



## DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

### Board of Directors

*Meeting of the  
Environmental Quality and Sewerage Services and  
Water Quality and Water Services Committee*

*5000 Overlook Avenue, SW, Room 407  
Thursday, January 15, 2015  
10:15 a.m.*

#### 1. Call to Order

Howard Gibbs  
Acting Chairperson

#### 10:15 a.m. II. FY 2015 – FY 2024 Capital Improvement Program (CIP)

Len Benson

#### 11:05 a.m. III. Board Member Questions and Follow-Up Proposed CIP and Operating Budgets

Len Benson  
Mark Kim

#### 11:10 a.m. IV. [Action Items](#)

1. [Recommendation for Board Action – Project Lifetime Budget](#)
2. [Recommendation for Board Action – Disbursements](#)

#### 11:15 a.m. V. Executive Session\*

##### Adjournment

Howard Gibbs  
Acting Chairperson

\* The DC Water Board of Directors may go into executive session at this meeting pursuant to the District of Columbia Open Meetings Act of 2010, if such action is approved by a majority vote of the Board members who constitute a quorum to discuss: matters prohibited from public disclosure pursuant to a court order or law under D.C. Official Code § 2-575(b)(1); contract negotiations under D.C. Official Code § 2-575(b)(1); legal, confidential or privileged matters under D.C. Official Code § 2-575(b)(4); collective bargaining negotiations under D.C. Official Code § 2-575(b)(5); facility security under D.C. Official Code § 2-575(b)(8); disciplinary matters under D.C. Official Code § 2-575(b)(9); personnel matters under D.C. Official Code § 2-575(b)(10); proprietary matters under D.C. Official Code § 2-575(b)(11); decision in an adjudication action under D.C. Official Code § 2-575(b)(13); civil or criminal matters where disclosure to the public may harm the investigation under D.C. Official Code § 2-575(b)(14), and other matters provided in the Act.



**JOINT MEETING OF THE  
ENVIRONMENTAL QUALITY AND SEWERAGE  
SERVICES COMMITTEE**

*COMMITTEE CHAIR – OBIORA “BO” MENKITI*

**WATER QUALITY AND WATER SERVICES COMMITTEE**

*COMMITTEE CHAIR – RACHNA BUTANI*

***JANUARY 15, 2015***

**CAPITAL IMPROVEMENT PROGRAM**



### Provide a summary of:

- Lifetime Budget, Current and Proposed
- Disbursements Plan, Current and Proposed
- Issues/Sensitivities



## Lifetime Budget – Capital Projects

- Project Lifetime Budget is the full budgeted amount for projects which are active within the ten-year budget period
- Lifetime budgets include amounts already expended and amounts anticipated to be expended to complete the project and project contingencies

	Capital Projects*
Approved Lifetime Budget (FY 2014-FY 2023)	\$8.883B
Proposed Lifetime Budget (FY 2015-FY 2024)	\$9.226B
Lifetime Budget Increase	\$343M

**Increase of \$343M driven by**

- Dropped Projects (\$358.0M)
- New Projects Added \$404.3M
- Project Changes \$296.7M

- \$175M in FY 2014 closed projects will be dropped from next year’s FY 2016 – FY 2025 CIP

*\*Excludes lifetime budgets for Automated Meter Reading, Washington Aqueduct, and Capital Equipment*



## Lifetime Budgets – New Projects

Significant Variances > \$10M and projects of note

<u>Wastewater Treatment:</u>	<u>Budget</u>	<u>Start Year</u>
PF – Chemical System/Building Upgrades	\$ 22.5M	2015
OH – Plantwide Demolition	\$ 11.1M	2017
OZ – Grit Chambers 1& 2 Upgrades	\$ 11.0M	2015
 <u>Sewer System (Sanitary, Storm, CSO)</u>		
HH – New Fleet Management Facility	\$ 16.5M	2016
O4 – Southwest Interceptor Inspection & Rehab	\$ 4.5M	2020
NZ – Floatable Debris Dock Replacement	\$ 1.0M	2015
Continuation of sewer system projects, FY24	\$ 55.9M	2024
 <u>Water System</u>		
LB – Water Program Mgt. Services 2G	\$ 35.5M	2024
Continuation of water system projects, FY24	\$150.2M	2024



## Lifetime Budgets – Project Changes

Significant Variances > \$10M listed

<u>Wastewater Treatment:</u>	<u>Budget Change</u>	<u>New Funding Start</u>
TZ – 504I6 – Elec Power Sys – Switch Gear	\$27.6M	2015
IY – Effluent Filter Upgrade	\$27.0M	2016
FS – Div D Bolling Overflow and Diversion	\$11.7M	2015
XA – New Digestion Facilities	\$10.8M	2015
<u>DC Clean Rivers</u>		
CY – Anacostia LTCP Projects	\$96.2M	2015
<u>Sewer System (Sanitary, Storm, CSO)</u>		
FQ – Main & O St. PS Intermediate Upgrade	\$16.8M	2017
IL – Creek Bed Sewer Rehabilitation 2	\$17.4M	2015
FY – Rehab Upstream Rock Creek Main Interceptor	\$13.6M	2015
G5 – Sewer Rehab Near Creek Beds	\$13.1M	2015
<u>Water System</u>		
MA – St. Elizabeth Water Tank	\$14.3M	2015



## Disbursements Plan by Service Area

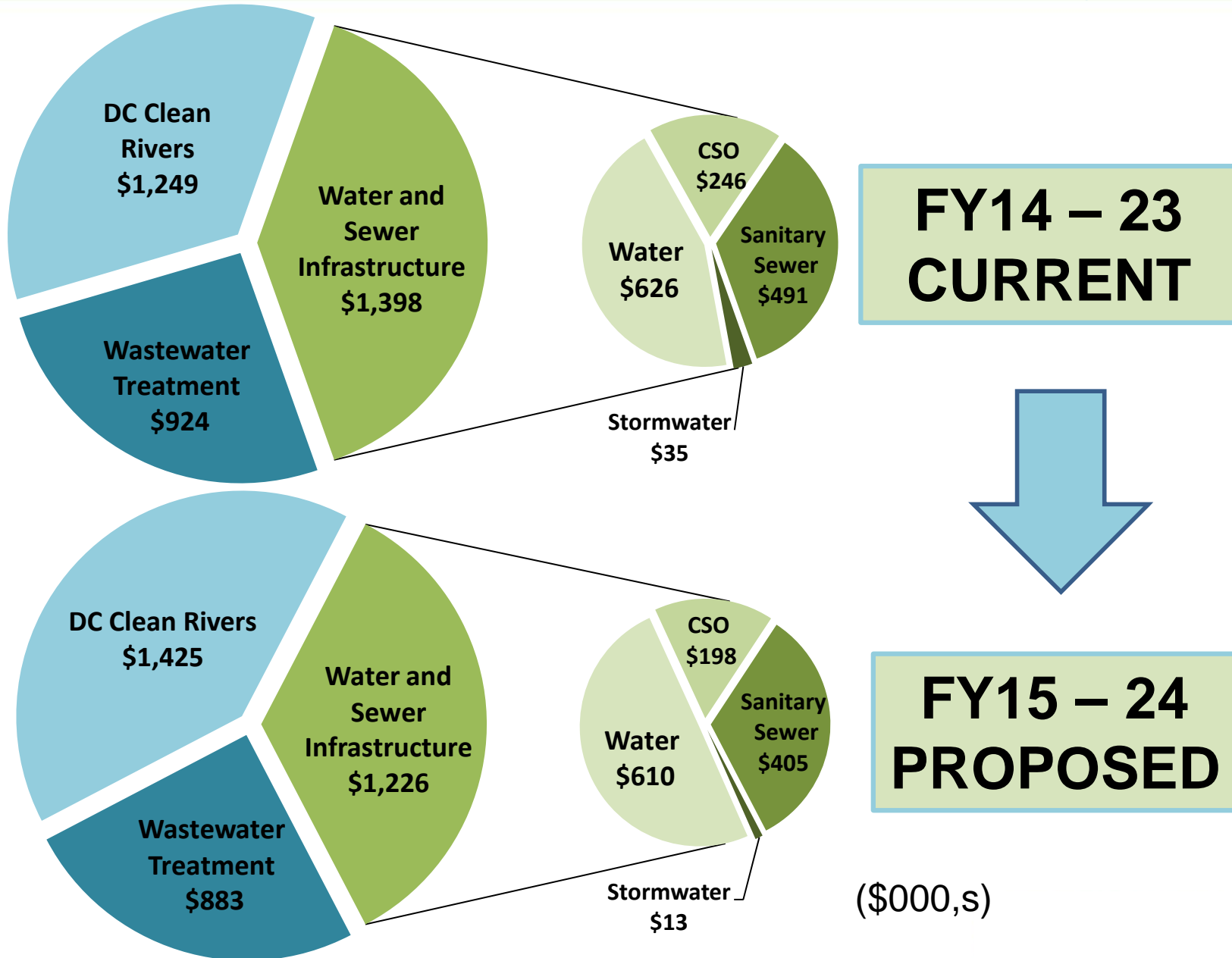
Service Area (\$000's)	FY 2015 Revised	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total
		Proposed									
Wastewater Treatment	206,260	149,375	121,268	110,405	62,461	64,267	52,006	50,750	37,094	29,285	883,171
Sanitary Sewer	40,258	42,175	51,076	42,956	39,711	44,960	25,896	33,524	45,712	39,116	405,384
Combined Sewer Overflow	271,101	238,703	159,531	129,091	165,594	176,571	136,958	115,203	139,437	91,442	1,623,631
Stormwater	2,559	1,178	1,726	1,848	760	772	691	1,115	970	1,270	12,889
Water	65,006	67,546	58,968	50,862	48,795	61,249	68,201	61,153	59,828	68,645	610,250
<b>Engineering Managed</b>	<b>585,183</b>	<b>498,977</b>	<b>392,570</b>	<b>335,162</b>	<b>317,321</b>	<b>347,818</b>	<b>283,752</b>	<b>261,745</b>	<b>283,041</b>	<b>229,758</b>	<b>3,535,326</b>
Total AMR / Meter / CIS	7,900	14,389	14,707	11,345	6,672	1,000	500	500	500	500	58,013
Washington Aqueduct	10,000	10,864	10,850	10,936	11,060	11,045	11,226	11,212	11,081	10,842	109,116
Capital Equipment	22,191	24,810	24,018	15,683	14,282	9,058	9,058	8,058	7,433	7,017	141,608
<b>Sub-Total</b>	<b>40,091</b>	<b>50,063</b>	<b>49,575</b>	<b>37,964</b>	<b>32,014</b>	<b>21,103</b>	<b>20,784</b>	<b>19,770</b>	<b>19,014</b>	<b>18,359</b>	<b>308,737</b>
<b>Total CIP</b>	<b>625,274</b>	<b>549,040</b>	<b>442,145</b>	<b>373,126</b>	<b>349,335</b>	<b>368,921</b>	<b>304,536</b>	<b>281,515</b>	<b>302,055</b>	<b>248,117</b>	<b>3,844,063</b>

Prior Board Approved CIP	628,779	522,921	420,070	402,945	329,994	253,022	235,898	229,586	269,603	-
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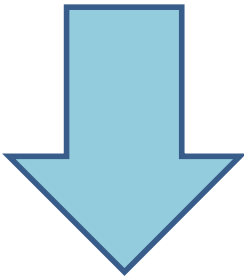
Increase/(Decrease)	(3,505)	26,119	22,075	(29,819)	19,341	115,899	68,638	51,929	32,452	248,117
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# Disbursements Plan by Service Area Capital Projects Only



**FY14 – 23  
CURRENT**



**FY15 – 24  
PROPOSED**

(\$000,s)





# Prioritization of Spending



(\$000's)

	1A		2A	2B	2C	2D	3A		3B	
	Mandates		Health & Safety	Board Policy	Potential Failure	High Profile / Good Neighbor	Good Engineering Practices / High Payback	Good Engineering Practices / Low Payback		
	Agreements, Regulatory standards, Court orders, Issues and Permits requirements, Stipulated Agreements, Etc.		Required to address Public Safety	Undertaken as a result of the Board's commitment to outside agencies	Related to Facilities in danger of failing, or critical to meeting permit requirements	Address Public concerns	Need to fulfill Mission and upgrade Facilities	Lower priority Projects		<b>Total</b>
<b>FY 2015</b>	239,582	38%	11,385	94,118	34,423	2,666	217,535	35%	25,562	<b>\$625,274</b>
<b>FY 2016</b>	264,579	48%	13,570	35,430	36,756	3,615	155,491	28%	39,599	<b>\$549,040</b>
<b>FY 2017</b>	192,510	44%	16,382	4,192	60,389	8,971	113,124	26%	46,575	<b>\$442,145</b>
<b>FY 2018</b>	150,521	40%	15,450	1,581	53,947	6,916	112,163	30%	32,549	<b>\$373,126</b>
<b>FY 2019</b>	154,297	44%	6,580	1,842	44,199	228	107,483	31%	34,706	<b>\$349,335</b>
<b>FY 2020</b>	175,428	48%	9,992	2,057	51,705	-	96,482	26%	33,257	<b>\$368,921</b>
<b>FY 2021</b>	133,243	44%	8,361	2,314	16,442	-	104,128	34%	40,048	<b>\$304,536</b>
<b>FY 2022</b>	108,729	39%	771	1,749	16,884	-	115,081	41%	38,301	<b>\$281,515</b>
<b>FY 2023</b>	130,748	43%	43	-	23,849	-	125,530	42%	21,885	<b>\$302,055</b>
<b>FY 2024</b>	96,839	39%	45	-	20,960	-	117,249	47%	13,025	<b>\$248,117</b>
<b>Total</b>	<b>1,646,476</b>	<b>43%</b>	<b>82,578</b>	<b>143,283</b>	<b>359,553</b>	<b>22,397</b>	<b>1,264,266</b>	<b>33%</b>	<b>325,507</b>	<b>3,844,063</b>
<b>% of Total</b>	<b>42.8%</b>		<b>2.1%</b>	<b>3.7%</b>	<b>9.4%</b>	<b>0.6%</b>	<b>32.9%</b>		<b>8.5%</b>	



## CIP Issues / Sensitivities

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- 💧 MS4 Regulations/Policy - *Not in plan. \$'s unknown*
- 💧 DC Clean Rivers Green Infrastructure Consent Decree (GI CD) Modification – Hybrid GI + Gray for Potomac River and Rock Creek Basin plus schedule extension
- 💧 DC Clean Rivers Potomac River and Rock Creek Basin costs escalation (current CIP includes cost estimates not updated since 2002; also does not include risk allowances for Potomac or Rock Creek)
- 💧 Regulatory Requirements: Blue Plains NPDES Permit renewal 2015 & Chesapeake TMDL mid term review 2018
- 💧 Pepco DC Power Line Undergrounding (DC PLUG)
- 💧 Blue Plains Odor Control
- 💧 FY15 Facility Plan updates likely to identify additional needs



## Below The Line Projects

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### Blue Plains – for example:

- Full Plant Deammonification - \$45M
- Various Plantwide Rehabilitation Projects - \$41M

### Planned Sewer Projects - \$267M – for example:

- Rehab NE Boundary Sewer - \$45M
- Tiber Creek Sewer Lining Ph 1 - \$40M
- Rehab of Influent Sewers - \$141M
- Rehab of Anacostia Force Main - \$16M

### Planned Water Projects - \$8M – for example:

- 1 MG 4th High East Storage Tank

(\$'s - Lifetime Budgets)





Questions?

**FINANCE AND BUDGET COMMITTEE  
FISCAL YEAR 2015 – 2024 CAPITAL IMPROVEMENT PROGRAM  
ACTION ITEM**

**ACTION ITEM 3C: FY 2015 – FY 2024 Capital Improvement Program  
(Lifetime & Cash Disbursements Basis)**

DC Water presents its ten-year capital improvement program on two different bases:

- a. **Project lifetime budgets** – Total project lifetime budgets reflect the total costs of each active project, as well as projects that are projected to begin over the ten-year planning period. These costs include historical and projected spending as well as project contingencies. As shown in Attachment A-1, the Board of Directors will be asked to approve total project lifetime budgets of \$10.1 billion.
- b. **Disbursements-based budget** - The disbursements-based capital improvement program plan is utilized to forecast the timing and amount of capital financings, which are the primary basis for projected retail rate increases. As shown in Attachment A-2, the Board of Directors will be asked to approve a cash disbursements-based CIP of \$3.8 billion.

FY 2015 - FY 2024 Capital Improvement Plan

Project Lifetime Budgets by Service Area / Program (\$ 000's)

	FY 2015 Approved	FY 2015 Revised / FY 2016 Proposed	Variance
<b>WASTEWATER TREATMENT</b>			
Liquid Processing Projects	5831,760	5864,232	\$32,472
Plantwide Projects	446,508	470,153	23,645
Solids Processing Projects	793,044	709,416	(83,628)
Enhanced Nitrogen Removal Facilities	1,024,481	1,042,636	18,155
<b>Subtotal</b>	<b>3,095,793</b>	<b>3,086,438</b>	<b>(9,355)</b>
<b>SANITARY SEWER</b>			
Sanitary Collection Sewers	212,995	227,541	14,546
Sanitary On-Going Projects	200,741	202,500	1,759
Sanitary Pumping Facilities	44,193	34,096	(10,097)
Sanitary Sewer Projects Program Management	111,214	112,576	1,362
Sanitary Interceptor/Trunk Force Sewers	585,475	706,450	120,975
<b>Subtotal</b>	<b>1,154,618</b>	<b>1,283,165</b>	<b>128,547</b>
<b>COMBINED SEWER OVERFLOW</b>			
CSO Program Management	68,464	74,094	5,630
Combined Sewer Projects: Nine Minimum Controls	549,625	523,524	(26,101)
D.C. Clean Rivers Project <i>(aka Long-Term Control Plan)</i>			
Anacostia Tunnel	1,806,541	1,902,752	96,211
Potomac Tunnel	383,700	410,394	26,694
Rock Creek Tunnel	65,342	76,442	11,100
D.C. Clean Rivers Green Infrastructures	40,000	2,206	(37,794)
<b>Subtotal</b>	<b>2,913,672</b>	<b>2,989,411</b>	<b>75,739</b>
<b>STORMWATER</b>			
Stormwater Extensions/Local Drainage	22,829	22,832	3
Stormwater On-Going Program	12,988	13,173	185
Stormwater Pumping Facilities	25,000	25,000	-
DDOT Stormwater Program	3,237	3,237	-
Stormwater Projects Program Management	12,051	11,979	(72)
Stormwater Trunk/Force Sewers	15,341	15,597	256
<b>Subtotal</b>	<b>91,446</b>	<b>91,818</b>	<b>372</b>
<b>WATER</b>			
Water Distribution Systems	940,902	1,067,765	126,863
Water Lead Program	189,040	189,040	-
Water On-Going Projects	140,871	144,292	3,421
Water Pumping Facilities	167,217	167,401	184
DDOT Water Projects	38,775	33,867	(4,908)
Water Storage Facilities	76,358	100,715	24,357
Water Projects Program Management	74,781	72,173	(2,608)
<b>Subtotal</b>	<b>1,627,944</b>	<b>1,775,253</b>	<b>147,309</b>
<b>Capital Projects</b>	<b>8,883,473</b>	<b>9,226,085</b>	<b>342,612</b>
<b>AUTOMATED METER READING/ CUSTOMER INFORMATION SYSTEM</b>			
	50,181	100,921	50,740
<b>WASHINGTON AQUEDUCT</b>			
	286,358	296,972	10,614
<b>CAPITAL EQUIPMENT</b>			
	139,436	141,608	2,172
<b>Subtotal</b>	<b>475,975</b>	<b>539,501</b>	<b>63,526</b>
<b>LABOR</b>			
	-	334,755	334,755
<b>Total DC Water CIP Lifetime</b>	<b>\$9,359,448</b>	<b>\$10,100,341</b>	<b>\$740,893</b>



**FY 2015 – FY 2024 PROJECTED CAPITAL IMPROVEMENT PLAN (CIP) – DISBURSEMENTS BASIS (\$ in 000's)**

	FY 2015 Revised	FY 2016 Proposed	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total
<b>WASTEWATER TREATMENT</b>											
Liquid Processing Projects	\$ 20,566	\$ 14,467	\$ 28,586	\$ 35,332	\$ 35,529	\$ 16,825	\$ 11,626	\$ 15,860	\$ 6,994	\$ 3,113	\$ 188,899
Plantwide Projects	18,322	11,376	12,271	12,822	16,132	38,518	25,488	30,882	28,372	20,665	214,847
Solids Processing Projects	58,333	8,053	14,845	9,791	4,807	4,918	13,930	3,414	503	2	118,596
Enhanced Nitrogen Removal Facilities	109,039	115,478	65,566	52,460	5,993	4,007	962	595	1,225	5,505	360,830
<b>Subtotal</b>	<b>206,260</b>	<b>149,375</b>	<b>121,268</b>	<b>110,405</b>	<b>62,461</b>	<b>64,267</b>	<b>52,006</b>	<b>50,750</b>	<b>37,094</b>	<b>29,285</b>	<b>883,171</b>
<b>SANITARY SEWER</b>											
Sanitary Collection Sewers	5,932	7,989	6,892	866	461	2,089	736	7,202	10,735	11,058	53,960
Sanitary On-Going Projects	8,256	7,133	6,516	5,887	6,816	5,455	7,462	7,109	13,243	10,380	78,257
Sanitary Pumping Facilities	1,377	973	612	282	473	2,429	70	-	-	-	6,217
Sanitary Sewer Projects Program Management	10,105	6,486	5,567	7,045	5,531	4,068	2,707	4,577	5,337	4,611	56,032
Sanitary Interceptor/Trunk Force Sewers	14,587	19,596	31,489	28,878	26,429	30,919	14,921	14,636	16,396	13,068	210,918
<b>Subtotal</b>	<b>40,258</b>	<b>42,175</b>	<b>51,076</b>	<b>42,956</b>	<b>39,711</b>	<b>44,960</b>	<b>25,896</b>	<b>33,524</b>	<b>45,712</b>	<b>39,116</b>	<b>405,384</b>
<b>COMBINED SEWER OVERFLOW</b>											
CSO Program Management	4,423	2,104	3,219	3,456	2,446	2,264	1,772	2,799	3,060	2,195	27,739
Combined Sewer Projects	10,769	30,575	31,066	27,400	20,248	10,490	10,858	11,464	12,778	4,492	170,140
D.C. Clean Rivers Project	255,909	206,024	125,245	98,235	142,900	163,816	124,328	100,940	123,599	84,755	1,425,752
<b>Subtotal</b>	<b>271,101</b>	<b>238,703</b>	<b>159,531</b>	<b>129,091</b>	<b>165,594</b>	<b>176,571</b>	<b>136,958</b>	<b>115,203</b>	<b>139,437</b>	<b>91,442</b>	<b>1,623,631</b>
<b>STORMWATER</b>											
Stormwater Local Drainage	28	75	182	92	27	78	27	261	111	382	1,263
Stormwater On-Going Program	489	691	449	478	532	546	585	736	721	774	6,000
Stormwater Pumping Facilities	-	128	781	912	-	-	-	-	-	-	1,821
DDOT Stormwater Program	27	30	27	21	20	2	-	-	-	-	129
Stormwater Research and Program Management	518	179	235	254	180	145	79	118	138	114	1,959
Stormwater Trunk/Force Sewers	1,497	76	53	91	-	-	-	-	-	-	1,717
<b>Subtotal</b>	<b>2,559</b>	<b>1,178</b>	<b>1,726</b>	<b>1,848</b>	<b>760</b>	<b>772</b>	<b>691</b>	<b>1,115</b>	<b>970</b>	<b>1,270</b>	<b>12,889</b>
<b>WATER</b>											
Water Distribution Systems	33,291	37,486	27,496	26,297	29,433	39,700	45,075	43,354	47,700	56,356	386,188
Water Lead Program	2,350	1,304	955	1,037	1,796	2,055	2,314	1,749	-	-	13,560
Water On-Going Projects	7,070	7,383	6,793	5,475	5,859	5,541	5,823	5,631	6,708	7,472	63,754
Water Pumping Facilities	6,074	5,305	5,406	3,260	4,529	6,794	165	87	-	-	31,621
DDOT Water Projects	2,121	1,394	858	84	-	-	-	-	-	-	4,457
Water Storage Facilities	6,323	9,028	11,937	9,150	1,846	3,336	8,749	4,003	1,345	567	56,282
Water Projects Program Management	7,777	5,645	5,523	5,559	5,332	3,823	6,074	6,329	4,076	4,249	54,388
<b>Subtotal</b>	<b>65,006</b>	<b>67,546</b>	<b>58,968</b>	<b>50,862</b>	<b>48,795</b>	<b>61,249</b>	<b>68,201</b>	<b>61,153</b>	<b>59,828</b>	<b>68,645</b>	<b>610,250</b>
<b>Capital Projects</b>	<b>585,183</b>	<b>498,977</b>	<b>392,570</b>	<b>335,162</b>	<b>317,321</b>	<b>347,818</b>	<b>283,752</b>	<b>261,745</b>	<b>283,041</b>	<b>229,758</b>	<b>3,535,326</b>
<b>AMR/CIS</b>											
Automated Meter Reading	5,314	7,384	6,707	6,345	5,672	1,000	500	500	500	500	34,422
Customer Information System	2,586	7,005	8,000	5,000	1,000	-	-	-	-	-	23,591
<b>Subtotal</b>	<b>7,900</b>	<b>14,389</b>	<b>14,707</b>	<b>11,345</b>	<b>6,672</b>	<b>1,000</b>	<b>500</b>	<b>500</b>	<b>500</b>	<b>500</b>	<b>58,013</b>
<b>WASHINGTON AQUEDUCT</b>											
	10,000	10,864	10,850	10,936	11,060	11,045	11,226	11,212	11,081	10,842	109,116
<b>CAPITAL EQUIPMENT</b>											
	22,191	24,810	24,018	15,683	14,282	9,058	9,058	8,058	7,433	7,017	141,608
<b>Subtotal</b>	<b>40,091</b>	<b>50,063</b>	<b>49,575</b>	<b>37,964</b>	<b>32,014</b>	<b>21,103</b>	<b>20,784</b>	<b>19,770</b>	<b>19,014</b>	<b>18,359</b>	<b>308,737</b>
<b>Total FY 2015 - FY 2024</b>	<b>\$ 625,274</b>	<b>\$ 549,040</b>	<b>\$ 442,145</b>	<b>\$ 373,126</b>	<b>\$ 349,335</b>	<b>\$ 368,921</b>	<b>\$ 304,536</b>	<b>\$ 281,515</b>	<b>\$ 302,055</b>	<b>\$ 248,117</b>	<b>\$ 3,844,063</b>