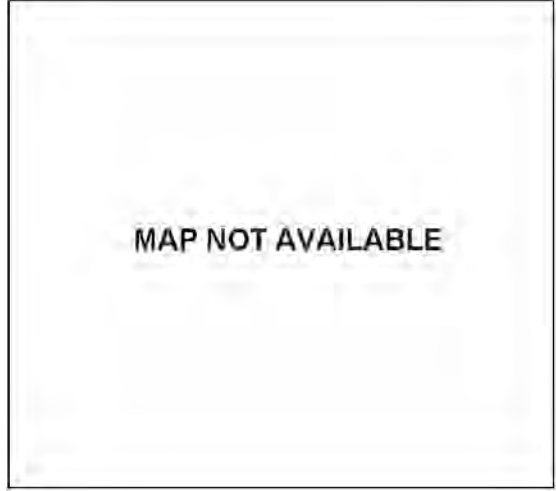
## F. Approval and Expenditure Data (000's)

Date First in Program	FY 15
Date First Approved	FY 10
Initial Cost Estimate	345
Cost Estimate Last FY	261,993
Present Cost Estimate	281,208
Approved Request Last FY	58,118
Total Expense & Encumbrances	29,189
Approval Request Year 1	61,320

## G. Status Information

Land Status	Public/Agency owned land
Project Phase	Construction
Percent Complete	2 %
Estimated Completion Date	December 2023
Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

## H. Map



(March 2017).

**COST CHANGE**

Cost increased based upon 30% design estimate and to reflect continuing market trends in construction industry escalations for costs of labor, steel, diesel, miscellaneous metals, concrete, electrical and process equipment, and other materials.

**OTHER**

The project scope has remained the same. The Commission 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'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 April 2017 the Maryland Energy Administration notified WSSC of approval of grant funding up to \$500,000. In June 2017 WSSC was approved for a \$3 million grant through the Maryland Department of the Environment's Energy Water Infrastructure Program (EWIP). WSSC has also applied for grants from the local power utility. WSSC will continue to apply for other available funding sources. The Commission 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 Bio-Energy project. In Sept 2017 issued a Request for Proposals (RFP) to two design --build entities for a progressive design-build delivery of the Bio-Energy Project. Transporting of biosolids from Western Branch WRRF to Piscataway included in FY2019 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 the Commission awarded a Progressive Design-Build Contract to PC Construction for the Bioenergy Project.

**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

# Septage Discharge Facility Planning & Implementation

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000170.08	103802	Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	Bi-County

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	5,055	3,359	561	1,135	561	124		225	225		
Land											
Construction	32,146	2,045	10,767	19,334	10,767	2,393		3,087	3,087		
Other	3,180		1,133	2,047	1,133	252		331	331		
<b>Total</b>	<b>40,381</b>	<b>5,404</b>	<b>12,461</b>	<b>22,516</b>	<b>12,461</b>	<b>2,769</b>		<b>3,643</b>	<b>3,643</b>		

## C. Funding Schedule (000's)

WSSC Bonds	40,381	5,404	12,461	22,516	12,461	2,769		3,643	3,643		
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## D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of a new Septage and Fats, Oils, Grease (FOG) discharge facility at the abandoned Rock Creek WRRF, and new Septage discharge facilities at Anacostia WWPS No. 2 and Piscataway WRRF.

**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 the Commission'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**  
 The estimated construction cost of the three facilities has increased based upon more refined cost estimates for all three sites.

**OTHER**  
 The project scope has remained the same. The design of the Rock Creek and Anacostia sites are 100% complete. The design of the Piscataway site is 90% complete. The expenditures and schedule projections shown in Block B are estimates at the current design stages at each site, and may change based upon actual bids. The design and construction of the FOG Discharge Facility at the Piscataway WRRF has been moved to the Piscataway WRRF Bio-Energy Project.

The Rock Creek and Anacostia sites will be advertised as one project in 2019. The design of the Piscataway site will be completed with construction deferred until 2023, after the performance of the Rock Creek and Anacostia sites have been evaluated, and 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		
Maintenance		
Debt Service	\$2,627	26
Total Cost	\$2,627	26
Impact on Water and Sewer Rate	\$0.01	26

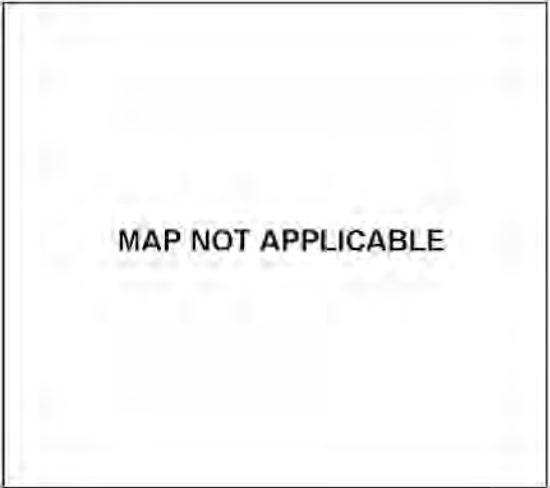
## F. Approval and Expenditure Data (000's)

Date First in Program	FY 10
Date First Approved	FY 10
Initial Cost Estimate	10,835
Cost Estimate Last FY	32,455
Present Cost Estimate	40,381
Approved Request Last FY	12,276
Total Expense & Encumbrances	5,404
Approval Request Year 1	12,461

## G. Status Information

Land Status	Public/Agency owned land
Project Phase	Design
Percent Complete	90 %
Estimated Completion Date	January 2025
Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

## H. Map





# Trunk Sewer Reconstruction Program

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

PDF Date	October 1, 2019
Date Revised	

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

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	44,184		5,126	39,058	6,287	6,931	6,358	6,303	6,492	6,687	
Land											
Construction	268,369		54,750	213,619	56,887	54,053	37,972	20,935	21,563	22,209	
Other	31,254		5,988	25,266	6,317	6,097	4,433	2,724	2,805	2,890	
<b>Total</b>	<b>343,807</b>		<b>65,864</b>	<b>277,943</b>	<b>69,491</b>	<b>67,081</b>	<b>48,763</b>	<b>29,962</b>	<b>30,860</b>	<b>31,786</b>	

### C. Funding Schedule (000's)

WSSC Bonds	343,807		65,864	277,943	69,491	67,081	48,763	29,962	30,860	31,786
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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 (ESA). 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.

**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 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 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 expenditure and schedule estimates based upon the recommendations from the Buried Wastewater Assets System Asset Management Plan.

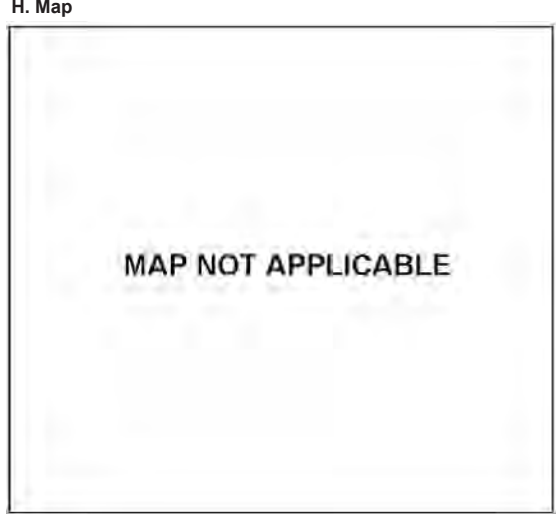
**OTHER**  
 The project scope has remained the same. Reconstruction work will include: reduction of I/I; replacement of substandard sewer segments; in situ lining of sewer segments; pipeline and manhole protection; rebuilding of manholes; and correction of structural defects and poor alignment. The 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's deadline to FY 2022 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 five miles per year beginning in FY 2024. Land costs are included in WSSC 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; National Park Service; Prince George's County Department of Permitting Inspection and Enforcement; U.S. Army Corps of Engineers; U.S. Environmental Protection Agency, Region III  
 Coordinating Projects: S - 000001.01 - Sewer Reconstruction Program

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$22,365	
Total Cost	\$22,365	
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	371,635
Present Cost Estimate	343,807
Approved Request Last FY	75,326
Total Expense & Encumbrances	
Approval Request Year 1	69,491

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	



# Land & Rights-of-Way Acquisition - Bi-County Sewer

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000203.00	163800	Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	Bi-County

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision											
Land	933		50	883	283	120	120	120	120	120	
Construction											
Other											
<b>Total</b>	<b>933</b>		<b>50</b>	<b>883</b>	<b>283</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>	

### C. Funding Schedule (000's)

WSSC Bonds	884		50	834	234	120	120	120	120	120	
SDC	49			49	49						

### D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This PDF provides a consolidated estimate of funding for the acquisition of land and rights-of-way for sewer projects. Expenditures are programmed based upon anticipated schedules and are required for the completion of those specific projects. These costs do not include purchases which have already been completed.</p> <p><b>JUSTIFICATION</b></p> <p>Consolidation of expenditures for land and rights-of-way acquisitions provides flexibility in expending funds in a specific fiscal year and permits the WSSC to respond to the uncertainty of project-specific implementation schedules. Other considerations include the accommodation of unpredictable delays which impact the timing of a planned purchase, unanticipated rights-of-way requirements due to minor alignment changes identified late in the design phase, and the need to assure the WSSC an equitable negotiation position by avoiding project-specific cost displays prior to contacting property owners.</p> <p>Acquisition needs are determined by the WSSC and are based upon facility planning efforts, alignment studies, field surveys, realignments required by other agencies, or requirements identified within the Development Services Process.</p> <p><b>COST CHANGE</b></p> <p>Not applicable.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. Expenditure and schedule projections shown in Block B are estimates only and may change based upon actual negotiations. When purchases are complete, the actual cost will be displayed in the expenditure schedule on the appropriate project.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: Not Applicable Coordinating Projects: Not Applicable</p>
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E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$58	
Total Cost	\$58	
Impact on Water and Sewer Rate		

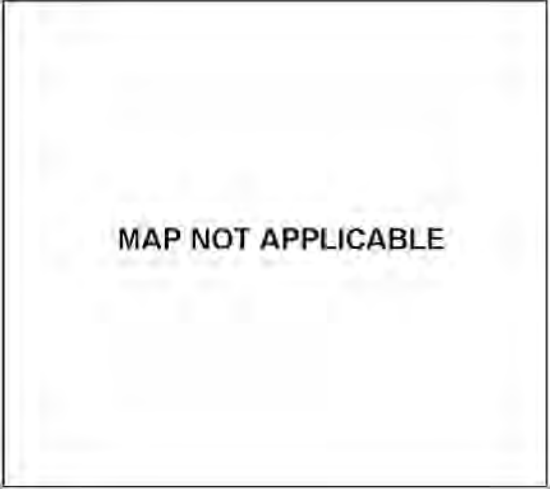
### F. Approval and Expenditure Data (000's)

Date First in Program	FY 98
Date First Approved	FY 98
Initial Cost Estimate	
Cost Estimate Last FY	375
Present Cost Estimate	933
Approved Request Last FY	50
Total Expense & Encumbrances	
Approval Request Year 1	283

### G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	On-Going
Percent Complete	0 %
Estimated Completion Date	Not Applicable
Growth	5%
System Improvement	95%
Environmental Regulation	
Population Served	
Capacity	

### H. Map



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## Section 5 - Prince George's County Water Projects

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## FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

### PRINCE GEORGE'S COUNTY WATER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 19	EST. EXPEND 20	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM	
						YR 1 21	YR 2 22	YR 3 23	YR 4 24	YR 5 25	YR 6 26			
W-12.02	Prince George's County HG415 Zone Water Main	3,910	531	1,105	2,274	2,201	73	0	0	0	0	0	0	5-2
W-34.02	Old Branch Avenue Water Main	22,908	2,888	5,574	14,446	7,772	6,674	0	0	0	0	0	0	5-3
W-34.04	Branch Avenue Water Transmission Improvements	42,931	21,964	4,343	16,624	3,520	9,460	3,311	333	0	0	0	0	5-4
W-34.05	Marlboro Zone Reinforcement Main	4,263	532	2,496	1,235	1,235	0	0	0	0	0	0	0	5-5
W-62.06	Rosaryville Water Storage Facility	8,510	0	0	230	0	0	0	0	0	230	8,280	0	5-6
W-84.02	Ritchie Marlboro Road Transmission & PRV	9,729	8,947	713	69	69	0	0	0	0	0	0	0	5-7
W-84.03	Smith Home Farms Water Main	2,883	974	606	1,303	439	435	429	0	0	0	0	0	5-8
W-84.04	Westphalia Town Center Water Main	1,708	639	45	1,024	342	404	278	0	0	0	0	0	5-9
W-84.05	Prince George's County 450A Zone Water Main	79,588	2,498	567	76,523	18,403	16,375	15,325	13,225	6,925	6,270	0	0	5-10
W-93.01	Konterra Town Center East Water Main	2,121	67	714	1,340	814	526	0	0	0	0	0	0	5-11
W-105.01	Marlton Section 18 Water Main, Lake Marlton Avenue	2,737	30	1	2,706	429	457	457	453	455	455	0	0	5-12
W-111.05	Hillmeade Road Water Main	5,718	5,511	138	69	69	0	0	0	0	0	0	0	5-13
W-120.14	Timothy Branch Water Main	3,381	618	1,782	981	981	0	0	0	0	0	0	0	5-14
W-137.03	South Potomac Supply Improvement, Phase 2	66,520	1,702	1,449	63,369	210	21,053	21,053	21,053	0	0	0	0	5-15
	Projects Pending Close-Out	36,674	35,582	1,092	0	0	0	0	0	0	0	0	0	5-16
	<b>TOTALS</b>	293,581	82,483	20,625	182,193	36,484	55,457	40,853	35,064	7,380	6,955	8,280		

# Prince George's County HG415 Zone Water Main

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000012.02		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	Montgomery High Zone HG660A; Montgomery Main 495A;
Drainage Basins	
Planning Areas	Patuxent PA 15

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	465	455	4	6	4	2					
Land	76	76									
Construction	2,928		957	1,971	1,910	61					
Other	441		144	297	287	10					
<b>Total</b>	<b>3,910</b>	<b>531</b>	<b>1,105</b>	<b>2,274</b>	<b>2,201</b>	<b>73</b>					

### C. Funding Schedule (000's)

WSSC Bonds	3,910	531	1,105	2,274	2,201	73					
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### D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of 1,500 feet of 24-inch diameter water main, new isolation valves, and pressure relief valves with flow control capability, which will improve system reliability by improving the flexibility of the delivery system to the Montgomery County High Zone HG660, Montgomery County Main Zone HG495A, and Patuxent Pressure Zone HG415A 30-inch and 42-inch diameter transmission mains leaving the Patuxent Plant.

**JUSTIFICATION**  
 The new water main will provide a redundant feed to the Montgomery County High Zone HG660, Montgomery County Main Zone HG495, and Patuxent Pressure Zone HG415A from the Potomac Plant in the event the Patuxent Plant is out of service. BOA Contract No. PM0003A05, Task Order No. 12: Patuxent Pressure Zone HG415A Redundancy Study, Whitman, Requardt & Associates, LLP (February 2009); BOA Contract No. PM0019A08, Task Order No. 11, Patuxent Pressure Zone HG415A 24-inch Transmission Main, EBA Engineering (December 2011); PM0007A13, Task Order No. 14, Patuxent Pressure Zone HG415A 24-inch Transmission Main, EBA Engineering (March 16, 2017).

### COST CHANGE

Not applicable.

### OTHER

The project scope remains the same. Expenditure and schedule projections shown in Block B above are preliminary design level estimates and may change depending on site-specific conditions and design constraints.

### COORDINATION

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

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$44	23
Debt Service	\$254	23
Total Cost	\$298	23
Impact on Water and Sewer Rate		

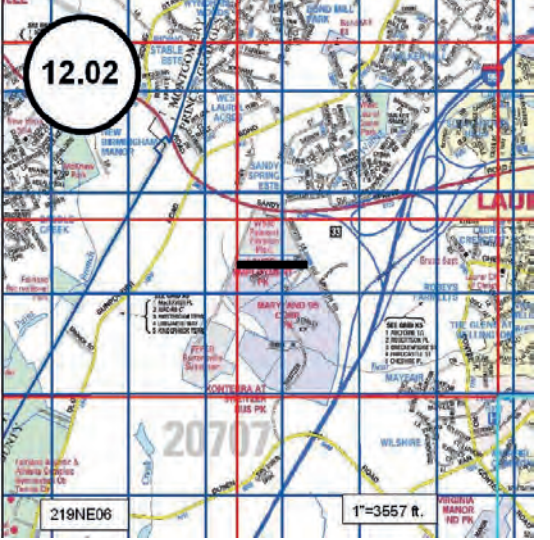
### F. Approval and Expenditure Data (000's)

Date First in Program	FY 11
Date First Approved	FY 11
Initial Cost Estimate	1,074
Cost Estimate Last FY	3,718
Present Cost Estimate	3,910
Approved Request Last FY	2,136
Total Expense & Encumbrances	531
Approval Request Year 1	2,201

### G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	Design
Percent Complete	90 %
Estimated Completion Date	June 2022
Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

### H. Map



# Old Branch Avenue Water Main

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000034.02		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	Clinton HG385B
Drainage Basins	
Planning Areas	Clinton & Vicinity PA 81A

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	2,752	2,551	67	134	67	67					
Land	268	268									
Construction	18,069	69	5,000	13,000	7,000	6,000					
Other	1,819		507	1,312	705	607					
<b>Total</b>	<b>22,908</b>	<b>2,888</b>	<b>5,574</b>	<b>14,446</b>	<b>7,772</b>	<b>6,674</b>					

## C. Funding Schedule (000's)

WSSC Bonds	11,454	1,444	2,787	7,223	3,886	3,337					
SDC	11,454	1,444	2,787	7,223	3,886	3,337					

## D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of approximately 16,000 feet of 30-inch diameter water main and a new flow control valve along Old Branch Avenue, from Allentown Road to Piscataway Road.

**JUSTIFICATION**  
 This project will provide redundancy to a large area of Prince George's County, including the 85,000 customers in Clinton Pressure Zone HG385B and dependent zones. Service to these zones would be severely disrupted with the loss of the Marlboro Road Pressure Reducing Valves or associated piping. The WSSC attempts to provide for average day demands in the event of the loss of any one water system facility and this project will meet that goal for Clinton Pressure Zone HG385B and dependent zones.  
 General Plan; M-NCP&PC Round 7.0 growth forecasts; WSSC Memorandum dated May 16, 2006.

**COST CHANGE**  
 Not applicable.

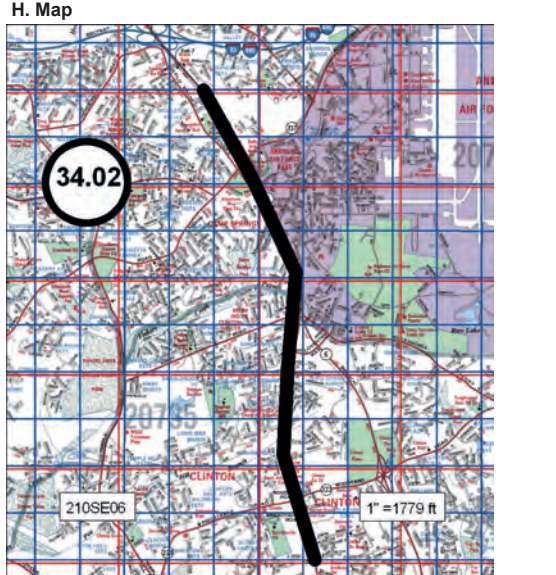
**OTHER**  
 The project scope has remained the same. The expenditure and schedule projections as shown in Block B above are design level estimates and may change based upon the final engineer's estimate and actual bids. Five properties have been acquired.

**COORDINATION**  
 Coordinating Agencies: Maryland Department of the Environment; Maryland State Highway Administration; Maryland-National Capital Park & Planning Commission; Prince George's County Government; Prince George's County Department of Permitting Inspection and Enforcement  
 Coordinating Projects: W - 000062.05 - Clinton Zone Water Storage Facility Implementation; W - 000062.06 - Rosaryville Water Storage Facility; W - 000084.05 - Prince George's County 450A Zone Water Main; W - 000137.03 - South Potomac Supply Improvement, Phase 2

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$472	23
Debt Service	\$745	23
Total Cost	\$1,217	23
Impact on Water and Sewer Rate		

F. Approval and Expenditure Data (000's)	
Date First in Program	FY 08
Date First Approved	FY 08
Initial Cost Estimate	10,350
Cost Estimate Last FY	23,930
Present Cost Estimate	22,908
Approved Request Last FY	6,766
Total Expense & Encumbrances	2,888
Approval Request Year 1	7,772

G. Status Information	
Land Status	Public/Agency owned land
Project Phase	Design
Percent Complete	100 %
Estimated Completion Date	June 2022
Growth	50%
System Improvement	50%
Environmental Regulation	
Population Served	
Capacity	



# Branch Avenue Water Transmission Improvements

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000034.04		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	Clinton HG385B
Drainage Basins	
Planning Areas	Clinton & Vicinity PA 81A

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	3,743	2,980	450	313	200	100	10	3			
Land	244	244									
Construction	37,038	18,740	3,498	14,800	3,000	8,500	3,000	300			
Other	1,906		395	1,511	320	860	301	30			
<b>Total</b>	<b>42,931</b>	<b>21,964</b>	<b>4,343</b>	<b>16,624</b>	<b>3,520</b>	<b>9,460</b>	<b>3,311</b>	<b>333</b>			

## C. Funding Schedule (000's)

SDC	42,931	21,964	4,343	16,624	3,520	9,460	3,311	333			
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## D. Description & Justification

### DESCRIPTION

This project provides for the planning, design, and construction of approximately 21,800 feet of 42-inch diameter water transmission main and 5,400 feet of 30-inch diameter water transmission main along Branch Avenue and Surratts Road in the Clinton area.

### JUSTIFICATION

The new water main will serve as a primary feed for the new Brandywine (formerly Clinton South) Tank. Clinton Zone WSF & Transmission Improvements Modeling and Master Plan Report, Gannett Fleming, Inc. (February 2012).

### COST CHANGE

Cost estimates increased due to the complexity of the design and construction of the final phase of the project within a narrow right-of-way with many existing utilities.

### OTHER

The project scope has remained the same. Expenditure and schedule projections shown in Block B above are a mix of construction cost, design, and planning level estimates and are expected to change as design progresses. The project is split into four phases. The first phase is comprised of approximately 1,200 feet of 42-inch pipe along Surratts Road and has been constructed by Prince George's County as part of the County Surratts/Brandywine road widening project. The second phase is approximately 3,300 feet of 30-inch main along Branch Avenue and has been constructed by the Maryland State Highway Administration (SHA) under the SHA MD5/Brandywine interchange improvement project. The third phase is to construct approximately 12,800 feet of 42-inch pipe and 2,100 feet of 30-inch pipe along Branch Avenue. The last phase is to construct the remaining 7,798 feet of pipe along Surratts Rd and the north section to tie-in to the existing 30-inch pipe on Woodyard/Piscataway Road. Phase III (BL5273B11) has been constructed by a WSSC contractor. Phase IV (BL5273F11) will be bid and constructed by WSSC as well. No WSSC rate supported debt will be used for this project. Land costs are included in WSSC Project W-202.00.

### COORDINATION

Coordinating Agencies: Maryland Department of Natural Resources; Maryland Department of the Environment; Maryland State Highway Administration; Maryland-National Capital Park & Planning Commission;(Mandatory Referral Process); 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  
Coordinating Projects: W - 000062.05 - Clinton Zone Water Storage Facility Implementation; W - 000062.06 - Rosaryville Water Storage Facility

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$802	25
Debt Service		
Total Cost	\$802	25
Impact on Water and Sewer Rate		

## F. Approval and Expenditure Data (000's)

Date First in Program	FY 14
Date First Approved	FY 14
Initial Cost Estimate	23,705
Cost Estimate Last FY	38,155
Present Cost Estimate	42,931
Approved Request Last FY	10,714
Total Expense & Encumbrances	21,964
Approval Request Year 1	3,520

## G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	Construction
Percent Complete	65 %
Estimated Completion Date	April 2024
Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	

## H. Map



# Marlboro Zone Reinforcement Main

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000034.05		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	Clinton HG385B
Drainage Basins	
Planning Areas	Clinton & Vicinity PA 81A

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	721	527	120	74	74						
Land	3	3									
Construction	3,052	2	2,050	1,000	1,000						
Other	487		326	161	161						
<b>Total</b>	<b>4,263</b>	<b>532</b>	<b>2,496</b>	<b>1,235</b>	<b>1,235</b>						

## C. Funding Schedule (000's)

WSSC Bonds	4,263	532	2,496	1,235	1,235						
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## D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of approximately 4,000 feet of 16-inch diameter water transmission main and a flow control valve along Old Marlboro Pike in the Clinton area.

**JUSTIFICATION**  
 This new water main will provide system reliability and redundancy by connecting the 385B and 280A pressure zones. Clinton Zone WSF & Transmission Improvements Modeling and Master Plan Report, Gannett Fleming, Inc. (February 2012).

**COST CHANGE**  
 Not applicable.

**OTHER**  
 The project scope has remained the same. Expenditure and schedule projections shown in Block B above are preliminary design level estimates and are expected to change as design progresses.

**COORDINATION**  
 Coordinating Agencies: Maryland State Highway Administration; Maryland-National Capital Park & Planning Commission;(Mandatory Referral Process); Prince George's County Department of Environmental Resources; Prince George's County Government; Prince George's County Department of Permitting Inspection and Enforcement  
 Coordinating Projects: W - 000062.05 - Clinton Zone Water Storage Facility Implementation; W - 000062.06 - Rosaryville Water Storage Facility

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$118	22
Debt Service	\$277	22
Total Cost	\$395	22
Impact on Water and Sewer Rate		

## F. Approval and Expenditure Data (000's)

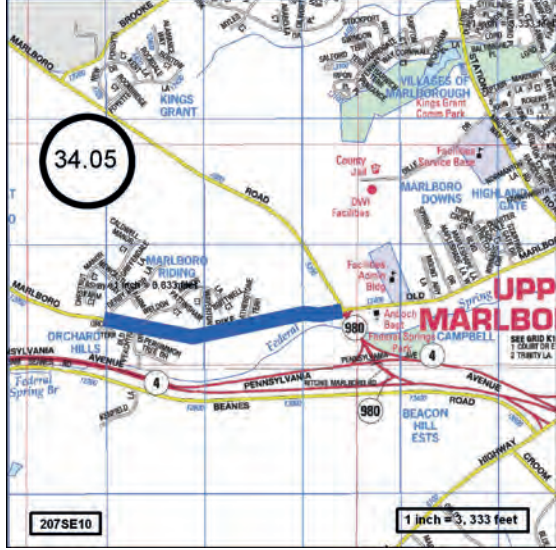
Date First in Program	FY 14
Date First Approved	FY 14
Initial Cost Estimate	5,234
Cost Estimate Last FY	4,302
Present Cost Estimate	4,263
Approved Request Last FY	2,990
Total Expense & Encumbrances	532
Approval Request Year 1	1,235

## G. Status Information

Land Status	R/W acquired
Project Phase	Design
Percent Complete	98 %
Estimated Completion Date	June 2021

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

## H. Map





# Rosaryville Water Storage Facility

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000062.06		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	Southern 385B
Drainage Basins	
Planning Areas	Rosaryville PA 82A

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	600			200						200	400
Land											
Construction	6,800										6,800
Other	1,110			30						30	1,080
<b>Total</b>	<b>8,510</b>			<b>230</b>						<b>230</b>	<b>8,280</b>

## C. Funding Schedule (000's)

SDC	8,510			230						230	8,280
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## D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of approximately 2.0 million gallons (MG) of water storage to serve the Rosaryville area in the Clinton Pressure Zone.

**JUSTIFICATION**  
 Clinton Pressure Zone HG385B serves a large and growing area of Southern Prince George's County. Since storage facilities must be periodically removed from service for maintenance, having only one in a large zone creates operational problems. The Modeling and Master Plan Report indicates that there will be approximately 4.0 MG of storage deficit in Clinton Pressure Zone HG385B. WSSC Memorandum dated May 9, 2005, from Timothy Hirrel, Unit Coordinator, to Craig Fricke, Planning Group Leader; 2006 Water Production Projections; 2005 Water Storage Volume Criteria; Clinton Zone WSF & Transmission Improvements Modeling and Master Plan Report, Gannett Fleming, Inc. (February 2012); Finished Water Storage Analysis Report (June 2013).

**COST CHANGE**  
 Not applicable.

**OTHER**  
 The project scope was developed for the FY '21 CIP and has an estimated cost of \$8,510,000. This project was split from project W-62.05, Clinton Zone Water Storage Facility Implementation which will be completed and placed in service in 2019. Expenditure and schedule projections shown are based upon planning level estimates and are expected to change once the project moves to design. No WSSC rate supported debt will be used for this project.

**COORDINATION**  
 Coordinating Agencies: Maryland Department of the Environment; Maryland-National Capital Park & Planning Commission; Prince George's County Department of Environmental Resources; Prince George's County Government  
 Coordinating Projects: W - 000034.02 - Old Branch Avenue Water Main; W - 000034.03 - Water Transmission Improvements 385B Pressure Zone; W - 000034.04 - Branch Avenue Water Transmission Improvements; W - 000034.05 - Marlboro Zone Reinforcement Main

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 13
Initial Cost Estimate	8,510
Cost Estimate Last FY	
Present Cost Estimate	8,510
Approved Request Last FY	
Total Expense & Encumbrances	
Approval Request Year 1	

G. Status Information	
Land Status	Public/Agency owned land
Project Phase	Design
Percent Complete	0 %
Estimated Completion Date	June 2030
Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	2.0 MG

## H. Map



# Ritchie Marlboro Road Transmission Main & PRV

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000084.02		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	Prince George's High HG450A; Southern 385B
Drainage Basins	
Planning Areas	Westphalia & Vicinity PA 78

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	1,534	1,504	20	10	10						
Land	2	2									
Construction	8,091	7,441	600	50	50						
Other	102		93	9	9						
<b>Total</b>	<b>9,729</b>	<b>8,947</b>	<b>713</b>	<b>69</b>	<b>69</b>						

## C. Funding Schedule (000's)

SDC	9,729	8,947	713	69	69						
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## D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of approximately 13,100 feet of 24-inch diameter main and a pressure reducing valve (PRV) to serve the Westphalia area. The water main will be constructed along Ritchie Marlboro Road from south of Westphalia Road to the Beltway.

**JUSTIFICATION**  
 Prince George's County High Zone Water Main Alignment and Capacity Study, Chester Engineering (September 2012).

**COST CHANGE**  
 Project cost increased to reflect value of WSSC provided pipe.

**OTHER**  
 The project scope has remained the same. Expenditure and schedule projections shown above are based upon actual bid. No WSSC rate supported debt will be used for this project.

**COORDINATION**  
 Coordinating Agencies: Maryland Department of Natural Resources; Maryland State Highway Administration; Maryland Water Management Administration; 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  
 Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$386	22
Debt Service		
Total Cost	\$386	22
Impact on Water and Sewer Rate		

## F. Approval and Expenditure Data (000's)

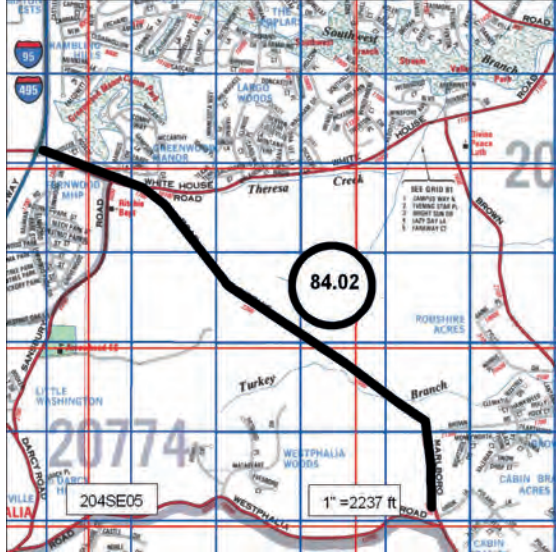
Date First in Program	FY 08
Date First Approved	FY 08
Initial Cost Estimate	2,496
Cost Estimate Last FY	6,877
Present Cost Estimate	9,729
Approved Request Last FY	25
Total Expense & Encumbrances	8,947
Approval Request Year 1	69

## G. Status Information

Land Status	Land Acquired
Project Phase	Construction
Percent Complete	96 %
Estimated Completion Date	August 2020

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	

## H. Map



# Smith Home Farms Water Main

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000084.03		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	Southern 385B
Drainage Basins	
Planning Areas	Westphalia & Vicinity PA 78

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	432	147	93	192	66	64	62				
Land											
Construction	2,202	827	434	941	316	314	311				
Other	249		79	170	57	57	56				
<b>Total</b>	<b>2,883</b>	<b>974</b>	<b>606</b>	<b>1,303</b>	<b>439</b>	<b>435</b>	<b>429</b>				

## C. Funding Schedule (000's)

Contributions/Other	2,883	974	606	1,303	439	435	429				
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## D. Description & Justification

**DESCRIPTION**  
This project provides for the planning, design, and construction of 7,600 feet of 16-inch diameter water main to serve the Smith Home Farms Subdivision.

**JUSTIFICATION**  
Smith Home Farm Subdivision Hydraulic Planning Analysis (Amended March 2015).

**COST CHANGE**  
Not applicable.

**OTHER**  
The project scope has remained the same. Expenditure and schedule projections shown in Block B above are based upon information provided by the developer. Design and construction will be performed by the developer under a System Extension Permit. The estimated completion date is developer dependent. No WSSC rate supported debt will be used for this project.

**COORDINATION**  
Coordinating Agencies: Maryland-National Capital Park & Planning Commission;(Westphalia Sector Plan); Prince George's County Government  
Coordinating Projects: W - 000084.04 - Westphalia Town Center Water Main

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$224	
Debt Service		
Total Cost	\$224	
Impact on Water and Sewer Rate		

## F. Approval and Expenditure Data (000's)

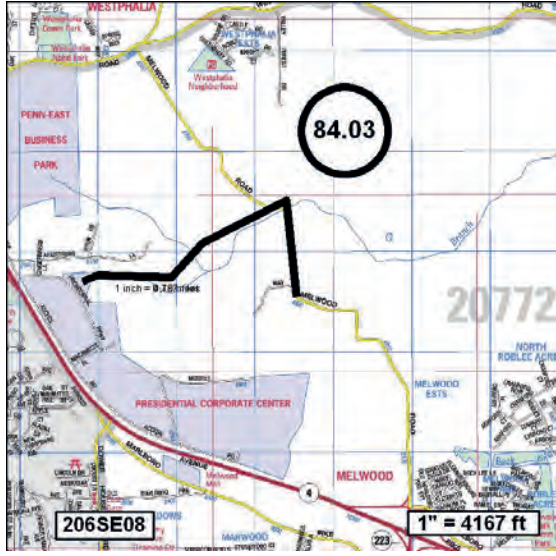
Date First in Program	FY 08
Date First Approved	FY 08
Initial Cost Estimate	1,600
Cost Estimate Last FY	2,689
Present Cost Estimate	2,883
Approved Request Last FY	438
Total Expense & Encumbrances	974
Approval Request Year 1	439

## G. Status Information

Land Status	Not Applicable
Project Phase	Construction
Percent Complete	75 %
Estimated Completion Date	Developer Dependent

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	

## H. Map



# Westphalia Town Center Water Main

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000084.04		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	Clinton HG385B
Drainage Basins	
Planning Areas	Westphalia & Vicinity PA 78

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	207	26	39	142	67	49	26				
Land											
Construction	1,361	613		748	230	302	216				
Other	140		6	134	45	53	36				
<b>Total</b>	<b>1,708</b>	<b>639</b>	<b>45</b>	<b>1,024</b>	<b>342</b>	<b>404</b>	<b>278</b>				

## C. Funding Schedule (000's)

Contributions/Other	1,708	639	45	1,024	342	404	278				
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## D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of 4,700 feet of 16-inch diameter water main to serve Westphalia Town Center and vicinity.

**JUSTIFICATION**  
 Westphalia Town Center Hydraulic Planning Analysis (June 2009).

**COST CHANGE**  
 Not applicable.

**OTHER**  
 The project scope has remained the same. The expenditure and schedule projections shown in Block B above are based upon information provided by the developer. Design and construction will be performed by the developer under a System Extension Permit. The estimated completion date is developer dependent. No WSSC rate supported debt will be used for this project.

**COORDINATION**  
 Coordinating Agencies: Maryland State Highway Administration; Maryland-National Capital Park & Planning Commission; Prince George's County Government; Prince George's County Department of Permitting Inspection and Enforcement  
 Coordinating Projects: W - 000084.03 - Smith Home Farms Water Main

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$139	
Debt Service		
Total Cost	\$139	
Impact on Water and Sewer Rate		

## F. Approval and Expenditure Data (000's)

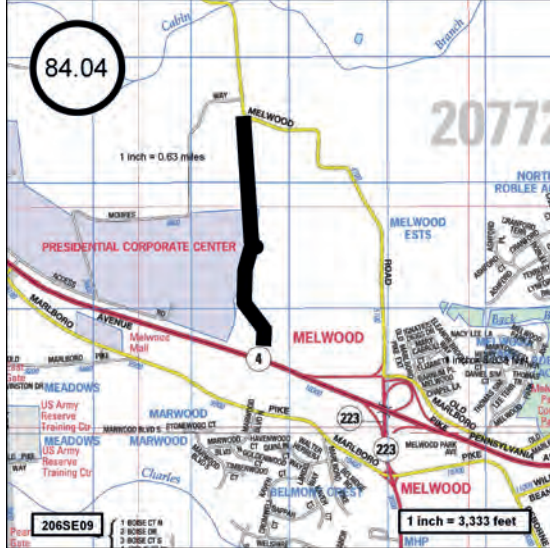
Date First in Program	FY 14
Date First Approved	FY 14
Initial Cost Estimate	1,396
Cost Estimate Last FY	1,578
Present Cost Estimate	1,708
Approved Request Last FY	327
Total Expense & Encumbrances	639
Approval Request Year 1	342

## G. Status Information

Land Status	Not Applicable
Project Phase	Construction
Percent Complete	40 %
Estimated Completion Date	Developer Dependent

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	

## H. Map



# Prince George's County 450A Zone Water Main

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000084.05		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	Prince George's High HG450A
Drainage Basins	
Planning Areas	Prince George's County

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	3,815	2,498	540	777	302	95	95	95	95	95	
Land											
Construction	72,101			72,101	17,225	15,500	14,500	12,500	6,500	5,876	
Other	3,672		27	3,645	876	780	730	630	330	299	
<b>Total</b>	<b>79,588</b>	<b>2,498</b>	<b>567</b>	<b>76,523</b>	<b>18,403</b>	<b>16,375</b>	<b>15,325</b>	<b>13,225</b>	<b>6,925</b>	<b>6,270</b>	

## C. Funding Schedule (000's)

WSSC Bonds	79,588	2,498	567	76,523	18,403	16,375	15,325	13,225	6,925	6,270
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## D. Description & Justification

**DESCRIPTION**  
 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.

**JUSTIFICATION**  
 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 Ave. and tie in to the new 30-inch diameter main to be constructed under WSSC project W-34.02-Old Branch Avenue Water Main.

**COST CHANGE**  
 Not applicable.

**OTHER**  
 The project scope has remained the same. Expenditure and schedule projections shown above are preliminary design level estimates and are expected to change as the project moves through design. An alignment and capacity study has been performed and final alignment and pipeline diameter has been selected. Land costs are included in WSSC Project W-202.00.

**COORDINATION**  
 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  
 Coordinating Projects: W - 000034.02 - Old Branch Avenue Water Main; W - 000137.03 - South Potomac Supply Improvement, Phase 2

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$592	27
Debt Service	\$5,177	27
Total Cost	\$5,769	27
Impact on Water and Sewer Rate	\$0.01	27

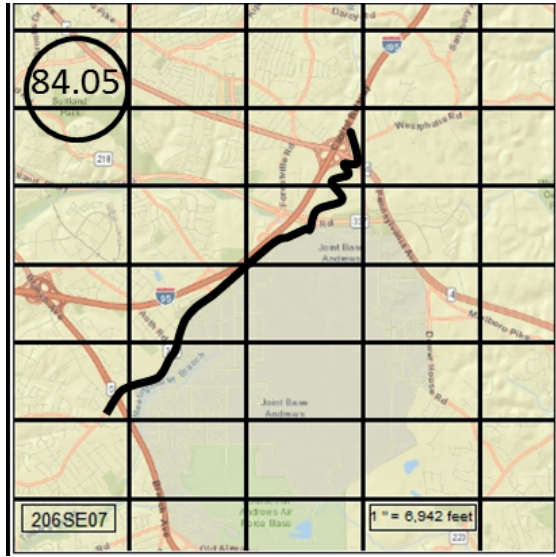
## F. Approval and Expenditure Data (000's)

Date First in Program	FY 13
Date First Approved	FY 13
Initial Cost Estimate	374
Cost Estimate Last FY	79,578
Present Cost Estimate	79,588
Approved Request Last FY	643
Total Expense & Encumbrances	2,498
Approval Request Year 1	18,403

## G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	Design
Percent Complete	70 %
Estimated Completion Date	June 2026
Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	0

## H. Map



# Konterra Town Center East Water Main

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000093.01		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	Prince George's 415A
Drainage Basins	
Planning Areas	Northwestern Area PA 60

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	300	67	81	152	92	60					
Land											
Construction	1,553		540	1,013	616	397					
Other	268		93	175	106	69					
<b>Total</b>	<b>2,121</b>	<b>67</b>	<b>714</b>	<b>1,340</b>	<b>814</b>	<b>526</b>					

## C. Funding Schedule (000's)

Contributions/Other	2,121	67	714	1,340	814	526					
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## D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This project provides for the planning, design, and construction of 9,200 feet of 16-inch diameter water main to serve the Konterra Town Center East, located in the area bounded by Interstate 95, the Intercounty Connector, and Konterra Drive. The sleeve for the water main crossing the Intercounty Connector was built under WSSC Project S-28.18 Konterra Town Center East Sewer.</p> <p><b>JUSTIFICATION</b></p> <p>Letter of Findings - Hydraulic Planning Analysis (October 19, 2018).</p> <p><b>COST CHANGE</b></p> <p>Not applicable.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. The expenditures and schedule projections shown in Block B are based upon information provided by the developer. Design and construction will be performed by the developer under a Systems Extension Permit. Estimated completion date is developer dependent. No WSSC rate supported debt will be used for this project.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: Prince George's County Government                  Coordinating Projects: S - 000028.18 - Konterra Town Center East Sewer</p>
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E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$271	
Debt Service		
Total Cost	\$271	
Impact on Water and Sewer Rate		

F. Approval and Expenditure Data (000's)	
Date First in Program	FY 09
Date First Approved	FY 09
Initial Cost Estimate	610
Cost Estimate Last FY	2,107
Present Cost Estimate	2,121
Approved Request Last FY	714
Total Expense & Encumbrances	67
Approval Request Year 1	814

G. Status Information	
Land Status	Not Applicable
Project Phase	Construction
Percent Complete	3 %
Estimated Completion Date	Developer Dependent

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	



# Marlton Section 18 Water Main, Lake Marlton Avenue

<b>A. Identification and Coding Information</b>			PDF Date	October 1, 2019	Pressure Zones	Clinton HG385B
Agency Number	Project Number	Update Code	Date Revised		Drainage Basins	
W - 000105.01		Change			Planning Areas	Rosaryville PA 82A

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	415	30	1	384	44	68	68	68	68	68	
Land											
Construction	1,969			1,969	329	329	329	326	328	328	
Other	353			353	56	60	60	59	59	59	
<b>Total</b>	<b>2,737</b>	<b>30</b>	<b>1</b>	<b>2,706</b>	<b>429</b>	<b>457</b>	<b>457</b>	<b>453</b>	<b>455</b>	<b>455</b>	

## C. Funding Schedule (000's)

Contributions/Other	2,737	30	1	2,706	429	457	457	453	455	455
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## D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of 5,400 feet of 16-inch diameter water main to provide service to East Marlton, Section 18, along Heathermore Boulevard and Lake Marlton Avenue.

**JUSTIFICATION**  
 East Marlton Hydraulic Planning Analysis (February 2008).

**COST CHANGE**  
 The expenditures and schedule have been updated based upon information provided by the developer.

**OTHER**  
 The project scope has remained the same. The expenditures and schedule projections shown in Block B are based upon information provided by the developer. Design and construction will be performed by the developer under a Systems Extension Permit. Estimated completion date is developer dependent. No WSSC rate supported debt will be used for this project.

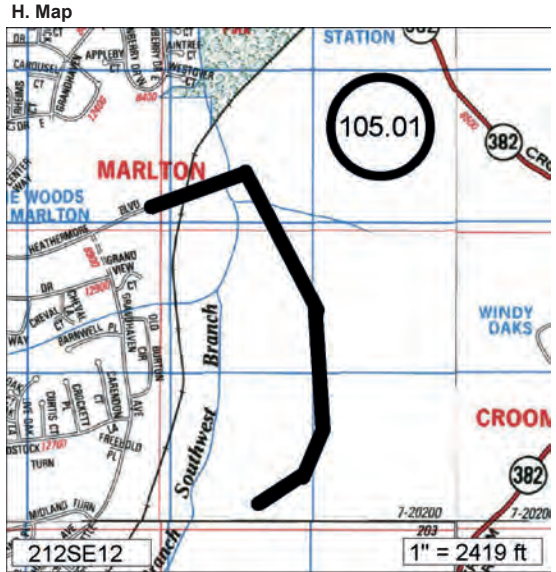
**COORDINATION**  
 Coordinating Agencies: Maryland Department of the Environment; Maryland-National Capital Park & Planning Commission; Prince George's County Government  
 Coordinating Projects: Not Applicable

<b>E. Annual Operating Budget Impact (000's)</b>		FY of Impact
Staff & Other		
Maintenance	\$159	
Debt Service		
Total Cost	\$159	
Impact on Water and Sewer Rate		

<b>F. Approval and Expenditure Data (000's)</b>	
Date First in Program	FY 02
Date First Approved	FY 02
Initial Cost Estimate	398
Cost Estimate Last FY	2,657
Present Cost Estimate	2,737
Approved Request Last FY	417
Total Expense & Encumbrances	30
Approval Request Year 1	429

<b>G. Status Information</b>	
Land Status	Not Applicable
Project Phase	Design
Percent Complete	20 %
Estimated Completion Date	Developer Dependent

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	



# Hillmeade Road Water Main

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000111.05		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	Bowie HG350E
Drainage Basins	
Planning Areas	Bowie & Vicinity PA 71A

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	561	531	20	10	10						
Land	5	5									
Construction	5,125	4,975	100	50	50						
Other	27		18	9	9						
<b>Total</b>	<b>5,718</b>	<b>5,511</b>	<b>138</b>	<b>69</b>	<b>69</b>						

## C. Funding Schedule (000's)

SDC	5,718	5,511	138	69	69						
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## D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of approximately 7,300 feet of 24-inch diameter water main along Hillmeade Road from Lanham-Severn Road to an existing 24-inch diameter water main in Hillmeade Road at Daisy Lane.

**JUSTIFICATION**  
 The purpose of this project is to provide adequate pressure in response to growth in the Bowie area. Bowie-Glen Dale Water Storage Facility Plan, O'Brien & Gere Engineers, Inc. (October 1990); Water Resources Planning Section Memorandum dated May 31, 1996; M-NCP&PC Round 6 growth forecasts.

**COST CHANGE**  
 Not applicable.

**OTHER**  
 The project scope has remained the same. Expenditures and schedule projections shown in Block B are based upon actual bid. No WSSC rate supported debt will be used for this project.

**COORDINATION**  
 Coordinating Agencies: AMTRAK; Maryland Department of Natural Resources; Maryland State Highway Administration; 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  
 Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$215	22
Debt Service		
Total Cost	\$215	22
Impact on Water and Sewer Rate		

## F. Approval and Expenditure Data (000's)

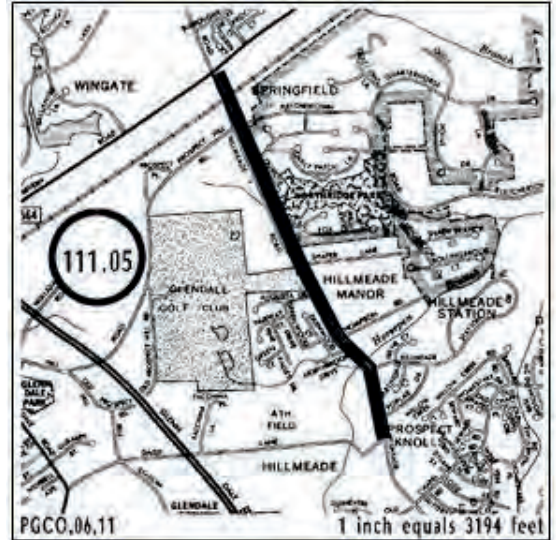
Date First in Program	FY 98
Date First Approved	FY 98
Initial Cost Estimate	1,898
Cost Estimate Last FY	5,431
Present Cost Estimate	5,718
Approved Request Last FY	25
Total Expense & Encumbrances	5,511
Approval Request Year 1	69

## G. Status Information

Land Status	Land Acquired
Project Phase	Construction
Percent Complete	98 %
Estimated Completion Date	July 2020

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	

## H. Map





# Timothy Branch Water Main

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000120.14		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	Southern 385B
Drainage Basins	
Planning Areas	Brandywine & Vicinity PA 85A

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	935	618	159	158	158						
Land											
Construction	2,086		1,391	695	695						
Other	360		232	128	128						
<b>Total</b>	<b>3,381</b>	<b>618</b>	<b>1,782</b>	<b>981</b>	<b>981</b>						

## C. Funding Schedule (000's)

Contributions/Other	3,381	618	1,782	981	981						
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## D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of 5,750 feet of 16-inch water main to serve the Timothy Branch project, parts 6, 9, and 22.

**JUSTIFICATION**  
 Timothy Branch Hydraulic Planning Analysis DA9381Z92 (Amended April 18, 2019).

**COST CHANGE**  
 The expenditures and schedule have been updated based upon information provided by the developer.

**OTHER**  
 The project scope has changed. The project length has increased to coordinate with the Hydraulic Planning Analysis Amendment approved April 18, 2019. The expenditure and schedule projections shown in Block B above are based upon information provided by the developer. The estimated completion date is developer dependent. No WSSC rate supported debt will be used for this project.

**COORDINATION**  
 Coordinating Agencies: Prince George's County Government  
 Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$170	
Debt Service		
Total Cost	\$170	
Impact on Water and Sewer Rate		

## F. Approval and Expenditure Data (000's)

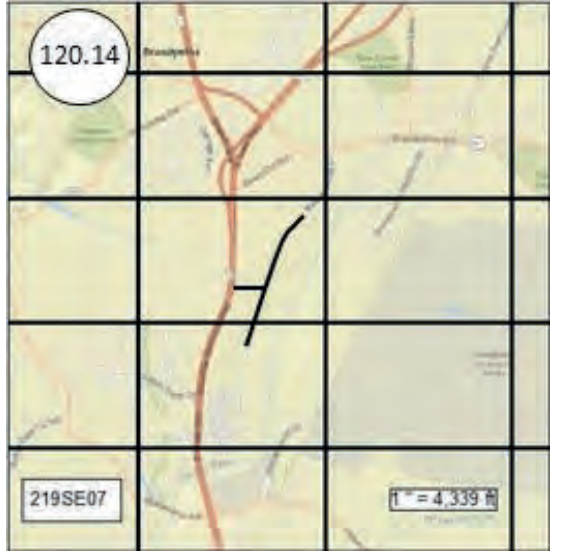
Date First in Program	FY 94
Date First Approved	FY 94
Initial Cost Estimate	176
Cost Estimate Last FY	2,056
Present Cost Estimate	3,381
Approved Request Last FY	262
Total Expense & Encumbrances	618
Approval Request Year 1	981

## G. Status Information

Land Status	Not Applicable
Project Phase	Planning
Percent Complete	100 %
Estimated Completion Date	Developer Dependent

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	

## H. Map



# 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, 2019
Date Revised	

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'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	3,432	1,702	1,380	350	200	50	50	50			
Land											
Construction	60,000			60,000		20,000	20,000	20,000			
Other	3,088		69	3,019	10	1,003	1,003	1,003			
<b>Total</b>	<b>66,520</b>	<b>1,702</b>	<b>1,449</b>	<b>63,369</b>	<b>210</b>	<b>21,053</b>	<b>21,053</b>	<b>21,053</b>			

### C. Funding Schedule (000's)

WSSC Bonds	43,903	1,123	956	41,824	139	13,895	13,895	13,895			
SDC	22,617	579	493	21,545	71	7,158	7,158	7,158			

### 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.

**JUSTIFICATION**  
 During design of the 42-inch PCCP transmission main replacement under CIP W-137.02, South Potomac Supply Improvement, Phase 1, WSSC and the Maryland Department of the Environment discussed extensive requirements for stream restoration of Henson Creek. At that time, WSSC 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

Not applicable.

### OTHER

The project scope remains the same. The Phase 1 alignment study was completed in April 2017. Notice to Proceed for Phase 2 (Design) was issued in February 2018. Schedule and expenditure projections for Phase 2 are preliminary design estimates and may change based upon design constraints, site-specific conditions, and stream restoration requirements for Henson Creek. Land costs are included in WSSC 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	\$1,075	25
Debt Service	\$2,856	25
Total Cost	\$3,931	25
Impact on Water and Sewer Rate	\$0.01	25

### 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	66,759
Present Cost Estimate	66,520
Approved Request Last FY	651
Total Expense & Encumbrances	1,702
Approval Request Year 1	210

### G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	Design
Percent Complete	30 %
Estimated Completion Date	June 2024
Growth	34%
System Improvement	66%
Environmental Regulation	
Population Served	
Capacity	

### H. Map



**PROJECTS PENDING CLOSE-OUT**  
**Prince George's Water Projects**  
 (ALL FIGURES IN THOUSANDS)

<b>Agency Number</b>	<b>Project Name</b>	<b>Estimated Total Cost</b>	<b>Expenditures Thru FY'19</b>	<b>Estimated Expenditures FY'20</b>	<b>Remarks</b>
W-34.03	Water Transmission Improvements 385B Pressure Zone	\$14,320	\$13,765	\$555	Project completion expected in FY'20.
W-62.05	Clinton Zone Water Storage Facility Implementation	10,036	9,681	355	Project completion expected in FY'20.
W-65.10	St. Barnabas Elevated Tank Replacement	12,318	12,136	182	Project completion expected in FY'20.
	<b>TOTALS</b>	\$36,674	\$35,582	\$1,092	

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## Section 6 - Prince George's County Sewer Projects

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### FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

#### PRINCE GEORGE'S COUNTY SEWER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 19	EST. EXPEND 20	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 21	YR 2 22	YR 3 23	YR 4 24	YR 5 25	YR 6 26		
S-27.08	Westphalia Town Center Sewer Main	1,523	829	487	207	141	54	12	0	0	0	0	6-2
S-28.18	Konterra Town Center East Sewer	8,484	6,492	0	1,992	1,992	0	0	0	0	0	0	6-3
S-43.02	Broad Creek WWPS Augmentation	188,381	177,807	10,408	166	166	0	0	0	0	0	0	6-4
S-68.01	Landover Mall Redevelopment	1,381	25	105	1,251	649	414	47	47	47	47	0	6-5
S-75.21	Mattawoman WWTP Upgrades	20,394	0	3,190	15,488	3,630	4,928	3,762	1,584	792	792	1,716	6-6
S-77.20	Parkway North Substation Replacement	8,535	1,377	5,663	1,495	1,357	138	0	0	0	0	0	6-7
S-86.19	Southlake Subdivision Sewer	820	214	222	384	187	197	0	0	0	0	0	6-8
S-96.14	Piscataway WRRF Facility Upgrades	160,304	24,728	39,350	96,226	28,284	39,674	26,860	1,408	0	0	0	6-9
S-131.05	Pleasant Valley Sewer Main, Part 2	910	24	212	674	419	174	81	0	0	0	0	6-10
S-131.07	Pleasant Valley Sewer Main, Part 1	1,854	98	495	1,261	1,029	232	0	0	0	0	0	6-11
S-131.10	Fort Washington Forest No. 1 WWPS Augmentation	4,451	3,425	1,004	22	22	0	0	0	0	0	0	6-12
S-157.02	Western Branch WRRF Process Train Improvements	14,859	480	330	14,049	880	880	3,465	3,465	3,465	1,894	0	6-13
	Projects Pending Close-Out	52,684	52,449	235	0	0	0	0	0	0	0	0	6-14
	<b>TOTALS</b>	464,580	267,948	61,701	133,215	38,756	46,691	34,227	6,504	4,304	2,733	1,716	

# Westphalia Town Center Sewer Main

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000027.08		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	Western Branch 14
Planning Areas	Westphalia & Vicinity PA 78

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	187	115	34	38	22	11	5				
Land											
Construction	1,245	714	389	142	101	36	5				
Other	91		64	27	18	7	2				
<b>Total</b>	<b>1,523</b>	<b>829</b>	<b>487</b>	<b>207</b>	<b>141</b>	<b>54</b>	<b>12</b>				

## C. Funding Schedule (000's)

Contributions/Other	1,523	829	487	207	141	54	12				
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## D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of 4,550 feet of 15-inch, 18-inch, and 21-inch sanitary sewer main to serve the Westphalia Town Center.

**JUSTIFICATION**  
 Westphalia Town Center Hydraulic Planning Analysis (June 2009).

**COST CHANGE**  
 The expenditures and schedule have been updated based upon information provided by the developer.

**OTHER**  
 The project scope has remained the same. The expenditure and schedule projections shown in Block B are based upon information provided by the developer. Design and construction will be performed by the developer under a System Extension Permit. The estimated completion date is developer dependent. No WSSC rate supported debt will be used for this project.

**COORDINATION**  
 Coordinating Agencies: Local Community Civic Associations;(Interaction with state, county and regulatory staff); Maryland-National Capital Park & Planning Commission; Prince George's County Department of Environmental Resources; Prince George's County Government; Prince George's County Department of Permitting Inspection and Enforcement  
 Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$92	
Debt Service		
Total Cost	\$92	
Impact on Water and Sewer Rate		

## F. Approval and Expenditure Data (000's)

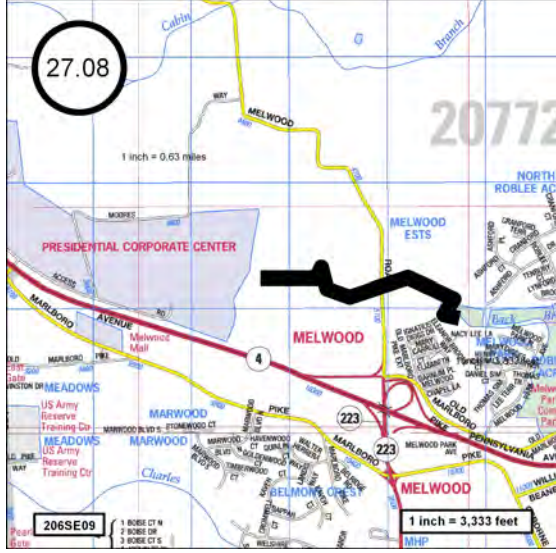
Date First in Program	FY 14
Date First Approved	FY 14
Initial Cost Estimate	378
Cost Estimate Last FY	876
Present Cost Estimate	1,523
Approved Request Last FY	133
Total Expense & Encumbrances	829
Approval Request Year 1	141

## G. Status Information

Land Status	Not Applicable
Project Phase	Construction
Percent Complete	40 %
Estimated Completion Date	Developer Dependent

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	7,600
Capacity	3.2 MGD

## H. Map



# Konterra Town Center East Sewer

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000028.18		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	Northeast Branch Branch 08
Planning Areas	Northwestern Area PA 60

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	3,203	2,977		226	226						
Land											
Construction	5,021	3,515		1,506	1,506						
Other	260			260	260						
<b>Total</b>	<b>8,484</b>	<b>6,492</b>		<b>1,992</b>	<b>1,992</b>						

## C. Funding Schedule (000's)

Contributions/Other	8,484	6,492		1,992	1,992						
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## D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of 14,000 feet of 15-inch to 24-inch diameter sewer main, 240 feet of 24-inch diameter steel sleeve for a 16-inch diameter water main (W-93.01), and 240 feet of 48-inch diameter steel sleeve for a 24-inch diameter sewer. The project serves the Konterra Town Center East development which is located in the area bound by Interstate 95, the Intercounty Connector, and Konterra Drive.

**JUSTIFICATION**  
 Letter of Findings DA4623Z07 (October 19, 2018).

**COST CHANGE**  
 The expenditures and schedule have been updated based upon information provided by the developer.

**OTHER**  
 The project scope has remained the same. The expenditure and schedule projections shown in Block B are based upon information provided by the developer. Design and construction will be performed by the developer under a System Extension Permit. The estimated completion date is developer dependent. No WSSC rate supported debt will be used for this project.

**COORDINATION**  
 Coordinating Agencies: Prince George's County Government  
 Coordinating Projects: W - 000093.01 - Konterra Town Center East Water Main

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$292	
Debt Service		
Total Cost	\$292	
Impact on Water and Sewer Rate		

F. Approval and Expenditure Data (000's)	
Date First in Program	FY 09
Date First Approved	FY 09
Initial Cost Estimate	833
Cost Estimate Last FY	7,136
Present Cost Estimate	8,484
Approved Request Last FY	
Total Expense & Encumbrances	6,492
Approval Request Year 1	1,992

G. Status Information	
Land Status	Not Applicable
Project Phase	Construction
Percent Complete	72 %
Estimated Completion Date	Developer Dependent

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	11,300
Capacity	8.11 MGD



# Broad Creek WWPS Augmentation

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000043.02		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	Broad Creek 11
Planning Areas	South Potomac Sector PA 80

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	27,865	26,284	1,550	31	31						
Land	177	177									
Construction	159,833	151,346	8,360	127	127						
Other	506		498	8	8						
<b>Total</b>	<b>188,381</b>	<b>177,807</b>	<b>10,408</b>	<b>166</b>	<b>166</b>						

## C. Funding Schedule (000's)

WSSC Bonds	32,024	30,227	1,769	28	28						
SDC	156,357	147,580	8,639	138	138						

## D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This project provides for modifications to the Broad Creek Wastewater Pumping Station and Force Main system for conveying Broad Creek sewerage basin flows to the Piscataway Water Resource Recovery Facility. The Broad Creek WWPS Facility Plan included assessments of engineering, economic, environmental, and local community impacts, and recommended the construction of a 48-inch diameter force main and capacity enhancing modifications at the pumping station. At the Piscataway WRRF, a concrete storage facility was constructed in the upper existing polishing pond, allowing intermittent storage of excess sewage until flow levels at the plant allow treatment. Implementation of this alternative was approved by the Environmental Protection Agency and the Maryland Department of the Environment (MDE). Construction costs shown above also reflect emergency generators that were installed in the event of power outages.</p> <p><b>JUSTIFICATION</b></p> <p>This project stems from the following litigation: Section V (Remedial Measures), Article 10, Section B.8 (Pump Stations - Broad Creek), Sanitary Sewer Overflows (SSO) Consent Order Decree (Civil Action PJM-04-3679), Judge Messite, December 7, 2005. The following plans/studies have been completed: Broad Creek Flow Monitoring and I/I Analysis (1996); Broad Creek SSES (1996 to 1999); Broad Creek I/I Analysis and SSES Phase II (2001 to 2005); Broad Creek Facility Plan, Delon Hampton &amp; Associates, Inc. (January 2007); FY2012 Broad Creek WWPS Asset Management Plan, GHD, Inc. (March 2011).</p> <p><b>COST CHANGE</b></p> <p>Not applicable.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. The expenditures and schedule projections shown in Block B reflect the latest available estimates. Construction is being performed under four (4) contracts to expedite project completion. Three contracts have been completed. The final contract is in the construction phase.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: Maryland Department of Natural Resources; Maryland Department of the Environment; Maryland State Highway Administration; Maryland-National Capital Park &amp; Planning Commission; National Park Service; Prince George's County Department of Environmental Resources; Prince George's County Government; U.S. Army Corps of Engineers; U.S. Environmental Protection Agency, Region III</p> <p>Coordinating Projects: S - 000096.14 - Piscataway WRRF Facility Upgrades</p>
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E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$495	22
Debt Service	\$2,083	22
Total Cost	\$2,578	22
Impact on Water and Sewer Rate	\$0.01	22

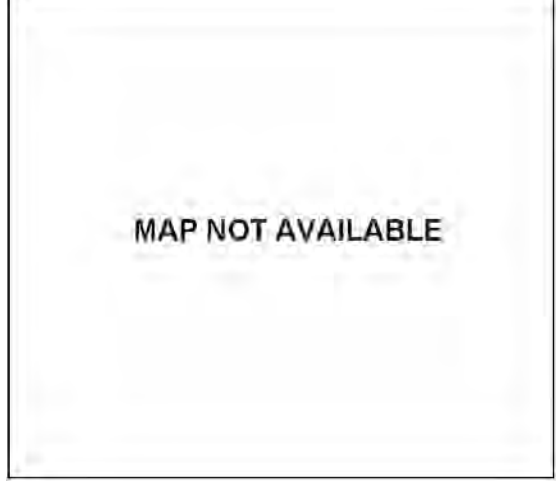
## F. Approval and Expenditure Data (000's)

Date First in Program	FY 09
Date First Approved	FY 09
Initial Cost Estimate	80,850
Cost Estimate Last FY	182,032
Present Cost Estimate	188,381
Approved Request Last FY	3,821
Total Expense & Encumbrances	177,807
Approval Request Year 1	166

## G. Status Information

Land Status	R/W acquired
Project Phase	Construction
Percent Complete	90 %
Estimated Completion Date	September 2020
Growth	83%
System Improvement	17%
Environmental Regulation	
Population Served	
Capacity	

## H. Map





# Landover Mall Redevelopment

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000068.01		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	Beaverdam Branch 3
Planning Areas	Prince George's County

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	236	25	37	174	78	47	13	12	12	12	
Land											
Construction	970		55	915	487	313	28	29	29	29	
Other	175		13	162	84	54	6	6	6	6	
<b>Total</b>	<b>1,381</b>	<b>25</b>	<b>105</b>	<b>1,251</b>	<b>649</b>	<b>414</b>	<b>47</b>	<b>47</b>	<b>47</b>	<b>47</b>	

## C. Funding Schedule (000's)

Contributions/Other	1,381	25	105	1,251	649	414	47	47	47	47
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## D. Description & Justification

**DESCRIPTION**  
 This project provides 2,500 feet of 27-inch, 300 feet of 24-inch, and 1,450 feet of 18-inch diameter sewer main to provide service for the Landover Mall Redevelopment.

**JUSTIFICATION**  
 Hydraulic Planning Analysis (May 2009).

**COST CHANGE**  
 Not applicable.

**OTHER**  
 The project scope has remained the same. The expenditures and schedule projections shown in Block B are based on information provided by the developer. Estimated completion date is developer dependent. No WSSC rate supported debt will be used for this project.

**COORDINATION**  
 Coordinating Agencies: Prince George's County Government  
 Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$86	
Debt Service		
Total Cost	\$86	
Impact on Water and Sewer Rate		

## F. Approval and Expenditure Data (000's)

Date First in Program	FY 11
Date First Approved	FY 11
Initial Cost Estimate	1,108
Cost Estimate Last FY	1,344
Present Cost Estimate	1,381
Approved Request Last FY	631
Total Expense & Encumbrances	25
Approval Request Year 1	649

## G. Status Information

Land Status	Not Applicable
Project Phase	Planning
Percent Complete	20 %
Estimated Completion Date	Developer Dependent
Growth	100%
System Improvement	
Environmental Regulation	
Population Served	3,347
Capacity	5.63 MGD

## H. Map



# Mattawoman WWTP Upgrades

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000075.21		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	Mattawoman 21
Planning Areas	Accokeek PA 83; Brandywine & Vicinity PA 85A; Cedarville &

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision											
Land											
Construction	18,540		2,900	14,080	3,300	4,480	3,420	1,440	720	720	1,560
Other	1,854		290	1,408	330	448	342	144	72	72	156
<b>Total</b>	<b>20,394</b>		<b>3,190</b>	<b>15,488</b>	<b>3,630</b>	<b>4,928</b>	<b>3,762</b>	<b>1,584</b>	<b>792</b>	<b>792</b>	<b>1,716</b>

### C. Funding Schedule (000's)

WSSC Bonds	20,394		3,190	15,488	3,630	4,928	3,762	1,584	792	792	1,716
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### D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This project provides for the WSSC's share of the evaluation, design, and construction of capital projects to upgrade and repair Charles County's Mattawoman Interceptor and WWTP. Current projects include: Influent/Effluent Pump Station Upgrades, SCADA/Plant Automation, Electrical System Replacement, In-Plant Water System Improvement, Flow Equalization Study, Clarifier and Thickener Upgrades, Belt Filter Press Replacement, Effluent Force Main Improvements, and Primary Clarifiers 1-4 Demolition.</p> <p><b>JUSTIFICATION</b></p> <p>Prior evaluations of equipment and structural facilities concluded the need existed for various upgrade, repair, and replacement projects. A further thorough evaluation of the Head Works, Influent/Effluent Pumps, and Influent Wet Well was also deemed necessary in order to identify the specific scope of hydraulic, control, capacity, and safety upgrades to the Influent/Effluent Pump Station. Plant automation will improve the efficiency of operation and maintenance, thereby minimizing resource utilization and avoiding costs. Agreement dated October 22, 1980; Agreement Addendum No. 1 dated April 15, 2004.</p> <p><b>COST CHANGE</b></p> <p>The schedule and expenditure estimates reflect the latest information provided by Charles County.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. Under the terms of the 1980 Agreement with Charles County, the WSSC has the use of 3 MGD of the WEEF's capacity, and pays a proportionate share of the capital expenses. As new upgrade sub-projects are added, the associated costs will be added to this project. Beginning in FY 2007, the total plant capacity increased to 20 MGD, and WSSC's proportionate cost share decreased to 15% under the terms of Agreement Addendum No.1. This project is expected to continue indefinitely.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: Charles 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	\$1,327	
Total Cost	\$1,327	
Impact on Water and Sewer Rate		

### F. Approval and Expenditure Data (000's)

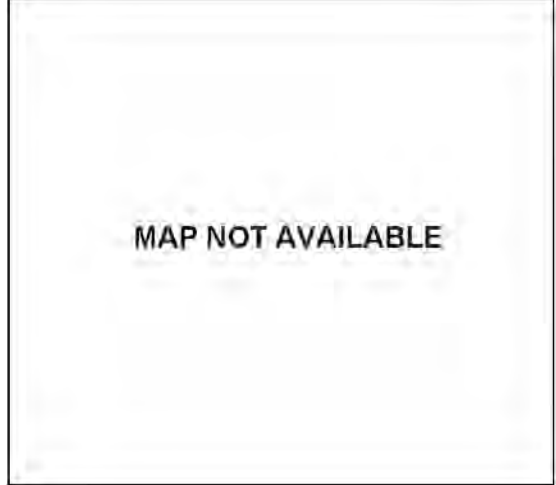
Date First in Program	FY 08
Date First Approved	FY 08
Initial Cost Estimate	760
Cost Estimate Last FY	17,237
Present Cost Estimate	20,394
Approved Request Last FY	4,174
Total Expense & Encumbrances	
Approval Request Year 1	3,630

### 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	3 MGD for WSSC

### H. Map



# Parkway North Substation Replacement

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000077.20		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	Parkway 17
Planning Areas	South Laurel-Montpelier PA 62

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	1,124	850	174	100	80	20					
Land											
Construction	6,477	527	4,750	1,200	1,100	100					
Other	934		739	195	177	18					
<b>Total</b>	<b>8,535</b>	<b>1,377</b>	<b>5,663</b>	<b>1,495</b>	<b>1,357</b>	<b>138</b>					

## C. Funding Schedule (000's)

WSSC Bonds	8,535	1,377	5,663	1,495	1,357	138					
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## D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of electrical upgrades for the Parkway WRRF including the full replacement of the North Substation, Motor Control Cabinet #1 (MCC1), and a 480 volt substation. Temporary facilities must be provided to maintain operation of the WRRF during construction.

**JUSTIFICATION**  
 Asset Management Program, CNPV #48, Business Case recommendation requires immediate replacement of electrical equipment to maintain level of services at the WRRF.

**COST CHANGE**  
 Cost has increased based on cost estimate by Design Builder at time of award.

**OTHER**  
 The project scope has remained the same. Project to be awarded under Design-Build delivery method. "Planning, Design & Supervision" cost includes Owner's Advisor. Construction cost will include Design-Builder's design work. The schedule and expenditure projections shown in Block B above are estimates based upon the award of the Preliminary Phase of the Design-Build contract. Preliminary planning work was conducted under ESP project S-627.15, Parkway North Substation.

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

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$555	23
Total Cost	\$555	23
Impact on Water and Sewer Rate		

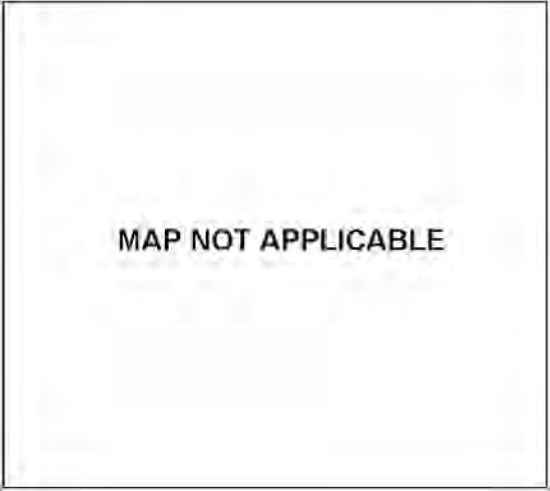
## F. Approval and Expenditure Data (000's)

Date First in Program	FY19
Date First Approved	FY19
Initial Cost Estimate	5,003
Cost Estimate Last FY	6,133
Present Cost Estimate	8,535
Approved Request Last FY	2,473
Total Expense & Encumbrances	1,377
Approval Request Year 1	1,357

## G. Status Information

Land Status	Public/Agency owned land
Project Phase	Design
Percent Complete	11 %
Estimated Completion Date	July 2021
Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

## H. Map



# Southlake Subdivision Sewer

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000086.19		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	Western Branch 14
Planning Areas	Mitchellville & Vicinity PA 74A

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	204	184	13	7	4	3					
Land											
Construction	537	30	180	327	159	168					
Other	79		29	50	24	26					
<b>Total</b>	<b>820</b>	<b>214</b>	<b>222</b>	<b>384</b>	<b>187</b>	<b>197</b>					

## C. Funding Schedule (000's)

Contributions/Other	820	214	222	384	187	197					
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## D. Description & Justification

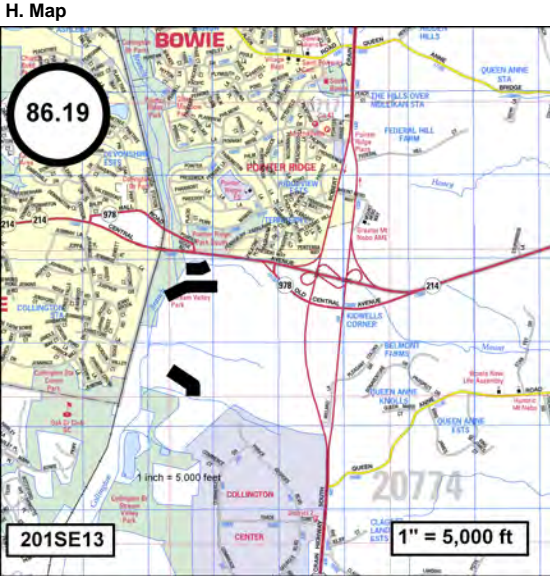
<p><b>DESCRIPTION</b> This project provides for the planning, design, and construction of 970 feet of 15-inch and 20-inch diameter sewer main to serve the Southlake Subdivision.</p> <p><b>JUSTIFICATION</b> Karington Hydraulic Planning Analysis (May 2006).</p> <p><b>COST CHANGE</b> Not applicable.</p> <p><b>OTHER</b> The project scope has remained the same. The expenditures and schedule projections shown in Block B are based on information provided by the developer. The estimated completion date is developer dependent. The project name was changed from Karington to Southlake at the request of the developer. No WSSC rate supported debt will be used for this project.</p> <p><b>COORDINATION</b> Coordinating Agencies: Maryland Department of the Environment; Maryland-National Capital Park &amp; Planning Commission; Prince George's County Government Coordinating Projects: Not Applicable</p>
--

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

F. Approval and Expenditure Data (000's)	
Date First in Program	FY 08
Date First Approved	FY 08
Initial Cost Estimate	801
Cost Estimate Last FY	692
Present Cost Estimate	820
Approved Request Last FY	182
Total Expense & Encumbrances	214
Approval Request Year 1	187

G. Status Information	
Land Status	Not Applicable
Project Phase	Design
Percent Complete	100 %
Estimated Completion Date	Developer Dependent

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	2,102
Capacity	1.7 to 2.87 MGD



# Piscataway WRRF Facility Upgrades

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000096.14		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	Piscataway Creek 4
Planning Areas	Accokeek PA 83

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	27,934	14,844	2,871	10,219	1,502	4,595	3,981	141			
Land											
Construction	125,914	9,884	34,605	81,425	25,435	33,190	21,600	1,200			
Other	6,456		1,874	4,582	1,347	1,889	1,279	67			
<b>Total</b>	<b>160,304</b>	<b>24,728</b>	<b>39,350</b>	<b>96,226</b>	<b>28,284</b>	<b>39,674</b>	<b>26,860</b>	<b>1,408</b>			

### C. Funding Schedule (000's)

WSSC Bonds	160,304	24,728	39,350	96,226	28,284	39,674	26,860	1,408			
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### D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This project provides for the planning, design, and construction of improvements at the Piscataway WRRF required to prevent plant overflows or permit violations which can occur during significant rainfall events. The work will remove bottlenecks within the plant process trains, address the physical capacity of the system, and rehabilitate existing equipment that has reached its expected service life, ensuring the ability of the plant to achieve its permit-required level of service.</p> <p><b>JUSTIFICATION</b></p> <p>In the Asset Management Plan the condition assessment process identified several areas of concern within the plant process trains that could potentially result in capacity or level of service failures during significant rainfall events. The Facility Plan provided a more detailed study that included the development of a plant-wide hydraulic and biological process model, CCTV inspection of buried piping, analysis of soil borings, and Level 3 Condition Assessment of electrical systems. Projects within the Facility Plan were justified and prioritized using WSSC's Asset Management Strategy guidelines, based on life cycle costs, business risk exposure, and needs prioritization.</p> <p>FY 2012 Piscataway WRRF Asset Management Plan, GHD, Inc. (March 2011); Piscataway WRRF Facility Plan, AECOM (January 2014); FY 2019 Wastewater Treatment System Asset Management Plan (December 2016).</p> <p><b>COST CHANGE</b></p> <p>Cost increased based upon the revised Engineer's Estimate for the electrical upgrades and due to site constraints with multiple projects underway.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. Expenditure and schedule projections shown in Block B represent estimates at the bid ready design or construction stage for all projects. These costs may change based upon site conditions and actual bids received. The Office of Asset Management has determined the priority of the recommended projects.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: Maryland Department of Natural Resources; Maryland Department of the Environment; Prince George's County Department of Environmental Resources; Prince George's County Government; U.S. Army Corps of Engineers</p> <p>Coordinating Projects: A - 000103.00 - Energy Performance Program; S - 000043.02 - Broad Creek WWPS Augmentation; S - 000103.02 - Piscataway Bioenergy; S - 000170.08 - Septage Discharge Facility Planning &amp; Implementation</p>
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E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$10,428	25
Total Cost	\$10,428	25
Impact on Water and Sewer Rate	\$0.02	25

### F. Approval and Expenditure Data (000's)

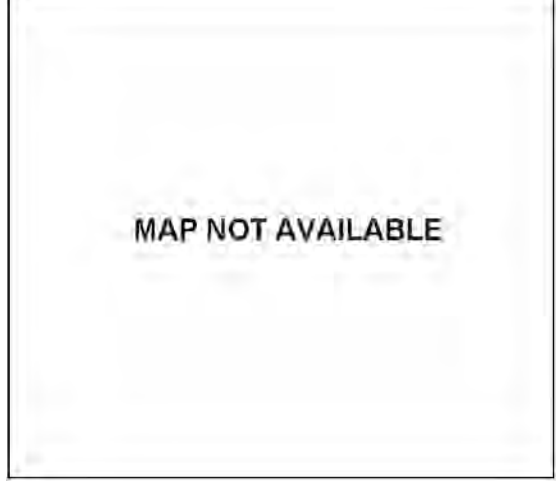
Date First in Program	FY 12
Date First Approved	FY 12
Initial Cost Estimate	66,396
Cost Estimate Last FY	147,648
Present Cost Estimate	160,304
Approved Request Last FY	38,229
Total Expense & Encumbrances	24,728
Approval Request Year 1	28,284

### G. Status Information

Land Status	Not Applicable
Project Phase	Construction
Percent Complete	7 %
Estimated Completion Date	December 2023

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	30 MGD

### H. Map



# Pleasant Valley Sewer Main, Part 2

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000131.05		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	Piscataway Creek 4
Planning Areas	Piscataway & Vicinity PA 84

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	160	24	63	73	56	10	7				
Land											
Construction	634		121	513	308	141	64				
Other	116		28	88	55	23	10				
<b>Total</b>	<b>910</b>	<b>24</b>	<b>212</b>	<b>674</b>	<b>419</b>	<b>174</b>	<b>81</b>				

## C. Funding Schedule (000's)

Contributions/Other	910	24	212	674	419	174	81				
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## D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of 2,750 feet of 21-inch diameter sewer main to provide service to the Estates of Pleasant Valley and the Ridges III Subdivisions.

**JUSTIFICATION**  
 Estates of Pleasant Valley Hydraulic Planning Analysis (Amended March 2010).

**COST CHANGE**  
 Not applicable.

**OTHER**  
 The project scope has remained the same. Expenditure and schedule projections shown in Block B are based upon information provided by the developer. The estimated completion date is developer dependent. No WSSC rate supported debt will be used for this project.

**COORDINATION**  
 Coordinating Agencies: 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  
 Coordinating Projects: S - 000131.07 - Pleasant Valley Sewer Main, Part 1

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$56	
Debt Service		
Total Cost	\$56	
Impact on Water and Sewer Rate		

## F. Approval and Expenditure Data (000's)

Date First in Program	FY 05
Date First Approved	FY 05
Initial Cost Estimate	586
Cost Estimate Last FY	902
Present Cost Estimate	910
Approved Request Last FY	406
Total Expense & Encumbrances	24
Approval Request Year 1	419

## G. Status Information

Land Status	R/W acquired
Project Phase	Design
Percent Complete	60 %
Estimated Completion Date	Developer Dependent

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	2,000
Capacity	3.5 MGD

## H. Map



# Pleasant Valley Sewer Main, Part 1

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000131.07		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	Piscataway Creek 4
Planning Areas	Accokeek PA 83

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	399	98	164	137	113	24					
Land											
Construction	1,225		266	959	781	178					
Other	230		65	165	135	30					
<b>Total</b>	<b>1,854</b>	<b>98</b>	<b>495</b>	<b>1,261</b>	<b>1,029</b>	<b>232</b>					

## C. Funding Schedule (000's)

Contributions/Other	1,854	98	495	1,261	1,029	232					
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## D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of 10,000 feet of 15-inch and 18-inch diameter sewer main to serve The Estates at Pleasant Valley Subdivision.

**JUSTIFICATION**  
 Estates of Pleasant Valley Hydraulic Planning Analysis (Amended March 2010).

**COST CHANGE**  
 Not applicable.

**OTHER**  
 The project scope has remained the same. The expenditure and schedule projections shown in Block B are based upon information provided by the developer. The estimated completion date is developer dependent. No WSSC rate supported debt will be used for this project.

**COORDINATION**  
 Coordinating Agencies: Maryland-National Capital Park & Planning Commission; Potomac Electric Power Company; Prince George's County Government  
 Coordinating Projects: S - 000131.05 - Pleasant Valley Sewer Main, Part 2

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$202	
Debt Service		
Total Cost	\$202	
Impact on Water and Sewer Rate		

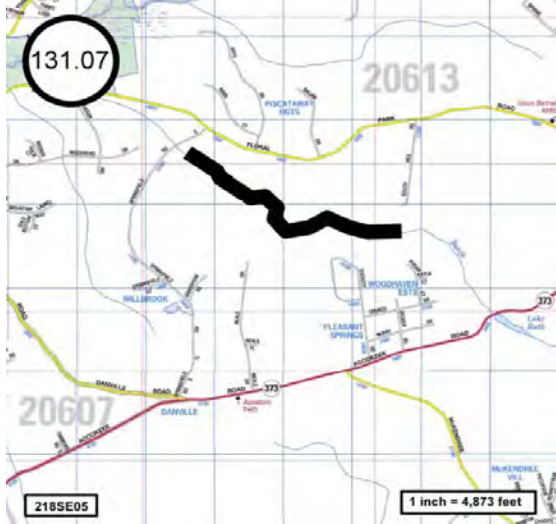
## F. Approval and Expenditure Data (000's)

Date First in Program	FY 10
Date First Approved	FY 10
Initial Cost Estimate	1,303
Cost Estimate Last FY	1,761
Present Cost Estimate	1,854
Approved Request Last FY	999
Total Expense & Encumbrances	98
Approval Request Year 1	1,029

## G. Status Information

Land Status	Land and R/W to be acquired
Project Phase	Design
Percent Complete	80 %
Estimated Completion Date	Developer Dependent
Growth	100%
System Improvement	
Environmental Regulation	
Population Served	2,800
Capacity	1.7 to 2.2 MGD

## H. Map



# Fort Washington Forest No. 1 WWPS Augmentation

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000131.10		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	Piscataway Creek 4
Planning Areas	Piscataway & Vicinity PA 84

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	907	897	10								
Land											
Construction	3,411	2,528	863	20	20						
Other	133		131	2	2						
<b>Total</b>	<b>4,451</b>	<b>3,425</b>	<b>1,004</b>	<b>22</b>	<b>22</b>						

### C. Funding Schedule (000's)

WSSC Bonds	4,451	3,425	1,004	22	22						
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### D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This project provides for the planning, design, and construction of the rehabilitation work required for the Fort Washington Forest No.1 WWPS and to upsize a 900 foot segment of failing 4-inch diameter force main to an 8-inch diameter force main. The rehabilitation will more than double the pumping station's capacity. In addition, approximately 2,700 feet of downstream 8-inch diameter gravity sewer will be upsized to 12-inch diameter to accommodate the additional flow. At the Fort Washington Estates WWPS facility, improvements will be planned, designed, and constructed to improve its reliability and the existing force main and downstream gravity sewer will be upsized to accommodate the additional flow.</p> <p><b>JUSTIFICATION</b></p> <p>There have been additional overflows at both pumping stations since the original 2005 study. On January 22, 2013, the EPA approved a 180-Day Report, making Fort Washington Forest No. 1 part of the Consent Decree. On July 2, 2015, the 180-Day Report and Schedule for Corrective Measures at Fort Washington Estates WWPS was approved by the EPA. July 2005 Study by Ken Dixon, Planning Group, outlined work to be done on the Fort Washington Forest No. 1 WWPS and Fort Washington Estates WWPS.</p> <p><b>COST CHANGE</b></p> <p>Not applicable.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. The expenditure and schedule projections shown in Block B are based upon actual bid. Planning began in March 2014 for the Fort Washington Estates WWPS with construction to start in FY2019.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: Maryland Department of the Environment; Maryland-National Capital Park &amp; Planning Commission; Prince George's County Department of Environmental Resources; Prince George's County Government; U.S. Environmental Protection Agency, Region III</p> <p>Coordinating Projects: Not Applicable</p>
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E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$73	21
Debt Service	\$290	21
Total Cost	\$363	21
Impact on Water and Sewer Rate		

### F. Approval and Expenditure Data (000's)

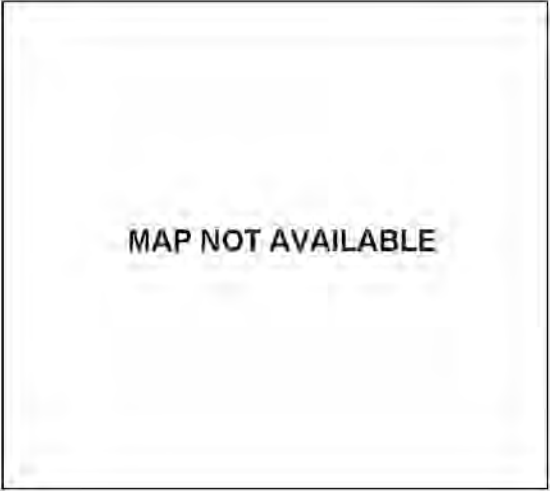
Date First in Program	FY 13
Date First Approved	FY 13
Initial Cost Estimate	1,454
Cost Estimate Last FY	4,578
Present Cost Estimate	4,451
Approved Request Last FY	707
Total Expense & Encumbrances	3,425
Approval Request Year 1	22

### G. Status Information

Land Status	Not Applicable
Project Phase	Construction
Percent Complete	25 %
Estimated Completion Date	March 2020

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	825
Capacity	0.7 MGD

### H. Map





# Western Branch WRRF Process Train Improvements

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000157.02		Change

PDF Date	October 1, 2019
Date Revised	

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

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	3,445	480	300	2,665	800	800	300	300	300	165	
Land											
Construction	10,107			10,107			2,850	2,850	2,850	1,557	
Other	1,307		30	1,277	80	80	315	315	315	172	
<b>Total</b>	<b>14,859</b>	<b>480</b>	<b>330</b>	<b>14,049</b>	<b>880</b>	<b>880</b>	<b>3,465</b>	<b>3,465</b>	<b>3,465</b>	<b>1,894</b>	

## C. Funding Schedule (000's)

WSSC Bonds	14,859	480	330	14,049	880	880	3,465	3,465	3,465	1,894
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## D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This project provides for the planning, design, and construction of improvements at the Western Branch WRRF required to rehabilitate aging structures within the process treatment trains. Improvements are to the clarifiers, aeration system as well as concrete structure and walkway rehabilitation.</p> <p><b>JUSTIFICATION</b></p> <p>The Plant was originally built in the early 1970s. Weathering and corrosion of concrete structures and metal equipment require rehabilitation and replacement to extend the useful life and maintain safe access and operation of the process treatment trains. This project was evaluated through the Asset Management Needs Planning process under ESP Project Number S-647.46. A treatment train structural condition assessment was performed by WSSC's Engineering and Environmental Services Division as part of the needs planning process.</p> <p><b>COST CHANGE</b></p> <p>Not applicable.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. The expenditure and schedule projections shown in Block B are planning level estimates and may change based upon site conditions and design constraints. Planning work began in FY'18 under ESP project S-647.46, Western Branch WRRF Process Train Improvements.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: Maryland Department of the Environment; 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	\$967	27
Total Cost	\$967	27
Impact on Water and Sewer Rate		

## F. Approval and Expenditure Data (000's)

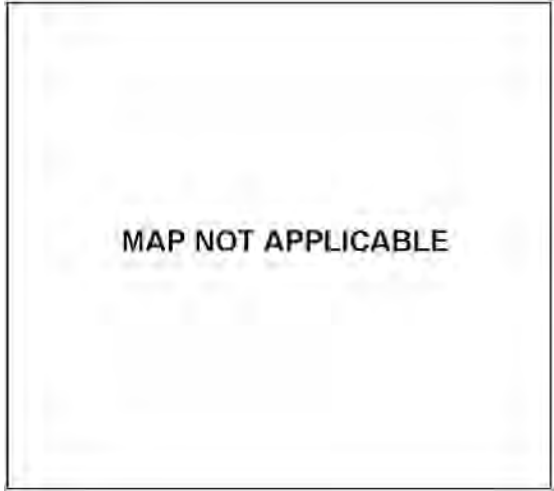
Date First in Program	FY 20
Date First Approved	FY 20
Initial Cost Estimate	14,859
Cost Estimate Last FY	14,859
Present Cost Estimate	14,859
Approved Request Last FY	3,520
Total Expense & Encumbrances	480
Approval Request Year 1	880

## G. Status Information

Land Status	Not Applicable
Project Phase	Design
Percent Complete	0 %
Estimated Completion Date	June 2026

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	30.6 MGD

## H. Map



**PROJECTS PENDING CLOSE-OUT**  
**Prince George's Sewer Projects**  
 (ALL FIGURES IN THOUSANDS)

Agency Number	Project Name	Estimated Total Cost	Expenditures Thru FY'19	Estimated Expenditures FY'20	Remarks
S-57.92	Western Branch Facility Upgrade	\$52,672	\$52,437	\$235	Project completion expected in FY'20.
S-75.19	Brandywine Woods Wastewater Pumping Station	0	0	0	Project canceled.
S-75.20	Brandywine Woods WWPS Force Main	12	12	0	Project canceled.
	<b>TOTALS</b>	\$52,684	\$52,449	\$235	

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## Section 7 - Information Only Projects

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## FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

### INFORMATION ONLY PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 19	EST. EXPEND 20	TOTAL SIX YEARS	EXPENDITURE SCHEDULE						BEYOND SIX YEARS	PAGE NUM
						YR 1 21	YR 2 22	YR 3 23	YR 4 24	YR 5 25	YR 6 26		
W-1.00	Water Reconstruction Program	721,454	0	70,232	651,222	72,494	85,068	101,030	115,018	131,051	146,561	0	7-3
S-1.01	Sewer Reconstruction Program	425,442	0	53,218	372,224	55,495	59,657	61,447	63,290	65,192	67,143	0	7-4
A-101.04	Laboratory Division Building Expansion	21,844	21	1,243	20,580	1,276	9,525	9,779	0	0	0	0	7-5
A-102.00	Engineering Support Program	132,000	0	18,000	114,000	18,000	18,000	18,000	20,000	20,000	20,000	0	7-6
A-103.00	Energy Performance Program	20,236	0	3,094	17,142	7,595	4,841	3,331	1,375	0	0	0	7-7
W-105.00	Water Storage Facility Rehabilitation Program	18,700	0	550	18,150	1,650	3,300	3,300	3,300	3,300	3,300	0	7-8
W-107.00	Specialty Valve Vault Rehabilitation Program	8,957	0	391	6,595	1,132	2,214	1,213	1,266	443	327	1,971	7-9
A-109.00	Advanced Metering Infrastructure	99,603	980	3,039	95,584	20,687	30,906	30,906	13,085	0	0	0	7-10
A-110.00	Other Capital Programs	500,045	0	68,862	431,183	70,610	66,021	67,227	73,927	77,442	75,956	0	7-11
S-300.01	D'Arcy Park North Relief Sewer	941	91	275	575	290	285	0	0	0	0	0	7-12
<b>TOTALS</b>		1,949,222	1,092	218,904	1,727,255	249,229	279,817	296,233	291,261	297,428	313,287	1,971	

**Information Only Projects**  
**New Projects Listing**  
 (ALL FIGURES IN THOUSANDS)

<b>Agency Number</b>	<b>Project Name</b>	<b>Total Project Cost</b>	<b>Budget Year Cost</b>	<b>Page Number</b>
A-101.04	Laboratory Division Building Expansion	\$21,844	\$1,276	7-5
A-110.00	Other Capital Programs	500,045	70,610	7-11
	<b>TOTALS</b>	\$521,889	\$71,886	

# Water Reconstruction Program

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

PDF Date	October 1, 2019
Date Revised	

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

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	106,361		11,034	95,327	11,798	12,058	14,489	16,126	19,353	21,503	
Land											
Construction	526,277		49,938	476,339	51,143	62,227	73,928	84,905	96,147	107,989	
Other	88,816		9,260	79,556	9,553	10,783	12,613	13,987	15,551	17,069	
<b>Total</b>	<b>721,454</b>		<b>70,232</b>	<b>651,222</b>	<b>72,494</b>	<b>85,068</b>	<b>101,030</b>	<b>115,018</b>	<b>131,051</b>	<b>146,561</b>	

### C. Funding Schedule (000's)

WSSC Bonds	721,454		70,232	651,222	72,494	85,068	101,030	115,018	131,051	146,561
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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.

**JUSTIFICATION**

The program's projected work units and expenditure levels for FY '21 are as follows: design and construction of main replacement and associated water house connection renewals, 25 miles - \$54.8M; cathodic protection - \$1.5M; design and construction of large water service replacements - \$11.0M; emergency contracts at depots - \$5.2M. 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. 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 2021 Enterprise Asset Management Plan, the number of miles of water main replacement was maintained at 25 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 2021 Enterprise Asset Management Plan (May 2019).

**COST CHANGE**

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

**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 '19 summarize the magnitude of the reconstruction effort: 1,886 miles rehabilitated or replaced; 258 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 Transportation; Montgomery County Government; Prince George's County Government; Prince George's County Department of Permitting Inspection and Enforcement

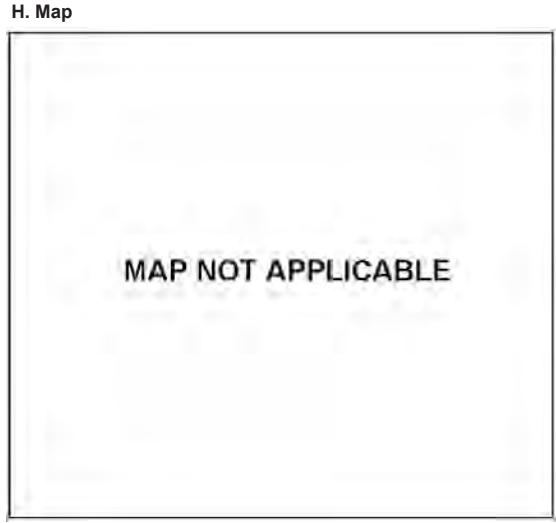
Coordinating Projects: W - 000161.01 - Large Diameter Water Pipe & Large Valve Rehabilitation Program

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$46,932	
Total Cost	\$46,932	
Impact on Water and Sewer Rate	\$0.10	

F. Approval and Expenditure Data (000's)	
Date First in Program	
Date First Approved	
Initial Cost Estimate	
Cost Estimate Last FY	815,164
Present Cost Estimate	721,454
Approved Request Last FY	75,784
Total Expense & Encumbrances	
Approval Request Year 1	72,494

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	



# Sewer Reconstruction Program

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

PDF Date	October 1, 2019
Date Revised	

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

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	39,302		4,460	34,842	5,212	5,581	5,748	5,921	6,099	6,281	
Land											
Construction	347,464		43,920	303,544	45,238	48,653	50,113	51,615	53,166	54,759	
Other	38,676		4,838	33,838	5,045	5,423	5,586	5,754	5,927	6,103	
<b>Total</b>	<b>425,442</b>		<b>53,218</b>	<b>372,224</b>	<b>55,495</b>	<b>59,657</b>	<b>61,447</b>	<b>63,290</b>	<b>65,192</b>	<b>67,143</b>	

### C. Funding Schedule (000's)

WSSC Bonds	285,442		33,218	252,224	35,495	39,657	41,447	43,290	45,192	47,143	
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 funds a comprehensive sewer system rehabilitation program in residential areas. The main component of this program is the rehabilitation and/or repair of sewer mains less than 15-inches in diameter and sewer house connections. The program addresses infiltration and inflow control, exposed pipe problems, and future capacity needs for the basin. The rehabilitation and repair funded by this program includes the rehabilitation and repair recommended by comprehensive basin studies as well as that resulting from sewer systems evaluations, line blockage assessments, field surveys, and closed circuit TV inspections. This program does not include funding for any major capital projects (e.g. CIP size relief or replacement sewers) that may result from a comprehensive basin study. These are funded separately in the CIP.  
 \* EXPENDITURES FOR SEWER RECONSTRUCTION ARE EXPECTED TO CONTINUE INDEFINITELY.

**JUSTIFICATION**  
 The program's projected work units and expenditure levels for FY '21 are as follows: 20 miles of mainline design & construction - \$29.7M; 6 miles of lateral line construction and associated sewer house connection renewals - \$23.6M; emergency repairs - \$2.3M. Note: The specific mix and type of sewer reconstruction may vary in any given year depending on identified system defects. The work units and associated costs are based on our historical experience with regards to timing of design and construction work and availability of authorized contractors for proprietary rehabilitation techniques. 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. FY2021 Enterprise Asset Management Plan (May 2019).

**COST CHANGE**  
 The overall program cost estimate reflects the current plan for the completion of Phase 2 (Priority 2 and Priority 3) Consent Decree work.

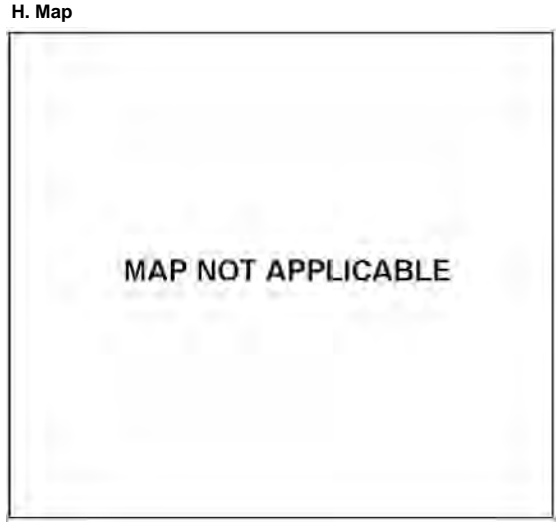
**OTHER**  
 The project scope has remained the same. The program schedule and expenditures shown above reflect the terms of the Sanitary Sewer Overflow Consent Decree. The Consent Decree between WSSC, Maryland Department of the Environment (MDE), and the EPA was entered into on December 7, 2005. WSSC 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 '19 summarize the magnitude of this reconstruction effort: sewer main reconstruction, 503 miles; and sewer house connection renewals, 22,429. It is anticipated that sewer reconstruction activity will be a perpetual element of future work programs.

**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

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$18,568	
Total Cost	\$18,568	
Impact on Water and Sewer Rate	\$0.04	

F. Approval and Expenditure Data (000's)	
Date First in Program	
Date First Approved	
Initial Cost Estimate	
Cost Estimate Last FY	496,842
Present Cost Estimate	425,442
Approved Request Last FY	64,684
Total Expense & Encumbrances	
Approval Request Year 1	55,495

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	



# Laboratory Division Building Expansion

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
A - 000101.04		Add

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	3,862	21	1,130	2,711	1,160	800	751				
Land											
Construction	15,998			15,998		7,859	8,139				
Other	1,984		113	1,871	116	866	889				
<b>Total</b>	<b>21,844</b>	<b>21</b>	<b>1,243</b>	<b>20,580</b>	<b>1,276</b>	<b>9,525</b>	<b>9,779</b>				

## C. Funding Schedule (000's)

WSSC Bonds	21,844	21	1,243	20,580	1,276	9,525	9,779				
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## D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of a 12,405 square-foot expansion to the Consolidated Laboratory Facility to accommodate the increased analytical workload, ensure that all data meets requirements set forth by the regulators, and to improve the safety of WSSC's employees and customers.

**JUSTIFICATION**  
 WSSC's Consolidated Laboratory Facility is an MDE-certified laboratory constructed in 2000 to meet the original laboratory program of a maximum of 500,000 tests per year. During the past 19 years, WSSC has experienced a significant increase in the analytical workload, number of employees, and number of instruments, and also added new functions with the creation of the Water Quality Division. The historical workload of 500,000 tests per year is expected to grow to over 750,000 tests per year in the coming years.

Currently, WSSC depends on subcontract laboratories for critical and regulatory analysis that cannot be handled in-house due to space, infrastructure, and instrument constraints. Lack of control and supervision by qualified WSSC staff on the regulatory samples tested in subcontract laboratories has resulted in errors in the past that could potentially lead to a citation/violation for WSSC. Additionally, increased analytical time involved with subcontract analysis may delay response to critical water contamination events, which could jeopardize the safety of WSSC's customers. An MDE Laboratory audit recommended having separate rooms for analyzing wastewater and drinking water microbiological samples. Lab Expansion Business Case Evaluation, CDM Smith (March 2019).

### COST CHANGE

Not applicable.

### OTHER

The present project scope was developed for the FY 2021 CIP and has an estimated cost of \$21,844,000. The expenditure and schedule projections shown in Block B are planning level estimates and may change based upon site conditions and design constraints. The Water Quality Division is in the process of implementing a Water Quality Surveillance and Response System to continuously monitor and respond to drinking water contamination events on a real-time basis from a centralized Water Quality Control Center. The Water Quality Division also manages the Contamination Rapid Response Team (CRRT) and the response to all water quality related customer complaints. Planning work began in FY 2019 under ESP project A-852.03, Laboratory Services Building Expansion.

### COORDINATION

Coordinating Agencies: Maryland Department of the Environment; Montgomery County Government; Prince George's County Government; U.S. Environmental Protection Agency, Region III  
 Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$1,421	24
Total Cost	\$1,421	24
Impact on Water and Sewer Rate		

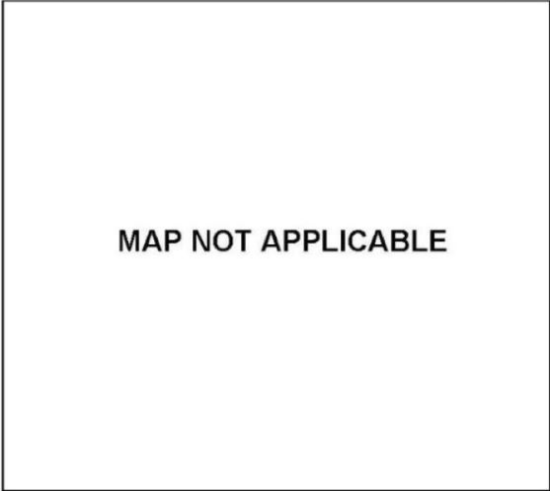
## F. Approval and Expenditure Data (000's)

Date First in Program	FY 21
Date First Approved	FY 21
Initial Cost Estimate	21,844
Cost Estimate Last FY	
Present Cost Estimate	21,844
Approved Request Last FY	
Total Expense & Encumbrances	21
Approval Request Year 1	1,276

## G. Status Information

Land Status	Public/Agency owned land
Project Phase	Design
Percent Complete	0 %
Estimated Completion Date	June 2023
Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	750,000 tests annually

## H. Map





# Engineering Support Program

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
A - 000102.00		Change

PDF Date	October 1, 2019
Date Revised	

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

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision											
Land											
Construction	118,000		16,000	102,000	16,000	16,000	16,000	18,000	18,000	18,000	
Other	14,000		2,000	12,000	2,000	2,000	2,000	2,000	2,000	2,000	
<b>Total</b>	<b>132,000</b>		<b>18,000</b>	<b>114,000</b>	<b>18,000</b>	<b>18,000</b>	<b>18,000</b>	<b>20,000</b>	<b>20,000</b>	<b>20,000</b>	

### C. Funding Schedule (000's)

WSSC Bonds	132,000		18,000	114,000	18,000	18,000	18,000	20,000	20,000	20,000	
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### D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>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 the WSSC.                  *EXPENDITURES FOR ENGINEERING SUPPORT ARE EXPECTED TO CONTINUE INDEFINITELY.</p> <p><b>JUSTIFICATION</b></p> <p>ESP projects are identified primarily through the WSSC's Asset Management Planning process. 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 the WSSC Six-Year Capital Improvements Program or projects to serve new development.</p> <p>Asset Management Implementation Plan, Stearns &amp; Wheeler (April 2008) FY 2021 Enterprise Asset Management Plan (May 2019).</p> <p><b>COST CHANGE</b></p> <p>Not applicable.</p> <p><b>OTHER</b></p> <p>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.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: Not Applicable                  Coordinating Projects: Not Applicable</p>
--

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$8,587	
Total Cost	\$8,587	
Impact on Water and Sewer Rate	\$0.02	

### F. Approval and Expenditure Data (000's)

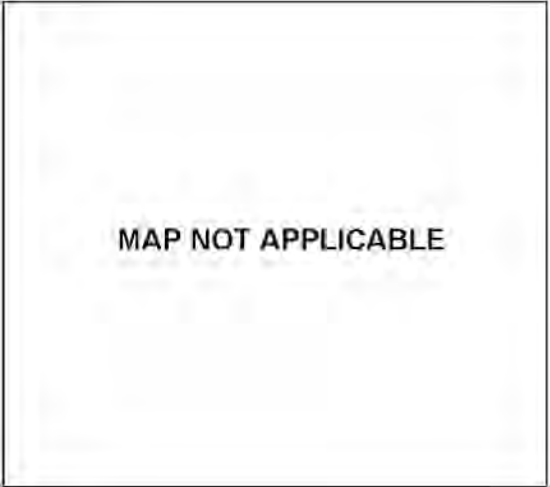
Date First in Program	FY 87
Date First Approved	FY 87
Initial Cost Estimate	
Cost Estimate Last FY	128,000
Present Cost Estimate	132,000
Approved Request Last FY	18,000
Total Expense & Encumbrances	
Approval Request Year 1	18,000

### 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



# Energy Performance Program

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
A - 000103.00		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	Bi-County

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	3,445		416	3,029	1,411	800	568	250			
Land											
Construction	14,950		2,397	12,553	5,493	3,600	2,460	1,000			
Other	1,841		281	1,560	691	441	303	125			
<b>Total</b>	<b>20,236</b>		<b>3,094</b>	<b>17,142</b>	<b>7,595</b>	<b>4,841</b>	<b>3,331</b>	<b>1,375</b>			

## C. Funding Schedule (000's)

WSSC Bonds	19,936		2,794	17,142	7,595	4,841	3,331	1,375			
Contributions/Other	300		300								

## D. Description & Justification

### DESCRIPTION

This program provides for the planning, design, and construction of projects to replace and upgrade energy consuming equipment and systems at all Commission facilities to reduce energy consumption and energy-related costs (electricity, fuel oil, natural gas, or other fuel). The program will maintain or enhance existing operating conditions and reliability while continuing to meet all permit requirements and ensuring a continued commitment to environmental stewardship at WSSC sites. Energy conservation measures may include, but are not limited to, the replacement or upgrade of water and wastewater process equipment, wastewater pumps, water pump/valve/motor replacement, peak shaving and backup power generation systems, variable speed drives, HVAC equipment/systems, and lighting. A baseline is established for each energy conservation measure to identify energy usage and costs before the energy conservation measures (equipment upgrades) are implemented and then compared to the actual energy savings to quantify the savings.

### JUSTIFICATION

Past Projects: Phases I-A through 1-D were implemented through various Energy Services Companies (ESCO) and Power Purchase Agreement (PPA) procurement mechanisms. Detailed engineering audits, supply analysis, engineering, and planning of equipment and operations upgrades were undertaken to develop an energy efficient and guaranteed savings program. The implementation phases involved detailed design, construction, maintenance, savings monitoring, energy/energy-related savings guarantees and, for solar and wind, power purchase agreements. The upgrades were implemented at WSSC's water and wastewater treatment and pumping facilities as well as offices and depots.

Phase F: awarded in February 2018, includes Energy Conservation Measures for LED lighting upgrades at the RGH Headquarters building, Potomac and Patuxent WFPs, Parkway, Seneca, Piscataway and Damascus WRRFs, as well Anacostia and Gaithersburg Depots and Mill Branch, Hyattsville and Horsepen WWPSs. Energy Conservation Measures for building envelope upgrades and HVAC controls tuning are also included. Energy efficiency rebates are anticipated from BGE and PEPSCO, totaling \$300,000. Phase II-F projects will be the last utilizing the ESCO contracting mechanism. The remaining recommended Phase II-F Energy Conservation Measures: Piscataway WRRF Aeration system upgrades; Parkway WRRF mixer replacements; and Potomac WFP LCI Drives replacement are moving forward as standalone projects implemented by WSSC.

WSSC will continue to identify energy savings efforts through the implementation of energy audit calculations and methods utilized in the previous phases of the program. Future projects may include the replacement or upgrade of treatment process equipment at our WRRFs and WFPs. All future projects will be validated via the AMP Project Needs Validation Process (PNVP) prior to moving forward.

The Khepra Group, Potomac Water Filtration Plant Pump Systems Evaluation (May 2008).

### COST CHANGE

Not applicable.

### OTHER

The project scope has remained the same. Costs for monitoring and verification are included in the Operating Budget. 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.

### COORDINATION

Coordinating Agencies: Montgomery County Government; Prince George's County Government

Coordinating Projects: S - 000096.14 - Piscataway WRRF Facility Upgrades

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$1,297	
Total Cost	\$1,297	
Impact on Water and Sewer Rate		

## F. Approval and Expenditure Data (000's)

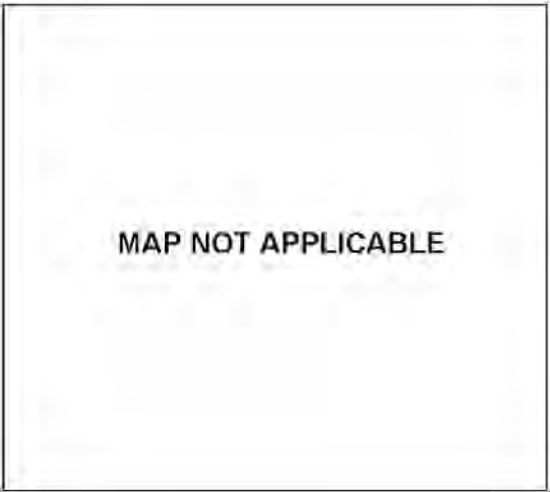
Date First in Program	FY 03
Date First Approved	FY 03
Initial Cost Estimate	
Cost Estimate Last FY	25,105
Present Cost Estimate	20,236
Approved Request Last FY	5,898
Total Expense & Encumbrances	
Approval Request Year 1	7,595

## G. Status Information

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

Growth	
System Improvement	100%
Environmental Regulation	
Population Served	
Capacity	

## H. Map



# Water Storage Facility Rehabilitation Program

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

PDF Date	October 1, 2019
Date Revised	

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

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	4,600		500	4,100	600	700	700	700	700	700	
Land											
Construction	12,400			12,400	900	2,300	2,300	2,300	2,300	2,300	
Other	1,700		50	1,650	150	300	300	300	300	300	
<b>Total</b>	<b>18,700</b>		<b>550</b>	<b>18,150</b>	<b>1,650</b>	<b>3,300</b>	<b>3,300</b>	<b>3,300</b>	<b>3,300</b>	<b>3,300</b>	

### C. Funding Schedule (000's)

WSSC Bonds	18,700		550	18,150	1,650	3,300	3,300	3,300	3,300	3,300
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### D. Description & Justification

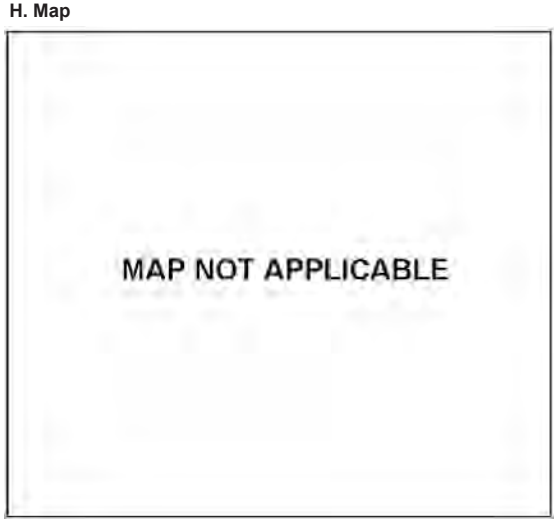
<p><b>DESCRIPTION</b></p> <p>The Water Storage Facility Rehabilitation Program provides for the comprehensive rehabilitation of the Commission's more than 60 water storage facilities located throughout the WSSC service area holding over 200 million gallons of finished drinking water. The Program provides for structural metal and concrete foundation repairs, equipment upgrades to meet current OSHA standards, lead paint removal, security upgrades, advanced mixing systems to improve water quality, and altitude valve vault and supply pipe replacements.</p> <p><b>JUSTIFICATION</b></p> <p>Currently, there are more than 20 steel tanks whose last painting contract was finished 10 or more years ago. Many older tanks have accumulated significant layers of paint which have lost their bonding strength to the steel. Old coatings will be completely removed and costly lead abatement techniques will be required in many cases. The recommended practice is to do this extra work every third re-coating to extend the service life of the structure. Modern coating systems should extend the length of service between coatings from the current 10 years to somewhere between 15 to 20 years.</p> <p><b>COST CHANGE</b></p> <p>Program costs have been updated to reflect the schedule for the remaining tanks in the program.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. Tanks are prioritized based on the condition of the existing coating and structural integrity issues. The Program plan for FY '21 will address the following water storage facilities: North Woodside, Pointer Ridge, and Greenbelt.</p> <p><b>COORDINATION</b></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	\$1,216	
Total Cost	\$1,216	
Impact on Water and Sewer Rate		

F. Approval and Expenditure Data (000's)	
Date First in Program	FY 09
Date First Approved	FY 09
Initial Cost Estimate	
Cost Estimate Last FY	18,630
Present Cost Estimate	18,700
Approved Request Last FY	3,000
Total Expense & Encumbrances	
Approval Request Year 1	1,650

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	



# Specialty Valve Vault Rehabilitation Program

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
W - 000107.00		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	Bi-County

### B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	1,846		130	1,542	385	426	227	284	124	96	174
Land											
Construction	5,946		210	4,196	600	1,500	828	817	262	189	1,540
Other	1,165		51	857	147	288	158	165	57	42	257
<b>Total</b>	<b>8,957</b>		<b>391</b>	<b>6,595</b>	<b>1,132</b>	<b>2,214</b>	<b>1,213</b>	<b>1,266</b>	<b>443</b>	<b>327</b>	<b>1,971</b>

### C. Funding Schedule (000's)

WSSC Bonds	8,957		391	6,595	1,132	2,214	1,213	1,266	443	327	1,971
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### D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This program provides for the planning, design, and construction of improvements and replacement of specialty valves and their associated vaults, including pressure reducing valves, pressure relief valves, altitude and metering valves, throughout the water distribution system. The program includes valves ranging in size from 8-inches to 60-inches in diameter. The program will systematically evaluate the condition of individual installations, some of which were constructed as early as the 1930's, and upgrade or relocate the structures and equipment as necessary. This program will improve reliability and increase the efficiency of system operations.</p> <p><b>JUSTIFICATION</b></p> <p>The facilities included in this program are in need of rehabilitation due to factors such as: location within heavily traveled roadways, age deterioration, obsolescence and operational improvements. Candidate PRVs were originally identified in an October 26, 2005 memo from Jeff Asner to Karen Wright, and a subsequent May 7, 2007, memo from Karen Wright to Thomas Heikkinen. Originally, there were 23 candidate vaults within this Program, as identified by the Systems Control Group; PRV Vault Rehabilitation Evaluation Study, EBA Engineering, Inc. (September 2010). Additional work has been added through 290B Business Case Report (January 2016).</p> <p><b>COST CHANGE</b></p> <p>Not applicable.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. Additional vaults may be added to or removed from the program based upon business case recommendations from the Asset Management Program. The cost for vaults that may be permanently taken out of service or replaced under other future projects have been moved to funding beyond 6 years. The Prince George's, Old Baltimore Ave, and Brinkley vaults are now complete. Land and rights-of-way costs are included in WSSC Project W-202.00.</p> <p><b>COORDINATION</b></p> <p>Coordinating Agencies: Maryland State Highway Administration; Maryland Water Management 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</p> <p>Coordinating Projects: W - 000161.01 - Large Diameter Water Pipe &amp; Large Valve Rehabilitation Program</p>
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E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$583	
Total Cost	\$583	
Impact on Water and Sewer Rate		

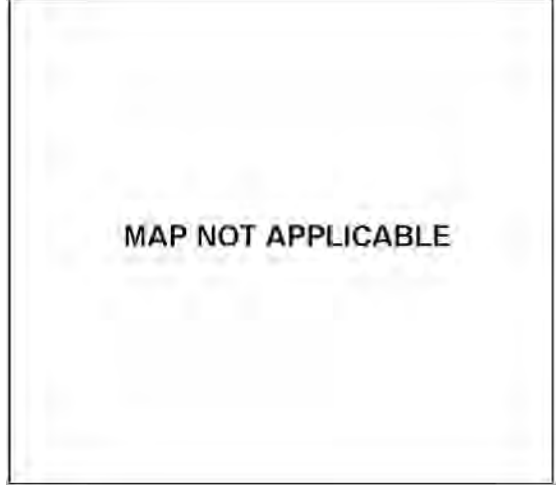
### F. Approval and Expenditure Data (000's)

Date First in Program	FY 11
Date First Approved	FY 11
Initial Cost Estimate	17,560
Cost Estimate Last FY	37,947
Present Cost Estimate	8,957
Approved Request Last FY	1,119
Total Expense & Encumbrances	
Approval Request Year 1	1,132

### 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



# Advanced Metering Infrastructure

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
A - 000109.00		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	Bi-County

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	450	450									
Land											
Construction	90,186	530	2,763	86,893	18,806	28,096	28,096	11,895			
Other	8,967		276	8,691	1,881	2,810	2,810	1,190			
<b>Total</b>	<b>99,603</b>	<b>980</b>	<b>3,039</b>	<b>95,584</b>	<b>20,687</b>	<b>30,906</b>	<b>30,906</b>	<b>13,085</b>			

## C. Funding Schedule (000's)

WSSC Bonds	99,603	980	3,039	95,584	20,687	30,906	30,906	13,085			
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## D. Description & Justification

<p><b>DESCRIPTION</b></p> <p>This project provides for the implementation of a system-wide automated meter reading infrastructure system (System), new comprehensive customer billing system, new data analysis software, and software integration with the Commission's data management system. All meters will receive new Meter Interface Units with internal antenna capable of obtaining and transmitting the meter register reading. All readings will be collected remotely by either a fixed or cellular communication network.</p> <p><b>JUSTIFICATION</b></p> <p>The System will be required to obtain accurate register readings from a variety of water meters located in indoor, pit-set, and underground vault settings, and be universally compatible with the existing meters in the distribution system. Dial Outbound AMR Trial Final Report, Metering Services, Inc. (1990); An Economic Evaluation of AMR for WSSC, Marilyn Harrington (1992); Cost of Meter Reading Study, Marilyn Harrington (2000); The WSSC Experience with Radio-Frequency AMR on Commercial &amp; Industrial Meters (2002); Radio Frequency Solution for Meter Reading (2003); AMR Phase I (July 2005); Customer Care Team Departmental Action Item#20 - AMR Installation (2007); Advanced Metering Infrastructure Study, R.W. Beck (March 2011).</p> <p><b>COST CHANGE</b></p> <p>Order of Magnitude cost estimates were increased for inflation.</p> <p><b>OTHER</b></p> <p>The project scope has remained the same. AMI will improve both customer service and operational efficiency. The expected results include: Monthly billing based on actual meter readings. This would reduce bill size to help customers stay current with their payments, help customers develop a greater awareness of their water consumption, and ensure that problems such as excessive consumption due to leaks are addressed more quickly; Active notification of customers with abnormal consumption that might signify leaks before they get high consumption bills; Reduced customer calls; Reduced field investigation visits; Provide opportunities to employ more sophisticated rate structures; Analysis of individual consumption patterns to detect meters suspected of wearing out, or perform meter sizing analysis to ensure that large meters are optimally sized; Monitoring of individual consumption to perform precise, targeted conservation enforcement during droughts; Opportunities to improve the monitoring and operation of the distribution system, in order to detect and reduce non-revenue water. Schedule and expenditure estimates are Order of Magnitude estimates originating from the March 2011 study. These estimates are expected to change based upon the latest technology available at the time the project is bid. The AMI project has been delayed until the replacement of the Commission's Customer Service Information System (CSIS) is completed. Implementation of the new customer billing software, Customer2Meter (C2M), and pilot testing of the latest meter technology is underway.</p> <p><b>COORDINATION</b></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	\$6,479	25
Total Cost	\$6,479	25
Impact on Water and Sewer Rate	\$0.01	25

## F. Approval and Expenditure Data (000's)

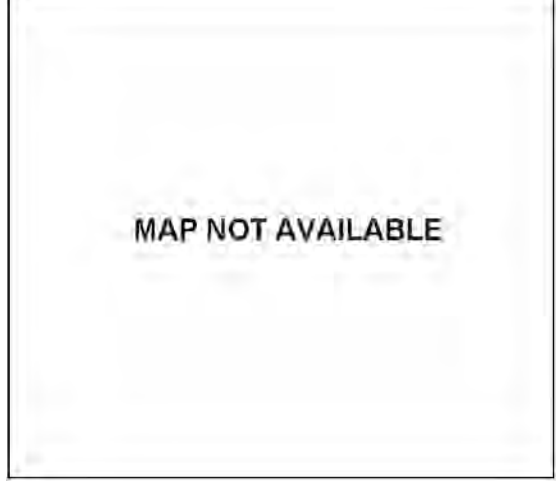
Date First in Program	FY 13
Date First Approved	FY 13
Initial Cost Estimate	86,000
Cost Estimate Last FY	96,750
Present Cost Estimate	99,603
Approved Request Last FY	17,577
Total Expense & Encumbrances	980
Approval Request Year 1	20,687

## G. Status Information

Land Status	Not Applicable
Project Phase	Planning
Percent Complete	80 %
Estimated Completion Date	June 2024

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

## H. Map



# Other Capital Programs

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
A - 000110.00		Add

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	
Planning Areas	Bi-County

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision											
Land											
Construction	239,400		34,200	205,200	34,200	34,200	34,200	34,200	34,200	34,200	
Other	260,645		34,662	225,983	36,410	31,821	33,027	39,727	43,242	41,756	
<b>Total</b>	<b>500,045</b>		<b>68,862</b>	<b>431,183</b>	<b>70,610</b>	<b>66,021</b>	<b>67,227</b>	<b>73,927</b>	<b>77,442</b>	<b>75,956</b>	

## C. Funding Schedule (000's)

WSSC Bonds	500,045		68,862	431,183	70,610	66,021	67,227	73,927	77,442	75,956
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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 & Sewer House Connections, Purchase of Water Meters, Paving and General Construction of Local Lines.  
 \*EXPENDITURES FOR OTHER CAPITAL PROGRAMS ARE EXPECTED TO CONTINUE INDEFINITELY.

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

**COST CHANGE**  
 Not applicable.

**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.

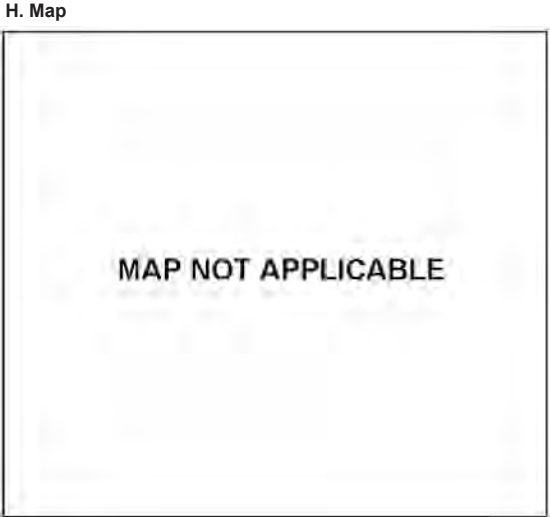
**COORDINATION**  
 Coordinating Agencies: Not Applicable  
 Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance		
Debt Service	\$32,529	
Total Cost	\$32,529	
Impact on Water and Sewer Rate	\$0.07	

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	
Present Cost Estimate	500,045
Approved Request Last FY	
Total Expense & Encumbrances	
Approval Request Year 1	70,610

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	



# D'Arcy Park North Relief Sewer

A. Identification and Coding Information		
Agency Number	Project Number	Update Code
S - 000300.01		Change

PDF Date	October 1, 2019
Date Revised	

Pressure Zones	
Drainage Basins	Western Branch 14
Planning Areas	Suitland-District Heights & Vicinity PA 75A

## B. Expenditure Schedule (000's)

Cost Elements	Total	Thru FY'19	Estimate FY'20	Total 6 Years	Year 1 FY'21	Year 2 FY'22	Year 3 FY'23	Year 4 FY'24	Year 5 FY'25	Year 6 FY'26	Beyond 6 Years
Planning, Design & Supervision	282	91	99	92	48	44					
Land											
Construction	548		140	408	204	204					
Other	111		36	75	38	37					
<b>Total</b>	<b>941</b>	<b>91</b>	<b>275</b>	<b>575</b>	<b>290</b>	<b>285</b>					

## C. Funding Schedule (000's)

Contributions/Other	941	91	275	575	290	285					
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## D. Description & Justification

**DESCRIPTION**  
 This project provides for the planning, design, and construction of 1,110 feet of 12-inch diameter (non-SDC eligible) PVC relief sewer to provide service to D'Arcy Park North.

**JUSTIFICATION**  
 D'Arcy Park North Hydraulic Planning Analysis, (September 2008).

**COST CHANGE**  
 Not applicable

**OTHER**  
 The project scope has remained the same. The expenditure and schedule projections shown in Block B are based upon information provided by the developer. Estimated completion date is developer dependent. This project is not eligible for SDC credits. No WSSC rate supported debt will be used for this project.

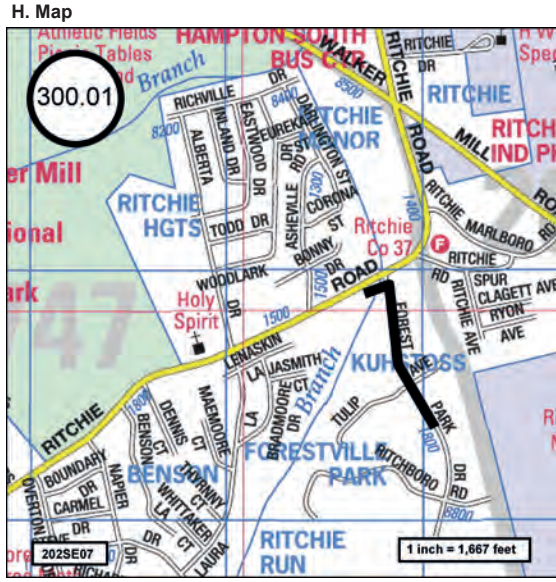
**COORDINATION**  
 Coordinating Agencies: Local Community Civic Associations; Prince George's County Department of Environmental Resources; Prince George's County Government  
 Coordinating Projects: Not Applicable

E. Annual Operating Budget Impact (000's)		FY of Impact
Staff & Other		
Maintenance	\$22	
Debt Service		
Total Cost	\$22	
Impact on Water and Sewer Rate		

F. Approval and Expenditure Data (000's)	
Date First in Program	FY 14
Date First Approved	FY 14
Initial Cost Estimate	824
Cost Estimate Last FY	916
Present Cost Estimate	941
Approved Request Last FY	282
Total Expense & Encumbrances	91
Approval Request Year 1	290

G. Status Information	
Land Status	Not Applicable
Project Phase	Design
Percent Complete	20 %
Estimated Completion Date	Developer Dependent

Growth	100%
System Improvement	
Environmental Regulation	
Population Served	
Capacity	1.6 MGD



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## Appendices

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RESOLUTION NO. 2019-2225

Adopted: June [19], 2019

Effective Date: July 1, 2019

WASHINGTON SUBURBAN SANITARY COMMISSION

**SUBJECT:** A RESOLUTION modifying the System Development Charge (SDC) to help finance the capital costs of expanding and augmenting water and sewerage systems to accommodate service to subscribers in the Washington Suburban Sanitary District (WSSD) and to provide a financing mechanism to aid the Washington Suburban Sanitary Commission (Commission) in paying for the capital projects thereof by providing methods and procedures by which the SDC is to be implemented and/or collected.

**WHEREAS**, the Maryland Annotated Code, Public Utilities Article (PUA) §§ 25-401, *et. seq.* authorizes the Montgomery and Prince George's County Councils to establish a System Development Charge which will be paid by applicants for new water and sewer service; and

**WHEREAS**, PUA §§ 25-402 and 25-403 govern the schedule for the payment of the System Development Charge to the Commission for certain properties and establishes a maximum System Development Charge that may be charged; and

**WHEREAS**, PUA § 25-403(b) provides that the Montgomery and Prince George's County Councils shall grant a full or partial exemption from the SDC charge for public sponsored or affordable housing; and

**WHEREAS**, PUA § 25-403(b) provides that the Montgomery and Prince George's County Councils may grant a full or partial exemption from the SDC charge for revitalization projects, elderly housing, biotechnology, and for certain properties used primarily for recreational and educational programs for youth, properties used for child care or after-school care, or properties used for programs and services for the developmentally disabled; and

**WHEREAS**, the Commission owns and operates various water treatment and sewage treatment disposal plants and facilities within the WSSD and utilizes and invests in the capital costs of sewage treatment plants operated by other jurisdictions to treat sewage generated in portions of the WSSD; and

**WHEREAS**, it is necessary that the Commission, with the advice and consent of the local governing bodies within the WSSD, develop alternative funding to cover the costs of providing quality water and sewer service in the WSSD and to similarly accommodate new growth therein as authorized by the County Governments; and

RESOLUTION NO. 2019-2225

Adopted: June [19], 2019

Effective Date: July 1, 2019

**WHEREAS**, the System Development Charge is a component of the Commission's Fiscal Year 2020 capital and operating budgets prepared pursuant to PUA §17-202; and

**WHEREAS**, the Commission last modified the System Development Charge effective July 1, 2018 by Commission Resolution No. 2018-2187; and

**WHEREAS**, for all of the foregoing reasons it is necessary or desirable to continue the imposition of a System Development Charge fee; and

**WHEREAS**, PUA § 25-403 provides that the Montgomery and Prince George's County Councils may adopt and the Commission may implement a System Development Charge not to exceed \$200.00 per fixture unit or, for residential properties with five or fewer toilets, not to exceed certain enumerated amounts based on the number of toilets per dwelling unit; and

**WHEREAS**, PUA § 25-403 provides that on July 1, 1999 and each July 1 of each succeeding year, the maximum charge may be changed by an amount equal to the prior calendar year's change in the consumer price index published by the Bureau of Labor Statistics of the United States Department of Labor for urban wage earners and clerical workers for all items for the Washington, D.C. metropolitan area; and

**WHEREAS**, the consumer price index published by the Bureau of Labor Statistics of the United States Department of Labor for urban wage earners and clerical workers for all items for the Washington, D.C. metropolitan area increased 1.5% from November 2017 to November 2018; and

**WHEREAS**, the Commission recommends keeping the System Development Charge rates unchanged for FY'20. However, the Commission recommends increasing the maximum allowable charge by 1.5% from FY'19 limits in order to maintain future rate flexibility to address future potential growth funding gaps; and

**WHEREAS**, the County Councils of Prince George's County and Montgomery County met and approved the modifications to the System Development Charge set forth below on May 9, 2019; and

**NOW, THEREFORE, BE IT RESOLVED** THIS 19<sup>th</sup> day of June, 2019, that the Commission hereby adopts the approved System Development Charge fee schedule as set forth herein. For the purposes of this Resolution, the following definitions apply:

RESOLUTION NO. 2019-2225

Adopted: June [19], 2019

Effective Date: July 1, 2019

Definitions:

- 1) Apartment Unit means one of several single family residential units within one building that is not a “multi-unit dwelling.” An “apartment unit” must contain at least one full bath and kitchen, but not more than two toilets. An “apartment unit” typically includes, but is not limited to, an individual dwelling unit in a garden, medium or high-rise type residential building.
- 2) Biotechnology Research and Development or Manufacturing means any development as jointly defined and approved by the Montgomery and Prince George’s County Councils as eligible for a waived System Development Charge, more particularly described in Schedule C, attached.
- 3) Drainage Charge is the portion of the System Development Charge applicable to drainage fixture units for apartments and residential properties having five or fewer toilets.
- 4) Drainage Fixture Unit Value is a measure of the probable discharge into the drainage system by a particular plumbing fixture in terms of volume rate of discharge and duration of a single drainage operation and the time between successive operations.
- 5) Dwelling Unit means a single-family housing unit used as a residence, including trailers and mobile homes.
- 6) Elderly Housing means residential units as jointly defined and approved by the Montgomery and Prince George’s County Councils as eligible for a waived System Development Charge, more particularly described in Schedule D, attached.
- 7) Hookup means the joining of the on-site water and/or sewer line(s) to the Commission’s service connection or the installation of plumbing fixtures in a building served by the Commission’s water and/or sewer facilities.
- 8) Multi-Unit Dwelling means a building that will accommodate several housing units on a lateral basis; namely, semi-attached houses, row houses, or townhouses used as residences.
- 9) New Service means:
  - a) the first-time hook-up of a property to the Commission’s water and/or sewer system, including
    - 1) a direct connection of an improvement or building; or
    - 2) a connection of the improvement or building through an existing on-site system; or
  - b) a new connection or increased water meter size for a property previously or currently served by the Commission if the new connection or increased meter

RESOLUTION NO. 2019-2225

Adopted: June [19], 2019

Effective Date: July 1, 2019

size is needed because of a change in the use of the property or an increase in demand for service at the property.

- 10) Non-Residential Unit is a structure not otherwise defined as a Residential Unit, generally commercial or industrial in nature. Examples may include shopping malls, non-residential townhouses, warehouses, industrial buildings, restaurants, schools, dormitories, hospitals, hotels, motels, nursing homes, office buildings, churches, theaters, and similar commercial or industrial buildings.
- 11) Property Used Primarily for Recreational and Educational Programs and Services to Youth means real property, owned in fee simple, by a Community Based Organization that is jointly defined and approved by the Montgomery and Prince George's County Councils as eligible for a System Development Charge exemption, more particularly described in Schedule F, attached.
- 12) Property Used Primarily for Child Care and After-School Care means improved property owned in fee simple by an individual or organization licensed by the State of Maryland to provide day care services, on which a child day care use or after-school care use, as defined in the Montgomery County or Prince George's County Zoning Ordinance (as applicable), operates as a principal use thereon.
- 13) Property Used Primarily for Programs and Services for Developmentally Disabled Individuals means improved property owned in fee simple by an individual or organization licensed by the State of Maryland to provide services to developmentally disabled individuals, on which a use defined in the Montgomery County or Prince George's County Zoning Ordinance (as applicable) as one that provides services to developmentally disabled individuals, operates as a principal use thereon.
- 14) Public Sponsored or Affordable Housing means residential units as jointly defined and approved by the Montgomery and Prince George's County Councils as eligible for a waived System Development Charge, more particularly described in Schedule A, attached.
- 15) Residential Unit means any housing unit defined in Paragraphs 1, 5, 6, 8 and 11 above used as a residence.
- 16) Revitalization means any development as jointly defined and approved by the Montgomery and Prince George's County Councils as eligible for a waived System Development Charge, more particularly described in Schedule B, attached.
- 17) System Development Charge means that charge imposed by the Commission pursuant to the provisions of §25-403, Division II of the Public Utilities Article,

RESOLUTION NO. 2019-2225

Adopted: June [19], 2019

Effective Date: July 1, 2019

Annotated Code of Maryland. (Maximum allowable System Development Charge is the maximum charge authorized by law, but not necessarily imposed in a given year.)

- 18) Toilet is a water closet as set forth in the WSSC Code of Regulations, Chapter 14.25—the Plumbing and Fuel Gas Code; and
- 19) Water Supply Charge is the portion of the System Development Charge applicable to water supply fixture units for apartments and residential properties having five or fewer toilets; and
- 20) Water Supply Fixture Unit Value is a measure of the probable hydraulic demand on the water supply by a particular plumbing fixture in terms of volume rate of supply and duration of a single supply operation and the time between successive operations; and

**BE IT FURTHER RESOLVED**, that the System Development Charge rates for FY'20 shall be as follows:

Property Type	FY'20 Charge	Maximum Allowable Charge
Apartment Unit		
Water	\$896	\$1,330
Sewer	1,140	1,694
1-2 Toilets / Residential		
Water	1,344	1,998
Sewer	1,710	2,538
3-4 Toilets / Residential		
Water	2,240	3,328
Sewer	2,850	4,234
5 Toilets / Residential		
Water	3,135	4,658
Sewer	3,991	5,929
6 or More Toilets / Residential*		
Water	88	132
Sewer	115	173
Non-Residential*		
Water	88	132
Sewer	115	173

\*Per Fixture Unit

(The System Development Charge for non-residential properties and dwelling units or multi-unit dwellings with more than five toilets shall be based on the number of plumbing fixtures and the assigned values for those fixtures as set forth in the WSSC Code of Regulations, Chapter 14.25—the Plumbing and Fuel Gas Code.); and

RESOLUTION NO. 2019-2225

Adopted: June [19], 2019

Effective Date: July 1, 2019

**BE IT FURTHER RESOLVED**, that the System Development Charge, as established herein, shall be paid to the Commission at the time of application for plumbing permit to install fixtures or hookup(s) to the Commission's water and/or sewage system(s) except that an applicant for a plumbing permit for a residential unit may pay the System Development Charge in two payments as follows:

- 1) One-half at the time of Plumbing Permit Application;
- 2) The remaining one-half within 12 months after the first payment or prior to the transfer of title to the property, whichever occurs first.

At the time of the first payment, the applicant for the plumbing permit for a residential unit shall deposit with the Commission security for the second payment in an amount and form established and approved by the Commission; and

**BE IT FURTHER RESOLVED**, that the fees established herein shall be in addition to, and not a substitution for, any other fees, rates, charges, or assessments allowed by law; and

**BE IT FURTHER RESOLVED**, that the County Councils for Prince George's and Montgomery Counties shall grant a full or partial exemption from the System Development Charge, as set forth in PUA §25-403(b)(1), for any public sponsored or affordable housing as defined in Schedule A; and

**BE IT FURTHER RESOLVED**, that the County Councils for Prince George's and Montgomery Counties may grant a full or partial exemption from the System Development Charge, as set forth in PUA §25-403(b)(2)(i), for revitalization projects, as defined in Schedule B; and

**BE IT FURTHER RESOLVED**, that the County Councils for Prince George's and Montgomery Counties may grant a full or partial exemption from the System Development Charge, as set forth in PUA §25-403(b)(3), for elderly housing as defined in Schedule D, and subject to the maximum exemptions established by County Councils and set forth in Schedule E; and

**BE IT FURTHER RESOLVED**, that the County Councils for Prince George's and Montgomery Counties may grant a full or partial exemption from the System Development Charge, up to \$80,000, as set forth in PUA §25-403(b)(2)(ii) for Properties Used Primarily for Recreational and Educational Programs and Service to Youth as defined in Schedule F; and

**BE IT FURTHER RESOLVED**, that the County Councils for Prince George's and Montgomery Counties may grant a full or partial exemption from the System

RESOLUTION NO. 2019-2225

Adopted: June [19], 2019

Effective Date: July 1, 2019

Development Charge, as set forth in PUA §25-403(b)(2)(iii), for properties used primarily for child care or after-school care, as defined in Definition 12 herein; and

**BE IT FURTHER RESOLVED**, that the County Councils for Prince George's and Montgomery Counties may grant a full or partial exemption from the System Development Charge, as set forth in PUA §25-403(b)(2)(iv), for properties used primarily for programs and services for developmentally disabled individuals, as defined in Definition 13 herein; and

**BE IT FURTHER RESOLVED**, that the County Councils for Prince George's and Montgomery Counties may grant a full or partial exemption from the System Development Charge, as set forth in PUA §25-403(b)(3)(iv), for properties used for manufacturing or biotechnology research and development, as defined in Schedule C;

**BE IT FURTHER RESOLVED**, that the County Councils of Prince George's and Montgomery Counties may adopt implementing resolutions for the aforesaid System Development Charge exemptions, which resolutions govern the administration of the exemptions for projects within each County.

**BE IT FURTHER RESOLVED**, that nothing herein shall be construed as creating a contract between the Commission and the applicant for service, and that the providing of water and/or sewer service to an applicant's property shall be subject to intervention of other governmental authority; the duly adopted policies of Montgomery and Prince George's Counties, and the Commission's ability to otherwise provide such service; and

**BE IT FURTHER RESOLVED**, that Commission Resolution No. 2018-2187 adopted June 20, 2018 on the same subject matter be, and the same is hereby superseded by this Commission Resolution No. 2019-2225; and

**BE IT FURTHER RESOLVED**, that the System Development Charge established herein shall take effect on July 1, 2019.

RESOLUTION NO. 2019-2225  
Adopted: June [19], 2019  
Effective Date: July 1, 2019

A True Copy

Attest:

  
Sheila R. Finlayson, Esq. Corporate Secretary



**SCHEDULE A**

“Public sponsored or affordable housing” means:

- 1) any dwelling unit built or financed under a government program, regulation, or binding agreement that limits for at least 10 years the price or rent charged for the unit in order to make the unit affordable to households earning less than 80% of the area median income, adjusted for family size;
- 2) any Moderately Priced Dwelling Unit built under Chapter 25A of the Montgomery County Code or Subtitles 13 and 27 of the Prince George’s County Code;
- 3) any Productivity Housing Unit, as defined in Section 25B-17 (k) of the Montgomery County Code;
- 4) any unit in an Opportunity Housing Project built under Sections 56-28 through 56-32 of the Montgomery County Code or Subtitle 13, Division 8, of the Prince George’s County Code, which is reserved for occupancy only by persons with low or moderate incomes (as defined in applicable provisions of State and County Law);
- 5) any dwelling unit constructed pursuant to the Capturing Housing Opportunities in Communities Everywhere (CHOICE) Program in Prince George’s County which is reserved for occupancy only by persons with low or moderate incomes (as defined in applicable provisions of State and County Law).

**SCHEDULE B**

“Revitalization” means:

- 1) a project meeting any additional criteria that may be adopted by the respective county council or applicable municipal council that is located in:
  - a) any state-designated revitalization area as defined by the Maryland Department of Housing and Community Development (DHCD).
  - b) any state-designated enterprise zone as defined by the Maryland Department of Business and Economic Development (DBED).
  - c) any federally-designated economic development district as defined by the U.S. Department of Commerce, Economic Development Administration (EDA).
  - d) any federally-designated empowerment zone and developable sites as defined by the U.S. Department of Housing and Urban Development (HUD).
  - e) any Transit District Overlay Zone (T-D-O Zone) as defined by Subtitle 27, Part 10A, Division 1, of the Prince George’s County Code.
  - f) any Prince George’s County designated revitalization area as defined in Subtitle 10 of the Prince George’s County Code.
  - g) any state designated Neighborhood Business Development Program as defined in Subtitle 3, of Title 6, of the Housing and Community Development Article of the Annotated Code of Maryland.
  - h) any Montgomery County designated neighborhoods, as determined by the Montgomery County Executive and County Council, as a revitalization neighborhood for activities that will act to preserve, stabilize, and enhance the social, physical, and economic conditions of the neighborhood. Activities may include concentrated housing code inspections and enforcement, housing rehabilitation, social service programs, public infrastructure improvements, and private and/or public capital investment.
- 2) A property used for the production of alcoholic beverages.

**SCHEDULE C**

“Biotechnology Research and Development or Manufacturing” means:

Any activity that substantially involves research, development, or manufacturing of:

- a. Biologically-active molecules;
- b. Devices that employ or affect biological processes; or
- c. Devices and software for production or management of specific biological information.

**SCHEDULE D**

“Elderly Housing” include the following types of housing:

As defined in the Prince George’s County Zoning Ordinance:

**Sec. 27-107.01. Definitions**

**(a) Terms in the Zoning Ordinance are defined as follows:**

- (20.3) Assisted Living Facility**
- (54) Congregate Living Facility**
- (151) Mixed Retirement Development**

**Sec. 27-352.01 Elderly Housing (one-family attached dwellings)**

**Sec. 27-374 Medical / residential campus**

**Sec. 27-395 Planned retirement community**

OR

As defined in the Montgomery County Zoning Ordinance:

**Sec. 59-G-2.35 Housing and related facilities for elderly or handicapped persons**

**Sec. 59-G-2.35.1 Life Care (continuing care) facility**

**Sec. 59-C-7.4 Housing constructed in a planned retirement community zone**

OR

As defined in a municipal zoning ordinance in a municipality having separate zoning powers and that is found by the Director of the Department of Housing and Community Affairs to be equivalent to the definition for the county in which the municipality is located. The review of equivalency should be based upon age of occupants and the inclusion of assisted living dwelling units.

**SCHEDULE E**

Maximum “elderly housing” exemptions are as follows:

1.	Apartment unit	\$436.00
2.	Dwelling unit or housing unit within a multi-unit dwelling with one or two toilets	\$654.00
3.	Dwelling unit or housing unit within a multi-unit dwelling with three or four toilets	\$1,090.00
4.	Dwelling unit or housing unit with a multi-unit dwelling with five toilets	\$1,526.00
5.	For other housing that meets the elderly housing exemption criteria	Not more than \$43 per combined fixture unit value

**SCHEDULE F**

1. “Property Used Primarily for Recreational and Educational Programs and Services to Youth” means:

Real property, owned in fee simple, by a Community Based Organization, located within the Washington Suburban Sanitary District, which is used to advance the mission and purpose of providing recreational and educational program and services to youth in Prince George’s and/or Montgomery County.

2. “Community Based Organization” means:

A not-for-profit entity duly incorporated in or authorized to do business by the State of Maryland and in good standing under the laws of the State of Maryland, which has as its primary mission and purpose to provide recreational and educational programs and services to youth in Prince George’s and/or Montgomery County.

3. “Exempt From Taxation” means:

A not-for-profit, charitable or educational organization as determined by the Internal Revenue Service, under Section 501(c) (3) of the Internal Revenue Code.

**STANDARD PROCEDURES  
OF THE  
WASHINGTON SUBURBAN SANITARY COMMISSION**

ORIGINATOR	SP NUMBER	APPROVE BY/DATE	EFFECTIVE DATE	PAGE
Joseph P. McNerney Customer Affairs Bureau Director	CUS 98-01 Supersedes CUS 94-06 & CUS 93-02	COMMISSION <i>Mel Schwartz</i>	July 1, 1998	1 OF 7

SUBJECT: SYSTEM DEVELOPMENT CHARGE LEVY AND COLLECTION

PURPOSE

- 1.1 To document the levy, collection and deposit of the System Development Charge (SDC) in accordance with Article 29, §6-113 of the Annotated Code of Maryland and WSSC's Resolution No. 98-1555.
- 1.2 Define terms and phrases referencing SDC as commonly used in the issuance of plumbing permits.

DEFINITIONS

- 2.1 Apartment Unit means one of several single family housing units within one building and not specifically classified as a multi-unit dwelling, e.g., individual dwelling units in garden, medium and high-rise type residential buildings.
- 2.2 Base SDC Fee is the WSSC approved dollar charge for a plumbing fixture having a Drainage Fixture Unit Value and/or a Water Supply Fixture Unit Value of one for non-residential properties or residential units with more than five toilets. The Base SDC Fee for residential units with five or fewer toilets is the WSSC approved dollar charge based upon the unit's number of toilets
- 2.3 Drainage Fixture Unit Value is a measure of the probable discharge into the drainage system by a particular plumbing fixture in terms of volume rate of discharge and duration of a single drainage operation and the time period between successive operations.
- 2.4 Dwelling Unit means a single family housing unit used as a residence, including trailers and mobile homes.
- 2.5 Hookup means the joining of a property's on-site water and/or sewer line(s) to the Commission's service connection or the installation of plumbing fixtures in a building served by the Commission's water and/or sewer facilities.
- 2.6 Multi-Unit Dwelling means a building that will accommodate several housing units on a lateral basis; namely, semi-attached houses, row houses or townhouses used as residences.
- 2.7 New Service means:

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WSSC STANDARD PROCEDURES

- (a) the first-time hook-up of a property to the Commission's water and/or sewer system; or
- (b) a new connection or increased water meter size for a property, previously or currently served by the Commission, if the new connection or increased meter size is needed because of a change in the use of the property or an increase in demand for service at the property.

2.8 Non-Residential Unit is a structure not otherwise defined as a Residential Unit, generally commercial or industrial in nature. Examples may include Shopping Malls, non-Residential Townhouses, Warehouses, Industrial Buildings, Restaurants, Schools, Dormitories, Hospitals, Hotels, Motels, Nursing Homes, Office Buildings, Churches, Theaters and similar commercial or industrial buildings.

2.9 Plumbing Permit is the approved instrument, resulting from an application filed by a Registered Master Plumber, which allows for hookup of fixtures or onsite piping to the Commission's water and/or sewer systems.

2.10 Property means an improvement(s) or building(s) on a lot or parcel of land containing plumbing fixtures described in terms of Drainage Fixture Unit Values or Water Supply Fixture Unit Values.

2.11 Public Sponsored and Affordable Housing means:

- (1) any dwelling unit built or financed under a government program, regulation, or binding agreement that limits for at least 10 years the price or rent charged for the unit in order to make the unit affordable to households earning less than 80% of the area median income, adjusted for family size;
- (2) any Moderately Priced Dwelling Unit built under Chapter 25A of the Montgomery County Code or Subtitles 13 and 27 of the Prince George's County Code;
- (3) any Productivity Housing Unit, as defined in Section 25B-17(m) of the Montgomery County Code;
- (4) any unit in an Opportunity Housing Project built under Sections 56-28 through 56-33 of the Montgomery County Code or Subtitle 13, Division 8, of the Prince George's County Code, which is reserved for occupancy only by persons with low or moderate incomes (as defined in applicable provisions of State and County Law);
- (5) any dwelling unit constructed pursuant to the Capturing Housing Opportunities in Communities Everywhere (CHOICE) Program in Prince George's County which is reserved for occupancy only by persons with low or moderate incomes (as defined in applicable provisions of State and County Law).

2.12 Residential Unit means any housing unit defined in Paragraphs 2.1, 2.4, and 2.5 above used as a residence.



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- 2.13 Residential Applicant means a builder on whose behalf a Registered Master Plumber applies for and receives from the Commission plumbing permits for construction of new residential units.
- 2.14 SDC Sewer Charge is the product of a fixture's Drainage Fixture Unit Value and its associated Base SDC Fee for non-residential properties or dwelling and multi-unit housing units with more than five toilets. For residential properties with five or fewer toilets, the SDC Sewer Charge is the Commission approved drainage portion of the Base SDC Fee.
- 2.15 SDC Water Charge is the product of a fixture's Water Supply Fixture Unit Value and its associated Base SDC Fee for non-residential properties or dwelling and multi-unit housing units with more than five toilets. For residential properties with five or fewer toilets, the SDC Water Charge is the Commission approved water supply portion of the Base SDC Fee.
- 2.16 Sub-District Charge means that charge established by the Commission pursuant to the provisions of §6-103, Article 29, Annotated Code of Maryland.
- 2.17 Toilet means a water closet, as set forth in the WSSD Plumbing and Gasfitting Regulations.
- 2.18 Water Supply Fixture Unit Value is a measure of the probable hydraulic demand on the water supply by a particular plumbing fixture in terms of volume rate of supply and duration of a single supply operation and the time period between successive operations.

GENERAL

- 3.1 SDC is a fee established pursuant to provisions of Article 29, § 6-113 of the Annotated Code of Maryland, to help finance the capital cost of upgrading existing plants and facilities as well as the construction of new capital projects attributable to the addition of new service.
- 3.2 The Base SDC Fee level is established by Commission Resolution representing a formal adoption of the fee level mutually agreed upon by the Montgomery and Prince George's County Councils.
- 3.3 The SDC fee for a non-residential property or a dwelling unit or housing unit within multi-unit dwelling with more than five toilets is determined by the type and number of fixtures, existing and/or proposed, for which hookup to the WSSC's water and/or sewerage system(s) is proposed. The SDC levy is the sum of SDC Water Charges and SDC Sewer Charges, prevailing at the time of application for hook-up, which are associated with the individual fixtures proposed for hook-up.
- 3.4 The SDC fee for a residential unit with five or fewer toilets is determined by the number of toilets, existing and/or proposed, for which hookup to the WSSC's water and/or sewerage system(s) is proposed. The SDC levy is the sum

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of SDC Water Charges and SDC Sewer Charges, prevailing at the time of application for hook-up, which are associated with the number of toilets proposed for hookup.

- 3.5 Except as provided by Section 3.9, a property's calculated SDC fee is payable in full and shall accompany the application for plumbing permit for hookup of a property's fixtures to the WSSC system. Any "credit" pursuant to WSSC Standard Procedure CUS 94-03, entitled *SDC DEVELOPER CREDITS AND REIMBURSEMENTS*, may be substituted as payment, on a dollar for dollar basis, as therein described. Collected SDC fees shall be deposited in established revenue accounts and reconciled through the Service Applications & Records Section's remittance-processing system.
- 3.6 When a request is made to add a fixture(s) to a plumbing permit which has been issued under a previous SDC rate structure and which has not received final inspection approval, the additional SDC shall be calculated and collected based upon the fixture unit rate in effect at the time of request, except that the total SDC for a residential unit permit with five or less toilets shall not exceed the current Base SDC fee for such a unit.
- 3.7 When an application is made to add a toilet(s) to an existing dwelling or housing unit within an existing multi-unit dwelling, the resulting permit may be subject to a SDC fee only if the unit was previously assessed a SDC fee or an increase is required in the size of the unit's connection or meter. In either situation, a SDC fee will be actually assessed only if the number of toilets is being increased from one toilet based rate category to the next. For housing units with five or fewer toilets, the SDC fee assessed will be equal to the difference in the SDC base charge currently applicable to the number of existing toilets and that applicable to the total number of existing and proposed toilets. The SDC fee assessed for existing housing units with more than five toilets is the sum of the SDC Base fees at the current SDC rate structure for all added fixtures.
- 3.8 When an application is made to add fixtures to a Non-residential Unit, the resulting permit may be subject to a SDC fee only if the unit was previously assessed a SDC fee or an increase is required in the size of the unit's connection or meter. In either situation, the SDC fee assessed is the sum of the SDC Base fees at the current SDC rate structure for all added fixtures.
- 3.9 A residential applicant who elects to delay paying a portion of the system development charge shall pay one half the charge at the time of filing application for plumbing permit. The remaining one half of the system development charge for each residential unit shall be paid to the Commission within 12 months after the first payment or prior to the transfer of title to the property, whichever occurs first. A residential applicant must provide security for the remaining one half of the system development charge at the time of filing the plumbing permit application in one of the following forms:

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- (a). An irrevocable letter of credit that is automatically renewed from a bank that is rated "C" or better by Thomson BankWatch.
- (b). A financial guaranty bond in a form substantially similar to the form attached here as Appendix "A." The bond shall be executed by the applicant and a corporate bonding company licensed to transact such business in the State of Maryland and named on the current list of "surety companies acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of this bond shall be paid by the applicant. If at any time the surety on any such bond is declared bankrupt or loses its right to do business in the State of Maryland or is removed from the list of surety companies accepted on Federal bonds, the applicant shall within ten days after notice from the Commission to do so, substitute an acceptable bond in such forms and sum and signed by such other surety or sureties as may be satisfactory to the Commission.
- (c). For the residential applicant who certifies that he or she applies for four or fewer permits for the construction of residential units within the same calendar year, the General Counsel is hereby authorized to accept other forms of security proposed by the applicant and that in the judgment of the General Counsel will protect the Commission's interests in the same manner as the letter of credit and financial guaranty bond described above.

3.10. Fixtures verified by WSSC inspection prior to removal may result in credits toward SDC in a replacement structure. Following written application by a Registered Master Plumber, Postcard Permit inspections to confirm fixtures prior to removal will be the basis for calculating any SDC credit. No credit

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will be afforded for rough-in piping or fixtures removed prior to inspection. SDC credit under this paragraph may only be obtained by submitting the original Master Plumber's copy of the approved Postcard Permit document at the time of application for hook-up of the replacement or remodeled structure. Credit obtained under this provision may only be used toward the remodeling of the existing structure or the redevelopment of a property from which the original fixtures were removed.

EXEMPTIONS

- 4.1 Additional fixtures installed in a structure or building are exempt from the levy of an SDC fee only if inspection of the initial hookup of the building or structure's plumbing to the WSSC's system(s) was approved under a permit issued as a result of an application filed before July 19, 1993, and the change in fixtures does not require an increase in the property's connection(s) or meter size.
- 4.2 The hook-up of a residential unit which is certified by Montgomery or Prince George's County as being a Public Sponsored or Affordable Housing Unit, as defined by Commission Resolution No. 98-1555, shall be exempted from any SDC fee.
- 4.3 The initial hook-up of a residential unit to the Commission's water and/or sewerage system will be exempted from the levy of any SDC fee if the unit existed and was served by a private well and/or septic system on or before July 16, 1993, and the applicable WSSC water or sewer main was in service or its construction was the subject of "Formal Notice To Proceed" (to the WSSC contractor) on or before the same July 16, 1993.

REFUNDS

- 5.1 In the event a permit to install plumbing fixtures expires or is canceled pursuant to provisions of Section 206.2 of the Plumbing and Gasfitting Regulations, all SDC fees paid in association with the application for plumbing permit to hook-up may be refunded, provided Code Enforcement Section's inspection records confirm that no work covered by the permit has been accomplished. Such refunds will be made to the original SDC payer at the time of application.
- 5.2 SDC payments for fixtures represented on an application, but not installed, may be refunded to the original payer provided a written request for refund is filed with the Service Applications & Records Section prior to a request for final inspection. Upon confirmation by the Code Enforcement Section that the fixtures or related rough-in work referenced in the written request have not been installed, the fixtures will be deleted from the permit database record and SDC refund action will be initiated.
- 5.3 The reimbursement of SDC payments to comply with credit requirements set forth in Article 29, §6-113.(e) of the Annotated Code of Maryland shall be

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WSSC STANDARD PROCEDURES

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accomplished as specified by WSSC Standard Procedure CUS 94-03, entitled SDC CREDITS AND REIMBURSEMENT.

- 5.4 A request for full or partial refund of previously remitted SDC which has been denied may be appealed under provisions of Article 29, §6-111 of the Annotated Code of Maryland.

AUTHORITY CLAUSE

The General Counsel certifies that the statutory authority for adoption of this Standard Procedure is Article 29, §§ 6-113 and 9-101 of the Annotated Code of Maryland.

Distribution List

MASTER VOLUME LIST:

General Manager's Office  
Internal Audit Office  
Secretary's Office  
Human Resources Division

Other Distribution:

Commissioner's Office  
Administration Branch  
Operations Branch  
General Counsel's Office  
Budget and Financial Planning Office  
Construction Bureau  
Customer Affairs Bureau  
Finance Bureau  
Customer Services Division  
Financial Operations Division  
Regulatory Compliance Division  
Code Enforcement Section  
General Accounting Section  
Service Applications & Records Section

APPENDIX "A"

FINANCIAL GUARANTY BOND

Plumbing Permit Number \_\_\_\_\_

Bond Number \_\_\_\_\_

Date Bond Executed \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS:

That \_\_\_\_\_  
(here insert the legal name of the Applicant)

\_\_\_\_\_  
(here insert the address of the Applicant)

as Principal, hereinafter called "Applicant", and

\_\_\_\_\_  
(here insert the legal name of the Surety)

\_\_\_\_\_  
(here insert the address of the Surety)

as Surety, hereinafter called "Surety", are held and firmly bound unto the WASHINGTON SUBURBAN SANITARY COMMISSION, Laurel, Maryland, a public and governmental corporate agency of the State of Maryland, as Obligee, hereinafter called the "Commission", in the amount of

\_\_\_\_\_ dollars (\$ \_\_\_\_\_), being 50 percent of the System Development Charge of the herein-mentioned application, for the payment whereof Applicant and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, the Applicant has applied for a plumbing permit to install fixtures or hookup a residential property to the Commission's water and/or sewerage system(s) under Plumbing Permit No. \_\_\_\_\_ and has promised to pay the full system development charge within 12

months of the date of the application or prior to the transfer of title to the property, whichever occurs first.

NOW, THEREFORE, the condition of this obligation is such that if the Applicant shall promptly and faithfully pay the system development charge in a timely manner, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the Commission.

Whenever Applicant shall be, and declared by Commission to be, in default in payment of the system development charge, the Commission having performed Commission's obligations thereunder, the Surety shall promptly pay the amount owed by the Applicant to the Commission.

Any suit under this bond must be instituted before the expiration of eighteen (18) months from the date payment is due. No right of action shall accrue on this bond to or for the use of any person or corporation other than the Commission or its successors and assigns.

The bond is executed in two (2) counterparts, each of which shall, without proof or accounting for the other counterpart, be deemed an original thereof.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_,

ATTEST: \_\_\_\_\_ Applicant Name

By: \_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Surety Name)

By: \_\_\_\_\_  
(Title)

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed, or caused to be executed by their duly authorized officials, this performance bond in (\_\_\_\_\_) copies each of which shall be deemed an original on the date first above written. (The following is applicable if applicant is corporation or incorporated joint venture.)

A Corporation \_\_\_\_\_

By: \_\_\_\_\_ Date: \_\_\_\_\_  
(Title)

Attest: \_\_\_\_\_  
Secretary of Corporation

Certificate as to Corporation (Corporate Seal)

I, \_\_\_\_\_, certify that I am Secretary of the Corporation named as Applicant herein, that \_\_\_\_\_ who signed this Performance Bond on behalf of the Applicant was then \_\_\_\_\_ of said Corporation; that I know his signature thereto is genuine; that the Bond was duly signed and sealed in behalf of said Corporation by authority of its governing body, and is within the scope of its corporate powers.

\_\_\_\_\_  
Secretary of Corporation



(The following is applicable if Applicant is individual, partnership or unincorporated joint venture.)

Signed and Sealed in the full names of all partners and all members of Joint Ventures.

\_\_\_\_\_  
(Print)      Name      (Signature)  
\_\_\_\_\_  
                 Address

\_\_\_\_\_  
(Print)      Name      (Signature)  
\_\_\_\_\_  
                 Address

\_\_\_\_\_  
(Seal)

\_\_\_\_\_  
(Print)      Name      (Signature)  
\_\_\_\_\_  
                 Address

\_\_\_\_\_  
(Seal)

\_\_\_\_\_  
(Print)      Name      (Signature)  
\_\_\_\_\_  
                 Address

## STANDARD PROCEDURES OF THE WASHINGTON SUBURBAN SANITARY COMMISSION

ORIGINATOR & POSITION	SP NUMBER	APPROVE BY/DATE	EFFECTIVE DATE	PAGE
Richard Shagogue, Team Chief Engineering & Construction Team	ENG 04-01 Supercedes CUS 94-03	<i>Secretary Morris</i> <i>Acting Corp Secretary</i> Commissioners March 10, 2004	March 24, 2004	1 OF 8

**SUBJECT:**  
SDC APPLICANT CREDITS AND REIMBURSEMENTS

### PURPOSE

- 1.0 Define procedures for the issuance of a System Development Charge (SDC) Credit earned through private design and construction to serve the Applicant's property. These procedures pertain only to either an approved Capital Improvement Program (CIP) Project or a project that provides only local service, is 2,000 feet or less in length, is either a sewer main 15 inches or greater in diameter, or water main 16 inches or greater in diameter and is built to avoid unnecessary and uneconomical duplication when a major project is constructed.
- 1.1 Describe how the SDC Credit due an Applicant will be determined.
- 1.2 Describe when SDC credit and reimbursement will occur.

### DEFINITIONS

- 2.0 Systems Development Charge (SDC) - A fee paid to the WSSC at the time of application for a plumbing permit intended to cover the cost of building CIP Projects needed to accommodate growth.
- 2.1 Applicant - Any firm, corporation, partnership, joint venture, municipality, agency, person or persons whom WSSC has authorized to design and construct a Qualified Project eligible for SDC credit or whom WSSC has required to provide eligible private funding of the Commission's costs to design and construct such a Project.
- 2.2 System Extension Permit (SEP) - A permit/agreement made between the WSSC and an Applicant pursuant to the "Development Services Process Manual" adopted by the Commission, effective July 1, 2000, and subsequent adopted revisions. **A qualified project built under a System Extension Permit issued without a signed accompanying SDC Credit Agreement is not eligible for SDC applicant credits or reimbursement.**
- 2.3 Memorandum of Understanding (MOU) - An agreement made pursuant to provisions of Standard Procedure # PD-93-06 entitled "Procedure for Developing a Memorandum of

SP NUMBER ENG 04-01  
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WSSC STANDARD PROCEDURES

Understanding for the Construction of WSSC Systems by Others" between the WSSC and an Applicant which covers the Applicant's design and construction of a CIP Project and which identifies the estimated total Applicant costs eligible for SDC credit and/or reimbursement. **A qualified project built without a signed MOU is not eligible for SDC applicant credits or reimbursement.**

- 2.4 **Qualified Project** - Any CIP facility, CIP line, sewer main 15 inches or greater, or water main 16 inches or greater in diameter necessary to serve the Applicant's property, which is designed and constructed by and at the sole expense of an Applicant pursuant to an MOU or SEP or other agreement. Also, any CIP project which is constructed by WSSC that the Applicant is required to provide eligible private funding of WSSC design and construction costs.
- 2.5 **Qualified Properties** - The specific properties located within the geographic area which WSSC identifies as served by the Qualified Project, as defined in Section 3.2.
- 2.6 **Eligible Private Funding** - Payment required by and made to WSSC by an Applicant to cover WSSC costs to design and construct a CIP Project needed to accommodate growth.
- 2.7 **SDC Credit** - A dollar value which is credited to an Applicant against SDC payable in connection with Qualified Properties and which equals the total eligible costs as defined in Section 3.6 incurred by the Applicant in the Applicant's design and construction of a Qualified Project or the amount of eligible private funding made by the Applicant to cover WSSC costs to design and construct a Qualified Project. An Applicant who designs a Qualified Project must also construct that Project in order to be eligible to receive SDC Credits.
- 2.8 **SDC Credit Agreement** - An agreement that summarizes the eligible costs considered for SDC Credit (as described in Section 3.6). The SDC Credit Agreement is appended to an SEP. The credit agreement is included in the MOU as Attachment A.
- 2.9 **SDC Ledger** - The record of SDC credit authorized for an Applicant and the amount(s) of SDC credit issued or reimbursed to the Applicant for fixtures covered by plumbing permits obtained in the course of developing Qualified Properties associated with a Qualified Project.
- 2.10 **Credit Voucher** - The document (Attachment "B"), executed by the Applicant, which serves as the instrument to obtain SDC credit associated with an application for permit to install plumbing fixtures. Each Credit Voucher may apply only to a single application for plumbing permit and shall:
- identify the Qualified Project from which credit is derived; and
  - specify the Qualified Property for which the credit is requested; and
  - be signed by the Applicant or its authorized agent, be duly notarized; and
  - show the amount to be credited in lieu of SDC payment
- 2.11 **Qualified Project Scope** - The specific scope of the qualified project. For pipelines built under an SEP, the specific scope will be included with the SDC Credit Agreement, and

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WSSC STANDARD PROCEDURES

will include pipeline lengths and diameters, valves, vaults and any other appurtenant structures. For facility projects, the specific scope of work will be included with the MOU.

PROCEDURES

- 3.0 An Applicant shall declare a desire to design and construct a Qualified Project eligible for SDC credit either as an element of its request for a Hydraulic Planning Analysis filed with the Development Services Group or in a written response to the Letter of Findings prepared by the Development Services Group. For projects that were previously authorized, but have not yet been issued an SEP or MOU, the Applicant may request an authorization amendment to allow the Applicant to design and construct a Qualified Project eligible for SDC credit.
- 3.1 The Applicant agrees to pay WSSC all review fees normally due WSSC. Letters of credit are not acceptable in lieu of fees.
- 3.2 When an Applicant has requested that it be permitted to design and construct a CIP Project, the Development Services Group shall prepare a map during its hydraulic planning analysis that identifies the Qualified Properties to be served by the CIP Project which the Applicant has requested to design and construct. SDC Credit will only be issued to properties within the geographic boundaries identified in the map as Qualified Properties. A copy of the prepared map will be sent to the Applicant.
- 3.3 If WSSC either authorizes the Applicant to design and construct a Qualified Project or requires eligible private funding from the Applicant of WSSC's design and construction costs, then the properties identified as served by the Project will receive credit and/or be subject to SDC Payments which may be reimbursed to the Applicant up to the total eligible amount. The Permit Services Unit will establish an Applicant's SDC Ledger following either 1) execution of a MOU or SEP covering Applicant design and construction of the Qualified Project or 2) WSSC receipt of eligible private funding of the Qualified Project from the Applicant. Prior to establishing the Applicant's SDC Ledger, the Permit Services Unit requires a map identifying all Qualified Properties to be served by the Qualified Project from the Development Services Group. **Please note that for pipeline jobs, the Applicant will not receive SDC credit or reimbursement unless the SDC credit agreement is signed before the SEP is issued.**
- 3.4 The SDC Ledger will reflect the total amount of SDC credit/reimbursement that the Applicant is eligible to receive. If the Applicant is designing and constructing the Qualified Project, the Ledger will initially reflect the Applicant's SDC credit based upon the estimated total eligible costs agreed upon in the MOU or SEP. The Applicant's initial Ledger credit amount will be adjusted to reflect the actual total eligible costs for the Qualified Project, as determined by the WSSC's Internal Audit Manager (as discussed in Sections 3.5, 3.6, 3.7, 3.8 and 3.12), after the Qualified Project has been accepted and placed in service by WSSC. If WSSC is designing and constructing a Qualified Project, the Ledger will reflect the total amount of eligible private funding received from the Applicant.
- 3.5 SDC credits may not exceed 50% of the estimated total eligible project cost (not to

WSSC STANDARD PROCEDURES

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include contingency for increase in scope items (see Section 3.8)) until such time as final audit is completed and the actual total eligible project cost is determined. Once the actual total eligible project cost is determined, SDC credits are available up to the eligible project cost and quarterly refunds (based upon SDC collected for qualified properties) will commence. Prior to the final audit, the Credit Voucher is the only method of reimbursement to the Applicant.

Following WSSC receipt of eligible private funding, SDC credits against the ledger amount may be granted. However in the SDC credits toward the private funding may not exceed 50% of the total estimated project cost.

- 3.6 When an Applicant is designing and constructing a Qualified Project, SDC Credit is the total eligible Project cost incurred and paid by the Applicant. The SDC Credit is subject to the general guidelines that (1) eligible costs will be the types of costs that WSSC would have incurred had WSSC designed and constructed the Qualified Project, and (2) the SDC Credit will not exceed the maximum amount mutually agreed upon in the SDC Credit Agreement. Eligible costs must be directly allocable to the Qualified Project. Examples include, but are not limited to

**Engineering Costs:** design, reprographics, survey (topo), soil borings, As-built drawing preparation, and bonding fees.

**Permits Costs:** Costs for permits that WSSC would have had to acquire had WSSC built the project.

**WSSC Fees for Pipelines:** Fees for extra WSSC reviews or re-testing will be considered only if non-eligible portions of the job do not require extra reviews or re-testing. Unless mentioned otherwise, fees will be allocated to the Qualified Project based on estimated costs and overall water and sewer project cost for the project number.

**WSSC Fees for Facilities:** All WSSC direct costs and overhead associated with the qualified project as stated in the MOU.

**Construction Costs:** Contractors bid price, survey (stake out), Geotech (compaction testing), off-site restoration, and construction management.

**Interest Costs:** Interest costs for funds used during design and construction, at an average interest rate not to exceed the rate paid by WSSC on short-term construction notes outstanding during the period beginning with the date of WSSC signature on the SEP or MOU agreement and ending when the Qualified Project is substantially complete.

**Off-Property Rights of Way:** Acquisition costs are eligible up to amount appraised by WSSC for purchase of off-Applicant's property right-of-way and construction strips, plus up to 25 percent of the appraised amount for direct costs associated with purchase of off-site rights-of-way and construction strips.

- 3.7 Examples of costs that are not eligible include, but are not limited to

Area wide planning not directly related to the Qualified Project;

Attorneys fees

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- The WSSC Hydraulic Review Fee
  - Costs for negotiation of SDC Credit Agreement or MOU;
  - Bonus payments or acceleration costs paid to the contractor for completion of construction;
  - Third party inspection costs for facility projects;
  - Applicant's overhead costs not directly attributable to the Qualified Project;
  - Costs outside the scope of the Qualified Project;
  - Permit costs associated with a development rather than the Qualified Project;
  - Site acquisition costs beyond what WSSC would have paid;
  - Facilities capital cost of money;
  - Fines and penalties;
  - Maintenance Costs;
  - Maintenance Bond Costs that are beyond both two years after substantial completion and beyond one year after release of service or final acceptance.
  - Grading of rights of way;
  - Sediment control for grading;
  - Clearing and grubbing for public rights-of-way in which the Qualified Project will be installed;
  - Federal and state income taxes;
  - Administrative or Management Fees not directly associated with the Qualified Project, and
  - Personal injury compensation or damages.
- 3.8 The maximum SDC reimbursement shall not exceed 110 percent of the contractor bid price plus other eligible costs.
- 3.9 The SDC Credit Agreement will not provide payment to the Applicant for costs the Applicant did not incur or for costs reimbursed to the Applicant from other sources. The SDC Credit Agreement will not provide any premiums for expedited work.
- 3.10 Prior to SDC Credit Agreement or MOU approval, the WSSC project manager for the project is responsible to have components of the SDC Credit Agreement or MOU

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WSSC STANDARD PROCEDURES

reviewed by other offices. The Contract Technical Services Unit should review the Applicant's construction costs using a copy of the signed plans. Internal Audit is to review any item that the WSSC project manager proposes which is contrary to items 3.6 or 3.7. Other appropriate WSSC offices should be consulted such as the Land Acquisition Unit for additional land acquisition costs and the Planning Group for planning costs.

- 3.11 For Qualified Projects, the SEP or MOU agreements should indicate that the Maintenance Bond should remain in effect at least two years beyond the date of substantial completion for SEP projects or at least one year beyond the date of final acceptance for MOU projects. The Applicant will submit a written request for audit to WSSC's Internal Audit Manager, after the Qualified Project built by the Applicant has been released for service (pipelines) or finally accepted (facilities). Along with the request, the Applicant must submit an itemized listing of eligible Qualified Project costs, incurred and paid, supporting the total amount of SDC Credit claimed. **It should be emphasized that the Applicant should retain all the contracts, invoices and payments for WSSC Internal Audit to inspect and review to determine the SDC credits.**
- 3.12 In compliance with Article 29 § 6-113(e)(4), of the Annotated Code of Maryland, WSSC's Internal Audit Manager shall review and approve the costs incurred by the Applicant. The Internal Audit Manager will strive to initiate the audit within 90 days of the Applicant's request, if the request includes the required itemized cost listing. The Internal Audit Report will be the formal document that communicates the final results of the audit to WSSC and the Applicant. When an audit is complete, prior to the final Internal Audit Report, the Internal Audit Manager will issue to the Applicant an unsigned DISCUSSION DRAFT to allow the Applicant an opportunity to discuss with Internal Audit any concerns the Applicant has with the proposed SDC Credit. Subsequently, the Internal Audit Manager will issue to the Applicant its final Report on the SDC Credit to be provided the Applicant.
- 3.13 SDC credits against an Applicant's SDC Credit balance will be issued by WSSC upon receipt of a complete and fully executed Credit Voucher submitted at the time of plumbing permit application. The application must be made in connection with a Qualified Property served by the Qualified Project (being) built by the Applicant. Also, the amount specified in the Credit Voucher shall not exceed the calculated SDC for plumbing fixtures covered by the permit application. Credit Vouchers reflecting and specifying an amount in excess of calculated SDC for the requested permit will not be accepted. The plumbing permit will be issued after verification that a sufficient credit balance remains to cover the Credit Voucher Amount. Insofar as possible, Credit Vouchers will be considered on a "first come-first served" basis. For a plumbing permit application accompanied by a Credit Voucher for which an Applicant's credit balance has been exhausted, the credit voucher and the associated application will be returned to the applicant. WSSC is not responsible for managing or assisting the Applicant in managing the issuance of Credit Vouchers. Managing the issuance of Credit Vouchers is not an eligible cost for reimbursement.
- 3.14 In the event an issued Plumbing Permit expires or is cancelled by the owner or

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WSSC STANDARD PROCEDURES

- plumber, no SDC reimbursement to the Applicant will be approved for that permit. In such cases, any Credit Voucher will be voided and the credit amount added to the Applicant's outstanding Ledger balance.
- 3.15 In conformance with Section 3.18, SDC payments received in association with applications for plumbing permits for Qualified Properties will be identified as eligible for reimbursement (after the Internal Audit Report has been completed - see Section 3.12) to the Applicant who has constructed the Qualified Projects serving those Qualified Properties.
  - 3.16 For those situations where more than one Qualified Project serves a Qualified Property, SDC reimbursement payments shall be made in proportional shares to the Applicants who have built or funded the Qualified Projects. A proportional share is calculated based upon a Qualified Project's actual eligible costs or funding expressed as a percentage of the sum of all actual eligible costs and/or funding of Qualified Projects serving the Qualified Property.
  - 3.17 At the conclusion of each calendar quarter, the Permit Services Unit will determine the total SDC receipts eligible for reimbursement made for each previously identified Qualified Property. Only those SDC receipts filed in association with plumbing permits under which all covered work has received an approved final inspection are eligible for reimbursement.
  - 3.18 Based upon the quarterly reconciliation, the Permit Services Unit will prepare and forward to the Accounting Group a Payment Request to be made to the appropriate Applicant in an amount equal to the sum of qualifying SDC receipts not yet reimbursed, and a memorandum recommending reimbursement of SDC receipts and identifying the maximum amount recoverable. The memorandum shall be accompanied by a statement detailing eligible plumbing permits.
  - 3.19 Following review of the recommended reimbursement, the Accounting Group will forward the Payment Request and supporting documentation to the Disbursements Group which will issue payment to the Applicant.
  - 3.20 When an Applicant has designed and constructed a Qualified Project, the sum of SDC Credits and Reimbursements pursuant to this procedure will be made only to the maximum determined by the Internal Audit Report and only to the Applicant identified in the MOU or SEP.
  - 3.21 The Applicant may issue credit vouchers to multiple builders to facilitate construction of residential or non-residential structures within the Qualified Property and reimbursement of Qualified Project costs. If the Applicant wishes to transfer its right and title to any remaining SDC credit from a Qualified Project, the Applicant shall notify the Permit Services Unit of the requested transfer. Such notification shall be in writing and shall identify the single entity to receive the entire remaining balance of SDC credit from a Qualified Project. The Permit Services Unit will acknowledge the credit transfer and forward the written request for inclusion in the Qualified Project's MOU or SEP as an amendment. Thereafter, all Qualified Property SDC credits or reimbursements will be issued to the last designated entity in the MOU or SEP as amended.
  - 3.22 Notwithstanding any other provision of this Procedure, SDC Credit or reimbursements



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**WSSC STANDARD PROCEDURES**

for costs identified in Section 3.3 of this Procedure are limited to SDC transactions for Qualified Properties served by the Qualified Project within a twenty-year period, or until the sum of credits and reimbursements equals the total approved SDC Credit. The twenty-year period will commence for SEP, MOU, or eligible funding projects on the day of release for service. At the conclusion of the twenty-year period, the Permit Services Unit will close the SDC Reimbursement Ledger and will provide written notification of exhaustion or termination of the SDC Credit to the last designated recipient.

**AUTHORITY**

The General Counsel certifies that this Standard Procedure was adopted pursuant to the authority of Sections 6-113 and 9-101 of Article 29 of the Annotated Code of Maryland.

**Distribution List:**

**MASTER VOLUME LIST:**

General Manager's Office  
Internal Audit Office  
Secretary's Office  
Human Resources Group

**Other Distribution:**

Commissioner's Office  
Engineering and Construction Team  
Public Communications  
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Customer Care Team  
Rate Stabilization and Debt Reduction Team  
General Counsel's Office  
Development Services Group  
Project Delivery Group  
Regulatory Services Group  
Planning Group  
Systems Inspection Group  
Customer Relations Group  
Permit Services Unit  
Accounting Group  
Budget Group  
Disbursements Group

**ATTACHMENT A**

**SDC CREDITS ESTIMATE**

ESTIMATED AMOUNT

Design

Permits

Administration

Interest

WSSC's Fees

Construction Costs

**TOTAL ESTIMATED ELIGIBLE COSTS**

ATTACHMENT B  
WASHINGTON SUBURBAN  
SANITARY COMMISSION

System Development Charge  
Credit Voucher

I, \_\_\_\_\_ hereby affirm under penalty of perjury that I am the Developer  
(name printed)  
or its authorized agent, entitled to an SDC credit pursuant to an approved System Extension  
Permit or Memorandum of Understanding for \_\_\_\_\_, a Qualified  
Project. Pursuant to the current

(WSSC Contract No. & C.I.P.No.)

WSSC Standard Operating Procedure, I hereby request that \$ \_\_\_\_\_ be charged against the  
remaining eligible SDC credit balance for the specified Qualified Project. The above credit  
amount shall be applied against SDC due in connection with an application for plumbing permit  
to install fixtures in an improvement on property described as: \_\_\_\_\_  
\_\_\_\_\_ which is a "Qualified Property" served by the above named  
"Qualified Project."

I agree to indemnify and hold harmless the Washington Suburban Sanitary Commission to whom  
this request is presented and its agents and employees, from and against all claims, damages,  
losses and expenses, including reasonable attorneys' fees, arising out of or by reason of  
complying with this request.

\_\_\_\_\_  
(Developer's Signature)

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
(Notary Public)

\_\_\_\_\_  
(Name Printed)

My Commission Expires \_\_\_\_\_

STANDARD PROCEDURES  
OF  
THE WASHINGTON SUBURBAN SANITARY COMMISSION

ORIGINATOR	DEPT. & NUMBER	APPROVED BY/DATE	EFFECTIVE DATE	PAGE 1
Water Resources Planning Section	PD 93-01	<i>Cortez A. White</i> Cortez A. White General Manager	July 1, 1993	of 3

SUBJECT  
PROCEDURE FOR DETERMINING PERCENT GROWTH FOR CIP PROJECTS

I. PURPOSE AND APPLICABILITY

The purpose of this procedure is to establish a method for determining what proportion of certain WSSC CIP projects is for growth. This procedure applies after June 30, 1993: 1) to projects which are added to the CIP; and 2) to any revisions of projects already programmed which change the amount of system capacity added by the projects.

II. PROCEDURE AND METHODOLOGY

The Water Resources Planning Section will determine the percent growth for all applicable CIP Projects using the following methodology.

The method involves the following three steps:

Step 1. Test for 100% Growth

If flows/demands remained at June 1993 levels, would a project still be required?

No ==> Growth = 100%  
Yes ==> Continue to Step 2

Step 2. Test for 0% Growth

Does the project improve or replace components of an existing facility without increasing the capacity of any of the components?

Yes ==> Growth = 0%  
No ==> Continue to Step 3

Step 3. Determine Percent Growth

1. Identify system capacity added by the project.
2. Identify and subtract June 30, 1993 capacity deficit, if any.
3. Divide result by total project design capacity.

**Notes:**

1. For most water and wastewater facilities, there is a straight-forward relationship between demand, capacity requirements, and facility size. For water transmission mains, however, the relationship is more complicated. There are many factors other than size which must be considered to determine capacity. These factors include length, the size and number of interconnections and the allowable energy differential between the points connected by the transmission system. Capacity analysis of a transmission network normally requires computer modeling. Previous water system analyses will be used to the extent they are applicable; however, where no previous analysis exists, computer modeling will be required.
2. If an existing facility with available system capacity is being replaced by a new project which increases total system capacity, the available capacity in the existing facility is lost or wasted. In such cases, existing available capacity will be treated as a negative deficit in Step 3, part 2.

**Examples:**

1. An existing sewer has a safe capacity of 20 mgd. The June 30, 1993 peak flow is 17 mgd. A proposed parallel sewer will add 10 mgd of capacity for growth. Since the existing sewer can handle the June 30, 1993 flows the project is 100% for growth. (Step 1)
2. An existing sewer has a safe capacity of 20 mgd; its maximum capacity before overflow is 27 mgd. The June 30, 1993 peak flow is 21 mgd. A proposed parallel sewer will add 10 mgd of capacity for growth. Since the existing sewer can handle the June 30, 1993 flows, the project is 100% for growth. (Step 1)
3. An existing pumping station has 1 mgd of capacity. The June 30, 1993 flow is 0.8 mgd. A proposed replacement pumping station will have a total capacity of 1.5 mgd. The existing pumping station is old, and a rehab project would be needed if the new pumping station were not built. Therefore, the station is not 100% for growth. (Step 1) It adds capacity, so it is not 0% growth. (Step 2) The percent for growth is calculated as follows:  $0.5 \text{ mgd [the capacity added by the new pumping station] plus } 0.2 \text{ mgd [the amount of lost available capacity] divided by } 1.5 \text{ mgd [the total capacity of the new pumping station]} = 47\%$ . (Step 3)

WSSC STANDARD PROCEDURES

DEPT. & NUMBER: FD 93-01

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4. An existing pumping station in good condition has 1 mgd of capacity. The June 30, 1993 flow is 0.8 mgd. A proposed replacement pumping station, located downstream to increase the service area, will have a total capacity of 1.5 mgd. The proposed pumping station is 100% for growth. (Step 1)
5. A pressure zone has a 1 mg storage deficit based on June 30, 1993 demands. When we finally get agreement to build a 3 mg tank in the zone, the deficit has risen to 2 mg. The tank is 66.7% for growth. [3 mg added - 1 mg deficit]/3 mg total capacity = 67%. (Step 3)

DISTRIBUTION:

Commission  
General Manager  
Deputy General Manager for Administration  
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Communications  
Bureau of Planning and Design  
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Bureau of Maintenance  
Bureau of Operations  
MBE Officer

WASHINGTON SUBURBAN SANITARY COMMISSION  
 PROPOSED FYS 2021 - 2026 CIP  
 SDC ELIGIBLE PROJECTS  
 SUMMARY  
 (In Thousands)

PROGRAM NAME	TOTAL COST	FY 2019	FY 2020	TOTAL 6 YEARS	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	BEYOND 6 YEARS
<b>MONTGOMERY COUNTY WATER PROJECTS</b>											
Total Project Costs *	\$12,330	\$4,248	\$2,620	\$5,462	\$1,202	\$325	\$2,278	\$1,657	\$0	\$0	\$0
SDC Eligible Costs	\$12,330	\$4,248	\$2,620	\$5,462	\$1,202	\$325	\$2,278	\$1,657	\$0	\$0	\$0
<b>BI-COUNTY WATER PROJECTS</b>											
Total Project Costs *	\$3,093	\$0	\$913	\$1,580	\$1,512	\$20	\$18	\$10	\$10	\$10	\$600
SDC Eligible Costs	\$209	\$0	\$122	\$87	\$87	\$0	\$0	\$0	\$0	\$0	\$0
<b>PRINCE GEORGE'S COUNTY WATER PROJECTS</b>											
Total Project Costs *	\$169,146	\$43,340	\$15,365	\$102,161	\$14,645	\$39,009	\$25,528	\$21,839	\$455	\$685	\$8,280
SDC Eligible Costs	\$113,789	\$40,773	\$11,622	\$53,114	\$10,620	\$21,777	\$11,633	\$7,944	\$455	\$685	\$8,280
<b>TOTAL WATER PROJECT COSTS</b>	<b>\$184,569</b>	<b>\$47,588</b>	<b>\$18,898</b>	<b>\$109,203</b>	<b>\$17,359</b>	<b>\$39,354</b>	<b>\$27,824</b>	<b>\$23,506</b>	<b>\$465</b>	<b>\$695</b>	<b>\$8,880</b>
<b>TOTAL WATER SDC ELIGIBLE COSTS</b>	<b>\$126,328</b>	<b>\$45,021</b>	<b>\$14,364</b>	<b>\$58,663</b>	<b>\$11,909</b>	<b>\$22,102</b>	<b>\$13,911</b>	<b>\$9,601</b>	<b>\$455</b>	<b>\$685</b>	<b>\$8,280</b>
<b>MONTGOMERY COUNTY SEWERAGE PROJECTS</b>											
Total Project Costs *	\$36,878	\$2,759	\$5,087	\$29,032	\$9,637	\$6,633	\$10,468	\$2,294	\$0	\$0	\$0
SDC Eligible Costs	\$26,464	\$2,450	\$4,561	\$19,453	\$8,948	\$3,909	\$5,147	\$1,449	\$0	\$0	\$0
<b>BI-COUNTY SEWERAGE PROJECTS</b>											
Total Project Costs *	\$884	\$0	\$50	\$834	\$234	\$120	\$120	\$120	\$120	\$120	\$0
SDC Eligible Costs	\$49	\$0	\$0	\$49	\$49	\$0	\$0	\$0	\$0	\$0	\$0
<b>PRINCE GEORGE'S COUNTY SEWERAGE PROJECTS</b>											
Total Project Costs *	\$203,353	\$185,489	\$11,929	\$5,935	\$4,583	\$1,071	\$140	\$47	\$47	\$47	\$0
SDC Eligible Costs	\$171,329	\$155,262	\$10,160	\$5,907	\$4,555	\$1,071	\$140	\$47	\$47	\$47	\$0
<b>TOTAL SEWERAGE PROJECT COSTS</b>	<b>\$241,115</b>	<b>\$188,248</b>	<b>\$17,066</b>	<b>\$35,801</b>	<b>\$14,454</b>	<b>\$7,824</b>	<b>\$10,728</b>	<b>\$2,461</b>	<b>\$167</b>	<b>\$167</b>	<b>\$0</b>
<b>TOTAL SEWERAGE SDC ELIGIBLE COSTS</b>	<b>\$197,842</b>	<b>\$157,712</b>	<b>\$14,721</b>	<b>\$25,409</b>	<b>\$13,552</b>	<b>\$4,980</b>	<b>\$5,287</b>	<b>\$1,496</b>	<b>\$47</b>	<b>\$47</b>	<b>\$0</b>
<b>TOTAL PROJECT COSTS</b>	<b>\$425,684</b>	<b>\$235,836</b>	<b>\$35,964</b>	<b>\$145,004</b>	<b>\$31,813</b>	<b>\$47,178</b>	<b>\$38,552</b>	<b>\$25,967</b>	<b>\$632</b>	<b>\$862</b>	<b>\$8,880</b>
<b>TOTAL SDC ELIGIBLE COSTS</b>	<b>\$324,170</b>	<b>\$202,733</b>	<b>\$29,085</b>	<b>\$84,072</b>	<b>\$25,461</b>	<b>\$27,082</b>	<b>\$19,198</b>	<b>\$11,097</b>	<b>\$502</b>	<b>\$732</b>	<b>\$8,280</b>

\* 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).

WASHINGTON SUBURBAN SANITARY COMMISSION  
 PROPOSED FY'S 2021 - 2026 CIP  
 SDC ELIGIBLE PROJECTS  
 (In Thousands)

<u>PROJECT NUMBER</u>	<u>PROJECT NAME</u>	<u>TOTAL COST</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>TOTAL 6 YEARS</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>BEYOND 6 YEARS</u>
<b><u>WATER PROJECTS</u></b>												
<b><u>BI-COUNTY PROJECTS</u></b>												
W-202.00	LAND & RIGHTS-OF-WAY ACQUISITION - BI-COUNTY WATER	3,093	0	913	1,580	1,512	20	18	10	10	10	600
	TOTAL GROWTH COSTS	209	0	122	87	87	0	0	0	0	0	0
	<b>SUBTOTAL BI-COUNTY WATER PROJECTS</b>	<b>\$3,093</b>	<b>\$0</b>	<b>\$913</b>	<b>\$1,580</b>	<b>\$1,512</b>	<b>\$20</b>	<b>\$18</b>	<b>\$10</b>	<b>\$10</b>	<b>\$10</b>	<b>\$600</b>
	<b>SUBTOTAL BI-COUNTY SDC ELIGIBLE COSTS</b>	<b>\$209</b>	<b>\$0</b>	<b>\$122</b>	<b>\$87</b>	<b>\$87</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b><u>MONTGOMERY COUNTY PROJECTS</u></b>												
W-46.24	CLARKSBURG AREA STAGE 3 WATER MAIN, PART 4	4,515	3,798	278	439	439	0	0	0	0	0	0
	TOTAL GROWTH COSTS	4,515	3,798	278	439	439	0	0	0	0	0	0
W-46.25	CLARKSBURG AREA STAGE 3 WATER MAIN, PART 5	2,845	450	1,987	408	408	0	0	0	0	0	0
	TOTAL GROWTH COSTS	2,845	450	1,987	408	408	0	0	0	0	0	0
W-113.20	WHITE OAK WATER MAINS AUGMENTATION	4,970	0	355	4,615	355	325	2,278	1,657	0	0	0
	TOTAL GROWTH COSTS	4,970	0	355	4,615	355	325	2,278	1,657	0	0	0
	<b>SUBTOTAL MONTGOMERY COUNTY WATER PROJECTS</b>	<b>\$12,330</b>	<b>\$4,248</b>	<b>\$2,620</b>	<b>\$5,462</b>	<b>\$1,202</b>	<b>\$325</b>	<b>\$2,278</b>	<b>\$1,657</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
	<b>SUBTOTAL MONTGOMERY COUNTY SDC ELIGIBLE COSTS</b>	<b>\$12,330</b>	<b>\$4,248</b>	<b>\$2,620</b>	<b>\$5,462</b>	<b>\$1,202</b>	<b>\$325</b>	<b>\$2,278</b>	<b>\$1,657</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b><u>PRINCE GEORGE'S COUNTY PROJECTS</u></b>												
W-34.02	OLD BRANCH AVENUE WATER MAIN	22,908	2,888	5,574	14,446	7,772	6,674		0	0	0	0
	TOTAL GROWTH COSTS	11,454	1,444	2,787	7,223	3,886	3,337	0	0	0	0	0
W-34.04	BRANCH AVENUE WATER TRANSMISSION IMPROVEMENTS	42,931	21,964	4,343	16,624	3,520	9,460	3,311	333	0	0	0
	TOTAL GROWTH COSTS	42,931	21,964	4,343	16,624	3,520	9,460	3,311	333	0	0	0



WASHINGTON SUBURBAN SANITARY COMMISSION  
 PROPOSED FY'S 2021 - 2026 CIP  
 SDC ELIGIBLE PROJECTS  
 (In Thousands)

<u>PROJECT NUMBER</u>	<u>PROJECT NAME</u>	<u>TOTAL COST</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>TOTAL 6 YEARS</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>BEYOND 6 YEARS</u>
<b><u>PRINCE GEORGE'S COUNTY PROJECTS (CONTINUED)</u></b>												
W-62.06	ROSARYVILLE WATER STORAGE FACILITY	8,510	0	0	230	0	0	0	0	0	230	8,280
	TOTAL GROWTH COSTS	8,510	0	0	230	0	0	0	0	0	230	8,280
W-84.02	RITCHIE MARLBORO ROAD TRANSMISSION MAIN & PRV	9,729	8,947	713	69	69	0	0	0	0	0	0
	TOTAL GROWTH COSTS	9,729	8,947	713	69	69	0	0	0	0	0	0
W-84.03	SMITH HOME FARMS WATER MAIN	2,883	974	606	1,303	439	435	429	0	0	0	0
	TOTAL GROWTH COSTS	2,883	974	606	1,303	439	435	429	0	0	0	0
W-84.04	WESTPHALIA TOWN CENTER WATER MAIN	1,708	639	45	1,024	342	404	278	0	0	0	0
	TOTAL GROWTH COSTS	1,708	639	45	1,024	342	404	278	0	0	0	0
W-93.01	KONTERRA TOWN CENTER EAST WATER MAIN	2,121	67	714	1,340	814	526	0	0	0	0	0
	TOTAL GROWTH COSTS	2,121	67	714	1,340	814	526	0	0	0	0	0
W-105.01	MARLTON SECTION 18 WATER MAIN, LAKE MARLTON AVENUE	2,737	30	1	2,706	429	457	457	453	455	455	0
	TOTAL GROWTH COSTS	2,737	30	1	2,706	429	457	457	453	455	455	0
W-111.05	HILLMEADE ROAD WATER MAIN	5,718	5,511	138	69	69	0	0	0	0	0	0
	TOTAL GROWTH COSTS	5,718	5,511	138	69	69	0	0	0	0	0	0
W-120.14	VILLAGES OF TIMOTHY WATER MAIN, PART 1	3,381	618	1,782	981	981	0	0	0	0	0	0
	TOTAL GROWTH COSTS	3,381	618	1,782	981	981	0	0	0	0	0	0
W-137.03	SOUTH POTOMAC SUPPLY IMPROVEMENT, PHASE 2	66,520	1,702	1,449	63,369	210	21,053	21,053	21,053	0	0	0
	TOTAL GROWTH COSTS	22,617	579	493	21,545	71	7,158	7,158	7,158	0	0	0
<b>SUBTOTAL PRINCE GEORGE'S COUNTY WATER PROJECTS</b>		<b>\$169,146</b>	<b>\$43,340</b>	<b>\$15,365</b>	<b>\$102,161</b>	<b>\$14,645</b>	<b>\$39,009</b>	<b>\$25,528</b>	<b>\$21,839</b>	<b>\$455</b>	<b>\$685</b>	<b>\$8,280</b>
<b>SUBTOTAL PRINCE GEORGE'S COUNTY SDC ELIGIBLE COSTS</b>		<b>\$113,789</b>	<b>\$40,773</b>	<b>\$11,622</b>	<b>\$53,114</b>	<b>\$10,620</b>	<b>\$21,777</b>	<b>\$11,633</b>	<b>\$7,944</b>	<b>\$455</b>	<b>\$685</b>	<b>\$8,280</b>
<b>TOTAL WATER PROJECTS COSTS</b>		<b>\$184,569</b>	<b>\$47,588</b>	<b>\$18,898</b>	<b>109,203</b>	<b>\$17,359</b>	<b>\$39,354</b>	<b>\$27,824</b>	<b>\$23,506</b>	<b>\$465</b>	<b>\$695</b>	<b>\$8,880</b>
<b>TOTAL WATER SDC ELIGIBLE COSTS</b>		<b>\$126,328</b>	<b>\$45,021</b>	<b>\$14,364</b>	<b>58,663</b>	<b>\$11,909</b>	<b>\$22,102</b>	<b>\$13,911</b>	<b>\$9,601</b>	<b>\$455</b>	<b>\$685</b>	<b>\$8,280</b>

WASHINGTON SUBURBAN SANITARY COMMISSION  
 PROPOSED FY'S 2021 - 2026 CIP  
 SDC ELIGIBLE PROJECTS  
 (In Thousands)

<u>PROJECT NUMBER</u>	<u>PROJECT NAME</u>	<u>TOTAL COST</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>TOTAL 6 YEARS</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>BEYOND 6 YEARS</u>
<b><u>SEWERAGE PROJECTS</u></b>												
<b><u>BI-COUNTY PROJECTS</u></b>												
S-203.00	LAND & RIGHTS-OF-WAY ACQUISITION - BI-COUNTY SEWER	884	0	50	834	234	120	120	120	120	120	0
	TOTAL GROWTH COSTS	49	0	0	49	49	0	0	0	0	0	0
<b>SUBTOTAL BI-COUNTY SEWERAGE PROJECTS</b>		<b>\$884</b>	<b>\$0</b>	<b>\$50</b>	<b>\$834</b>	<b>\$234</b>	<b>\$120</b>	<b>\$120</b>	<b>\$120</b>	<b>\$120</b>	<b>\$120</b>	<b>\$0</b>
<b>SUBTOTAL BI-COUNTY SDC ELIGIBLE COSTS</b>		<b>\$49</b>	<b>\$0</b>	<b>\$0</b>	<b>\$49</b>	<b>\$49</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b><u>MONTGOMERY COUNTY PROJECTS</u></b>												
S-84.67	MILESTONE CENTER SEWER MAIN	834	288	0	546	522	24	0	0	0	0	0
	TOTAL GROWTH COSTS	834	288	0	546	522	24	0	0	0	0	0
S-84.68	CLARKSBURG WASTEWATER PUMPING STATION	4,954	1,254	3,082	618	618	0	0	0	0	0	0
	TOTAL GROWTH COSTS	4,954	1,254	3,082	618	618	0	0	0	0	0	0
S-85.21	SHADY GROVE STATION SEWER AUGMENTATION	6,982	519	353	6,110	5,773	244	93	0	0	0	0
	TOTAL GROWTH COSTS	6,982	519	353	6,110	5,773	244	93	0	0	0	0
S-85.22	SHADY GROVE NEIGHBORHOOD CENTER	3,391	0	658	2,733	1,367	1,366	0	0	0	0	0
	TOTAL GROWTH COSTS	3,391	0	658	2,733	1,367	1,366	0	0	0	0	0
S-94.13	DAMASCUS TOWN CENTER WWPS REPLACEMENT	9,669	215	534	8,920	652	2,901	5,129	238	0	0	0
	TOTAL GROWTH COSTS	2,901	65	160	2,676	196	870	1,539	71	0	0	0
S-94.14	SPRING GARDENS WWPS REPLACEMENT	11,048	483	460	10,105	705	2,098	5,246	2,056	0	0	0
	TOTAL GROWTH COSTS	7,402	324	308	6,770	472	1,405	3,515	1,378	0	0	0
<b>SUBTOTAL MONTGOMERY COUNTY SEWERAGE PROJECTS</b>		<b>\$36,878</b>	<b>\$2,759</b>	<b>\$5,087</b>	<b>\$29,032</b>	<b>\$9,637</b>	<b>\$6,633</b>	<b>\$10,468</b>	<b>\$2,294</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>SUBTOTAL MONTGOMERY COUNTY SDC ELIGIBLE COSTS</b>		<b>\$26,464</b>	<b>\$2,450</b>	<b>\$4,561</b>	<b>\$19,453</b>	<b>\$8,948</b>	<b>\$3,909</b>	<b>\$5,147</b>	<b>\$1,449</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

WASHINGTON SUBURBAN SANITARY COMMISSION  
 PROPOSED FY'S 2021 - 2026 CIP  
 SDC ELIGIBLE PROJECTS  
 (In Thousands)

<u>PROJECT NUMBER</u>	<u>PROJECT NAME</u>	<u>TOTAL COST</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>TOTAL 6 YEARS</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>BEYOND 6 YEARS</u>
<b>PRINCE GEORGE'S COUNTY PROJECTS</b>												
S-27.08	WESTPHALIA TOWN CENTER SEWER MAIN	1,523	829	487	207	141	54	12	0	0	0	0
	TOTAL GROWTH COSTS	1,523	829	487	207	141	54	12	0	0	0	0
S-28.18	KONTERRA TOWN CENTER EAST SEWER	8,484	6,492	0	1,992	1,992	0	0	0	0	0	0
	TOTAL GROWTH COSTS	8,484	6,492	0	1,992	1,992	0	0	0	0	0	0
S-43.02	BROAD CREEK WWPS AUGMENTATION	188,381	177,807	10,408	166	166	0	0	0	0	0	0
	TOTAL GROWTH COSTS	156,357	147,580	8,639	138	138	0	0	0	0	0	0
S-68.01	LANDOVER MALL REDEVELOPMENT	1,381	25	105	1,251	649	414	47	47	47	47	0
	TOTAL GROWTH COSTS	1,381	25	105	1,251	649	414	47	47	47	47	0
S-86.19	SOUTHLAKE SUBDIVISION SEWER	820	214	222	384	187	197	0	0	0	0	0
	TOTAL GROWTH COSTS	820	214	222	384	187	197	0	0	0	0	0
S-131.05	PLEASANT VALLEY SEWER MAIN, PART 2	910	24	212	674	419	174	81	0	0	0	0
	TOTAL GROWTH COSTS	910	24	212	674	419	174	81	0	0	0	0
S-131.07	PLEASANT VALLEY SEWER MAIN, PART 1	1,854	98	495	1,261	1,029	232	0	0	0	0	0
	TOTAL GROWTH COSTS	1,854	98	495	1,261	1,029	232	0	0	0	0	0
<b>SUBTOTAL PRINCE GEORGE'S COUNTY SEWERAGE PROJECTS</b>		<b>203,353</b>	<b>185,489</b>	<b>11,929</b>	<b>5,935</b>	<b>4,583</b>	<b>1,071</b>	<b>140</b>	<b>47</b>	<b>47</b>	<b>47</b>	<b>\$0</b>
<b>SUBTOTAL PRINCE GEORGE'S COUNTY SDC ELIGIBLE COSTS</b>		<b>171,329</b>	<b>155,262</b>	<b>10,160</b>	<b>5,907</b>	<b>4,555</b>	<b>1,071</b>	<b>140</b>	<b>47</b>	<b>47</b>	<b>47</b>	<b>\$0</b>
<b>TOTAL SEWERAGE PROJECTS COSTS</b>		<b>\$241,115</b>	<b>\$188,248</b>	<b>\$17,066</b>	<b>\$35,801</b>	<b>\$14,454</b>	<b>\$7,824</b>	<b>\$10,728</b>	<b>\$2,461</b>	<b>\$167</b>	<b>\$167</b>	<b>\$0</b>
<b>TOTAL SEWERAGE SDC ELIGIBLE COSTS</b>		<b>\$197,842</b>	<b>\$157,712</b>	<b>\$14,721</b>	<b>\$25,409</b>	<b>\$13,552</b>	<b>\$4,980</b>	<b>\$5,287</b>	<b>\$1,496</b>	<b>\$47</b>	<b>\$47</b>	<b>\$0</b>
<b>TOTAL PROJECT COSTS</b>		<b>\$425,684</b>	<b>\$235,836</b>	<b>\$35,964</b>	<b>145,004</b>	<b>\$31,813</b>	<b>\$47,178</b>	<b>\$38,552</b>	<b>\$25,967</b>	<b>\$632</b>	<b>\$862</b>	<b>\$8,880</b>
<b>TOTAL SDC ELIGIBLE COSTS</b>		<b>\$324,170</b>	<b>\$202,733</b>	<b>\$29,085</b>	<b>84,072</b>	<b>\$25,461</b>	<b>\$27,082</b>	<b>\$19,198</b>	<b>\$11,097</b>	<b>\$502</b>	<b>\$732</b>	<b>\$8,280</b>

**We created a logo to highlight our water resource recovery process.**

Emphasized the W as it represents WSSC, Water and World Class.

Used a color palette that is bright, friendly, bold and innovative.

Selected a clean font that's clear, modern and strong.

Added water to our name and created a new tagline describing our service and growth.



**WSSC WATER**  
DELIVERING THE ESSENTIAL