



PROPOSED FYS 2022 - 2027 CIP STAFF DRAFT

PUBLIC HEARING DOCUMENT

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**WSSC WATER
PROPOSED CAPITAL IMPROVEMENTS PROGRAM
FISCAL YEARS 2022-2027**

LEGAL AUTHORITY AND RESPONSIBILITY

Statutory Basis

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

Section 23-303 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 10-year water and sewerage plans and is in direct support of the two Counties' approved land use plans and policies for orderly growth and development. By Resolution No. 2020-2256 dated June 17, 2020, the Commissioners adopted the FYs 2021-2026 CIP.

WSSC Water's Role

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

WSSC Water's Mission

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

WSSC Water's Responsibilities

Primary responsibilities include:

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

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

PROGRAM OVERVIEW

Objective

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

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

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

- continues an aggressive program to rehabilitate or replace the older portions of our 5,900 miles of water main and 5,700 miles of sewer main infrastructure;
- funds capital facilities needed to accommodate growth with the System Development Charge (SDC). This charge is reviewed annually by the County Councils. (Refer to Appendices A and B for details. A comparison of SDC revenues and estimated growth spending for the six-year program period is displayed on the table titled "Growth Funding 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. WSSC Water's reliance on rate-supported debt to build the capital program is reduced to the extent that these sources are available to help fund capital projects; and

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

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

WSSC Water has submitted a CIP and budget, which generally conforms to the Spending Affordability Guidelines (SAG) established by both County governments every year since 1994. Through FY'21, projects were reduced or deferred by nearly \$272 million. For FY'22, CIP and Information Only combined spending was within guidelines as submitted.

The FY'22 combined expenditures (CIP & Information Only projects) are estimated at \$733.2 million, which represents an increase of approximately \$118.2 million above the approved funding level for FY'21. The increase is primarily due to construction ramping up for the Piscataway Bioenergy and Piscataway WRRF Facility Upgrades projects; the addition of 11 new projects in FY'22; increases in the Water Reconstruction Program as the replacement mileage ramps back up; and increases in the Sewer Reconstruction Program for the rehabilitation work in the Piscataway Basin.

Funding Sources

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

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

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

Funding Growth

The portion of the Combined Program needed to accommodate growth is approximately \$129.9 million, which equals 3% of the six-year total expenditures, and \$48.5 million or 7% of the FY'22 budget. The funding sources for this part of the program are SDC revenues and payments by Applicants. In the event that growth costs are greater than the income generated by growth funding sources, either SDC supported or rate-supported water/sewer bonds may be used to close any gap.

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

the Councils approved, and WSSC Water began to phase in, this charge beginning in FY'94. The SDC was approved at the maximum rate of \$160 per fixture unit by Commission Resolution No. 95-1457, adopted May 24, 1995, and became effective July 1, 1995. In the 1998 legislative session, the General Assembly modified the charge by passage of House Bill 832 setting the fee at \$200 per fixture unit with a provision for annual inflation adjustments. Subsequent resolutions have established a process for approving partial and full exemptions for elderly housing and biotechnology properties, as well as exemptions for properties in designated economic revitalization areas and properties used primarily for recreational and educational programs and services to youth. For FY'21, the Montgomery County and Prince George's Councils increased the maximum allowable charge by the 1.2% increase in the CPI-U but maintained the current rate of \$203 per fixture unit. The Commissioners adopted the Councils' actions by Resolution Number 2020-2253 dated June 17, 2020. Policies and other information associated with the SDC are included in this document in Appendices A through D.

It is estimated that there will be an overall growth funding surplus of \$3.7 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 new SDC-supported debt would be issued to cover this temporary gap. The debt will be repaid through future SDC collections, as allowed by State Law. Further, it is currently anticipated that no significant additional growth projects will evolve in the later years of the six-year period. (A listing of SDC-eligible projects is included in Appendix D.)

An estimate of the gap or surplus for each fiscal year is presented in the table on the following page. To estimate the gap/surplus for an individual fiscal year, it is assumed that approximately 70% 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)

| | FY'22 | FY'23 | FY'24 | FY'25 | FY'26 | FY'27 | Total 6 Years |
|--|----------------|----------------|----------------|-----------------|------------------|------------------|------------------|
| CIP GROWTH EXPENDITURES | \$ 48.5 | \$ 42.6 | \$ 25.5 | \$ 9.8 | \$ 2.3 | \$ 1.2 | \$ 129.9 |
| Expenditures Adjusted for Completion | 34.0 | 44.4 | 30.7 | 14.6 | 4.5 | 1.5 | 129.7 |
| FUNDING SOURCES | | | | | | | |
| Privately Funded Projects | 12.0 | 10.5 | 4.2 | 1.5 | 0.8 | 0.7 | 29.7 |
| Estimated SDC Revenue | 20.7 | 20.7 | 20.7 | 21.7 | 21.7 | 22.2 | 127.7 |
| Less SDC Developer Credits | (4.0) | (4.0) | (3.0) | (3.0) | (2.0) | (2.0) | (18.0) |
| Less SDC Exemptions ¹ | (1.0) | (1.0) | (1.0) | (1.0) | (1.0) | (1.0) | (6.0) |
| Total Funding Sources | \$ 27.7 | \$ 26.2 | \$ 20.9 | \$ 19.2 | \$ 19.5 | \$ 19.9 | \$ 133.4 |
| FUNDING GAP/(SURPLUS) ADJUSTED FOR COMPLETION | \$ 6.3 | \$ 18.2 | \$ 9.8 | \$ (4.6) | \$ (15.0) | \$ (18.4) | \$ (3.7) |

Expenditures

The Proposed FYs 2022-2027 Combined Program includes 56 CIP and 10 Information Only projects for a grand total of \$5.7 billion. The grand total is \$137.6 million greater than the Adopted FYs 2021-2026 Combined Program primarily due to the increases in the Water Reconstruction Program as the replacement mileage ramps back up and increases in the Sewer Reconstruction Program for the rehabilitation work in the Piscataway Basin. Expenditures for the six-year program period are estimated at \$3.9 billion. FY'22 expenditures are estimated at \$733.2 million, of which \$153.3 million is for the Water Program, \$313.6 million is for the Sewerage Program, and \$266.3 million is for the Information Only projects. System Extension Process (SEP) growth projects are estimated at \$29.9 million in the six-year program with approximately \$17.1 million programmed in FY'22. There are 11 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 2021-2026 CIP to the Proposed FYs 2022-2027 CIP follows:

CIP COMPARISON

(In Thousands)

| CIP | Combined Program | Total 6 Years | Budget Years |
|------------------------|------------------|---------------|--------------|
| Adopted FYs 2021-2026 | \$ 5,547,775 | \$ 3,703,130 | \$ 615,005 |
| Proposed FYs 2022-2027 | 5,685,422 | 3,904,434 | 733,151 |
| Change | \$ 137,647 | \$ 201,304 | \$ 118,146 |

The six-year expenditures for the Combined Program are estimated at approximately \$3.9 billion, \$883.9 million for the Water Program, \$1.2 billion for the Sewerage Program, and \$1.8 billion for the Information Only projects. This is a \$201.3 million increase from the six-year total for the Combined Program in the Adopted FYs 2021-2026 CIP. The overall increase is primarily due to the addition of 11 new projects in FY'22, increases in the Water Reconstruction Program as the replacement mileage ramps back up, and increases in the Sewer Reconstruction Program for the rehabilitation work in the Piscataway Basin.

Expenditure Categories

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

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

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 Finance Department (Budget Division). The expenditures and schedules displayed on each PDF represent the 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 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 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 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 and authorize 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 15th, 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. WSSC Water then adopts these changes and additions before the beginning of the new fiscal year on July 1st. If the Councils do not jointly agree on changes by June 1st, under law, the CIP is approved as proposed.

Program Description

Individual project information is displayed on the PDFs. 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. 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.







Projected acquisition costs for land, rights-of-way, and any watershed buffer property 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 WSSC Water to respond to the uncertainty of implementation schedules, unpredictable delays, unanticipated rights-of-way requirements, and the need to assure 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 and represents the entire capital budget request.

Expenditure projections for the first year of the six-year program, as shown on each PDF in Block B, column Year I, are included in the capital budget and the operating budget includes the requisite debt service. In addition to adopting a six-year CIP, the Montgomery and Prince George's County governments also annually review and approve WSSC Water'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 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 163.1 million 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 WSSC Water. Both reservoirs are shared by users in the Washington Metropolitan area, including the U.S. Army Corps of Engineers and the Fairfax County Water Authority. 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 plants has to be pumped into the distribution system. Water pumping stations are strategically located throughout the WSSD 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 5,900 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 over 100 years, these facilities have been operated and maintained by WSSC Water 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

WSSC Water'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 WateReuse 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 Water facilities go beyond conventional, second-stage treatment to provide "tertiary treatment," which is an advanced treatment process. All of WSSC Water'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. WSSC Water 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.

WSSC Water'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, WSSC Water has purchased 169.6 MGD of treatment capacity at the Blue Plains Advanced Wastewater Treatment Plant located in the District of Columbia, 3.0 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. WSSC Water 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 in the Poolesville plant is in accordance with the May 1984 agreement between 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 approximately 5,700 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 WSSD.

The largest diameter pipelines (interceptor sewers) extend out from the treatment plant to the major lines (trunk lines) within individual drainage basins. Smaller diameter pipelines (outfalls) run up sub-basins from the major lines. Even smaller lines (laterals), 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 laterals in the various subdivisions to the outfalls and through the larger diameter interceptors to the water resource recovery facility. Because gravity cannot always be used to accomplish this ideal pattern of flow, WSSC Water has more than 40 wastewater pumping stations in operation, and others in standby status, throughout the WSSD. 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 Water wastewater flows through enclosed trunk line systems and is completely separate and independent from the storm drain system. For over 100 years, these facilities have been operated and maintained by WSSC Water 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 WSSD. 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 Advanced Wastewater Treatment Plant. WSSC Water'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

WSSC Water 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 by the Asset Management Program (AMP), 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 M-NCP&PC, 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 M-NCP&PC or County government may provide additional information of local interest.

A further extension of these protections has been funded by the approximately \$245.4 million included in the six-year Combined Program which is attributable to meeting environmental regulations. These projects, currently estimated at 6% of the six-

year Combined Program costs, are mandated by the EPA 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 in the following table, and project details can be found on the individual PDFs included elsewhere in this document.

Environmental Spending

| Project Name | Amount (In Millions) |
|---|-----------------------------|
| W-73.33 – Potomac WFP Consent Decree Program | \$ 174.8 |
| W-202.00 – Land & Rights-of-Way Acquisition - Bi-County Water | 4.6 |
| S-22.10 – Blue Plains WWTP: Enhanced Nutrient Removal | 3.1 |
| S-22.11 – Blue Plains: Pipelines & Appurtenances | 62.9 |
| Total 6 Years Combined Program Expenditures Allocated to Environmental Regulations | \$ 245.4 |

Green Bond Project Funding

The International Capital Market Association (ICMA) describes the Green Bond market as an opportunity to enable and develop the key role that debt markets can play in funding projects that contribute to environmental sustainability. WSSC Water is committed to protecting the natural environment of Prince George’s and Montgomery Counties as it carries out its mandate to provide sanitary sewer services and safe, clean drinking water. This commitment is reflected in the organization’s core values of accountability, innovation, and environmental stewardship, which serve to guide and incorporate behavior and decision making into the organization’s investments into green buildings, pollution prevention and control, renewable energy, water quality, and climate change adaptation.

To be eligible for Green Bond proceeds, candidate green projects must meet criteria in one or more of the following areas:

Green buildings

- Installation of high-efficiency heating, ventilating, and air conditioning units;
- Installation of high-efficiency LED lighting fixtures;
- Use of cool roof materials; and
- Installation of high-efficiency water and wastewater processing equipment, pumps, motors, and valves.

Pollution prevention and control

- Lead clean-up and removal;
- Protection of environmentally sensitive areas from sewer overflow;
- Construction of new sewer, storm drain, and recycled water supply systems;
- Sewer system repair and rehabilitation to prevent overflow into waterways;
- Sewer line blockage assessments and remediation; and
- Enhance nutrient removal (nitrogen and phosphorus) and discharge processes to protect waterways.

Renewable energy

- Installation of new equipment and systems to produce biogas and electricity.

Water quality

- Sewer and water line reconstruction;
- Leak detection technologies;
- Advanced mixing systems;
- Installation of technologies to reduce chemical use; and
- Construction of new source water intake to reduce drinking water contamination and treatment cost.

Climate change adaptation

- Address safety standards including the Probable Maximum Flood criteria and maximum credible earthquake loadings;
- Installation of enhanced power reliability at wastewater facilities to prevent sanitary sewer overflows; and
- Reduce biosolids production to enhance the health of the Chesapeake Bay and reduce greenhouse gas emissions and other air pollutants.

Projects focused on the activities above are eligible to be funded in whole or in part by an allocation of the Green Bond proceeds. Based upon WSSC Water's review of its capital project portfolio, the following projects will be financed with the proceeds of its first series of Green Bonds in December 2019: Potomac WFP Pre-Filter Chlorination and Air Scour Improvements (page 3-3), Potomac Water Filtration Plant (WFP) Consent Decree Program (page 3-6), and Large Diameter Water Pipe Rehabilitation Program (page 3-7).

Green Bond proceeds will be specifically directed to pay the costs of design, construction, property acquisition, and other related costs necessary for selected projects. Further, WSSC Water will produce an annual report detailing how the Green Bond proceeds were used to finance the selected projects, a description of the selected projects, and details of the environmental benefits resulting from the project. More information on WSSC Water's Green Bond program and reporting can be found on our website at wsscwater.com/greenbond.

Public Outreach

WSSC Water'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 WSSC Water's plans, actively seek their input, and respond to their concerns. WSSC Water'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 WSSC Water 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.

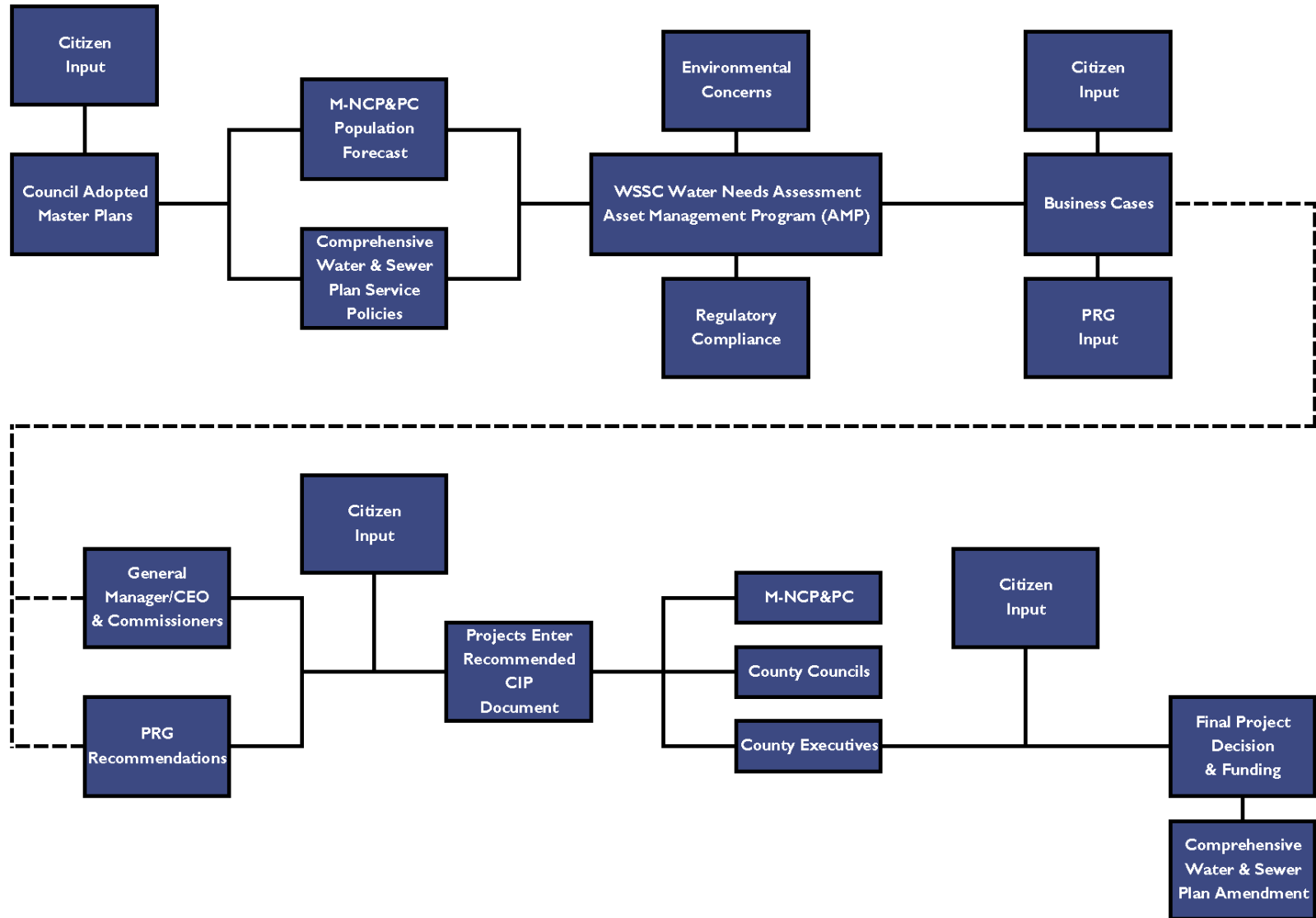
The Project Outreach program advocates achieving planning goals through a collaborative effort among staff, technical experts, citizens and/or organizations, and public officials. Fostering community involvement allows WSSC Water to be responsive and sensitive to community concerns, to define the best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

The Planning Process

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 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 WSSC Water at a reasonable cost.

A number of outside influences affect the 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 M-NCP&PC. These elements are used to calculate projected water and sewerage demands. WSSC Water must also consider environmental consequences and compliance with Federal and State regulations such as the Clean Water Act and Safe Drinking Water Act. The needs analysis process also incorporates both County governments' guidance on service policies as contained in the Comprehensive 10-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 WSSC Water's 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 I
PROJECT DEVELOPMENT & APPROVAL PROCESS



WSSC Water’s Asset Management Program

To address WSSC Water’s Strategic Priorities, in particular those to Optimize Infrastructure and Spend Customer Dollars Wisely, the objective of the 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 WSSC Water’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 AMP 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 WSSC Water’s AMP process.

**Figure 2
OVERVIEW OF WSSC WATER’S AMP PROCESS**

| Genesis and Validation | Business Case Development | Review and Approval |
|-------------------------------|--------------------------------------|----------------------------|
| Asset Management Plans | Technical Analysis and Documentation | WSSC Water CIP |
| • Establishment of Need | • Coordination | • Project Prioritization |
| • Need Validation | • Community Outreach | • Public Comment |
| • Funding | • Project Validation | • County Governments |
| | • Solution Recommendation | |
| Implementation | | |

WSSC Water’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 for administrative reasons such as to afford better project management or to provide greater clarity to the reader.

System Extension Process (SEP)

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 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 Statutory Basis section at the beginning of this narrative.

To initiate a project, the Applicant will submit preliminary subdivision plans to the Planning Department of the M-NCP&PC for their County. WSSC Water 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 10-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 10-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, WSSC Water 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 during the HPA review. WSSC Water will perform a review of the design plans for compliance with 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 SEP or can opt to follow the WSSC Water Built Process. Each step in the WSSC Water Built Process is done at the Applicant's expense. In this case, the Applicant will prepare a feasibility study for review and for WSSC Water to issue a feasibility LOF. The LOF will again specify any project conditions and advise the Applicant of their cost responsibilities. If the Applicant elects to proceed with the WSSC Water Built Process, WSSC Water will prepare the design plans. Once the Applicant has met all the project conditions from the LOF, the design plans are approved, and all permits and rights-of-way are acquired, WSSC Water 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 WSSC Water'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 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 Advanced 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, WSSC Water 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 project construction. WSSC Water 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.

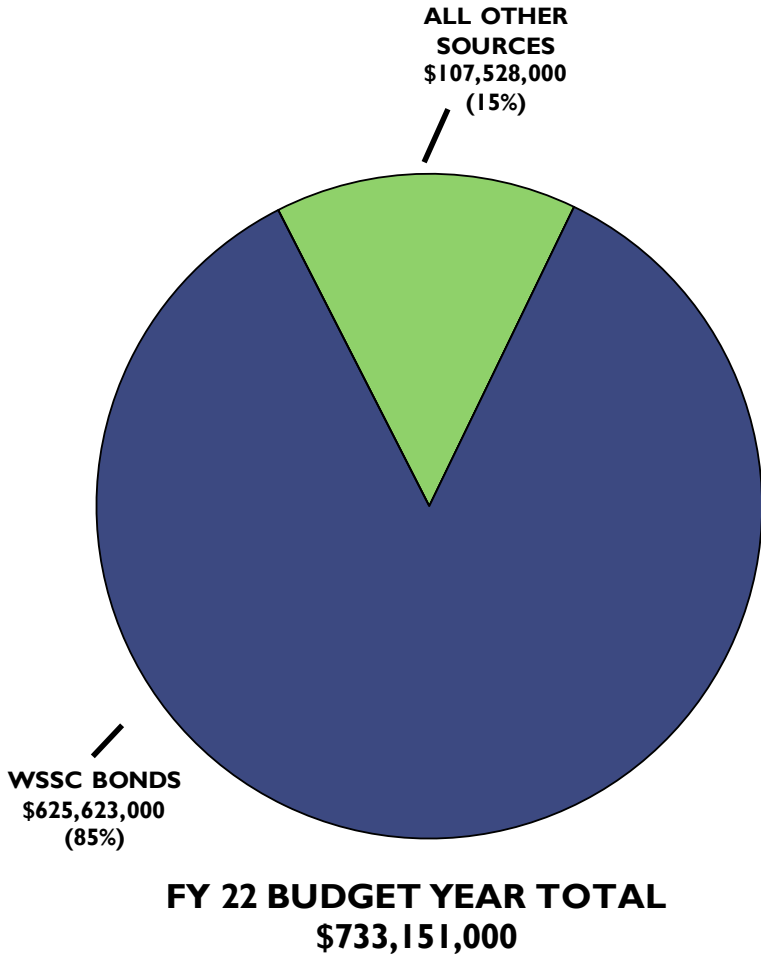
Actual design plans and profiles, if available, are analyzed together with United States Geological Survey soil maps. Additional factors such as site access, excessive traffic, known jurisdictional constraints, presence of rock or running sand, work through existing neighborhoods or open fields, and 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 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. WSSC Water 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, etc.), 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 15.0%. There are exceptions: a value, based upon 1.0%, is applied to Blue Plains project costs; a constant of 10.0% is used to more realistically estimate these expenses for projects with a total estimated cost of \$10.0 to \$49.9 million; and, a constant of 5.0% is used for projects with a total estimated cost of \$50.0 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 financial information system through the period ending March 31st 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 WATER PROPOSED FYS 2022-2027 CIP
COMBINED PROGRAM FUNDING BY SOURCE

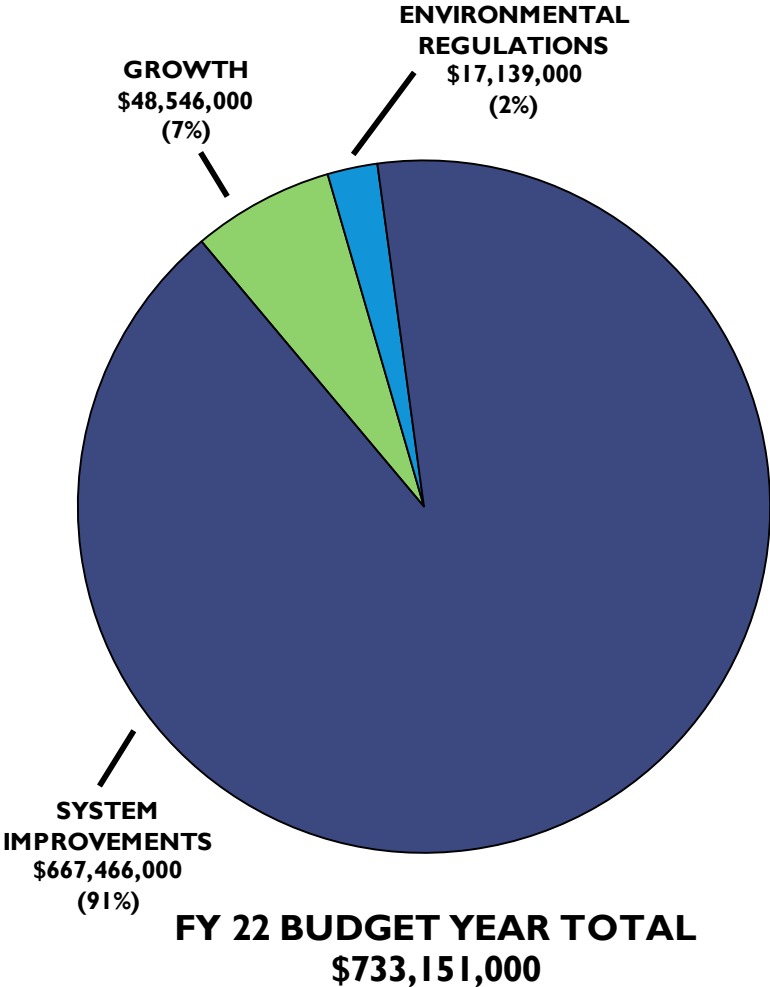


85%

of the FY 22 Combined Program is funded through long-term debt.

| Funding Source | FY'22 Amount |
|--------------------------------|-----------------------|
| Federal & State Grants | \$ 24,471,000 |
| SDC & Others | 48,698,000 |
| Local Government Contributions | 3,343,000 |
| WSSC Bonds | 625,623,000 |
| PAYGO | 31,016,000 |
| Total | \$ 733,151,000 |

Figure 4
WSSC WATER PROPOSED FYS 2022-2027 CIP
COMBINED PROGRAM BY MAJOR CATEGORY



91%

of the FY 22 Combined Program is for reinvestment in our system infrastructure.

| Major Category | FY'22 Amount |
|---------------------------|-----------------------|
| Growth | \$ 48,546,000 |
| System Improvements | 667,466,000 |
| Environmental Regulations | 17,139,000 |
| Total | \$ 733,151,000 |

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

EXPENDITURE PROJECTIONS

| | EST. TOTAL COST | EXPEND THRU 20 | EST. EXPEND 21 | TOTAL SIX YEARS | EXPENDITURE SCHEDULE | | | | | | BEYOND SIX YEARS | PAGE NUM |
|---------------------------------------|-----------------------|----------------------|----------------------|-----------------------|----------------------|----------------|----------------|----------------|----------------|----------------|------------------------|-------------|
| | | | | | YR 1 22 | YR 2 23 | YR 3 24 | YR 4 25 | YR 5 26 | YR 6 27 | | |
| Montgomery County Water Projects | 31,879 | 21,738 | 1,623 | 8,518 | 2,864 | 2,624 | 2,674 | 178 | 89 | 89 | 0 | 1-1 |
| Prince George's County Water Projects | 227,832 | 49,426 | 15,767 | 154,341 | 62,481 | 49,628 | 35,048 | 5,214 | 1,030 | 940 | 8,298 | 5-1 |
| Bi-County Water Projects | 1,000,474 | 118,946 | 73,558 | 721,026 | 87,972 | 106,854 | 137,539 | 136,188 | 126,858 | 125,615 | 86,944 | 3-1 |
| TOTAL WATER PROJECTS | 1,260,185 | 190,110 | 90,948 | 883,885 | 153,317 | 159,106 | 175,261 | 141,580 | 127,977 | 126,644 | 95,242 | |
| Montgomery County Sewer Projects | 37,742 | 4,047 | 4,832 | 28,863 | 8,512 | 4,972 | 7,441 | 5,387 | 2,476 | 75 | 0 | 2-1 |
| Prince George's County Sewer Projects | 537,300 | 260,871 | 89,917 | 184,937 | 70,103 | 50,439 | 33,459 | 19,966 | 8,830 | 2,140 | 1,575 | 6-1 |
| Bi-County Sewer Projects | 1,794,199 | 484,052 | 149,841 | 986,879 | 234,947 | 243,526 | 149,823 | 116,032 | 121,135 | 121,416 | 173,427 | 4-1 |
| TOTAL SEWER PROJECTS | 2,369,241 | 748,970 | 244,590 | 1,200,679 | 313,562 | 298,937 | 190,723 | 141,385 | 132,441 | 123,631 | 175,002 | |
| TOTAL CIP PROGRAM | 3,629,426 | 939,080 | 335,538 | 2,084,564 | 466,879 | 458,043 | 365,984 | 282,965 | 260,418 | 250,275 | 270,244 | |
| Total Information Only Projects | 2,055,996 | 1,916 | 234,210 | 1,819,870 | 266,272 | 292,201 | 300,784 | 306,243 | 316,934 | 337,436 | 0 | 7-1 |
| COMBINED PROGRAM | 5,685,422 | 940,996 | 569,748 | 3,904,434 | 733,151 | 750,244 | 666,768 | 589,208 | 577,352 | 587,711 | 270,244 | |

FUNDING SOURCES

| | | | | | | | | | | | |
|----------------------------|------------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| WSSC Bonds | 4,437,282 | 468,344 | 515,802 | 3,281,913 | 625,623 | 647,330 | 567,793 | 489,018 | 470,379 | 481,770 | 171,223 |
| PAYGO | 432,048 | 11,016 | 10,000 | 331,032 | 31,016 | 31,016 | 44,000 | 65,000 | 80,000 | 80,000 | 80,000 |
| State Grants | 385,831 | 242,480 | 20,000 | 123,351 | 20,351 | 21,500 | 21,500 | 20,000 | 20,000 | 20,000 | 0 |
| System Development Charges | 314,497 | 194,092 | 12,479 | 99,628 | 31,329 | 34,621 | 22,813 | 8,797 | 1,608 | 460 | 8,298 |
| Contributions/Other | 53,465 | 16,758 | 6,247 | 30,458 | 17,369 | 8,011 | 2,656 | 951 | 736 | 735 | 2 |
| Government Contributions | 46,279 | 7,736 | 3,675 | 24,147 | 3,343 | 3,646 | 3,886 | 3,897 | 4,629 | 4,746 | 10,721 |
| Federal Grants | 16,020 | 570 | 1,545 | 13,905 | 4,120 | 4,120 | 4,120 | 1,545 | 0 | 0 | 0 |
| COMBINED PROGRAM | 5,685,422 | 940,996 | 569,748 | 3,904,434 | 733,151 | 750,244 | 666,768 | 589,208 | 577,352 | 587,711 | 270,244 |

WSSC WATER FYS 2022 - 2027 COMBINED PROGRAM
NEW PROJECT LISTING
 (ALL FIGURES IN THOUSANDS)

| Agency Number | Project Name | Total Project Cost | 6 Year Program Cost | Budget Year Cost | % of Growth |
|---|--|--------------------------|---------------------------|------------------------|----------------|
| <u>Montgomery County Water Projects</u> | | | | | |
| W- 46.26 | Pleasant's Property Water Main Extension | \$1,984 | \$1,984 | \$1,786 | 100% |
| W-113.21 | Viva White Oak Water Main | 1,780 | 1,780 | 712 | 100% |
| <u>Montgomery County Sewer Projects</u> | | | | | |
| S-118.09 | Viva White Oak Sewer Main | 1,500 | 1,500 | 599 | 100% |
| <u>Bi-County Sewer Projects</u> | | | | | |
| S- 89.24 | Anacostia #2 WWPS Upgrades | 31,298 | 23,361 | 10,927 | 22% |
| <u>Prince George's County Sewer Projects</u> | | | | | |
| S- 28.20 | Pumpkin Hill WWPS & FM | 4,496 | 3,669 | 1,725 | 0% |
| S- 77.21 | Parkway WRRF Electrical Upgrades | 11,066 | 10,626 | 1,760 | 0% |
| S- 87.19 | Horsepen WWPS & FM | 35,349 | 33,262 | 4,146 | 90% |
| S- 89.25 | Little Anacostia WWPS & FM | 9,239 | 1,370 | 1,370 | 0% |
| S-118.10 | Viva White Oak Sewer Augmentation | 1,080 | 1,080 | 432 | 100% |
| S-131.11 | Calm Retreat Sewer Main | 981 | 981 | 883 | 100% |
| S-131.12 | Swan Creek WWPS & FM | 12,186 | 3,168 | 1,793 | 0% |
| TOTALS | | <u>\$110,959</u> | <u>\$82,781</u> | <u>\$26,133</u> | |

11 New Projects

WSSC WATER FYS 2022 - 2027 COMBINED PROGRAM
PENDING CLOSE-OUT PROJECT LISTING
 (ALL FIGURES IN THOUSANDS)

| Agency Number | Project Name | Estimated Total Cost | Expenditures Thru FY'20 | Estimated Expenditures FY'21 | Remarks |
|---|--|----------------------------|-------------------------------|------------------------------------|---------------------------------------|
| <u>Montgomery County Water Projects</u> | | | | | |
| W- 46.24 | Clarksburg Area Stage 3 Water Main, Part 4 | \$4,617 | \$4,288 | \$329 | Project completion expected in FY'21. |
| W- 46.25 | Clarksburg Area Stage 3 Water Main, Part 5 | 2,902 | 2,436 | 466 | Project completion expected in FY'21. |
| W- 90.04 | Brink Zone Reliability Improvements | 15,432 | 14,970 | 462 | Project completion expected in FY'21. |
| <u>Montgomery County Sewer Projects</u> | | | | | |
| S- 84.68 | Clarksburg Wastewater Pumping Station & Sewer Improvements | 5,776 | 2,745 | 3,031 | Project completion expected in FY'21. |
| <u>Bi-County Water Projects</u> | | | | | |
| W-139.02 | Duckett & Brighton Dam Upgrades | 41,380 | 41,380 | - | Project Completed. |
| W-172.08 | Rocky Gorge Pump Station Upgrade | 25,722 | 25,132 | 590 | Project completion expected in FY'21. |
| <u>Prince George's County Water Projects</u> | | | | | |
| W- 84.02 | Ritchie Marlboro Road Transmission Main & PRV | 9,952 | 9,889 | 63 | Project completion expected in FY'21. |
| W-111.05 | Hillmeade Road Water Main | 5,661 | 5,598 | 63 | Project completion expected in FY'21. |
| <u>Prince George's County Sewer Projects</u> | | | | | |
| S- 43.02 | Broad Creek WWPS Augmentation | 183,190 | 181,825 | 1,365 | Project completion expected in FY'21. |
| S-131.10 | Fort Washington Forest No. 1 WWPS Augmentation | 4,558 | 4,558 | - | Project completed. |
| TOTALS | | <u>\$299,190</u> | <u>\$292,821</u> | <u>\$6,369</u> | |

10 Projects Pending Close-Out

Section 1 - Montgomery County Water Projects

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

MONTGOMERY COUNTY WATER PROJECTS

| AGENCY NUMBER | PROJECT NAME | EST. TOTAL COST | EXPEND THRU 20 | EST. EXPEND 21 | TOTAL SIX YEARS | EXPENDITURE SCHEDULE | | | | | | BEYOND SIX YEARS | PAGE NUM | |
|---------------|--|-----------------|----------------|----------------|-----------------|----------------------|---------|---------|---------|---------|---------|------------------|----------|-----|
| | | | | | | YR 1 22 | YR 2 23 | YR 3 24 | YR 4 25 | YR 5 26 | YR 6 27 | | | |
| W-46.26 | Pleasant's Property Water Main Extension | 1,984 | 0 | 0 | 1,984 | 1,786 | 198 | 0 | 0 | 0 | 0 | 0 | 0 | 1-3 |
| W-113.20 | White Oak Water Mains Augmentation | 5,164 | 44 | 366 | 4,754 | 366 | 1,981 | 2,407 | 0 | 0 | 0 | 0 | 0 | 1-4 |
| W-113.21 | Viva White Oak Water Main | 1,780 | 0 | 0 | 1,780 | 712 | 445 | 267 | 178 | 89 | 89 | 0 | 0 | 1-5 |
| | Projects Pending Close-Out | 22,951 | 21,694 | 1,257 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1-6 |
| | TOTALS | 31,879 | 21,738 | 1,623 | 8,518 | 2,864 | 2,624 | 2,674 | 178 | 89 | 89 | 0 | | |

NEW PROJECT LISTING
MONTGOMERY COUNTY WATER PROJECTS
 (ALL FIGURES IN THOUSANDS)

| Agency Number | Project Name | Total Project Cost | Budget Year Cost | Page Number |
|----------------------|--|---------------------------|-------------------------|--------------------|
| W-46.26 | Pleasant's Property Water Main Extension | \$1,984 | \$1,786 | 1-3 |
| W-113.21 | Viva White Oak Water Main | 1,780 | 712 | 1-5 |
| | TOTALS | \$3,764 | \$2,498 | |

Pleasant's Property Water Main Extension

| A. Identification and Coding Information | | |
|--|----------------|-------------|
| Agency Number | Project Number | Update Code |
| W - 000046.26 | | Add |

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 474 | | | 474 | 427 | 47 | | | | | |
| Land | | | | | | | | | | | |
| Construction | 1,251 | | | 1,251 | 1,126 | 125 | | | | | |
| Other | 259 | | | 259 | 233 | 26 | | | | | |
| Total | 1,984 | | | 1,984 | 1,786 | 198 | | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|-------|--|--|-------|-------|-----|--|--|--|--|--|
| Contributions/Other | 1,984 | | | 1,984 | 1,786 | 198 | | | | | |
|---------------------|-------|--|--|-------|-------|-----|--|--|--|--|--|

D. Description & Justification

| |
|---|
| <p>DESCRIPTION This project provides for the planning, design, and construction of 2,320 feet of 16-inch diameter water main to serve Pleasant's Property.</p> <p>JUSTIFICATION Pleasant's Property Hydraulic Planning Analysis (June 2020).</p> <p>COST CHANGE Not applicable.</p> <p>OTHER The present project scope was developed for the FY 2022 CIP and has an estimated cost of \$1,984,000. The expenditures 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 Water rate supported debt will be used for this project.</p> <p>COORDINATION Coordinating Agencies: Maryland-National Capital Park & Planning Commission; Montgomery County Department of Environmental Protection; Montgomery County Government Coordinating Projects: Not Applicable</p> |
|---|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|------|--------------|
| Staff & Other | | |
| Maintenance | \$68 | |
| Debt Service | | |
| Total Cost | \$68 | |
| Impact on Water and Sewer Rate | | |

F. Approval and Expenditure Data (000's)

| | |
|------------------------------|-------|
| Date First in Program | FY 22 |
| Date First Approved | FY 22 |
| Initial Cost Estimate | 1,984 |
| Cost Estimate Last FY | |
| Present Cost Estimate | 1,984 |
| Approved Request Last FY | |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 1,786 |

G. Status Information

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

| | |
|--------------------------|------|
| Growth | 100% |
| System Improvement | |
| Environmental Regulation | |
| Population Served | |
| Capacity | |

H. Map



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, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 891 | 44 | 318 | 529 | 318 | 106 | 105 | | | | |
| Land | | | | | | | | | | | |
| Construction | 3,605 | | | 3,605 | | 1,617 | 1,988 | | | | |
| Other | 668 | | 48 | 620 | 48 | 258 | 314 | | | | |
| Total | 5,164 | 44 | 366 | 4,754 | 366 | 1,981 | 2,407 | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|-----|-------|----|-----|-------|-----|-------|-------|--|--|--|--|
| SDC | 5,164 | 44 | 366 | 4,754 | 366 | 1,981 | 2,407 | | | | |
|-----|-------|----|-----|-------|-----|-------|-------|--|--|--|--|

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 planning level estimates and are expected to change once the project moves into design.

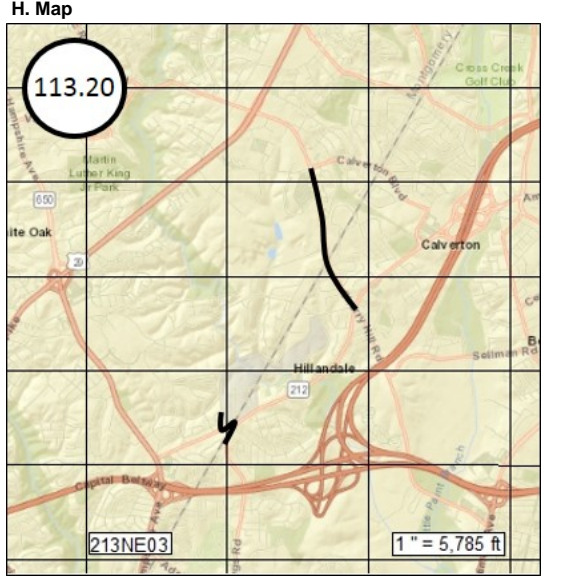
COORDINATION
 Coordinating Agencies: Maryland Department of the Environment; Maryland State Highway Administration; Maryland-National Capital Park & Planning Commission; Montgomery County Government; Prince George's County Government
 Coordinating Projects: W - 000113.21 - Viva White Oak Water Main

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|-------|--------------|
| Staff & Other | | |
| Maintenance | \$224 | 25 |
| Debt Service | | |
| Total Cost | \$224 | 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 | 4,970 |
| Present Cost Estimate | 5,164 |
| Approved Request Last FY | 355 |
| Total Expense & Encumbrances | 44 |
| Approval Request Year 1 | 366 |

| G. Status Information | |
|---------------------------|----------------|
| Land Status | Not Applicable |
| Project Phase | Design |
| Percent Complete | 0 % |
| Estimated Completion Date | April 2024 |

| | |
|--------------------------|------|
| Growth | 100% |
| System Improvement | |
| Environmental Regulation | |
| Population Served | |
| Capacity | |



Viva White Oak Water Main

| A. Identification and Coding Information | | |
|--|----------------|-------------|
| Agency Number | Project Number | Update Code |
| W - 000113.21 | | Add |

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

| | |
|-----------------|--|
| Pressure Zones | Montgomery Main 495A |
| Drainage Basins | |
| Planning Areas | Colesville-White Oak & Vicinity PA 33; Fairland (MC) PA 34 |

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 308 | | | 308 | 124 | 77 | 46 | 31 | 15 | 15 | |
| Land | | | | | | | | | | | |
| Construction | 1,239 | | | 1,239 | 495 | 310 | 186 | 124 | 62 | 62 | |
| Other | 233 | | | 233 | 93 | 58 | 35 | 23 | 12 | 12 | |
| Total | 1,780 | | | 1,780 | 712 | 445 | 267 | 178 | 89 | 89 | |

C. Funding Schedule (000's)

| | | | | | | | | | | |
|---------------------|-------|--|--|-------|-----|-----|-----|-----|----|----|
| Contributions/Other | 1,780 | | | 1,780 | 712 | 445 | 267 | 178 | 89 | 89 |
|---------------------|-------|--|--|-------|-----|-----|-----|-----|----|----|

D. Description & Justification

DESCRIPTION
This project provides for the planning, design, and construction of 8,900 feet of 16-inch diameter water main to serve Viva White Oak and vicinity.

JUSTIFICATION
Viva White Oak Hydraulic Planning Analysis (July 2019).

COST CHANGE
Not applicable.

OTHER
The present project scope was developed for the FY 2022 CIP and has an estimated cost of \$1,780,000. The expenditures 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 Water rate supported debt will be used for this project.

COORDINATION
Coordinating Agencies: Maryland Department of the Environment; Maryland-National Capital Park & Planning Commission; Montgomery County Department of Public Works and Transportation; Montgomery County Government
Coordinating Projects: S - 000118.09 - Viva White Oak Sewer Main; S - 000118.10 - Viva White Oak Sewer Augmentation; W - 000113.20 - White Oak Water Mains Augmentation

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|-------|--------------|
| Staff & Other | | |
| Maintenance | \$261 | |
| Debt Service | | |
| Total Cost | \$261 | |
| Impact on Water and Sewer Rate | | |

F. Approval and Expenditure Data (000's)

| | |
|------------------------------|-------|
| Date First in Program | FY 22 |
| Date First Approved | FY 22 |
| Initial Cost Estimate | 1,780 |
| Cost Estimate Last FY | |
| Present Cost Estimate | 1,780 |
| Approved Request Last FY | |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 712 |

G. Status Information

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

| | |
|--------------------------|--------|
| Growth | 100% |
| System Improvement | |
| Environmental Regulation | |
| Population Served | 53,300 |
| Capacity | |

H. Map



PENDING CLOSE-OUT PROJECT LISTING
MONTGOMERY COUNTY WATER PROJECTS
 (ALL FIGURES IN THOUSANDS)

| Project Number | Agency Number | Project Name | Estimated Total Cost | Expenditures Thru FY'20 | Estimated Expenditures FY'21 | Remarks |
|-----------------------|----------------------|--|-----------------------------|--------------------------------|-------------------------------------|---------------------------------------|
| 113800 | W-46.24 | Clarksburg Area Stage 3 Water Main, Part 4 | \$4,617 | \$4,288 | \$329 | Project completion expected in FY'21. |
| 163801 | W-46.25 | Clarksburg Area Stage 3 Water Main, Part 5 | 2,902 | 2,436 | 466 | Project completion expected in FY'21. |
| 143800 | W-90.04 | Brink Zone Reliability Improvements | 15,432 | 14,970 | 462 | Project completion expected in FY'21. |
| | | TOTALS | \$22,951 | \$21,694 | \$1,257 | |

Section 2 - Montgomery County Sewer Projects

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

MONTGOMERY COUNTY SEWER PROJECTS

| AGENCY NUMBER | PROJECT NAME | EST. TOTAL COST | EXPEND THRU 20 | EST. EXPEND 21 | TOTAL SIX YEARS | EXPENDITURE SCHEDULE | | | | | | BEYOND SIX YEARS | PAGE NUM |
|---------------|--|-----------------|----------------|----------------|-----------------|----------------------|---------|---------|---------|---------|---------|------------------|----------|
| | | | | | | YR 1 22 | YR 2 23 | YR 3 24 | YR 4 25 | YR 5 26 | YR 6 27 | | |
| S-84.67 | Milestone Center Sewer Main | 856 | 293 | 0 | 563 | 538 | 25 | 0 | 0 | 0 | 0 | 0 | 2-3 |
| S-85.21 | Shady Grove Station Sewer Augmentation | 7,192 | 521 | 363 | 6,308 | 5,960 | 251 | 97 | 0 | 0 | 0 | 0 | 2-4 |
| S-85.22 | Shady Grove Neighborhood Center | 1,700 | 0 | 435 | 1,265 | 633 | 632 | 0 | 0 | 0 | 0 | 0 | 2-5 |
| S-94.13 | Damascus Town Center WWPS Replacement | 10,053 | 312 | 550 | 9,191 | 672 | 2,988 | 5,285 | 246 | 0 | 0 | 0 | 2-6 |
| S-94.14 | Spring Gardens WWPS Replacement | 10,665 | 176 | 453 | 10,036 | 110 | 701 | 1,834 | 4,991 | 2,400 | 0 | 0 | 2-7 |
| S-118.09 | Viva White Oak Sewer Main | 1,500 | 0 | 0 | 1,500 | 599 | 375 | 225 | 150 | 76 | 75 | 0 | 2-8 |
| | Projects Pending Close-Out | 5,776 | 2,745 | 3,031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2-9 |
| | TOTALS | 37,742 | 4,047 | 4,832 | 28,863 | 8,512 | 4,972 | 7,441 | 5,387 | 2,476 | 75 | 0 | |

NEW PROJECT LISTING
MONTGOMERY COUNTY SEWER PROJECTS
 (ALL FIGURES IN THOUSANDS)

| Agency Number | Project Name | Total Project Cost | Budget Year Cost | Page Number |
|----------------------|---------------------------|---------------------------|-------------------------|--------------------|
| S-118.09 | Viva White Oak Sewer Main | \$1,500 | \$599 | 2-8 |
| | TOTALS | \$1,500 | \$599 | |

Milestone Center Sewer Main

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

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 427 | 293 | | 134 | 134 | | | | | | |
| Land | | | | | | | | | | | |
| Construction | 356 | | | 356 | 334 | 22 | | | | | |
| Other | 73 | | | 73 | 70 | 3 | | | | | |
| Total | 856 | 293 | | 563 | 538 | 25 | | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|-----|-----|--|-----|-----|----|--|--|--|--|--|
| Contributions/Other | 856 | 293 | | 563 | 538 | 25 | | | | | |
|---------------------|-----|-----|--|-----|-----|----|--|--|--|--|--|

D. Description & Justification

| |
|---|
| <p>DESCRIPTION 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.</p> <p>JUSTIFICATION Milestone Development Amended Hydraulic Planning Analysis and Letter of Findings #2 (January 2016).</p> <p>COST CHANGE Not applicable.</p> <p>OTHER 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 Water rate supported debt will be used for this project.</p> <p>This project has been inactive since January of 2017.</p> <p>COORDINATION Coordinating Agencies: Maryland-National Capital Park & Planning Commission; Montgomery County Government Coordinating Projects: Not Applicable</p> |
|---|

| 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)

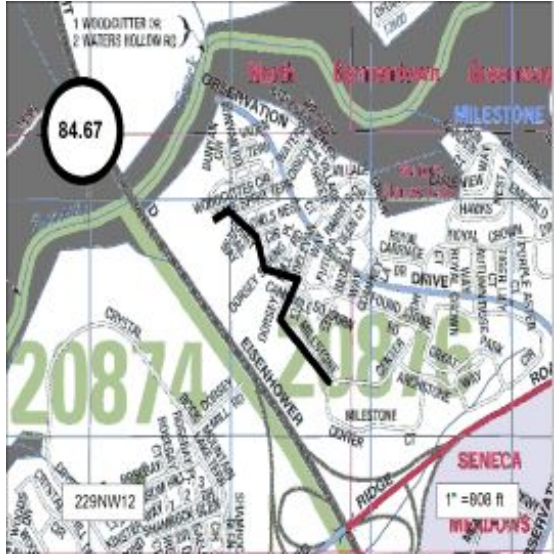
| | |
|------------------------------|-------|
| Date First in Program | FY 18 |
| Date First Approved | FY 18 |
| Initial Cost Estimate | 504 |
| Cost Estimate Last FY | 834 |
| Present Cost Estimate | 856 |
| Approved Request Last FY | 522 |
| Total Expense & Encumbrances | 293 |
| Approval Request Year 1 | 538 |

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



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, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 577 | 512 | 31 | 34 | 21 | 12 | 1 | | | | |
| Land | | | | | | | | | | | |
| Construction | 5,745 | 9 | 285 | 5,451 | 5,162 | 206 | 83 | | | | |
| Other | 870 | | 47 | 823 | 777 | 33 | 13 | | | | |
| Total | 7,192 | 521 | 363 | 6,308 | 5,960 | 251 | 97 | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|-------|-----|-----|-------|-------|-----|----|--|--|--|--|
| Contributions/Other | 7,192 | 521 | 363 | 6,308 | 5,960 | 251 | 97 | | | | |
|---------------------|-------|-----|-----|-------|-------|-----|----|--|--|--|--|

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
 Not applicable.

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 Water 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 | | |
| Maintenance | \$73 | |
| Debt Service | | |
| Total Cost | \$73 | |
| Impact on Water and Sewer Rate | | |

F. Approval and Expenditure Data (000's)

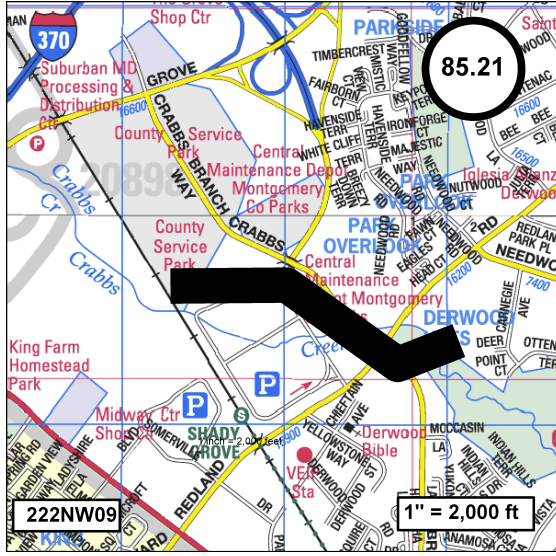
| | |
|------------------------------|-------|
| Date First in Program | FY 15 |
| Date First Approved | FY 15 |
| Initial Cost Estimate | 2,254 |
| Cost Estimate Last FY | 6,982 |
| Present Cost Estimate | 7,192 |
| Approved Request Last FY | 5,773 |
| Total Expense & Encumbrances | 521 |
| Approval Request Year 1 | 5,960 |

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 | 382102 | Change |

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 278 | | 178 | 100 | 50 | 50 | | | | | |
| Land | | | | | | | | | | | |
| Construction | 1,200 | | 200 | 1,000 | 500 | 500 | | | | | |
| Other | 222 | | 57 | 165 | 83 | 82 | | | | | |
| Total | 1,700 | | 435 | 1,265 | 633 | 632 | | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|-------|--|-----|-------|-----|-----|--|--|--|--|--|
| Contributions/Other | 1,700 | | 435 | 1,265 | 633 | 632 | | | | | |
|---------------------|-------|--|-----|-------|-----|-----|--|--|--|--|--|

D. Description & Justification

| |
|--|
| <p>DESCRIPTION This project provides for the planning, design and construction of 1,800 feet of 15-inch sewer main to serve the Shady Grove Neighborhood Center Subdivision.</p> <p>JUSTIFICATION 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>COST CHANGE A new sewer alignment has shortened the sewer length from 4,375 feet to 1,800 feet and changed the drainage basin to Watts Branch.</p> <p>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. The estimated completion date is developer dependent. No WSSC Water rate supported debt will be used for this project.</p> <p>COORDINATION Coordinating Agencies: City of Rockville; Maryland Department of the Environment; Maryland-National Capital Park & Planning Commission; Montgomery County Government Coordinating Projects: Not Applicable</p> |
|--|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|------|--------------|
| Staff & Other | | |
| Maintenance | \$37 | |
| Debt Service | | |
| Total Cost | \$37 | |
| 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 | 3,391 |
| Cost Estimate Last FY | 3,391 |
| Present Cost Estimate | 1,700 |
| Approved Request Last FY | 1,367 |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 633 |

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, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 1,798 | 312 | 478 | 1,008 | 584 | 185 | 185 | 54 | | | |
| Land | | | | | | | | | | | |
| Construction | 6,983 | | | 6,983 | | 2,413 | 4,410 | 160 | | | |
| Other | 1,272 | | 72 | 1,200 | 88 | 390 | 690 | 32 | | | |
| Total | 10,053 | 312 | 550 | 9,191 | 672 | 2,988 | 5,285 | 246 | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|-------|-----|-----|-------|-----|-------|-------|-----|--|--|--|
| WSSC Bonds | 7,036 | 218 | 385 | 6,433 | 470 | 2,092 | 3,699 | 172 | | | |
| SDC | 3,017 | 94 | 165 | 2,758 | 202 | 896 | 1,586 | 74 | | | |

D. Description & Justification

DESCRIPTION
 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.

JUSTIFICATION
 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 Water standards. The pumping station was taken over by WSSC Water 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.

COST CHANGE
 Not applicable.

OTHER
 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 Water's project S-203.00.

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

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|-------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$458 | 25 |
| Total Cost | \$458 | 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 | 9,669 |
| Present Cost Estimate | 10,053 |
| Approved Request Last FY | 652 |
| Total Expense & Encumbrances | 312 |
| Approval Request Year 1 | 672 |

| G. Status Information | |
|---------------------------|-----------------------------|
| Land Status | Land and R/W to be acquired |
| Project Phase | Planning |
| Percent Complete | 80 % |
| 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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 2,636 | 176 | 412 | 2,048 | 100 | 637 | 637 | 262 | 412 | | |
| Land | | | | | | | | | | | |
| Construction | 7,109 | | | 7,109 | | | 1,030 | 4,275 | 1,804 | | |
| Other | 920 | | 41 | 879 | 10 | 64 | 167 | 454 | 184 | | |
| Total | 10,665 | 176 | 453 | 10,036 | 110 | 701 | 1,834 | 4,991 | 2,400 | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|-------|-----|-----|-------|----|-----|-------|-------|-------|--|--|
| WSSC Bonds | 3,520 | 59 | 149 | 3,312 | 37 | 231 | 605 | 1,647 | 792 | | |
| SDC | 7,145 | 117 | 304 | 6,724 | 73 | 470 | 1,229 | 3,344 | 1,608 | | |

D. Description & Justification

| |
|---|
| <p>DESCRIPTION</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>JUSTIFICATION</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>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</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. Future land costs are included in WSSC Water's project S-203.00.</p> <p>COORDINATION</p> <p>Coordinating Agencies: Maryland Department of the Environment; Maryland State Highway Administration; Maryland-National Capital Park & Planning Commission; Montgomery County Department of Public Works and Transportation; Montgomery County Government</p> <p>Coordinating Projects: Not Applicable</p> |
|---|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|-------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$229 | 27 |
| Total Cost | \$229 | 27 |
| Impact on Water and Sewer Rate | | |

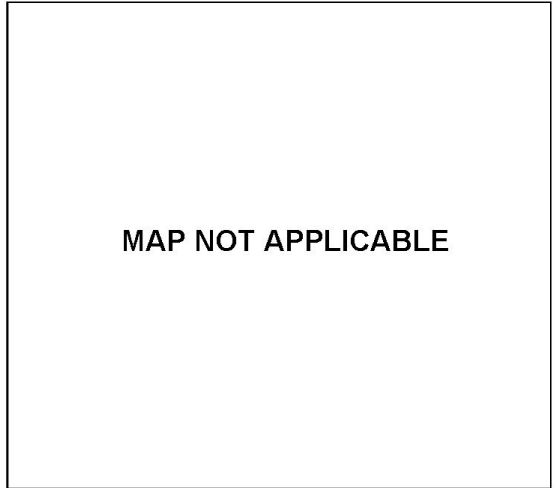
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|--------|
| Date First in Program | FY 20 |
| Date First Approved | FY 20 |
| Initial Cost Estimate | 10,180 |
| Cost Estimate Last FY | 11,048 |
| Present Cost Estimate | 10,665 |
| Approved Request Last FY | 705 |
| Total Expense & Encumbrances | 176 |
| Approval Request Year 1 | 110 |

G. Status Information

| | |
|---------------------------|-----------------------------|
| Land Status | Land and R/W to be acquired |
| Project Phase | Planning |
| Percent Complete | 5 % |
| Estimated Completion Date | June 2026 |
| Growth | 67% |
| System Improvement | 33% |
| Environmental Regulation | |
| Population Served | |
| Capacity | 1.3 MGD |

H. Map



Viva White Oak Sewer Main

| A. Identification and Coding Information | | |
|--|----------------|-------------|
| Agency Number | Project Number | Update Code |
| S - 000118.09 | | Add |

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

| | |
|-----------------|--|
| Pressure Zones | |
| Drainage Basins | Paint Branch 2 |
| Planning Areas | Colesville-White Oak & Vicinity PA 33; Fairland (MC) PA 34 |

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 260 | | | 260 | 104 | 65 | 39 | 26 | 13 | 13 | |
| Land | | | | | | | | | | | |
| Construction | 1,044 | | | 1,044 | 417 | 261 | 157 | 104 | 53 | 52 | |
| Other | 196 | | | 196 | 78 | 49 | 29 | 20 | 10 | 10 | |
| Total | 1,500 | | | 1,500 | 599 | 375 | 225 | 150 | 76 | 75 | |

C. Funding Schedule (000's)

| | | | | | | | | | | |
|---------------------|-------|--|--|-------|-----|-----|-----|-----|----|----|
| Contributions/Other | 1,500 | | | 1,500 | 599 | 375 | 225 | 150 | 76 | 75 |
|---------------------|-------|--|--|-------|-----|-----|-----|-----|----|----|

D. Description & Justification

DESCRIPTION
This project provides for the planning, design, and construction of 4,175 feet of 15-inch to 24-inch diameter sewer main to serve Viva White Oak and vicinity.

JUSTIFICATION
Viva White Oak Hydraulic Planning Analysis (July 2019).

COST CHANGE
Not applicable.

OTHER
The present project scope was developed for the FY2022 CIP and has an estimated cost of \$1,500,000. The expenditures 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 Water rate supported debt will be used for this project.

COORDINATION
Coordinating Agencies: Maryland Department of the Environment; Maryland-National Capital Park & Planning Commission; Montgomery County Department of Environmental Protection; Montgomery County Government
Coordinating Projects: S - 000118.10 - Viva White Oak Sewer Augmentation; W - 000113.21 - Viva White Oak Water Main

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|------|--------------|
| Staff & Other | | |
| Maintenance | \$85 | |
| Debt Service | | |
| Total Cost | \$85 | |
| Impact on Water and Sewer Rate | | |

F. Approval and Expenditure Data (000's)

| | |
|------------------------------|-------|
| Date First in Program | FY 22 |
| Date First Approved | FY 22 |
| Initial Cost Estimate | 1,500 |
| Cost Estimate Last FY | |
| Present Cost Estimate | 1,500 |
| Approved Request Last FY | |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 599 |

G. Status Information

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

| | |
|--------------------------|-----------|
| Growth | 100% |
| System Improvement | |
| Environmental Regulation | |
| Population Served | |
| Capacity | 1.097 MGD |

H. Map



PENDING CLOSE-OUT PROJECT LISTING
MONTGOMERY COUNTY SEWER PROJECTS
 (ALL FIGURES IN THOUSANDS)

| Project Number | Agency Number | Project Name | Estimated Total Cost | Expenditures Thru FY'20 | Estimated Expenditures FY'21 | Remarks |
|----------------|---------------|--|----------------------|-------------------------|------------------------------|---------------------------------------|
| 173802 | S-84.68 | Clarksburg Wastewater Pumping Station & Sewer Improvements | \$5,776 | \$2,745 | \$3,031 | Project completion expected in FY'21. |
| | | TOTALS | \$5,776 | \$2,745 | \$3,031 | |

Section 3 - Bi-County Water Projects

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

BI-COUNTY WATER PROJECTS

| AGENCY NUMBER | PROJECT NAME | EST. TOTAL COST | EXPEND THRU 20 | EST. EXPEND 21 | TOTAL SIX YEARS | EXPENDITURE SCHEDULE | | | | | | BEYOND SIX YEARS | PAGE NUM |
|---------------|--|------------------|----------------|----------------|-----------------|----------------------|----------------|----------------|----------------|----------------|----------------|------------------|----------|
| | | | | | | YR 1 22 | YR 2 23 | YR 3 24 | YR 4 25 | YR 5 26 | YR 6 27 | | |
| W-73.22 | Potomac WFP Pre-Filter Chlorination & Air Scour Improvements | 20,476 | 14,503 | 5,830 | 143 | 143 | 0 | 0 | 0 | 0 | 0 | 0 | 3-3 |
| W-73.30 | Potomac WFP Submerged Channel Intake | 90,691 | 4,347 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 86,344 | 3-4 |
| W-73.32 | Potomac WFP Main Zone Pipeline | 39,069 | 1,666 | 660 | 36,743 | 913 | 506 | 17,618 | 14,193 | 3,513 | 0 | 0 | 3-5 |
| W-73.33 | Potomac WFP Consent Decree Program | 203,007 | 18,207 | 9,975 | 174,825 | 10,500 | 26,250 | 31,500 | 35,700 | 35,700 | 35,175 | 0 | 3-6 |
| W-161.01 | Large Diameter Water Pipe & Large Valve Rehabilitation Program | 518,952 | 0 | 45,997 | 472,955 | 61,681 | 71,374 | 80,320 | 83,665 | 86,560 | 89,355 | 0 | 3-7 |
| W-172.07 | Patuxent Raw Water Pipeline | 34,284 | 13,711 | 4,661 | 15,912 | 9,515 | 3,509 | 2,888 | 0 | 0 | 0 | 0 | 3-9 |
| W-175.05 | Regional Water Supply Resiliency | 15,450 | 0 | 1,545 | 13,905 | 4,120 | 4,120 | 4,120 | 1,545 | 0 | 0 | 0 | 3-10 |
| W-202.00 | Land & Rights-of-Way Acquisition - Bi-County Water | 11,443 | 0 | 4,300 | 6,543 | 1,100 | 1,095 | 1,093 | 1,085 | 1,085 | 1,085 | 600 | 3-11 |
| | Projects Pending Close-Out | 67,102 | 66,512 | 590 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3-12 |
| TOTALS | | 1,000,474 | 118,946 | 73,558 | 721,026 | 87,972 | 106,854 | 137,539 | 136,188 | 126,858 | 125,615 | 86,944 | |

POTOMAC WATER FILTRATION PLANT PROJECTS
(ALL FIGURES IN THOUSANDS)

| AGENCY NUMBER | PROJECT NAME | ADOPTED FY'21 TOTAL COST | PROPOSED FY'22 TOTAL COST | CHANGE \$ | CHANGE % | SIX-YEAR COST | COMPLETION DATE (est) |
|---------------|--|--------------------------|---------------------------|--------------|-------------|------------------|-----------------------|
| W-73.22 | Potomac WFP Pre-Filter Chlorination & Air Scour Improvements | \$24,404 | \$20,476 | (\$3,928) | -16.1% | \$143 | June 2021 |
| W-73.30 | Potomac WFP Submerged Channel Intake | 88,177 | 90,691 | 2,514 | 2.9% | 0 | TBD |
| W-73.32 | Potomac WFP Main Zone Pipeline | 37,745 | 39,069 | 1,324 | 3.5% | 36,743 | November 2025 |
| W-73.33 | Potomac WFP Consent Decree Program | 202,032 | 203,007 | 975 | 0.5% | 174,825 | January 2027 |
| | TOTALS | \$352,358 | \$353,243 | \$885 | 0.3% | \$211,711 | |

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 WSSC Water 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) 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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|---------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 1,457 | 927 | 500 | 30 | 30 | | | | | | |
| Land | | | | | | | | | | | |
| Construction | 18,476 | 13,576 | 4,800 | 100 | 100 | | | | | | |
| Other | 543 | | 530 | 13 | 13 | | | | | | |
| Total | 20,476 | 14,503 | 5,830 | 143 | 143 | | | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|--------|--------|-------|-----|-----|--|--|--|--|--|--|
| WSSC Bonds | 20,476 | 14,503 | 5,830 | 143 | 143 | | | | | | |
|------------|--------|--------|-------|-----|-----|--|--|--|--|--|--|

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 Water 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
 Total cost for the project was reduced based on actual bid.

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 actual bid price for Air Scour. 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. WSSC Water Green Bonds issued in December 2019 will be utilized to fund a portion of this project. The elimination of filter underdrain failures will address the following International Capital Market Association (ICMA) Green Bond Principles 2016 category: Sustainable water management.

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 | \$1,332 | 22 |
| Total Cost | \$1,332 | 22 |
| Impact on Water and Sewer Rate | | |

F. Approval and Expenditure Data (000's)

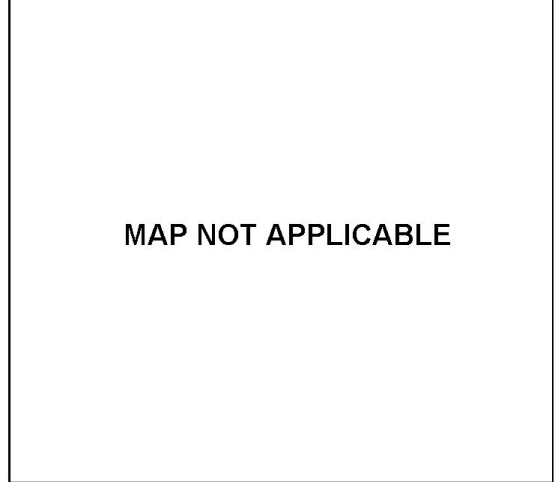
| | |
|------------------------------|--------|
| Date First in Program | FY 14 |
| Date First Approved | FY 14 |
| Initial Cost Estimate | 5,602 |
| Cost Estimate Last FY | 24,404 |
| Present Cost Estimate | 20,476 |
| Approved Request Last FY | 2,991 |
| Total Expense & Encumbrances | 14,503 |
| Approval Request Year 1 | 143 |

G. Status Information

| | |
|---------------------------|--------------------------|
| Land Status | Public/Agency owned land |
| Project Phase | Construction |
| Percent Complete | 30 % |
| 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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|--------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 11,389 | 4,227 | | | | | | | | | 7,162 |
| Land | | | | | | | | | | | |
| Construction | 75,190 | 120 | | | | | | | | | 75,070 |
| Other | 4,112 | | | | | | | | | | 4,112 |
| Total | 90,691 | 4,347 | | | | | | | | | 86,344 |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|--------|-------|--|--|--|--|--|--|--|--|--------|
| WSSC Bonds | 90,691 | 4,347 | | | | | | | | | 86,344 |
|------------|--------|-------|--|--|--|--|--|--|--|--|--------|

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 Water 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 | \$5,900 | |
| Total Cost | \$5,900 | |
| Impact on Water and Sewer Rate | \$0.01 | |

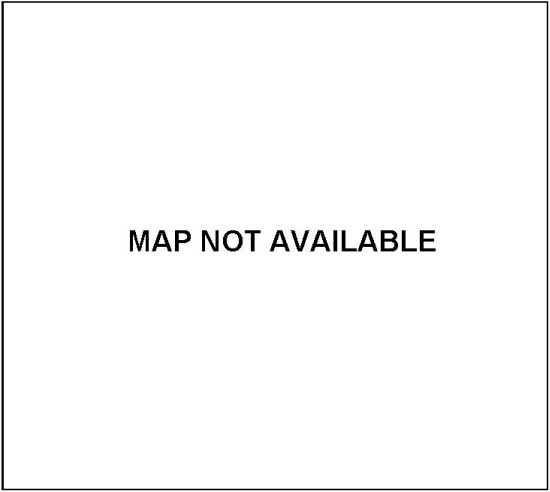
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|--------|
| Date First in Program | FY 04 |
| Date First Approved | FY 03 |
| Initial Cost Estimate | 936 |
| Cost Estimate Last FY | 88,177 |
| Present Cost Estimate | 90,691 |
| Approved Request Last FY | |
| Total Expense & Encumbrances | 4,347 |
| 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, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|--------------|----------------|---------------|--------------|--------------|---------------|---------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 3,865 | 1,666 | 600 | 1,599 | 830 | 460 | 103 | 103 | 103 | | |
| Land | | | | | | | | | | | |
| Construction | 31,803 | | | 31,803 | | | 15,913 | 12,800 | 3,090 | | |
| Other | 3,401 | | 60 | 3,341 | 83 | 46 | 1,602 | 1,290 | 320 | | |
| Total | 39,069 | 1,666 | 660 | 36,743 | 913 | 506 | 17,618 | 14,193 | 3,513 | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|--------|-------|-----|--------|-----|-----|--------|--------|-------|--|--|
| WSSC Bonds | 39,069 | 1,666 | 660 | 36,743 | 913 | 506 | 17,618 | 14,193 | 3,513 | | |
|------------|--------|-------|-----|--------|-----|-----|--------|--------|-------|--|--|

D. Description & Justification

| |
|--|
| <p>DESCRIPTION</p> <p>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.</p> <p>JUSTIFICATION</p> <p>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.</p> <p>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</p> <p>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.</p> <p>COORDINATION</p> <p>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</p> |
|--|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|---------|--------------|
| Staff & Other | | |
| Maintenance | \$44 | 27 |
| Debt Service | \$2,541 | 27 |
| Total Cost | \$2,585 | 27 |
| Impact on Water and Sewer Rate | \$0.01 | 27 |

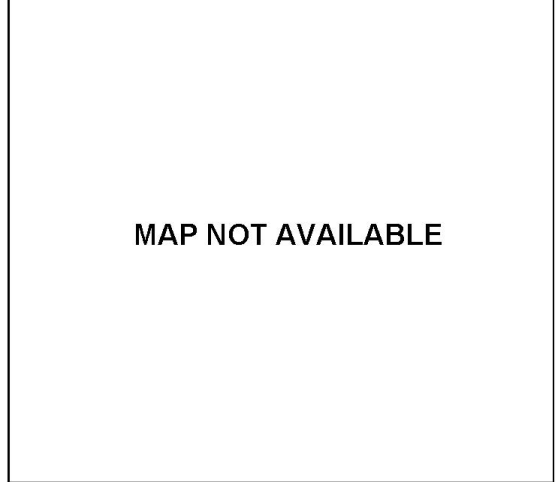
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|--------|
| Date First in Program | FY 13 |
| Date First Approved | FY 13 |
| Initial Cost Estimate | 330 |
| Cost Estimate Last FY | 37,745 |
| Present Cost Estimate | 39,069 |
| Approved Request Last FY | 688 |
| Total Expense & Encumbrances | 1,666 |
| Approval Request Year 1 | 913 |

G. Status Information

| | |
|---------------------------|--------------------------|
| Land Status | Public/Agency owned land |
| Project Phase | Planning |
| Percent Complete | 25 % |
| Estimated Completion Date | November 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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|----------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Planning, Design & Supervision | 41,072 | 8,072 | 4,500 | 28,500 | 4,000 | 5,000 | 5,000 | 5,000 | 5,000 | 4,500 | |
| Land | 1,000 | 1,000 | | | | | | | | | |
| Construction | 152,135 | 9,135 | 5,000 | 138,000 | 6,000 | 20,000 | 25,000 | 29,000 | 29,000 | 29,000 | |
| Other | 8,800 | | 475 | 8,325 | 500 | 1,250 | 1,500 | 1,700 | 1,700 | 1,675 | |
| Total | 203,007 | 18,207 | 9,975 | 174,825 | 10,500 | 26,250 | 31,500 | 35,700 | 35,700 | 35,175 | |

C. Funding Schedule (000's)

| | | | | | | | | | | |
|------------|---------|--------|-------|---------|--------|--------|--------|--------|--------|--------|
| WSSC Bonds | 203,007 | 18,207 | 9,975 | 174,825 | 10,500 | 26,250 | 31,500 | 35,700 | 35,700 | 35,175 |
|------------|---------|--------|-------|---------|--------|--------|--------|--------|--------|--------|

D. Description & Justification

| |
|--|
| <p>DESCRIPTION</p> <p>The Potomac WFP Consent Decree Program provides for the planning, design, and construction required for the implementation of Short-Term Operational and Long-Term Capital Improvements at the Potomac Water Filtration Plant (WFP) to allow WSSC Water to meet the new discharge limitations identified in the Consent Decree.</p> <p>JUSTIFICATION</p> <p>The Consent Decree (CD) was Entered by the U.S. District Court of Maryland on April 15, 2016. Under the terms of the CD WSSC Water is required to “undertake short-term operational changes and capital improvements at the Potomac WFP that will enable WSSC Water to reduce significantly the pounds per day of solids discharged to the River” (CD Section II. Paragraph 6.i); and to plan, design, and implement long term “upgrades to the existing Plant or to design and construct a new plant to achieve the effluent limits, conditions, and waste load allocations established by the Maryland Department of the Environment (the Department) and/or in this Consent Decree, and incorporated in a new discharge permit to be issued by the Department” (CD Section II. Paragraph 6.ii). The CD required WSSC Water to submit a Draft Audit Report and Draft Long-Term Upgrade Plan to the Citizens and the Department by November 15, 2016, and final reports to the Citizens and the Department by January 1, 2017. The Final Audit and Long-Term Upgrade Plan Reports were submitted to the Citizens and the Department on December 29, 2016. The Department reviews the Audit Report and selects recommended improvements in operations, monitoring, and waste tracking, along with select capital projects that can be completed no later than April 1, 2020 and that are necessary to achieve the goals identified in CD Section IV. Paragraph 24. Additionally, the work required to implement the Long-Term Capital Improvements Project(s) shall be fully implemented in accordance with the schedule set forth in the Long-Term Upgrade Plan. WSSC Water shall be subject to a lump-sum stipulated penalty in accordance with the CD for failure to implement the Long-Term Capital Improvement Project(s) by January 1, 2026.</p> <p>COST CHANGE</p> <p>Costs are based on recommendations in the approved revised LTUP Report dated September 2018.</p> <p>OTHER</p> <p>The project scope has remained the same. Expenditure and schedule projections shown above are preliminary design level estimates and include \$1,000,000 for Supplemental Environmental Projects included under CD Section IX. Paragraph 50. WSSC Water Green Bonds issued in December 2019 will be utilized to fund a portion of this project. The reduction in suspended solids discharged into the Potomac River will address the following International Capital Market Association (ICMA) Green Bond Principles 2016 categories: Pollution prevention/control; and, Terrestrial and aquatic biodiversity conservation.</p> <p>COORDINATION</p> <p>Coordinating Agencies: Maryland Department of the Environment; Montgomery County Government; National Park Service; Prince George's County Government; U.S. Environmental Protection Agency, Region III</p> <p>Coordinating Projects: W - 000073.30 - Potomac WFP Submerged Channel Intake; W - 000073.32 - Potomac WFP Main Zone Pipeline</p> |
|--|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|----------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$13,206 | 28 |
| Total Cost | \$13,206 | 28 |
| Impact on Water and Sewer Rate | \$0.03 | 28 |

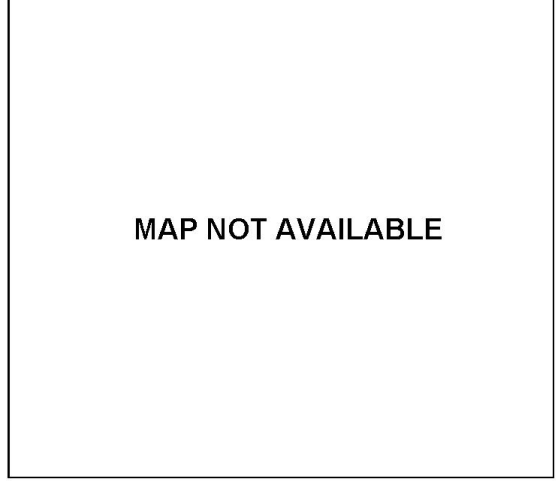
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|---------|
| Date First in Program | FY 17 |
| Date First Approved | FY 16 |
| Initial Cost Estimate | 27,250 |
| Cost Estimate Last FY | 202,032 |
| Present Cost Estimate | 203,007 |
| Approved Request Last FY | 10,500 |
| Total Expense & Encumbrances | 18,207 |
| Approval Request Year 1 | 10,500 |

G. Status Information

| | |
|---------------------------|---------------|
| Land Status | Land Acquired |
| Project Phase | Design |
| Percent Complete | 30 % |
| Estimated Completion Date | January 2027 |
| Growth | |
| System Improvement | |
| Environmental Regulation | 100% |
| 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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|----------------|------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Planning, Design & Supervision | 58,129 | | 6,587 | 51,542 | 8,110 | 8,049 | 8,417 | 8,872 | 8,824 | 9,270 | |
| Land | | | | | | | | | | | |
| Construction | 413,644 | | 35,228 | 378,416 | 47,962 | 56,836 | 64,600 | 67,186 | 69,868 | 71,964 | |
| Other | 47,179 | | 4,182 | 42,997 | 5,609 | 6,489 | 7,303 | 7,607 | 7,868 | 8,121 | |
| Total | 518,952 | | 45,997 | 472,955 | 61,681 | 71,374 | 80,320 | 83,665 | 86,560 | 89,355 | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|---------|--|--------|---------|--------|--------|--------|--------|--------|--------|--|
| WSSC Bonds | 518,952 | | 45,997 | 472,955 | 61,681 | 71,374 | 80,320 | 83,665 | 86,560 | 89,355 | |
|------------|---------|--|--------|---------|--------|--------|--------|--------|--------|--------|--|

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

Utility Wide Master Plan (December 2007); 30 Year Infrastructure Plan (2007); FY 2022 Water Network Asset Management Plan (May 2020).

COST CHANGE

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

- .
- .
- .

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|----------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$33,759 | |
| Total Cost | \$33,759 | |
| Impact on Water and Sewer Rate | \$0.07 | |

F. Approval and Expenditure Data (000's)

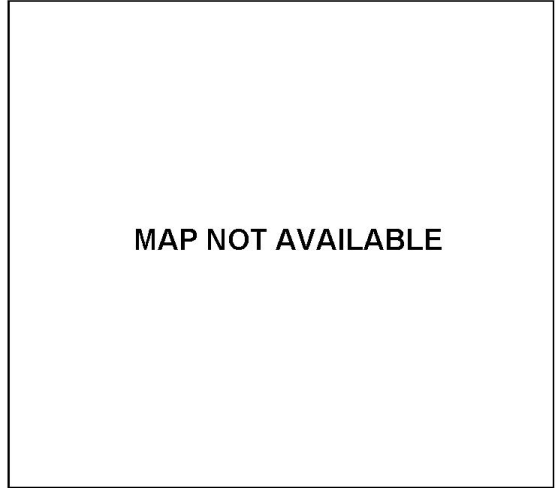
| | |
|------------------------------|---------|
| Date First in Program | FY 11 |
| Date First Approved | FY 11 |
| Initial Cost Estimate | |
| Cost Estimate Last FY | 485,696 |
| Present Cost Estimate | 518,952 |
| Approved Request Last FY | 58,139 |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 61,681 |

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. WSSC Water Green Bonds issued in December 2019 will be utilized to fund a portion of this project. The annual replacement of large diameter water mains will address the following International Capital Market Association (ICMA) Green Bond Principles 2016 category: Sustainable water management.

COORDINATION

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

Coordinating Projects: W - 000001.00 - Water Reconstruction Program; W - 000107.00 - Specialty Valve Vault Rehabilitation Program

Patuxent Raw Water Pipeline

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

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|---------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 3,593 | 3,243 | 50 | 300 | 150 | 100 | 50 | | | | |
| Land | 306 | 306 | | | | | | | | | |
| Construction | 28,514 | 10,162 | 4,187 | 14,165 | 8,500 | 3,090 | 2,575 | | | | |
| Other | 1,871 | | 424 | 1,447 | 865 | 319 | 263 | | | | |
| Total | 34,284 | 13,711 | 4,661 | 15,912 | 9,515 | 3,509 | 2,888 | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|--------|--------|-------|--------|-------|-------|-------|--|--|--|--|
| WSSC Bonds | 34,284 | 13,711 | 4,661 | 15,912 | 9,515 | 3,509 | 2,888 | | | | |
|------------|--------|--------|-------|--------|-------|-------|-------|--|--|--|--|

D. Description & Justification

| |
|---|
| <p>DESCRIPTION</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>JUSTIFICATION</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>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</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>COORDINATION</p> <p>Coordinating Agencies: Baltimore Gas & 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 & Planning Commission; Montgomery County Government; Prince George's County Government</p> <p>Coordinating Projects: W - 000172.08 - Rocky Gorge Pump Station Upgrade</p> |
|---|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|---------|--------------|
| Staff & Other | | |
| Maintenance | \$387 | 25 |
| Debt Service | \$2,230 | 25 |
| Total Cost | \$2,617 | 25 |
| Impact on Water and Sewer Rate | \$0.05 | 25 |

F. Approval and Expenditure Data (000's)

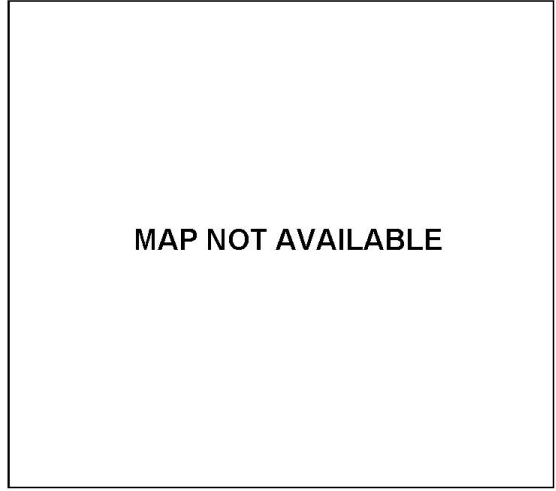
| | |
|------------------------------|--------|
| Date First in Program | FY 06 |
| Date First Approved | FY 03 |
| Initial Cost Estimate | 18,750 |
| Cost Estimate Last FY | 30,901 |
| Present Cost Estimate | 34,284 |
| Approved Request Last FY | 9,570 |
| Total Expense & Encumbrances | 13,711 |
| Approval Request Year 1 | 9,515 |

G. Status Information

| | |
|---------------------------|---------------|
| Land Status | Land Acquired |
| Project Phase | Design |
| Percent Complete | 100 % |
| Estimated Completion Date | July 2023 |

| | |
|--------------------------|------|
| Growth | |
| System Improvement | 100% |
| Environmental Regulation | |
| Population Served | |
| Capacity | |

H. Map



Regional Water Supply Resiliency

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

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

| | |
|-----------------|----------------------|
| Pressure Zones | |
| Drainage Basins | |
| Planning Areas | Montgomery County PA |

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 15,450 | | 1,545 | 13,905 | 4,120 | 4,120 | 4,120 | 1,545 | | | |
| Land | | | | | | | | | | | |
| Construction | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| Total | 15,450 | | 1,545 | 13,905 | 4,120 | 4,120 | 4,120 | 1,545 | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|-------------|--------|--|-------|--------|-------|-------|-------|-------|--|--|--|
| Federal Aid | 15,450 | | 1,545 | 13,905 | 4,120 | 4,120 | 4,120 | 1,545 | | | |
|-------------|--------|--|-------|--------|-------|-------|-------|-------|--|--|--|

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. A value engineering planning evaluation for the proposed project was conducted by the USACE in 2020.

COST CHANGE

Not applicable.

OTHER

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

COORDINATION

Coordinating Agencies: Federal and State Grant Agencies; Interstate Commission on the Potomac River Basin; Local Community Civic Associations; Maryland Department of the Environment; Maryland-National Capital Park & Planning Commission; Montgomery County Department of Environmental Protection; Montgomery County Government; National Park Service; Prince George's County Government; Prince George's County Department of Permitting Inspection and Enforcement
 Coordinating Projects: Not Applicable

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

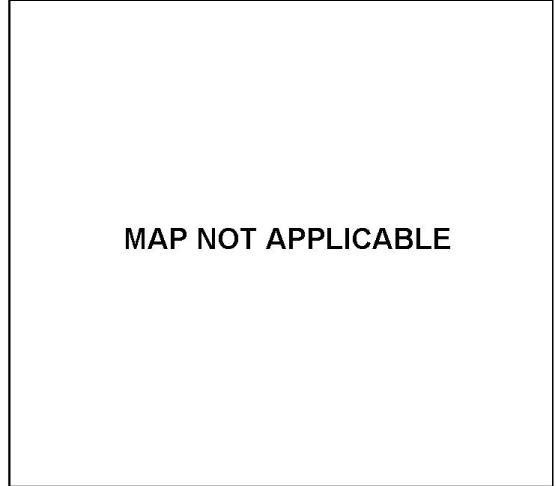
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|--------|
| Date First in Program | FY 21 |
| Date First Approved | FY 21 |
| Initial Cost Estimate | 15,000 |
| Cost Estimate Last FY | 15,000 |
| Present Cost Estimate | 15,450 |
| Approved Request Last FY | 1,500 |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 4,120 |

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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | | | | | | | | | | | |
| Land | 11,443 | | 4,300 | 6,543 | 1,100 | 1,095 | 1,093 | 1,085 | 1,085 | 1,085 | 600 |
| Construction | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| Total | 11,443 | | 4,300 | 6,543 | 1,100 | 1,095 | 1,093 | 1,085 | 1,085 | 1,085 | 600 |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|--------|--|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| WSSC Bonds | 11,409 | | 4,266 | 6,543 | 1,100 | 1,095 | 1,093 | 1,085 | 1,085 | 1,085 | 600 |
| SDC | 34 | | 34 | | | | | | | | |

D. Description & Justification

DESCRIPTION
 This project provides a consolidated estimate of funding for the acquisition of land and rights-of-way for water projects and programs, 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.

JUSTIFICATION
 Consolidation of expenditures for land and rights-of-way acquisitions provides flexibility in expending funds in a specific fiscal year and permits WSSC Water 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 WSSC Water an equitable negotiation position by avoiding project-specific cost displays prior to contacting property owners.

Acquisition needs are determined by WSSC Water 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).

COST CHANGE
 Program costs were increased to reflect annual allocation for acquisition of land and easements for watershed protection.

OTHER
 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.

COORDINATION
 Coordinating Agencies: Not Applicable
 Coordinating Projects: Not Applicable

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|-------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$742 | |
| Total Cost | \$742 | |
| 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 | 3,093 |
| Present Cost Estimate | 11,443 |
| Approved Request Last FY | 1,512 |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 1,100 |

| 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 | |
| System Improvement | 30% |
| Environmental Regulation | 70% |
| Population Served | |
| Capacity | |

H. Map

MAP NOT AVAILABLE

PENDING CLOSE-OUT PROJECT LISTING
BI-COUNTY WATER PROJECTS
 (ALL FIGURES IN THOUSANDS)

| Project Number | Agency Number | Project Name | Estimated Total Cost | Expenditures Thru FY'20 | Estimated Expenditures FY'21 | Remarks |
|-----------------------|----------------------|----------------------------------|-----------------------------|--------------------------------|-------------------------------------|---------------------------------------|
| 073802 | W-139.02 | Duckett & Brighton Dam Upgrades | \$41,380 | \$41,380 | \$0 | Project completed. |
| 063805 | W-172.08 | Rocky Gorge Pump Station Upgrade | 25,722 | 25,132 | 590 | Project completion expected in FY'21. |
| | | TOTALS | \$67,102 | \$66,512 | \$590 | |

Section 4 - Bi-County Sewer Projects

FINANCIAL SUMMARY
(ALL FIGURES IN THOUSANDS)

BI-COUNTY SEWER PROJECTS

| AGENCY NUMBER | PROJECT NAME | EST. TOTAL COST | EXPEND THRU 20 | EST. EXPEND 21 | TOTAL SIX YEARS | EXPENDITURE SCHEDULE | | | | | | BEYOND SIX YEARS | PAGE NUM |
|---------------|--|-----------------|----------------|----------------|-----------------|----------------------|---------|---------|---------|---------|---------|------------------|----------|
| | | | | | | YR 1 22 | YR 2 23 | YR 3 24 | YR 4 25 | YR 5 26 | YR 6 27 | | |
| S-22.06 | Blue Plains WWTP: Liquid Train Projects, Part 2 | 261,738 | 0 | 23,432 | 149,033 | 18,847 | 23,194 | 21,994 | 16,222 | 31,506 | 37,270 | 89,273 | 4-4 |
| S-22.07 | Blue Plains WWTP: Biosolids Management, Part 2 | 76,311 | 0 | 11,347 | 54,161 | 15,321 | 12,407 | 10,486 | 7,297 | 5,860 | 2,790 | 10,803 | 4-5 |
| S-22.09 | Blue Plains WWTP: Plant-wide Projects | 100,521 | 0 | 10,811 | 71,416 | 9,891 | 13,844 | 17,706 | 10,202 | 8,266 | 11,507 | 18,294 | 4-6 |
| S-22.10 | Blue Plains WWTP: Enhanced Nutrient Removal | 429,852 | 420,224 | 294 | 3,072 | 116 | 929 | 1,006 | 0 | 0 | 1,021 | 6,262 | 4-7 |
| S-22.11 | Blue Plains: Pipelines & Appurtenances | 176,853 | 0 | 13,622 | 114,436 | 10,460 | 9,934 | 11,961 | 31,053 | 28,984 | 22,044 | 48,795 | 4-8 |
| S-89.24 | Anacostia #2 WWPS Upgrades | 31,298 | 79 | 7,858 | 23,361 | 10,927 | 8,703 | 3,731 | 0 | 0 | 0 | 0 | 4-9 |
| S-103.02 | Piscataway Bioenergy | 327,208 | 58,898 | 45,708 | 222,602 | 97,864 | 89,948 | 28,808 | 5,982 | 0 | 0 | 0 | 4-10 |
| S-170.08 | Septage Discharge Facility Planning & Implementation | 40,048 | 4,851 | 220 | 34,977 | 12,461 | 12,461 | 2,769 | 3,643 | 3,643 | 0 | 0 | 4-12 |
| S-170.09 | Trunk Sewer Reconstruction Program | 348,442 | 0 | 36,091 | 312,351 | 58,565 | 71,911 | 51,167 | 41,438 | 42,681 | 46,589 | 0 | 4-13 |
| S-203.00 | Land & Rights-Of-Way Acquisition - Bi-County Sewer | 1,928 | 0 | 458 | 1,470 | 495 | 195 | 195 | 195 | 195 | 195 | 0 | 4-14 |
| TOTALS | | 1,794,199 | 484,052 | 149,841 | 986,879 | 234,947 | 243,526 | 149,823 | 116,032 | 121,135 | 121,416 | 173,427 | |

NEW PROJECT LISTING
BI-COUNTY SEWER PROJECTS
 (ALL FIGURES IN THOUSANDS)

| Agency Number | Project Name | Total Project Cost | Budget Year Cost | Page Number |
|----------------------|----------------------------|---------------------------|-------------------------|--------------------|
| S-89.24 | Anacostia #2 WWPS Upgrades | \$31,298 | \$10,927 | 4-9 |
| | TOTALS | \$31,298 | \$10,927 | |

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

| AGENCY NUMBER | PROJECT NAME | ADOPTED FY21 TOTAL COST | PROPOSED FY22 TOTAL COST | CHANGE \$ | CHANGE % | SIX-YEAR COST | COMPLETION DATE (est) |
|---------------|---|-------------------------|--------------------------|-------------------|--------------|------------------|-----------------------|
| S-22.06 | Blue Plains WWTP: Liquid Train Projects, Part 2 | \$310,880 | \$261,738 | (\$49,142) | -15.8% | \$149,033 | On-Going |
| S-22.07 | Blue Plains WWTP: Biosolids Management, Part 2 | 75,220 | 76,311 | 1,091 | 1.5% | 54,161 | On-Going |
| S-22.09 | Blue Plains WWTP: Plant-wide Projects | 111,706 | 100,521 | (11,185) | -10.0% | 71,416 | On-Going |
| S-22.10 | Blue Plains WWTP: Enhanced Nutrient Removal | 440,738 | 429,852 | (10,886) | -2.5% | 21,469 | Jul-26 |
| S-22.11 | Blue Plains: Pipelines & Appurtenances | 172,974 | 176,853 | 3,879 | 2.2% | 114,436 | On-Going |
| | TOTALS | \$1,111,518 | \$1,045,275 | (\$66,243) | -6.0% | \$410,515 | |

Summary: These five projects, with an estimated total cost of \$1.0 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 Water projects encompass planning, design, construction, and start-up for a single project, with defined starting and ending dates, the Blue Plains projects are comprised of many sub-projects and are “open-ended.” As the Blue Plains Facility Plans move forward and new sub-projects are approved, the costs of these new sub-projects are added to the appropriate existing Blue Plains project. The expenditures displayed represent WSSC Water’s calculated share. There are four main funding divisions: liquid treatment train (S-22.06); biosolids management (S-22.07); plant-wide projects (S-22.09); and, pipelines & appurtenances (S-22.11). 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 19% of the Six-Year WSSC Water CIP program. The figures shown above are derived from the latest available spending projections provided by the District of Columbia Water and Sewer Authority (DCWASA). Spending at the DCWASA staff-proposed rate in future years may challenge WSSC Water’s ability to stay within County-established spending affordability limits. It is, therefore, recommended that the coordination of development and approval of the DCWASA’s and WSSC Water’s CIPs be sustained in order that the economic development and environmental objectives of the region be met, without causing a rapid increase in WSSC Water customers’ bills. 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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|----------------|------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Planning, Design & Supervision | | | | | | | | | | | |
| Land | | | | | | | | | | | |
| Construction | 259,145 | | 23,200 | 147,556 | 18,660 | 22,964 | 21,776 | 16,061 | 31,194 | 36,901 | 88,389 |
| Other | 2,593 | | 232 | 1,477 | 187 | 230 | 218 | 161 | 312 | 369 | 884 |
| Total | 261,738 | | 23,432 | 149,033 | 18,847 | 23,194 | 21,994 | 16,222 | 31,506 | 37,270 | 89,273 |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|-------------------|---------|--|--------|---------|--------|--------|--------|--------|--------|--------|--------|
| WSSC Bonds | 247,370 | | 22,146 | 140,852 | 17,812 | 21,921 | 20,787 | 15,331 | 29,777 | 35,224 | 84,372 |
| City of Rockville | 14,368 | | 1,286 | 8,181 | 1,035 | 1,273 | 1,207 | 891 | 1,729 | 2,046 | 4,901 |

D. Description & Justification

| |
|--|
| <p>DESCRIPTION</p> <p>This project provides funding for WSSC Water's share of Blue Plains liquid train projects for which construction began after June 30, 1993. Current projects include: Filtration/Disinfection Facilities (UC); upgrading influent screening (IZ); upgrading effluent filters (IY); replacing/upgrading the primary clarifier mechanical components (UC); and, improvements to the headworks influent structures (J2).</p> <p>JUSTIFICATION</p> <p>This is a continuation of the DC Water's upgrading of the Blue Plains Wastewater Treatment Plant. The Blue Plains Inter-municipal Agreement of 2012; the DCWASA Master Plan (1998); Blue Plains Facilities Master Plan (2016), and the DC Water Approved FY2021 Capital Improvements Program.</p> <p>COST CHANGE</p> <p>Increased estimates beginning in FY'26 reflect programmed costs for renewal and replacement of major process components expected to have reached the end of their useful life, including mechanical treatment components and some structural rebuilds of tanks and filters.</p> <p>OTHER</p> <p>The project scope has remained the same. Project costs are derived from the DC Water Capital & Operating Budget 10-year forecast of spending and DC Water's latest project management data, and fully reflect DC Water's current cost estimates and expenditure schedules. Given the open-ended nature of the Blue Plains projects, this PDF does not fully reflect the total project costs. These projects are, in fact, expected to continue indefinitely. As new sub-projects are added to the Blue Plains facility plans, the associated costs will be added to this project. The funding schedule also indicates the calculated Rockville share of the cost.</p> <p>COORDINATION</p> <p>Coordinating Agencies: City of Rockville;(responsible for a share of funding); DC Water;(responsible for design and construction) Coordinating Projects: S - 000022.10 - Blue Plains WWTP: Enhanced Nutrient Removal</p> |
|--|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|----------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$16,092 | |
| Total Cost | \$16,092 | |
| Impact on Water and Sewer Rate | \$0.04 | |

F. Approval and Expenditure Data (000's)

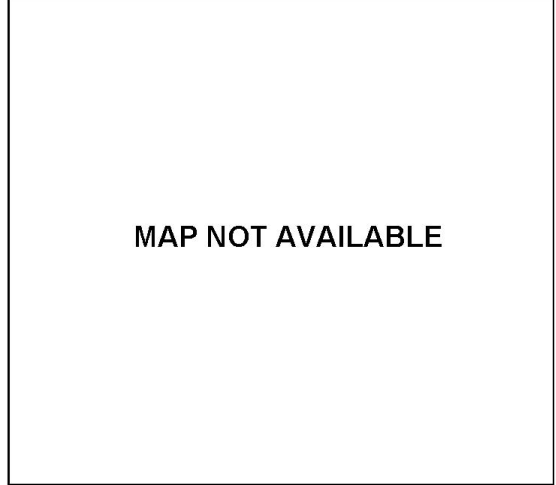
| | |
|------------------------------|---------|
| Date First in Program | FY 95 |
| Date First Approved | FY 95 |
| Initial Cost Estimate | |
| Cost Estimate Last FY | 310,880 |
| Present Cost Estimate | 261,738 |
| Approved Request Last FY | 23,432 |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 18,847 |

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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|------------|----------------|---------------|---------------|---------------|---------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | | | | | | | | | | | |
| Land | | | | | | | | | | | |
| Construction | 75,554 | | 11,234 | 53,624 | 15,169 | 12,284 | 10,382 | 7,225 | 5,802 | 2,762 | 10,696 |
| Other | 757 | | 113 | 537 | 152 | 123 | 104 | 72 | 58 | 28 | 107 |
| Total | 76,311 | | 11,347 | 54,161 | 15,321 | 12,407 | 10,486 | 7,297 | 5,860 | 2,790 | 10,803 |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|-------------------|--------|--|--------|--------|--------|--------|-------|-------|-------|-------|--------|
| WSSC Bonds | 72,122 | | 10,724 | 51,188 | 14,480 | 11,726 | 9,910 | 6,896 | 5,539 | 2,637 | 10,210 |
| City of Rockville | 4,189 | | 623 | 2,973 | 841 | 681 | 576 | 401 | 321 | 153 | 593 |

D. Description & Justification

| |
|---|
| <p>DESCRIPTION</p> <p>This project provides funding for WSSC Water's share of the Blue Plains bio-solids handling projects for which construction began after June 30, 1993. Current projects include: Gravity Thickener Facility upgrades (BX); Bio-solids Blending Development Center (I3); Solids Processing Building/De-watered Sludge Loading Facility (XZ); and, planned rehabilitation of solids processing equipment and facilities (RM).</p> <p>JUSTIFICATION</p> <p>This project is needed to implement a set of facilities which will provide a permanent bio-solids management program for Blue Plains. The Blue Plains Inter-municipal Agreement of 2012; the DCWASA Master Plan (1998); EPMC IV Facility Plan, CH2MHILL (2001); the Bio-solids Management at DCWASA Blue Plains Wastewater Treatment Plant Phase II - Design and Cost Considerations for Treatment Alternatives Report (December 2007); Blue Plains Facilities Master Plan (2016); and the DC Water Approved FY2021 Capital Improvement Program.</p> <p>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</p> <p>The project scope has remained the same. Project costs are derived from the DC Water Capital & Operating Budget 10-year forecast of spending and DC Water's latest project management data, and fully reflect DC Water's current cost estimates and expenditure schedules. Given the open-ended nature of the Blue Plains projects, this PDF does not fully reflect the total project costs. These projects are, in fact, expected to continue indefinitely. As new sub-projects are added to the Blue Plains facility plans, the associated costs will be added to this project. Portions of the program have been financed by low interest loans through the Maryland Department of the Environment's Water Quality Administration State Revolving Loan Program. The funding schedule also indicates the calculated Rockville share of the cost.</p> <p>COORDINATION</p> <p>Coordinating Agencies: City of Rockville;(responsible for a share of funding); DC Water;(responsible for design and construction) Coordinating Projects: Not Applicable</p> |
|---|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|---------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$4,692 | |
| Total Cost | \$4,692 | |
| Impact on Water and Sewer Rate | \$0.01 | |

F. Approval and Expenditure Data (000's)

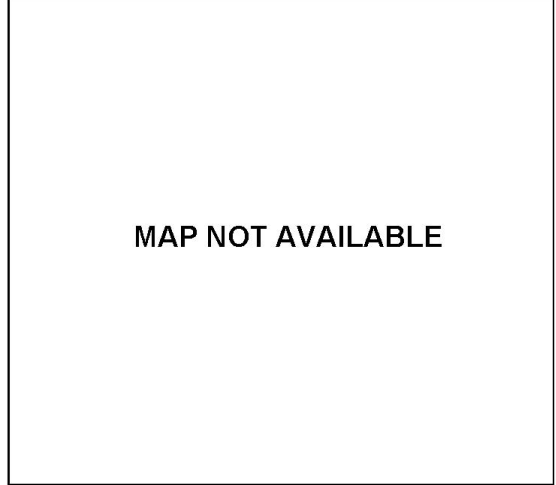
| | |
|------------------------------|--------|
| Date First in Program | FY 95 |
| Date First Approved | FY 95 |
| Initial Cost Estimate | |
| Cost Estimate Last FY | 75,220 |
| Present Cost Estimate | 76,311 |
| Approved Request Last FY | 11,347 |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 15,321 |

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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|----------------|------------|----------------|---------------|--------------|---------------|---------------|---------------|--------------|---------------|----------------|
| Planning, Design & Supervision | | | | | | | | | | | |
| Land | | | | | | | | | | | |
| Construction | 99,526 | | 10,704 | 70,709 | 9,793 | 13,707 | 17,531 | 10,101 | 8,184 | 11,393 | 18,113 |
| Other | 995 | | 107 | 707 | 98 | 137 | 175 | 101 | 82 | 114 | 181 |
| Total | 100,521 | | 10,811 | 71,416 | 9,891 | 13,844 | 17,706 | 10,202 | 8,266 | 11,507 | 18,294 |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|-------------------|--------|--|--------|--------|-------|--------|--------|-------|-------|--------|--------|
| WSSC Bonds | 95,003 | | 10,218 | 67,495 | 9,348 | 13,084 | 16,734 | 9,642 | 7,812 | 10,875 | 17,290 |
| City of Rockville | 5,518 | | 593 | 3,921 | 543 | 760 | 972 | 560 | 454 | 632 | 1,004 |

D. Description & Justification

| |
|--|
| <p>DESCRIPTION</p> <p>This project provides funding for WSSC Water's share of Blue Plains plant-wide projects for which construction began after June 30, 1993. Current projects include: Electrical system upgrades (TZ); Floodwall construction (JF); Plant-side Drainage Improvements (OE); Process Computer Control system (IV and LX); and, Miscellaneous projects.</p> <p>JUSTIFICATION</p> <p>This is a continuation of DC Water's upgrading of the Blue Plains Wastewater Treatment Plant. The Blue Plains Inter-municipal Agreement of 2012; the DCWASA Master Plan (1998); Blue Plains Facilities Master Plan (2016), and the DC Water Approved FY2021 Capital Improvement Program.</p> <p>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</p> <p>The project scope has remained the same. Project costs are derived from the DC Water Capital & Operating Budget 10-year forecast and latest project management data, and reflect DC Water's current expenditure estimates and schedules. Given the open-ended nature of the project, this PDF does not fully reflect the total project costs. These projects are, in fact, expected to continue indefinitely. As new sub-projects are added to the Blue Plains facility plans, the associated costs will be added to this project. The funding schedule also indicates the calculated Rockville share of the cost.</p> <p>COORDINATION</p> <p>Coordinating Agencies: City of Rockville;(responsible for a share of funding); DC Water;(responsible for design and construction) Coordinating Projects: Not Applicable</p> |
|--|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|---------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$6,180 | |
| Total Cost | \$6,180 | |
| Impact on Water and Sewer Rate | \$0.02 | |

F. Approval and Expenditure Data (000's)

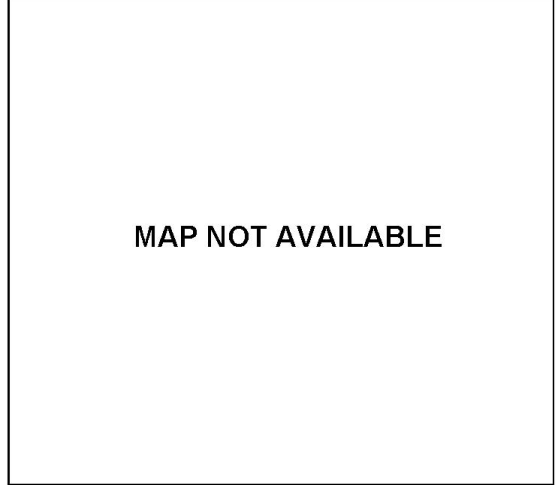
| | |
|------------------------------|---------|
| Date First in Program | FY 95 |
| Date First Approved | FY 02 |
| Initial Cost Estimate | |
| Cost Estimate Last FY | 111,706 |
| Present Cost Estimate | 100,521 |
| Approved Request Last FY | 10,811 |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 9,891 |

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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|----------------|----------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | | | | | | | | | | | |
| Land | | | | | | | | | | | |
| Construction | 429,757 | 420,224 | 291 | 3,042 | 115 | 920 | 996 | | | 1,011 | 6,200 |
| Other | 95 | | 3 | 30 | 1 | 9 | 10 | | | 10 | 62 |
| Total | 429,852 | 420,224 | 294 | 3,072 | 116 | 929 | 1,006 | | | 1,021 | 6,262 |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|-------------------|---------|---------|-----|-------|-----|-----|-----|--|--|-----|-------|
| WSSC Bonds | 179,108 | 170,008 | 278 | 2,904 | 110 | 878 | 951 | | | 965 | 5,918 |
| State Aid | 242,480 | 242,480 | | | | | | | | | |
| City of Rockville | 8,264 | 7,736 | 16 | 168 | 6 | 51 | 55 | | | 56 | 344 |

D. Description & Justification

DESCRIPTION

This project provides funding for WSSC Water'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 2010 Bay TMDL and DC Water's 2010 NPDES permit. Major projects to achieve enhanced nutrient removal are substantially completed and operational. Additional projects are required to ensure NPDES permit compliance, as flows and influent load 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); DC Water Approved FY2021 Capital Improvement Program; and the Blue Plains Inter-municipal 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 DC Water Capital & Operating Budget 10-year forecast and latest project management data, and reflect DC Water's current expenditure estimates and schedules. Total Nitrogen Secondary Treatment Upgrades are scheduled to be initiated in FY'28 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); DC Water;(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 | \$11,651 | 28 |
| Total Cost | \$11,651 | 28 |
| Impact on Water and Sewer Rate | \$0.03 | 28 |

F. Approval and Expenditure Data (000's)

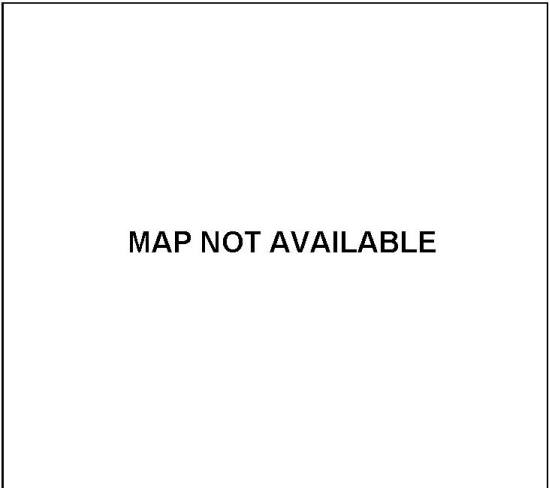
| | |
|------------------------------|---------|
| Date First in Program | FY 08 |
| Date First Approved | FY 07 |
| Initial Cost Estimate | 648 |
| Cost Estimate Last FY | 440,739 |
| Present Cost Estimate | 429,852 |
| Approved Request Last FY | 294 |
| Total Expense & Encumbrances | 420,224 |
| Approval Request Year 1 | 116 |

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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|----------------|------------|----------------|----------------|---------------|--------------|---------------|---------------|---------------|---------------|----------------|
| Planning, Design & Supervision | | | | | | | | | | | |
| Land | | | | | | | | | | | |
| Construction | 175,101 | | 13,487 | 113,302 | 10,356 | 9,836 | 11,842 | 30,745 | 28,697 | 21,826 | 48,312 |
| Other | 1,752 | | 135 | 1,134 | 104 | 98 | 119 | 308 | 287 | 218 | 483 |
| Total | 176,853 | | 13,622 | 114,436 | 10,460 | 9,934 | 11,961 | 31,053 | 28,984 | 22,044 | 48,795 |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|-------------------|---------|--|--------|---------|-------|-------|--------|--------|--------|--------|--------|
| WSSC Bonds | 162,913 | | 12,465 | 105,532 | 9,542 | 9,053 | 10,885 | 29,008 | 26,859 | 20,185 | 44,916 |
| City of Rockville | 13,940 | | 1,157 | 8,904 | 918 | 881 | 1,076 | 2,045 | 2,125 | 1,859 | 3,879 |

D. Description & Justification

| |
|--|
| <p>DESCRIPTION</p> <p>This project provides funding for WSSC Water's share of Blue Plains-associated projects which are generally situated "outside the fence" of the treatment plant. Current projects include: Potomac Interceptor Rehabilitation (LZ); Potomac Sewage Pumping Station Rehabilitation (MJ14); Main Sewage Pumping Station intermediate repairs (MJ21); Renovations to the Central Maintenance Facility (HK); Influent Sewers Rehabilitation (HS); and, projects associated with the Combined Sewer Overflow (CSO) Long Term Control Plan under the DC Clean Rivers Program - Anacostia and Potomac Tunnels (CY and CZ).</p> <p>JUSTIFICATION</p> <p>This is a continuation of DC Water's upgrading of the Blue Plains-associated projects outside the fence. The Blue Plains Inter-municipal Agreement of 2012; the DCWASA Master Plan (1998); Technical Memorandum No. 1, Multi-Jurisdictional Use Facilities Capital Cost Allocation, (June 2013); and the DC Water Approved FY2021 Capital Improvement Program.</p> <p>COST CHANGE</p> <p>Increased estimates beginning in FY'25 are attributed to continued major construction to repair and rehabilitate portions of the Potomac Interceptor (LZ) and the Anacostia FM (PJ) as well as active construction of the LTCP Potomac Tunnel (CZ).</p> <p>OTHER</p> <p>The project scope has remained the same. Project costs are derived from the DC Water Capital & Operating Budget 10-year forecast and project management data, and reflect DC Water's expenditure estimates and schedules. Given the open-ended nature of the project, this PDF does not fully reflect the total project costs. These projects are, in fact, expected to continue indefinitely. As new sub-projects are added to the Blue Plains facility plans, the associated costs will be added to this project. The funding schedule also indicates the calculated Rockville share of the cost which varies by project based on the City's relative share of WSSC Water's flow as derived in the Multi-jurisdiction Use Facilities Study.</p> <p>COORDINATION</p> <p>Coordinating Agencies: City of Rockville;(responsible for a share of funding); DC Water;(responsible for design and construction) Coordinating Projects: Not Applicable</p> |
|--|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|---------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$9,175 | |
| Total Cost | \$9,175 | |
| Impact on Water and Sewer Rate | \$0.02 | |

F. Approval and Expenditure Data (000's)

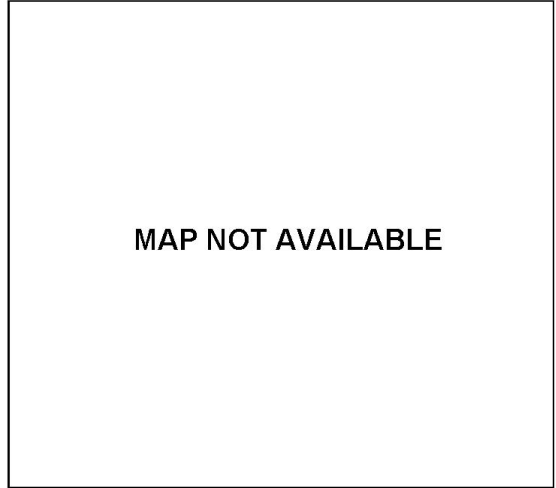
| | |
|------------------------------|---------|
| Date First in Program | FY 11 |
| Date First Approved | FY 02 |
| Initial Cost Estimate | |
| Cost Estimate Last FY | 172,974 |
| Present Cost Estimate | 176,853 |
| Approved Request Last FY | 13,622 |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 10,460 |

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



Anacostia #2 WWPS Upgrades

| A. Identification and Coding Information | | |
|--|----------------|-------------|
| Agency Number | Project Number | Update Code |
| S - 000089.24 | | Add |

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

| | |
|-----------------|---------------------------|
| Pressure Zones | |
| Drainage Basins | Lower Anacostia 9 |
| Planning Areas | Landover & Vicinity PA 72 |

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|------------|----------------|---------------|---------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 4,187 | 79 | 1,144 | 2,964 | 1,934 | 720 | 310 | | | | |
| Land | | | | | | | | | | | |
| Construction | 24,274 | | 6,000 | 18,274 | 8,000 | 7,192 | 3,082 | | | | |
| Other | 2,837 | | 714 | 2,123 | 993 | 791 | 339 | | | | |
| Total | 31,298 | 79 | 7,858 | 23,361 | 10,927 | 8,703 | 3,731 | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|--------|----|-------|--------|-------|-------|-------|--|--|--|--|
| WSSC Bonds | 24,412 | 62 | 6,129 | 18,221 | 8,523 | 6,788 | 2,910 | | | | |
| SDC | 6,886 | 17 | 1,729 | 5,140 | 2,404 | 1,915 | 821 | | | | |

D. Description & Justification

| |
|---|
| <p>DESCRIPTION</p> <p>This project provides for the replacement of transformers, switch gear, and MCC-A with redesign of 13.8kv switch gear in two IPA enclosures and 4.16KV switch gear in one IPA enclosure at the Anacostia II Wastewater Pump Station (WWPS). The Anacostia II WWPS is WSSC Water's largest and most critical WWPS with an average flow of 50 to 60 MGD, and storm peaks up to 260 MGD instantaneous flow. This WWPS receives wastewater from a large portion of WSSC Water's service area and delivers it to the Blue Plains Advanced Wastewater Treatment Plant in Washington, DC. Secondly, this project involves replacement of five existing bar screens and associated electrical upgrades and implementing NFPA 820 requirements for the pump station. Thirdly, the coarse screening of Beaver Dam S.A. Flows will be evaluated and rehabilitated.</p> <p>JUSTIFICATION</p> <p>The majority of the electrical equipment, excluding all 4.16kV MCCs and the unit substation, were installed with the original construction in the late 1970s and is beyond its useful life. In addition, several equipment parts are becoming increasingly difficult to find since the equipment is obsolete. Failure of any of the above critical components could cause serious issues in providing reliable power to the pump station. This replacement, rehabilitation, and upgrade work was recommended by various business case evaluations undertaken as part of WSSC Water's Asset Management Program.</p> <p>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</p> <p>The present project scope was developed for the FY2022 CIP and has an estimated cost of \$31,298,000. The schedule and expenditure projections shown in Block B above are planning level estimates and may change based upon site conditions and design constraints. Preliminary planning work for the pump station began in FY'19 under ESP project S-637.37, Anacostia No. 2 WWPS Electrical Upgrades.</p> <p>COORDINATION</p> <p>Coordinating Agencies: Maryland Department of the Environment; Potomac Electric Power Company Coordinating Projects: Not Applicable</p> |
|---|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|---------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$1,588 | |
| Total Cost | \$1,588 | |
| Impact on Water and Sewer Rate | | |

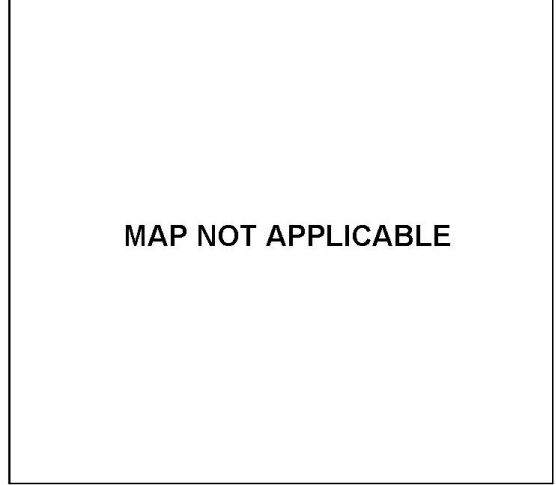
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|--------|
| Date First in Program | FY 20 |
| Date First Approved | FY 20 |
| Initial Cost Estimate | 31,298 |
| Cost Estimate Last FY | |
| Present Cost Estimate | 31,298 |
| Approved Request Last FY | |
| Total Expense & Encumbrances | 79 |
| Approval Request Year 1 | 10,927 |

G. Status Information

| | |
|---------------------------|--------------------------|
| Land Status | Public/Agency owned land |
| Project Phase | Design |
| Percent Complete | 0 % |
| Estimated Completion Date | TBD |
| Growth | 22% |
| System Improvement | 78% |
| Environmental Regulation | |
| 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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|----------------|---------------|----------------|----------------|---------------|---------------|---------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 62,281 | 38,869 | 4,950 | 18,462 | 7,100 | 7,000 | 3,700 | 662 | | | |
| Land | 61 | 61 | | | | | | | | | |
| Construction | 254,558 | 19,968 | 39,000 | 195,590 | 87,000 | 79,500 | 24,000 | 5,090 | | | |
| Other | 10,308 | | 1,758 | 8,550 | 3,764 | 3,448 | 1,108 | 230 | | | |
| Total | 327,208 | 58,898 | 45,708 | 222,602 | 97,864 | 89,948 | 28,808 | 5,982 | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|-------------|---------|--------|--------|---------|--------|--------|--------|-------|--|--|--|
| WSSC Bonds | 323,287 | 58,328 | 45,708 | 219,251 | 97,513 | 88,448 | 27,308 | 5,982 | | | |
| Federal Aid | 570 | 570 | | | | | | | | | |
| State Aid | 3,351 | | | 3,351 | 351 | 1,500 | 1,500 | | | | |

D. Description & Justification

DESCRIPTION

This project will develop a comprehensive program for the engineering, design, construction, maintenance, 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 Water sites. The scope of work includes, but is not limited to, the addition of anaerobic digestion equipment; thermal hydrolysis pretreatment equipment; gas cleaning, storage, and upgrade systems; tanks; piping; valves; pumps; biosolids pre- and post dewatering; cake receiving and blending; cake storage; effluent disinfection systems; instrumentation; flow metering; power measurement; and combined heat and power generation systems.

JUSTIFICATION

In March 2009, WSSC Water received approval for a federal Department of Energy grant of \$570,900 for the feasibility study/conceptual design phase. On June 16, 2010, WSSC Water was 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 WSSC Water in April 2012.

The EPA is urging wastewater utilities to utilize this commercially available technology (anaerobic digestion) to produce power at a cost below retail electricity, displace purchased fuels for thermal needs, produce renewable fuel for green power programs, enhance power reliability for the wastewater treatment plant to prevent sanitary sewer overflows, reduce biosolids production and improve the health of the Chesapeake Bay, and 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; and produce pathogen-free Class A Biosolids.

The economic benefits are estimated as follows: recover more than \$1.5 million of renewable energy costs/year; reduce biosolids disposal costs by ~ \$1.7 million/year; reduce chemical costs by ~ \$500,000/year; hedge against rising costs of power fuel and chemicals; and provide a net payback over time.

Plans & Studies: Appel Consultants, Urban Waste Grease Resource Assessment-NREL (November 1998); Environmental Protection Agency (EPA), Opportunities For and Benefits Of Combined Heat and Power at Wastewater Treatment Facilities (December 2006); Brown & Caldwell, Anaerobic Digestion 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 | \$21,030 | 26 |
| Total Cost | \$21,030 | 26 |
| Impact on Water and Sewer Rate | \$0.04 | 26 |

F. Approval and Expenditure Data (000's)

| | |
|------------------------------|---------|
| Date First in Program | FY 15 |
| Date First Approved | FY 10 |
| Initial Cost Estimate | 345 |
| Cost Estimate Last FY | 281,208 |
| Present Cost Estimate | 327,208 |
| Approved Request Last FY | 61,320 |
| Total Expense & Encumbrances | 58,898 |
| Approval Request Year 1 | 97,864 |

G. Status Information

| | |
|---------------------------|--------------------------|
| Land Status | Public/Agency owned land |
| Project Phase | Construction |
| Percent Complete | 5 % |
| Estimated Completion Date | August 2024 |
| Growth | |
| System Improvement | 100% |
| Environmental Regulation | |
| Population Served | |
| Capacity | |

H. Map

MAP NOT AVAILABLE

(March 2017).

COST CHANGE

Cost increased based upon receipt of construction market competitive bid prices on 60% design documents which 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. WSSC Water has a defined scope and estimated capital cost, and is able to proceed with the detailed design and construction of the anaerobic digestion, biomass, and combined heat and power generation system facilities for treating all biosolids from WSSC Water's Damascus, Seneca, Parkway, Western Branch, and Piscataway WRRFs. The Montgomery and Prince George's County Councils were briefed and approved the project by resolution on November 25, 2014, and September 9, 2014, respectively. In June 2017 WSSC Water was approved for a \$3 million grant through the Maryland Department of the Environment's Energy Water Infrastructure Program (EWIP). WSSC Water will continue to apply for other available funding sources. WSSC Water retained the following consulting services: in 2015 - Hawkins, Delafield and Wood - procurement; Raftelis Financial Consultants - financial; in 2016 - HDR Inc for program management and construction management for the 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 WSSC Water awarded a Progressive Design-Build Contract to PC Construction for the Bioenergy Project. In FY 2019 incorporated project for Solids Screenings at Four Remote WRRFs, Contract No. CD6630A19. In January 2020, the Maryland Energy Administration notified WSSC Water of approval grant funding up to \$351,750 for Combined Heat & Power. WSSC Water has also applied for grants from SMECO, a local power utility.

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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|--------------|----------------|---------------|---------------|---------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 4,835 | 2,939 | 200 | 1,696 | 561 | 561 | 124 | 225 | 225 | | |
| Land | | | | | | | | | | | |
| Construction | 32,013 | 1,912 | | 30,101 | 10,767 | 10,767 | 2,393 | 3,087 | 3,087 | | |
| Other | 3,200 | | 20 | 3,180 | 1,133 | 1,133 | 252 | 331 | 331 | | |
| Total | 40,048 | 4,851 | 220 | 34,977 | 12,461 | 12,461 | 2,769 | 3,643 | 3,643 | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|--------|-------|-----|--------|--------|--------|-------|-------|-------|--|--|
| WSSC Bonds | 40,048 | 4,851 | 220 | 34,977 | 12,461 | 12,461 | 2,769 | 3,643 | 3,643 | | |
|------------|--------|-------|-----|--------|--------|--------|-------|-------|-------|--|--|

D. Description & Justification

| |
|--|
| <p>DESCRIPTION</p> <p>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.</p> <p>JUSTIFICATION</p> <p>Currently septage waste is collected at three locations: Muddy Branch Road Disposal Site in Montgomery County, and Ritchie Road Disposal Site and Bladensburg Disposal Site in Prince George's County (the Temple Hills Road site was closed down on July 1, 2015). The types of waste collected are as follows: Septic Tank Pump-Out (Sludge), Waste Holding Tank Discharge (Gray Water); Grease Trap Pump Out (FOG), Bus Holding Tank Discharge (Sewage and Chemicals), and Small Food Service Providers (Low Volume FOG Waste). FOG wastes should not be discharged to WSSC Water's sewerage system without treatment.</p> <p>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).</p> <p>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</p> <p>The project scope has remained the same. The design of the Rock Creek, Anacostia and Piscataway sites are complete. The construction of these facilities is currently on hold due to budget constraints. The Piscataway site will be coordinated with the construction schedule of other Piscataway facility projects. The expenditures and schedule projections shown in Block B are estimates and may change based upon actual bids.</p> <p>COORDINATION</p> <p>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</p> <p>Coordinating Projects: S - 000096.14 - Piscataway WRRF Facility Upgrades; S - 000103.02 - Piscataway Bioenergy</p> |
|--|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|---------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$2,605 | 27 |
| Total Cost | \$2,605 | 27 |
| Impact on Water and Sewer Rate | \$0.05 | 27 |

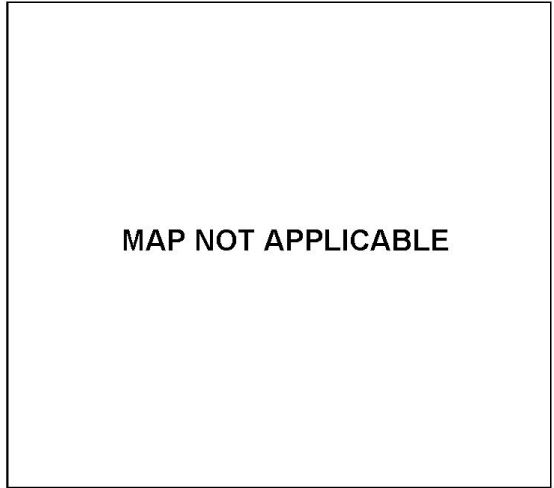
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|--------|
| Date First in Program | FY 10 |
| Date First Approved | FY 10 |
| Initial Cost Estimate | 10,835 |
| Cost Estimate Last FY | 33,581 |
| Present Cost Estimate | 40,048 |
| Approved Request Last FY | 12,461 |
| Total Expense & Encumbrances | 4,851 |
| Approval Request Year 1 | 12,461 |

G. Status Information

| | |
|---------------------------|--------------------------|
| Land Status | Public/Agency owned land |
| Project Phase | Design |
| Percent Complete | 100 % |
| Estimated Completion Date | June 2026 |
| 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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|----------------|------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Planning, Design & Supervision | 48,222 | | 7,660 | 40,562 | 7,014 | 7,291 | 6,358 | 6,438 | 6,631 | 6,830 | |
| Land | | | | | | | | | | | |
| Construction | 268,544 | | 25,150 | 243,394 | 46,227 | 58,084 | 40,157 | 31,233 | 32,170 | 35,523 | |
| Other | 31,676 | | 3,281 | 28,395 | 5,324 | 6,536 | 4,652 | 3,767 | 3,880 | 4,236 | |
| Total | 348,442 | | 36,091 | 312,351 | 58,565 | 71,911 | 51,167 | 41,438 | 42,681 | 46,589 | |

C. Funding Schedule (000's)

| | | | | | | | | | | |
|------------|---------|--|--------|---------|--------|--------|--------|--------|--------|--------|
| WSSC Bonds | 348,442 | | 36,091 | 312,351 | 58,565 | 71,911 | 51,167 | 41,438 | 42,681 | 46,589 |
|------------|---------|--|--------|---------|--------|--------|--------|--------|--------|--------|

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

COST CHANGE
 Program costs reflect the latest 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 Water'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 | \$22,667 | |
| Total Cost | \$22,667 | |
| 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 | 343,507 |
| Present Cost Estimate | 348,442 |
| Approved Request Last FY | 69,491 |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 58,565 |

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

| | |
|--------------------------|------|
| Growth | |
| System Improvement | 100% |
| Environmental Regulation | |
| Population Served | |
| Capacity | |

H. Map

MAP NOT APPLICABLE

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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | | | | | | | | | | | |
| Land | 1,928 | | 458 | 1,470 | 495 | 195 | 195 | 195 | 195 | 195 | |
| Construction | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| Total | 1,928 | | 458 | 1,470 | 495 | 195 | 195 | 195 | 195 | 195 | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|-------|--|-----|-------|-----|-----|-----|-----|-----|-----|--|
| WSSC Bonds | 1,588 | | 319 | 1,269 | 294 | 195 | 195 | 195 | 195 | 195 | |
| SDC | 340 | | 139 | 201 | 201 | | | | | | |

D. Description & Justification

DESCRIPTION
 This project provides a consolidated estimate of funding for the acquisition of land and rights-of-way for sewer projects and programs. 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.

JUSTIFICATION
 Consolidation of expenditures for land and rights-of-way acquisitions provides flexibility in expending funds in a specific fiscal year and permits WSSC Water 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 WSSC Water an equitable negotiation position by avoiding project-specific cost displays prior to contacting property owners.

Acquisition needs are determined by WSSC Water and are based upon facility planning efforts, alignment studies, field surveys, realignments required by other agencies, or requirements identified within the Development Services Process.

COST CHANGE
 Not applicable.

OTHER
 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.

COORDINATION
 Coordinating Agencies: Not Applicable
 Coordinating Projects: Not Applicable

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|-------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$103 | |
| Total Cost | \$103 | |
| 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 | 1,928 |
| Approved Request Last FY | 50 |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 495 |

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 | 18% |
| System Improvement | 82% |
| Environmental Regulation | |
| Population Served | |
| Capacity | |

H. Map

MAP NOT APPLICABLE

Section 5 - Prince George's County Water Projects

FINANCIAL SUMMARY
(ALL FIGURES IN THOUSANDS)

PRINCE GEORGE'S COUNTY WATER PROJECTS

| AGENCY NUMBER | PROJECT NAME | EST. TOTAL COST | EXPEND THRU 20 | EST. EXPEND 21 | TOTAL SIX YEARS | EXPENDITURE SCHEDULE | | | | | | BEYOND SIX YEARS | PAGE NUM | |
|---------------|--|-----------------|----------------|----------------|-----------------|----------------------|---------|---------|---------|---------|---------|------------------|----------|------|
| | | | | | | YR 1 22 | YR 2 23 | YR 3 24 | YR 4 25 | YR 5 26 | YR 6 27 | | | |
| W-12.02 | Prince George's County HG415 Zone Water Main | 3,989 | 574 | 1,139 | 2,276 | 2,267 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 5-2 |
| W-34.02 | Old Branch Avenue Water Main | 21,830 | 2,940 | 5,556 | 13,334 | 5,556 | 5,556 | 2,222 | 0 | 0 | 0 | 0 | 0 | 5-3 |
| W-34.04 | Branch Avenue Water Transmission Improvements | 43,910 | 21,784 | 1,256 | 20,870 | 14,201 | 5,775 | 564 | 330 | 0 | 0 | 0 | 0 | 5-4 |
| W-34.05 | Marlboro Zone Reinforcement Main | 4,269 | 540 | 604 | 3,125 | 1,946 | 1,179 | 0 | 0 | 0 | 0 | 0 | 0 | 5-5 |
| W-62.06 | Rosaryville Water Storage Facility | 8,758 | 0 | 0 | 460 | 0 | 0 | 0 | 0 | 0 | 460 | 8,298 | 5-6 | |
| W-84.03 | Smith Home Farms Water Main | 3,660 | 1,694 | 624 | 1,342 | 452 | 448 | 442 | 0 | 0 | 0 | 0 | 0 | 5-7 |
| W-84.04 | Westphalia Town Center Water Main | 1,759 | 642 | 46 | 1,071 | 358 | 422 | 291 | 0 | 0 | 0 | 0 | 0 | 5-8 |
| W-84.05 | Prince George's County 450A Zone Water Main | 47,778 | 3,265 | 3,685 | 40,828 | 13,805 | 13,217 | 8,817 | 4,417 | 561 | 11 | 0 | 0 | 5-9 |
| W-93.01 | Konterra Town Center East Water Main | 2,428 | 248 | 0 | 2,180 | 758 | 865 | 557 | 0 | 0 | 0 | 0 | 0 | 5-10 |
| W-105.01 | Marlton Section 18 Water Main, Lake Marlton Avenue | 2,822 | 31 | 2 | 2,789 | 442 | 472 | 470 | 467 | 469 | 469 | 0 | 0 | 5-11 |
| W-120.14 | Timothy Branch Water Main | 3,141 | 294 | 1,836 | 1,011 | 1,011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5-12 |
| W-137.03 | South Potomac Supply Improvement, Phase 2 | 67,875 | 1,927 | 893 | 65,055 | 21,685 | 21,685 | 21,685 | 0 | 0 | 0 | 0 | 0 | 5-13 |
| | Projects Pending Close-Out | 15,613 | 15,487 | 126 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5-14 |
| | TOTALS | 227,832 | 49,426 | 15,767 | 154,341 | 62,481 | 49,628 | 35,048 | 5,214 | 1,030 | 940 | 8,298 | | |

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, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 483 | 472 | 5 | 6 | 4 | 2 | | | | | |
| Land | 53 | 53 | | | | | | | | | |
| Construction | 3,007 | 49 | 985 | 1,973 | 1,967 | 6 | | | | | |
| Other | 446 | | 149 | 297 | 296 | 1 | | | | | |
| Total | 3,989 | 574 | 1,139 | 2,276 | 2,267 | 9 | | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|-------|-----|-------|-------|-------|---|--|--|--|--|--|
| WSSC Bonds | 3,989 | 574 | 1,139 | 2,276 | 2,267 | 9 | | | | | |
|------------|-------|-----|-------|-------|-------|---|--|--|--|--|--|

D. Description & Justification

DESCRIPTION
 This project provides for the planning, design, and construction of 1,990 feet of 24-inch diameter water main, 142 feet of 16-inch diameter water main, new isolation valves, and pressure reducing valves with flow control capability. It will improve system reliability by providing the flexibility of the delivery system to the Montgomery County High Zone HG660, Montgomery County Main Zone HG495A, and Patuxent Pressure Zone HG415A; it will also improve the reliability and provide a redundancy to the HG415A zone and its dependent lower zones currently supplied through 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 in the event that 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); BOA Contract No. 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 has remained the same. Expenditure and schedule projections shown in Block B above are 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 | \$62 | 24 |
| Debt Service | \$259 | 24 |
| Total Cost | \$321 | 24 |
| Impact on Water and Sewer Rate | | |

F. Approval and Expenditure Data (000's)

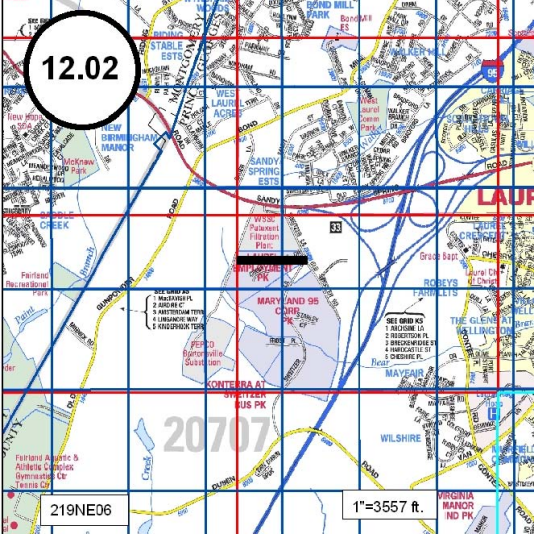
| | |
|------------------------------|-------|
| Date First in Program | FY 11 |
| Date First Approved | FY 11 |
| Initial Cost Estimate | 1,074 |
| Cost Estimate Last FY | 3,910 |
| Present Cost Estimate | 3,989 |
| Approved Request Last FY | 2,201 |
| Total Expense & Encumbrances | 574 |
| Approval Request Year 1 | 2,267 |

G. Status Information

| | |
|---------------------------|----------------|
| Land Status | R/W acquired |
| Project Phase | Design |
| Percent Complete | 90 % |
| Estimated Completion Date | September 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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|--------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 2,773 | 2,603 | 50 | 120 | 50 | 50 | 20 | | | | |
| Land | 268 | 268 | | | | | | | | | |
| Construction | 17,069 | 69 | 5,000 | 12,000 | 5,000 | 5,000 | 2,000 | | | | |
| Other | 1,720 | | 506 | 1,214 | 506 | 506 | 202 | | | | |
| Total | 21,830 | 2,940 | 5,556 | 13,334 | 5,556 | 5,556 | 2,222 | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|--------|-------|-------|-------|-------|-------|-------|--|--|--|--|
| WSSC Bonds | 10,915 | 1,470 | 2,778 | 6,667 | 2,778 | 2,778 | 1,111 | | | | |
| SDC | 10,915 | 1,470 | 2,778 | 6,667 | 2,778 | 2,778 | 1,111 | | | | |

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. WSSC Water 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 | \$469 | 25 |
| Debt Service | \$710 | 25 |
| Total Cost | \$1,179 | 25 |
| Impact on Water and Sewer Rate | | |

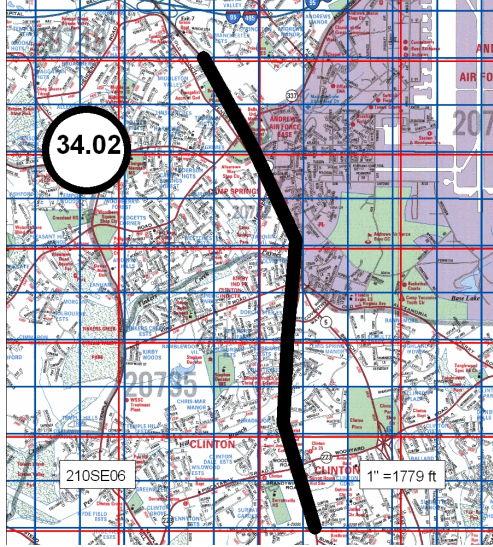
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|--------|
| Date First in Program | FY 08 |
| Date First Approved | FY 08 |
| Initial Cost Estimate | 10,350 |
| Cost Estimate Last FY | 22,908 |
| Present Cost Estimate | 21,830 |
| Approved Request Last FY | 7,772 |
| Total Expense & Encumbrances | 2,940 |
| Approval Request Year 1 | 5,556 |

G. Status Information

| | |
|---------------------------|--------------------------|
| Land Status | Public/Agency owned land |
| Project Phase | Design |
| Percent Complete | 100 % |
| Estimated Completion Date | June 2024 |
| Growth | 50% |
| System Improvement | 50% |
| Environmental Regulation | |
| Population Served | |
| Capacity | |

H. Map



Branch Avenue Water Transmission Improvements

| | | | | | | |
|---|----------------|-------------|--------------|-----------------|-----------------|---------------------------|
| A. Identification and Coding Information | | | PDF Date | October 1, 2020 | Pressure Zones | Clinton HG385B |
| Agency Number | Project Number | Update Code | Date Revised | | Drainage Basins | |
| W - 000034.04 | | Change | | | Planning Areas | Clinton & Vicinity PA 81A |

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|---------------|----------------|---------------|---------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 3,744 | 3,029 | 542 | 173 | 110 | 50 | 13 | | | | |
| Land | 244 | 244 | | | | | | | | | |
| Construction | 37,911 | 18,511 | 600 | 18,800 | 12,800 | 5,200 | 500 | 300 | | | |
| Other | 2,011 | | 114 | 1,897 | 1,291 | 525 | 51 | 30 | | | |
| Total | 43,910 | 21,784 | 1,256 | 20,870 | 14,201 | 5,775 | 564 | 330 | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|-----|--------|--------|-------|--------|--------|-------|-----|-----|--|--|--|
| SDC | 43,910 | 21,784 | 1,256 | 20,870 | 14,201 | 5,775 | 564 | 330 | | | |
|-----|--------|--------|-------|--------|--------|-------|-----|-----|--|--|--|

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 were increased for inflation.

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 was to construct approximately 12,800 feet of 42-inch pipe and 2,100 feet of 30-inch pipe along Branch Avenue, the construction was completed in Fall 2019 by a WSSC Water contractor. 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 IV (BL5273F11) will be bid and constructed by WSSC Water as well. No WSSC Water rate supported debt will be used for this project. No additional land costs are anticipated at this time.

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 | \$797 | 26 |
| Debt Service | | |
| Total Cost | \$797 | 26 |
| Impact on Water and Sewer Rate | | |

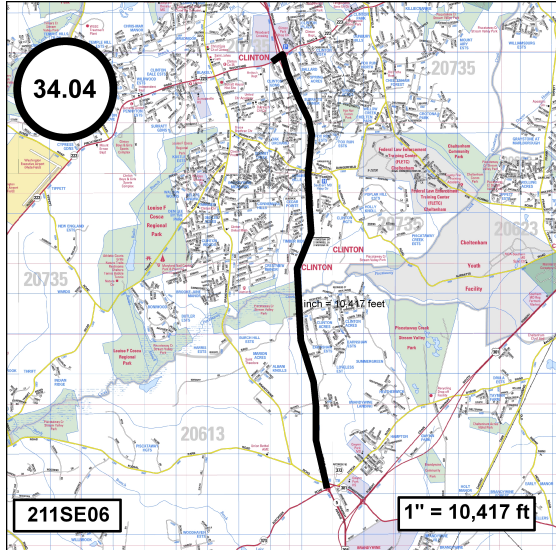
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|--------|
| Date First in Program | FY 14 |
| Date First Approved | FY 14 |
| Initial Cost Estimate | 23,705 |
| Cost Estimate Last FY | 42,931 |
| Present Cost Estimate | 43,910 |
| Approved Request Last FY | 3,520 |
| Total Expense & Encumbrances | 21,784 |
| Approval Request Year 1 | 14,201 |

G. Status Information

| | |
|---------------------------|-----------------------|
| Land Status | Land and R/W Acquired |
| Project Phase | Construction |
| Percent Complete | 65 % |
| Estimated Completion Date | July 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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 635 | 535 | 25 | 75 | 50 | 25 | | | | | |
| Land | 3 | 3 | | | | | | | | | |
| Construction | 3,144 | 2 | 500 | 2,642 | 1,642 | 1,000 | | | | | |
| Other | 487 | | 79 | 408 | 254 | 154 | | | | | |
| Total | 4,269 | 540 | 604 | 3,125 | 1,946 | 1,179 | | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|-------|-----|-----|-------|-------|-------|--|--|--|--|--|
| WSSC Bonds | 4,269 | 540 | 604 | 3,125 | 1,946 | 1,179 | | | | | |
|------------|-------|-----|-----|-------|-------|-------|--|--|--|--|--|

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 design level estimates and may change depending on site-specific conditions and design constraints.

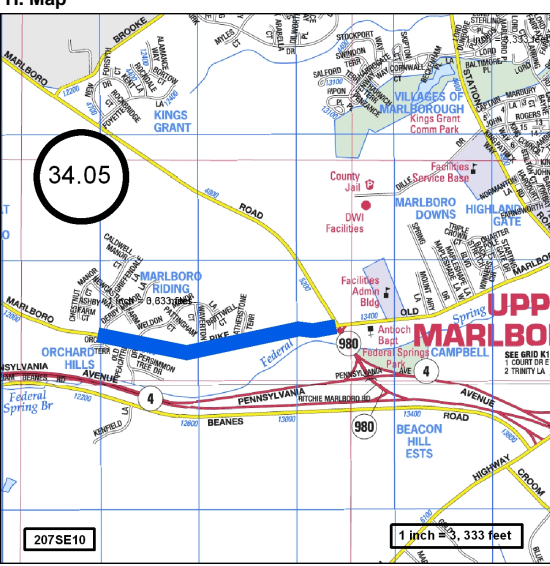
COORDINATION
 Coordinating Agencies: Maryland State Highway Administration; Maryland-National Capital Park & Planning Commission;(Mandatory Referral Process); Prince George's County Department of Environmental Resources; Prince George's County Government; Prince George's County Department of Permitting 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 | \$117 | 24 |
| Debt Service | \$278 | 24 |
| Total Cost | \$395 | 24 |
| 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 | 4,263 |
| Present Cost Estimate | 4,269 |
| Approved Request Last FY | 1,235 |
| Total Expense & Encumbrances | 540 |
| Approval Request Year 1 | 1,946 |

| G. Status Information | |
|---------------------------|---------------|
| Land Status | R/W acquired |
| Project Phase | Design |
| Percent Complete | 99 % |
| Estimated Completion Date | December 2022 |

| | |
|--------------------------|------|
| Growth | |
| System Improvement | 100% |
| Environmental Regulation | |
| Population Served | |
| Capacity | |



Rosaryville Water Storage Facility

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

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 816 | | | 400 | | | | | | 400 | 416 |
| Land | | | | | | | | | | | |
| Construction | 6,800 | | | | | | | | | | 6,800 |
| Other | 1,142 | | | 60 | | | | | | 60 | 1,082 |
| Total | 8,758 | | | 460 | | | | | | 460 | 8,298 |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|-----|-------|--|--|-----|--|--|--|--|--|-----|-------|
| SDC | 8,758 | | | 460 | | | | | | 460 | 8,298 |
|-----|-------|--|--|-----|--|--|--|--|--|-----|-------|

D. Description & Justification

| |
|--|
| <p>DESCRIPTION</p> <p>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.</p> <p>JUSTIFICATION</p> <p>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).</p> <p>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</p> <p>The project scope has remained the same. Expenditure and schedule projections shown in Block B are based upon planning level estimates and are expected to change once the project moves to design. No WSSC Water rate supported debt will be used for this project.</p> <p>COORDINATION</p> <p>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</p> |
|--|

| 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 | 8,510 |
| Present Cost Estimate | 8,758 |
| 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



Smith Home Farms Water Main

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

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|--------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 557 | 263 | 96 | 198 | 68 | 66 | 64 | | | | |
| Land | | | | | | | | | | | |
| Construction | 2,846 | 1,431 | 447 | 968 | 325 | 323 | 320 | | | | |
| Other | 257 | | 81 | 176 | 59 | 59 | 58 | | | | |
| Total | 3,660 | 1,694 | 624 | 1,342 | 452 | 448 | 442 | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|-------|-------|-----|-------|-----|-----|-----|--|--|--|--|
| Contributions/Other | 3,660 | 1,694 | 624 | 1,342 | 452 | 448 | 442 | | | | |
|---------------------|-------|-------|-----|-------|-----|-----|-----|--|--|--|--|

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

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 Water 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)

| | | |
|--------------------------------|-------|----|
| Staff & Other | | |
| Maintenance | \$223 | 25 |
| Debt Service | | |
| Total Cost | \$223 | 25 |
| Impact on Water and Sewer Rate | | |

F. Approval and Expenditure Data (000's)

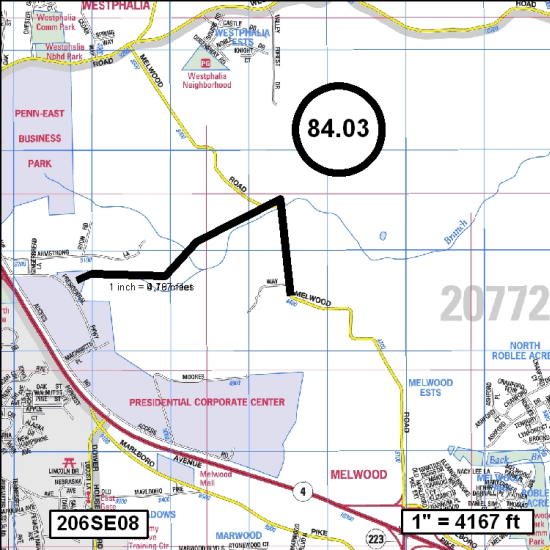
| | |
|------------------------------|-------|
| Date First in Program | FY 08 |
| Date First Approved | FY 08 |
| Initial Cost Estimate | 1,600 |
| Cost Estimate Last FY | 2,883 |
| Present Cost Estimate | 3,660 |
| Approved Request Last FY | 439 |
| Total Expense & Encumbrances | 1,694 |
| Approval Request Year 1 | 452 |

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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 214 | 26 | 40 | 148 | 70 | 51 | 27 | | | | |
| Land | | | | | | | | | | | |
| Construction | 1,399 | 616 | | 783 | 241 | 316 | 226 | | | | |
| Other | 146 | | 6 | 140 | 47 | 55 | 38 | | | | |
| Total | 1,759 | 642 | 46 | 1,071 | 358 | 422 | 291 | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|-------|-----|----|-------|-----|-----|-----|--|--|--|--|
| Contributions/Other | 1,759 | 642 | 46 | 1,071 | 358 | 422 | 291 | | | | |
|---------------------|-------|-----|----|-------|-----|-----|-----|--|--|--|--|

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 Water rate supported debt will be used for this project.

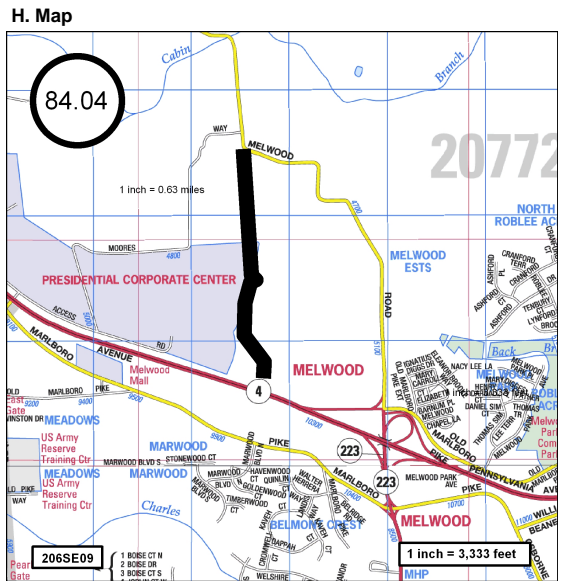
COORDINATION
Coordinating Agencies: Maryland State Highway Administration; Maryland-National Capital Park & Planning Commission; Prince George's County Government; Prince George's County Department of Permitting Inspection and Enforcement
Coordinating Projects: W - 000084.03 - Smith Home Farms Water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

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|-------|--------------|
| Staff & Other | | |
| Maintenance | \$138 | 25 |
| Debt Service | | |
| Total Cost | \$138 | 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 | 1,396 |
| Cost Estimate Last FY | 1,708 |
| Present Cost Estimate | 1,759 |
| Approved Request Last FY | 342 |
| Total Expense & Encumbrances | 642 |
| Approval Request Year 1 | 358 |

| 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 | |



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, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|--------------|----------------|---------------|---------------|---------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 3,475 | 3,265 | 100 | 110 | 50 | 15 | 15 | 15 | 10 | 5 | |
| Land | | | | | | | | | | | |
| Construction | 40,255 | | 3,250 | 37,005 | 12,500 | 12,000 | 8,000 | 4,000 | 500 | 5 | |
| Other | 4,048 | | 335 | 3,713 | 1,255 | 1,202 | 802 | 402 | 51 | 1 | |
| Total | 47,778 | 3,265 | 3,685 | 40,828 | 13,805 | 13,217 | 8,817 | 4,417 | 561 | 11 | |

C. Funding Schedule (000's)

| | | | | | | | | | | |
|------------|--------|-------|-------|--------|--------|--------|-------|-------|-----|----|
| WSSC Bonds | 47,778 | 3,265 | 3,685 | 40,828 | 13,805 | 13,217 | 8,817 | 4,417 | 561 | 11 |
|------------|--------|-------|-------|--------|--------|--------|-------|-------|-----|----|

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 Water project W-34.02-Old Branch Avenue Water Main.

COST CHANGE

The overall construction cost estimate has decreased due to the significant reduction in jack and bore requirements along Allentown Road and micro-tunneling length requirements across National Park Service land.

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 Water 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 | \$588 | 29 |
| Debt Service | \$3,108 | 29 |
| Total Cost | \$3,696 | 29 |
| Impact on Water and Sewer Rate | \$0.01 | 29 |

F. Approval and Expenditure Data (000's)

| | |
|------------------------------|--------|
| Date First in Program | FY 13 |
| Date First Approved | FY 13 |
| Initial Cost Estimate | 374 |
| Cost Estimate Last FY | 79,588 |
| Present Cost Estimate | 47,778 |
| Approved Request Last FY | 18,403 |
| Total Expense & Encumbrances | 3,265 |
| Approval Request Year 1 | 13,805 |

G. Status Information

| | |
|---------------------------|-----------------------------|
| Land Status | Land and R/W to be acquired |
| Project Phase | Design |
| Percent Complete | 90 % |
| Estimated Completion Date | July 2027 |
| Growth | |
| System Improvement | 100% |
| Environmental Regulation | |
| Population Served | |
| Capacity | 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, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 301 | 54 | | 247 | 86 | 98 | 63 | | | | |
| Land | | | | | | | | | | | |
| Construction | 1,842 | 194 | | 1,648 | 573 | 654 | 421 | | | | |
| Other | 285 | | | 285 | 99 | 113 | 73 | | | | |
| Total | 2,428 | 248 | | 2,180 | 758 | 865 | 557 | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|-------|-----|--|-------|-----|-----|-----|--|--|--|--|
| Contributions/Other | 2,428 | 248 | | 2,180 | 758 | 865 | 557 | | | | |
|---------------------|-------|-----|--|-------|-----|-----|-----|--|--|--|--|

D. Description & Justification

DESCRIPTION
 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 Water Project S-28.18 Konterra Town Center East Sewer.

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

COST CHANGE
 Not applicable.

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 Water rate supported debt will be used for this project.

COORDINATION
 Coordinating Agencies: Prince George's County Government
 Coordinating Projects: S - 000028.18 - Konterra Town Center East Sewer

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|-------|--------------|
| Staff & Other | | |
| Maintenance | \$270 | |
| Debt Service | | |
| Total Cost | \$270 | |
| Impact on Water and Sewer Rate | | |

F. Approval and Expenditure Data (000's)

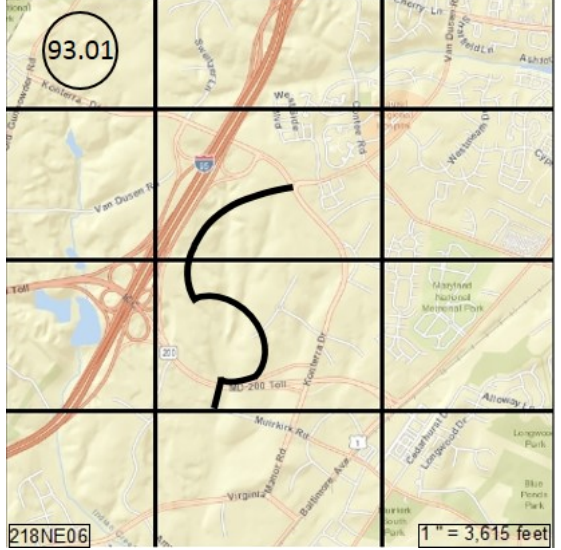
| | |
|------------------------------|-------|
| Date First in Program | FY 09 |
| Date First Approved | FY 09 |
| Initial Cost Estimate | 610 |
| Cost Estimate Last FY | 2,121 |
| Present Cost Estimate | 2,428 |
| Approved Request Last FY | 814 |
| Total Expense & Encumbrances | 248 |
| Approval Request Year 1 | 758 |

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 | |

H. Map



Marlton Section 18 Water Main, Lake Marlton Avenue

| | | | | | | |
|---|----------------|-------------|--------------|-----------------|-----------------|--------------------|
| A. Identification and Coding Information | | | PDF Date | October 1, 2020 | 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 427 | 31 | 1 | 395 | 44 | 71 | 70 | 70 | 70 | 70 | |
| Land | | | | | | | | | | | |
| Construction | 2,031 | | 1 | 2,030 | 340 | 339 | 339 | 336 | 338 | 338 | |
| Other | 364 | | | 364 | 58 | 62 | 61 | 61 | 61 | 61 | |
| Total | 2,822 | 31 | 2 | 2,789 | 442 | 472 | 470 | 467 | 469 | 469 | |

C. Funding Schedule (000's)

| | | | | | | | | | | |
|---------------------|-------|----|---|-------|-----|-----|-----|-----|-----|-----|
| Contributions/Other | 2,822 | 31 | 2 | 2,789 | 442 | 472 | 470 | 467 | 469 | 469 |
|---------------------|-------|----|---|-------|-----|-----|-----|-----|-----|-----|

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
 Not applicable.

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 Water rate supported debt will be used for this project.

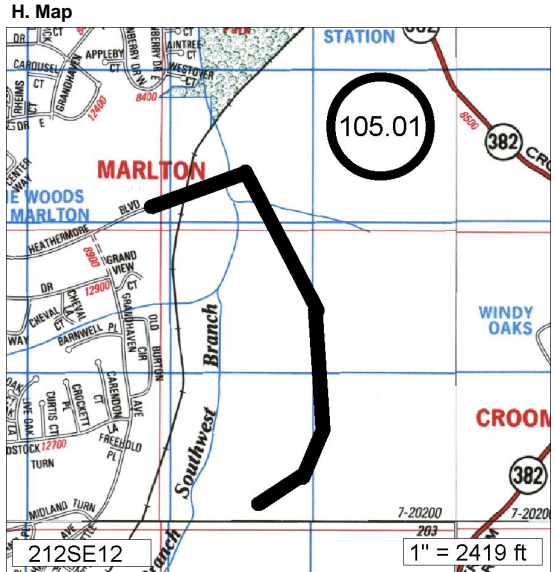
COORDINATION
 Coordinating Agencies: Maryland Department of the Environment; Maryland-National Capital Park & Planning Commission; Prince George's County Government
 Coordinating Projects: Not Applicable

| | | |
|--|-------|--------------|
| E. Annual Operating Budget Impact (000's) | | FY of Impact |
| Staff & Other | | |
| Maintenance | \$158 | |
| Debt Service | | |
| Total Cost | \$158 | |
| Impact on Water and Sewer Rate | | |

| | |
|---|-------|
| F. Approval and Expenditure Data (000's) | |
| Date First in Program | FY 02 |
| Date First Approved | FY 02 |
| Initial Cost Estimate | 398 |
| Cost Estimate Last FY | 2,737 |
| Present Cost Estimate | 2,822 |
| Approved Request Last FY | 429 |
| Total Expense & Encumbrances | 31 |
| Approval Request Year 1 | 442 |

| | |
|------------------------------|---------------------|
| 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 | |



Timothy Branch Water Main

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

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 621 | 294 | 164 | 163 | 163 | | | | | | |
| Land | | | | | | | | | | | |
| Construction | 2,149 | | 1,433 | 716 | 716 | | | | | | |
| Other | 371 | | 239 | 132 | 132 | | | | | | |
| Total | 3,141 | 294 | 1,836 | 1,011 | 1,011 | | | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|-------|-----|-------|-------|-------|--|--|--|--|--|--|
| Contributions/Other | 3,141 | 294 | 1,836 | 1,011 | 1,011 | | | | | | |
|---------------------|-------|-----|-------|-------|-------|--|--|--|--|--|--|

D. Description & Justification

| |
|--|
| <p>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.</p> <p>JUSTIFICATION Timothy Branch Hydraulic Planning Analysis DA9381Z92 (Amended April 18, 2019).</p> <p>COST CHANGE Not applicable.</p> <p>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 Water rate supported debt will be used for this project.</p> <p>COORDINATION Coordinating Agencies: Prince George's County Government Coordinating Projects: Not Applicable</p> |
|--|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|-------|--------------|
| Staff & Other | | |
| Maintenance | \$168 | |
| Debt Service | | |
| Total Cost | \$168 | |
| Impact on Water and Sewer Rate | | |

F. Approval and Expenditure Data (000's)

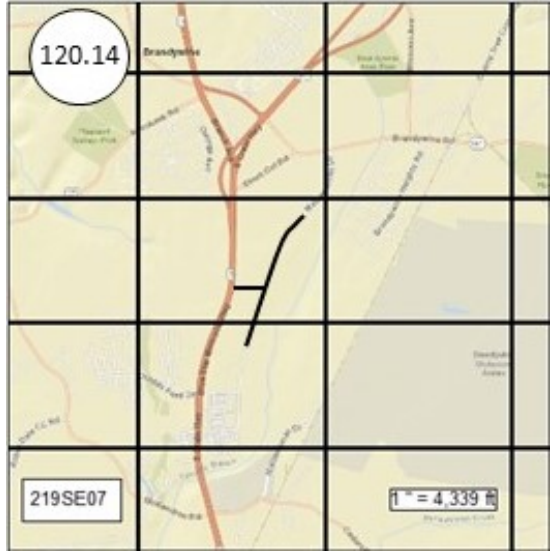
| | |
|------------------------------|-------|
| Date First in Program | FY 94 |
| Date First Approved | FY 94 |
| Initial Cost Estimate | 176 |
| Cost Estimate Last FY | 3,381 |
| Present Cost Estimate | 3,141 |
| Approved Request Last FY | 981 |
| Total Expense & Encumbrances | 294 |
| Approval Request Year 1 | 1,011 |

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, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|--------------|----------------|---------------|---------------|---------------|---------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 2,933 | 1,927 | 850 | 156 | 52 | 52 | 52 | | | | |
| Land | | | | | | | | | | | |
| Construction | 61,800 | | | 61,800 | 20,600 | 20,600 | 20,600 | | | | |
| Other | 3,142 | | 43 | 3,099 | 1,033 | 1,033 | 1,033 | | | | |
| Total | 67,875 | 1,927 | 893 | 65,055 | 21,685 | 21,685 | 21,685 | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|--------|-------|-----|--------|--------|--------|--------|--|--|--|--|
| WSSC Bonds | 44,797 | 1,272 | 589 | 42,936 | 14,312 | 14,312 | 14,312 | | | | |
| SDC | 23,078 | 655 | 304 | 22,119 | 7,373 | 7,373 | 7,373 | | | | |

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 Water and the Maryland Department of the Environment discussed extensive requirements for stream restoration of Henson Creek. At that time, WSSC Water staff identified up to 3.5 miles of pipe south of the project area that is exposed along eroding stretches of Henson Creek. An alignment study began under CIP W-137.03, South Potomac Supply Improvement, Phase 2, to evaluate possible relocation of the existing 42-inch PCCP main between Rosecroft Drive and Indian Head Highway. The 3.5 miles of PCCP main will be relocated out of Henson Creek and into a roadway alignment between Temple Hill Road and Indian Head Highway, for a total of 4.4 miles of new 42-inch ductile iron pipe. The transmission main will be relocated out of the 290B pressure zone and into the 450A pressure zone. Phase 2 includes the installation of a flow control valve between pressure zones 450A and 290B. Concept Finalization Report, O'Brien & Gere Engineers Inc. (January 2014); Alignment Study - Final: Henson Creek 42-Inch Water Main Replacement, O'Brien & Gere Engineers Inc. (April 2017).

COST CHANGE

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 Water 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 | \$1,067 | 25 |
| Debt Service | \$2,914 | 25 |
| Total Cost | \$3,981 | 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 | 66,520 |
| Present Cost Estimate | 67,875 |
| Approved Request Last FY | 210 |
| Total Expense & Encumbrances | 1,927 |
| Approval Request Year 1 | 21,685 |

G. Status Information

| | |
|---------------------------|-----------------------------|
| Land Status | Land and R/W to be acquired |
| Project Phase | Design |
| Percent Complete | 70 % |
| Estimated Completion Date | June 2024 |
| Growth | 34% |
| System Improvement | 66% |
| Environmental Regulation | |
| Population Served | |
| Capacity | |

H. Map



PENDING CLOSE-OUT PROJECT LISTING
PRINCE GEORGE'S COUNTY WATER PROJECTS
 (ALL FIGURES IN THOUSANDS)

| Agency Number | Project Name | Estimated Total Cost | Expenditures Thru FY'20 | Estimated Expenditures FY'21 | Remarks |
|---------------|---|----------------------|-------------------------|------------------------------|---------------------------------------|
| W-84.02 | Ritchie Marlboro Road Transmission Main & PRV | \$9,952 | \$9,889 | \$63 | Project completion expected in FY'21. |
| W-111.05 | Hillmeade Road Water Main | 5,661 | 5,598 | 63 | Project completion expected in FY'21. |
| | TOTALS | \$15,613 | \$15,487 | \$126 | |

Section 6 - Prince George's County Sewer Projects

FINANCIAL SUMMARY
(ALL FIGURES IN THOUSANDS)

PRINCE GEORGE'S COUNTY SEWER PROJECTS

| AGENCY NUMBER | PROJECT NAME | EST. TOTAL COST | EXPEND THRU 20 | EST. EXPEND 21 | TOTAL SIX YEARS | EXPENDITURE SCHEDULE | | | | | | BEYOND SIX YEARS | PAGE NUM |
|---------------|--|-----------------|----------------|----------------|-----------------|----------------------|---------|---------|---------|---------|---------|------------------|----------|
| | | | | | | YR 1 22 | YR 2 23 | YR 3 24 | YR 4 25 | YR 5 26 | YR 6 27 | | |
| S-27.08 | Westphalia Town Center Sewer Main | 1,570 | 832 | 501 | 237 | 161 | 62 | 14 | 0 | 0 | 0 | 0 | 6-3 |
| S-28.18 | Konterra Town Center East Sewer | 7,102 | 4,988 | 0 | 2,114 | 0 | 2,114 | 0 | 0 | 0 | 0 | 0 | 6-4 |
| S-28.20 | Pumpkin Hill WWPS & FM | 4,496 | 183 | 644 | 3,669 | 1,725 | 1,656 | 288 | 0 | 0 | 0 | 0 | 6-5 |
| S-68.01 | Landover Mall Redevelopment | 1,422 | 25 | 109 | 1,286 | 668 | 426 | 48 | 48 | 48 | 48 | 2 | 6-6 |
| S-75.21 | Mattawoman WWTP Upgrades | 19,625 | 0 | 3,333 | 14,719 | 3,983 | 3,470 | 2,879 | 2,597 | 1,380 | 410 | 1,573 | 6-7 |
| S-77.20 | Parkway North Substation Replacement | 9,335 | 3,711 | 5,497 | 127 | 127 | 0 | 0 | 0 | 0 | 0 | 0 | 6-8 |
| S-77.21 | Parkway WRRF Electrical Upgrades | 11,066 | 0 | 440 | 10,626 | 1,760 | 803 | 2,453 | 2,453 | 2,453 | 704 | 0 | 6-9 |
| S-86.19 | Southlake Subdivision Sewer | 884 | 253 | 232 | 399 | 194 | 205 | 0 | 0 | 0 | 0 | 0 | 6-10 |
| S-87.19 | Horsepen WWPS & FM | 35,349 | 849 | 1,238 | 33,262 | 4,146 | 14,926 | 8,580 | 5,610 | 0 | 0 | 0 | 6-11 |
| S-89.25 | Little Anacostia WWPS & FM | 9,239 | 3,716 | 4,153 | 1,370 | 1,370 | 0 | 0 | 0 | 0 | 0 | 0 | 6-12 |
| S-96.14 | Piscataway WRRF Facility Upgrades | 169,830 | 55,106 | 62,979 | 51,745 | 44,153 | 6,405 | 1,187 | 0 | 0 | 0 | 0 | 6-13 |
| S-118.10 | Viva White Oak Sewer Augmentation | 1,080 | 0 | 0 | 1,080 | 432 | 270 | 162 | 108 | 54 | 54 | 0 | 6-14 |
| S-131.05 | Pleasant Valley Sewer Main, Part 2 | 962 | 49 | 219 | 694 | 432 | 179 | 83 | 0 | 0 | 0 | 0 | 6-15 |
| S-131.07 | Pleasant Valley Sewer Main, Part 1 | 1,882 | 73 | 510 | 1,299 | 1,060 | 239 | 0 | 0 | 0 | 0 | 0 | 6-16 |
| S-131.11 | Calm Retreat Sewer Main | 981 | 0 | 0 | 981 | 883 | 98 | 0 | 0 | 0 | 0 | 0 | 6-17 |
| S-131.12 | Swan Creek WWPS & FM | 12,186 | 3,363 | 5,655 | 3,168 | 1,793 | 1,375 | 0 | 0 | 0 | 0 | 0 | 6-18 |
| S-157.02 | Western Branch WRRF Process Train Improvements | 62,543 | 1,340 | 3,042 | 58,161 | 7,216 | 18,211 | 17,765 | 9,150 | 4,895 | 924 | 0 | 6-19 |
| | Projects Pending Close-Out | 187,748 | 186,383 | 1,365 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6-20 |
| | TOTALS | 537,300 | 260,871 | 89,917 | 184,937 | 70,103 | 50,439 | 33,459 | 19,966 | 8,830 | 2,140 | 1,575 | |

NEW PROJECT LISTING
PRINCE GEORGE'S COUNTY SEWER PROJECTS
 (ALL FIGURES IN THOUSANDS)

| Agency Number | Project Name | Total Project Cost | Budget Year Cost | Page Number |
|---------------|-----------------------------------|--------------------|------------------|-------------|
| S-28.20 | Pumpkin Hill WWPS & FM | \$4,496 | \$1,725 | 6-5 |
| S-77.21 | Parkway WRRF Electrical Upgrades | 11,066 | 1,760 | 6-9 |
| S-87.19 | Horsepen WWPS & FM | 35,349 | 4,146 | 6-11 |
| S-89.25 | Little Anacostia WWPS & FM | 9,239 | 1,370 | 6-12 |
| S-118.10 | Viva White Oak Sewer Augmentation | 1,080 | 432 | 6-14 |
| S-131.11 | Calm Retreat Sewer Main | 981 | 883 | 6-17 |
| S-131.12 | Swan Creek WWPS & FM | 12,186 | 1,793 | 6-18 |
| | TOTALS | \$74,397 | \$12,109 | |

Westphalia Town Center Sewer Main

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

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 196 | 117 | 35 | 44 | 25 | 13 | 6 | | | | |
| Land | | | | | | | | | | | |
| Construction | 1,278 | 715 | 401 | 162 | 115 | 41 | 6 | | | | |
| Other | 96 | | 65 | 31 | 21 | 8 | 2 | | | | |
| Total | 1,570 | 832 | 501 | 237 | 161 | 62 | 14 | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|-------|-----|-----|-----|-----|----|----|--|--|--|--|
| Contributions/Other | 1,570 | 832 | 501 | 237 | 161 | 62 | 14 | | | | |
|---------------------|-------|-----|-----|-----|-----|----|----|--|--|--|--|

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
 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. Design and construction will be performed by the developer under a System Extension Permit. The estimated completion date is developer dependent. No WSSC Water 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)

| | | |
|--------------------------------|------|--|
| Staff & Other | | |
| Maintenance | \$93 | |
| Debt Service | | |
| Total Cost | \$93 | |
| Impact on Water and Sewer Rate | | |

F. Approval and Expenditure Data (000's)

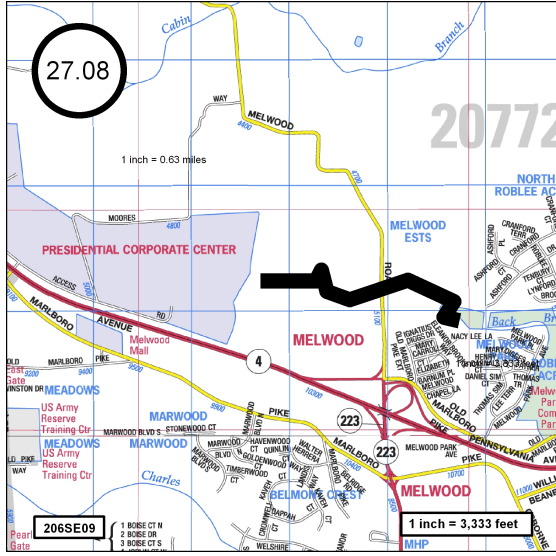
| | |
|------------------------------|-------|
| Date First in Program | FY 14 |
| Date First Approved | FY 14 |
| Initial Cost Estimate | 378 |
| Cost Estimate Last FY | 1,523 |
| Present Cost Estimate | 1,570 |
| Approved Request Last FY | 141 |
| Total Expense & Encumbrances | 832 |
| Approval Request Year 1 | 161 |

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, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|--------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 2,197 | 1,957 | | 240 | | 240 | | | | | |
| Land | | | | | | | | | | | |
| Construction | 4,629 | 3,031 | | 1,598 | | 1,598 | | | | | |
| Other | 276 | | | 276 | | 276 | | | | | |
| Total | 7,102 | 4,988 | | 2,114 | | 2,114 | | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|-------|-------|--|-------|--|-------|--|--|--|--|--|
| Contributions/Other | 7,102 | 4,988 | | 2,114 | | 2,114 | | | | | |
|---------------------|-------|-------|--|-------|--|-------|--|--|--|--|--|

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 Water 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 | \$295 | |
| Debt Service | | |
| Total Cost | \$295 | |
| 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 | 8,484 |
| Present Cost Estimate | 7,102 |
| Approved Request Last FY | 1,992 |
| Total Expense & Encumbrances | 4,988 |
| Approval Request Year 1 | |

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 |

H. Map



Pumpkin Hill WWPS & FM

| A. Identification and Coding Information | | |
|--|----------------|-------------|
| Agency Number | Project Number | Update Code |
| S - 000028.20 | | Add |

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 883 | 183 | 560 | 140 | 100 | 40 | | | | | |
| Land | | | | | | | | | | | |
| Construction | 3,050 | | | 3,050 | 1,400 | 1,400 | 250 | | | | |
| Other | 563 | | 84 | 479 | 225 | 216 | 38 | | | | |
| Total | 4,496 | 183 | 644 | 3,669 | 1,725 | 1,656 | 288 | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|-------|-----|-----|-------|-------|-------|-----|--|--|--|--|
| WSSC Bonds | 4,496 | 183 | 644 | 3,669 | 1,725 | 1,656 | 288 | | | | |
|------------|-------|-----|-----|-------|-------|-------|-----|--|--|--|--|

D. Description & Justification

| |
|---|
| <p>DESCRIPTION</p> <p>This project provides for the planning, design, and construction of the modifications to the Pumpkin Hill Wastewater Pumping Station and replacement of the Pumpkin Hill Force Main. The rehabilitation will replace both pumps maintaining the pumping station's 2.11 MGD capacity. In addition the existing 3,200 LF of 16-inch force main will be replaced.</p> <p>JUSTIFICATION</p> <p>The existing pumping station was put in service in 1974. The pumps were rebuilt in 1992 and have reached the end of their useful life. Replacement of the existing force main, constructed in 1965, is in accordance with an initiative to prioritize replacing force mains that have reached their anticipated life expectancy.</p> <p>Hydraulics Analysis Memorandum (July 2019)</p> <p>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</p> <p>The present project scope was developed for the FY2022 CIP and has an estimated total cost of \$4,496,000. The schedule and expenditure projections shown in Block B above are planning level estimates and may change based upon site conditions and design constraints.</p> <p>COORDINATION</p> <p>Coordinating Agencies: Maryland Department of Natural Resources; Maryland Department of the Environment Coordinating Projects: Not Applicable</p> |
|---|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|-------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$292 | 24 |
| Total Cost | \$292 | 24 |
| Impact on Water and Sewer Rate | | |

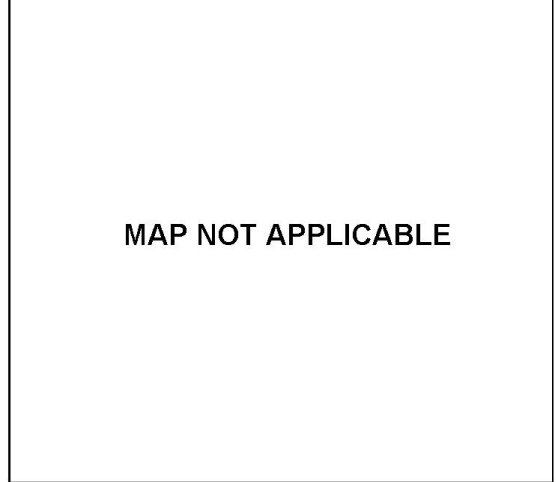
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|-------|
| Date First in Program | FY 22 |
| Date First Approved | FY 22 |
| Initial Cost Estimate | 4,500 |
| Cost Estimate Last FY | |
| Present Cost Estimate | 4,496 |
| Approved Request Last FY | |
| Total Expense & Encumbrances | 183 |
| Approval Request Year 1 | 1,725 |

G. Status Information

| | |
|---------------------------|--------------------------|
| Land Status | Public/Agency owned land |
| Project Phase | Design |
| Percent Complete | 0 % |
| Estimated Completion Date | January 2023 |
| Growth | |
| System Improvement | 100% |
| Environmental Regulation | |
| Population Served | |
| Capacity | 3.15 MGD |

H. Map



Landover Mall Redevelopment

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

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 242 | 25 | 38 | 177 | 80 | 48 | 13 | 12 | 12 | 12 | 2 |
| Land | | | | | | | | | | | |
| Construction | 999 | | 57 | 942 | 501 | 322 | 29 | 30 | 30 | 30 | |
| Other | 181 | | 14 | 167 | 87 | 56 | 6 | 6 | 6 | 6 | |
| Total | 1,422 | 25 | 109 | 1,286 | 668 | 426 | 48 | 48 | 48 | 48 | 2 |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|-------|----|-----|-------|-----|-----|----|----|----|----|---|
| Contributions/Other | 1,422 | 25 | 109 | 1,286 | 668 | 426 | 48 | 48 | 48 | 48 | 2 |
|---------------------|-------|----|-----|-------|-----|-----|----|----|----|----|---|

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 Water 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 | \$87 | |
| Debt Service | | |
| Total Cost | \$87 | |
| Impact on Water and Sewer Rate | | |

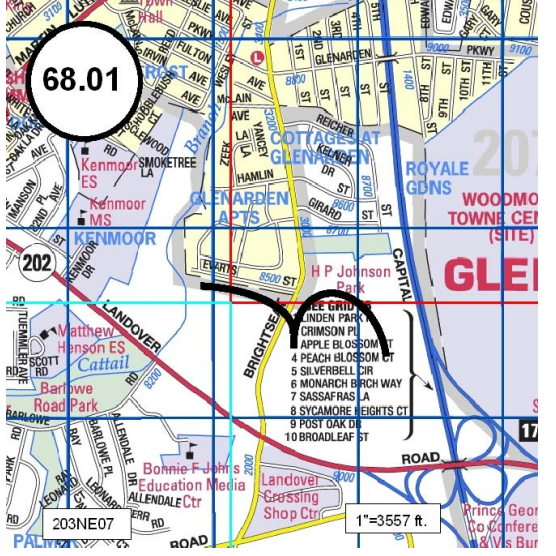
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|-------|
| Date First in Program | FY 11 |
| Date First Approved | FY 11 |
| Initial Cost Estimate | 1,108 |
| Cost Estimate Last FY | 1,381 |
| Present Cost Estimate | 1,422 |
| Approved Request Last FY | 649 |
| Total Expense & Encumbrances | 25 |
| Approval Request Year 1 | 668 |

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, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | | | | | | | | | | | |
| Land | | | | | | | | | | | |
| Construction | 19,430 | | 3,300 | 14,573 | 3,944 | 3,436 | 2,850 | 2,571 | 1,366 | 406 | 1,557 |
| Other | 195 | | 33 | 146 | 39 | 34 | 29 | 26 | 14 | 4 | 16 |
| Total | 19,625 | | 3,333 | 14,719 | 3,983 | 3,470 | 2,879 | 2,597 | 1,380 | 410 | 1,573 |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|--------|--|-------|--------|-------|-------|-------|-------|-------|-----|-------|
| WSSC Bonds | 19,625 | | 3,333 | 14,719 | 3,983 | 3,470 | 2,879 | 2,597 | 1,380 | 410 | 1,573 |
|------------|--------|--|-------|--------|-------|-------|-------|-------|-------|-----|-------|

D. Description & Justification

| |
|---|
| <p>DESCRIPTION</p> <p>This project provides for WSSC Water'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: SCADA/Plant Automation, Electrical System Replacement, In-Plant Water System Improvement, Flow Equalization, Clarifier and Thickener Upgrades, Belt Filter Press Replacement, Effluent Force Main Improvements, Primary Clarifiers 1-4 Demolition, Additional Effluent Filters, and Filtered Water Disinfection Improvements.</p> <p>JUSTIFICATION</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>COST CHANGE</p> <p>The schedule and expenditure estimates reflect the latest information provided by Charles County.</p> <p>OTHER</p> <p>The project scope has remained the same. Under the terms of the 1980 Agreement with Charles County, WSSC Water 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 Water's proportionate cost share decreased to 15% under the terms of Agreement Addendum No.1. This project is expected to continue indefinitely.</p> <p>COORDINATION</p> <p>Coordinating Agencies: Charles County Government Coordinating Projects: Not Applicable</p> |
|---|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|---------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$1,277 | |
| Total Cost | \$1,277 | |
| Impact on Water and Sewer Rate | | |

F. Approval and Expenditure Data (000's)

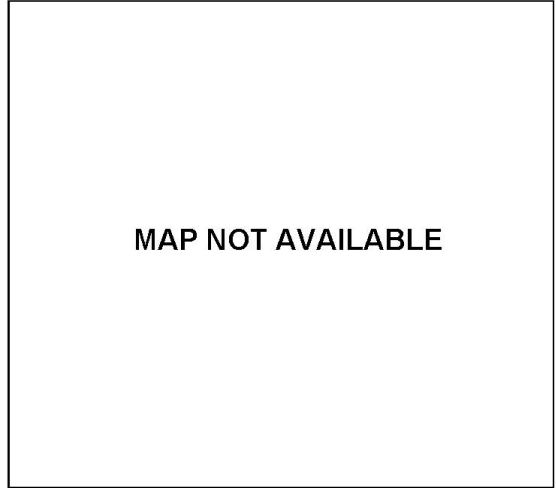
| | |
|------------------------------|--------|
| Date First in Program | FY 08 |
| Date First Approved | FY 08 |
| Initial Cost Estimate | 760 |
| Cost Estimate Last FY | 20,394 |
| Present Cost Estimate | 19,625 |
| Approved Request Last FY | 3,630 |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 3,983 |

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, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|--------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 2,171 | 1,861 | 300 | 10 | 10 | | | | | | |
| Land | | | | | | | | | | | |
| Construction | 6,430 | 1,850 | 4,480 | 100 | 100 | | | | | | |
| Other | 734 | | 717 | 17 | 17 | | | | | | |
| Total | 9,335 | 3,711 | 5,497 | 127 | 127 | | | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|-------|-------|-------|-----|-----|--|--|--|--|--|--|
| WSSC Bonds | 9,335 | 3,711 | 5,497 | 127 | 127 | | | | | | |
|------------|-------|-------|-------|-----|-----|--|--|--|--|--|--|

D. Description & Justification

| |
|---|
| <p>DESCRIPTION</p> <p>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.</p> <p>JUSTIFICATION</p> <p>Asset Management Program, CNPV #48, Business Case recommendation requires immediate replacement of electrical equipment to maintain level of services at the WRRF.</p> <p>COST CHANGE</p> <p>Cost has increased based on negotiated costs for completion phase of contract.</p> <p>OTHER</p> <p>The project scope has remained the same. The schedule and expenditure projections shown in Block B above are based upon the actual bid for the Design-Build contract. Preliminary planning work was conducted under ESP project S-627.15, Parkway North Substation.</p> <p>COORDINATION</p> <p>Coordinating Agencies: Maryland Department of the Environment; Prince George's County Department of Environmental Resources; Prince George's County Government</p> <p>Coordinating Projects: Not Applicable</p> |
|---|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|-------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$607 | 23 |
| Total Cost | \$607 | 23 |
| Impact on Water and Sewer Rate | | |

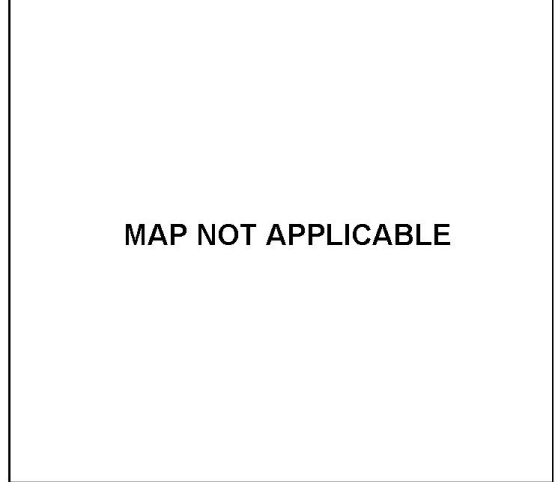
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|-------|
| Date First in Program | FY19 |
| Date First Approved | FY19 |
| Initial Cost Estimate | 5,003 |
| Cost Estimate Last FY | 8,535 |
| Present Cost Estimate | 9,335 |
| Approved Request Last FY | 1,357 |
| Total Expense & Encumbrances | 3,711 |
| Approval Request Year 1 | 127 |

G. Status Information

| | |
|---------------------------|--------------------------|
| Land Status | Public/Agency owned land |
| Project Phase | Construction |
| Percent Complete | 5 % |
| Estimated Completion Date | July 2021 |
| Growth | |
| System Improvement | 100% |
| Environmental Regulation | |
| Population Served | |
| Capacity | |

H. Map



Parkway WRRF Electrical Upgrades

| A. Identification and Coding Information | | |
|--|----------------|-------------|
| Agency Number | Project Number | Update Code |
| S - 000077.21 | | Add |

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 3,060 | | 400 | 2,660 | 1,600 | 230 | 230 | 230 | 230 | 140 | |
| Land | | | | | | | | | | | |
| Construction | 7,000 | | | 7,000 | | 500 | 2,000 | 2,000 | 2,000 | 500 | |
| Other | 1,006 | | 40 | 966 | 160 | 73 | 223 | 223 | 223 | 64 | |
| Total | 11,066 | | 440 | 10,626 | 1,760 | 803 | 2,453 | 2,453 | 2,453 | 704 | |

C. Funding Schedule (000's)

| | | | | | | | | | | |
|------------|--------|--|-----|--------|-------|-----|-------|-------|-------|-----|
| WSSC Bonds | 11,066 | | 440 | 10,626 | 1,760 | 803 | 2,453 | 2,453 | 2,453 | 704 |
|------------|--------|--|-----|--------|-------|-----|-------|-------|-------|-----|

D. Description & Justification

| |
|--|
| <p>DESCRIPTION</p> <p>This project provides for the planning, design, and construction of electrical upgrades for the Parkway WRRF originally installed in the early 1970's, including: Transformers A & B (13.2kV:2400V) and C & D (13.2kV:480V) and feeders from those transformers; Generator Building 2400 Kv and 480 volt switchgear; Blower Building Blowers and associated gear with 480 volt HST Blowers, diffusers and associated electrical gear; A 480 volt MCC in Control Building; A 480 volt MCC in Chemical Building; A 480 volt MCC in RAS Building; and A 480 volt MCC in Grit Building</p> <p>JUSTIFICATION</p> <p>Asset Management Program, CNPV #48 and CNPV #66, Business Case recommended replacement of equipment that is beyond its life expectancy (April 2020).</p> <p>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</p> <p>The present project scope was developed for the FY2022 CIP and has an estimated total cost of \$11,066,000. 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. Preliminary planning work was conducted under ESP project S-627.17, Parkway WRRF Electrical Upgrades.</p> <p>COORDINATION</p> <p>Coordinating Agencies: Maryland Department of the Environment Coordinating Projects: Not Applicable</p> |
|--|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|-------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$720 | 28 |
| Total Cost | \$720 | 28 |
| Impact on Water and Sewer Rate | | |

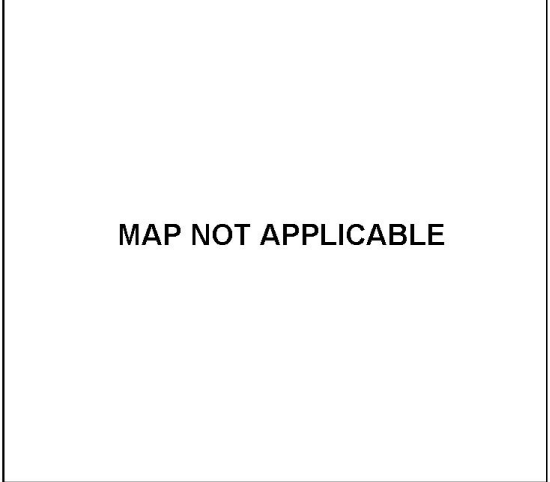
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|--------|
| Date First in Program | FY 22 |
| Date First Approved | FY 22 |
| Initial Cost Estimate | 11,066 |
| Cost Estimate Last FY | |
| Present Cost Estimate | 11,066 |
| Approved Request Last FY | |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 1,760 |

G. Status Information

| | |
|---------------------------|--------------------------|
| Land Status | Public/Agency owned land |
| Project Phase | Planning |
| Percent Complete | 0 % |
| Estimated Completion Date | March 2027 |
| 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, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 252 | 229 | 16 | 7 | 4 | 3 | | | | | |
| Land | | | | | | | | | | | |
| Construction | 550 | 24 | 186 | 340 | 165 | 175 | | | | | |
| Other | 82 | | 30 | 52 | 25 | 27 | | | | | |
| Total | 884 | 253 | 232 | 399 | 194 | 205 | | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|
| Contributions/Other | 884 | 253 | 232 | 399 | 194 | 205 | | | | | |
|---------------------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|

D. Description & Justification

DESCRIPTION
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.

JUSTIFICATION
Karington Hydraulic Planning Analysis (May 2006).

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. Design and construction will be performed by the developer under a System Extension Permit. The estimated completion date is developer dependent. The project name was changed from Karington to Southlake at the request of the developer. No WSSC Water rate supported debt will be used for this project.

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

E. Annual Operating Budget Impact (000's)

| | | |
|--------------------------------|------|--|
| Staff & Other | | |
| Maintenance | \$20 | |
| Debt Service | | |
| Total Cost | \$20 | |
| Impact on Water and Sewer Rate | | |

F. Approval and Expenditure Data (000's)

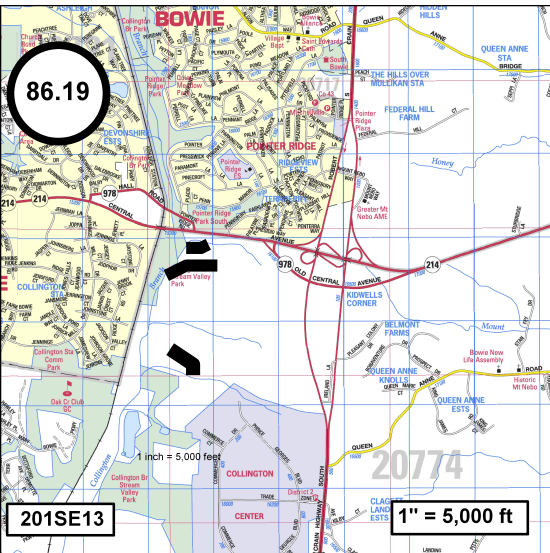
| | |
|------------------------------|-------|
| Date First in Program | FY 08 |
| Date First Approved | FY 08 |
| Initial Cost Estimate | 801 |
| Cost Estimate Last FY | 820 |
| Present Cost Estimate | 884 |
| Approved Request Last FY | 187 |
| Total Expense & Encumbrances | 253 |
| Approval Request Year 1 | 194 |

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 |

H. Map



Horsepen WWPS & FM

| A. Identification and Coding Information | | |
|--|----------------|-------------|
| Agency Number | Project Number | Update Code |
| S - 000087.19 | | Add |

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

| | |
|-----------------|-------------------------|
| Pressure Zones | |
| Drainage Basins | Horsepen 19 |
| Planning Areas | Bowie & Vicinity PA 71A |

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|------------|----------------|---------------|--------------|---------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 3,074 | 849 | 1,125 | 1,100 | 500 | 300 | 200 | 100 | | | |
| Land | | | | | | | | | | | |
| Construction | 29,138 | | | 29,138 | 3,269 | 13,269 | 7,600 | 5,000 | | | |
| Other | 3,137 | | 113 | 3,024 | 377 | 1,357 | 780 | 510 | | | |
| Total | 35,349 | 849 | 1,238 | 33,262 | 4,146 | 14,926 | 8,580 | 5,610 | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|--------|-----|-------|--------|-------|--------|-------|-------|--|--|--|
| WSSC Bonds | 3,536 | 85 | 124 | 3,327 | 415 | 1,493 | 858 | 561 | | | |
| SDC | 31,813 | 764 | 1,114 | 29,935 | 3,731 | 13,433 | 7,722 | 5,049 | | | |

D. Description & Justification

| |
|--|
| <p>DESCRIPTION</p> <p>This project provides for the planning, design, and construction of the modifications to the Horsepen Wastewater Pumping Station and replacement of the Horsepen Force Main. The rehabilitation will increase the pumping station's capacity from 4.22 MGD to 8.40 MGD. In addition, the approximately 21,500-foot force main will be relocated and upsized from 18-inch to 24-inch diameter to accommodate the additional flow.</p> <p>JUSTIFICATION</p> <p>Peak flow rates experienced at the station have exceeded the station's safe capacity; the projected peak flow conditions have increased to 8.4 MGD. Additionally, the existing pumping station equipment is over thirty years old and has reached the end of its useful life. The replacement of the force main is critical due to its age of service and location within environmentally sensitive areas. Breaks occurred along the force main in 2011, 2012, 2013, and 2018.</p> <p>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</p> <p>The present project scope was developed for the FY2022 CIP and has an estimated total cost of \$35,349,000. The schedule and expenditure projections are planning level estimates and may change based upon site conditions and design constraints. Preliminary planning work for the pump station began in FY'18 under ESP project S-640.02, Horsepen WWPS Reliable Capacity Expansion.</p> <p>COORDINATION</p> <p>Coordinating Agencies: City of Bowie; Maryland Department of Natural Resources; Maryland Department of the Environment; Maryland State Highway Administration; Maryland-National Capital Park & Planning Commission; Prince George's County Government</p> <p>Coordinating Projects: Not Applicable</p> |
|--|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|-------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$230 | 26 |
| Total Cost | \$230 | 26 |
| Impact on Water and Sewer Rate | | |

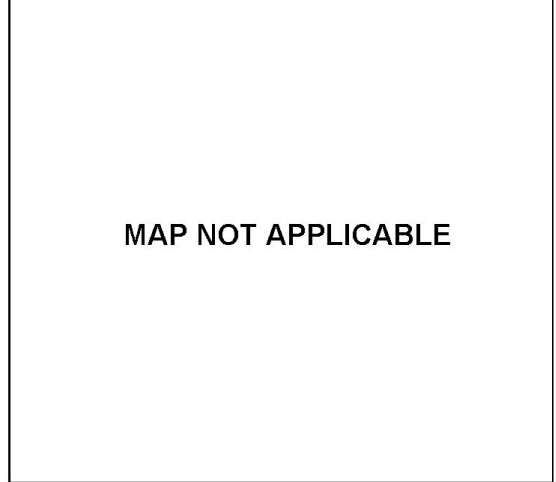
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|--------|
| Date First in Program | FY 22 |
| Date First Approved | FY 22 |
| Initial Cost Estimate | 35,333 |
| Cost Estimate Last FY | |
| Present Cost Estimate | 35,349 |
| Approved Request Last FY | |
| Total Expense & Encumbrances | 849 |
| Approval Request Year 1 | 4,146 |

G. Status Information

| | |
|---------------------------|-----------------------------|
| Land Status | Land and R/W to be acquired |
| Project Phase | Planning |
| Percent Complete | 15 % |
| Estimated Completion Date | December 2024 |
| Growth | 90% |
| System Improvement | 10% |
| Environmental Regulation | |
| Population Served | |
| Capacity | |

H. Map



Little Anacostia WWPS & FM

| A. Identification and Coding Information | | |
|--|----------------|-------------|
| Agency Number | Project Number | Update Code |
| S - 000089.25 | | Add |

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

| | |
|-----------------|---------------------------------------|
| Pressure Zones | |
| Drainage Basins | Beaverdam Branch 3; Lower Anacostia 9 |
| Planning Areas | Prince George's County |

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|--------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 1,101 | 934 | 135 | 32 | 32 | | | | | | |
| Land | | | | | | | | | | | |
| Construction | 7,417 | 2,782 | 3,476 | 1,159 | 1,159 | | | | | | |
| Other | 721 | | 542 | 179 | 179 | | | | | | |
| Total | 9,239 | 3,716 | 4,153 | 1,370 | 1,370 | | | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|-------|-------|-------|-------|-------|--|--|--|--|--|--|
| WSSC Bonds | 9,239 | 3,716 | 4,153 | 1,370 | 1,370 | | | | | | |
|------------|-------|-------|-------|-------|-------|--|--|--|--|--|--|

D. Description & Justification

| |
|--|
| <p>DESCRIPTION</p> <p>This project provides for the planning, design and construction of the rehabilitation of the existing pumping station. This project will provide 3.3 million gallons per day of pumping capacity, the construction of a new 14-inch diameter ductile iron force main, and appurtenant work including, but not limited to, a valve vault, refurbishment of the adjacent Beaver Dam Screening Chamber, installation of new electrical and HVAC equipment, and yard piping.</p> <p>JUSTIFICATION</p> <p>There is a need to provide adequate pumping capacity to alleviate flow in the existing 30-inch diameter sewer main which has experienced surcharging, repeated sanitary sewer overflows and caused basement backups. The flow is currently being bypassed with temporary bypass pumping. The Asset Management Office recommended restoring the existing Little Anacostia No. 1 pumping station to service in order to provide pumping capacity to alleviate flow in the existing 30-inch diameter sewer main.</p> <p>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</p> <p>The present project scope was developed for the FY2022 CIP and has an estimated total cost of \$9,239,000. The schedule and expenditure projections shown in Block B above represent either estimates at the bid ready design or actual construction bids for all projects. These costs may change based upon site conditions and additional bids received. Early work for this project began under ESP S-637.01 Little Anacostia WWPS & FM Study.</p> <p>COORDINATION</p> <p>Coordinating Agencies: Prince George's County Government Coordinating Projects: Not Applicable</p> |
|--|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|-------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$601 | 23 |
| Total Cost | \$601 | 23 |
| Impact on Water and Sewer Rate | | |

F. Approval and Expenditure Data (000's)

| | |
|------------------------------|-------|
| Date First in Program | FY 22 |
| Date First Approved | FY 22 |
| Initial Cost Estimate | 9,239 |
| Cost Estimate Last FY | |
| Present Cost Estimate | 9,239 |
| Approved Request Last FY | |
| Total Expense & Encumbrances | 3,716 |
| Approval Request Year 1 | 1,370 |

G. Status Information

| | |
|---------------------------|--------------------------|
| Land Status | Public/Agency owned land |
| Project Phase | Construction |
| Percent Complete | 10 % |
| Estimated Completion Date | October 2021 |
| Growth | |
| System Improvement | 100% |
| Environmental Regulation | |
| Population Served | |
| Capacity | 3.3 MGD |

H. Map

| |
|----------------------------------|
| <p>MAP NOT APPLICABLE</p> |
|----------------------------------|

Piscataway WRRF Facility Upgrades

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

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|----------------|---------------|----------------|---------------|---------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 27,523 | 15,463 | 5,580 | 6,480 | 5,650 | 700 | 130 | | | | |
| Land | | | | | | | | | | | |
| Construction | 136,843 | 39,643 | 54,400 | 42,800 | 36,400 | 5,400 | 1,000 | | | | |
| Other | 5,464 | | 2,999 | 2,465 | 2,103 | 305 | 57 | | | | |
| Total | 169,830 | 55,106 | 62,979 | 51,745 | 44,153 | 6,405 | 1,187 | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|---------|--------|--------|--------|--------|-------|-------|--|--|--|--|
| WSSC Bonds | 169,830 | 55,106 | 62,979 | 51,745 | 44,153 | 6,405 | 1,187 | | | | |
|------------|---------|--------|--------|--------|--------|-------|-------|--|--|--|--|

D. Description & Justification

| |
|--|
| <p>DESCRIPTION</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>JUSTIFICATION</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 Water's Asset Management Strategy guidelines, based on life cycle costs, business risk exposure, and needs prioritization. Piscataway WRRF Asset Management Plan, GHD, Inc. (March 2011); Piscataway WRRF Facility Plan, AECOM (January 2014); Wastewater Treatment System Asset Management Plan (December 2016).</p> <p>COST CHANGE</p> <p>Construction costs have increased for the Electrical Upgrades, Secondary Clarifier, Raw Wastewater Pump Station, and Effluent Filters based on actual bids received and updated Engineer Estimates on bid ready designs.</p> <p>OTHER</p> <p>The project scope has remained the same. Expenditure and schedule projections shown in Block B represent either estimates at the bid ready design or actual construction bids for all projects. These costs may change based upon site conditions and additional bids received. The Office of Asset Management has determined the priority of the recommended projects.</p> <p>COORDINATION</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 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 & Implementation</p> |
|--|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|----------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$11,048 | 25 |
| Total Cost | \$11,048 | 25 |
| Impact on Water and Sewer Rate | \$0.02 | 25 |

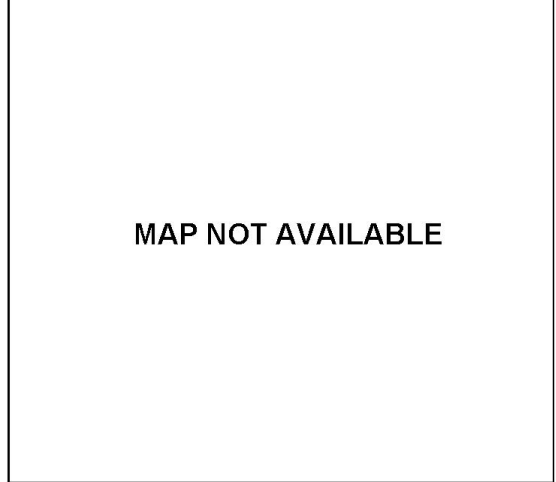
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|---------|
| Date First in Program | FY 12 |
| Date First Approved | FY 12 |
| Initial Cost Estimate | 66,396 |
| Cost Estimate Last FY | 160,304 |
| Present Cost Estimate | 169,830 |
| Approved Request Last FY | 28,284 |
| Total Expense & Encumbrances | 55,106 |
| Approval Request Year 1 | 44,153 |

G. Status Information

| | |
|---------------------------|--------------------------|
| Land Status | Public/Agency owned land |
| Project Phase | Construction |
| Percent Complete | 20 % |
| Estimated Completion Date | December 2023 |
| Growth | |
| System Improvement | 100% |
| Environmental Regulation | |
| Population Served | |
| Capacity | 30 MGD |

H. Map



Viva White Oak Sewer Augmentation

| A. Identification and Coding Information | | |
|--|----------------|-------------|
| Agency Number | Project Number | Update Code |
| S - 000118.10 | | Add |

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

| | |
|-----------------|---|
| Pressure Zones | |
| Drainage Basins | Paint Branch 2 |
| Planning Areas | Colesville-White Oak & Vicinity PA 33; Fairland-Beltsville (PG) |

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 187 | | | 187 | 75 | 47 | 28 | 19 | 9 | 9 | |
| Land | | | | | | | | | | | |
| Construction | 753 | | | 753 | 301 | 188 | 113 | 75 | 38 | 38 | |
| Other | 140 | | | 140 | 56 | 35 | 21 | 14 | 7 | 7 | |
| Total | 1,080 | | | 1,080 | 432 | 270 | 162 | 108 | 54 | 54 | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|-------|--|--|-------|-----|-----|-----|-----|----|----|--|
| Contributions/Other | 1,080 | | | 1,080 | 432 | 270 | 162 | 108 | 54 | 54 | |
|---------------------|-------|--|--|-------|-----|-----|-----|-----|----|----|--|

D. Description & Justification

DESCRIPTION
 This project provides for the planning, design, and construction of 2,500 feet of 24-inch and 30-inch diameter sewer mains. These sewers will replace existing 21-inch and 27-inch diameter sewer mains in the Paint Branch Basin downstream of the West Farm Creek Tributary and terminate at Powder Mill Road.

JUSTIFICATION
 Viva White Oak Hydraulic Planning Analysis (July 2019).

COST CHANGE
 Not applicable.

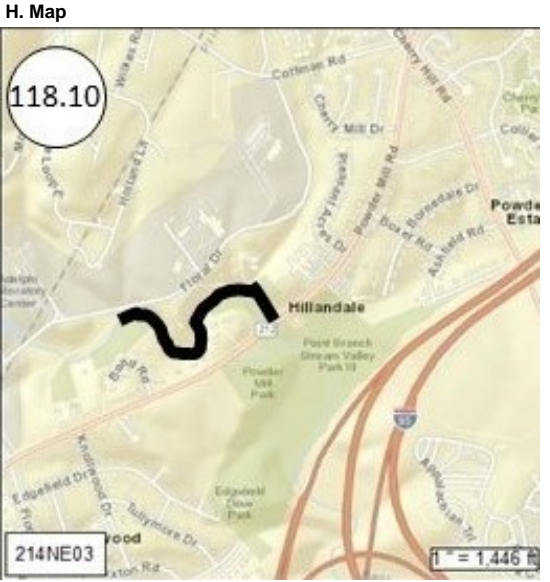
OTHER
 The present project scope was developed for the FY2022 CIP and has an estimated cost of \$1,080,000. The expenditures and schedule projections shown in Block B above are based upon information provided by the developer. The estimated completion date is developer dependent. No WSSC Water rate supported 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 Department of Permitting Inspection and Enforcement
 Coordinating Projects: S - 000118.09 - Viva White Oak Sewer Main; W - 000113.21 - Viva White Oak Water 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 22 |
| Date First Approved | FY 22 |
| Initial Cost Estimate | 1,080 |
| Cost Estimate Last FY | |
| Present Cost Estimate | 1,080 |
| Approved Request Last FY | |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 432 |

| G. Status Information | |
|---------------------------|---------------------|
| Land Status | Not Applicable |
| Project Phase | Planning |
| Percent Complete | 0 % |
| Estimated Completion Date | Developer Dependent |
| Growth | 100% |
| System Improvement | |
| Environmental Regulation | |
| Population Served | |
| Capacity | 11.5 MGD |



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, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 189 | 49 | 65 | 75 | 58 | 10 | 7 | | | | |
| Land | | | | | | | | | | | |
| Construction | 653 | | 125 | 528 | 317 | 145 | 66 | | | | |
| Other | 120 | | 29 | 91 | 57 | 24 | 10 | | | | |
| Total | 962 | 49 | 219 | 694 | 432 | 179 | 83 | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|-----|----|-----|-----|-----|-----|----|--|--|--|--|
| Contributions/Other | 962 | 49 | 219 | 694 | 432 | 179 | 83 | | | | |
|---------------------|-----|----|-----|-----|-----|-----|----|--|--|--|--|

D. Description & Justification

| |
|--|
| <p>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.</p> <p>JUSTIFICATION Estates of Pleasant Valley Hydraulic Planning Analysis (Amended March 2010).</p> <p>COST CHANGE Not applicable.</p> <p>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 Water rate supported debt will be used for this project.</p> <p>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</p> |
|--|

| 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 | | |

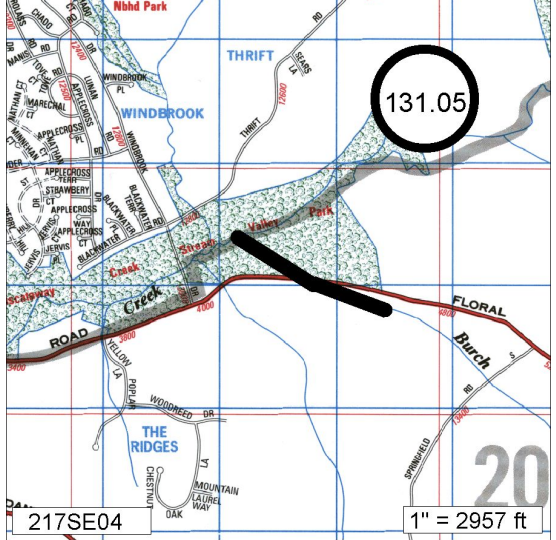
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|-------|
| Date First in Program | FY 05 |
| Date First Approved | FY 05 |
| Initial Cost Estimate | 586 |
| Cost Estimate Last FY | 910 |
| Present Cost Estimate | 962 |
| Approved Request Last FY | 419 |
| Total Expense & Encumbrances | 49 |
| Approval Request Year 1 | 432 |

G. Status Information

| | |
|---------------------------|---------------------|
| Land Status | Not Applicable |
| 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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 383 | 73 | 169 | 141 | 116 | 25 | | | | | |
| Land | | | | | | | | | | | |
| Construction | 1,262 | | 274 | 988 | 805 | 183 | | | | | |
| Other | 237 | | 67 | 170 | 139 | 31 | | | | | |
| Total | 1,882 | 73 | 510 | 1,299 | 1,060 | 239 | | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|-------|----|-----|-------|-------|-----|--|--|--|--|--|
| Contributions/Other | 1,882 | 73 | 510 | 1,299 | 1,060 | 239 | | | | | |
|---------------------|-------|----|-----|-------|-------|-----|--|--|--|--|--|

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 Water rate supported debt will be used for this project.

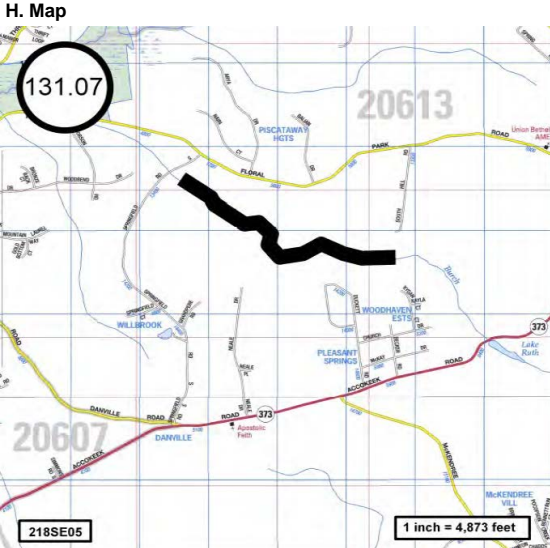
COORDINATION
 Coordinating Agencies: Maryland-National Capital Park & Planning Commission; Potomac Electric Power Company; Prince George's County Government
 Coordinating Projects: S - 000131.05 - Pleasant Valley Sewer Main, Part 2

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|-------|--------------|
| Staff & Other | | |
| Maintenance | \$204 | |
| Debt Service | | |
| Total Cost | \$204 | |
| 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 | 1,854 |
| Present Cost Estimate | 1,882 |
| Approved Request Last FY | 1,029 |
| Total Expense & Encumbrances | 73 |
| Approval Request Year 1 | 1,060 |

| G. Status Information | |
|---------------------------|---------------------|
| Land Status | Not Applicable |
| 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 |



Calm Retreat Sewer Main

| A. Identification and Coding Information | | |
|--|----------------|-------------|
| Agency Number | Project Number | Update Code |
| S - 000131.11 | | Add |

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

| | |
|-----------------|------------------------------|
| Pressure Zones | |
| Drainage Basins | Mattawoman 21 |
| Planning Areas | Brandywine & Vicinity PA 85A |

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 353 | | | 353 | 318 | 35 | | | | | |
| Land | | | | | | | | | | | |
| Construction | 481 | | | 481 | 433 | 48 | | | | | |
| Other | 147 | | | 147 | 132 | 15 | | | | | |
| Total | 981 | | | 981 | 883 | 98 | | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|-----|--|--|-----|-----|----|--|--|--|--|--|
| Contributions/Other | 981 | | | 981 | 883 | 98 | | | | | |
|---------------------|-----|--|--|-----|-----|----|--|--|--|--|--|

D. Description & Justification

| |
|---|
| <p>DESCRIPTION This project provides for the planning, design and construction of 2,914 feet of 15-inch diameter sewer main to serve the Calm Retreat Subdivision.</p> <p>JUSTIFICATION Milestone- Letter of Finding Issued (May 2020)</p> <p>COST CHANGE Not applicable.</p> <p>OTHER The present project scope was developed for the FY2022 CIP and has an estimated cost of \$981,000. 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 Water rate supported debt will be used for this project.</p> <p>COORDINATION Coordinating Agencies: Maryland-National Capital Park & 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 | \$59 | |
| Debt Service | | |
| Total Cost | \$59 | |
| Impact on Water and Sewer Rate | | |

F. Approval and Expenditure Data (000's)

| | |
|------------------------------|-------|
| Date First in Program | FY 22 |
| Date First Approved | FY 22 |
| Initial Cost Estimate | |
| Cost Estimate Last FY | |
| Present Cost Estimate | 981 |
| Approved Request Last FY | |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 883 |

G. Status Information

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

H. Map



Swan Creek WWPS & FM

| A. Identification and Coding Information | | |
|--|----------------|-------------|
| Agency Number | Project Number | Update Code |
| S - 000131.12 | | Add |

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

| | |
|-----------------|----------------------------|
| Pressure Zones | |
| Drainage Basins | Piscataway Creek 4 |
| Planning Areas | South Potomac Sector PA 80 |

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|--------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 2,393 | 1,336 | 987 | 70 | 70 | | | | | | |
| Land | | | | | | | | | | | |
| Construction | 8,991 | 2,027 | 4,154 | 2,810 | 1,560 | 1,250 | | | | | |
| Other | 802 | | 514 | 288 | 163 | 125 | | | | | |
| Total | 12,186 | 3,363 | 5,655 | 3,168 | 1,793 | 1,375 | | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|--------|-------|-------|-------|-------|-------|--|--|--|--|--|
| WSSC Bonds | 12,186 | 3,363 | 5,655 | 3,168 | 1,793 | 1,375 | | | | | |
|------------|--------|-------|-------|-------|-------|-------|--|--|--|--|--|

D. Description & Justification

| |
|---|
| <p>DESCRIPTION</p> <p>This project provides for the planning, design and construction of the modifications to the existing 3.90 MGD wastewater pumping station, and replacement of approximately 5,500 feet of existing force main.</p> <p>JUSTIFICATION</p> <p>The existing pumping station and 24-inch diameter PCCP force main were built in 1966 and have reached the end of their useful life. Replacement parts are obsolete and unavailable.</p> <p>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</p> <p>The present project scope was developed for the FY2022 CIP and has an estimated total cost of \$12,186,000. The expenditures and schedule projections shown in Block B are based on planning level estimates and actual bid costs and may change based upon site conditions and design constraints. Force main replacement costs are based on preliminary planning level estimates. WWPS costs are based on actual design and construction bids. Early work on Swan Creek WWPS Upgrades began in FY'16 under ESP project S-653.01, Swan Creek Facility Evaluation and Pump Replacement.</p> <p>COORDINATION</p> <p>Coordinating Agencies: Maryland Department of the Environment; Maryland State Highway Administration; Maryland-National Capital Park & Planning Commission; Prince George's County Department of Public Works and Transportation; Prince George's County Department of Permitting Inspection and Enforcement</p> <p>Coordinating Projects: Not Applicable</p> |
|---|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|-------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$793 | 24 |
| Total Cost | \$793 | 24 |
| Impact on Water and Sewer Rate | | |

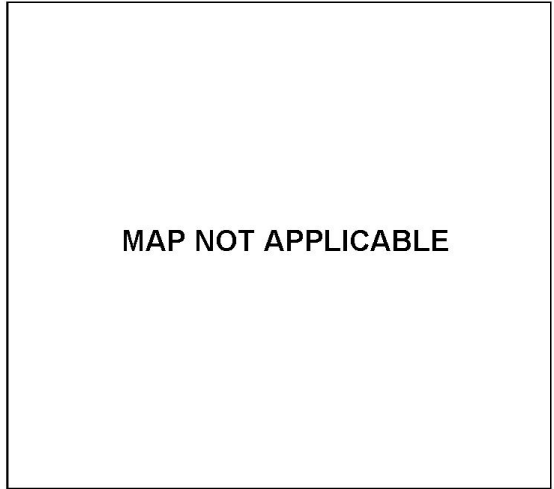
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|--------|
| Date First in Program | FY 22 |
| Date First Approved | FY 22 |
| Initial Cost Estimate | 12,186 |
| Cost Estimate Last FY | |
| Present Cost Estimate | 12,186 |
| Approved Request Last FY | |
| Total Expense & Encumbrances | 3,363 |
| Approval Request Year 1 | 1,793 |

G. Status Information

| | |
|---------------------------|--------------------------|
| Land Status | Public/Agency owned land |
| Project Phase | Construction |
| Percent Complete | 20 % |
| Estimated Completion Date | June 2023 |
| Growth | |
| System Improvement | 100% |
| Environmental Regulation | |
| Population Served | |
| Capacity | 3.9 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, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|--------------|----------------|---------------|--------------|---------------|---------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 13,120 | 1,340 | 2,015 | 9,765 | 2,560 | 2,430 | 2,250 | 1,560 | 750 | 215 | |
| Land | | | | | | | | | | | |
| Construction | 43,858 | | 750 | 43,108 | 4,000 | 14,125 | 13,900 | 6,758 | 3,700 | 625 | |
| Other | 5,565 | | 277 | 5,288 | 656 | 1,656 | 1,615 | 832 | 445 | 84 | |
| Total | 62,543 | 1,340 | 3,042 | 58,161 | 7,216 | 18,211 | 17,765 | 9,150 | 4,895 | 924 | |

C. Funding Schedule (000's)

| | | | | | | | | | | |
|------------|--------|-------|-------|--------|-------|--------|--------|-------|-------|-----|
| WSSC Bonds | 62,543 | 1,340 | 3,042 | 58,161 | 7,216 | 18,211 | 17,765 | 9,150 | 4,895 | 924 |
|------------|--------|-------|-------|--------|-------|--------|--------|-------|-------|-----|

D. Description & Justification

| |
|---|
| <p>DESCRIPTION</p> <p>This project provides for the planning, design, and construction of improvements at the Western Branch WRRF required to replace the influent flow splitter box and main electrical substation; to rehabilitate aging concrete treatment structures and tertiary filters; and to upgrade clarifier equipment, the potable water system, and the solids truck loading operations.</p> <p>JUSTIFICATION</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 reactors, clarifiers and filters. Medium voltage electrical distribution equipment is at the end of its useful life, replacement parts are obsolete, and repair/maintenance represents a safety risk. The potable water well and distribution system is over 50 years old and requires replacement and upgrade. This replacement, rehabilitation, and upgrade work was recommended by various business case evaluations undertaken as part of WSSC Water's Asset Management Program.</p> <p>COST CHANGE</p> <p>The expenditures and schedule have been updated to reflect the revised scope of the project.</p> <p>OTHER</p> <p>The project scope has been revised to include other process improvements and rehabilitation of aging equipment at the Western Branch WRRF that were identified and validated through WSSC Water's Asset Management Program. 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. Early work began under multiple ESP projects.</p> <p>COORDINATION</p> <p>Coordinating Agencies: Maryland Department of the Environment; Prince George's County Government Coordinating Projects: Not Applicable</p> |
|---|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|---------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$4,068 | 28 |
| Total Cost | \$4,068 | 28 |
| Impact on Water and Sewer Rate | | |

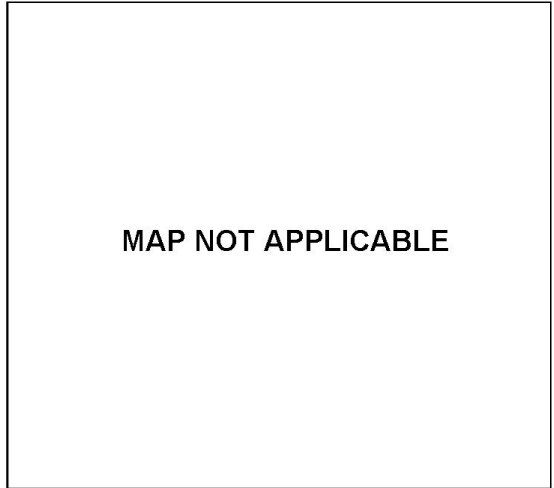
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|--------|
| Date First in Program | FY 20 |
| Date First Approved | FY 20 |
| Initial Cost Estimate | 14,859 |
| Cost Estimate Last FY | 14,859 |
| Present Cost Estimate | 62,543 |
| Approved Request Last FY | 880 |
| Total Expense & Encumbrances | 1,340 |
| Approval Request Year 1 | 7,216 |

G. Status Information

| | |
|---------------------------|--------------------------|
| Land Status | Public/Agency owned land |
| Project Phase | Design |
| Percent Complete | 2 % |
| Estimated Completion Date | June 2027 |
| Growth | |
| System Improvement | 100% |
| Environmental Regulation | |
| Population Served | |
| Capacity | 30.6 MGD |

H. Map



PENDING CLOSE-OUT PROJECT LISTING
PRINCE GEORGE'S COUNTY SEWER PROJECTS
 (ALL FIGURES IN THOUSANDS)

| Agency Number | Project Name | Estimated Total Cost | Expenditures Thru FY'20 | Estimated Expenditures FY'21 | Remarks |
|---------------|--|----------------------|-------------------------|------------------------------|---------------------------------------|
| S-43.02 | Broad Creek WWPS Augmentation | \$183,190 | \$181,825 | \$1,365 | Project completion expected in FY'21. |
| S-131.10 | Fort Washington Forest No. 1 WWPS Augmentation | 4,558 | 4,558 | 0 | Project completed. |
| | TOTALS | \$187,748 | \$186,383 | \$1,365 | |

Section 7 - Information Only Projects

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

INFORMATION ONLY PROJECTS

| AGENCY NUMBER | PROJECT NAME | EST. TOTAL COST | EXPEND THRU 20 | EST. EXPEND 21 | TOTAL SIX YEARS | EXPENDITURE SCHEDULE | | | | | | BEYOND SIX YEARS | PAGE NUM |
|---------------|---|-----------------|----------------|----------------|-----------------|----------------------|---------|---------|---------|---------|---------|------------------|----------|
| | | | | | | YR 1 22 | YR 2 23 | YR 3 24 | YR 4 25 | YR 5 26 | YR 6 27 | | |
| W-1.00 | Water Reconstruction Program | 798,631 | 0 | 72,105 | 726,526 | 83,563 | 98,645 | 112,801 | 128,392 | 143,484 | 159,641 | 0 | 7-2 |
| S-1.01 | Sewer Reconstruction Program | 482,660 | 0 | 77,258 | 405,402 | 71,083 | 69,344 | 63,335 | 65,236 | 67,195 | 69,209 | 0 | 7-3 |
| A-101.04 | Laboratory Division Building Expansion | 22,478 | 724 | 1,870 | 19,884 | 9,482 | 9,680 | 722 | 0 | 0 | 0 | 0 | 7-4 |
| A-102.00 | Engineering Support Program | 125,000 | 0 | 9,000 | 116,000 | 18,000 | 18,000 | 20,000 | 20,000 | 20,000 | 20,000 | 0 | 7-5 |
| A-103.00 | Energy Performance Program | 16,015 | 0 | 3,938 | 12,077 | 3,576 | 4,376 | 2,750 | 1,375 | 0 | 0 | 0 | 7-6 |
| W-105.00 | Water Storage Facility Rehabilitation Program | 34,000 | 0 | 2,000 | 32,000 | 3,000 | 4,000 | 5,000 | 6,000 | 7,000 | 7,000 | 0 | 7-7 |
| W-107.00 | Specialty Valve Vault Rehabilitation Program | 7,179 | 0 | 1,185 | 5,994 | 2,252 | 1,248 | 1,302 | 457 | 335 | 400 | 0 | 7-8 |
| A-109.00 | Advanced Metering Infrastructure | 102,591 | 1,101 | 3,128 | 98,362 | 21,288 | 31,805 | 31,805 | 13,464 | 0 | 0 | 0 | 7-9 |
| A-110.00 | Other Capital Programs | 466,501 | 0 | 63,451 | 403,050 | 53,738 | 54,818 | 63,069 | 71,319 | 78,920 | 81,186 | 0 | 7-10 |
| S-300.01 | D'Arcy Park North Relief Sewer | 941 | 91 | 275 | 575 | 290 | 285 | 0 | 0 | 0 | 0 | 0 | 7-11 |
| TOTALS | | 2,055,996 | 1,916 | 234,210 | 1,819,870 | 266,272 | 292,201 | 300,784 | 306,243 | 316,934 | 337,436 | 0 | |

Water Reconstruction Program

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

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|----------------|------------|----------------|----------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|
| Planning, Design & Supervision | 110,227 | | 10,928 | 99,299 | 10,935 | 13,144 | 14,839 | 17,945 | 20,008 | 22,428 | |
| Land | | | | | | | | | | | |
| Construction | 586,646 | | 50,763 | 535,883 | 61,306 | 72,696 | 83,466 | 94,410 | 105,936 | 118,069 | |
| Other | 101,758 | | 10,414 | 91,344 | 11,322 | 12,805 | 14,496 | 16,037 | 17,540 | 19,144 | |
| Total | 798,631 | | 72,105 | 726,526 | 83,563 | 98,645 | 112,801 | 128,392 | 143,484 | 159,641 | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|---------|--|--------|---------|--------|--------|---------|---------|---------|---------|--|
| WSSC Bonds | 798,631 | | 72,105 | 726,526 | 83,563 | 98,645 | 112,801 | 128,392 | 143,484 | 159,641 | |
|------------|---------|--|--------|---------|--------|--------|---------|---------|---------|---------|--|

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 2022 are as follows: design and construction of main replacement and associated water house connection renewals, 31.4 miles - \$66.4M; cathodic protection - \$1.2M; design and construction of large water service replacements - \$10.2M; emergency contracts at depots - \$5.2M; pipe armoring - \$0.6M. Note: The specific mix and type of water main reconstruction may vary in any given year depending on the nature and priority of the work to be addressed. 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 2022 Enterprise Asset Management Plan, the number of miles of water main replacement will begin to ramp back up approximately 5 miles per year.
 Flow studies, water system modeling, and field surveys are routinely conducted. The annual Buried Water Assets System Asset Management Plan identifies the business risk exposure of the water distribution system. FY 2022 Enterprise Asset Management Plan (May 2020).

COST CHANGE
 Program costs reflect the latest expenditure and schedule estimates based on the recommendations from the FY 2022 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 2019 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. WSSC Water Green Bonds issued in December 2019 will be utilized to fund a portion of this project. The annual replacement of small diameter water mains will address the following International Capital Market Association (ICMA) Green Bond Principles 2016 category: Sustainable water management.

COORDINATION
 Coordinating Agencies: Local Community Civic Associations; Maryland State Highway Administration; 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 | \$51,952 | |
| Total Cost | \$51,952 | |
| 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 | 721,454 |
| Present Cost Estimate | 798,631 |
| Approved Request Last FY | 72,494 |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 83,563 |

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

| | |
|--------------------------|------|
| Growth | |
| System Improvement | 100% |
| Environmental Regulation | |
| Population Served | |
| Capacity | |

H. Map

MAP NOT APPLICABLE

Sewer Reconstruction Program

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

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|----------------|------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Planning, Design & Supervision | 39,769 | | 7,690 | 32,079 | 8,374 | 4,911 | 4,492 | 4,627 | 4,766 | 4,909 | |
| Land | | | | | | | | | | | |
| Construction | 399,010 | | 62,545 | 336,465 | 56,244 | 58,130 | 53,084 | 54,679 | 56,321 | 58,007 | |
| Other | 43,881 | | 7,023 | 36,858 | 6,465 | 6,303 | 5,759 | 5,930 | 6,108 | 6,293 | |
| Total | 482,660 | | 77,258 | 405,402 | 71,083 | 69,344 | 63,335 | 65,236 | 67,195 | 69,209 | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|---------|--|--------|---------|--------|--------|--------|--------|--------|--------|--|
| WSSC Bonds | 342,660 | | 57,258 | 285,402 | 51,083 | 49,344 | 43,335 | 45,236 | 47,195 | 49,209 | |
| State Aid | 140,000 | | 20,000 | 120,000 | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 | |

D. Description & Justification

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

JUSTIFICATION
 The projected work units and expenditure levels for FY '22 are as follows: 20 miles of mainline design & construction - \$28.4M; 6 miles of lateral line construction and associated sewer house connection renewals - \$24.0M; emergency repairs - \$2.3M; Piscataway rehabilitation - \$16.4M. Note: The specific mix and type of sewer reconstruction may vary in any given year depending on identified system defects. Projections are based on historical experience with regards to timing of design and construction work and availability of authorized contractors.
 Comprehensive Basin Studies, Sewer System Evaluation Surveys, Line Blockage Assessments, field surveys, closed-circuit TV inspections, and/or other activities investigating specific portions of the collection system. Annual Buried Wastewater Assets System Asset Management Plan. FY 2022 Enterprise Asset Management Plan (May 2020).

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 and the rehabilitation work in the Piscataway Basin.

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 between WSSC Water, Maryland Department of the Environment (MDE), and the EPA, entered into on December 7, 2005. WSSC Water has applied for low interest loans through the MDE's Water Quality Administration State Revolving Loan Program and grant funding from the MDE Bay Restoration Fund for portions of this program. The sewer reconstruction program was established in 1979. Expenditures for grouting repairs are included in the operating budget. The following work accomplishments through FY '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 | \$22,291 | |
| Total Cost | \$22,291 | |
| 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 | 425,442 |
| Present Cost Estimate | 482,660 |
| Approved Request Last FY | 55,495 |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 71,083 |

G. Status Information

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

| | |
|--------------------------|------|
| Growth | |
| System Improvement | 100% |
| Environmental Regulation | |
| Population Served | |
| Capacity | |

H. Map

MAP NOT APPLICABLE

Laboratory Division Building Expansion

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

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

| | |
|-----------------|--|
| Pressure Zones | |
| Drainage Basins | |
| Planning Areas | |

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 4,502 | 724 | 1,700 | 2,078 | 1,120 | 800 | 158 | | | | |
| Land | | | | | | | | | | | |
| Construction | 15,998 | | | 15,998 | 7,500 | 8,000 | 498 | | | | |
| Other | 1,978 | | 170 | 1,808 | 862 | 880 | 66 | | | | |
| Total | 22,478 | 724 | 1,870 | 19,884 | 9,482 | 9,680 | 722 | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|--------|-----|-------|--------|-------|-------|-----|--|--|--|--|
| WSSC Bonds | 22,478 | 724 | 1,870 | 19,884 | 9,482 | 9,680 | 722 | | | | |
|------------|--------|-----|-------|--------|-------|-------|-----|--|--|--|--|

D. Description & Justification

| |
|---|
| <p>DESCRIPTION</p> <p>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 Water's employees and customers.</p> <p>JUSTIFICATION</p> <p>WSSC Water'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. Since the lab was built in 2000, WSSC Water 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.</p> <p>Currently, WSSC Water 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 Water 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 Water. Additionally, increased analytical time involved with subcontract analysis may delay response to critical water contamination events, which could jeopardize the safety of WSSC Water'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).</p> <p>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</p> <p>The project scope has remained the same. The schedule and expenditure projections shown in Block B above are planning level estimates and may change based upon site conditions and design constraints. The Water Quality Division is 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.</p> <p>COORDINATION</p> <p>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</p> |
|---|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|---------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$1,462 | 25 |
| Total Cost | \$1,462 | 25 |
| Impact on Water and Sewer Rate | | |

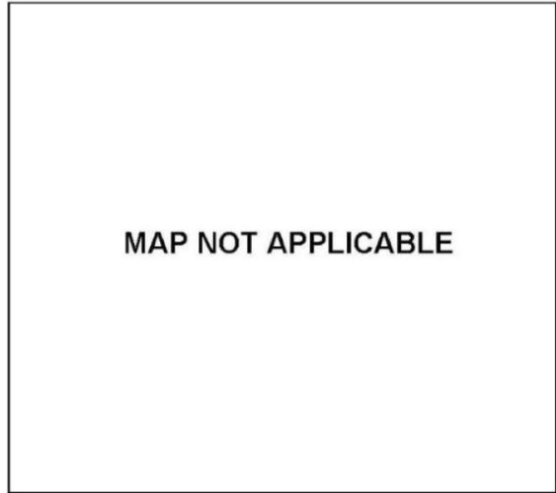
F. Approval and Expenditure Data (000's)

| | |
|------------------------------|--------|
| Date First in Program | FY 21 |
| Date First Approved | FY 21 |
| Initial Cost Estimate | 21,844 |
| Cost Estimate Last FY | 1,243 |
| Present Cost Estimate | 22,478 |
| Approved Request Last FY | 1,276 |
| Total Expense & Encumbrances | 724 |
| Approval Request Year 1 | 9,482 |

G. Status Information

| | |
|---------------------------|--------------------------|
| Land Status | Public/Agency owned land |
| Project Phase | Design |
| Percent Complete | 0 % |
| Estimated Completion Date | August 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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|----------------|------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Planning, Design & Supervision | | | | | | | | | | | |
| Land | | | | | | | | | | | |
| Construction | 112,000 | | 8,000 | 104,000 | 16,000 | 16,000 | 18,000 | 18,000 | 18,000 | 18,000 | |
| Other | 13,000 | | 1,000 | 12,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | |
| Total | 125,000 | | 9,000 | 116,000 | 18,000 | 18,000 | 20,000 | 20,000 | 20,000 | 20,000 | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|---------|--|-------|---------|--------|--------|--------|--------|--------|--------|--|
| WSSC Bonds | 125,000 | | 9,000 | 116,000 | 18,000 | 18,000 | 20,000 | 20,000 | 20,000 | 20,000 | |
|------------|---------|--|-------|---------|--------|--------|--------|--------|--------|--------|--|

D. Description & Justification

| |
|---|
| <p>DESCRIPTION</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 WSSC Water. *EXPENDITURES FOR ENGINEERING SUPPORT ARE EXPECTED TO CONTINUE INDEFINITELY.</p> <p>JUSTIFICATION</p> <p>ESP projects are identified primarily through WSSC Water'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 WSSC Water's Six-Year Capital Improvements Program or projects to serve new development.</p> <p>Asset Management Implementation Plan, Stearns & Wheler (April 2008) FY 2022 Enterprise Asset Management Plan (May 2020).</p> <p>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</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>COORDINATION</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 | \$8,131 | |
| Total Cost | \$8,131 | |
| Impact on Water and Sewer Rate | \$0.02 | |

F. Approval and Expenditure Data (000's)

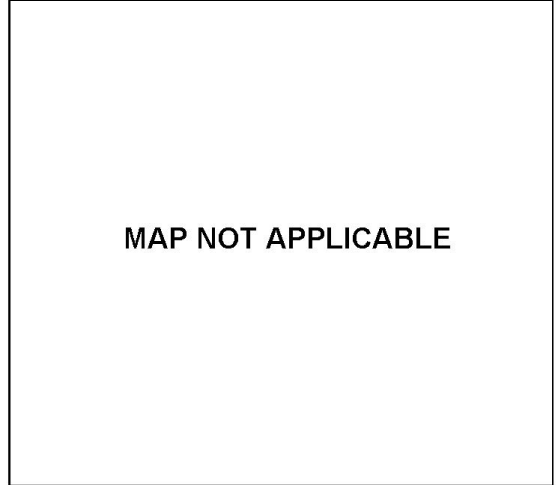
| | |
|------------------------------|---------|
| Date First in Program | FY 87 |
| Date First Approved | FY 87 |
| Initial Cost Estimate | |
| Cost Estimate Last FY | 132,000 |
| Present Cost Estimate | 125,000 |
| Approved Request Last FY | 18,000 |
| Total Expense & Encumbrances | |
| Approval Request 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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 2,881 | | 653 | 2,228 | 800 | 678 | 500 | 250 | | | |
| Land | | | | | | | | | | | |
| Construction | 11,677 | | 2,927 | 8,750 | 2,450 | 3,300 | 2,000 | 1,000 | | | |
| Other | 1,457 | | 358 | 1,099 | 326 | 398 | 250 | 125 | | | |
| Total | 16,015 | | 3,938 | 12,077 | 3,576 | 4,376 | 2,750 | 1,375 | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|--------|--|-------|--------|-------|-------|-------|-------|--|--|--|
| WSSC Bonds | 15,715 | | 3,638 | 12,077 | 3,576 | 4,376 | 2,750 | 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 to reduce energy consumption and costs (electricity, fuel oil, natural gas, or other fuel) at all WSSC Water facilities. 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. Projects 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 project before the energy conservation measures are implemented and then compared to the actual energy savings to quantify the savings.

JUSTIFICATION

Previous projects were implemented through various Energy Services Companies (ESCO) and Power Purchase Agreement (PPA) procurements. Detailed engineering audits, supply analysis, engineering, and planning of equipment and operations upgrades were undertaken to develop an energy efficient and guaranteed savings program. Implementation 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 facilities as well as offices and depots. Phase F includes LED lighting upgrades at the RGH building, Potomac, Patuxent, Parkway, Seneca, Piscataway and Damascus facilities, Anacostia and Gaithersburg Depots and Mill Branch, Hyattsville and Horsepen WWPSs; and also include building envelope upgrades and HVAC controls tuning. Energy efficiency rebates are anticipated from BGE and PEPCO, totaling \$300,000. Phase II-F projects will be the last utilizing the ESCO contracting mechanism. The remaining projects: Piscataway WRRF Aeration system upgrades; Piscataway mixer replacement / upgrade; Potomac WFP LCI Drives replacement; Western Branch WRRF mixer replacement / upgrade and utility water upgrades; and the addition of a jockey blower at Damascus WRRF are moving forward as standalone projects implemented by WSSC Water. Parkway WRRF mixer replacements were completed in FY 2020 and funded by an MDE Energy Water Infrastructure Program grant. WSSC Water will continue to identify energy savings efforts through the implementation of energy audit calculations and methods developed as part of the program. All future projects will be validated via the AMP Project Needs Validation Process.

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 as well as through the Maryland Department of the Environment Energy Water Infrastructure Grant Program.

COORDINATION

Coordinating Agencies: Maryland Department of the Environment; 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 | \$1,022 | |
| Total Cost | \$1,022 | |
| Impact on Water and Sewer Rate | | |

F. Approval and Expenditure Data (000's)

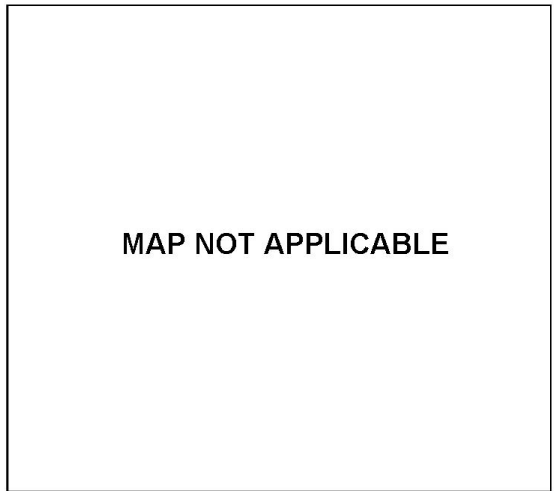
| | |
|------------------------------|--------|
| Date First in Program | FY 03 |
| Date First Approved | FY 03 |
| Initial Cost Estimate | |
| Cost Estimate Last FY | 20,236 |
| Present Cost Estimate | 16,015 |
| Approved Request Last FY | 7,595 |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 3,576 |

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, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|---------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 7,000 | | 1,000 | 6,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| Land | | | | | | | | | | | |
| Construction | 23,909 | | 818 | 23,091 | 1,727 | 2,636 | 3,545 | 4,455 | 5,364 | 5,364 | |
| Other | 3,091 | | 182 | 2,909 | 273 | 364 | 455 | 545 | 636 | 636 | |
| Total | 34,000 | | 2,000 | 32,000 | 3,000 | 4,000 | 5,000 | 6,000 | 7,000 | 7,000 | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|--------|--|-------|--------|-------|-------|-------|-------|-------|-------|--|
| WSSC Bonds | 34,000 | | 2,000 | 32,000 | 3,000 | 4,000 | 5,000 | 6,000 | 7,000 | 7,000 | |
|------------|--------|--|-------|--------|-------|-------|-------|-------|-------|-------|--|

D. Description & Justification

| |
|---|
| <p>DESCRIPTION</p> <p>The Water Storage Facility Rehabilitation Program provides for the comprehensive rehabilitation of WSSC Water's more than 60 water storage facilities located throughout WSSC Water service area holding over 200 million gallons of finished drinking water. The Program provides for structural metal and concrete foundation repairs, equipment upgrades to meet current OSHA standards, lead paint removal, security upgrades, advanced mixing systems to improve water quality, and altitude valve vault and supply pipe replacements.</p> <p>JUSTIFICATION</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>COST CHANGE</p> <p>Program costs have been updated to reflect the accelerated schedule for the remaining tanks in the program.</p> <p>OTHER</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 '22 will include the following water storage facilities: North Woodside Standpipe, Pointer Ridge Elevated Tank, Greenbelt Standpipe, Andrews Elevated Tank, Wall Lane Standpipe, Brink Elevated Tank, and Cedar Heights Reservoir.</p> <p>COORDINATION</p> <p>Coordinating Agencies: Montgomery County Government; Prince George's County Government Coordinating Projects: Not Applicable</p> |
|---|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|---------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$2,212 | |
| Total Cost | \$2,212 | |
| 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 | 18,700 |
| Present Cost Estimate | 34,000 |
| Approved Request Last FY | 1,650 |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 3,000 |

| 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 | |

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

Specialty Valve Vault Rehabilitation Program

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

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|--------------|------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 1,619 | | 413 | 1,206 | 414 | 233 | 292 | 128 | 98 | 41 | |
| Land | | | | | | | | | | | |
| Construction | 4,628 | | 618 | 4,010 | 1,545 | 853 | 841 | 270 | 194 | 307 | |
| Other | 932 | | 154 | 778 | 293 | 162 | 169 | 59 | 43 | 52 | |
| Total | 7,179 | | 1,185 | 5,994 | 2,252 | 1,248 | 1,302 | 457 | 335 | 400 | |

C. Funding Schedule (000's)

| | | | | | | | | | | |
|------------|-------|--|-------|-------|-------|-------|-------|-----|-----|-----|
| WSSC Bonds | 7,179 | | 1,185 | 5,994 | 2,252 | 1,248 | 1,302 | 457 | 335 | 400 |
|------------|-------|--|-------|-------|-------|-------|-------|-----|-----|-----|

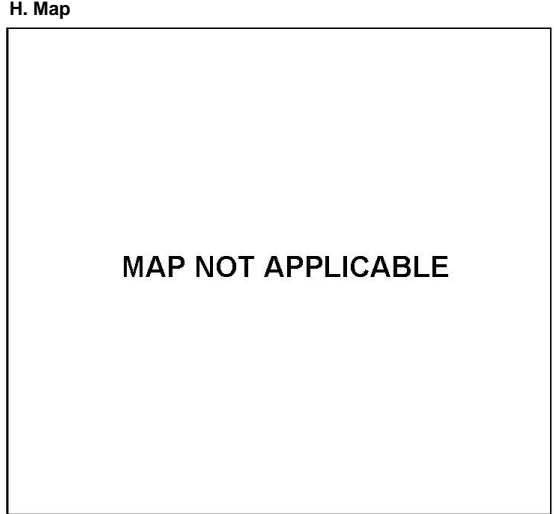
D. Description & Justification

| |
|---|
| <p>DESCRIPTION</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>JUSTIFICATION</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); 290B Business Case Report (January 2016).</p> <p>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</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. Land and rights-of-way costs are included in WSSC Water Project W-202.00.</p> <p>COORDINATION</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 & Large Valve Rehabilitation Program</p> |
|---|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|-------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$467 | |
| Total Cost | \$467 | |
| 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 | 8,957 |
| Present Cost Estimate | 7,179 |
| Approved Request Last FY | 1,132 |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 2,252 |

| 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 | |



Advanced Metering Infrastructure

| A. Identification and Coding Information | | |
|--|----------------|-------------|
| Agency Number | Project Number | Update Code |
| A - 000109.00 | | Change |

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|----------------|--------------|----------------|---------------|---------------|---------------|---------------|---------------|--------------|--------------|----------------|
| Planning, Design & Supervision | 8,764 | 1,101 | 2,979 | 4,684 | 1,013 | 1,515 | 1,515 | 641 | | | |
| Land | | | | | | | | | | | |
| Construction | 88,993 | | | 88,993 | 19,261 | 28,775 | 28,775 | 12,182 | | | |
| Other | 4,834 | | 149 | 4,685 | 1,014 | 1,515 | 1,515 | 641 | | | |
| Total | 102,591 | 1,101 | 3,128 | 98,362 | 21,288 | 31,805 | 31,805 | 13,464 | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|------------|---------|-------|-------|--------|--------|--------|--------|--------|--|--|--|
| WSSC Bonds | 102,591 | 1,101 | 3,128 | 98,362 | 21,288 | 31,805 | 31,805 | 13,464 | | | |
|------------|---------|-------|-------|--------|--------|--------|--------|--------|--|--|--|

D. Description & Justification

| |
|--|
| <p>DESCRIPTION</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 WSSC Water'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>JUSTIFICATION</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 & 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>COST CHANGE</p> <p>Order of Magnitude cost estimates were increased for inflation.</p> <p>OTHER</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 schedule was delayed until the implementation of the new customer billing software, Customer2Meter (C2M) was complete. Pilot testing of the latest meter technology is underway. Due to the public health emergency relating to the COVID-19 outbreak, planned public meetings were suspended and the project was postponed.</p> <p>COORDINATION</p> <p>Coordinating Agencies: Montgomery County Government; Prince George's County Government Coordinating Projects: Not Applicable</p> |
|--|

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|---------|--------------|
| Staff & Other | | |
| Maintenance | | |
| Debt Service | \$6,674 | 26 |
| Total Cost | \$6,674 | 26 |
| Impact on Water and Sewer Rate | \$0.01 | 26 |

F. Approval and Expenditure Data (000's)

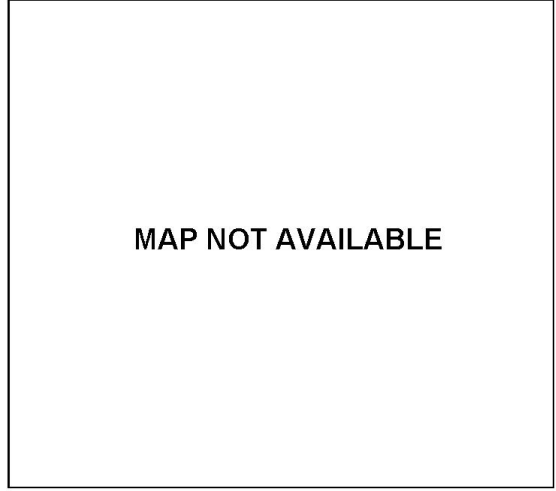
| | |
|------------------------------|---------|
| Date First in Program | FY 13 |
| Date First Approved | FY 13 |
| Initial Cost Estimate | 86,000 |
| Cost Estimate Last FY | 99,603 |
| Present Cost Estimate | 102,591 |
| Approved Request Last FY | 20,687 |
| Total Expense & Encumbrances | 1,101 |
| Approval Request Year 1 | 21,288 |

G. Status Information

| | |
|---------------------------|----------------|
| Land Status | Not Applicable |
| Project Phase | Planning |
| Percent Complete | 80 % |
| Estimated Completion Date | June 2025 |

| | |
|--------------------------|-----------|
| 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 | | Change |

| | |
|--------------|-----------------|
| PDF Date | October 1, 2020 |
| Date Revised | |

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

B. Expenditure Schedule (000's)

| Cost Elements | Total | Thru FY'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | Beyond 6 Years |
|--------------------------------|----------------|------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Planning, Design & Supervision | 52,959 | | 7,155 | 45,804 | 7,286 | 7,420 | 7,558 | 7,699 | 7,845 | 7,996 | |
| Land | | | | | | | | | | | |
| Construction | 266,060 | | 37,246 | 228,814 | 37,533 | 37,764 | 38,003 | 38,248 | 38,502 | 38,762 | |
| Other | 147,483 | | 19,050 | 128,433 | 8,919 | 9,634 | 17,508 | 25,372 | 32,573 | 34,428 | |
| Total | 466,502 | | 63,451 | 403,051 | 53,738 | 54,818 | 63,069 | 71,319 | 78,920 | 81,186 | |

C. Funding Schedule (000's)

| | | | | | | | | | | |
|------------|---------|--|--------|---------|--------|--------|--------|--------|--------|--------|
| WSSC Bonds | 466,502 | | 63,451 | 403,051 | 53,738 | 54,818 | 63,069 | 71,319 | 78,920 | 81,186 |
|------------|---------|--|--------|---------|--------|--------|--------|--------|--------|--------|

D. Description & Justification

| |
|--|
| <p>DESCRIPTION</p> <p>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.</p> <p>JUSTIFICATION</p> <p>The OCP does not include proposed "major projects" which, by law, must be programmed in WSSC Water's Six-Year Capital Improvements Program (CIP) or projects to serve new development.</p> <p>COST CHANGE</p> <p>Not applicable.</p> <p>OTHER</p> <p>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.</p> <p>COORDINATION</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 | \$30,347 | |
| Total Cost | \$30,347 | |
| 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 | 490,748 |
| Present Cost Estimate | 466,502 |
| Approved Request Last FY | 61,313 |
| Total Expense & Encumbrances | |
| Approval Request Year 1 | 53,738 |

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

| | |
|--------------------------|------|
| Growth | |
| System Improvement | 100% |
| Environmental Regulation | |
| Population Served | |
| Capacity | |

H. Map

MAP NOT APPLICABLE

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, 2020 |
| 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'20 | Estimate FY'21 | Total 6 Years | Year 1 FY'22 | Year 2 FY'23 | Year 3 FY'24 | Year 4 FY'25 | Year 5 FY'26 | Year 6 FY'27 | 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 | | | | | |
| Total | 941 | 91 | 275 | 575 | 290 | 285 | | | | | |

C. Funding Schedule (000's)

| | | | | | | | | | | | |
|---------------------|-----|----|-----|-----|-----|-----|--|--|--|--|--|
| Contributions/Other | 941 | 91 | 275 | 575 | 290 | 285 | | | | | |
|---------------------|-----|----|-----|-----|-----|-----|--|--|--|--|--|

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 project is on hold due to lack of activity and will need to be re-evaluated when the Owner / Developer approaches WSSC Water to restart the project. The current estimated total project cost shown above reflects the original plans for the subdivision. A new cost estimate and schedule will be required at restart. Estimated completion date is developer dependent. This project is not eligible for SDC credits. No WSSC Water rate supported debt will be used for this project.

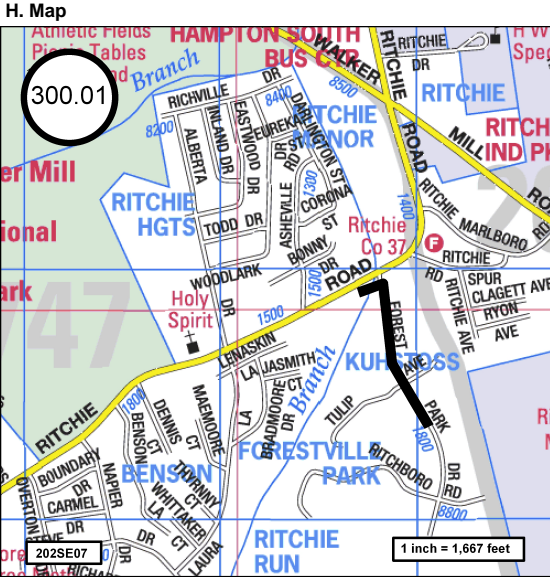
COORDINATION
 Coordinating Agencies: Local Community Civic Associations; Prince George's County Department of Environmental Resources; Prince George's County Government
 Coordinating Projects: Not Applicable

| E. Annual Operating Budget Impact (000's) | | FY of Impact |
|---|------|--------------|
| Staff & Other | | |
| Maintenance | \$23 | |
| Debt Service | | |
| Total Cost | \$23 | |
| 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 | 941 |
| Present Cost Estimate | 941 |
| Approved Request Last FY | 290 |
| 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 |



Appendices

RESOLUTION NO. 2020-2253
Adopted: June [17], 2020
Effective Date: July 1, 2020

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 has an equity share in 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. 2020-2253

Adopted: June [17], 2020

Effective Date: July 1, 2020

WHEREAS, the System Development Charge is a component of the Commission's Fiscal Year 2021 capital and operating budgets prepared pursuant to PUA §17-202; and

WHEREAS, the Commission last modified the System Development Charge effective July 1, 2019 by Commission Resolution No. 2019-2225; 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 1.2% from November 2018 to November 2019; and

WHEREAS, the Commission recommends keeping the System Development Charge rates unchanged for FY 2021. However, the Commission recommends increasing the maximum allowable charge by 1.2% from FY 2020 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 7, 2020; and

NOW, THEREFORE, BE IT RESOLVED THIS 17th day of June, 2020, 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. 2020-2253Adopted: June [17], 2020Effective Date: July 1, 2020Definitions:

- 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. 2020-2253Adopted: June [17], 2020Effective Date: July 1, 2020

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. 2020-2253Adopted: June [17], 2020Effective Date: July 1, 2020

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'21 shall be as follows:

| Property Type | FY'21 Charge | Maximum Allowable Charge |
|----------------------------------|--------------|--------------------------|
| Apartment Unit | | |
| Water | \$896 | \$1,346 |
| Sewer | 1,140 | 1,714 |
| 1-2 Toilets / Residential | | |
| Water | 1,344 | 2,022 |
| Sewer | 1,710 | 2,568 |
| 3-4 Toilets / Residential | | |
| Water | 2,240 | 3,368 |
| Sewer | 2,850 | 4,285 |
| 5 Toilets / Residential | | |
| Water | 3,135 | 4,714 |
| Sewer | 3,991 | 6,000 |
| 6 or More Toilets / Residential* | | |
| Water | 88 | 134 |
| Sewer | 115 | 175 |
| Non-Residential* | | |
| Water | 88 | 134 |
| Sewer | 115 | 175 |

*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

RESOLUTION NO. 2020-2253

Adopted: June [17], 2020

Effective Date: July 1, 2020

WSSC Code of Regulations, Chapter 14.25—the Plumbing and Fuel Gas Code.);
and

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

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Effective Date: July 1, 2020

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)(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. 2019-2225 adopted June 19, 2019 on the same subject matter be, and the same is hereby superseded by this Commission Resolution No. 2020-2253; and

BE IT FURTHER RESOLVED, that the System Development Charge established herein shall take effect on July 1, 2020.

RESOLUTION NO. 2020-2253
Adopted: June [17], 2020
Effective Date: July 1, 2020

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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- (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

WSSC STANDARD PROCEDURES

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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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: _____

(Title)

Date: _____

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

Chapter 5.95

SDC CREDITS AND REIMBURSEMENTS

Sections:

- 5.95.010 Purpose.**
- 5.95.020 Definitions.**
- 5.95.030 General procedures.**
- 5.95.040 Procedures for wet weather projects.**
- 5.95.050 Authority.**

5.95.010 Purpose.

- (a) 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.
- (b) Describe how the SDC credit due an applicant will be determined.
- (c) Describe when SDC credit and reimbursement will occur. (document dated July 1, 2020)

5.95.020 Definitions.

- (a) "Administrative costs" means costs incurred by the applicant for processing and managing the design and construction of the project. Examples include administrative services, utilities, and supplies.
- (b) "Applicant" means 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.
- (c) "Credit voucher" means 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:
 - (1) Identify the qualified project from which credit is derived; and
 - (2) Specify the qualified property for which the credit is requested; and
 - (3) Be signed by the applicant or its authorized agent, be duly notarized; and

- (4) Show the amount to be credited in lieu of SDC payment.
- (d) “Eligible private funding” means 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.
- (e) “Memorandum of understanding (MOU)” means a written agreement made 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.
- (f) “Qualified project” means 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.
- (g) “Qualified project scope” means 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 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.
- (h) “Qualified properties” means the specific properties located within the geographic area which WSSC identifies as served by the qualified project, as defined in WSSC [5.95.030\(c\)](#).
- (i) “SDC credit” means 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 WSSC [5.95.030\(f\)](#) 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.
- (j) “SDC credit agreement” means an agreement that summarizes the eligible costs considered for SDC credit (as described in WSSC [5.95.030\(f\)](#)). The SDC credit agreement is appended to an SEP. The credit agreement is included in the MOU as [Attachment A](#).
- (k) “SDC ledger” means 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.
- (l) “System development charge (SDC)” means 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.
- (m) “System extension permit (SEP)” means a permit/agreement made between the WSSC and an applicant pursuant to the Development Services Code or any subsequently 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.

(n) "Wet weather project" means proposed developments connecting into or upstream of CIP size trunk sewer stretches that have projected sanitary sewer overflows based on existing dry weather flow (including ground water) and rainfall dependent infiltration and inflow from a two-year design storm (specified by WSSC).

All other proposed developments projected to generate flows over 100,000 gallons per day (gpd) connecting into or upstream of CIP size trunk sewer stretches that have projected sanitary sewer overflows based on existing dry weather flow (including ground water) and rainfall dependent infiltration and inflow from a 10-year design storm (specified by WSSC). (document dated July 1, 2020)

5.95.030 General procedures.

(a) 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.

(b) The applicant agrees to pay WSSC all review fees normally due WSSC. Letters of credit are not acceptable in lieu of fees.

(c) 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.

(d) 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.

(e) 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 Inspector General (as discussed in subsections [\(f\)](#), [\(g\)](#), [\(h\)](#), [\(i\)](#) and [\(m\)](#) of this section), 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.

(f) SDC credits may not exceed 50 percent of the estimated total eligible project cost (not to include contingency for increase in scope items (see subsection (i) of this section)) 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 percent of the total estimated project cost.

(g) 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:

- (1) *Engineering Costs.* Design, reprographics, survey (topo), soil borings, as-built drawing preparation and bonding fees.
- (2) *Permit Costs.* Costs for permits that WSSC would have had to acquire had WSSC built the project.
- (3) *WSSC Fees for Pipelines.* Fees for extra WSSC reviews or retesting will be considered only if noneligible portions of the job do not require extra reviews or retesting. 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.
- (4) *WSSC Fees for Facilities.* All WSSC direct costs and overhead associated with the qualified project as stated in the MOU.
- (5) *Construction Costs.* Contractors bid price, survey (stake out), geotech (compaction testing), off-site restoration and construction management.
- (6) *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.
- (7) *Off-Property Rights-of-Way.* Acquisition costs are eligible up to amount appraised by WSSC for purchase of applicant's off-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.

(h) Examples of costs that are not eligible include but are not limited to:

- (1) Areawide planning not directly related to the qualified project;
- (2) Attorney fees;

- (3) The WSSC hydraulic review fee;
 - (4) Costs for negotiation of SDC credit agreement or MOU;
 - (5) Bonus payments or acceleration costs paid to the contractor for completion of construction;
 - (6) Third-party inspection costs for facility projects;
 - (7) Applicant's overhead costs not directly attributable to the qualified project;
 - (8) Costs outside the scope of the qualified project;
 - (9) Permit costs associated with a development rather than the qualified project;
 - (10) Site acquisition costs beyond what WSSC would have paid;
 - (11) Facilities capital cost of money;
 - (12) Fines and penalties;
 - (13) Maintenance costs;
 - (14) Maintenance bond costs that are beyond both two years after substantial completion and beyond one year after release of service or final acceptance;
 - (15) Grading of rights-of-way;
 - (16) Sediment control for grading;
 - (17) Clearing and grubbing for public rights-of-way in which the qualified project will be installed;
 - (18) Federal and state income taxes;
 - (19) Administrative or management fees not directly associated with the qualified project; and
 - (20) Personal injury compensation or damages.
- (i) The maximum SDC reimbursement shall not exceed 110 percent of the contractor bid price plus other eligible costs.
- (j) 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.
- (k) 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 reviewed by other offices. The Contract Technical Services Unit should review the applicant's construction costs using a copy of the signed plans. The Inspector General is to review any item that the WSSC project manager proposes which is contrary to subsections [\(g\)](#) and [\(h\)](#) of this section. 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.

(l) 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 release for service 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 Inspector General 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 the Inspector General to inspect and review to determine the SDC credits. The Inspector General will calculate administrative costs at five percent of the construction, design and other (geotechnical, permits, etc.) qualified project costs. The five percent calculation will not include WSSC costs or interest. If the requested amount exceeds five percent, supporting documentation is required to justify all costs.

(m) In compliance with Public Utilities Article, § [25-405\(d\)](#), Annotated Code of Maryland, WSSC's Inspector General shall review and approve the costs incurred by the applicant. The Inspector General will strive to initiate the audit within 90 days of the applicant's request, if the request includes the required itemized cost listing. The Inspector General's 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 Inspector General Report, the Inspector General will issue to the applicant an unsigned discussion draft to allow the applicant an opportunity to discuss with the Inspector General any concerns the applicant has with the proposed SDC credit. Subsequently, the Inspector General will issue to the applicant its final report on the SDC credit to be provided the applicant.

(n) 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 of reimbursement.

(o) In the event an issued plumbing permit expires or is canceled by the owner or 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.

(p) In conformance with subsection [\(s\)](#) of this section, SDC payments received in association with applications for plumbing permits for qualified properties will be identified as eligible for reimbursement (after the Inspector General's Report has been completed – see subsection [\(m\)](#) of this section) to the applicant who has constructed the qualified projects serving those qualified properties.

(q) 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.

(r) 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.

(s) 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.

(t) 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.

(u) 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 Inspector General's Report and only to the applicant identified in the MOU or SEP.

(v) The applicant may issue credit vouchers to multiple builders to facilitate construction of residential or nonresidential 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.

(w) Notwithstanding any other provision of this chapter, SDC credit or reimbursements for costs identified in subsection (d) of this section are limited to SDC transactions for qualified properties served by the qualified project within a 20-year period, or until the sum of credits and reimbursements equals the total approved SDC credit. The 20-year period will commence for SEP, MOU, or eligible funding projects on the day of release for service. At the conclusion of the 20-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. (document dated July 1, 2020)

5.95.040 Procedures for wet weather projects.

(a) Notwithstanding any other provision of this chapter, for wet weather projects only, WSSC may issue SDC reimbursements to the applicant from SDC funds collected from the entire county in which the qualified project is located.

- (b) Prior to the final audit, the developer may submit quarterly invoices for reimbursement (less any SDC vouchers for the developer's project) for up to 80 percent of the estimated total eligible costs agreed upon in the MOU or SEP. All invoices submitted shall be subject to review and approval by the Development Services Group Project Manager assigned to the project, or another staff member as designated by the Development Services Group Leader.
- (c) WSSC shall reimburse the developer for quarterly invoices submitted pursuant to subsection (b) of this section by first drawing from the eligible SDC receipts from properties served by the qualified project as set forth in WSSC [5.95.030\(r\)](#) and (s). Should the SDC receipts from the qualified project become insufficient to cover the invoices, WSSC shall reimburse the developer from SDC funds from the entire county.
- (d) Following the final audit conducted pursuant to WSSC [5.95.030\(m\)](#), additional reimbursements and credits will be made by WSSC, up to maximum eligible costs as set forth in WSSC [5.95.030\(i\)](#). (document dated July 1, 2020)

5.95.050 Authority.

The General Counsel certifies that the standard procedure codified in this chapter was adopted pursuant to the authority as set forth in the Public Utilities Article, §§ [17-403](#) and [25-405](#), Annotated Code of Maryland. (document dated July 1, 2020)

The WSSC Code of Regulations is current through regulations passed July 1, 2020.

Disclaimer: The General Counsel's office has the official version of the WSSC Code of Regulations. Users should contact the General Counsel's office for ordinances passed subsequent to the ordinance cited above.

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Chapter 11.10

PROCEDURE FOR DETERMINING PERCENT GROWTH FOR CIP PROJECTS

Sections:

- 11.10.010 Purpose and applicability.**
- 11.10.020 Procedure and methodology.**

11.10.010 Purpose and applicability.

The purpose of this chapter is to establish a method for determining what proportion of certain WSSC CIP projects is for growth. This chapter applies after June 30, 1993: (A) to projects which are added to the CIP; and (B) to any revisions of projects already programmed which change the amount of system capacity added by the projects. (PD 93-01 § I)

11.10.020 Procedure and methodology.

(a) 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:

- (1) *Step 1 – Test for 100 Percent Growth.* If flows/demands remained at June 1993 levels, would a project still be required?
 - (i) No: Growth = 100 percent.
 - (ii) Yes: Continue to Step 2.
- (2) *Step 2 – Test for Zero Percent Growth.* Does the project improve or replace components of an existing facility without increasing the capacity of any of the components?
 - (i) Yes: Growth = zero percent.
 - (ii) No: Continue to Step 3.
- (3) *Step 3 – Determine Percent Growth.*
 - (i) Identify system capacity added by the project.
 - (ii) Identify and subtract June 30, 1993, capacity deficit, if any.
 - (iii) Divide result by total project design capacity.

(b) *Notes.*

(1) For most water and wastewater facilities, there is a straightforward 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 subsection [\(a\)\(3\)\(ii\)](#) of this section.

(c) *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 percent for growth (subsection [\(a\)\(1\)](#) of this section).

(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 percent for growth (subsection [\(a\)\(1\)](#) of this section).

(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 percent for growth (subsection [\(a\)\(1\)](#) of this section). It adds capacity, so it is not zero percent growth (subsection [\(a\)\(2\)](#) of this section). The percent for growth is calculated as follows: 0.5 mgd (the capacity added by the new pumping station) plus 0.2 mgd (the amount of lost available capacity) divided by 1.5 mgd (the total capacity of the new pumping station) = 47 percent (subsection [\(a\)\(3\)](#) of this section).

(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 percent for growth (subsection [\(a\)\(1\)](#) of this section).

(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 percent for growth (3 mg added – 1 mg deficit)/3 mg total capacity = 67.7 percent (subsection [\(a\)\(3\)](#) of this section). (PD 93-01 § II)

The WSSC Code of Regulations is current through regulations passed July 17, 2019.

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WSSC WATER
PROPOSED FY 2022 - 2027 CIP
SDC ELIGIBLE PROJECTS
(In Thousands)

| PROGRAM NAME | TOTAL COST | THRU FY 2020 | ESTIMATE FY 2021 | TOTAL 6 YEARS | YEAR 1 FY 2022 | YEAR 2 FY 2023 | YEAR 3 FY 2024 | YEAR 4 FY 2025 | YEAR 5 FY 2026 | YEAR 6 FY 2027 | BEYOND 6 YEARS |
|--|-------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|-----------------|-----------------|-----------------|
| MONTGOMERY COUNTY WATER PROJECTS | | | | | | | | | | | |
| Total Project Costs* | \$ 8,928 | \$ 44 | \$ 366 | \$ 8,518 | \$ 2,864 | \$ 2,624 | \$ 2,674 | \$ 178 | \$ 89 | \$ 89 | \$ 0 |
| SDC Eligible Costs† | \$ 8,928 | \$ 44 | \$ 366 | \$ 8,518 | \$ 2,864 | \$ 2,624 | \$ 2,674 | \$ 178 | \$ 89 | \$ 89 | \$ 0 |
| BI-COUNTY WATER PROJECTS | | | | | | | | | | | |
| Total Project Costs | 11,443 | 0 | 4,300 | 6,543 | 1,100 | 1,095 | 1,093 | 1,085 | 1,085 | 1,085 | 600 |
| SDC Eligible Costs | 34 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PRINCE GEORGE'S COUNTY WATER PROJECTS | | | | | | | | | | | |
| Total Project Costs | 156,183 | 29,560 | 10,213 | 108,112 | 44,463 | 35,223 | 26,231 | 797 | 469 | 929 | 8,298 |
| SDC Eligible Costs | 100,471 | 26,818 | 6,846 | 58,509 | 27,373 | 18,133 | 10,808 | 797 | 469 | 929 | 8,298 |
| TOTAL WATER PROJECT COSTS | 176,554 | 29,604 | 14,879 | 123,173 | 48,427 | 38,942 | 29,998 | 2,060 | 1,643 | 2,103 | 8,898 |
| TOTAL WATER SDC ELIGIBLE COSTS | 109,433 | 26,862 | 7,246 | 67,027 | 30,237 | 20,757 | 13,482 | 975 | 558 | 1,018 | 8,298 |
| MONTGOMERY COUNTY SEWER PROJECTS | | | | | | | | | | | |
| Total Project Costs | 31,966 | 1,302 | 1,801 | 28,863 | 8,512 | 4,972 | 7,441 | 5,387 | 2,476 | 75 | 0 |
| SDC Eligible Costs | 21,409 | 1,024 | 1,267 | 19,118 | 8,005 | 2,649 | 3,137 | 3,568 | 1,684 | 75 | 0 |
| BI-COUNTY SEWER PROJECTS | | | | | | | | | | | |
| Total Project Costs | 33,226 | 79 | 8,316 | 24,831 | 11,422 | 8,898 | 3,926 | 195 | 195 | 195 | 0 |
| SDC Eligible Costs | 7,226 | 17 | 1,868 | 5,341 | 2,605 | 1,915 | 821 | 0 | 0 | 0 | 0 |
| PRINCE GEORGE'S COUNTY SEWER PROJECTS | | | | | | | | | | | |
| Total Project Costs | 51,232 | 7,069 | 2,809 | 41,352 | 7,976 | 18,519 | 8,887 | 5,766 | 102 | 102 | 2 |
| SDC Eligible Costs | 47,696 | 6,984 | 2,685 | 38,025 | 7,561 | 17,026 | 8,029 | 5,205 | 102 | 102 | 2 |
| TOTAL SEWER PROJECT COSTS | 116,424 | 8,450 | 12,926 | 95,046 | 27,910 | 32,389 | 20,254 | 11,348 | 2,773 | 372 | 2 |
| TOTAL SEWER SDC ELIGIBLE COSTS | 76,332 | 8,026 | 5,820 | 62,484 | 18,171 | 21,590 | 11,987 | 8,773 | 1,786 | 177 | 2 |
| INFORMATION ONLY PROJECTS | | | | | | | | | | | |
| Total Project Costs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SDC Eligible Costs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL PROJECT COSTS | \$ 292,979 | \$ 38,055 | \$ 27,805 | \$ 218,219 | \$ 76,337 | \$ 71,331 | \$ 50,252 | \$ 13,408 | \$ 4,416 | \$ 2,475 | \$ 8,900 |
| TOTAL SDC ELIGIBLE COSTS | \$ 185,765 | \$ 34,888 | \$ 13,066 | \$ 129,511 | \$ 48,408 | \$ 42,347 | \$ 25,469 | \$ 9,748 | \$ 2,344 | \$ 1,195 | \$ 8,300 |

*Total Project Costs - This is the total cost for all projects needed to support growth.

†SDC Eligible Costs - That portion of the total project costs that is specifically for growth (i.e., if a project supports 50% growth and 50% system improvements, the SDC eligible costs refer only to the 50% growth portion).

**WSSC WATER
PROPOSED FY 2022 - 2027 CIP
SDC ELIGIBLE PROJECTS
(In Thousands)**

| PROJECT NUMBER | PROJECT NAME | TOTAL COST | THRU FY 2020 | ESTIMATE FY 2021 | TOTAL 6 YEARS | YEAR 1 FY 2022 | YEAR 2 FY 2023 | YEAR 3 FY 2024 | YEAR 4 FY 2025 | YEAR 5 FY 2026 | YEAR 6 FY 2027 | BEYOND 6 YEARS |
|--|--|-------------------|---------------------|-------------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <u>MONTGOMERY COUNTY WATER PROJECTS</u> | | | | | | | | | | | | |
| W - 000046.26 | PLEASANT'S PROPERTY WATER MAIN EXTENSION | \$ 1,984 | \$ 0 | \$ 0 | \$ 1,984 | \$ 1,786 | \$ 198 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| | TOTAL GROWTH COSTS | \$ 1,984 | \$ 0 | \$ 0 | \$ 1,984 | \$ 1,786 | \$ 198 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| W - 000113.20 | WHITE OAK WATER MAINS AUGMENTATION | 5,164 | 44 | 366 | 4,754 | 366 | 1,981 | 2,407 | 0 | 0 | 0 | 0 |
| | TOTAL GROWTH COSTS | 5,164 | 44 | 366 | 4,754 | 366 | 1,981 | 2,407 | 0 | 0 | 0 | 0 |
| W - 000113.21 | VIVA WHITE OAK WATER MAIN | 1,780 | 0 | 0 | 1,780 | 712 | 445 | 267 | 178 | 89 | 89 | 0 |
| | TOTAL GROWTH COSTS | 1,780 | 0 | 0 | 1,780 | 712 | 445 | 267 | 178 | 89 | 89 | 0 |
| SUBTOTAL MONTGOMERY COUNTY WATER PROJECTS | | \$ 8,928 | \$ 44 | \$ 366 | \$ 8,518 | \$ 2,864 | \$ 2,624 | \$ 2,674 | \$ 178 | \$ 89 | \$ 89 | \$ 0 |
| SUBTOTAL MONTGOMERY COUNTY WATER SDC ELIGIBLE COSTS | | \$ 8,928 | \$ 44 | \$ 366 | \$ 8,518 | \$ 2,864 | \$ 2,624 | \$ 2,674 | \$ 178 | \$ 89 | \$ 89 | \$ 0 |
| <u>BI-COUNTY WATER PROJECTS</u> | | | | | | | | | | | | |
| W - 000202.00 | LAND & RIGHTS-OF-WAY ACQUISITION - BI-COUNTY WATER | \$ 11,443 | \$ 0 | \$ 4,300 | \$ 6,543 | \$ 1,100 | \$ 1,095 | \$ 1,093 | \$ 1,085 | \$ 1,085 | \$ 1,085 | \$ 600 |
| | TOTAL GROWTH COSTS | \$ 34 | \$ 0 | \$ 34 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| SUBTOTAL BI-COUNTY WATER PROJECTS | | \$ 11,443 | \$ 0 | \$ 4,300 | \$ 6,543 | \$ 1,100 | \$ 1,095 | \$ 1,093 | \$ 1,085 | \$ 1,085 | \$ 1,085 | \$ 600 |
| SUBTOTAL BI-COUNTY WATER SDC ELIGIBLE COSTS | | \$ 34 | \$ 0 | \$ 34 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |

**WSSC WATER
PROPOSED FY 2022 - 2027 CIP
SDC ELIGIBLE PROJECTS
(In Thousands)**

PRINCE GEORGE'S COUNTY WATER PROJECTS

| | | | | | | | | | | | | |
|---|--|-------------------|------------------|------------------|-------------------|------------------|------------------|------------------|---------------|---------------|---------------|-----------------|
| W - 000034.02 | OLD BRANCH AVENUE WATER MAIN | \$ 21,830 | \$ 2,940 | \$ 5,556 | \$ 13,334 | \$ 5,556 | \$ 5,556 | \$ 2,222 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| | TOTAL GROWTH COSTS | \$ 10,915 | \$ 1,470 | \$ 2,778 | \$ 6,667 | \$ 2,778 | \$ 2,778 | \$ 1,111 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| W - 000034.04 | BRANCH AVENUE WATER TRANSMISSION IMPROVEMENTS | 43,910 | 21,784 | 1,256 | 20,870 | 14,201 | 5,775 | 564 | 330 | 0 | 0 | 0 |
| | TOTAL GROWTH COSTS | 43,910 | 21,784 | 1,256 | 20,870 | 14,201 | 5,775 | 564 | 330 | 0 | 0 | 0 |
| W - 000062.06 | ROSARYVILLE WATER STORAGE FACILITY | 8,758 | 0 | 0 | 460 | 0 | 0 | 0 | 0 | 0 | 460 | 8,298 |
| | TOTAL GROWTH COSTS | 8,758 | 0 | 0 | 460 | 0 | 0 | 0 | 0 | 0 | 460 | 8,298 |
| W - 000084.03 | SMITH HOME FARMS WATER MAIN | 3,660 | 1,694 | 624 | 1,342 | 452 | 448 | 442 | 0 | 0 | 0 | 0 |
| | TOTAL GROWTH COSTS | 3,660 | 1,694 | 624 | 1,342 | 452 | 448 | 442 | 0 | 0 | 0 | 0 |
| W - 000084.04 | WESTPHALIA TOWN CENTER WATER MAIN | 1,759 | 642 | 46 | 1,071 | 358 | 422 | 291 | 0 | 0 | 0 | 0 |
| | TOTAL GROWTH COSTS | 1,759 | 642 | 46 | 1,071 | 358 | 422 | 291 | 0 | 0 | 0 | 0 |
| W - 000093.01 | KONTERRA TOWN CENTER EAST WATER MAIN | 2,428 | 248 | 0 | 2,180 | 758 | 865 | 557 | 0 | 0 | 0 | 0 |
| | TOTAL GROWTH COSTS | 2,428 | 248 | 0 | 2,180 | 758 | 865 | 557 | 0 | 0 | 0 | 0 |
| W - 000105.01 | MARLTON SECTION 18 WATER MAIN, LAKE MARLTON AVENUE | 2,822 | 31 | 2 | 2,789 | 442 | 472 | 470 | 467 | 469 | 469 | 0 |
| | TOTAL GROWTH COSTS | 2,822 | 31 | 2 | 2,789 | 442 | 472 | 470 | 467 | 469 | 469 | 0 |
| W - 000120.14 | TIMOTHY BRANCH WATER MAIN | 3,141 | 294 | 1,836 | 1,011 | 1,011 | 0 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL GROWTH COSTS | 3,141 | 294 | 1,836 | 1,011 | 1,011 | 0 | 0 | 0 | 0 | 0 | 0 |
| W - 000137.03 | SOUTH POTOMAC SUPPLY IMPROVEMENT, PHASE 2 | 67,875 | 1,927 | 893 | 65,055 | 21,685 | 21,685 | 21,685 | 0 | 0 | 0 | 0 |
| | TOTAL GROWTH COSTS | 23,078 | 655 | 304 | 22,119 | 7,373 | 7,373 | 7,373 | 0 | 0 | 0 | 0 |
| SUBTOTAL PRINCE GEORGE'S COUNTY WATER PROJECTS | | \$ 156,183 | \$ 29,560 | \$ 10,213 | \$ 108,112 | \$ 44,463 | \$ 35,223 | \$ 26,231 | \$ 797 | \$ 469 | \$ 929 | \$ 8,298 |
| SUBTOTAL PRINCE GEORGE'S COUNTY WATER SDC ELIGIBLE COSTS | | \$ 100,471 | \$ 26,818 | \$ 6,846 | \$ 58,509 | \$ 27,373 | \$ 18,133 | \$ 10,808 | \$ 797 | \$ 469 | \$ 929 | \$ 8,298 |

**WSSC WATER
PROPOSED FY 2022 - 2027 CIP
SDC ELIGIBLE PROJECTS
(In Thousands)**

| PROJECT NUMBER | PROJECT NAME | TOTAL COST | THRU FY 2020 | ESTIMATE FY 2021 | TOTAL 6 YEARS | YEAR 1 FY 2022 | YEAR 2 FY 2023 | YEAR 3 FY 2024 | YEAR 4 FY 2025 | YEAR 5 FY 2026 | YEAR 6 FY 2027 | BEYOND 6 YEARS |
|--|--|-------------------|---------------------|-------------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <u>MONTGOMERY COUNTY SEWER PROJECTS</u> | | | | | | | | | | | | |
| S - 000084.67 | MILESTONE CENTER SEWER MAIN | \$ 856 | \$ 293 | \$ 0 | \$ 563 | \$ 538 | \$ 25 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| | TOTAL GROWTH COSTS | \$ 856 | \$ 293 | \$ 0 | \$ 563 | \$ 538 | \$ 25 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| S - 000085.21 | SHADY GROVE STATION SEWER AUGMENTATION | 7,192 | 521 | 363 | 6,308 | 5,960 | 251 | 97 | 0 | 0 | 0 | 0 |
| | TOTAL GROWTH COSTS | 7,192 | 521 | 363 | 6,308 | 5,960 | 251 | 97 | 0 | 0 | 0 | 0 |
| S - 000085.22 | SHADY GROVE NEIGHBORHOOD CENTER | 1,700 | 0 | 435 | 1,265 | 633 | 632 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL GROWTH COSTS | 1,700 | 0 | 435 | 1,265 | 633 | 632 | 0 | 0 | 0 | 0 | 0 |
| S - 000094.13 | DAMASCUS TOWN CENTER WWPS REPLACEMENT | 10,053 | 312 | 550 | 9,191 | 672 | 2,988 | 5,285 | 246 | 0 | 0 | 0 |
| | TOTAL GROWTH COSTS | 3,017 | 94 | 165 | 2,758 | 202 | 896 | 1,586 | 74 | 0 | 0 | 0 |
| S - 000094.14 | SPRING GARDENS WWPS REPLACEMENT | 10,665 | 176 | 453 | 10,036 | 110 | 701 | 1,834 | 4,991 | 2,400 | 0 | 0 |
| | TOTAL GROWTH COSTS | 7,145 | 117 | 304 | 6,724 | 73 | 470 | 1,229 | 3,344 | 1,608 | 0 | 0 |
| S - 000118.09 | VIVA WHITE OAK SEWER MAIN | 1,500 | 0 | 0 | 1,500 | 599 | 375 | 225 | 150 | 76 | 75 | 0 |
| | TOTAL GROWTH COSTS | 1,500 | 0 | 0 | 1,500 | 599 | 375 | 225 | 150 | 76 | 75 | 0 |
| SUBTOTAL MONTGOMERY COUNTY SEWER PROJECTS | | \$ 31,966 | \$ 1,302 | \$ 1,801 | \$ 28,863 | \$ 8,512 | \$ 4,972 | \$ 7,441 | \$ 5,387 | \$ 2,476 | \$ 75 | \$ 0 |
| SUBTOTAL MONTGOMERY COUNTY SEWER SDC ELIGIBLE COSTS | | \$ 21,409 | \$ 1,024 | \$ 1,267 | \$ 19,118 | \$ 8,005 | \$ 2,649 | \$ 3,137 | \$ 3,568 | \$ 1,684 | \$ 75 | \$ 0 |
| <u>BI-COUNTY SEWER PROJECTS</u> | | | | | | | | | | | | |
| S - 000089.24 | ANACOSTIA #2 WWPS UPGRADES | \$ 31,298 | \$ 79 | \$ 7,858 | \$ 23,361 | \$ 10,927 | \$ 8,703 | \$ 3,731 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| | TOTAL GROWTH COSTS | \$ 6,886 | \$ 17 | \$ 1,729 | \$ 5,140 | \$ 2,404 | \$ 1,915 | \$ 821 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| S - 000203.00 | LAND & RIGHTS-OF-WAY ACQUISITION - BI-COUNTY SEWER | 1,928 | 0 | 458 | 1,470 | 495 | 195 | 195 | 195 | 195 | 195 | 0 |
| | TOTAL GROWTH COSTS | 340 | 0 | 139 | 201 | 201 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUBTOTAL BI-COUNTY SEWER PROJECTS | | \$ 33,226 | \$ 79 | \$ 8,316 | \$ 24,831 | \$ 11,422 | \$ 8,898 | \$ 3,926 | \$ 195 | \$ 195 | \$ 195 | \$ 0 |
| SUBTOTAL BI-COUNTY SEWER SDC ELIGIBLE COSTS | | \$ 7,226 | \$ 17 | \$ 1,868 | \$ 5,341 | \$ 2,605 | \$ 1,915 | \$ 821 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |

WSSC WATER
PROPOSED FY 2022 - 2027 CIP
SDC ELIGIBLE PROJECTS
(In Thousands)

| PROJECT NUMBER | PROJECT NAME | TOTAL COST | THRU FY 2020 | ESTIMATE FY 2021 | TOTAL 6 YEARS | YEAR 1 FY 2022 | YEAR 2 FY 2023 | YEAR 3 FY 2024 | YEAR 4 FY 2025 | YEAR 5 FY 2026 | YEAR 6 FY 2027 | BEYOND 6 YEARS |
|---|------------------------------------|-------------------|---------------------|-------------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| PRINCE GEORGE'S COUNTY SEWER PROJECTS | | | | | | | | | | | | |
| S - 000027.08 | WESTPHALIA TOWN CENTER SEWER MAIN | \$ 1,570 | \$ 832 | \$ 501 | \$ 237 | \$ 161 | \$ 62 | \$ 14 | \$ 0 | \$ 0 | \$ 0 | 0 |
| | TOTAL GROWTH COSTS | \$ 1,570 | \$ 832 | \$ 501 | \$ 237 | \$ 161 | \$ 62 | \$ 14 | \$ 0 | \$ 0 | \$ 0 | 0 |
| S - 000028.18 | KONTERRA TOWN CENTER EAST SEWER | 7,102 | 4,988 | 0 | 2,114 | 0 | 2,114 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL GROWTH COSTS | 7,102 | 4,988 | 0 | 2,114 | 0 | 2,114 | 0 | 0 | 0 | 0 | 0 |
| S - 000068.01 | LANDOVER MALL REDEVELOPMENT | 1,422 | 25 | 109 | 1,286 | 668 | 426 | 48 | 48 | 48 | 48 | 2 |
| | TOTAL GROWTH COSTS | 1,422 | 25 | 109 | 1,286 | 668 | 426 | 48 | 48 | 48 | 48 | 2 |
| S - 000086.19 | SOUTHLAKE SUBDIVISION SEWER | 884 | 253 | 232 | 399 | 194 | 205 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL GROWTH COSTS | 884 | 253 | 232 | 399 | 194 | 205 | 0 | 0 | 0 | 0 | 0 |
| S - 000087.19 | HORSEPEN WWPS & FM | 35,349 | 849 | 1,238 | 33,262 | 4,146 | 14,926 | 8,580 | 5,610 | 0 | 0 | 0 |
| | TOTAL GROWTH COSTS | 31,813 | 764 | 1,114 | 29,935 | 3,731 | 13,433 | 7,722 | 5,049 | 0 | 0 | 0 |
| S - 000118.10 | VIVA WHITE OAK SEWER AUGMENTATION | 1,080 | 0 | 0 | 1,080 | 432 | 270 | 162 | 108 | 54 | 54 | 0 |
| | TOTAL GROWTH COSTS | 1,080 | 0 | 0 | 1,080 | 432 | 270 | 162 | 108 | 54 | 54 | 0 |
| S - 000131.05 | PLEASANT VALLEY SEWER MAIN, PART 2 | 962 | 49 | 219 | 694 | 432 | 179 | 83 | 0 | 0 | 0 | 0 |
| | TOTAL GROWTH COSTS | 962 | 49 | 219 | 694 | 432 | 179 | 83 | 0 | 0 | 0 | 0 |
| S - 000131.07 | PLEASANT VALLEY SEWER MAIN, PART 1 | 1,882 | 73 | 510 | 1,299 | 1,060 | 239 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL GROWTH COSTS | 1,882 | 73 | 510 | 1,299 | 1,060 | 239 | 0 | 0 | 0 | 0 | 0 |
| S - 000131.11 | CALM RETREAT SEWER MAIN | 981 | 0 | 0 | 981 | 883 | 98 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL GROWTH COSTS | 981 | 0 | 0 | 981 | 883 | 98 | 0 | 0 | 0 | 0 | 0 |
| SUBTOTAL PRINCE GEORGE'S COUNTY SEWER PROJECTS | | \$ 51,232 | \$ 7,069 | \$ 2,809 | \$ 41,352 | \$ 7,976 | \$ 18,519 | \$ 8,887 | \$ 5,766 | \$ 102 | \$ 102 | \$ 2 |
| SUBTOTAL PRINCE GEORGE'S COUNTY SEWER SDC ELIGIBLE COSTS | | \$ 47,696 | \$ 6,984 | \$ 2,685 | \$ 38,025 | \$ 7,561 | \$ 17,026 | \$ 8,029 | \$ 5,205 | \$ 102 | \$ 102 | \$ 2 |



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DELIVERING THE ESSENTIAL