T&E COMMITTEE #1A
April 15, 2013

Worksession

MEMORANDUM

April 11, 2013

TO: Transportation, Infrastructure, Energy and Environment Committee

FROM: Keith Levchenko, Senior Legislative Analyst

SUBJECT: **Worksession: FY14-19 Capital Improvements Program: Washington Suburban Sanitary Commission (WSSC)**

Council Staff recommends approval of the WSSC FY14-19 CIP with the changes recommended by the County Executive.

Attachments to this memorandum include:

- County Executive Memorandum of January 15, 2013 Regarding WSSC's Proposed FY14-19 CIP
- Excerpts from WSSC's Proposed FY14-19 CIP
- Consent Decree Summary (©42-44)

Note: Councilmembers were previously provided a spiral bound copy of WSSC's Proposed FY14-19 CIP.

The following officials and staff are expected to attend this meeting:

WSSC
Gene Counihan, Vice Chair
Adrienne Mandel, Commissioner
Jerry Johnson, General Manager/CEO
Gary Gumm, Chief Engineer
Tom Traber, Chief Financial Officer
Chris Cullinan, Budget Group Leader
Mark Brackett, Budget Unit Coordinator

County Government
Matt Schaeffer, Office of Management and Budget

WSSC FY14-19 Highlights

Fiscal Highlights

- WSSC's FY14-19 CIP is about $2.06 billion (an increase of $399.2 million, or 24%, from the FY13-18 CIP). This increase is entirely the result of large increases in the Trunk Sewer Reconstruction project needed to meet Federal consent decree requirements.
- Montgomery County and Bi-County projects total $1.63 billion (an increase of $383.1 million, or 30.7%, from the FY13-18 CIP), and are increasing for similar reasons to the overall WSSC CIP noted above.
- Blue Plains projects total $510.1 million for FY14-19 (a decrease of $94.1 million or 15.6%), primarily as a result of projects moving through construction (especially the ENR and biosolids projects) and out of the six-year period.
- "Information Only" projects (which are presented in the CIP but which are not formally part of the CIP and not in the above CIP totals) continue to see expenditure growth (Total = $1.68 billion over six years and $182.9 million in FY14) as WSSC ramps up its water/sewer reconstruction work.

Other Issues

- Growth (SDC) Funding Trends (see pages 7-8)
- Cost to Extend Sewer to Address Failing Septic Systems (see page 17-18): Under review by the Bi-County Infrastructure Working Group

New Projects in Montgomery County/BiCounty (see page 8)

- Two new Bi-County water projects are requested: Potomac WFP Corrosion Mitigation ($6.4 million total cost) and Potomac WFP Pre-Filter Chlorination & Air Scour Improvements ($5.6 million total cost).
- One new Montgomery County water project is requested: Brink Zone Reliability Improvements ($345,000 in planning dollars included).
- One new Montgomery County sewer project is requested: Mid-Pike Plaza Sewer Main, Phase 2 ($5.9 million total cost) (developer-funded).

Selected Major Ongoing Projects (see page 9)

- Trunk Sewer Rehabilitation Program ($684.5 million over six years, an increase of nearly $477 million) to meet Consent Decree issues.
- Large Diameter Water Pipe Rehabilitation Program ($209.9 million over six years): *Note: WSSC will complete its first multi-year inspection cycle for all 77.7 miles of 48-inch diameter pipe during FY13.*
- Laytonsville Elevated Tank and Pumping Station ($6.04 million total cost).
- Patuxent Water Filtration Plant Phase II Expansion ($64.2 million total cost).
- Potomac Water Filtration Plant Submerged Channel Intake ($27.8 million total cost, but still in planning. Issue will come back to both Councils before design and construction occur).
- Bi-County Water Tunnel ($151 million project, in-service date of August 2013).
- Seneca WWTP Expansion Part 2 ($29.5 million total cost, completion in January 2015).
- Enhanced Nutrient Removal Projects: FY14-19 Total = $255.7 million (a decrease of $85.1 million, or 25 percent, because of projects moving through construction (and out of the CIP period)).
- Blue Plains Projects (Latest CIP numbers from DC Water recommended by the CE). Council Staff concurs.

- Water Reconstruction Program ($711.9 million over six years, 51 miles per year requested; 46 miles approved in FY13).
- Sewer Reconstruction Program ($583.9 million over six years).

Background/Timeline

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

Unlike other County agency CIP proposals that are reviewed biennially, Montgomery County reviews the WSSC CIP every year. Also, unlike other agencies, WSSC's budget is not included within the County's Spending Affordability process. Instead, WSSC is subject to a separate affordability process with both Montgomery and Prince George's County Council approval in the fall of each year.

The FY14-19 WSSC CIP timeline

- October 1, 2012: WSSC transmitted its Proposed FY14-19 CIP (Excerpts on ©6-41)
- October 16, 2012: Council Approval of WSSC's FY14 Spending Control Limits
- January 15, 2013: County Executive's recommendations transmitted (©1-5)
- March 1, 2013: WSSC transmittal of its Proposed FY14 Budget
- April 9, 10 and 11: Council's Public Hearings on the FY14 Operating Budget, FY13-18 CIP amendments and FY14-19 WSSC CIP
- April 15, 2013: T&E Committee review of the WSSC CIP and Operating Budget
- Early May: Council review of the WSSC CIP and Operating Budget
- May 9, 2013: Bi-County Meeting between Montgomery County and Prince George's County on the WSSC CIP and Operating Budget, as well as any other Bi-County budget issues

Fiscal Overview

The following chart presents WSSC's proposed CIP expenditures. This chart includes capital water and sewer expenditures for both Montgomery and Prince George's Counties.

Table 1: Total WSSC Expenditures
Proposed FY14-19 CIP versus Approved FY13-18 CIP
($s in 000s)

	Approved FY13	Six-Year Total	FY14	FY15	FY16	FY17	FY18	FY19
Total Water Projects								
Approved FY13-18	153,438	**469,158**	106,134	73,469	53,050	50,486	32,581	
Proposed FY14-19		**535,706**	151,430	116,490	98,348	87,395	45,012	37,031
Difference		**66,548**	45,296	43,021	45,298	36,909	12,431	
% Change		**14.2%**	**42.7%**	**58.6%**	**85.4%**	**73.1%**	**38.2%**	
Total Sewer Projects								
Approved FY13-18	410,689	**1,190,661**	285,470	176,202	121,904	117,354	79,042	
Proposed FY14-19		**1,523,298**	490,844	420,517	198,689	167,181	139,083	106,984
Difference		**332,637**	205,374	244,315	76,785	49,827	60,041	
% Change		**27.9%**	**71.9%**	**138.7%**	**63.0%**	**42.5%**	**76.0%**	
Total								
Approved FY13-18	564,127	**1,659,819**	391,604	249,671	174,954	167,840	111,623	
Proposed FY14-19		**2,059,004**	642,274	537,007	297,037	254,576	184,095	144,015
Difference		**399,185**	250,670	287,336	122,083	86,736	72,472	
% Change		**24.0%**	**64.0%**	**115.1%**	**69.8%**	**51.7%**	**64.9%**	

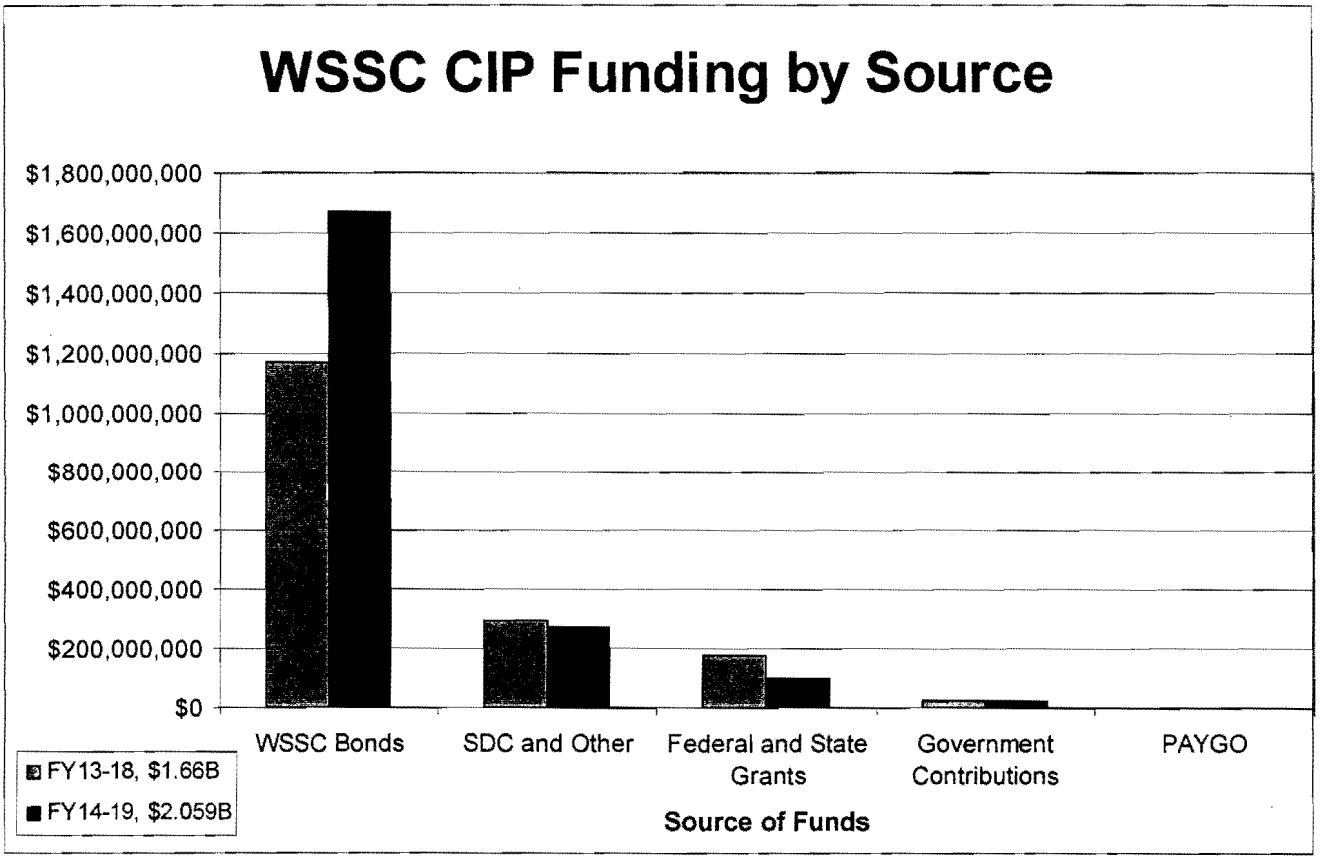
As shown on the chart, WSSC is recommending an overall increase in expenditures of 24.0 percent (+$399.2 million). This large increase is broken down by project later.

It is important to note that the capital program presented in this fiscal overview reflects "major projects" as defined by State law. WSSC has a number of other infrastructure activities (shown in the "Information Only" section of the CIP; summary page attached on ©33) which are not included in the above CIP fiscal summary. The six-year cost estimate for the "Information Only" projects is $1.68 billion.

About three quarters of the "Information Only" project total is for water and sewer main reconstruction, a major infrastructure issue that has been the subject of much discussion over the past several years. These non-CIP projects are discussed in both this CIP packet and the Operating Budget because, while they are part of WSSC's overall multi-year effort to address infrastructure needs, they are funded on an annual basis and must fit within WSSC's spending control limits set each year.

Funding Sources

The following chart compares funding sources between the Approved FY13-18 CIP and the Proposed FY14-19 CIP.



Bond funding is up substantially to cover increased costs in a number of projects. State aid is down somewhat in the six-year period, as ENR costs in general have also declined within the six-year period as projects move through construction.

Montgomery County and Bi-County Projects

Each Council generally focuses on the projects within its County as well as the Bi-County projects. The following chart summarizes six-year program information for Montgomery County and Bi-County projects only.

Table 2: Total WSSC Expenditures (Montgomery County and Bi-County Only)
Proposed FY14-19 CIP versus Approved FY13-18 CIP
($s in 000s)

	Approved FY13	Six-Year Total	FY14	FY15	FY16	FY17	FY18	FY19
Total Water Projects								
Approved FY13-18	124,267	**375,533**	80,267	48,552	41,189	49,002	32,256	
Proposed FY14-19		**397,761**	114,294	76,425	64,103	64,277	41,631	37,031
Difference		**22,228**	34,027	27,873	22,914	15,275	9,375	
% Change		**5.9%**	**42.4%**	**57.4%**	**55.6%**	**31.2%**	**29.1%**	
Total Sewer Projects								
Approved FY13-18	308,743	**870,961**	190,066	112,254	107,981	93,430	58,487	
Proposed FY14-19		**1,231,874**	383,291	332,579	160,983	141,570	116,065	97,386
Difference		**360,913**	193,225	220,325	53,002	48,140	57,578	
% Change		**41.4%**	**101.7%**	**196.3%**	**49.1%**	**51.5%**	**98.4%**	
Total								
Approved FY13-18	433,010	**1,246,494**	270,333	160,806	149,170	142,432	90,743	
Proposed FY14-19		**1,629,635**	497,585	409,004	225,086	205,847	157,696	134,417
Difference		**383,141**	227,252	248,198	75,916	63,415	66,953	
% Change		**30.7%**	**84.1%**	**154.3%**	**50.9%**	**44.5%**	**73.8%**	

Montgomery County and Bi-County expenditures are up by $383.1 million. The entire increase is the result of the Trunk Sewer Reconstruction Program project, which is requested to increase by nearly $477 million (230 percent). This increase is partially offset by decreases in other projects. Major cost changes in the Montgomery County and Bi-County projects are presented in the following chart:

Major Changes in 6 Year Costs
(MC and Bi-County Projects Only)

Cost in ($000s)	Project	Comment
476,827	Trunk Sewer Reconstruction Program	Ongoing Consent Decree Work
53,955	Large Diameter Water Pipe Rehabilitation Program	Continued Ramp-Up
6,277	Potomac WFP Outdoor Substation No. 2 Replacement	Cost Increase Based on Design Estimates
5,456	Mid-Pike Plaza Sewer Main Phase II	New - Developer-Funded
5,248	Potomac WFP Corrosion Mitigation	New
4,611	Potomac WFP Pre-Filter Chlorination & Air Scour Improvements	New
(1,403)	Power Reliability and ARC Flash Implementation	Studies to be completed in FY14
(2,337)	Duckett and Brighton Dam Upgrades	Moving through construction
(3,696)	Potomac WFP Stage 2 Disinfection Byproducts Rule Implementation	Moving through construction
(3,746)	Seneca WWTP ENR	Moving through construction
(3,948)	Patuxent WFP Phase II Expansion	Moving through construction
(7,766)	Anacostia Storage Facility	Moving through construction
(12,047)	Seneca WWTP Expansion Part 2	Moving through construction
(39,180)	Bi-County Water tunnel	Moving through construction
(94,128)	Blue Plains Projects	Biosolids and ENR facilities moving through construction

Several of these projects are discussed in more detail later.

Blue Plains Project Cost Estimates

WSSC's Proposed CIP assumes $510.1 million over the FY14-19 period. This is a $94.1 million (or 15.6%) decline from the FY13-18 CIP.

DC Water's FY12-21 CIP was approved by its Board on January 3, 2013, and the latest expenditure totals were not available at the time the WSSC CIP was transmitted last fall. However, these numbers are reflected in the County Executive's Recommendations for WSSC as discussed in the next section.

County Executive Recommendations (Excerpt Attached on ©1-5)

The County Executive recommendation was transmitted on January 15, and the only changes recommended for the WSSC CIP are in the Blue Plains updated project costs noted earlier and summarized in the table below:

Table 4: CE Recommended Changes to the WSSC FY14-19 CIP

	Six-Year Total	FY13	FY14	FY15	FY16	FY17	FY18
WSSC Proposal	**2,059,004**	642,274	537,007	297,037	254,576	184,095	144,015
change from Approved FY12-17	399,185						
CE Changes	-						
- Revise Blue Plains Costs	**(19,497)**	(12,974)	3,507	4,268	(4,645)	(2,754)	(6,899)
Total CE Changes	**(19,497)**	**(12,974)**	**3,507**	**4,268**	**(4,645)**	**(2,754)**	**(6,899)**
CE Recommended Totals	**2,039,507**	**629,300**	**540,514**	**301,305**	**249,931**	**181,341**	**137,116**
change from FY13-18 Approved CIP	379,688						

Overall, the changes decrease the FY14-19 CIP request by approximately $19.5 million, as shown in the following chart:

Table 3: FY14-19 Blue Plains Projects: Cost Changes

Project	Six-Year Total	FY14	FY15	FY16	FY17	FY18	FY19
Blue Plains Projects							
Liquid Train Part II	**473**	(1,920)	3,815	785	(2,049)	543	(701)
Biosolids Part II	**9,432**	1,704	1,378	2,648	2,673	1,137	(108)
BNR	**1,800**	(203)	(6)	1,421	588	-	-
Plantwide Projects	**(251)**	2,801	(1,718)	330	442	68	(2,174)
ENR	**(8,046)**	(9,626)	6,234	(65)	(3,261)	(882)	(446)
Pipelines and Appurtenances	**(22,905)**	(5,730)	(6,196)	(851)	(3,038)	(3,620)	(3,470)
Blue Plains Projects Subtotal	**(19,497)**	**(12,974)**	**3,507**	**4,268**	**(4,645)**	**(2,754)**	**(6,899)**
Total Changes	**(19,497)**	**(12,974)**	**3,507**	**4,268**	**(4,645)**	**(2,754)**	**(6,899)**

The FY14 change reflects about a $13 million reduction, of which about $9.0 million is in WSSC bonds.

The operating budget impact of the reduction in bonds is about $500,000 in FY14 ($18.3 million in CIP bonds equals about $1.0 million in debt service).

Council Staff recommends approval of the Blue Plains projects with the adjustments recommended by the County Executive.

The County Executive also recommends changes to one "Information Only" project: Anaerobic Digestion/Combined Heat & Power (see ©4 for details). This change is discussed later.

Growth Funding

WSSC estimates that approximately $270.6 million (or 13.0%) of total proposed expenditures in the six-year period are needed to accommodate growth.[1] This is down from the FY13-18 CIP ($293 million and 18 percent of total CIP expenditures) as several large growth-related projects (such as the Bi-County Water Tunnel) move toward completion.

The major funding sources used to fund growth are:

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

Many of the projects in the WSSC CIP are funded with the above-mentioned sources. For instance, water and sewer projects needed to accommodate growth in Clarksburg and White Flint are funded with these sources.

The System Development Charge (SDC) is a major source of funding for much of the new water/sewer infrastructure built in the County. WSSC estimates approximately $110.5 million in revenue over the six-year period. Developer credits and SDC exemptions[2] reduce the net revenue to about $88.9 million.

Overall, WSSC estimates a deficit in growth funding versus expenditures over the six-year period of $146.3 million, as shown on ©6. This deficit is down from last year's estimate of $184 million as a result of reductions in estimated SDC-related expenditures and increases in expected SDC revenues during the six-year period.

The SDC Fund has a balance of $52.6 million (as of January 31, 2013), which is not sufficient to cover the FY14 projected gap of $58.3 million. There are also significant annual gaps shown in FYs15-17 as well. Two years ago, the Council agreed with WSSC staff that, as an alternative to an increase in the SDC charge, WSSC would use debt (financed with SDC funds) to address any actual gaps that may occur in the next few years and then use future SDC revenues to pay back the debt over time. Both Councils supported this proposed approach.

WSSC's Proposed Operating Budget for FY14 was transmitted on March 1. The Proposed Operating Budget assumes to increase the maximum rate for FY14 SDC charges as permitted under State law but leaves the actual rate charged unchanged. WSSC believes increasing the potential maximum rate is advisable, since the six-year projections show a deficit in growth funding versus

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[1] Environmental regulations and system improvements (17% and 70% of requested FY14-19 CIP expenditures respectively) are the two other major categories of spending (see ©9). Note: "information only" projects are not included in these totals.

[2] For purposes of projecting future SDC balances, WSSC assumes Montgomery and Prince George's Counties utilize the full $1.0 million in exemptions each fiscal year. Any amounts within each County's $500,000 share not used in a given year carry over to the next fiscal year. As of February 28, 2012, Montgomery County has $4.6 million in exemption capacity. Prince George's County has $2.6 million in exemption capacity.

growth expenditures. However, given there are no new major SDC funded projects coming up in the WSSC CIP and the bond-funding approach above should provide a short-term means to cover the annual projected gaps, WSSC does not recommend increasing the SDC rates at this time.

Project Discussion

Council Staff has provided some discussion, below, of the new projects and some other important capital projects (and groups of projects). "Information Only" projects are discussed later.

New Projects

WSSC is requesting nine new projects totaling $69.5 million (with $65.8 million within the FY14-19 CIP). Four of these projects are in the Montgomery County/Bi-County area of the CIP and include:

- **Brink Zone Reliability Improvements (Montgomery County Water Project, $345,000, PDF on ©12).** This project includes initial planning work to develop alternatives to increase reliability and redundancy to the Montgomery County High Zone water transmission system. Depending on the results of these studies, design and construction costs may be added in the future or new projects may be created.

  Councilmembers may recall that during a major electricity outage in Montgomery County in June/July of 2012 that affected both the Potomac Water filtration Plant and the Wheaton Pumping Station, WSSC had problems maintaining water pressure in the High Zone, because a water transmission pipe was also out of service at that time for scheduled maintenance. Future improvements to be identified in this study would provide WSSC with more flexibility to provide sufficient water to the High Zone.

- **Mid-Pike Plaza Sewer Main Phase II (Montgomery County Sewer Project, $5.9 million, PDF on ©16).** Phase I of this developer-funded project was approved by the Council last year. Phase II includes the design and construction of 3,600 feet of 21-inch and 24-inch diameter sewer main to serve the future redeveloped Mid-Pike Plaza development.

- **Potomac WFP Corrosion Mitigation ($6.4 million, PDF on ©21).** This project provides for the upgrade and replacement of the existing metallic components in the facility's eight sedimentation basins. These basins have experienced significant corrosion since the introduction of the low pH Enhanced Coagulation Program in 2008. Upgrades to the rapid mix and flocculation process areas are also included in this project. Prior expenditures shown in this project were moved from the Engineering Support Program "information-only" project.

- **Potomac WFP Pre-Filter Chlorination & Air Scour Improvements ($5.6 million, PDF on ©22).** This project provides for the planning, design, and construction of a pre-filter chlorination system at the Potomac plant. It also includes an evaluation of potential improvements to the air scour system. Prior expenditures shown in this project were moved from the Engineering Support Program "information-only" project.

Council Staff is supportive of each of these projects and recommends the Council support inclusion of these projects in the FY14-19 WSSC CIP.

Major Ongoing Projects

Large Diameter Water Pipe Rehabilitation Program ($209.9 million over six years, PDF on ©28-29)

This project, added to the CIP three years ago, funds the rehabilitation of transmission mains (pipes greater than 16 inches in diameter) in lengths of 100 feet or greater. WSSC has approximately 960 miles of large diameter water main (mains ranging in size from 16 inches to 96 inches in diameter), of which 350 miles are pre-cast concrete cylinder pipe (PCCP), 350 miles are cast iron, 225 miles are ductile iron, and 35 miles are steel. PCCP pipe is the highest priority for inspection, monitoring, repair, and replacement because PCCP pipe can fail in a more catastrophic manner than pipes made out of other materials such as iron or steel.

In the past, WSSC has dealt with replacement issues on a reactive basis, with expenditures coming out of the Water Main Reconstruction "information only" project as needed. However, in the last several years, WSSC has ramped up its inspection program for its large diameter mains[3], done immediate repairs where needed, and begun to identify larger replacement projects to be done over time as pipes reach the end of their useful life. In addition to some unexpected large PCCP pipe failures in Montgomery County in 2008 (and a break in Prince George's County in January 2011 and the most recent break in Chevy Chase in March 2013), the transmission system (like the smaller water distribution lines) is aging, and WSSC is moving to a more systematic inspection, repair, and replacement approach as a result.

The inspection, fiber optic monitoring, and repairs on shorter sections of pipe remain in the Operating Budget, while the large section replacements are done out of this project. The FY14-19 CIP request reflects a 35 percent cost increase based on the additional number of pipe sections (both of PCCP and cast iron) being inspected each year (from 12 to 18 miles) and the increased amount of repair and replacement work due primarily to pipeline aging.

[3] WSSC expects to complete its first round of inspections and installation of acoustic fiber optic monitoring for its 48-inch diameter and larger PCCP pipe during FY13.

Planned work for the next two fiscal years is noted on the chart provided by WSSC below:

Locations	Anticipated Construction
Beach Drive 30-inch Feasibility Study	FY15-FY17
Potomac Water Filtration Plan Main Zone 78-inch Redundancy	FY15-FY17
Georgia Avenue 16-inch water main replacement	FY15
Old Sandy Spring Road 24-inch water main replacement	FY14-FY15
Veirs Mill Road 24-inch water main replacement	FY-13-FY14
Summit Avenue/Cedar Lane 20-inch water main replacement	FY14-FY15
Olney Mill Road 16-inch water main replacement	FY15-FY16
Piney Branch 16-inch water main replacement	FY14-FY15
Silver Hill Road 24-inch water main replacement	1 mile FY 13, Restoration into FY 14
Indian Head Highway 20-inch water main replacement	1.55 mile FY 13, Restoration into FY 14

Laytonsville Elevated Tank and Pumping Station (PDF on ©13-14)

In 2001, the Council first authorized the extension of public water service to the Town of Laytonsville in order to address well water quality concerns.

This project includes the planning, design, and construction of a 1.72 mgd finished water pumping station, 0.5 million gallon elevated storage tank, approximately 6100 feet of 12-inch transmission main, and 10,400 feet of 12 -inch recirculation main to provide water service to the Town of Laytonsville. Capital costs are estimated to be $6.04 million. Approximately $6.7 million in non CIP-sized infrastructure work is also required.

WSSC and the Town of Laytonsville, along with the developer of a residential housing project in the town, agreed to a funding split for the project that assumed $3.0 million in contributions. The balance is to be covered from SDC funds. These assumptions are noted on the Project Description Form. A memorandum of understanding was signed on December 2, 2005. For FY14, the project costs have been increased to reflect actual bid prices for the storage tank and pumping station.

All water mains have been completed. 121 house connection permits have been issued although no house connections have been done yet. The storage tank and pump station will be completed this summer.

Potomac Submerged Channel Intake (PDF on ©23-24)

Planning work on the Potomac WFP Submerged Channel Intake project is ongoing. As noted in the Initiation Report for the ongoing study, "The purpose of the 'Potomac WFP Submerged Channel Intake Feasibility Study' is to determine where to locate an offshore raw water intake and to develop and document the related public health, operational, and environmental considerations." As noted in the PDF, "Both Councils will review the results of the detailed study and must approve continuing the project before design and construction proceed."

Potential benefits of the project include improved and more consistent source water quality (thereby reducing water collection and treatment costs) as well as increased operational flexibility of having two available intakes.

This study was originally expected to come back to both Councils in 2005. However, work by WSSC and the consultant on an environmental impact statement required by the National Park Service, and other work as required by the Maryland Department of the Environment, caused delays.

Also, subsequent to the completion of the original environmental assessment, WSSC began studying an additional potential intake alternative that would be less costly and more environmentally friendly.

WSSC is convening a new Project Review Group consisting of staff from Montgomery and Prince George's Counties, M-NCPPC staff, and representatives from Federal and State agencies to assist with the preparation of a new feasibility study. The study is expected to take 18 months.

Both Councils will be briefed on the project and must concur before design and construction would begin.

The project cost estimate has been increased for inflation but with a completion date still assumed for FY18.

Bi-County Water Tunnel ($151.0 million total project cost) (PDF on ©25-27)

This project provides for the construction of 28,400 feet of 84-inch diameter water main to portions of Montgomery and Prince George's Counties. This project will help serve existing and new growth in Prince George's County while also addressing potential future water pressure problems in the Silver Spring/Wheaton areas.

As a 99 percent growth-related project (one percent system improvement), the project is funded nearly completely with SDC revenues. The total project cost has decreased based upon the latest project cost estimates. The project will be substantially completed by June 2014 with an in-service date of August 2014. Punch-list items and stream bank and site restoration will be continuing through June 2015.

Seneca Wastewater Treatment Plant (Enhanced Nutrient Removal and Expansion Part 2) ($27.8 million combined over six years, PDFs on ©17-19)

These two CIP projects are actually one project broken out for purposes of isolating the ENR costs for State reimbursement, while also including the expansion of the plant from 20 mgd to 26 mgd. The latest totals for the projects reflect a 5.2 percent cost decrease based on the latest construction cost estimates. All of the work is scheduled to be completed by January 2015. The project costs decreased as a result of the actual construction contract awarded. The ENR project is funded with State aid and WSSC bonds. The expansion project is paid for with SDC funds.

Trunk Sewer Reconstruction Program ($684.5 million over six years, PDF on ©31-32)

This project was added three years ago (funded partially by bond-funded dollars removed from the Sewer Reconstruction Program Information Only project) to address Consent Decree requirements to

eliminate sanitary sewer overflows (SSOs). A summary of the requirements and the status of work completed toward this requirement is attached on ©42-44.

Under the terms of the Consent Decree (signed in December 2005 with the United States Environmental Protection Agency, the State of Maryland, and four conservation groups), WSSC inspected 625 miles of sewers in 21 basins by December 2010, as required. Sewer System Evaluation Studies (SSES) have been completed for 7 basins and 2 more will be completed by December 2013. Rehabilitation work is supposed to be completed within 10 years (2015). 18 basin rehabilitation plans have been approved to date, with the remaining basin plans awaiting approval. The actual work is expected to extend beyond the consent decree deadline, although all basins will have work either completed or underway by the 2015 deadline.

For FY14, WSSC has increased the annual project costs by 230 percent ($477 million), based on having more SSES studies completed. Also, some work previously in the sewer reconstruction program "information only" project has been shifted to this project.

The County Executive recommends approval of the Trunk Sewer Rehabilitation project as proposed. Council Staff concurs.

Enhanced Nutrient Reduction (ENR) Related Projects

FY14-19 Proposed Enhanced Nutrient Removal Projects

Facility	Total Cost	Through FY13	Six-Year Total	FY14	FY15	FY16	FY17	FY18	FY19
Seneca WWTP	**13,513**	10,288	**3,225**	2,542	683				
Damascus WWTP	**7,707**	7,684	**23**	23					
Western Branch WWTP	**39,109**	21,473	**17,636**	14,850	2,786				
Parkway WWTP	**19,131**	18,069	**1,062**	1,062					
Piscataway WWTP	**7,827**	7,827	-						
Proposed Total	**87,287**	**65,341**	**21,946**	**18,477**	**3,469**	-	-	-	-
Blue Plains ENR Project*	**407,890**	166,284	**233,800**	70,592	54,708	45,823	42,920	18,241	1,516
Total with Blue Plains	**495,177**	**231,625**	**255,746**	**89,069**	**58,177**	**45,823**	**42,920**	**18,241**	**1,516**

*Blue Plains ENR Project assumes $7.8 million in costs beyond FY19.

In 2004, the Maryland Legislature approved the Chesapeake Bay Restoration Act, which authorized the collection of a surcharge on water and sewer utility bills paid by Maryland residents and businesses. Funds raised by this surcharge (commonly known as the "flush tax") are used to fund the conversion of wastewater treatment plants from biological nutrient removal (BNR) to enhanced nutrient removal (ENR).

Starting with the FY07-12 CIP, the WSSC CIP included ENR projects at WSSC's wastewater treatment plants, with State funding assumed to cover eligible costs. Five years ago, major dollars were added to the equivalent ENR project for the Blue Plains Wastewater Treatment Plant.

For the FY14-19 CIP, WSSC has proposed ENR projects totaling $255.7 million over the six-year period. This represents about an $85.1 million, or 25 percent, reduction in six-year costs and is primarily the result of projects moving through construction (and moving out of the six-year period), especially with regard to the Blue Plains ENR project. The six-year total will drop even further (about $8.0 million) when taking into account the revised DC Water budget numbers for the Blue Plains ENR project (reflected in the CE recommendation).

The requirements to achieve the ENR standard vary by facility. The agreed-upon cost sharing percentages for each ENR project range from 46 percent to 100 percent State funding, depending on the

scope of work in each project. The following chart provided by WSSC staff shows the State aid split as well as the overall costs for each project.

WSSC ENR PROJECT STATUS					
	Damascus WWTP ENR	Parkway WWTP ENR	Piscataway WWTP ENR	Seneca WWTP ENR	Western Branch WWTP ENR
Notice to Proceed	June 10, 2011	July 11, 2011	January 28, 2011	September 30, 2011	October 31, 2011
Substantial Completion Date	January 21, 2013	May 17, 2013	September 25, 2012	July 30, 2014	July 2, 2014
FY'14 Proposed CIP	$7,707,000	$19,131,000	$7,827,000	$13,513,000	$39,109,000
MDE Funding Percentage	69%	87%	78%	46%	100%

The County Executive recommends approval of the ENR projects as proposed (with revised costs for the Blue Plains ENR project based on the latest DC Water FY12-21 CIP numbers, as discussed earlier).

Council Staff recommends approval of the ENR projects, with the cost change in the Blue Plains ENR project noted earlier.

Blue Plains Projects

The WSSC PDFs for Blue Plains represent WSSC's contribution to improvements at the Blue Plains Plant. WSSC's costs for the Blue Plains projects are summarized in the following table, as is the CE Recommendation.

Blue Plains Projects: Expenditures (in $000s)

	Approved FY13	Six-Year Total	FY14	FY15	FY16	FY17	FY18	FY19
Total Blue Plains Project Costs								
Approved FY13-18	226,756	**604,219**	133,320	80,509	72,641	62,968	28,025	
Proposed FY14-19		**510,091**	178,573	115,946	77,904	71,227	43,647	22,794
Difference		**(94,128)**	45,253	35,437	5,263	8,259	15,622	
% Change		**-15.6%**	**33.9%**	**44.0%**	**7.2%**	**13.1%**	**55.7%**	
CE Recommended FY14-19		**490,594**	**165,599**	**119,453**	**82,172**	**66,582**	**40,893**	**15,895**
$ Change from Proposed		**(19,497)**	(12,974)	3,507	4,268	(4,645)	(2,754)	(6,899)
% Change from Proposed		**-3.8%**	-7.3%	3.0%	5.5%	-6.5%	-6.3%	-30.3%

As shown in the table, WSSC's proposed six-year total is $510.1 million (a decrease of 15.6% from the Approved FY13-18 CIP). However, as noted earlier, the County Executive is recommending changes in the six-year total for these projects, based on more recent DC Water budget information.

Regional negotiations for a new Blue Plains Intermunicipal Agreement (IMA) to replace the 1985 IMA were recently finalized. The old IMA set capacity allocations for the Blue Plains regional partners (including WSSC). The capacity allocation percentages are used to allocate capital costs for Blue Plains projects. Actual flows to the facility are used to determine operating contributions by the regional partners. The new IMA maintains the same capacity allocation for WSSC.

As noted earlier, Council Staff recommends approval of the Blue Plains project totals as recommended by the County Executive. These numbers are based on the latest project cost estimates included in the DC Water FY12-21 CIP.

"Information Only" Projects

Advanced Metering Infrastructure (PDF on ©41)

This project (new last year) involves the study of various automated meter reading systems in FY13, with a goal of implementing a system that maximizes customer service and operational efficiency. Order of magnitude costs of $89.5 million are included in the six-year total for the project.

The customer benefits of such a system include: monthly billings based on actual water usage, more rapid identification of leaks, and the ability of the customer to better monitor water usage. For WSSC, the elimination of the need for manual reading of all customer meters could present significant cost savings. WSSC would also gain the capability to do more and better analysis of actual water usage and potential billing structures.

A key question is whether the cost savings and customer benefits from the project are sufficient to justify the major upfront costs. A study completed in March 2011 identified about $11.4 to $15.4 million in annual savings that could be achieved upon full implementation, which implies a 5 to 8 year payback.

Funding in FY13 is providing for the upgrade of the remaining monthly meters to the AMR standard. Further work has been postponed pending the upgrade of WSSC's Customer Service Information System, which is needed so the system can receive the volume of data that will come from AMR meters.

Anaerobic Digestion/Combined Heat & Power (PDF on ©38-39)

This project, as proposed, provides for the design and construction of systems to produce biogas from biosolids at the Piscataway Wastewater Treatment Plant. The total project cost is estimated at $146.4 million.

Cost savings will be achieved from reduced energy purchase costs and from reduced biosolids transportation and disposal costs. The project is intended to include a payback period of no more than 15 years that would be guaranteed by the contractor.

The County Executive recommends a number of expenditure and text changes to this project as detailed in his message from January 15 (see ©4). These changes reflect the County Executive's understanding that this project is still in an early planning phase. The Executive specifically notes that the option of utilizing anaerobic digestion capacity currently under construction at the Blue Plains plant needs to be further explored. Therefore, all design and construction costs shown in the proposed project are recommended for removal until this planning work is completed. WSSC has been asked to provide an update to the Committee on this planning work. **Council Staff concurs with the County Executive's recommendation pending any additional information provided by WSSC.**

Asset Management Program (PDF on ©40)

Work continues on WSSC's Asset Management Program ($8.03 million over the six-year period). Phase I of the work (a broad level review) was completed in December 2007.

Two major findings from Phase I were:

- The above-ground assets are in good condition, with a few exceptions.
  - Process upgrades needed to comply with existing regulations are programmed in the CIP.
  - Non-process rehabilitations at plants, pumping stations, and water storage tanks are needed.
- The renewal of buried assets is WSSC's most immediate challenge.
  - By 2025, approximately 50% of the entire distribution system will reach or exceed its useful life.
  - 85% of the cast iron pipe in the distribution system will exceed its useful life by 2025.
  - Renewal of the collection system piping is driven by compliance with the Consent Decree signed in 2005 to reduce sanitary sewer overflows (SSOs).

Phase II was completed in March 2011 and included the creation of five Asset Management Plans (AMPs), including: Piscataway WWTP, Broad Creek WWPS, Broad Creek Basin, Transmission System, and Distribution Systems. The Piscataway WWTP Upgrades project was the first project to be developed out of this AMP process. Phase II also included the development of 12 asset management processes and 69 asset management procedures.

An update by WSSC is provided below:

In FY'13, updates to Piscataway WWTP, Broad Creek WWPS, Broad Creek Basin, Water Distribution, and Water Transmission Systems Asset Management Plans will be completed.

In FY'14, work will continue on Asset Management Plans for Parkway WWTP, Anacostia WWPS, Collection System, Potomac WFP, Duckett and Brighton Dams, and Anacostia Depot. In addition, work started in FY13 on various process improvements to advance the implementation of the program will continue in FY14.

A primary focus in FY'13 that will continue into FY'14 is the development of software to replace legacy systems for the management of infrastructure asset data that is the foundation for the asset management processes that have been and continue to be developed.
Asset management is about efficiently managing the escalating costs associate with aging infrastructure. Some of the Program benefits (efficiencies) to date include:

- *Enhanced processes which allow for more comprehensive evaluation and selection of new projects, i.e. improved condition model for water buried assets, and Project Validation Process.*
- *Implementation of continuous condition monitoring pilot program at Piscataway WWTP Raw Pumping Station pumps. This program is expected to reduce O&M expenses through more efficient allocation of maintenance effort and earlier intervention when problems are detected.*
- *Facility Plan work prioritized to provide the greatest risk reduction in the shortest time frame.*
- *The outcomes of the Asset Management Program are inputs to the CIP and Budget decision-making process.*

Water Reconstruction Program (PDF on ©34-35)

This "information only" project funds small water main replacement throughout the WSSC service area. The project does not include any funding for "major capital projects" as defined in State law. The estimated six-year cost is $711.9 million.

Over the past five years, WSSC has ramped up the annual number of miles of pipe to be replaced. Beginning with the Approved FY10-15 CIP, budgeted and actual replacement miles began to increase steadily. The budget level for FY10 was 27 miles per year but has been increased each year and is 46 miles for FY13. For FY14, 51 miles of replacement are proposed. WSSC's long-term goal is to reach a steady state of approximately 55 miles of replacement per year (or about a 100-year replacement cycle).

The need for expanding this program was identified several years ago in the Asset Management Plan effort discussed earlier. Originally, this ramp-up was to be a major multi-year commitment predicated on a substantial increase in the Account Maintenance Fee (ready to serve) charge that was ultimately not agreed upon by the WSSC Commission. Without a new funding source, the ramp-up must be accommodated within available dollars from annual water and sewer rate increases.

This ramp-up is having an impact on rates of new debt and debt service costs in the Operating Budget. Fortunately, favorable interest rates and WSSC's move from 20 year debt to 30 year debt (with accompanying reinvestment of a portion of the debt service savings back into Paygo contributions) have helped temper this impact. Debt service is expected to climb from about 34.2 percent in FY13 to 37.4 percent in FY18. However, this FY18 percentage is substantially lower than what was projected at this time last year (42.5%).

The Bi-County Infrastructure Funding Working Group is continuing to look at possible infrastructure charges and possible changes in the current rate structure. WSSC recently hired a consultant to assist with this study. The consultant study should be completed by September 2013.

Sewer Reconstruction Program (PDF on ©36-37)

This "information only" project funds comprehensive sewer system evaluations and rehabilitation programs. The six-year cost is $583.9 million. As with the Water Reconstruction Program above, the sewer reconstruction project does not include funding for "major capital projects" as defined in State law. Capital-size projects that are identified in this project become stand-alone projects.

WSSC has approximately 5,400 miles of sewer pipe. As discussed in past years, this project is a major element of WSSC's SSO Consent Decree compliance efforts. Expenditures have already ramped up in this program as a result. As mentioned earlier, WSSC developed a new project in FY11 to deal specifically with trunk sewer reconstruction. Costs associated with that work were previously included in this project. The focus of this project is on sewer mains and house connections.

Both the water and sewer reconstruction efforts are a major area of concern to Montgomery County, given WSSC's aging infrastructure. However, recent years of significant rate increases and continued rising debt requirements make this effort a major challenge. The rate study noted earlier is needed so that WSSC and both counties can identify how to address WSSC's infrastructure needs over the long term with a sustainable and equitable revenue stream.

Cost To Extend Water/Sewer to Address Failing Septic Systems

The issue of the often cost-prohibitive nature of extending sewer to areas with failing septic systems (and/or areas where septic systems may currently be functional but sewer is assumed in County plans) has come before the Council in several contexts in recent years. There are a number of examples (such as in Potomac and Clarksburg) where properties receive category changes (or would be granted category changes if requested) to allow public water and/or sewer to address failed septic systems but cannot ultimately move forward with the water/sewer main extensions because of cost issues.

All septic systems will ultimately fail over time. If a property does not have sufficient acreage or suitable soil for a replacement well and/or septic field based on newer and stricter permit requirements, then public water and/or sewer may be the only viable long-term option. However, these extensions have gotten increasingly costly in recent years and, in many cases, the applicant may not be able to afford the cost of the water or sewer main extension.

A staff group with representatives from WSSC, Montgomery County, and Prince George's County studied this issue several years ago and presented recommendations to WSSC leadership that would have revised how water and sewer main extensions are financed in these cases.

More recently, at the request of Councilmember Floreen, the Bi-County Infrastructure Working Group has been reviewing the extension cost issue and is looking at some strategies for making water and sewer extensions more affordable. **Council Staff suggests that the Committee receive an update on this issue after the budget.**

In the meantime, DPS Well and Septic staff continues to respond to on-site septic system issues that arise. DEP reviews individual applications for category changes for property owners seeking to connect to sewer to address septic failures.

Summary of Council Staff Recommendations

- **Recommend approval of WSSC's CIP with the changes recommended by the County Executive.**
- **Concur with WSSC on all other projects in the Proposed FY14-19 CIP.**

Attachments
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OFFICE OF THE COUNTY EXECUTIVE
ROCKVILLE, MARYLAND 20850

Isiah Leggett
County Executive

MEMORANDUM

January 15, 2013

TO: Nancy Navarro, President, Montgomery County Council

FROM: Isiah Leggett, County Executive

SUBJECT: Washington Suburban Sanitary Commission (WSSC)
FY14-19 Capital Improvements Program (CIP) and FY14 CIP Expenditures

I am pleased to transmit to you, in accordance with State law, my recommended FY14-19 CIP and FY14 CIP expenditures for the Washington Suburban Sanitary Commission.

WSSC's Proposed FY14-19 CIP totals $2.059 billion, of which $1.630 billion is for Montgomery County and bi-county projects. The latter figure represents a $383.1 million increase over the six-year total for Montgomery County and bi-county projects in the Commission's approved FY13-18 CIP. WSSC is requesting $497.6 million in FY14 capital expenditures for Montgomery County and bi-county projects, up $64.6 million (14.9%) from the approved FY13 amount of $433.0 million. The FY14 increases are primarily attributable to significant growth in expenditures for the Trunk Sewer Reconstruction Program, the Large Diameter Water Pipe Rehabilitation Program, the Blue Plains Wastewater Treatment Plant (WWTP) Pipelines and Appurtenances project, the Patuxent Water Filtration Plant (WFP) Phase II Expansion, and the new Potomac WFP Corrosion Mitigation project. These increases were partially offset by decreased FY14 expenditures for the other five Blue Plains projects, the Duckett and Brighton Dam Upgrades, the Seneca WWTP Expansion Part 2, and other projects that are moving through construction.

Spending Control Limits

I recommended and the Council adopted FY14 Spending Control Limits for WSSC that include a maximum average water and sewer rate increase of 8.0 percent, which is 0.5 percentage points higher than the 7.5 percent average rate increase approved for FY13. An 8.0 percent average rate increase will fund a "same services" operating budget as well as WSSC's proposed FY14-19 CIP. It represents a balance between meeting WSSC's urgent needs and limiting the pressure on customer budgets in this difficult economy.

Under the 8.0 percent rate increase allowed by the Spending Control Limits adopted by the Council, WSSC would have to make unspecified reductions to its same services operating budget if it wishes to include wage and salary enhancements for its employees and/or its proposed high priority new and reinstated programs. Such reductions could potentially impact capital spending. I strongly urge the Commission to ensure that the following essential programs are preserved when deciding on reductions:

- The inspection, repair, and acoustic monitoring (using fiber optic cable) of large diameter pre-stressed concrete cylinder pipe (PCCP), and
- The reconstruction and rehabilitation of WSSC's aging small water and sewer mains.

These initiatives, which are critical to the rehabilitation and renewal of WSSC's aging infrastructure, must proceed as planned.

Furthermore, I want to reiterate my position that I will not support any increases in base salaries and wages or the provision of lump sum payments to WSSC employees that exceed the amounts that will be provided to Montgomery County's general government employees for FY14.

Blue Plains Advanced Wastewater Treatment Plant

The total six-year cost of the six Blue Plains WWTP projects in WSSC's Proposed FY14-19 CIP decreased by $94.1 million (15.6%) vs. its approved FY13-18 CIP. After WSSC issued its Proposed FY14-19 CIP, DC Water released its Proposed FY 2012-2021 CIP which further refined its capital investment needs for Blue Plains. The revised FY14 expenditures from DC Water for the six Blue Plains projects are $13.0 million less than what WSSC estimated in its Proposed FY14-19 CIP, and the total revised six-year cost of those projects is $19.5 million less than WSSC's earlier estimate. DC Water's revised Blue Plains figures include increases in the projected six-year costs for three of the six projects (relative to WSSC's Proposed FY14-19 CIP), with decreases for the other three projects. The adjustments are primarily due to revised project cost estimates and project schedule adjustments deferring costs to later years.

BLUE PLAINS WWTP PROJECTS - REQUESTED VS. RECOMMENDED AMOUNTS ($000)							
Projects	TOTAL 6 YR	FY14	FY15	FY16	FY17	FY18	FY19
WSSC REQUEST							
Liquid Train Projects, Part 2	38,242	7,228	5,357	4,861	8,575	6,189	6,032
Biosolids Management, Part 2	102,970	70,800	23,633	4,316	3,207	861	153
Biological Nutrient Removal	6,676	4,179	1,059	905	529	4	0
Plant Wide Projects	33,941	5,590	7,673	3,233	3,355	7,669	6,421
Enhanced Nutrient Removal	233,800	70,592	54,708	45,823	42,920	18,241	1,516
Pipelines and Appurtenances	94,462	20,184	23,516	18,766	12,641	10,683	8,672
WSSC REQUEST TOTAL	510,091	178,573	115,946	77,904	71,227	43,647	22,794
CE RECOMMENDED							
Liquid Train Projects, Part 2	38,715	5,308	9,172	5,646	6,526	6,732	5,331
Biosolids Management, Part 2	112,402	72,504	25,011	6,964	5,880	1,998	45
Biological Nutrient Removal	8,476	3,976	1,053	2,326	1,117	4	0
Plant Wide Projects	33,690	8,391	5,955	3,563	3,797	7,737	4,247
Enhanced Nutrient Removal	225,754	60,966	60,942	45,758	39,659	17,359	1,070
Pipelines and Appurtenances	71,557	14,454	17,320	17,915	9,603	7,063	5,202
CE RECOMMENDED TOTAL	490,594	165,599	119,453	82,172	66,582	40,893	15,895
CE Recommended - WSSC Request	(19,497)	(12,974)	3,507	4,268	(4,645)	(2,754)	(6,899)

Under the new 2012 Inter-Municipal Agreement, WSSC must pay for its share of the capital costs associated with the Blue Plains WWTP, as determined by DC Water but subject to certain adjustments by WSSC. I recommend that WSSC's Blue Plains WWTP project estimates be modified to align them with the revised amounts proposed by DC Water (with adjustments by WSSC). The foregoing table shows the recommended changes. The revised Blue Plains costs will result in a $12.974 million decrease in FY14 capital spending vs. WSSC's Proposed FY14-19 CIP. This decrease will reduce the need for WSSC bonds in FY14 by $9.021 million, which translates to a $493,100 decrease in FY14 debt service.

Debt Capacity

State law provides for the option of a tax levy by Montgomery and Prince George's counties against all assessable property in the Washington Suburban Sanitary District to pay for the principal and interest on WSSC bonds. This provision, which would be exercised only if requested by WSSC, does not constitute a pledge of the full faith and credit of the two counties. However, WSSC bonds are part of the County's overlapping debt. As of June 30, 2012, WSSC debt represented 50.8 percent of Montgomery County's gross overlapping debt. The amount of debt issued by WSSC is therefore a factor in rating agency assessments of the credit worthiness of Montgomery County.

Based on a recommendation from WSSC's Bi-County Infrastructure Funding Working Group, the Commission will begin to employ 30 year bonds starting in FY14, coupled with increased use of PAYGO made possible by the reduced debt service associated with moving to a 30 year amortization period. With these changes, WSSC's multi-year financial forecast (assuming a same services operating budget and implementation of its proposed FY14-19 CIP under the Spending Control Limits adopted by the Montgomery County Council) projects debt service increasing by 61.6% percent between FY13 and FY19. However, during that period, debt service will never exceed 37.4% of the operating budget (one of the reasons for implementing the Systems Development Charge in FY94 was to keep this debt service ratio under 40%). The updated Blue Plains expenditure estimates from DC Water will reduce WSSC's six-year debt requirement by $22.5 million vs. the Commission's Proposed FY14-19 CIP and are therefore consistent with the goal of keeping the debt service ratio under 40% during the six-years of the CIP.

Information Only Projects

While "Information Only" projects – which include the small water and sewer reconstruction programs – are subject to review and approval as part of WSSC's annual Operating and Capital Budget, they do not meet the criteria given in Section 23-301 of the Public Utilities Article, WSSD Laws, of the Annotated Code of Maryland for inclusion in WSSC's CIP. WSSC shows such projects and their expenditures separately in its CIP document to provide additional information on and context for its capital program. Information Only projects are not included in the six-year CIP.

Reconstruction of Small Water and Sewer Mains. WSSC is proposing to increase small water main replacement by 5 miles (10.9%) in FY14, for a total of 51 miles. At the same time, budgeted sewer reconstruction will fall by 78.2% from 55 to 12 miles, with a corresponding reduction in the lining of lateral sewer lines (see the table on the next page). FY14 funding for the reconstruction of small water mains will increase by 25.0% while expenditures for rehabilitating and reconstructing small sewers will fall by 63.4%. The decreased mileage and expenditures for small sewer rehabilitation reflect

SMALL WATER AND SEWER MAIN RECONSTRUCTION/REHABILITATION
FY14-19 Proposed vs. FY13-18 Approved

	FY13-18 Approved			FY14-19 Proposed					
				FY14		6-Year		Total	
	FY13	6-Year	Total	Amount	% Change	Amount	% Change	Amount	% Change
Reconstruction Costs									
Water Main Replacement ($000)	77,427	641,308	707,150	96,774	25.0%	711,923	11.0%	793,935	12.3%
Sewer Reconstruction ($000)	136,412	628,929	702,873	49,902	-63.4%	583,937	-7.2%	655,424	-6.8%
Reconstruction Mileage									
Water Main Replacement (miles)	46	317	--	51	10.9%	326	2.8%	--	--
Sewer Reconstruction (miles)									
Sewer Main Reconstruction	55	210	--	12	-78.2%	162	-22.9%	--	--
Lateral Sewer Lining	10	55	--	7	-30.0%	58	5.5%	--	--

efforts by WSSC to channel resources to the Trunk Sewer Reconstruction Program to help meet the December, 2015 SSO Consent Decree deadline.

Anaerobic Digestion/Combined Heat and Power Project. The PDF for this Information Only project does not reflect the current status of the project (which is still in the preliminary planning phase) or the results of the October 11, 2012 meeting between WSSC officials and representatives from Montgomery and Prince George's counties, where a decision was made to explore with DC Water the option of using the anaerobic digestion facility currently under construction at Blue Plains to achieve the goals of this project. I recommend that the following changes be made to the Anaerobic Digestion/ Combined Heat and Power "Information Only" PDF to align it with the actual status of this project.

1. Condense the information provided under "Specific Data" to provide a summary of the general types of benefits anticipated from this project as identified by the AECOM study, without citing quantitative results based on a specific option (since preliminary planning and final selection of an option for this facility are ongoing).
2. In the "Other" section, modify the second sentence to remove the statement that "the feasibility study has been completed" since the October 11, 2012 meeting referenced above concluded that more preliminary planning needs to be done. The rest of this section should be revised to describe the remaining planning efforts, including additional analysis of the Blue Plains option.
3. The Expenditure and Funding Schedules should be modified to include only the expenditures needed to complete the preliminary planning phase and final selection of a digester option/location. Construction expenditures (and related "Other" expenditures) should be deleted since it is too early in the planning process for them to be included. Federal Aid should be shown only if WSSC is confident that it will be provided to help complete the preliminary planning process.
4. The "Cost Change" section should be revised to describe and explain the changes noted in #3 above and should state that design and construction costs will be included after completion of the preliminary planning phase and selection of a digester facility and location.
5. The "Coordination" section should state that the project will be presented to the County Executives and County Councils of both counties for review and approval prior to inclusion of the project in the formal CIP and the spending of any funds for design and construction.

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

IL:jmg

c: Timothy L. Firestine, Chief Administrative Officer
Jerry N. Johnson, General Manager/CEO, Washington Suburban Sanitary Commission
Tom Traber, Chief Financial Officer, Washington Suburban Sanitary Commission
Stephen Farber, Staff Director, Montgomery County Council
Dave Lake, Department of Environmental Protection

Attachments: Executive Recommendation – Blue Plains WWTP: Plant Wide Projects
Executive Recommendation – Blue Plains WWTP: Biological Nutrient Removal
Executive Recommendation – Blue Plains WWTP: Biosolids Mgmt Pt. 2
Executive Recommendation – Blue Plains WWTP: Liquid Train Pt. 2
Executive Recommendation – Blue Plains WWTP: Enhanced Nutrient Removal
Executive Recommendation – Blue Plains WWTP: Pipelines and Appurtenances
Anaerobic Digestion/Combined Heat and Power "Information Only" PDF
Agency Request Compared to Executive Recommended

GROWTH FUNDING GAP
(In Millions)

	FY'14	FY'15	FY'16	FY'17	FY'18	FY'19	6 YEAR TOTAL
CIP GROWTH EXPENDITURES	$107.7	$89.1	$47.4	$23.0	$3.4	$0.0	$270.6
Expenditures Adjusted for Completion	86.2	92.8	55.7	27.9	7.3	0.7	270.6
FUNDING SOURCES							
Privately Funded Projects	13.9	14.1	6.2	1.1	0.1	0.0	35.4
Estimated SDC Revenue	17.6	17.8	18.3	18.8	19.0	19.0	110.5
Less SDC Developer Credits	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(15.6)
Less SDC Exemptions [1]	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(6.0)
TOTAL FUNDING SOURCES	$27.9	$28.3	$20.9	$16.3	$15.5	$15.4	$124.3
FUNDING GAP ADJUSTED FOR COMPLETION	**$58.3**	**$64.5**	**$34.8**	**$11.6**	**($8.2)**	**($14.7)**	**$146.3**

[1] Each County may grant SDC exemptions, as identified in Appendix A, totaling up to $500,000 per fiscal year as provided for in Maryland State Law (Article 29, Section 6-113(c)(iv)). Unused exemption amounts are available for use in future fiscal years. Cumulative unused SDC exemptions totaled approximately $4.1 million for Montgomery County and $2.3 million for Prince George's County through June 30, 2012.

Expenditures

The FYs 2014-2019 Capital Improvements Program includes 91 projects for a grand total of nearly $3.8 billion dollars. Expenditures for the six-year program period are estimated at $2.1 billion. FY'14 expenditures are estimated at $642.3 million, which is $78.2 million greater than the funding level approved for FY'13. Of the $642.3 million, $151.4 million is for the Water Program and $490.9 million is for the Sewerage Program. More than a third of the projects in this CIP are Development Services Process (DSP) growth projects. The DSP projects' estimated six-year program cost is $35.5 million, with approximately $17.5 million programmed in FY'14, approximately the same amount approved last year. There are 9 new CIP projects totaling $69.5 million in the six-year program period. These projects are shown on the New Projects Listing near the end of this section.

A table comparing the Adopted FYs 2013-2018 CIP to the Proposed FYs 2014-2019 CIP follows:

WSSC CIP - COMPARISON

(In Thousands)

	TOTAL PROGRAM	TOTAL SIX YEARS	BUDGET YEARS COMPARISON
Adopted FYs 2013-2018	2,979,816	1,659,819	564,127
Proposed FYs 2014-2019	3,787,318	2,059,004	642,274
Change	$807,502	$399,185	$78,147

Six-year program expenditures are estimated at approximately $2.1 billion, $535.7 million for the Water Program and $1.5 billion for the Sewerage Program. This is a $399.2 million increase from the six-year total in the Adopted FYs 2013-2018 CIP. The net increase is primarily due to the significant increase in the Trunk Sewer Reconstruction project in order to meet the requirements of the consent decree.

Expenditure Categories

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

Growth – any project, or part of a project, that increases the demand for treatment and delivery of potable water and/or increases system requirements to collect and treat more sewage in response to new, first time, service hookups to the WSSC's existing customer base.

Environmental Regulations – any project which is required to meet changes in federal regulations, such as the Clean Water Act, or in response to more stringent state operating permit requirements, but does not increase system capacity. Any part of this type of a project that provides for additional capacity is for growth.

System Improvements – any project which improves or replaces components of existing water and sewerage systems or provides for mainline relocations required in response to county or state transportation department road projects where the intended purpose is not to increase the capacity of any system components. This category also includes program-sized water main extensions for which the primary function is to provide water supply redundancy to pressure zones or smaller areas in the Sanitary District. Any part of this type of a project not dictated by maintenance or rehabilitation needs and that provides for additional capacity is for growth. (Refer to Figure 3, which displays funding allocations for all three categories.)

WSSC Asset Management Program

One of the WSSC's top priorities, in the core strategy of Infrastructure Asset Management, is to improve capital investment management. A key task is to develop an Asset Management Program for the Commission to address the existing and future capacity, regulatory, and rehabilitation/ repair/replacement requirements for the next 30 years. The objective of the "Asset Management Program" (AMP) is to identify infrastructure needs and investment strategies for the next 30 years, and develop and implement an asset management framework for optimal investment decision making. The AMP will provide input to the Commission's multi-year financial forecasting and will develop and refine a 30-year capital investment projection based on the following requirements: regulatory, capacity, maintenance, rehabilitation/replacement, process control, energy conservation, and reliability.

The AMP will be completed in phases. Phase 1A, completed in July 2007, provided a high level assessment of the WSSC's assets which was used as input into both the Fiscal Year 2009 capital planning process and the 10-Year Fiscal Plan. Each group of assets identified in Phase 1A was evaluated with respect to several areas of focus, including: compliance with existing regulatory requirements; providing adequate system capacity for current and future customers; adequately maintaining, rehabilitating, and replacing the existing systems; incorporating energy conservation and reliability measures at existing facilities; and providing process control systems that allow for optimization of the systems. The main outcomes of Phase 1A included: a 30-year investment projection; financial data for the 10-Year Fiscal Plan; asset summary profiles for each of the major asset groups; identification of key strategic drivers, trends, and levels of service; and recommendations for subsequent phases of the AMP. Phase 1B, completed in December 2007, refined the asset hierarchy and provided a roadmap for development of asset management plans in future phases. The development of an Asset Management Strategy was completed in April 2008, and included assessment of current asset management processes and practices, a gap analysis, and an Asset Management Implementation Plan (AMIP).

Phase 2 of the AMP , completed in March 2011, included the development of 5 Asset Management Plans (AMP) and implementation of 13 projects to begin addressing the recommendations identified in the AMIP to improve the Commission's asset management practices and processes. Detailed asset management plans were completed for the Water Distribution and Transmission System pipes, Piscataway WWTP, Broad Creek WWPS, and the Broad Creek Basin. The Commission also has improved guidelines and processes to define its level of services, assess the condition of water and wastewater assets, determine business risk associated with the assets, improve maintenance and operations strategies, determine asset life cycle costs, and optimize investment decisions.

Phase 3 of the AMP started in June 2012 and will deliver 19 projects. Nine projects will develop new asset management plans, 4 projects will update existing asset management plans and 6 projects will continue improving WSSC asset management practices and processes.

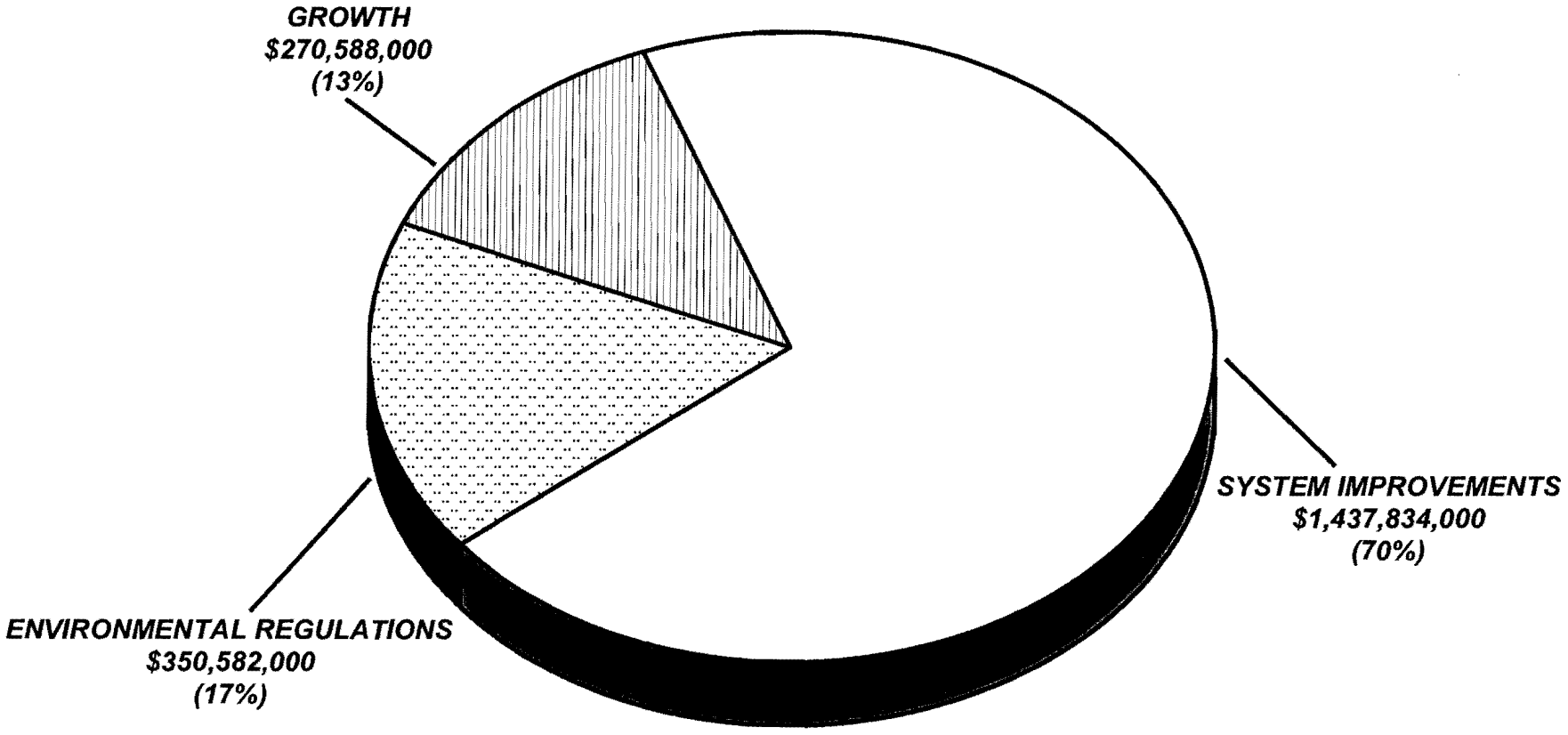
In each phase of the AMP, the core concepts of asset management will be applied more comprehensively to the individual components of the aggregated assets from Phase 1A to provide a highly detailed and well-defined evaluation of life-cycle cost for all assets throughout the WSSC. The results will include a much-refined 30-year investment projection and the ability to perform optimized investment decision-making. In addition, the recommendations outlined in the AMIP will be implemented to start transitioning to a Commission-wide asset management program.

The AMP will identify new capital investment requirements for inclusion in the CIP. The WSSC Asset Management Program project (A-106.00) is included in the Information Only section of the CIP.

FIGURE 3

WSSC PROPOSED FYS 2014-19 CIP

SIX-YEAR PROGRAM EXPENDITURES BY MAJOR CATEGORY*



SIX-YEAR PROGRAM TOTAL
$2,059,004,000

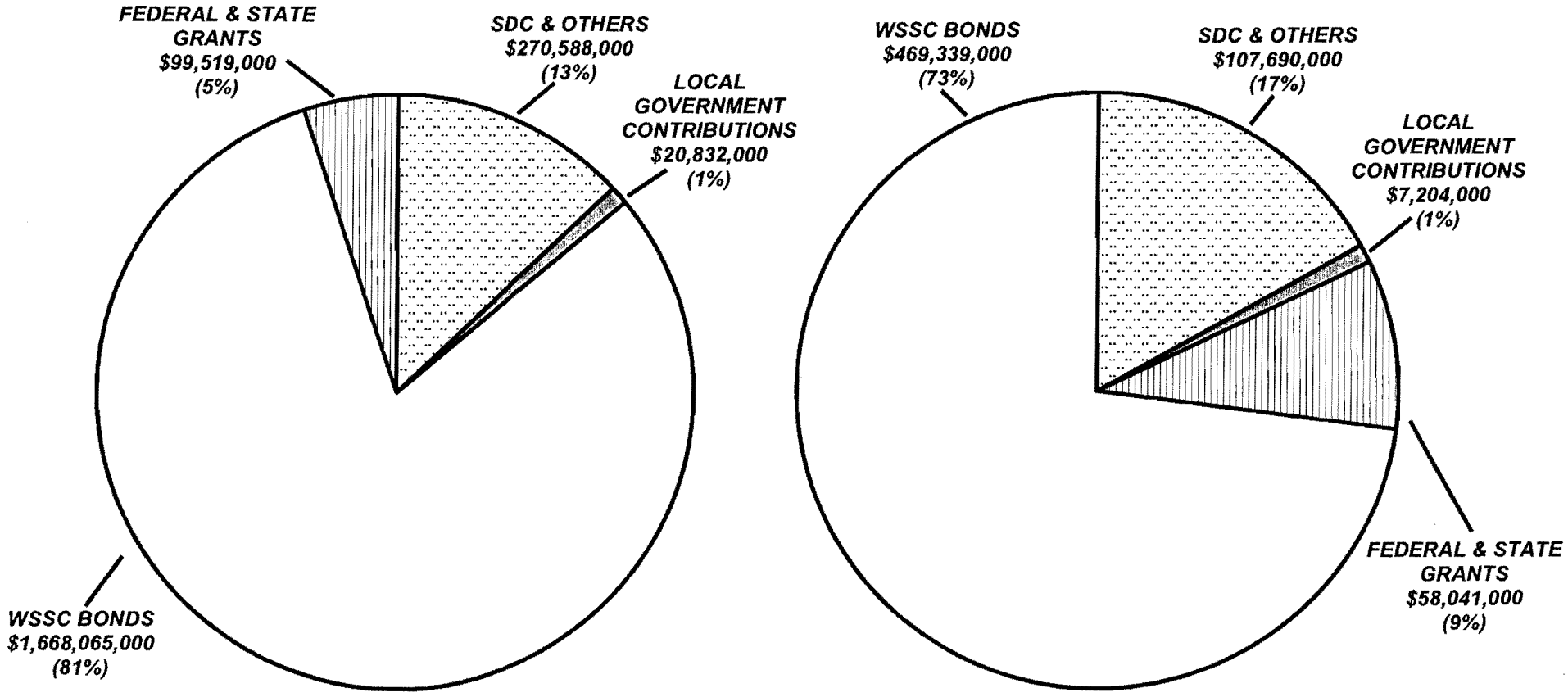
* Totals do not include $1,652,498,000 in System Improvements project capital expenditures for Information Only projects.

(9)

FIGURE 4

WSSC PROPOSED FYS 2014-19 CIP

FUNDING BY SOURCE*



SIX-YEAR PROGRAM TOTAL
$2,059,004,000

FY'14 BUDGET YEAR TOTAL
$642,274,000

* Totals do not include $1,652,498,000 and $177,330,000 in capital expenditures for Information Only projects in the six-year program and budget year, respectively.

(10)

DATE: October 1, 2012

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

MONTGOMERY COUNTY WATER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 12	EST. EXPEND 13	TOTAL SIX YEARS	EXPENDITURE SCHEDULE YR 1 14	YR 2 15	YR 3 16	YR 4 17	YR 5 18	YR 6 19	BUDGET REQUEST 14	PDF PAGE NUM
W-3.02	Olney Standpipe Replacement	6,775	1,111	253	5,411	2,611	1,610	810	380	0	0	2,611	1-3
W-46.14	Clarksburg Area Stage 3 Water Main, Parts 1, 2 & 3	5,529	108	1,035	4,386	2,333	1,442	468	143	0	0	2,333	1-5
W-46.15	Clarksburg Elevated Water Storage Facility	4,442	142	35	4,265	230	483	2,634	918	0	0	230	1-6
W-46.18	Newcut Road Water Main, Part 2	1,547	508	621	418	255	163	0	0	0	0	255	1-7
W-46.24	Clarksburg Area Stage 3 Water Main, Part 4	5,255	85	1,607	3,563	2,493	802	268	0	0	0	2,493	1-8
W-90.04	Brink Zone Reliability Improvements	345	0	0	345	345	0	0	0	0	0	345	1-9
W-138.02	Shady Grove Standpipe Replacement	9,687	712	698	8,277	2,083	4,508	1,247	439	0	0	2,083	1-10
W-153.00	Laytonsville Elevated Tank & Pumping Station	6,044	2,802	2,637	605	605	0	0	0	0	0	605	1-11
	Projects Pending Close-Out	342	178	164	0	0	0	0	0	0	0	0	1-13
	TOTAL MONTGOMERY COUNTY WATER PROJECTS	39,966	5,646	7,050	27,270	10,955	9,008	5,427	1,880	0	0	10,955	

A. Identification and Coding Information

1. Project Number	Agency Number	Update Code
143800	W-90.04	Add

2. Date: October 1, 2012
Revised:

7. Pre PDF Pg.No.: 8. Req. Adeq. Pub. Fac.

3. Project Name: Brink Zone Reliability Improvements

5.Agency: **WSSC**

4. Program: **Sanitation** 6. Planning Area: Montgomery County

B. Expenditure Schedule (000's)

Cost Elements	(8) Total	(9) Thru FY '12	(10) Estimate FY '13	(11) Total 6 Years	(12) Year 1 FY '14	(13) Year 2 FY '15	(14) Year 3 FY '16	(15) Year 4 FY '17	(16) Year 5 FY '18	(17) Year 6 FY '19	(18) Beyond 6 Years
Planning, Design & Supervision	**300**			**300**	300						
Land											
Site Improvements & Utilities											
Construction											
Other	**45**			**45**	45						
Total	**345**			**345**	**345**						

C. Funding Schedule (000's)

WSSC Bonds	**345**			**345**	345						

D. Description & Justification

DESCRIPTION

This project provides for initial planning work to develop alternatives to increase reliability and redundancy to the Montgomery County High Zone water transmission system; specifically, the HG760, HG836, HG960, and dependent pressure zones.

Service Area Brink Pressure Zone HG760A, Woodfield Pressure Zone HG740A, Clarksburg Pressure Zone HG740B, Clarksburg Pressure Zone HG760B, Sweepstakes Pressure Zone HG835A, Seneca Springs Pressure Zone HG835B, Cedar Heights Pressure Zone HG836A, Kings Bridge Pressure Zone HG836B, Kingstead Knolls Pressure Zone HG842A, Tralee Pressure Zone HG850A, Damascus Pressure Zone HG960A

JUSTIFICATION

Specific Data

The Neelsville Water Pumping Station is the sole delivery of water from the Montgomery County High Zone (HG660) through a single 24-inch diameter PCCP Water Transmission Main that crosses 2 miles to the Brink Elevated Tank (HG760). The selected alternative will effectively deliver water to the Brink Elevated Tank and, in turn, the Cedar Heights (HG836), Damascus (HG960), and dependent pressure zones.

Cost Change

Not applicable.

STATUS Planning

OTHER

The project scope was developed for the FY 2014 CIP and has an estimated cost for initial planning of $345,000. Expenditure and schedule estimates for design and construction will be developed through an engineering and business case analysis.

COORDINATION

Montgomery County Government.

NOTE This project supports 100% System Improvement.

E. Annual Operating Budget Impact (000's)

		FY of Impact		
Program Costs	Staff		....	
	Other		....	
Facility Costs	Maintenance		....	
	Debt Service	30	....	15
Total Costs		30	....	15
Impact on Water or Sewer Rate			....	

F. Approval and Expenditure Data (000's)

Date First in Capital Program	FY 14
Date First Approved	FY 14
Initial Cost Estimate	345
Cost Estimate Last FY	
Present Cost Estimate	345
Approved Request, Last FY	
Total Expenditures & Encumbrances	
Approval Request FY 14	345
Supplemental Approval Request Current FY (13)	

G. Status Information

Land Status:	Not Applicable
% Project Completion:	P-0%
Est. Completion Date:	FY 2014

H. Map **Map Reference Code:**

MAP NOT APPLICABLE

A. Identification and Coding Information

1. Project Number	Agency Number	Update Code
023800	W-153.00	Change

2. Date: October 1, 2012
Revised:

7. Pre PDF Pg.No.: 8. Req. Adeq. Pub. Fac.

3. Project Name: Laytonsville Elevated Tank & Pumping Station 5.Agency: **WSSC**

4. Program: **Sanitation** 6. Planning Area: Goshen, Woodfield & Vicinity P.A. 14

B. Expenditure Schedule (000's)

Cost Elements	(8) Total	(9) Thru FY '12	(10) Estimate FY '13	(11) Total 6 Years	(12) Year 1 FY '14	(13) Year 2 FY '15	(14) Year 3 FY '16	(15) Year 4 FY '17	(16) Year 5 FY '18	(17) Year 6 FY '19	(18) Beyond 6 Years
Planning, Design & Supervision	**2,192**	1,766	350	**76**	76						
Land											
Site Improvements & Utilities											
Construction	**3,429**	1,036	1,943	**450**	450						
Other	**423**		344	**79**	79						
Total	**6,044**	**2,802**	**2,637**	**605**	**605**						

C. Funding Schedule (000's)

SDC	**3,044**	1,552	1,387	**105**	105						
Contribution/Other	**3,000**	1,250	1,250	**500**	500						

D. Description & Justification

DESCRIPTION

The project provides for the planning, design, and construction for the creation of a new pressure zone to serve the town of Laytonsville and surrounding communities. Community outreach, site selection, design, and construction of an 0.5 million gallon (MG) elevated storage tank and a 1.72 MGD pumping station are part of this project. The purpose of this project is to provide public water service to existing residences and commercial properties in addition to new homes in the town of Laytonsville and the surrounding communities. To the extent that this project will add new hookups to the WSSC's existing customer base, 100% of this project supports future growth. Refer to the definition of growth projects in the Expenditure Section of the Program Overview at the front of this document.

Service Area Montgomery High Pressure Zone HG660A **Capacity** 0.5 MG

JUSTIFICATION

Plans & Studies

Preliminary Study for the Proposed Water Service Area for the Town of Laytonsville (October 1999); Memorandum dated October 18, 2001, from the Manager of the Well and Septic Section, Montgomery County Department of Permitting Services, to Water and Waste Water Management, Montgomery County Department of Environmental Protection, finding that connection to the public water system will help address problems caused by groundwater contamination and lack of available septic replacement areas; Montgomery County Ten-Year Comprehensive Water Supply and Sewerage Systems Plan.

Specific Data

The preliminary Study for Proposed Water Service Area for the Town of Laytonsville indicates that, due to high ground elevations, a new pressure zone which entails a pumping station and an elevated storage tank is required. In May 2001, under CR 14-857, the Montgomery County Council acted to permanently restrict the provision of community water service from any properties in the town currently zoned AG and from any properties adjacent to or near the town within the county-zoned RDT. The Town of Laytonsville filed a formal application for water service with the WSSC in November 2001.

Cost Change

Costs increased to reflect actual bid prices for the tank and pumping station.

STATUS Under Construction (WSSC Contract Nos. BM2938A00 , BP2938B00 , BE2938C00).

OTHER

The project scope has remained the same. Expenditure and schedule projections shown in Block B are based upon actual bids. It is estimated that an additional $2.74 million of non-CIP sized pipeline work will also be required. The expenditure and construction schedule presented above reflect that the WSSC, the Developer of the Faulk's property, and the Town of Laytonsville have agreed to the funding mechanism for the Contribution/Other funding shown above in Block C.

E. Annual Operating Budget Impact (000's) FY of Impact

Program Costs	Staff	....
	Other	....
Facility Costs	Maintenance	....
	Debt Service	....
Total Costs		....
Impact on Water or Sewer Rate		....

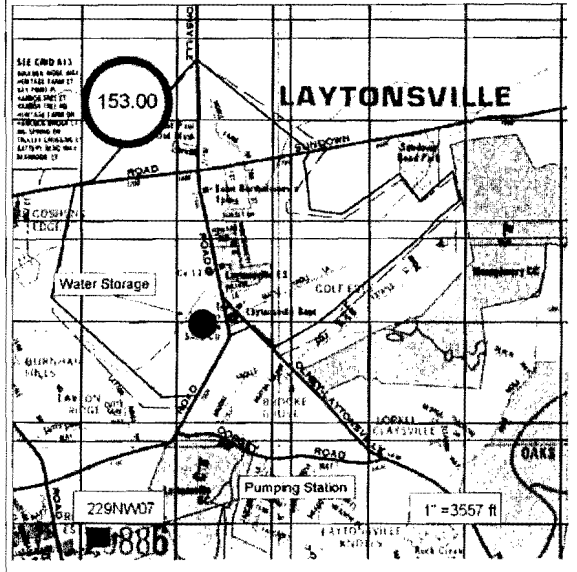
F. Approval and Expenditure Data (000's)

Date First in Capital Program	FY 02
Date First Approved	FY 02
Initial Cost Estimate	58
Cost Estimate Last FY	5,521
Present Cost Estimate	6,044
Approved Request, Last FY	2,277
Total Expenditures & Encumbrances	2,802
Approval Request FY 14	605
Supplemental Approval Request Current FY (13)	

G. Status Information

Land Status:	Site acquired
% Project Completion:	C-15%
Est. Completion Date:	November 2013

H. Map **Map Reference Code:**



(13)

D. DESCRIPTION & JUSTIFICATION (CONT.)

Agency Number: W - 153.00 **Project Name: Laytonsville Elevated Tank & Pumping Station**

The elevated storage tank is under construction and bids were received for the pumping station on April 12, 2012. The status in Block G is a composite for both projects.

COORDINATION

Maryland-National Capital Park & Planning Commission and Montgomery County Department of Environmental Protection.

NOTE This project supports 100% Growth.

DATE: October 1, 2012

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

MONTGOMERY COUNTY SEWER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 12	EST. EXPEND 13	TOTAL SIX YEARS	EXPENDITURE SCHEDULE YR 1 14	YR 2 15	YR 3 16	YR 4 17	YR 5 18	YR 6 19	BUDGET REQUEST 14	PDF PAGE NUM
S-25.03	Twinbrook Commons Sewer	980	566	57	357	116	104	102	35	0	0	116	2-3
S-25.04	Mid-Pike Plaza Sewer Main, Phase 1	1,514	119	726	669	669	0	0	0	0	0	669	2-4
S-25.05	Mid-Pike Plaza Sewer Main, Phase 2	5,917	119	342	5,456	2,728	2,728	0	0	0	0	2,728	2-5
S-38.01	Preserve at Rock Creek Wastewater Pumping Station	1,194	0	406	788	265	262	261	0	0	0	265	2-6
S-38.02	Preserve at Rock Creek WWPS Force Main	380	16	13	351	74	142	135	0	0	0	74	2-7
S-53.21	Seneca WWTP Enhanced Nutrient Removal	13,513	4,452	5,836	3,225	2,542	683	0	0	0	0	2,542	2-9
S-53.22	Seneca WWTP Expansion, Part 2	29,502	8,283	12,459	8,760	6,965	1,795	0	0	0	0	6,965	2-11
S-82.21	Montgomery College Germantown Campus Sewer	768	556	79	133	133	0	0	0	0	0	133	2-12
S-84.47	Clarksburg Triangle Outfall Sewer, Part 2	2,465	114	557	1,794	1,328	404	62	0	0	0	1,328	2-14
S-84.60	Cabin Branch Wastewater Pumping Station	2,274	12	13	2,249	437	1,501	311	0	0	0	437	2-15
S-84.61	Cabin Branch WWPS Force Main	411	0	17	394	138	233	23	0	0	0	138	2-16
S-84.65	Tapestry Wastewater Pumping Station	663	7	225	431	216	215	0	0	0	0	216	2-17
S-84.66	Tapestry WWPS Force Main	130	8	46	76	45	31	0	0	0	0	45	2-18
S-94.12	Damascus WWTP Enhanced Nutrient Removal	7,707	3,827	3,857	23	23	0	0	0	0	0	23	2-19
S-201.00	Land & Rights-of-Way Acquisition - Montgomery County	24	0	0	24	12	12	0	0	0	0	12	2-21
	Projects Pending Close-Out	2,612	2,612	0	0	0	0	0	0	0	0	0	2-22
	TOTAL MONTGOMERY COUNTY SEWER PROJECTS	70,054	20,691	24,633	24,730	15,691	8,110	894	35	0	0	15,691	

Denotes projects which include an environmental component.

A. Identification and Coding Information

1. Project Number	Agency Number	Update Code
143801	S-25.05	Add

2. Date: October 1, 2012
Revised:

7. Pre PDF Pg.No.: 8. Req. Adeq. Pub. Fac.

3. Project Name: Mid-Pike Plaza Sewer Main, Phase 2

5.Agency: **WSSC**

4. Program: **Sanitation** 6. Planning Area: North Bethesda P.A. 30

B. Expenditure Schedule (000's)

Cost Elements	(8) Total	(9) Thru FY '12	(10) Estimate FY '13	(11) Total 6 Years	(12) Year 1 FY '14	(13) Year 2 FY '15	(14) Year 3 FY '16	(15) Year 4 FY '17	(16) Year 5 FY '18	(17) Year 6 FY '19	(18) Beyond 6 Years
Planning, Design & Supervision	**860**	119	247	**494**	247	247					
Land											
Site Improvements & Utilities											
Construction	**4,300**		50	**4,250**	2,125	2,125					
Other	**757**		45	**712**	356	356					
Total	**5,917**	**119**	**342**	**5,456**	**2,728**	**2,728**					

C. Funding Schedule (000's)

Contribution/Other	**5,917**	119	342	**5,456**	2,728	2,728					

D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of 3,600 feet of 21-inch and 24-inch diameter sewer main to provide service to Mid-Pike Plaza.

Service Area Cabin John Drainage Basin

JUSTIFICATION

Plans & Studies

Mid-Pike Plaza Hydraulic Planning Analysis, (March 2012).

Cost Change

Not applicable.

STATUS Planning (WSSC Contract No. DA5238Z11,).

OTHER

The project scope was developed for the FY 2014 CIP and has an estimated total cost of $5,917,000. The expenditures and schedule projections shown in Block B are planning level estimates and may change depending upon site-specific conditions and design constraints. Expenditures shown in prior years are an allocation of the Hydraulic Planning Analysis costs developed for phase 1 of the Mid-Pike Plaza project. Estimated completion date is developer dependent. No WSSC rate supported debt will be used for this project.

COORDINATION

Montgomery County Government, Montgomery County Department of Environmental Protection and Local Community Civic Associations.

NOTE This project supports 100% Growth.

E. Annual Operating Budget Impact (000's)

		FY of Impact	
Program Costs	Staff	....	
	Other	....	
Facility Costs	Maintenance	64	16
	Debt Service	....	
Total Costs		64	16
Impact on Water or Sewer Rate		....	

F. Approval and Expenditure Data (000's)

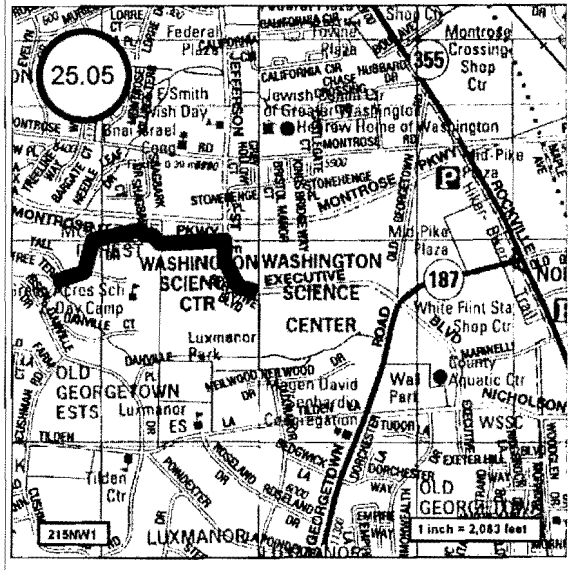
Date First in Capital Program	FY 14
Date First Approved	FY 14
Initial Cost Estimate	5,917
Cost Estimate Last FY	
Present Cost Estimate	5,917
Approved Request, Last FY	
Total Expenditures & Encumbrances	119
Approval Request FY 14	2,728
Supplemental Approval Request Current FY (13)	

G. Status Information

Land Status:	R/W required
% Project Completion:	P-100%
Est. Completion Date:	Developer Dependent

H. Map

Map Reference Code:



A. Identification and Coding Information

1. Project Number	Agency Number	Update Code
073800	S-53.21	Change

2. Date: October 1, 2012
Revised:

7. Pre PDF Pg.No.: 8. Req. Adeq. Pub. Fac.

3. Project Name: Seneca WWTP Enhanced Nutrient Removal

5.Agency: **WSSC**

4. Program: **Sanitation** 6. Planning Area: Lower Seneca P.A. 18

B. Expenditure Schedule (000's)

Cost Elements	(8) Total	(9) Thru FY '12	(10) Estimate FY '13	(11) Total 6 Years	(12) Year 1 FY '14	(13) Year 2 FY '15	(14) Year 3 FY '16	(15) Year 4 FY '17	(16) Year 5 FY '18	(17) Year 6 FY '19	(18) Beyond 6 Years
Planning, Design & Supervision	**3,621**	2,249	610	**762**	610	152					
Land											
Site Improvements & Utilities											
Construction	**8,710**	2,203	4,465	**2,042**	1,600	442					
Other	**1,182**		761	**421**	332	89					
Total	**13,513**	**4,452**	**5,836**	**3,225**	**2,542**	**683**					

C. Funding Schedule (000's)

WSSC Bonds	**7,293**	2,406	3,154	**1,733**	1,374	359					
State Aid	**6,220**	2,046	2,682	**1,492**	1,168	324					

D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of improvements at the Seneca WWTP necessary to meet the requirements of the Maryland Department of the Environment (MDE) Enhanced Nutrient Removal (ENR) Program at 20 MGD. The recommendations include modification of the existing basins to Flexible Modified Ludzack-Ettinger (MLE) mode, methanol storage and distribution system, upgrade of the existing 13 filters, and expansion of the filter gallery to include 3 new sand filters designed for phosphorous removal down to the permit goal of 0.18 mg/l at the maximum month flow of 33 MGD (design flow is 26 MGD).

Service Area Seneca Creek Drainage Basin

JUSTIFICATION

Plans & Studies

ENR Alternatives for the Seneca Wastewater Treatment Plant, Gannett Fleming (June 2005); Maryland Department of the Environment, Feasibility Study Approval Letter (July 27, 2005); WSSC Preliminary Engineering Report (September 2008); Design Criteria Report (November 2008).

Specific Data

The Bay Restoration Fund Enhanced Nutrient Removal (ENR) Program's purpose is to meet the commitments under the 2000 Chesapeake Bay Agreement. Reductions of nutrient pollutants from all sources including sewage treatment plants are necessary. The ENR strategy builds on the success of the Biological Nutrient Removal (BNR) Program already in place. The MDE is using the Bay Restoration Fund to upgrade the 66 major wastewater treatment plants which discharge to the Chesapeake Bay with ENR technologies. Once upgraded, these plants are expected to reduce nitrogen and phosphorus in the wastewater down to 3 mg/l total nitrogen and 0.3 mg/l total phosphorus, achieving approximately one-third of the needed reduction under the Chesapeake Bay 2000 Agreement. Other pollutants will continue to be reduced by more than 90%.

Cost Change

The cost estimate was revised to reflect the actual bid amount.

STATUS Under Construction (WSSC Contract Nos. CD4260A05 , CD4260C05).

OTHER

The project scope has remained the same. The expenditures and schedule projections shown in Block B are based upon the actual bid. The funding schedule reflects the final cost sharing agreement with MDE. WSSC's share of the project will be financed through a low interest loan from the MDE's Water Quality Administration State Revolving Loan Program. The NPDES effluent discharge compliance date is January 1, 2015.

E. Annual Operating Budget Impact (000's)

			FY of Impact
Program Costs	Staff	....	....
	Other	....	....
Facility Costs	Maintenance	....	....
	Debt Service	583	16
Total Costs		583	16
Impact on Water or Sewer Rate		1¢	16

F. Approval and Expenditure Data (000's)

Date First in Capital Program	FY 07
Date First Approved	FY 07
Initial Cost Estimate	22,862
Cost Estimate Last FY	13,221
Present Cost Estimate	13,513
Approved Request, Last FY	5,330
Total Expenditures & Encumbrances	4,452
Approval Request FY 14	2,542
Supplemental Approval Request Current FY (13)	

G. Status Information

Land Status:	No land or R/W required
% Project Completion:	C-16%
Est. Completion Date:	September 2014

H. Map **Map Reference Code:**

MAP NOT AVAILABLE

D. DESCRIPTION & JUSTIFICATION (CONT.)

Agency Number: S - 53.21 **Project Name: Seneca WWTP Enhanced Nutrient Removal**

COORDINATION

Montgomery County Government, Montgomery County Department of Environmental Protection, Maryland Department of the Environment and WSSC Project S-53.22, Seneca WWTP Expansion, Part 2.

NOTE This project supports 100% Environmental Regulation.

A. Identification and Coding Information

1. Project Number	Agency Number	Update Code
083802	S-53.22	Change

2. Date: October 1, 2012
Revised:

7. Pre PDF Pg.No.: 8. Req. Adeq. Pub. Fac.

3. Project Name: Seneca WWTP Expansion, Part 2

5.Agency: **WSSC**

4. Program: **Sanitation** 6. Planning Area: Lower Seneca P.A. 18

B. Expenditure Schedule (000's)

Cost Elements	(8) Total	(9) Thru FY '12	(10) Estimate FY '13	(11) Total 6 Years	(12) Year 1 FY '14	(13) Year 2 FY '15	(14) Year 3 FY '16	(15) Year 4 FY '17	(16) Year 5 FY '18	(17) Year 6 FY '19	(18) Beyond 6 Years
Planning, Design & Supervision	**7,564**	5,084	1,067	**1,413**	1,067	346					
Land											
Site Improvements & Utilities											
Construction	**20,009**	3,199	10,259	**6,551**	5,265	1,286					
Other	**1,929**		1,133	**796**	633	163					
Total	**29,502**	**8,283**	**12,459**	**8,760**	**6,965**	**1,795**					

C. Funding Schedule (000's)

SDC	**29,502**	8,283	12,459	**8,760**	6,965	1,795					

D. Description & Justification

DESCRIPTION

This project provides for the planning, design, and construction of improvements at the Seneca WWTP necessary to meet the projected growth in this service area while adhering to the requirements of the Maryland Department of the Environment (MDE) Enhanced Nutrient Removal (ENR) Program at 26 MGD (an increase from 20 MGD). The project will provide an additional aeration basin, an additional 150-foot clarifier, expansion of the filter gallery to include 4 new sand filters designed for phosphorous removal down to the permit goal of 0.18 mg/l at the maximum month flow of 33 MGD (design flow is 26 MGD), and biosolids handling system improvements. The biosolids handling improvements consist of an additional centrifuge and biolsolids conveyance modifications which will provide system redundancy. The electrical distribution system will also be evaluated.

Service Area Seneca Creek Drainage Basin

JUSTIFICATION

Plans & Studies

ENR Alternatives for the Seneca Wastewater Treatment Plant, Gannett Fleming (June 2005); Maryland Department of the Environment, Feasibility Study Approval Letter (July 27, 2005); WSSC Preliminary Engineering Report (September 2008); Design Criteria Report (November 2008).

Specific Data

The planned improvements at the Seneca WWTP will adhere to the requirements of MDE's ENR Program at 26 MGD in accordance with the reduction goals under the Chesapeake Bay 2000 Agreement. The design provides for phosphorous removal down to the permit goal of 0.18 mg/l at the maximum month flow of 33 MGD (design flow is 26 MGD).

Cost Change

The cost estimate was revised downward to reflect the actual bid amount.

STATUS Under Construction (WSSC Contract No. CD4260B05,).

OTHER

The project scope has remained the same. The expenditures and schedule projections shown in Block B are based upon actual bid.

COORDINATION

Montgomery County Government, Montgomery County Department of Environmental Protection, Maryland Department of the Environment and WSSC Project S-53.21, Seneca WWTP Enhanced Nutrient Removal.

NOTE This project supports 100% Growth.

E. Annual Operating Budget Impact (000's)

		FY of Impact
Program Costs	Staff	....
	Other	....
Facility Costs	Maintenance	....
	Debt Service	....
Total Costs		....
Impact on Water or Sewer Rate		....

F. Approval and Expenditure Data (000's)

Date First in Capital Program	FY 08
Date First Approved	FY 07
Initial Cost Estimate	16,478
Cost Estimate Last FY	32,134
Present Cost Estimate	29,502
Approved Request, Last FY	11,691
Total Expenditures & Encumbrances	8,283
Approval Request FY 14	6,965
Supplemental Approval Request Current FY (13)	

G. Status Information

Land Status:	Public/Agency owned land
% Project Completion:	C-16%
Est. Completion Date:	September 2014

H. Map **Map Reference Code:**

MAP NOT AVAILABLE

DATE: October 1, 2012

FINANCIAL SUMMARY

BI-COUNTY WATER PROJECTS

(ALL FIGURES IN THOUSANDS)

	AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 12	EST. EXPEND 13	TOTAL SIX YEARS	EXPENDITURE SCHEDULE YR 1 14	YR 2 15	YR 3 16	YR 4 17	YR 5 18	YR 6 19	BUDGET REQUEST 14	PDF PAGE NUM
	W-73.16	Potomac WFP Improvements	131,340	127,824	3,308	208	208	0	0	0	0	0	208	3-4
	W-73.18	Power Reliability and Arc Flash Implementation	7,032	2,523	3,612	897	897	0	0	0	0	0	897	3-5
	W-73.19	Potomac WFP Outdoor Substation No. 2 Replacement	15,526	370	440	14,716	2,310	5,280	4,730	2,396	0	0	2,310	3-6
	W-73.20	Potomac WFP Stage 2 Disinfection Byproducts Rule Implementation	10,280	1,507	4,945	3,828	3,322	506	0	0	0	0	3,322	3-7
	W-73.21	Potomac WFP Corrosion Mitigation	7,443	182	2,013	5,248	4,644	604	0	0	0	0	4,644	3-8
	W-73.22	Potomac WFP Pre-Filter Chlorination & Air Scour Improvements	5,602	25	966	4,611	759	477	2,530	845	0	0	759	3-9
	W-73.30	Potomac WFP Submerged Channel Intake	27,818	2,060	495	25,263	1,227	1,045	3,543	15,455	3,993	0	1,227	3-10
	W-73.32	Potomac WFP Main Zone Pipeline	356	0	173	183	183	0	0	0	0	0	183	3-12
	W-127.01	Bi-County Water Tunnel	150,975	94,326	40,942	15,707	14,442	1,265	0	0	0	0	14,442	3-13
	W-139.02	Duckett & Brighton Dam Upgrades	14,715	2,848	3,090	8,777	6,024	2,753	0	0	0	0	6,024	3-16
	W-161.01	Large Diameter Water Pipe Rehabilitation Program	248,178	12,452	25,850	209,876	37,028	31,086	29,474	37,631	37,631	37,026	37,028	3-17
	W-172.05	Patuxent WFP Phase II Expansion	64,220	5,559	4,107	54,554	25,969	16,573	10,908	1,104	0	0	25,969	3-20
	W-172.07	Patuxent Raw Water Pipeline	22,688	6,568	2,621	13,499	3,099	1,229	4,215	4,956	0	0	3,099	3-22
	W-172.08	Rocky Gorge Pump Station Upgrade	17,001	3,854	147	13,000	3,209	6,527	3,264	0	0	0	3,209	3-23
	W-202.00	Land & Rights-of-Way Acquisition - Bi-County	378	0	249	124	18	72	12	10	7	5	18	3-24
		TOTAL BI-COUNTY WATER PROJECTS	723,552	260,098	92,958	370,491	103,339	67,417	58,676	62,397	41,631	37,031	103,339	

 Denotes projects which include an environmental component (see page 15 in the opening narrative.)

Notes for costs beyond six years:
Includes 5 for Project W-202.00, Land & Rights-of-Way Acquisition - Bi-County.

A. Identification and Coding Information

1. Project Number	Agency Number	Update Code
143802	W-73.21	Add

2. Date: October 1, 2012
Revised:

7. Pre PDF Pg.No.: 8. Req. Adeq. Pub. Fac.

3. Project Name: Potomac WFP Corrosion Mitigation

5.Agency: **WSSC**

4. Program: **Sanitation** 6. Planning Area: Bi-County

B. Expenditure Schedule (000's)

Cost Elements	(8) Total	(9) Thru FY '12	(10) Estimate FY '13	(11) Total 6 Years	(12) Year 1 FY '14	(13) Year 2 FY '15	(14) Year 3 FY '16	(15) Year 4 FY '17	(16) Year 5 FY '18	(17) Year 6 FY '19	(18) Beyond 6 Years
Planning, Design & Supervision	**612**	182	250	**180**	120	60					
Land											
Site Improvements & Utilities											
Construction	**5,883**		1,500	**4,383**	3,918	465					
Other	**948**		263	**685**	606	79					
Total	**7,443**	**182**	**2,013**	**5,248**	**4,644**	**604**					

C. Funding Schedule (000's)

WSSC Bonds	**7,443**	182	2,013	**5,248**	4,644	604					

D. Description & Justification

DESCRIPTION

This project provides for the planning, design and construction required to upgrade and replace the existing metallic components in the eight Sedimentation Basins due to accelerated corrosion observed since the implementation of the full-scale Low pH Enhanced Coagulation Program in 2008. The project will also upgrade components in the Rapid Mix and Flocculation process areas in anticipation of the Ferric Chloride Feed System Project completion that will introduce a coagulant that is not compatible with several of the existing metallic components.

JUSTIFICATION

Plans & Studies

Technical Memorandum No. 1 - Impact of Ferric Chloride on Existing Facilities, Hazen and Sawyer, (May 2010); Potomac Sedimentation Basin Corrosion Study, Hatch Mott MacDonald, (July 2010).

Specific Data

Sedimentation Basin components, such as valve hardware, pipe couplings, operator extensions, cross beams, cross collector drive chains and pipe support brackets, are all essential elements. Failure could mean losing important and significant process capacity, possibly for extended periods of time. This could hinder the Commission's ability to meet water supply demands, particularly when the system may need to recover quickly, as in the case of a major water main break. Replacing the metallic components with 316 Stainless Steel will help maintain the integrity of our system. The project also includes the replacement of the existing polyurethane sprockets, chains for the cross collector drive, augers, auger shafts, and auger chains.

Cost Change

Not applicable.

STATUS Final Design (WSSC Contract No. BF5250A11,).

OTHER

The project scope was developed for the FY 2014 CIP and has an estimated total cost of $7,443,000. Expenditures and schedule projections shown in Block B above are preliminary design level estimates and may change based on site-specific conditions and design constraints. Prior year expenditures shown are for the planning phase of this project which was completed under ESP Project No. W-708.45, Potomac Corrosion Mitigation.

COORDINATION

WSSC Project W-73.20, Potomac WFP Stage 2 Disinfection Byproducts Rule Implementation(Ferric Chloride Feed System).

NOTE This project supports 100% System Improvement.

E. Annual Operating Budget Impact (000's)

			FY of Impact
Program Costs	Staff	....	
	Other	....	
Facility Costs	Maintenance	....	
	Debt Service	472	16
Total Costs		472	16
Impact on Water or Sewer Rate		....	

F. Approval and Expenditure Data (000's)

Date First in Capital Program	FY 14
Date First Approved	FY 14
Initial Cost Estimate	7,443
Cost Estimate Last FY	
Present Cost Estimate	7,443
Approved Request, Last FY	
Total Expenditures & Encumbrances	182
Approval Request FY 14	4,644
Supplemental Approval Request Current FY (13)	

G. Status Information

Land Status:	Not applicable
% Project Completion:	D-75%
Est. Completion Date:	July 2014

H. Map **Map Reference Code:**

MAP NOT APPLICABLE

A. Identification and Coding Information

1. Project Number	Agency Number	Update Code
143803	W-73.22	Add

2. Date: October 1, 2012
Revised:

7. Pre PDF Pg.No.: 8. Req. Adeq. Pub. Fac.

3. Project Name: Potomac WFP Pre-Filter Chlorination & Air Scour Improvements

5.Agency: **WSSC**

4. Program: **Sanitation** 6. Planning Area:

B. Expenditure Schedule (000's)

Cost Elements	(8) Total	(9) Thru FY '12	(10) Estimate FY '13	(11) Total 6 Years	(12) Year 1 FY '14	(13) Year 2 FY '15	(14) Year 3 FY '16	(15) Year 4 FY '17	(16) Year 5 FY '18	(17) Year 6 FY '19	(18) Beyond 6 Years
Planning, Design & Supervision	**1,875**	25	840	**1,010**	660	65	200	85			
Land											
Site Improvements & Utilities											
Construction	**3,000**			**3,000**		350	2,000	650			
Other	**727**		126	**601**	99	62	330	110			
Total	**5,602**	**25**	**966**	**4,611**	**759**	**477**	**2,530**	**845**			

C. Funding Schedule (000's)

WSSC Bonds	**5,602**	25	966	**4,611**	759	477	2,530	845			

D. Description & Justification

DESCRIPTION

This project provides for the planning, design and construction of a pre-filter chlorination system for the Potomac Water Filtration Plant. It also includes evaluation of retrofitting an air scour system into the existing plant filters, and the planning, design and construction of an appropriate system if the evaluation deems it favorable for implementation.

JUSTIFICATION

Plans & Studies

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);

Specific Data

The Potomac Water Filtration Plant has experienced four separate incidents of catastrophic filter underdrain failures since October 2006. Subsequent investigation conducted by WSSC and ITT Leopold, suppliers of the failed underdrain systems, 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.

Cost Change

Not applicable.

STATUS Preliminary Design (WSSC Contract No. BF5339A12,).

OTHER

The project scope was developed for the FY 2014 CIP and has an estimated total cost of $5,602,000. Expenditure and schedule projections shown in Block B above are planning level estimates, and may change based on site-specific conditions and design constraints. Prior year expenditures shown are for the planning phase of this project which was completed under ESP Project No. W-708.46, Potomac WFP Pre-Filter Chlorination & Air Scour Improvements.

COORDINATION

Montgomery County Government and Prince George's County Government.

NOTE This project supports 100% System Improvement.

E. Annual Operating Budget Impact (000's)

		FY of Impact	
Program Costs	Staff	....	
	Other	....	
Facility Costs	Maintenance	....	
	Debt Service	488	18
Total Costs		488	18
Impact on Water or Sewer Rate		....	

F. Approval and Expenditure Data (000's)

Date First in Capital Program	FY 14
Date First Approved	FY 14
Initial Cost Estimate	5,602
Cost Estimate Last FY	
Present Cost Estimate	5,602
Approved Request, Last FY	
Total Expenditures & Encumbrances	25
Approval Request FY 14	759
Supplemental Approval Request Current FY (13)	

G. Status Information

Land Status:	Not Applicable
% Project Completion:	D-0%
Est. Completion Date:	March 2017

H. Map **Map Reference Code:**

MAP NOT APPLICABLE

A. Identification and Coding Information

1. Project Number	Agency Number	Update Code
033812	W-73.30	Change

2. Date: October 1, 2012
Revised:

7. Pre PDF Pg.No.: 8. Req. Adeq. Pub. Fac.

3. Project Name: Potomac WFP Submerged Channel Intake

5.Agency: **WSSC**

4. Program: **Sanitation** 6. Planning Area: Bi-County

B. Expenditure Schedule (000's)

Cost Elements	(8) Total	(9) Thru FY '12	(10) Estimate FY '13	(11) Total 6 Years	(12) Year 1 FY '14	(13) Year 2 FY '15	(14) Year 3 FY '16	(15) Year 4 FY '17	(16) Year 5 FY '18	(17) Year 6 FY '19	(18) Beyond 6 Years
Planning, Design & Supervision	**5,946**	2,060	450	**3,436**	1,115	950	721	550	100		
Land											
Site Improvements & Utilities											
Construction	**19,530**			**19,530**			2,500	13,500	3,530		
Other	**2,342**		45	**2,297**	112	95	322	1,405	363		
Total	**27,818**	**2,060**	**495**	**25,263**	**1,227**	**1,045**	**3,543**	**15,455**	**3,993**		

C. Funding Schedule (000's)

WSSC Bonds	**27,818**	2,060	495	**25,263**	1,227	1,045	3,543	15,455	3,993		

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.

Service Area Potomac WFP Pressure Zone HGPOWF

JUSTIFICATION

Plans & Studies

"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, 2002); "Potomac WFP Facility Plan," O'Brien & Gere Engineers, Inc. (September, 2002).

Specific Data

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.

Cost Change

Costs were increased for inflation.

STATUS Planning (WSSC Contract Nos. BF2028F97 , BF2028I97).

OTHER

The project scope has remained the same. As part of the planning phase of this project, significant outreach activities will occur. 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. As the planning process moves into its final stages and the National Environmental Policy Act (NEPA) approval process is underway, elected officials, county government staffs, environmental community members, and the general public will be engaged in an on-going information, outreach and project participation program. Expenditure and schedule projections shown above are planning level estimates and may change based on site-specific conditions and design constraints. Both Councils will review the results of the detailed study and must approve continuing with the project before design and construction may proceed.

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(23)

E. Annual Operating Budget Impact (000's)

			FY of Impact
Program Costs	Staff	....	....
	Other	....	....
Facility Costs	Maintenance	....	....
	Debt Service	2198	19
Total Costs		2198	19
Impact on Water or Sewer Rate		4¢	19

F. Approval and Expenditure Data (000's)

Date First in Capital Program	FY 04
Date First Approved	FY 03
Initial Cost Estimate	936
Cost Estimate Last FY	26,714
Present Cost Estimate	27,818
Approved Request, Last FY	405
Total Expenditures & Encumbrances	2,060
Approval Request FY 14	1,227
Supplemental Approval Request Current FY (13)	

G. Status Information

Land Status:	Right-of-Way may be required
% Project Completion:	P-60%
Est. Completion Date:	FY 2018

H. Map **Map Reference Code:**

MAP NOT AVAILABLE

COORDINATION

Montgomery County Government, Prince George's County Government, National Park Service, Montgomery County Department of Environmental Protection, Maryland Department of the Environment, Maryland Department of Natural Resources, Prince George's County Department of Environmental Resources and U.S. Army Corps of Engineers.

NOTE This project supports 100% System Improvement.

A. Identification and Coding Information

1. Project Number	Agency Number	Update Code
934855	W-127.01	Change

2. Date: October 1, 2012
Revised:

7. Pre PDF Pg.No.: 8. Req. Adeq. Pub. Fac.

3. Project Name: Bi-County Water Tunnel

5.Agency: **WSSC**

4. Program: **Sanitation** 6. Planning Area: Bi-County

B. Expenditure Schedule (000's)

Cost Elements	(8) Total	(9) Thru FY '12	(10) Estimate FY '13	(11) Total 6 Years	(12) Year 1 FY '14	(13) Year 2 FY '15	(14) Year 3 FY '16	(15) Year 4 FY '17	(16) Year 5 FY '18	(17) Year 6 FY '19	(18) Beyond 6 Years
Planning, Design & Supervision	**27,978**	21,429	3,500	**3,049**	2,800	249					
Land											
Site Improvements & Utilities											
Construction	**117,847**	72,897	33,720	**11,230**	10,329	901					
Other	**5,150**		3,722	**1,428**	1,313	115					
Total	**150,975**	**94,326**	**40,942**	**15,707**	**14,442**	**1,265**					

C. Funding Schedule (000's)

WSSC Bonds	**700**			**700**	700						
SDC	**150,275**	94,326	40,942	**15,007**	13,742	1,265					

D. Description & Justification

DESCRIPTION

This project provides for the design and construction of approximately 28,400 feet of 84-inch diameter water main between the intersection of Tuckerman Lane and Route I-270 and the western terminus of the Bi-County Water Tunnel near the area where Rock Creek crosses the Capital Beltway (Maryland Route 495). The project will be constructed as a deep tunnel, minimizing community and environmental impacts. The project also includes relining 450 feet of existing 96-inch PCCP with 84-inch steel pipe at the I-270 connection between this pipeline and the new tunnel.

Service Area Prince George's High Pressure Zone HG450A, Montgomery Main Pressure Zone HG495A

JUSTIFICATION

Plans & Studies

Montgomery and Prince George's Main Zone Facility Plan, Black and Veatch, Inc. (October, 1990); Technical Memoranda #s1, 2, & 3 (Draft), Louis Berger & Associates (1997); Updated Water Demand Projections (dated April 6, 2001); and the General Plan. Final Alignment Report, Black and Veatch, Inc. (July, 2005).

Specific Data

This project will significantly increase transmission capacity from the Potomac Water Filtration Plant to the Montgomery County Main Zone and Prince George's County. The alignment study completed in July 2005 recommended that the water main be constructed as a pipeline with a deep rock tunnel from 90 to 250 feet below the ground surface.

Cost Change

The cost decrease reflects the latest available estimates.

STATUS Under Construction (WSSC Contract Nos. BL9972A94 , BL9972B94 , BL9972C94).

OTHER

The project scope remains the same. Expenditures shown in Block B above are definitive and are the sum of the design services, construction management services and construction contract amounts. In late 2005, both Councils reviewed the results of the detailed alignment study and agreed upon the final alignment and construction method. Substantial completion of the tunnel is expected in January 2014. Funding shown in FY'15 includes site/landscaping restoration.

As part of the permit requirements for work within Cabin John and Rock Creek Parks, M-NCP&PC calls for stream restoration along Old Farm Creek. This work will be handled under a separate contract with costs tracked under a separate contract number. The relining of 450 feet of existing 96-inch diameter PCCP, estimated to cost $700,000, is also being tracked under a separate contract and is not subject to SDC funding.

E. Annual Operating Budget Impact (000's)

			FY of Impact
Program Costs	Staff	....	....
	Other	....	....
Facility Costs	Maintenance	329	 16
	Debt Service	61	 16
Total Costs		390	 16
Impact on Water or Sewer Rate			....

F. Approval and Expenditure Data (000's)

Date First in Capital Program	FY 93
Date First Approved	FY 93
Initial Cost Estimate	63,000
Cost Estimate Last FY	157,606
Present Cost Estimate	150,975
Approved Request, Last FY	44,072
Total Expenditures & Encumbrances	94,326
Approval Request FY 14	14,442
Supplemental Approval Request Current FY (13)	

G. Status Information

Land Status:	Site selected
% Project Completion:	C-59%
Est. Completion Date:	January 2014

H. Map **Map Reference Code:**

SEE ATTACHED MAP

25

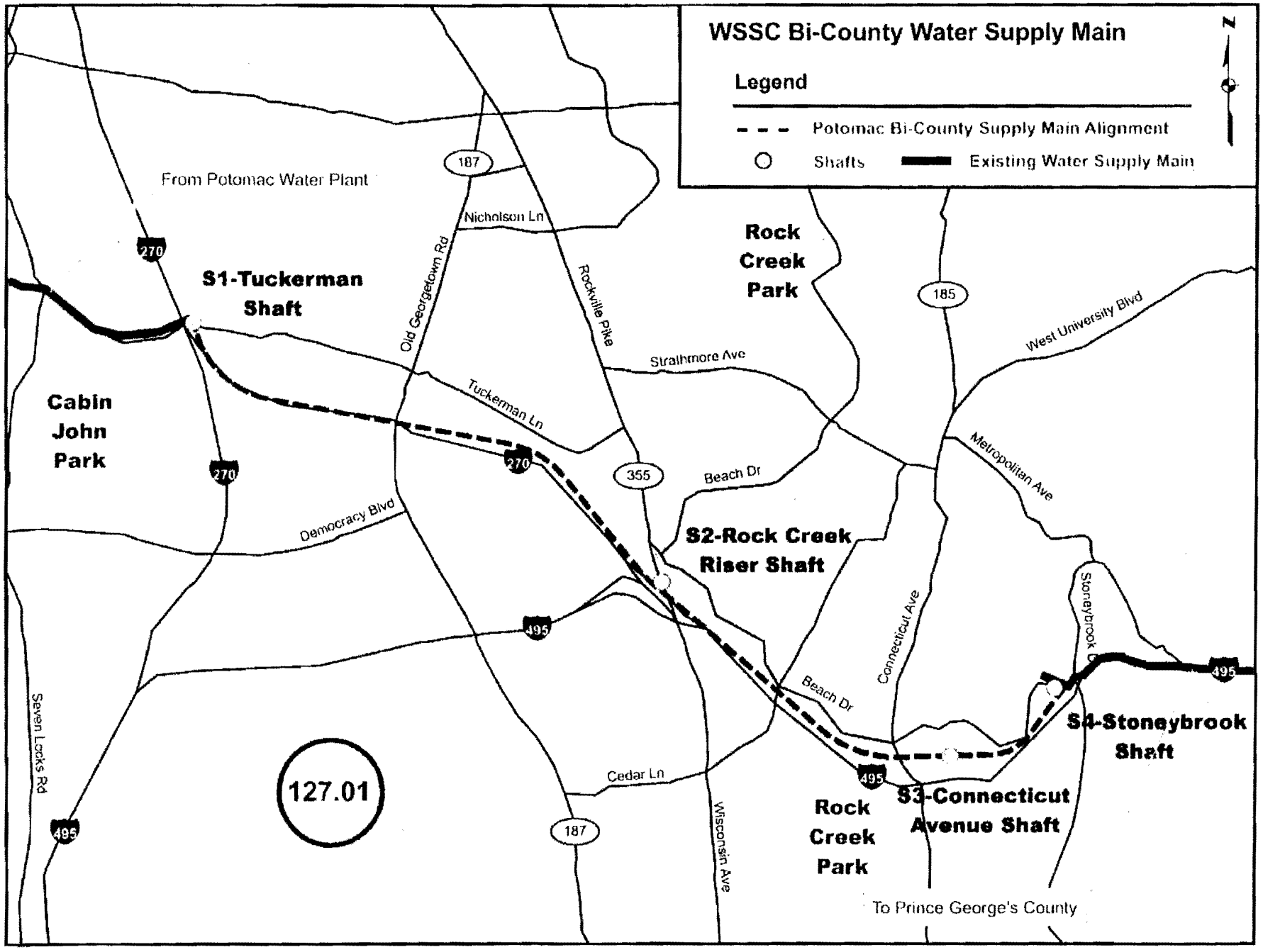
D. DESCRIPTION & JUSTIFICATION (CONT.)

Agency Number: W - 127.01 **Project Name: Bi-County Water Tunnel**

COORDINATION

Montgomery County Government, Prince George's County Government, Maryland-National Capital Park & Planning Commission (Mandatory Referral submissions are approved), Maryland Department of Natural Resources and Maryland State Department of Transportation.

NOTE This project supports 99% Growth and 1% System Improvement.


WSSC Bi-County Water Supply Main
Legend
Potomac Bi-County Supply Main Alignment
Shafts
Existing Water Supply Main
N
From Potomac Water Plant
S1-Tuckerman Shaft
Cabin John Park
Old Georgetown Rd
Nicholson Ln
Rockville Pike
Rock Creek Park
Strathmore Ave
Tuckerman Ln
Beach Dr
Democracy Blvd
S2-Rock Creek Riser Shaft
West University Blvd
Metropolitan Ave
Connecticut Ave
Stoneybrook Dr
S4-Stoneybrook Shaft
S3-Connecticut Avenue Shaft
Rock Creek Park
Cedar Ln
Wisconsin Ave
Seven Locks Rd
127.01
To Prince George's County
187
270
355
185
495

(27)

A. Identification and Coding Information

1. Project Number	Agency Number	Update Code
113803	W-161.01	Change

2. Date: October 1, 2012
Revised:

7. Pre PDF Pg.No.: 8. Req. Adeq. Pub. Fac.

3. Project Name: Large Diameter Water Pipe Rehabilitation Program

5.Agency: **WSSC**

4. Program: **Sanitation** 6. Planning Area: Bi-County

B. Expenditure Schedule (000's)

Cost Elements	(8) Total	(9) Thru FY '12	(10) Estimate FY '13	(11) Total 6 Years	(12) Year 1 FY '14	(13) Year 2 FY '15	(14) Year 3 FY '16	(15) Year 4 FY '17	(16) Year 5 FY '18	(17) Year 6 FY '19	(18) Beyond 6 Years
Planning, Design & Supervision	**15,070**	640	840	**13,590**	1,680	1,830	2,520	2,520	2,520	2,520	
Land											
Site Improvements & Utilities											
Construction	**210,547**	10,680	22,660	**177,207**	31,982	26,430	24,275	31,690	31,690	31,140	
Other	**22,561**	1,132	2,350	**19,079**	3,366	2,826	2,679	3,421	3,421	3,366	
Total	**248,178**	**12,452**	**25,850**	**209,876**	**37,028**	**31,086**	**29,474**	**37,631**	**37,631**	**37,026**	

C. Funding Schedule (000's)

WSSC Bonds	**248,178**	12,452	25,850	**209,876**	37,028	31,086	29,474	37,631	37,631	37,026	

D. Description & Justification

DESCRIPTION

The purpose of this program is to plan, design and rehabilitate or replace Large Diameter Water Transmission Mains 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 Program identifies individual pipe sections 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 sections 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 catastrophic 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

Plans & Studies

Utility Wide Master Plan, (December 2007); 30 Year Infrastructure Plan (2007); FY2012 Water Transmission System Asset Management Plan, GHD, Inc. (March 2011).

Specific Data

WSSC has approximately 960 miles of large diameter water main ranging from 16-inch to 96-inch in diameter. This includes 350 miles of cast iron, 225 miles of ductile iron, 35 miles of steel and 350 miles of PCCP. Internal inspection and condition assessment is performed annually on PCCP pipelines 36-inch and larger in diameter. Of the 350 miles of PCCP, 145 miles are 36-inch diameter and larger, and 59 miles are 54-inch diameter or 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.

Cost Change

The cost increase is due to an increase in the number of miles of PCCP pipeline inspections from 12 miles to 18 miles, the number of miles of cast iron pipe being replaced, and an increase in the number of PCCP pipe sections, long segments or the entire pipeline, that require repair or replacement. The cost increase also includes installation of Acoustic Fiber Optic Monitoring for 42-inch diameter and 36-inch diameter PCCP pipelines and the design and construction for cathodic protection.

E. Annual Operating Budget Impact (000's)

			FY of Impact	
Program Costs	Staff		....	
	Other		....	
Facility Costs	Maintenance		....	
	Debt Service	15803	....	20
Total Costs		15803	....	20
Impact on Water or Sewer Rate		31¢	....	20

F. Approval and Expenditure Data (000's)

Date First in Capital Program	FY 11
Date First Approved	FY 11
Initial Cost Estimate	60,000
Cost Estimate Last FY	181,223
Present Cost Estimate	248,178
Approved Request, Last FY	23,714
Total Expenditures & Encumbrances	12,452
Approval Request FY 14	37,028
Supplemental Approval Request Current FY (13)	

G. Status Information

Land Status:	Not applicable
% Project Completion:	On-Going
Est. Completion Date:	On-going

H. Map **Map Reference Code:**

MAP NOT AVAILABLE

D. DESCRIPTION & JUSTIFICATION (CONT.)

Agency Number: W - 161.01 **Project Name: Large Diameter Water Pipe Rehabilitation Program**

STATUS Not Applicable (WSSC Contract Nos. BM5063A09 , BM5063B09).

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 inspections and condition assessments. Additional costs associated with inspection, monitoring and emergency repairs are included in the Operating Budget.

COORDINATION

Maryland State Highway Administration, 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), Maryland-National Capital Park & Planning Commission, Prince George's County Department of Public Works & Transportation, Local Community Civic Associations and WSSC Projects A-107.00, Specialty Valve Vault Rehabilitation Program and W-1.00, Water Reconstruction Program.

NOTE This project supports 100% System Improvement.

DATE: October 1, 2012

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

BI-COUNTY SEWER PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 12	EST. EXPEND 13	TOTAL SIX YEARS	EXPENDITURE SCHEDULE YR 1 14	YR 2 15	YR 3 16	YR 4 17	YR 5 18	YR 6 19	BUDGET REQUEST 14	PDF PAGE NUM
S-22.06	Blue Plains WWTP: Liquid Train Projects, Part 2	285,104	227,524	10,249	38,242	7,228	5,357	4,861	8,575	6,189	6,032	7,228	4-3
S-22.07	Blue Plains WWTP: Biosolids Management, Part 2	386,588	184,540	98,981	102,970	70,800	23,633	4,316	3,207	861	153	70,800	4-4
S-22.08	Blue Plains WWTP: Biological Nutrient Removal	83,108	68,007	8,425	6,676	4,179	1,059	905	529	4	0	4,179	4-5
S-22.09	Blue Plains WWTP: Plant-wide Projects	214,983	163,716	13,432	33,941	5,590	7,673	3,233	3,355	7,669	6,421	5,590	4-6
S-22.10	Blue Plains WWTP: Enhanced Nutrient Removal	407,890	89,855	76,429	233,800	70,592	54,708	45,823	42,920	18,241	1,516	70,592	4-7
S-22.11	Blue Plains: Pipelines & Appurtenances	162,926	31,401	17,204	94,462	20,184	23,516	18,766	12,641	10,683	8,672	20,184	4-8
S-89.22	Anacostia Storage Facility	18,797	10,681	5,885	2,231	2,231	0	0	0	0	0	2,231	4-9
S-170.08	Septage Discharge Facility Planning & Implementation	11,168	787	41	10,340	550	110	9,680	0	0	0	550	4-11
S-170.09	Trunk Sewer Reconstruction Program	758,992	8,542	65,968	684,482	186,246	208,413	72,505	70,308	72,418	74,592	186,246	4-13
	Projects Pending Close-Out	2,526	2,421	105	0	0	0	0	0	0	0	0	4-15
	TOTAL BI-COUNTY SEWER PROJECTS	2,332,082	787,474	296,719	1,207,144	367,600	324,469	160,089	141,535	116,065	97,386	367,600	

Denotes projects which include an environmental component (see page 15 in the opening narrative.)

Notes for costs beyond six years:

Includes 9,089 for Project S-22.06, Blue Plains WWTP: Liquid Train Projects, Part 2
Includes 97 for Project S-22.07, Blue Plains WWTP: Biosolids Management, Part 2
Includes 3,894 for Project S-22.09, Blue Plains WWTP: Plant-wide Projects
Includes 7,806 for Project S-22.10, Blue Plains WWTP: Enhanced Nutrient Removal
Includes 19,859 for Project S-22.11, Blue Plains: Pipelines & Appurtenances

A. Identification and Coding Information

1. Project Number	Agency Number	Update Code
113805	S-170.09	Change

2. Date: October 1, 2012
Revised:

7. Pre PDF Pg.No.: 8. Req. Adeq. Pub. Fac.

3. Project Name: Trunk Sewer Reconstruction Program

5.Agency: **WSSC**

4. Program: **Sanitation** 6. Planning Area: Bi-County

B. Expenditure Schedule (000's)

Cost Elements	(8) Total	(9) Thru FY '12	(10) Estimate FY '13	(11) Total 6 Years	(12) Year 1 FY '14	(13) Year 2 FY '15	(14) Year 3 FY '16	(15) Year 4 FY '17	(16) Year 5 FY '18	(17) Year 6 FY '19	(18) Beyond 6 Years
Planning, Design & Supervision	**276,527**	7,629	21,073	**247,825**	79,909	48,813	28,953	29,166	30,041	30,943	
Land											
Site Improvements & Utilities											
Construction	**369,897**	913	35,000	**333,984**	78,400	128,338	32,676	30,596	31,514	32,460	
Other	**112,568**		9,895	**102,673**	27,937	31,262	10,876	10,546	10,863	11,189	
Total	**758,992**	**8,542**	**65,968**	**684,482**	**186,246**	**208,413**	**72,505**	**70,308***	**72,418***	**74,592***	

C. Funding Schedule (000's)

WSSC Bonds	**758,992**	8,542	65,968	**684,482**	186,246	208,413	72,505	70,308	72,418	74,592	

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. This includes both trunk sewers 15-inches in diameter and greater, along with associated smaller diameter pipe less than 15-inches diameter. The smaller diameter pipe is included due to its location within the environmentally sensitive areas.

JUSTIFICATION

Plans & Studies

WSSC Sanitary Sewer Overflow Consent Decree (December 7, 2005)

Specific Data

Under the terms of the Consent Decree the WSSC Trunk Sewer Inspection program had inspected all required sewers in 21 basins by December 2010; Sewer System Evaluation Surveys (SSES) will be conducted for 9 basins by December 2013, 7 basins have been completed to date; and WSSC shall conduct rainfall, groundwater and flow monitoring to determine I/I rates and identify areas of limited capacity through collection system modeling. Where appropriate, WSSC shall use additional means to identify sources of I/I, including CCTV, smoke and/or dye testing.

Once the Trunk Sewer Inspections, SSES work and other related collection system evaluations are complete, a Sewer Basin Repair, Replacement, Rehabilitation Plan (SR3 Plan) for each basin will be completed as required by Article 6 of the Consent Decree. To date, seventeen SR3 Plans have been submitted to the EPA and MDE.

* At the current rate of acquiring environmental permits, the required trunk sewer reconstruction work is expected to extend beyond the Consent Decree's December 2015 deadline. In addition to limited contractor availability, WSSC is experiencing significant delays in acquiring both permission and required permits to work in environmentally sensitive areas. In the past year, WSSC worked with the MDE and the USACE and identified a way to expedite environmental permit approvals. An umbrella permit was issued by the USACE on May 8, 2012. Based upon an estimated table of impacts, MDE and the USACE agreed to permit the entire Consent Decree with special conditions under an umbrella type permit. As basins move toward a 30% design stage, an updated permit application for the basin will be submitted, with final Joint Permit approval issued as an addendum to the umbrella permit with special conditions to address minimization and avoidance of impacts.

Cost Change

The cost has increased due to actual construction contract bids along with additional small diameter pipe. Work may go beyond six years, based on current productivity, permitting and right of entry delays.

E. Annual Operating Budget Impact (000's)

		FY of Impact
Program Costs	Staff	....
	Other	....
Facility Costs	Maintenance	....
	Debt Service	....
Total Costs		....
Impact on Water or Sewer Rate		....

F. Approval and Expenditure Data (000's)

Date First in Capital Program	FY 11
Date First Approved	FY 11
Initial Cost Estimate	504,993
Cost Estimate Last FY	228,982
Present Cost Estimate	758,992
Approved Request, Last FY	52,289
Total Expenditures & Encumbrances	8,542
Approval Request FY 14	186,246
Supplemental Approval Request Current FY (13)	

G. Status Information

Land Status:	Right-of-Way may be required
% Project Completion:	D-25%
Est. Completion Date:	See Block D

H. Map **Map Reference Code:**

MAP NOT APPLICABLE

D. DESCRIPTION & JUSTIFICATION (CONT.)

Agency Number: S - 170.09 **Project Name: Trunk Sewer Reconstruction Program**

STATUS Various Stages of Planning & Design

OTHER

The project scope remains the same. Reconstruction work will include: reduction of inflow and infiltration (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 that will be performed in each sewer basin will be prioritized to most effectively prevent SSOs and backups. The Consent Decree requires that all rehabilitation work be substantially complete by December 5, 2015.

The design work for the SR3 Plans pertaining to Trunk Sewer reconstruction began in FY 2010. The expenditures and schedule shown in Block B above are Order of Magnitude level estimates and are expected to change as individual basin designs are completed and construction contracts are bid. Construction will begin in each basin as the individual designs are completed.

Work is underway in two basins in FY2012, an additional 20 basins in FY2013, and the remaining two basins in FY2014. For FY2014, work will be underway in environmentally sensitive areas, encompassing mainline reconstruction, and providing exposed pipeline and manhole protection from high stream flows and stream bank erosion where required.

COORDINATION

Maryland State Highway Administration, Montgomery County Department of Public Works and Transportation, Maryland-National Capital Park & Planning Commission, National Park Service, Maryland Department of the Environment, Maryland Department of Natural Resources (Critical Area Commission, FSD Approval Forest Conservation/Reforestation Rare, Threatened or Endangered Species), Prince George's County Department of Public Works & Transportation, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, Region III, Maryland Historical Trust and WSSC Project S-1.01, Sewer Reconstruction Program.

NOTE This project supports 100% System Improvement.

DATE: October 1, 2012

FINANCIAL SUMMARY

(ALL FIGURES IN THOUSANDS)

INFORMATION ONLY PROJECTS

AGENCY NUMBER	PROJECT NAME	EST. TOTAL COST	EXPEND THRU 12	EST. EXPEND 13	TOTAL SIX YEARS	EXPENDITURE SCHEDULE YR 1 14	YR 2 15	YR 3 16	YR 4 17	YR 5 18	YR 6 19	BUDGET REQUEST 14	PDF PAGE NUM
W-1.00	Water Reconstruction Program	793,935	0	82,012	711,923	96,774	115,867	119,342	122,923	126,609	130,408	96,774	7-2
S-1.01	Sewer Reconstruction Program	655,424	0	71,487	583,937	49,902	103,753	102,850	105,933	109,113	112,386	49,902	7-4
A-102.00	Engineering Support Program	101,250	0	17,250	84,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	7-6
A-103.00	Energy Performance Program	40,502	28,350	1,747	9,065	1,105	764	2,645	3,030	1,325	196	1,105	7-7
A-103.01	Anaerobic Digestion/Combined Heat & Power (Piscataway WWTP)	146,399	1,177	22	145,200	4,840	7,260	7,260	43,560	43,560	38,720	4,840	7-10
A-104.00	Entrepreneurial Projects	8,964	1,406	1,305	6,253	1,613	535	55	0	0	4,050	1,613	7-12
A-105.00	Water Storage Facility Rehabilitation Program	34,000	0	4,000	30,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	7-13
A-106.00	Asset Management Program	19,271	7,974	3,269	8,028	2,197	1,479	553	245	1,777	1,777	2,197	7-14
A-107.00	Specialty Valve Vault Rehabilitation Program	21,068	1,361	2,911	15,211	4,912	2,860	2,134	2,028	1,698	1,579	4,912	7-16
A-109.00	Advanced Metering Infrastructure	89,484	0	1,010	88,474	2,575	13,484	26,360	26,360	19,695	0	2,575	7-17
	Projects Pending Close-Out	2,560	1,410	1,150	0	0	0	0	0	0	0	0	7-18
	TOTAL INFORMATION ONLY PROJECTS	1,912,857	41,678	186,163	1,682,091	182,918	265,002	280,199	323,079	322,777	308,116	182,918	

Denotes projects which include an environmental component (see page 15 in the opening narrative.)

Notes for costs beyond six years:
Includes 1,340 for Project A-103.00, Energy Performance Program
Includes 1,585 for Project A-107.00, Specialty Valve Vault Rehabilitation Program

A. Identification and Coding Information

1. Project Number	Agency Number	Update Code
	W-1.00	Change

2. Date: October 1, 2012
Revised:

7. Pre PDF Pg.No.: 8. Req. Adeq. Pub. Fac.

3. Project Name: Water Reconstruction Program

5.Agency: **WSSC**

4. Program: **Sanitation** 6. Planning Area: Bi-County

B. Expenditure Schedule (000's)

Cost Elements	(8) Total	(9) Thru FY '12	(10) Estimate FY '13	(11) Total 6 Years	(12) Year 1 FY '14	(13) Year 2 FY '15	(14) Year 3 FY '16	(15) Year 4 FY '17	(16) Year 5 FY '18	(17) Year 6 FY '19	(18) Beyond 6 Years
Planning, Design & Supervision	**291,072**		32,190	**258,882**	36,795	41,831	43,086	44,379	45,710	47,081	
Land											
Site Improvements & Utilities											
Construction	**346,874**		32,380	**314,494**	40,420	51,624	53,172	54,767	56,409	58,102	
Other	**155,989**		17,442	**138,547**	19,559	22,412	23,084	23,777	24,490	25,225	
Total	**793,935**		**82,012**	**711,923**	**96,774**	**115,867**	**119,342**	**122,923**	**126,609**	**130,408**	

C. Funding Schedule (000's)

WSSC Bonds	**793,935**		82,012	**711,923**	96,774	115,867	119,342	122,923	126,609	130,408	

D. Description & Justification

DESCRIPTION

The purpose of this program is to renew and extend the useful life of water mains. 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 of these mains provides added value to the customer. Galvanized, copper and cast iron water services, 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.

Service Area Bi-CountyArea

JUSTIFICATION

Plans & Studies

Flow studies, water system modeling, and field surveys are routinely conducted. A staff level report: Water Main Condition Assessment, 1915-1998; Analysis and Recommendations by the Water Main Reconstruction Work Group (June, 1999) examined the historical main break data for performance measures to define, characterize, and prioritize the future replacement needs of the distribution system. An early outcome of this project identified the need to increase the frequency of water main replacement. "FY2012 Water Distribution System Asset Management Plan", GHD, Inc. (March 2011).

Specific Data

The program's projected work units and expenditure levels for FY'14 (including overhead) are as follows: design and construction of main replacement and associated water house connection renewals, 51 miles - $88M; cathodic protection - $3.4M; design and construction of large water service replacements - $5.4M. 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. WSSC will pilot test one mile of cleaning and lining using new methods that will add structural integrity to the lined main.

Cost Change

The program cost increase in FY 2014 primarily reflects an increase in replacement miles and the addition a of cleaning and lining pilot project.

E. Annual Operating Budget Impact (000's)

			FY of Impact	
Program Costs	Staff		....	
	Other		....	
Facility Costs	Maintenance		....	
	Debt Service	61663	....	20
Total Costs		61663	....	20
Impact on Water or Sewer Rate		122¢	....	20

F. Approval and Expenditure Data (000's)

Date First in Capital Program	FY --
Date First Approved	FY --
Initial Cost Estimate	
Cost Estimate Last FY	707,150
Present Cost Estimate	793,935
Approved Request, Last FY	77,427
Total Expenditures & Encumbrances	
Approval Request FY 14	96,774

Supplemental Approval Request
Current FY (13)

G. Status Information

Land Status:	Not applicable
% Project Completion:	On-Going
Est. Completion Date:	On-Going

H. Map **Map Reference Code:**

MAP NOT APPLICABLE

D. DESCRIPTION & JUSTIFICATION (CONT.)

Agency Number: W - 1.00 **Project Name: Water Reconstruction Program**

STATUS Under Construction

OTHER

The project scope has remained the same. 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'11 summarize the magnitude of the reconstruction effort: water main cleaning and lining, 1,142 miles completed; water main replacement, 281miles completed; large water service/meter replacement, 40 large water service/meters replaced. It is anticipated water reconstruction activity will be a perpetual element of future work programs.

COORDINATION

Maryland State Highway Administration, Montgomery County Department of Public Works and Transportation, Montgomery County Government (including local municipalities where work is to be performed), Prince George's County Government (including local municipalities where work is to be performed), Prince George's County Department of Public Works & Transportation and Local Community Civic Associations.

A. Identification and Coding Information

1. Project Number	Agency Number	Update Code
	S-1.01	Change

2. Date: October 1, 2012
Revised:

7. Pre PDF Pg.No.: 8. Req. Adeq. Pub. Fac.

3. Project Name: Sewer Reconstruction Program

5.Agency: **WSSC**

4. Program: **Sanitation** 6. Planning Area: Bi-County

B. Expenditure Schedule (000's)

Cost Elements	(8) Total	(9) Thru FY '12	(10) Estimate FY '13	(11) Total 6 Years	(12) Year 1 FY '14	(13) Year 2 FY '15	(14) Year 3 FY '16	(15) Year 4 FY '17	(16) Year 5 FY '18	(17) Year 6 FY '19	(18) Beyond 6 Years
Planning, Design & Supervision	**123,326**		13,923	**109,403**	7,848	19,603	19,589	20,176	20,782	21,405	
Land											
Site Improvements & Utilities											
Construction	**434,719**		46,966	**387,753**	34,694	68,716	67,966	70,004	72,105	74,268	
Other	**97,379**		10,598	**86,781**	7,360	15,434	15,295	15,753	16,226	16,713	
Total	**655,424**		**71,487**	**583,937**	**49,902**	**103,753**	**102,850**	**105,933**	**109,113**	**112,386**	

C. Funding Schedule (000's)

WSSC Bonds	**655,424**		71,487	**583,937**	49,902	103,753	102,850	105,933	109,113	112,386	

D. Description & Justification

DESCRIPTION

This program funds a comprehensive sewer system rehabilitation program. The main component of this program is the rehabilitation and/or repair of sewer mains less than 15" in diameter and house connections. The program addresses infiltration and inflow control, exposed pipe problems, and future capacity needs for the basin. The rehabilitation and repair funded by this program includes the rehabilitation and repair recommended by comprehensive basin studies as well as that resulting from sewer systems evaluations, line blockage assessments, field surveys, and closed circuit TV inspections. This program does not include funding for any major capital projects (e.g. CIP size relief or replacement sewers) that may result from a comprehensive basin study. These are funded separately in the CIP.

* EXPENDITURES FOR SEWER RECONSTRUCTION ARE EXPECTED TO CONTINUE INDEFINITELY.

Service Area Bi-CountyArea

JUSTIFICATION

Plans & Studies

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.

Specific Data

The FY'14 work units and associated costs are based on our historical experience with regards to timing of design and construction work, cost per linear foot, availability of authorized contractors for proprietary rehabilitation techniques, and management's availability to oversee and manage the total number of individual contracts. The program's projected work units and expenditure levels for FY'14 (including overhead) are as follows: 12 miles of residential line construction - $16M; 7 miles of lateral line construction and associated sewer house connection renewals - $31.4M; emergency repairs - $2.5M. Note: The specific mix and type of sewer reconstruction may vary in any given year depending on identified system defects.

Cost Change

The overall program cost decreased due to a shift in reconstruction efforts to the Trunk Sewer Reconstruction Program (S-170.09) which is increased to meet the Consent Decree schedule.

STATUS Under Construction

OTHER

The project scope has remained the same. The program schedule and expenditures shown above reflect the terms of the Sanitary Sewer Overflow Consent Decree. The Consent Decree between WSSC, Maryland Department of the Environment (MDE), and the

E. Annual Operating Budget Impact (000's)

			FY of Impact
Program Costs	Staff	....	....
	Other	....	....
Facility Costs	Maintenance	....	....
	Debt Service	57153	 20
Total Costs		57153	 20
Impact on Water or Sewer Rate		113¢	 20

F. Approval and Expenditure Data (000's)

Date First in Capital Program	FY --
Date First Approved	FY --
Initial Cost Estimate	
Cost Estimate Last FY	702,873
Present Cost Estimate	655,424
Approved Request, Last FY	136,412
Total Expenditures & Encumbrances	
Approval Request FY 14	49,902

Supplemental Approval Request Current FY (13)

G. Status Information

Land Status:	Not applicable
% Project Completion:	On-Going
Est. Completion Date:	On-Going

H. Map **Map Reference Code:**

MAP NOT APPLICABLE

D. DESCRIPTION & JUSTIFICATION (CONT.)

Agency Number: S - 1.01 **Project Name: Sewer Reconstruction Program**

EPA was entered into on December 7, 2005. The sewer reconstruction program was established in 1979. Expenditures for grouting repairs are included in the operating budget.

The following work accomplishments through FY'11 summarize the magnitude of this reconstruction effort: sewer main reconstruction, 281 miles; and sewer house connection renewals, 16,362. It is anticipated that sewer reconstruction activity will be a perpetual element of future work programs.

COORDINATION

Maryland State Highway Administration, Montgomery County Department of Public Works and Transportation, Montgomery County Government (including local municipalities where work is to be performed), Prince George's County Government (including local municipalities where work is to be performed), Maryland Department of the Environment (SSO Consent Decree Compliance), Prince George's County Department of Public Works & Transportation, U.S. Environmental Protection Agency, Region III (SSO Consent Decree Compliance) and Local Community Civic Associations.

A. Identification and Coding Information

1. Project Number	Agency Number	Update Code
	A-103.01	Change

2. Date: October 1, 2012
Revised:

7. Pre PDF Pg.No.: 8. Req. Adeq. Pub. Fac.

3. Project Name: Anaerobic Digestion/Combined Heat & Power (Piscataway WWTP) 5.Agency: **WSSC**

4. Program: **Sanitation** 6. Planning Area: Bi-County

B. Expenditure Schedule (000's)

Cost Elements	(8) Total	(9) Thru FY '12	(10) Estimate FY '13	(11) Total 6 Years	(12) Year 1 FY '14	(13) Year 2 FY '15	(14) Year 3 FY '16	(15) Year 4 FY '17	(16) Year 5 FY '18	(17) Year 6 FY '19	(18) Beyond 6 Years
Planning, Design & Supervision	**23,197**	1,177	20	**22,000**	4,400	6,600	600	3,600	3,600	3,200	
Land											
Site Improvements & Utilities											
Construction	**110,000**			**110,000**			6,000	36,000	36,000	32,000	
Other	**13,202**		2	**13,200**	440	660	660	3,960	3,960	3,520	
Total	**146,399**	**1,177**	**22**	**145,200**	**4,840**	**7,260**	**7,260**	**43,560**	**43,560**	**38,720**	

C. Funding Schedule (000's)

WSSC Bonds	**73,228**	606	22	**72,600**	2,420	3,630	3,630	21,780	21,780	19,360	
Federal Aid	**73,171**	571		**72,600**	2,420	3,630	3,630	21,780	21,780	19,360	

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 at a regional/centralized location at the Piscataway Wastewater Treatment Plant (WWTP). The program will provide a reduction in energy and energy-related costs (electricity, natural gas, transportation, and disposal of biosolids) which may in part be guaranteed by the contractor. The potential guaranteed reduction component includes annual avoided energy costs as well as operations and maintenance, chemicals, and biosolids transportation and disposal costs. The program will enhance existing operating conditions and reliability while continuing to meet all permit requirements, and ensure a continued commitment to environmental stewardship at WSSC sites. The scope of work will include, but is not limited to, the addition of anaerobic digestion equipment, thermal hydrolysis pretreatment equipment, gas cleaning systems, hydrogen sulfide and siloxane removal, tanks, piping, valves, pumps, sludge dewatering/thickening equipment, grit removal, effluent disinfection systems, instrumentation, flow metering, power measurement, and combined heat and power generation systems.

In March 2009, the WSSC received approval for a federal Department of Energy grant of $570,900 for the feasibility study/conceptual design phase. This amount has been supplemented by $362,765 from the WSSC toward the feasibility study. On June 16, 2010, the WSSC awarded the study contract to AECOM Technical Services, Inc., of Laurel, Maryland. The study was completed in December 2011, and the Thermal Hydrolysis/Mesophilic Anaerobic Digestion/Combined Heat & Power facility recommendation to be constructed at the Piscataway WWTP was presented to the Commission in April 2012. The WSSC will continue to pursue federal capital funding cost sharing as the project develops.

JUSTIFICATION

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).

E. Annual Operating Budget Impact (000's)

			FY of Impact
Program Costs	Staff	....	
	Other	....	
Facility Costs	Maintenance	....	
	Debt Service	3425	20
Total Costs		3425	20
Impact on Water or Sewer Rate		7¢	20

F. Approval and Expenditure Data (000's)

Date First in Capital Program	FY 10
Date First Approved	FY 10
Initial Cost Estimate	345
Cost Estimate Last FY	79,258
Present Cost Estimate	146,399
Approved Request, Last FY	3,300
Total Expenditures & Encumbrances	1,177
Approval Request FY 14	4,840
Supplemental Approval Request Current FY (13)	

G. Status Information

Land Status:	No land or R/W required
% Project Completion:	P-100%
Est. Completion Date:	(See "Specific Data" for details.)

H. Map **Map Reference Code:**

MAP NOT APPLICABLE

D. DESCRIPTION & JUSTIFICATION (CONT.)

Agency Number: A - 103.01 **Project Name: Anaerobic Digestion/Combined Heat & Power (Piscataway WWTP)**

Specific Data

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.

Based on AECOM's feasibility study work as of May 2011, the capital cost (detail design + construction) estimate for the regional/centralized plant to be located at the Piscataway WWTP based on a Thermal Hydrolysis/Mesophillic Anaerobic Digestion/Combined Heat & Power (TH/MAD/CHP) process supplemented by restaurant grease fuel design is $110 million, with a 36 month construction period. Environmental benefits (to be verified prior to completion of the Concept Development Phase) are as follows:

1. Recover 1.7 MW of renewable energy from biomass
2. Reduce Greenhouse Gas production by 11,800 tons/year
3. Reduce biosolids output by more than 50,500 tons/year
4. Reduce lime demand by 4,100 tons/year
5. Reduce nutrient load to the Chesapeake Bay
6. Reduce 5 million gallons/year of grease discharge to sewers
7. Produce Class A Biosolids

The economic benefits (to be verified prior to completion of the Concept Development Phase) are as follows:

1. Recover more than $1.5 million of renewable energy costs/year
2. Reduce biosolids disposal costs by ~ $1.7 million/year
3. Reduce chemical costs by ~ $400,000/year
4. Hedge against rising costs of power, fuel, and chemicals
5. Net Payback of 15 to 18 years (net based on capital cost of TH/MAD/CHP minus capital cost of lime stabilization upgrade of WSSC WWTP facilities through 2030)

Cost Change

Order of Magnitude cost estimates were increased due to a higher degree of accuracy inherent in the conceptual design that was completed as part of the final component of the feasibility study. The cost increase also includes adequate redundancy for additional thermal hydrolysis pretreatment trains to operate in the event one or more trains are down due to unforeseen circumstances or maintenance.

STATUS Planning

OTHER

The project scope has remained the same. Now that the feasibility study has been completed, the Commission has a defined scope, capital cost, and energy and energy-related cost savings estimates to be able to proceed with the detailed design and construction of the anerobic digestion, biomass, and combined heat and power generation system facilities.

It is envisioned that either the entire project, or only portions of the project that include the thermal hydrolysis, anaerobic digestion or combined heat and power, include a guarantee by the contractor that the capital cost will be paid back 100% from energy and energy-related cost savings with the payback period not exceeding 15 years. The energy savings for other completed WSSC Energy Performance projects have surpassed the contracts' guaranteed amount every year of the monitoring and verification period.

COORDINATION

Montgomery County Government, Prince George's County Government, Montgomery County Department of Environmental Protection, Maryland Department of the Environment, Prince George's County Department of Environmental Resources and WSSC Projects S-53.21, Seneca WWTP Enhanced Nutrient Removal, S-53.22, Seneca WWTP Expansion, Part 2, S-96.12, Piscataway WWTP Enhanced Nutrient Removal and S-96.14, Piscataway WWTP Facility Upgrades.

NOTE This project supports 100% System Improvement.

A. Identification and Coding Information

1. Project Number	Agency Number	Update Code
	A-106.00	Change

2. Date: October 1, 2012
Revised:

7. Pre PDF Pg.No.: 8. Req. Adeq. Pub. Fac.

3. Project Name: Asset Management Program

5.Agency: **WSSC**

4. Program: **Sanitation** 6. Planning Area: Bi-County

B. Expenditure Schedule (000's)

Cost Elements	(8) Total	(9) Thru FY '12	(10) Estimate FY '13	(11) Total 6 Years	(12) Year 1 FY '14	(13) Year 2 FY '15	(14) Year 3 FY '16	(15) Year 4 FY '17	(16) Year 5 FY '18	(17) Year 6 FY '19	(18) Beyond 6 Years
Planning, Design & Supervision	**17,797**	7,974	2,843	**6,980**	1,910	1,286	481	213	1,545	1,545	
Land											
Site Improvements & Utilities											
Construction											
Other	**1,474**		426	**1,048**	287	193	72	32	232	232	
Total	**19,271**	**7,974**	**3,269**	**8,028**	**2,197**	**1,479**	**553**	**245**	**1,777**	**1,777**	

C. Funding Schedule (000's)

WSSC Bonds	**9,635**	4,770	579	**4,286**	1,049	901	403	159	887	887	
Water Operating Funds	**4,818**	1,602	1,345	**1,871**	574	289	75	43	445	445	
Sewer Operating Funds	**4,818**	1,602	1,345	**1,871**	574	289	75	43	445	445	

D. Description & Justification

DESCRIPTION

This project provides for establishing an Asset Management Strategy and the development of Asset Management Plans which will identify and examine overall infrastructure needs over 30 years. The Plans will encompass the water and wastewater networks (treatment, transmission, distribution, collection, pumping, and storage); buildings and grounds; and information technology assets (SCADA system, security services, telephony, radio system, data network, paging system, microwave network, and antenna support structures). The Plans will examine existing and future capacity needs, regulatory needs, and rehabilitation/replacement needs. The project will build on previous efforts that address particular components of the networks.

JUSTIFICATION

Plans & Studies

WSSC Strategic Sewerage Study (March 1993); Patuxent WFP Facility Plan (1997); Facility Master Plan Potomac WFP (2000); Facility Master Plan Patuxent WFP (2000); Potomac Facility Plan (2002); WSSC Sanitary Sewer Overflows Consent Decree (December 7, 2005); WSSC Dynamic Sewer System Model (Contract No. CM4269A05); WSSC Strategic Sewerage Study Update (April 2006); WSSC 2007 Annual Action Item No 13; Phase 1 High Level Utility Wide Master Plan Reports (December 2007).

Specific Data

The initial phase of the project included analysis of the results of the baseline sewer system modeling conducted in FY's 2006 and 2007, review of completed and planned Sewer System Evaluation Surveys (SSES), condition assessments, and trunk sewer inspections.

Cost Change

Cost estimates were decreased to reflect a change in strategy to deliver the program.

STATUS Planning (WSSC Contract Nos. BM4626A07 , CM4626A07).

OTHER

The project scope has remained the same. The program includes four phases. Phase 1, completed in December 2007, identified high level infrastructure needs. Track 2, Phase 1, completed in April 2008, developed a road map for establishing an asset management structure. Phase 2, completed in March 2011, developed 6 Asset Management Plans, 12 Asset Management processes, and 69 Asset Management procedures. Phase 3 will start in June 2012 and will develop 9 Asset Management Plans and 70 Asset Management procedures. Phase 4 will continue development of detailed Asset Management Plans for various types of assets. The percentage of project completion is based on completion of the 4 Phases.

E. Annual Operating Budget Impact (000's)

			FY of Impact
Program Costs	Staff	....	
	Other	....	
Facility Costs	Maintenance	....	
	Debt Service	840	20
Total Costs		840	20
Impact on Water or Sewer Rate		2¢	20

F. Approval and Expenditure Data (000's)

Date First in Capital Program	FY 10
Date First Approved	FY 08
Initial Cost Estimate	6,900
Cost Estimate Last FY	22,911
Present Cost Estimate	19,271
Approved Request, Last FY	2,093
Total Expenditures & Encumbrances	7,974
Approval Request FY 14	2,197
Supplemental Approval Request Current FY (13)	

G. Status Information

Land Status:	Not Applicable
% Project Completion:	P-50%
Est. Completion Date:	FY 2019

H. Map **Map Reference Code:**

MAP NOT APPLICABLE

A. Identification and Coding Information

1. Project Number	Agency Number	Update Code
	A-109.00	Change

2. Date: October 1, 2012
Revised:

7. Pre PDF Pg.No.: 8. Req. Adeq. Pub. Fac.

3. Project Name: Advanced Metering Infrastructure

5.Agency: **WSSC**

4. Program: **Sanitation** 6. Planning Area:

B. Expenditure Schedule (000's)

Cost Elements	(8) Total	(9) Thru FY '12	(10) Estimate FY '13	(11) Total 6 Years	(12) Year 1 FY '14	(13) Year 2 FY '15	(14) Year 3 FY '16	(15) Year 4 FY '17	(16) Year 5 FY '18	(17) Year 6 FY '19	(18) Beyond 6 Years
Planning, Design & Supervision	**5,100**		250	**4,850**	2,550	600	600	600	500		
Land											
Site Improvements & Utilities											
Construction	**83,500**		750	**82,750**		12,750	25,500	25,500	19,000		
Other	**884**		10	**874**	25	134	260	260	195		
Total	**89,484**		**1,010**	**88,474**	**2,575**	**13,484**	**26,360**	**26,360**	**19,695**		

C. Funding Schedule (000's)

WSSC Bonds	**89,484**		1,010	**88,474**	2,575	13,484	26,360	26,360	19,695		

D. Description & Justification

DESCRIPTION

This project provides for the implementation of a system-wide automated meter reading infrastructure system (System). All meters will receive new Meter Interface Units with internal antenna capable of obtaining and/or transmitting the meter register reading. All readings will be collected remotely by either a mobile system or a fixed network communications system.

JUSTIFICATION

Plans & Studies

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).

Specific Data

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 and encoder registers in the distribution system.

Cost Change

Costs were increased for inflation and to complete the upgrade of the remaining monthly meters to AMR.

STATUS Planning

OTHER

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; 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. The AMI project has been postponed until the upgrade of the Commission's Customer Service Information System (CSIS) is completed. Funding in FY'13 will upgrade the remaining monthly meters to the AMR standard.

COORDINATION

Montgomery County Government and Prince George's County Government.

E. Annual Operating Budget Impact (000's)

			FY of Impact
Program Costs	Staff	....	
	Other	....	
Facility Costs	Maintenance	....	
	Debt Service	7803	19
Total Costs		7803	19
Impact on Water or Sewer Rate		15¢	19

F. Approval and Expenditure Data (000's)

Date First in Capital Program	FY 13
Date First Approved	FY 13
Initial Cost Estimate	86,000
Cost Estimate Last FY	86,000
Present Cost Estimate	89,484
Approved Request, Last FY	2,500
Total Expenditures & Encumbrances	
Approval Request FY 14	2,575
Supplemental Approval Request Current FY (13)	

G. Status Information

Land Status:	Not determined
% Project Completion:	P-10%
Est. Completion Date:	FY 2018

H. Map **Map Reference Code:**

MAP NOT AVAILABLE

Consent Decree Summary

- **Mandate:**

  - Negotiations started in May of 2002
  - Consent Decree Remedial Measures section contains thirteen articles regarding operation and maintenance of the Wastewater Collection System
  - Court order driven by MDE, EPA, citizen groups
  - Rehabilitate failing sewer assets
  - $1.1 million civil penalty
  - Supplemental Environmental Projects including purchasing property around reservoirs totaling $4.4 million
  - Current estimated value for rehab: ~$1.0B

- **Scope & Schedule:**

  - Rehabilitate approximately 7,000 assets
  - 1,000 square-mile area
  - 24 sewer-shed basins
  - Deadline – December 7, 2015

- **Sewer Repair, Replacement, and Rehabilitation (SR3) projects are essentially maintenance activities to the existing sewer system**

  - Examples of activities:
    - Sewer lining
    - Lateral lining
    - External point repair
    - Internal spot repair
    - Joint sealing
    - Pipe protection
    - Manhole protection
    - Manhole and sewer main replacement or relocation via open cut trenching.
    - Stream restoration in combination with exposed sewer assets

IDIQ Contract Status

- **Designs**

  - Six Design Contracts Awarded
    - Road Designs – Ongoing
      - 18 of 24 Roads basin designs complete for SR3 Priority 1 assets
    - ESA Designs – Ongoing
      - One of the 24 ESA basins has several task orders in construction (Broad Creek)
    - Lateral Designs – Ongoing
    - Design phase beginning for the last basin, Parkway

- **Construction: Residential Roads**

  - Six contracts awarded - Construction underway
    - Sligo Creek and Cabin John
    - Paint Branch, Lower Anacostia and Beaverdam
    - Dulles Interceptor, Muddy Branch, Seneca & Monocacy
    - Piscataway, Mattawoman and Broad Creek

- Western Branch, Horsepen, Patuxent Center, Northwest Branch, Northeast Branch and Oxon Run
- Little Falls, Parkway, Rock Creek/Patuxent North, Rock Run, and Watts Branch

- Road Construction Status by Basin
  - Sligo Creek=96%
  - Cabin John=85%
  - Paint Branch=94%
  - Lower Anacostia=81%
  - Beaverdam=60%
  - Seneca Creek=17%
  - Dulles Interceptor=35%
  - Muddy Branch=10%
  - Broad Creek=90%
  - Piscataway=48%
  - Western Branch/Mattawoman=15%
  - Northwest=86%
  - Horsepen=100%
  - Northeast=34%
  - Oxon Run=17%
  - Rock Creek/ Patuxent North=1%
  - Rock Run, Watts Branch, Little Falls, and Parkway=0%

IDIQ Contact Awards

- **Construction: Environmentally Sensitive Areas (i.e. Trunk Walk)**

  - 8 ESA Construction Contracts Awarded
    - Broad Creek
    - Oxon Run
    - Rock Creek
    - Sligo Creek
    - Cabin John
    - Paint Branch
    - Northeast Branch
    - Northwest Branch

  - 2 ESA contracts to be approved for award
    - Lower Anacostia/Beaverdam/Mattawoman
    - Little Falls/Rock Run

  - The 6 remaining ESA contracts will be advertised by June 2013

- **Construction: Laterals**

  - 4 contracts awarded for all basins
  - Inspections by contractors nearly complete
  - Construction Work Ongoing

Schedule Status

- **Remaining SR3 assets to be refurbished by 12/7/2015**
- **Residential Roads**

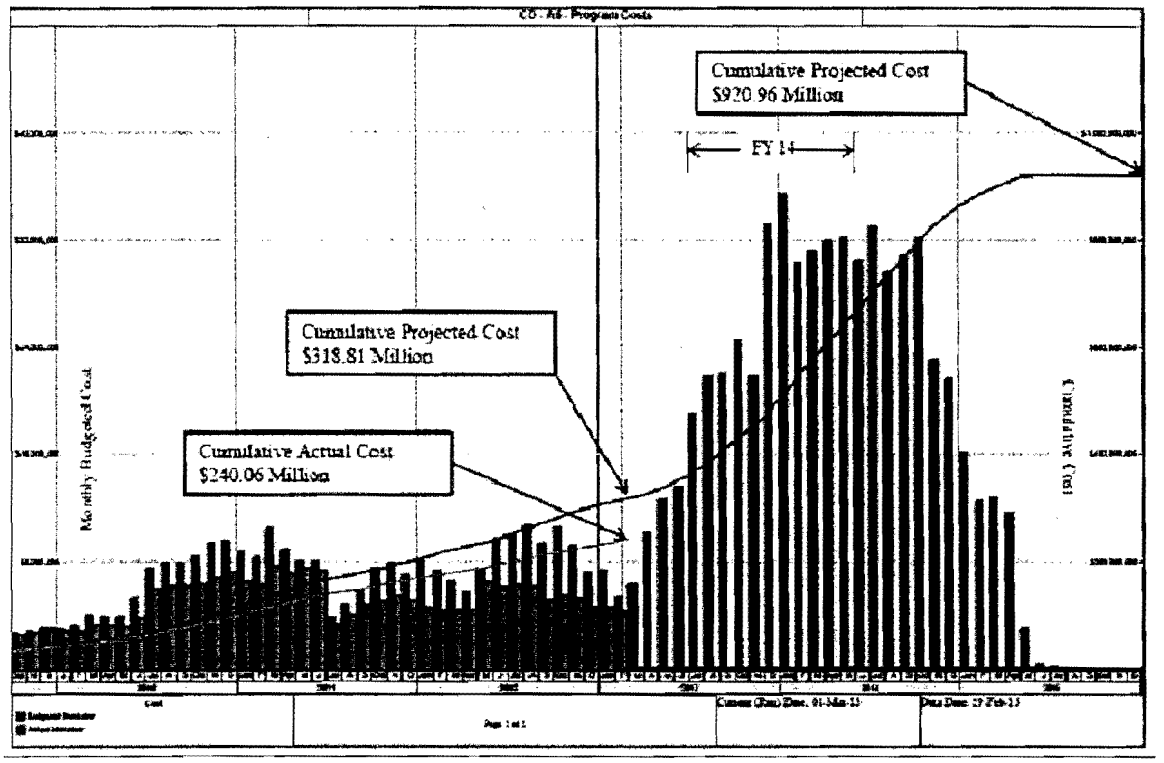
  - 56 miles constructed as of early March 2013
  - 40 miles currently under construction

- Prime Contractors portion of tasks (lining) essentially done.
- Primarily Subcontracting Work Remaining

- **Current Status for SR3 Plans**

  - Prepared and Submitted the SR3 Plans for Rock Run, Watts Branch and Little Falls in December 2012
  - Prepared and Submitted the SR3 Plan for Northeast Branch in January 2013
  - Prepared and Submitted the SR3 Plan for Parkway SR3 Plan March 2013
  - EPA and MDE have approved 18 SR3 plans
  - Awaiting approval from EPA and MDE for Rock Run, Watts Branch, Little Falls Northeast Branch and Parkway SR3 Plans

Costs



Why is cost increase needed?

The primary reason is that substantially more design work has been accomplished using information from (now) all of the SSES for the basins. More is known about what work we have to do and what it will cost. Also, part of the cost increase over that projected from last year is due to some costs shifting from the S-1.01 to S-170.09 project (see question 13).