

THE PRINCE GEORGE'S COUNTY GOVERNMENT

(301) 952-3700

County Council

APR 27 2016

MEMORANDUM

TO:

Todd M. Turner. Chair

Transportation, Housing and the Environment (THE) Committee

THRU:

Robert J. Williams Council Administrator

FROM:

Patrick Pope, Auditor Office of Audits and Investigations

Hawi Sanu, Director

Transportation, Housing and the Environment (THE) Committee

RE:

WSSC FY 2017-2022 Proposed Capital Improvements Program Staff Report

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

The summary and information included in this report reflects the Proposed CIP as submitted by WSSC. Staff recommendations are included in Section VI of this report.

The FY 2017-2022 Capital Improvement Plan includes 82 projects. There is only one new project this year and it is in the Information Only section. The six-year program total is approximately \$2.0 billion in expenditures, \$107 million less than the FY 2016-2021 CIP level. FY 2017 expenditures total \$492.7 million, which is approximately \$53.9 million less than the FY 2016 Adopted CIP. A detailed summary of the Proposed CIP for Fiscal Years 2017-2022 with emphasis on year one (FY2017) is discussed below. WSSC plans on submitting an update on the Blue Plains project costs and a new Potomac Water Filtration Plant Consent Decree Program.

WSSC PROPOSED FY 2017-2022 CAPITAL IMPROVEMENT PROGRAM STAFF REPORT

I. SUMMARY

A. <u>Expenditures</u>

WSSC's proposed FY 2017 CIP totals \$492.7 million, which is \$53.9 million less as compared to the approved funding level for FY 2016. Much of the decrease can be attributed to the projected construction progress on the Broad Creek WWPS Augmentation and Blue Plains WWTP Enhanced Nutrient Removal projects. In FY 2017, these projects are proposed below the FY 2016 levels at \$26.9 million and \$28.1 respectively. The Blue Plains projects account for \$332 million within the FY 17 - 22 Proposed CIP; this is a decrease of \$69 million, or 17.2% below the FY 16-21 Adopted CIP. The Blue Plains projects account for 17% of WSSC's total CIP and 28% of WSSC's sewer projects. The Trunk Sewer Reconstruction project also accounts for a cost decrease of approximately \$30.5 million in the FY 17-22 Proposed CIP Budget.

There are five (5) projects closing out which total \$19 million. FY 2017 includes \$181 million in water projects, \$311.7 million in sewer projects. More than one third of the projects in this CIP are Development Services Process (DSP) growth projects. This CIP includes 12 Bi-County water and 9 Bi-County sewer projects, 22 Prince George's County water projects and 20 Prince George's County sewer projects.

CATEGORY	NO. OF PROJECTS	FY 2017 PROPOSED	% of TOTAL COST
WATER			
Bi-County	12	\$101,462	20.6%
Prince George's County	22	\$66,565	13.5%
Montgomery County	7	\$12,956	2.6%
Subtotal	41	\$180,983	36.7%
SEWER			
Bi-County	9	\$238,616	48.4%
Prince George's County	20	\$60,782	12.3%
Montgomery County	<u>12</u>	\$12,345	2.5%
Subtotal	41	\$311,743	63.3%
TOTAL	82	\$492,726	100.0%

"Information Only" projects are not formally a part of the CIP and not in the above CIP totals; however they represent a significant portion of WSSC's infrastructure related work within the FY 17-22 expenditures. Information only projects are proposed to be \$1.187 billion (an increase of 43.4 million or 3.8 percent over the FY16-21 projected amount of \$1.14 billion). The largest increases are in Sewer Reconstruction (\$45.6 million) and Energy Performance (\$18.4 million) programs.

B. Sources of Funds

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

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

C. Funding Growth & the Growth Funding Gap

The Maryland General Assembly passed and later modified legislation that established a Systems Development Charge (SDC) to "help finance the capital costs of expanding and augmenting water and sewerage systems to accommodate service to subscribers in the Washington Suburban Sanitary District (WSSD) and to provide a financing mechanism to aid the Washington Suburban Sanitary Commission in paying for the capital projects thereof and providing methods and procedures by which the SDC is to be implemented and/or collected." The fee was set at \$200 per fixture unit with a provision for an annual inflation adjustment and is currently \$203 per fixture unit since the Councils made no adjustment in FY 2016.

Further, per State law, each County may grant \$500,000 of narrowly defined exemptions per year. Unused portions accumulate and are available for future fiscal years. As of February 29, 2016, Prince George's County's unused cumulative SDC exemptions total was \$2.8 million compared to Montgomery County's balance of \$5.8 million.

The Growth Funding Gap Chart from the FY 17-22 Capital Improvements Program document follows the format approved by both Counties, which reflects the projects that are currently in the CIP, and indicates a gap of \$33.2 million over the six-year period. The SDC Account Balance, as of February 29, 2016, was \$2.9 million. An increase in the SDC rate, at this time, does not appear to be justified to cover a short-term funding gap. WSSC is proposing to issue debt to cover any shortfall that may occur in the next few years and then repay the debt service through future SDC collections, as allowed by State Law.

II. NEW PROJECTS

There is one new project in the Proposed FY 2017 CIP for a total cost of \$6.4 million over the 6 year program period and it is an information only project. The Brighton Dam Operations & Maintenance Facility and Site Improvements project provides for the replacement of two existing facilities with a new ADA compliant 4,100 square foot facility with office space for 14

employees. The project also includes a new parking configuration to facilitate visiting groups and relocation of existing fuel facilities.

A detailed list of this new project is attached to this report in Attachment D.

III. BI-COUNTY PROJECTS A. Water

- Potomac Water Filtration Plant Projects. The 5 projects in this series are slated for operational improvements to the Potomac WFP. These expenditures are in the systems improvements category and are funded with WSSC bonds.
- Bi-County Water Tunnel. 100% growth funded, for a total cost of \$143.8 million, this
 project provides for an alignment study, community outreach, and water main design
 and construction.
- Duckett & Brighton Dam Upgrades. This project was included per request of the MDE and supports 100% system improvements.
- Large Diameter Water Pipe Rehabilitation Program. This project will rehabilitate or replace large diameter water lines. This 100% system improvements project will be WSSC bond funded.
- Patuxent Water Filtration Plant Projects Raw Water Pipeline. The Patuxent WFP serves northern Prince George's County and a portion of eastern Montgomery County. All 3 projects are wholly funded by WSSC bonds and supports 100% system improvements and ultimately provides for completion of phase II expansion projects and a new raw water pipeline and the necessary expansion.
- Rocky Gorge Pump Station permitting the delivery of up to 110 MGD of raw water to the Patuxent WFP.
- Land & Rights of Way Acquisition. This project is a consolidated estimate of land and right of way purchases for previously approved capital projects.

A financial list of Bi-County water projects is attached to this report in Attachment E.

B. Sewer

Anaerobic Digestion/Combined Heat & Power. A comprehensive long-term biosolids management project to construct a new centralized anaerobic digestion/combined heat & power system to treat bio-solids from Piscataway, Parkway, Seneca, and Damascus wastewater treatment plants. This system is funded by both WSSC Bonds and Federal Aid.

- Blue Plains Wastewater Treatment Plant Projects. This group of 5 projects represents the largest group of expenditures in the proposed CIP (17%) and provides
 - for WSSC's share of funding for the upgrade, expansion and enhancement of wastewater treatment and solids handling at the Regional Blue Plains WWTP located in Washington, DC. The Blue Plains WWTP treats approximately 66% of WSSC's wastewater.²
- Septage Discharge Facility. This project is 100% bond funded and wholly supports systems improvements to develop alternatives in managing septage discharge facilities in the WSSD.
- Trunk Sewer Reconstruction Program. This project will rehabilitate large diameter sewer mains. This 100% system improvements program is WSSC bond funded.
- Land & Rights of Way Acquisition. This project provides for a consolidated estimate of funding for the acquisition of land and rights-of-ways for sewer projects.

A financial list of Bi-County sewer projects is attached to this report in Attachment F.

IV. PRINCE GEORGE'S COUNTY PROJECTS A. Water

There are 22 Prince George's County water projects at a cost of \$66.6 million

- Prince George's County HG415 Zone Water Main. This water main construction project supports 100% system improvement.
- Old Branch Avenue Water Main. This project equally supports growth and system improvement for water main design and construction.
- Water Transmission Improvements 385 Pressure Zone. This project provides for a new water transmission main that will improve system reliability through the 385 and 345 pressure zones.
- Branch Avenue Water Transmission Improvements. This project provides for the planning, design and construction of approximately 21,800 feet of 42-inch, and 5,400 feet of 30-inch diameter water transmission main and flow control valve along Branch Avenue in the Clinton area.
- Marlboro Zone Reinforcement Main. This project provides for the planning, design and construction of approximately 4,000 feet of 16 inch diameter transmission main and flow control valve along Old Marlboro Pike in the Clinton area.

- Clinton Zone Water Storage Facility Implementation. This project provides for the design and construction of approximately 4.0 million gallons (MG) of water storage to serve the Clinton Pressure Zone.
- St. Barnabas Elevated Tank Replacement. This project provides for the design and construction of approximately 2.5 million gallons (MG) of water storage to serve Prince George's High Pressure Zone HG450A and it includes the demolition of the existing St. Barnabas elevated water storage tank. This system is funded through WSSC bonds and SDC.
- Ritchie Marlboro Road Transmission Main & PRV. This project provides for the planning, design and construction of approximately 13,100 feet of 24 inch diameter water transmission main and pressure reducing valve to serve the Westphalia area.
- Prince George's County 450A Zone Water Main. This project provides for the planning, design and construction of approximately ten miles of redundant water transmission main for the 450A zone in Prince Georges County.
- Hillmeade Road Water Main. This water main construction project supports 100% growth.
- John Hanson Highway Water Main, part 1. This water main construction project supports 100% growth.
- Oak Grove/Leeland Roads Water Main, part 2. This water main project supports growth and system improvement equally.
- South Potomac Supply Improvement. This water main project supports growth and system improvement equally and funded by bonds and SDC.
- Collington Elevated Water Storage Facility. This project provides site selection, design and construction of up to 4 million gallons of elevated storage to serve the intermediate zone.
- Development Services Process (DSP) & Conceptual Design Projects. This PDF provides the necessary approval to design and construct projects (8) which serve new development or are built in conjunction with new development to reinforce the existing system or to avoid future disruption to the area and includes funds for projects in the conceptual design phase or final stages of facility planning for which reliable cost date was not available for inclusion in the proposed CIP.

A financial list of Prince George's County water projects is attached to this report in Attachment G.

B. Sewer

There are 20 Prince George's County sewer projects at a cost of \$60.8 million.

- Broad Creek WWPS Augmentation. This project supports 83% growth. To eliminate overflows at the Broad Creek Wastewater Pumping Station, modifications will be made to the pumping station and/or the force main. After four (4) years of deliberation, the National Park Service (NPS) completed their Environmental Assessment and released their Findings of No Significant Impacts allowing construction to start in summer 2016 with completion in the FY 2020.
- Western Branch Facility Upgrade; and the Western Branch WWTP Enhanced Nutrient Removal which provides for improvements to meet the MDE's nutrient removal goals; Western Branch Incinerator Emissions Control upgrades the plant to meet EPA requirements.
- Mattawoman WWTP Upgrades. The costs represent WSSC's share of capital projects at Charles County's Mattawoman Wastewater Treatment Plant. These projects are WSSC bond funded.
- Parkway WWTP Bio-solids Facility Plan. This project is 100% system improvement.
- Piscataway WWTP Facility Upgrades. This project is100% system improvement.
- Fort Washington Forest No.1 WWPS Augmentation. This project provides for planning, design and construction of the rehabilitation work required for the Fort Washington Forest No. 1 WWPS and the replacement of a segment of a failing 4-inch diameter force main. This project will also provide for upgrades to the existing Fort Washington Estates WWPS and upsize the force main with a new 8-inch diameter gravity sewer.

Development Services Process (DSP) & Conceptual Design Sewer Projects. This PDF provides the necessary approval to design and construct projects (12) which serve new development or are built in conjunction with new development to reinforce the existing system or to avoid future disruption to the area.

A financial list of Prince George's County sewer projects is attached to this report in Attachment H.

VI. RECOMMENDATIONS

- A. Concur with WSSC to maintain SDC fees at current levels but increase the maximum ceiling on this charge as is consistent with State Law.
- **B.** Concur with the PCCP program which includes inspection and Acoustical Fiber Optical Monitoring.
- C. Concur with the addition on one new project.
- **D.** Concur with WSSC on all other FY 17-22 CIP projects.

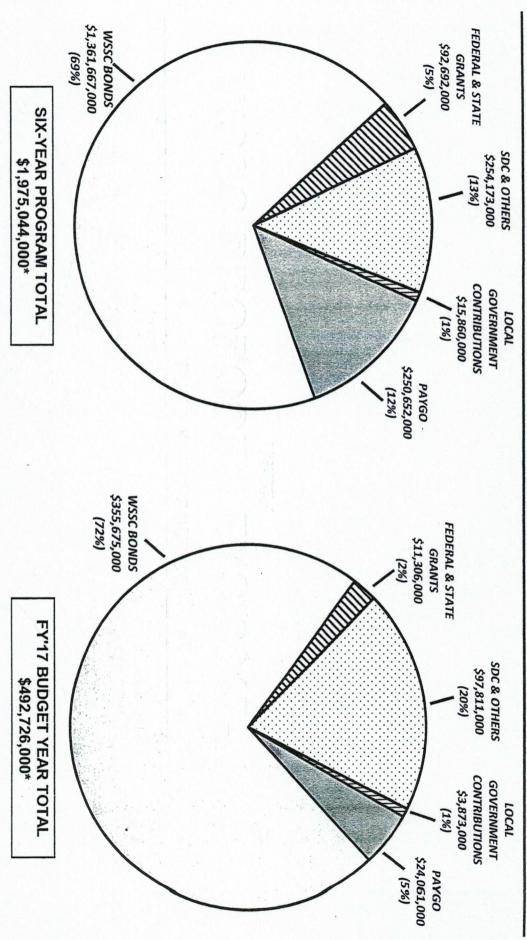
APPENDICES

- A. WSSC Proposed FY 2017-2022 CIP, Figure 4
- B. Total WSSC CIP Financial Summary
- C. SDC Exemptions
- D. WSSC FY 2017-2022 CIP New Projects Listing
- E. Bi-County Water Projects Financial Listing
- F. Bi-County Sewer Projects Financial Listing
- G. Prince George's County Water Projects Financial Listing
- H. Prince George's County Sewer Projects Financial Listing

FIGURE 4

WSSC PROPOSED FYS 2017-22 CIP

FUNDING BY SOURCE*



*Totals do not include expenditures for Information Only Projects in the six-year program and budget year, respectively.

ATTACHMENT

A

FINANCIAL SUMMARY

DATE: October 1, 2015 1

(ALL FIGURES IN THOUSANDS)

										NUMBER	TOTAL V
Total Information Only Projects	TOTAL WSSC PROGRAM	TOTAL SEWERAGE PROJECTS	Bi-County Sewerage Projects	Prince George's County Sewerage Projects	Montgomery County Sewerage Projects	TOTAL WATER PROJECTS	Bi-County Water Projects	Prince George's County Water Projects	Montgomery County Water Projects	3	TOTAL WSSC CIP PROJECT
1,459,597	4,386,164	3,158,287	2,619,359	456,800	82,128	1,227,877	867,508	316,433	43,936	TOTAL	FST
60,335	1,923,631	1,611,105	1,384,251	175,751	51,103	312,526	267,328	36,420	8,778	THRU 15	EXPEND
	412,065	300,629	212,960	82,491	5,178	111,436	77,024	29,393	5,019	EXPEND 16	EST
184,255 1,186,623	412,065 1,975,044	300,629 1,191,553	969,554	196,152	25,847	783,491	523,156	230,196	30,139	SIX	TOTAL
208,767	492,726	311,743	238,616	60,782	12,345	180,983	101,462	66,565	12,956	YR 1 17	and property and the second second second
198,473	480,918	301,794	225,699	65,680	10,415	179,124	95,997	67,451	15,676	YR 2 18	EXF
203,696	354,473	210,603	168,313	39,249	3,041	143,870	108,178	34,185	1,507	YR 3 19	PENDITURE
205,525	288,121	186,356	169,368	16,942	46	101,765	89,791	11,974	0	YR 4 20	EXPENDITURE SCHEDULE
194,158	206,280	117,127	105,814	11,313	0	89,153	71,930	17,223	0	YR 5	"
176,004	152,526	63,930	61,744	2,186	0	88,596	55,798	32,798	0	YR 6 22	
28,384	75,424	55,000	52,594	2,406	0	20,424	0	20,424	0	YEARS	BEYOND
7-1		mineral and the second second second	4	6-1	2-1	Maria e supo de sucho de	3 -1	5-1	1	PAGE	PDF

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bonds may be used to close any gap. the event that growth costs are greater than the income generated by growth funding sources, either SDC supported or rate-supported water/sewer program. The major funding sources for this part of the program are System Development Charge (SDC) revenues and payments by Applicants. In The portion of the CIP needed to accommodate growth is approximately \$254 million, which equals 13% of all expenditures in the six-year

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maximum rate of \$160 per fixture unit by Commission Resolution No. 95-1457, adopted May 24, 1995, and became effective July 1, 1995. In the Councils approved, and the Commission began to phase in, this charge beginning in FY'94. The SDC charge was eventually approved at the establish, and the WSSC to impose, a System Development Charge. This is a charge on new development to pay for that part of the Commission's document in Appendices A through D. Number 2015-2084 dated June 17, 2015. Policies and other information associated with the System Development Charge are included in this 162 approved May 21, 2015, and, CR-25-2015 approved May 28, 2015, respectively. The Commission adopted the Councils' actions by Resolution maximum allowable charge by the 1.0% increase in the CPI-U, but maintained the current rate of \$203 per fixture unit by Resolution Numbers 18housing and biotechnology properties, as well as exemptions for properties in designated economic revitalization areas and properties used primarily provision for annual inflation adjustments. Subsequent resolutions have established a process for approving partial and full exemptions for elderly 1998 legislative session, the General Assembly modified the charge by passage of House Bill 832 setting the fee at \$200 per fixture unit with a Capital Improvements Program needed to accommodate growth in the WSSC's customer base. In accordance with the enabling legislation, the for recreational and educational programs and services to youth. For FY'16, the Montgomery County and Prince George's Councils increased the The Maryland General Assembly, in 1993, first approved legislation authorizing the Montgomery and Prince George's County Councils to

collections, as allowed by State Law. Further, it is currently anticipated that no significant additional growth projects will evolve in the later years of expenditures vary over the six-year period. If growth-related expenditures were to exceed the available SDC account balance, it is anticipated that funding sources (SDC, developer contributions, and Applicant payments under System Extension Permits) and the estimated growth-related the six-year period. (A listing of SDC-eligible projects is included in Appendix D.) WSSC would issue new SDC supported debt to cover this temporary gap rather than increasing the SDC. The debt will be repaid through future SDC It is estimated that there will be an overall growth funding gap of \$33.2 million over the six-year program period. The gap between growth

gap/surplus is the difference between the eligible expenditures adjusted for completion and the sum of the various funding sources. year, it is assumed that 80% of the eligible expenditures will actually be incurred in a given year due to scheduling and other delays. The projected An estimate of the gap or surplus for each fiscal year is presented in the table that follows. To estimate the gap/surplus for an individual fiscal

GROWTH FUNDING GAP (In Millions)

FUNDING GAP ADJUSTED FOR COMPLETION	TOTAL FUNDING SOURCES	FUNDING SOURCES Privately Funded Projects Estimated SDC Revenue Less SDC Developer Credits Less SDC Exemptions	CIP GROWTH EXPENDITURES Expenditures Adjusted for Completion
\$35.3	\$42.9	15.8 29.8 (1.7)	FY'17 \$97.8 78.2
\$47.9	\$43.3	16.0 30.0 (1.7) (1.0)	FY'18 \$89.5 91.2
\$13.5	\$36.7	7.4 32.0 (1.7) (1.0)	FY'19 \$40.4 50.2
(\$17.9)	\$31.0	1.7 32.0 (1.7) (1.0)	FY'20 \$6.2 13.1
(\$26.0)	\$32.0	0.7 34.0 (1.7) (1.0)	FY'21 \$6.0 6.0
(\$19.6)	\$32.2	0.9 34.0 (1.7) (1.0)	FY'22 \$14.3 12.6
\$33.2	\$218.1	42.5 191.8 (10.2) (6.0)	6 YEAR TOTAL \$254.2 251.3

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 (Public Utilities Article, Section 25-403(b)). Unused exemption amounts are available for use in future fiscal years. Cumulative unused SDC exemptions totaled approximately \$5.3 million for Montgomery County and \$2.9 million for Prince George's County through June 30, 2015.

Expenditures

projects are shown on the New Projects Listing near the end of this section. is \$42.8 million, with approximately \$19.8 million programmed in FY'17. There is one new project in the Information Only section of the CIP. New than a third of the projects in this CIP are Development Services Process (DSP) growth projects. The DSP projects' estimated six-year program cost level approved for FY'16. Of the \$492.7 million, \$181.0 million is for the Water Program and \$311.7 million is for the Sewerage Program. More year program period are estimated at \$2.0 billion. FY'17 expenditures are estimated at \$492.7 million, which is \$53.9 million less than the funding The FYs 2017-2022 Capital Improvements Program includes 82 projects for a grand total of \$4.4 billion dollars. Expenditures for the six-

A table comparing the Adopted FYs 2016-2021 CIP to the Proposed FYs 2017-2022 CIP follows:

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Agency Number	Project Name	Total Project Cost	6 Year Program Cost	Budget Year Cost	% of Growth
Information Only Projects	nly Projects				
A-145.01	Brighton Dam Operations & Maintenance Facility and Site Improvements	\$6,448	\$5,951	\$1,357	0%
	TOTALS	\$6,448	\$5,951	\$1,357	

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(ALL FIGURES IN THOUSANDS)

DATE	
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P. Northwester, J. L.	W-202.00	W-172.08	W-172.07	W-172.05	W-161.01	W-139.02	W-127.01	W-73.32	W-73.30	W-73.22	W-73.21	W-73.19		AGENCY
TOTAL BI-COUNTY WATER PROJECTS	Land & Rights-of-Way Acquisition - Bi-County Water	Rocky Gorge Pump Station Upgrade	Patuxent Raw Water Pipeline	Patuxent WFP Phase II Expansion	Large Diameter Water Pipe & Large Valve Rehabilitation Program	Duckett & Brighton Dam Upgrades	Bi-County Water Tunnel	Potomac WFP Main Zone Pipeline	Potomac WFP Submerged Channel Intake	Potomac WFP Pre-Filter Chlorination & Air Scour Improvements	Potomac WFP Corrosion Mitigation	Potomac WFP Outdoor Substation No. 2 Replacement	INTERIL	PROJECT
867,508	2,120	19,582	32,436	64,838	417,169	29,692	143,855	35,009	80,537	11,200	15,508	15,562	COST	EST.
267,328	0	4,455	12,264	10,978	79,841	11,926	139,625	397	3,938	1,070	1,235	1,599	15	EXPEND
77,024	697	3,782	42	16,466	28,927	4,606	4,198	402	315	901	12,034	4,654	16	EST.
523,156	1,423	11,345	20,130	37,394	308,401	13,160	32	34,210	76,284	9,229	2,239	9,309	YEARS	TOTAL
101,462	425	7,564	5,610	17,778	48,092	8,773	32	353	1,050	2,564	2,239	6,982	YR 1	And the same of th
95,997	550	3,781	8,910	14,744	51,443	4,387	0	605	3,098	6,152	0	2,327	YR 2	EXF
95,997 108,178 89,791 71,930	20	0	5,610	4,872	52,751	0	0	20,052	24,360	513	0	0	YR 3	EXPENDITURE SCHEDULE
89,791	418	0	0	0	51,865	0	0	13,200	24,308	0	0	0	YR 4	E SCHED
71,930	10	0	0	0	51,865	0		0	20,055	0	0	0	YR 5	ÜLE
55,798	0	0	0	0	52,385	0	0	0	3,413	0	0	0	YR 6	The second second second second
0	0	0	0	0	0	0	0	0	0	0	0	0	SIX	BEYOND
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FINANCIAL SUMMARY (ALL FIGURES IN THOUSANDS)

DATE: October 1, 2015

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BI-COUNTY SEWER PROJECTS

	52,594	61,744	105,814	169,368	168,313	225,699	238,616	969,554	212,960	2,619,359 1,384,251	2,619,359	TOTAL BI-COUNTY SEWER PROJECTS	
4-12	0	10	10	10	10	22	122	184	20	0	204	S-203.00 Land & Rights-Of-Way Acquisition - Bi County Sewer	
4-11	0	23,950	47,236	63,807	67,950	134,664	145,521	483,128	105,357	201,575	790,060	S-170.09 Trunk Sewer Reconstruction Program	
4-10	0	0	711	2,135	3,779	3,728	2,455	12,808	751	919	14,478	S-170.08 Septage Discharge Facility Planning & Implementation	
4-8	0	0	20,780	55,440	47,934	13,252	4,254	141,660	998	1,362	144,020	S-103.02 Piscataway WWTP Bio-Energy Project	
4-7	16,747	9,891	7,894	11,827	13,733	12,279	18,091	73,715	22,007	69,441	181,910	S-22.11 Blue Plains: Pipelines & Appurtenances	
4-6	3,809	336	544	2,267	3,392	29,689	37,105	73,333	65,284	246,917	389,343	S-22.10 Blue Plains WWTP: Enhanced Nutrient Removal	
4-5	26,164	16,649	14,176	21,577	8,688	6,646	6,766	74,502	5,977	191,793	298,436	S-22.09 Blue Plains WWTP: Plant-wide Projects	
4-4	286	1,932	7,884	2,784	2,720	5,541	8,401	29,262	4,558	375,478	409,584	S-22.07 Blue Plains WWTP: Biosolids Management, Part 2	
4-3	5,588	8,976	6,579	9,521	20,107	19,878	15,901	80,962	8,008	296,766	391,324	S-22.06 Blue Plains WWTP: Liquid Train Projects, Part 2	
PAGE NUM	BEYOND SIX YEARS	YR 6	YR 5	YR 4 20	EXPENDITURE SCHEDULE 2 YR 3 YR 4 Y 19 20	EXP YR 2 18	YR 1	TOTAL SIX YEARS	EST. EXPEND 16	EXPEND THRU 15	EST. TOTAL COST	AGENCY PROJECT NUMBER NAME	
												BI-COUNTY SEWER PROJECTS	

FINANCIAL SUMMARY (ALL FIGURES IN THOUSANDS)

DATE: October 1, 2015

PRINCE GEORGE'S COUNTY WATER PROJECTS

AGENCY	PROJECT	EST.	EXPEND	EST.	TOTAL	The same of the sa	EXPE	NDITURE	EXPENDITURE SCHEDULE	İ		BEYOND	11 mm
NUMBER	NAME	Service.	THRU	EXPEND 16	SIX	YR 1	YR 2	YR 3	YR 4 20	YR 5	YR 6	SIX	
W-12.02	Prince George's County HG415 Zone Water Main	3,374	142	173	3,059	2,098	961	0	0	0	0	0	
W-34.02	Old Branch Avenue Water Main	26,070	1,528	122	24,420	3,336	9,762	9,708	1,614	0	0	0	
W-34.03	Water Transmission Improvements 385B Pressure Zone	34,593	900	473	33,220	2,860	13,310	13,200	3,850	0	0	0	ar and the second
W-34.04	Branch Avenue Water Transmission Improvements	53,555	3,569	11,900	38,086	15,834	18,991	3,261	0	0	0	0	
W-34.05	Marlboro Zone Reinforcement Main	4,443	318	77	4,048	1,354	2,694	0	0	0	0	0	
W-62.05	Clinton Zone Water Storage Facility Implementation	12,559	1,214	385	6,120	1,980	2,948	1,192	0	0	0	4,840	The second second
W-65.10	St. Barnabas Elevated Tank Replacement	10,908	640	1,972	8,296	5,524	2,772	0	0	0	0	0	
W-84.02	Ritchie Marlboro Road Transmission & PRV	12,619	1,184	396	11,039	4,413	4,413	2,213	0	0	0	0	
W-84.03	Smith Home Farms Water Main	2,500	737	583	1,180	397	394	389	0	0	0	0	
W-84.04	Westphalia Town Center Water Main	1,438	520	40	878	293	347	238	0	0	0	0	
W-84.05	Prince George's County 450A Zone Water Main	40,100	370	1,229	22,917	1,609	1,609	1,990	5,903	5,903	5,903	15,584	
W-93.01	Konterra Town Center East Water Main	1,607	89	53	1,465	619	59	334	185	268	0	0	
W-105.01	Marlton Section 18 Water Main, Lake Marlton Avenue	2,407	28	6	2,373	374	400	400	400	400	399	0	CO. ST. Co.
W-111.05	Hillmeade Road Water Main	5,514	934	1,555	3,025	3,025	0	0	0	0	0	0	
W-119.01	John Hanson Highway Water Main, Part 1	15,920	1,279	55	14,586	6,697	7,238	651	0	0	0	0	
W-120.14	Lakeview at Brandywine Water Main, Part 1	193	43	0	150	10	70	70	0	0	0	0	
W-120.15	Lakeview at Brandywine Water Main, Part 2	618	72	0	546	14	265	267	0	0	0	0	
W-120.16	Lakeview at Brandywine Water Main, Part 3	47	14	0	33	33	0	0	0	0	0	0	
W-123.14	Old Marlboro Pike Water Main	1,698	1,258	115	325	179	146	0	0	0	0	0	
W-123.20	Oak Grove/Leeland Roads Water Main, Part 2	12,828	6,410	2,820	3,598	3,472	126	0	0	0	0	0	

PRINCE GEORGE'S COUNTY SEWER PROJECTS

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NUMBER		TOTAL	THRU 15	EXPEND 16	SIX	YR 1	YR 2	YR 3	YR 4	YR 5	YR 6 22	SIX	PAGE
S-27.08	Westphalia Town Center Sewer Main	816	195	437	184	120	55	9	0	0	0	0	6-3
S-28.18	Konterra Town Center East Sewer	6,458	1,704	2,820	1,476	0	486	367	0	0	623	458	6-4
S-43.02	Broad Creek WWPS Augmentation	175,955	47,266	62,108	66,581	35,175	20,281	10,658	467	0	0	0	6-5
S-57.92	Western Branch Facility Upgrade	47,591	46,395	1,172	24	24	0	0	0	0	O	0	6-6
S-57.93	Western Branch WWTP Enhanced Nutrient Removal	42,205	41,145	1,040	20	20	0	0	0	0	0	0 -	6-7
S-57.94	Western Branch WWTP Incinerator Emissions Control	22,652	2,173	2,783	17,696	11,160	6,501	35	0.	0	0	0	6-8
S-68.01	Landover Mall Redevelopment	1,241	24	95	1,122	621	338	43	40	40	40	0	6-9
S-75.19	Brandywine Woods Wastewater Pumping Station	302	6,	171	125	63	62	0	0	0	0	0	6-10
S-75.20	Brandywine Woods WWPS Force Main	1117	12	35	70	37	33	0	0	0	0	0	6-11
S-75.21	Mattawoman WWTP Upgrades	14,323	5,185	793	7,765	3,305	2,420	1,022	1,018	0	0	580	6-12
S-77.19	Parkway WWTP Biosolids Facility Plan Implementation	31,123	25,975	4,928	220	220	0	0	0	0	0	0	6-13
S-86.19	Karington Subdivision Sewer	711	96	95	520	269	251	0	0	0	0	. 0	6-14
S-87.15	Rodenhauser Wastewater Pumping Station	1,200	97	1,055	48	33	15	0	0	0	0	0	6-15
S-87.16	Rodenhauser WWPS Force Main	280	90	174	16	16	0	0	0	0	0	-0	6-16
S-96.14	Piscataway WWTP Facility Upgrades	104,156	4,195	2,853	95,740	6,630	33,998	26,899	15,417	11,273	1,523	1,368	6-17
S-131.05	Pleasant Valley Sewer Main, Part 2	825	30	190	605	375	156	74	0	0	0	0	6-18
S-131.07	Pleasant Valley Sewer Main, Part 1	1,623	47	446	1,130	923	207	0	0	0	0	0	6-19

CAPITAL IMPROVEMENTS PROGRAM



PROPOSED FY's 2017-2022 CAPITAL IMPROVEMENTS PROGRAM

- Total program \$4.4 billion
 - Total program includes 82 projects
 - Four projects closing out \$4.6 million
- Six-year program period expenditures estimated at \$2.0 billion
- FY'17 budget estimated at \$493 million





INFORMATION ONLY PROJECTS

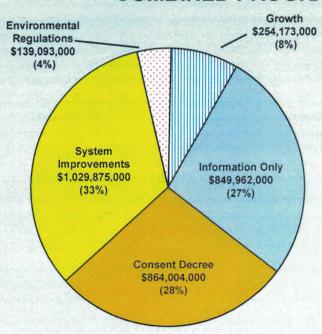
- Total program \$1.5 billion
 - One new project, ten total projects
 - Projects are not required by State Law to be included in CIP but are presented to provide additional information to our customers
- Six-year program expenditures estimated at \$1.2 billion
- FY'17 budget estimated at \$209 million



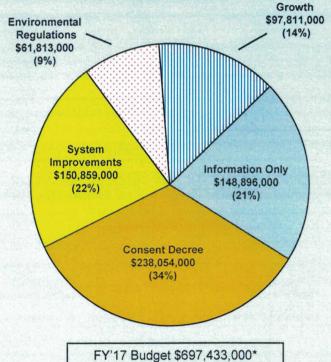




COMBINED PROGRAM MAJOR CATEGORIES



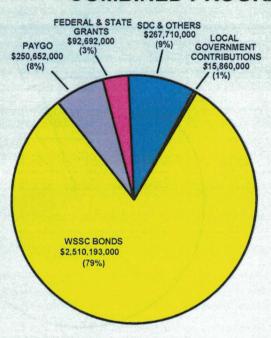
Six-Year Program Total \$3,137,107,000*

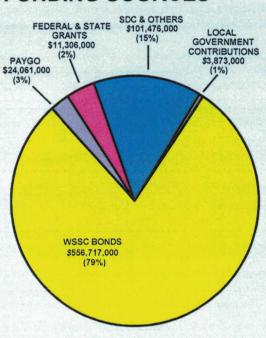


WSSC Whore Water Motters

^{*} Totals do not include Operating Funds in Information Only Projects.

COMBINED PROGRAM FUNDING SOURCES





Six-Year Program Total \$3,137,107,000*

FY'17 Budget \$697,433,000*



* Totals do not include Operating Funds in Information Only Projects.

NEW PROJECTS

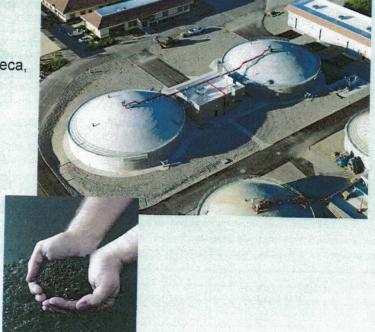
- One new project in the Information Only section of the CIP
 - Brighton Dam Operations & Maintenance Facility and Site Improvements
 (A-145.01; page 7-12) this project provides for the replacement of two existing
 facilities with a new ADA compliant 4,100 square foot facility with office space for
 14 employees. The project also includes a new parking configuration to facilitate
 visiting groups and relocation of existing fuel facilities. Green initiatives such as
 water reclamation and LEED building guidelines are also being considered in the
 design. (FY'17: \$1.4M; Bond Funded; Total Cost: \$6.5M; Information Only Project)



HIGHLIGHTED PROJECTS

<u>Piscataway WWTP Bio-Energy Project</u> (S-103.02; p.4-8)

- Construct new centralized anaerobic digestion/combined heat & power system
- Treat biosolids from Piscataway, Parkway, Seneca, and Damascus wastewater treatment plants
- Reduce biosolids volume by 50%
- Class A biosolids for beneficial re-use
- Reduce Greenhouse Gas Emissions by 15%
- Recover 2-3 megawatts of renewable energy
- Projected economic benefit of \$3.5M per year
- Preliminary design due summer 2017



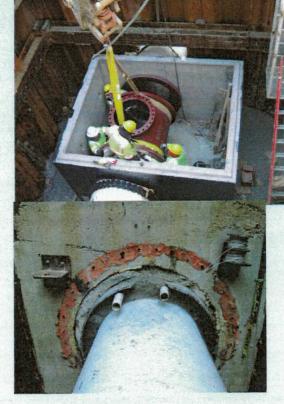


HIGHLIGHTED PROJECTS (cont.)

Broad Creek WWPS Augmentation

(S-43.02, page 6-5)

- Piscataway WWTP headworks and storage upgrade expected completion summer 2016
- Northern end of force main, and southern end of force main projects expected completion summer 2017
- Pumping station modifications design completed in November 2011
- After four years of deliberation, the National Park Service completed their Environment Assessment and released their Finding of No Significant Impacts on March 7th. Anticipated construction start summer 2016 with completion in fall 2018
- Quarterly Project Update Newsletters sent out to citizens and stakeholders





HIGHLIGHTED PROJECTS (cont.)

Western Branch Wastewater Treatment Plant

The Western Branch WWTP, located just south of Upper Marlboro, treated 20.7 mgd in FY'15

- <u>Facility Upgrade</u> (S-57.92, page 6-6) improvements required to rehabilitate aging systems and to continue to meet terms of NPDES discharge permit. Low interest State Revolving Loan funded. Construction substantially complete summer 2016
- Enhanced Nutrient Removal (S-57.93, page 6-7) improvements required to meet MDE nutrient removal
 goals. Funded through the Bay Restoration Fund ("flush"
 tax). Construction substantially complete summer 2016
- Incinerator Emissions Control (S-57.94, page 6-8) upgrades required for existing incinerators to meet US
 EPA Clean Air Act regulations for solid waste incineration.
 To bid for construction summer 2016





HIGHLIGHTED PROJECTS (cont.)

Blue Plains WWTP

The Blue Plains WWTP is owned and operated by DC Water. WSSC's share of the capital costs of the plant is approximately 46%.

- The Blue Plains WWTP treats approximately 65% of WSSC's wastewater
- The largest projects include the New Digesters, the Long-Term Control Plan tunnels, and the Enhanced Nutrient Removal projects
- At \$332 million, Blue Plains projects represent 17% of the six-year CIP program
- The FY'17 budget, at \$86.3 million, represents 18% of the budget year program



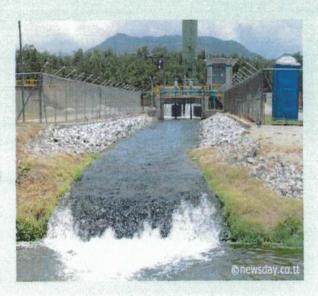


HIGHLIGHTED PROJECTS (cont.)

Enhanced Nutrient Removal

ENR projects provide for the improvements required to meet MDE's effluent permit limits and are primarily funded through the Bay Restoration Fund ("flush" tax).

- Piscataway WWTP placed in service September 2012
- Parkway WWTP placed in service May 2013
- Western Branch WWTP Substantial completion summer 2016
- Damascus WWTP placed in service January 2013
- Seneca WWTP placed in service August 2015
- Blue Plains WWTP (DC WASA / DC Water) New nitrogen reactor basin, main process train and tunnel construction currently underway. Projected in service in 2019. Total project cost \$389 million with overall State grant funding of approximately 53%.



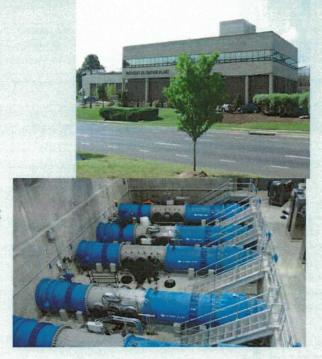


HIGHLIGHTED PROJECTS (cont.)

Patuxent Water Filtration Plant

The Patuxent plant in Laurel produced an average of 51 million gallons of water per day (mgd) in FY'15 and serves northern Prince George's County and a portion of eastern Montgomery County

- <u>Phase II Expansion</u> (W-172.05, page 3-14)
 Expansion to 72 MGD and new UV facilities.
 Currently in construction
- Raw Water Pipeline (W-172.07, page 3-15)
 New raw water pipeline currently in design. Final alignment determined. Spring 2017 construction start
- Rocky Gorge Pump Station Upgrade
 (W-172.08, page 3-16)
 Design complete. Schedule coordinated with Duckett Dam Upgrade project. Expect to go to construction Summer 2016





HIGHLIGHTED PROJECTS (cont.)

Large Valve Program

- Inspection and condition assessment of 1473 large valves (>16" diameter) over four year period – now projected for December 2016
- Over 1,000 valves inspected to date
- Minor corrections and major repairs already completed on 270 large valves
- Valves that can't be repaired are replaced and may also be relocated to improve accessibility





HIGHLIGHTED PROJECTS (cont.)

Trunk Sewer Reconstruction Program (S-170.09; page 4-11)

- Inspection and evaluation of all 24 sewer basins is complete (over 1300 miles inspected)
- Comprehensive rehabilitation of sewer pipes in Environmentally Sensitive Areas currently underway to reduce infiltration and inflow
- Replacement of pipe; in-situ relining of pipe; correction of defects; pipeline protection; and, rehabilitation of manholes
- Continued focus on Priority One work
- Consent Decree Status Update included in appendix





RECONSTRUCTION PROGRAMS

Water Reconstruction Program

	<u>F</u>	Current '16 Adopted	FY	16 Estimated	FY	Planned 17 Proposed
Main Line Design - (\$)	\$	13,328,000	\$	13,328,000	\$	11,789,000
Main Line & House Connection Construction - Miles		57 miles		57 miles		57 miles
Main Line & House Connection Construction - (\$)	\$	80,473,000	\$	80,473,000	\$	80,473,000
Cathodic Protection	\$	1,322,000	\$	1,000,000	\$	1,429,000
Large Water Service Design - (\$)	\$	2,121,000	\$	2,121,000	\$	2,121,000
Large Water Service Construction - Meters		30 meters		30 meters		30 meters
Large Water Service Construction - (\$)	\$	4,414,000	\$	4,414,000	\$	4,414,000
Total Water Reconstruction	\$	101,658,000	\$	101,336,000	\$	100,226,000



RECONSTRUCTION PROGRAMS

Sewer Reconstruction Program

Exception of the second	<u>F</u>)	Current C16 Adopted	FY	16 Estimated	FY	Planned '17 Proposed
Main and Lateral Line Design - (\$)	\$	1,074,000	\$	2,234,000	\$	1,074,000
Main Line Residential Construction - Miles Main Line Residential Construction - (\$)	\$	2 miles 3,607,000	\$	4 miles 7,006,000	\$	17 miles 24,634,000
Lateral Line & House Connection Construction - Miles Lateral Line & House Connection Construction - (\$)	\$	6 miles 24,103,000	\$	6 miles 23,400,000	\$	6 miles 24,103,000
Sewer House Connection Renewal - (\$)	\$	400 renewals 4,000,000	\$	400 renewals 4,000,000	\$	400 renewals 4,000,000
Emergency Repairs (\$)	\$	2,000,000	\$	2,000,000	\$	2,000,000
Total Sewer Reconstruction	\$	34,784,000	\$	38,640,000	\$	55,811,000



Note: The cost increase is due to increasing the main line residential construction program from 4 miles to 17 miles per year.



Sanitary Sewer Overflow (SSO) Consent Decree Update

Commissioner Meeting January 20, 2016

Agenda

- Schedule Update
- Costs
- Areas of Concern
- Q & A Session



Schedule Update Roads

- 6 IDIQ Contracts
- 135 Construction Task Orders (CTO)
- 3 Prime Contractors
- 131.4 sewer miles awarded for construction
- 121.73 sewer miles rehabilitated as of December 21, 2015



Schedule Update Roads (Basin Level Update)

	THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	THE PERSON NAMED IN	WHEN SOME STREET, STRE
Sligo Creek	100%	\rightarrow	100%
Cabin John	98%	\rightarrow	98%
Paint Branch	100%	\rightarrow	100%
Lower Anacostia	97%	\rightarrow	97%
Beaverdam	96%	\rightarrow	96%
Seneca Creek	96%	\rightarrow	96%
Dulles Interceptor	100%	\rightarrow	100%
Muddy Branch	100%	\rightarrow	100%
Broad Creek	99%	\rightarrow	99%
Piscataway	99%	\rightarrow	99%
Parkway	87%	\rightarrow	94%
A PLACE TO A COLOR SERVICIO DE LA COLOR DE	THE RESERVE AND PROPERTY OF THE PARTY OF THE	DESCRIPTION OF THE PARTY OF THE	Value and the state of the stat

Western Branch	100%	\rightarrow	100%
Mattawoman	100%	\rightarrow	100%
Northwest Branch	99%	\rightarrow	99%
Horsepen Branch	100%	\rightarrow	100%
Northeast Branch	79%	\rightarrow	79%
Oxon Run	97%	\rightarrow	97%
Rock Creek	96%	\rightarrow	96%
Rock Run	100%	\rightarrow	100%
Little Falls	92%	\rightarrow	96%
Watts Branch	92%	\rightarrow	96%
	Control of the Contro	The second second	THE RESERVE OF THE PARTY OF THE

Note:

No Roads work in Patuxent North basin



Schedule Update Environmentally Sensitive Areas (ESA)

- 16 IDIQ Contracts
- 10 ESA Contractors
- ESA includes a total of 233 CTOs
 - 165 (70.8%) CTOs issued for construction
- ESA includes a total of 156.38 miles
 - 108.04 (69.1%) miles awarded for construction
 - 57.67 miles rehabilitated as of December 21, 2015



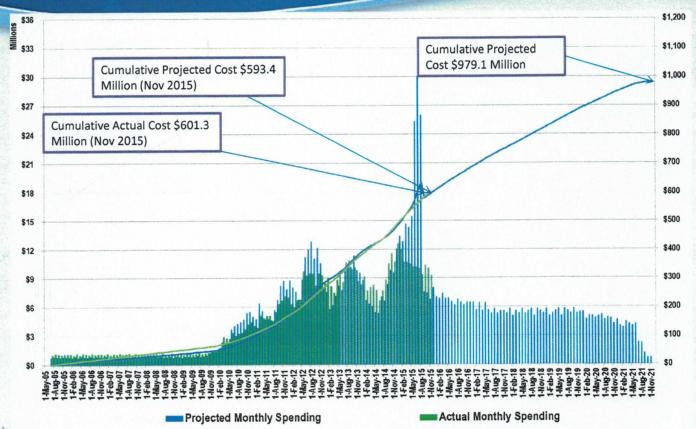
Schedule Update ESA (Basin Level)

Rock Run	1%	\rightarrow	6%	Muddy Branch	36%	\rightarrow	45%
Paint Branch	5%	\rightarrow	34%	Western Branch	0%	\rightarrow	1%
Beaverdam	47%	\rightarrow	63%	Seneca Creek	31%	\rightarrow	49%
Piscataway	5%	\rightarrow	7%	Watts Branch	2%	\rightarrow	16%
Rock Creek	33%	\rightarrow	48%	Parkway	3%	\rightarrow	4%
Sligo Creek	18%	\rightarrow	37%	Oxon Run	1%	\rightarrow	2%
Cabin John	40%	\rightarrow	44%	Horsepen Branch	75%	\rightarrow	80%
Northeast Branch	11%	\rightarrow	16%	Dulles Interceptor	50%	\rightarrow	50%
Lower Anacostia	50%	\rightarrow	67%	Mattawoman	100%	\rightarrow	100%
Northwest Branch	2%	\rightarrow	11%	Monocacy	0%	\rightarrow	0%
Broad Creek	78%	\rightarrow	79%	Patuxent North	0%	\rightarrow	0%
Little Falls	2%	\rightarrow	10%	Patuxent Center	100%	\rightarrow	100%



Consent Decree Costs

Article 6 – Design and Construction Costs (Oct 2015)





Consent Decree Costs

Description	Projected Total Cost to Date	Actual Cost to Date	
Consent Decree (All Articles)	\$1,480,467,330.87	\$864,157,810.43	
Article 06	\$1,030,365,211.26	\$625,263,998.61	
All other Articles Total Cost	\$447,830,944.61	\$236,867,998.61	
General Cost	\$38,242,843.00	\$17,972,072.00	
Article 02	\$88,748,679.77	\$52,266,304.77	
Article 03	\$44,438,066.84	\$22,546,178.84	
Article 04	\$33,532,801.00	\$15,719,350.00	
Article 05	\$2,708,764.00	\$2,708,764.00	
Article 07	\$11,298,130.00	\$44,151.00	
Article 10	\$189,891,319.00	\$96,350,536.00	
Article 11	\$34,052,744.00	\$24,217,545.00	
Supplemental Environmental Projects	\$5,043,097.00	\$5,043,097.00	
Stipulated Penalties	\$2,145,675.00	\$2,026,094.87	



.

Rehabilitation Phase Areas of Concern

- Rights of Entry (ROE)
- National Park Service (NPS)
- Stream Stabilization Permits
- Consent Decree Modification



Areas of Concern Rights of Entry

- Total outstanding ROEs have decreased from 127 to 120 since October 2015
- 17 ROEs requiring involvement from the General Counsel's Office and Land Unit
- Per the guidance of the Commissioners, WSSC is continuing the policy to contact local County Governments for assistance with securing difficult ROEs prior to implementing condemnation
 - To date, WSSC sent letters on 10 ROEs



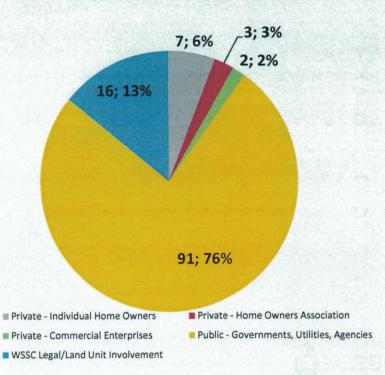
Areas of Concern Rights of Entry

Outstanding vs Received ROE's

119; 4% 3278; 96% Total Outstanding Total Received

wssc

Breakdown of Outstanding ROE's



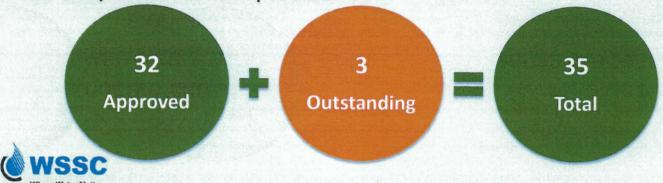
Areas of Concern National Park Service (NPS)

- WSSC continues to incur delays due to delays in acquiring NPS permits
- WSSC met with NPS on 9/25/2015 to discuss the possibility of approving Broad Creek projects under Categorical Exclusion
- WSSC responded to additional questions asked by NPS on 11/30/2015 in relation to approving Broad Creek projects under Categorical Exclusion
- WSSC received a letter in response to the meeting on 9/2/2015:
 WSSC to pay \$510,000 in cost recovery to NPS for the first year,
 NPS proposed Environmental Impact Statement (EIS) pathway for WSSC's work in Northeast basin (Greenbelt Parks)
- WSSC to respond back to NPS on the cost recovery



Areas of Concern Stream Permits (M-NCPPC)

- 35 Stream stabilization permits in Montgomery County, Maryland w/ M-NCPPC (Parks)
- 32 approved stream stabilization permits as of September 2015
- 3 permits outstanding
- Met with Parks on October 19, 2015 to discuss procedures and update current processes



Areas of Concern Consent Decree Extension

- WSSC has negotiated the terms of a Second Amendment to the Consent Decree with EPA, DOJ and MDE that provides an extension for work delayed by the permitting processes in ESAs
- The extension period is for up to six (6) years, with mandatory progress milestones during the extension period
- Extension period for projects requiring NPS permits runs for up to two (2) years from receipt of permit
- The Second Amendment was lodged with U.S. District Court for approval on November 30, 2015; the public comment period expired on January 5, 2016.
- The parties to the Second Amendment await Court review and approval





Questions & Answers