

**DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY**

Board of Directors

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

*5000 Overlook Avenue, SW, Room 407
Thursday, November 19, 2015
10:00 a.m.*

I. Call to Order

Racha Butani,
Chairperson
James Patteson,
Chairperson

10:00 a.m. II. FY 2016 – FY 2025 Capital Improvement Program (CIP)

Len Benson

10:30 a.m. III. Asset Management Program Update

Liliana Maldonado
Craig Fricke

10:55 a.m. IV. Action Items

1. Recommendation for Board Action – Project Lifetime Budget
2. Recommendation for Board Action – Disbursements

V. *Executive Session

11:00 a.m. VI. Adjournment

Racha Butani,
Chairperson
James Patteson,
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.

Follow-up Items from Prior Meetings:

1. Develop progress updates to the committee for the DC ART Supporting Documents. (JC June 2015) *{to be addressed at an Executive Session of the Joint Committee Meeting planned for December 2015}*
2. Provide clarification on evaluation of the merits and benefits of a non-compete provision pertaining to the DC Water ART pilot.(JC June 2015) *{to be addressed at an Executive Session of the Joint Committee Meeting planned for December 2015}*
3. Provide periodic reporting on the in-house transition status of the Asset Management Program (AMP). (JC June 2015) {agenda item for this meeting}
4. Determine what, if any, additional assets (e.g. IT) might be appropriate for consideration as part of the efforts of the AMP. (JC June 2015) {agenda item for this meeting}
5. Provide metrics for the AM program (JC May 2015) {agenda item for this meeting}



JOINT MEETING OF THE ENVIRONMENTAL QUALITY AND SEWERAGE SERVICES COMMITTEE

COMMITTEE CHAIR – JAMES PATTESON

WATER QUALITY AND WATER SERVICES COMMITTEE

COMMITTEE CHAIR – RACHNA BUTANI

CAPITAL IMPROVEMENT PROGRAM November 19, 2015

**ACTION ITEM : FY 2016 – FY 2025 Capital Improvement Program
(Lifetime & Cash Disbursements Basis)**

District of Columbia Water and Sewer Authority



Blue Plains Advanced Wastewater Treatment Plant



Provide a Summary of:

- I. Lifetime Budgets
- II. Disbursements Budget
- III. Unfunded Projects
- IV. CIP Issues/Sensitivities
- V. Committee Action Recommendation
 - a) 10-Year Disbursement Plan
 - b) Lifetime Budget



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 2015-FY 2024)	\$9.226B
Proposed Lifetime Budget (FY 2016-FY 2025)	\$9.743B
Lifetime Budget Increase	\$517M

Increase of \$517M driven by

- Dropped Projects (\$148.9M)
- FY15 Deferred Projects (\$237.2M)
- New Projects Added \$270.8M
- Project Changes \$632.3M

- \$157M in FY 2015 closed projects will be dropped from next year's FY 2017 – FY 2026 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>
OM – Plantwide Hot Water System/Loop Rehab	\$ 25.8M	2016
B9 – Large Motor Starting Migration	\$ 8.0M	2017
 <u>Sewer System (Sanitary, Storm, CSO)</u>		
PJ – Re-activation of Anacostia Force Main	\$ 20.0M	2016
IQ – Slash Run Sewer Rehab.	\$ 10.0M	2021
IR – Anacostia Main Interceptor Rehab.	\$ 15.0M	2022
PV – Broad Branch Trunk Sewer	\$ 13.0M	2024
Continuation of sewer system projects, FY25	\$ 34.8M	2025
 <u>Water System</u>		
HI – Bryant Street Pump Station Phase III	\$ 5.9M	2020
OR – Fort Reno Pump Station Improvements Phase II	\$ 6.4M	2021
Continuation of water system projects, FY24	\$ 62.9M	2024



Lifetime Budgets – Project Changes

Significant Variances > \$10M listed and variances of note

<u>Wastewater Treatment:</u>	<u>Budget Change</u>	<u>New Funding Start</u>
IY – Effluent Filter Upgrade	\$ 8.0M	2019
J2 – Replace/Upgrade Primary Treatment Mechanism	\$ 8.0M	2019
 <u>DC Clean Rivers</u>		
CZ – Potomac LTCP Projects	\$203.7M	2016
DZ – Rock Creek CSS LTCP Project	\$162.5M	2015
 <u>Sewer System (Sanitary, Storm, CSO)</u>		
FQ – Main & O St. PS Intermediate Upgrade	\$ 11.7M	2017
DN – Sewer Inspection Program	\$ 22.8M	2016
G4 – Upper Potomac Interceptor Sewer Rehab.	\$ 10.0M	2024
HS – Rehab of Influent Sewers	\$ 60.0M	2024
J0 – B Street/New Jersey Ave Trunk Sewer Rehab.	\$ 10.2M	2020
J1 – Oxon Run Sewer Rehab.	\$ 14.6M	2021
LZ – Potomac Interceptor Projects Phase 2	\$ 69.5M	2017
 <u>Water System</u>		
Small Diameter Water Main Replacements	\$ 58.9M	2016
BW – Lead Service Replacement Program	\$ 19.6M	2022



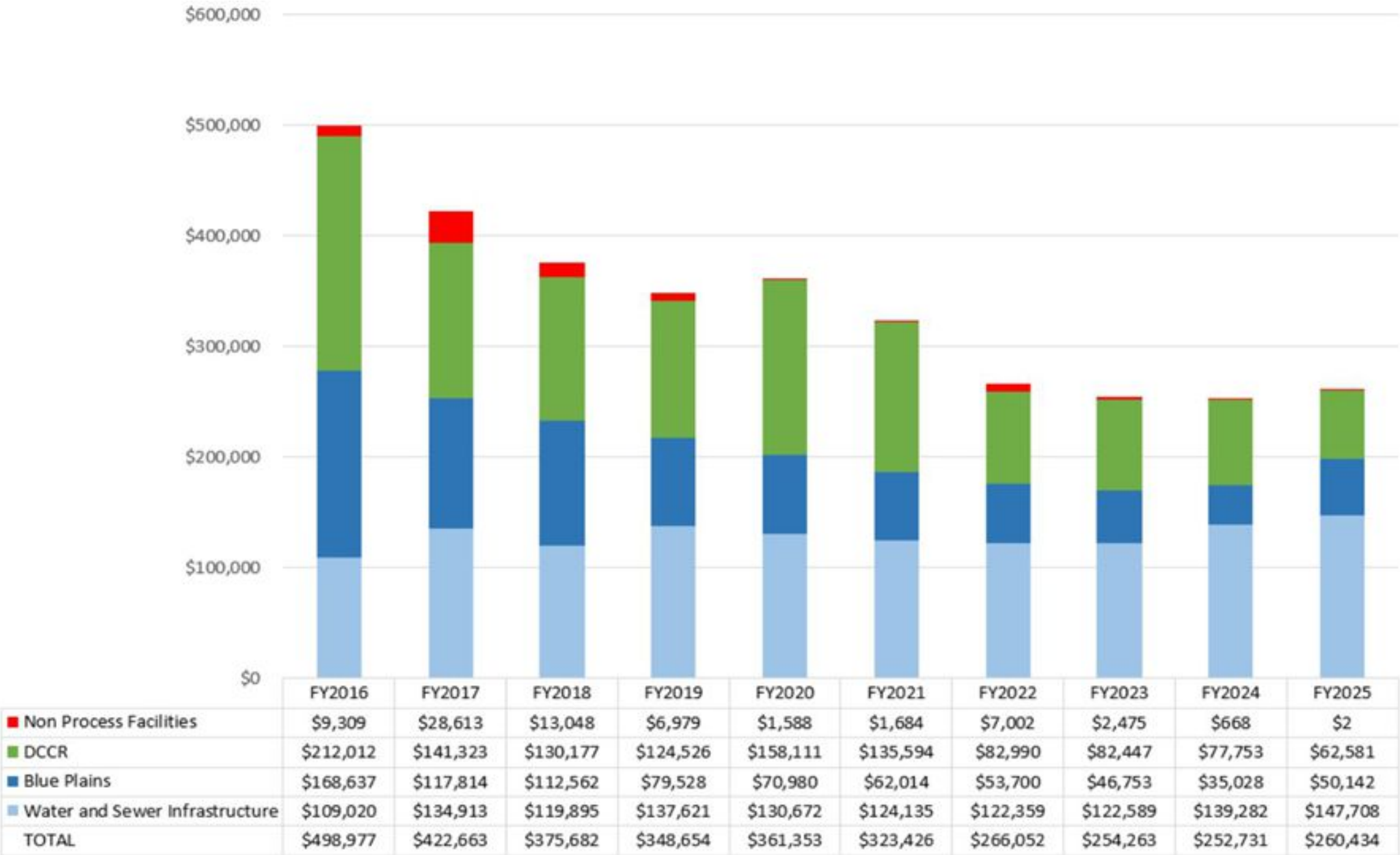
Disbursements - Capital Projects

Service Area (\$000's)	FY 2016 Revised	FY 2017 Proposed	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Total
Non Process Facilities	\$ 9,309	\$ 28,613	\$ 13,048	\$ 6,979	\$ 1,588	\$ 1,684	\$ 7,002	\$ 2,475	\$ 668	\$ 2	\$ 71,368
Wastewater Treatment	168,637	117,814	112,562	79,528	70,980	62,014	53,700	46,753	35,028	50,142	797,159
Combined Sewer Overflow	223,105	151,125	148,159	145,945	169,272	146,994	95,429	89,666	84,037	76,648	1,330,380
Stormwater	1,263	1,430	2,902	2,011	745	2,022	6,318	1,256	1,797	1,650	21,396
Sanitary Sewer	34,786	61,144	54,102	53,215	62,566	51,543	42,443	45,439	50,498	52,201	507,937
Water	61,878	62,537	44,909	60,975	56,201	59,170	61,158	68,675	80,703	79,790	635,995
Capital Projects	498,977	422,663	375,682	348,654	361,353	323,426	266,052	254,263	252,731	260,434	3,364,235
Capital Equipment	39,226	38,737	27,127	26,289	10,401	10,035	9,413	9,119	8,896	8,915	188,156
Washington Aqueduct	10,838	10,838	10,838	10,888	11,018	11,199	11,184	11,054	10,816	9,537	108,209
Additional Capital Programs	50,063	49,575	37,964	37,177	21,419	21,234	20,597	20,173	19,712	18,452	296,365
Total CIP	\$ 549,040	\$472,238	\$413,646	\$385,831	\$382,772	\$344,660	\$286,649	\$274,436	\$272,442	\$278,886	\$3,660,600

* Cash disbursements basis



Disbursements - Capital Projects (cont.)

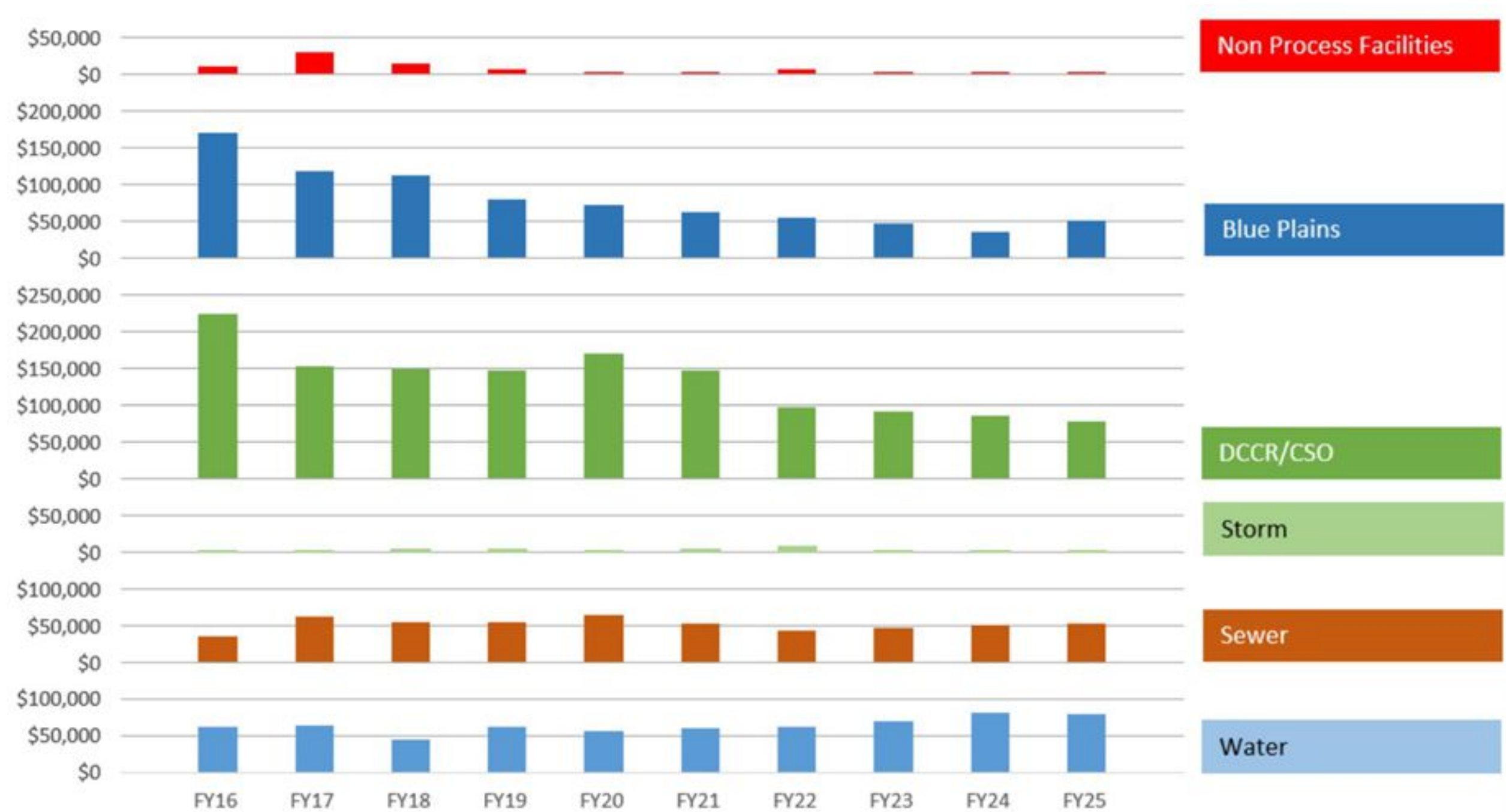


(\$000's)

* Cash disbursements basis



Disbursements - Capital Projects (cont.)

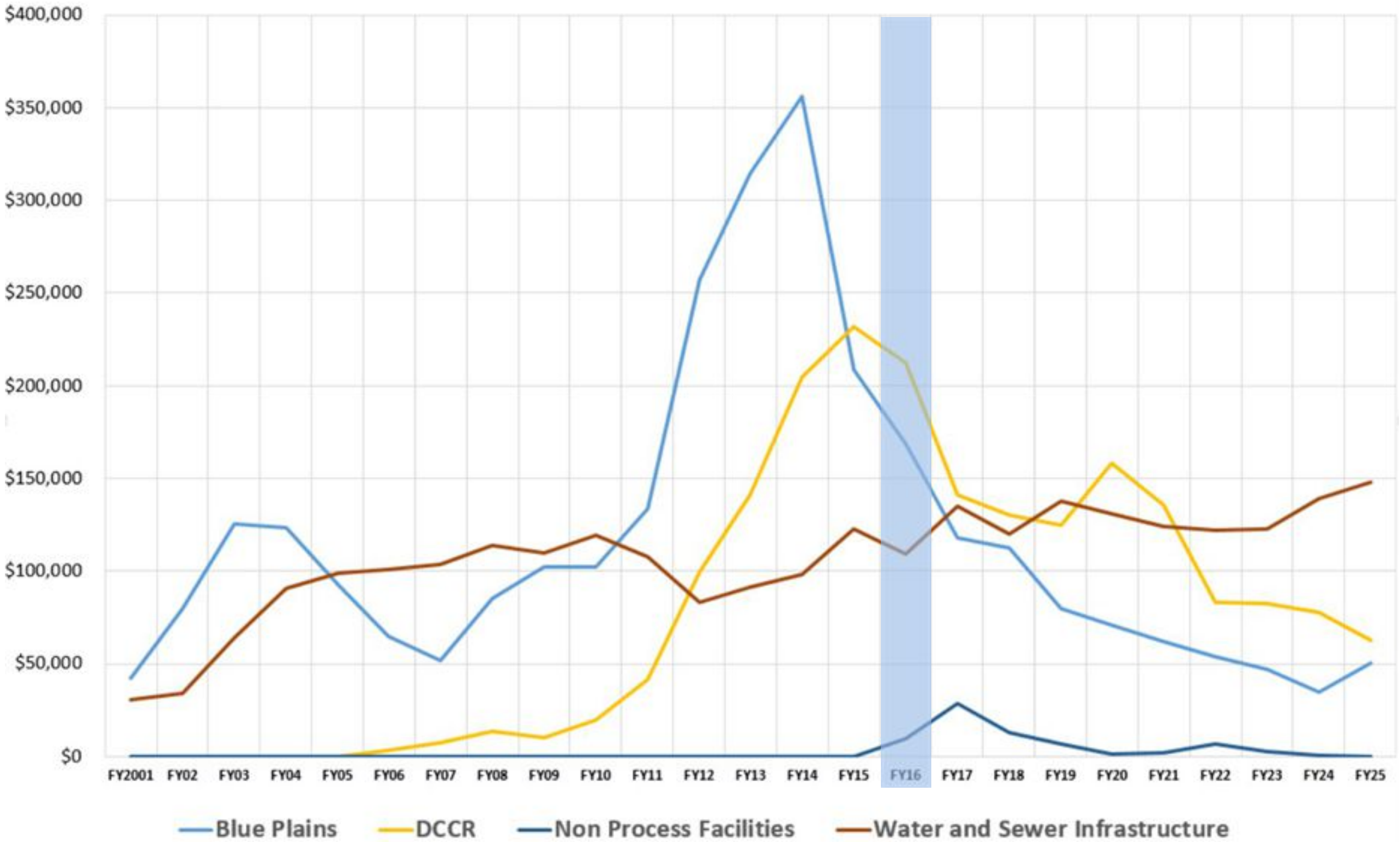


(\$000's)

* Cash disbursements basis



Disbursements - Capital Projects (cont.)





Prioritization of Spending

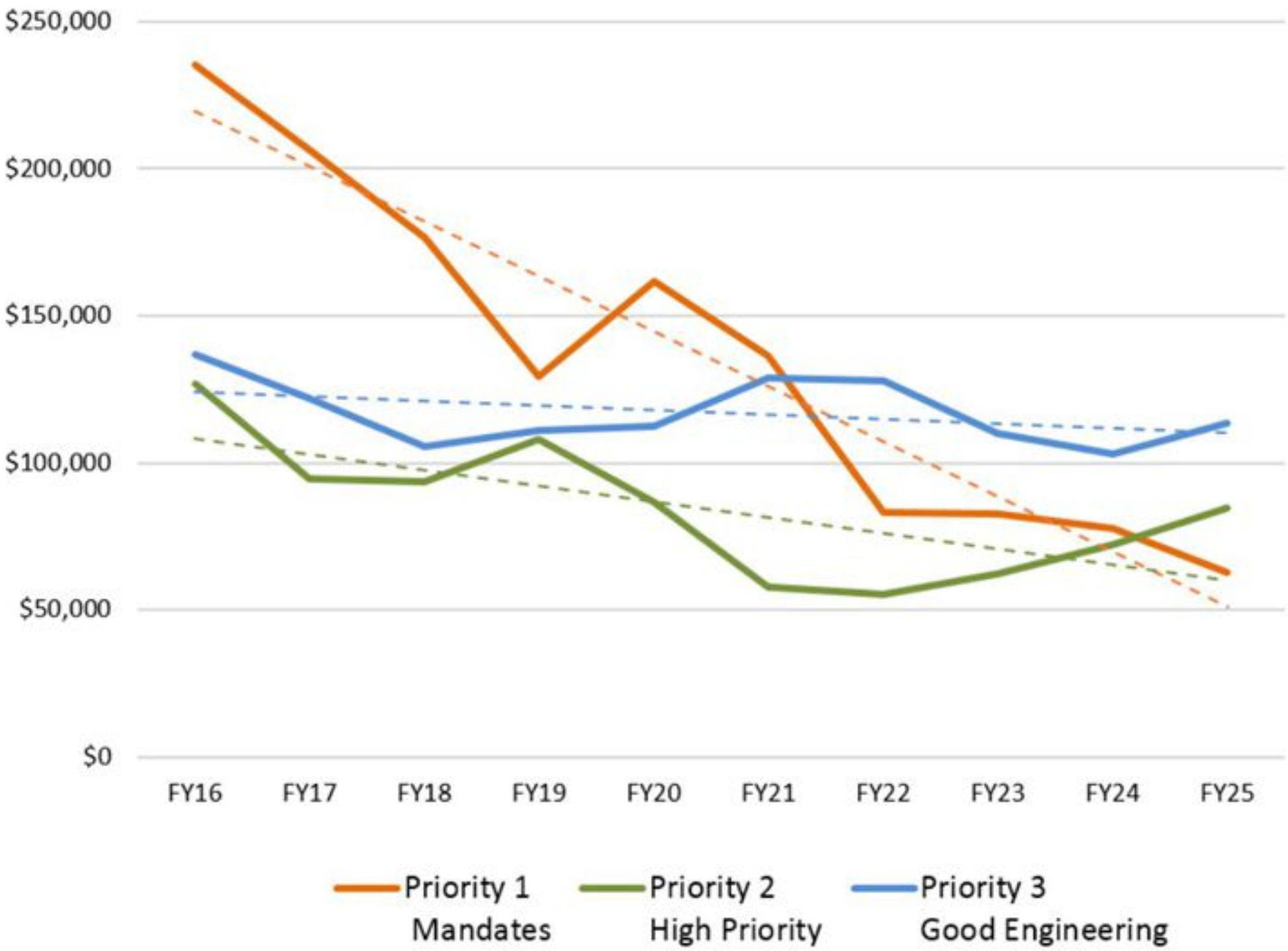
High Priority → Low Priority

	1A		2A	2B	2C	2D	3A		3B	Total
	Mandates		Health & Safety	Board Policy	Potential Failure	High Profile Good Neighbor	Good Engineering High Payback		Good Engineering Lower 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	
FY 2016	235,092	47%	13,678	77,739	31,179	4,421	122,818	25%	14,049	\$498,977
FY 2017	206,614	49%	14,484	31,610	40,394	7,865	77,872	18%	43,823	\$422,663
FY 2018	176,394	47%	16,695	23,141	50,938	2,869	68,065	18%	37,580	\$375,682
FY 2019	129,471	37%	9,958	29,403	67,068	1,813	73,876	21%	37,065	\$348,654
FY 2020	161,885	45%	6,149	29,389	51,291	-	87,203	24%	25,437	\$361,353
FY 2021	136,539	42%	5,140	28,527	24,275	46	88,367	27%	40,531	\$323,426
FY 2022	82,993	31%	462	34,307	20,355	171	78,230	29%	49,533	\$266,052
FY 2023	82,449	32%	44	39,122	22,520	362	78,178	31%	31,587	\$254,263
FY 2024	77,755	31%	45	40,765	28,744	2,471	85,520	34%	17,431	\$252,731
FY 2025	62,581	24%	-	43,189	40,960	432	87,104	33%	26,166	\$260,434
Total	1,351,775	40%	66,656	377,192	377,725	20,452	847,233	25%	323,202	3,364,235
% of Total	40.2%		2.0%	11.2%	11.2%	0.6%	25.2%		9.6%	

(\$000's)

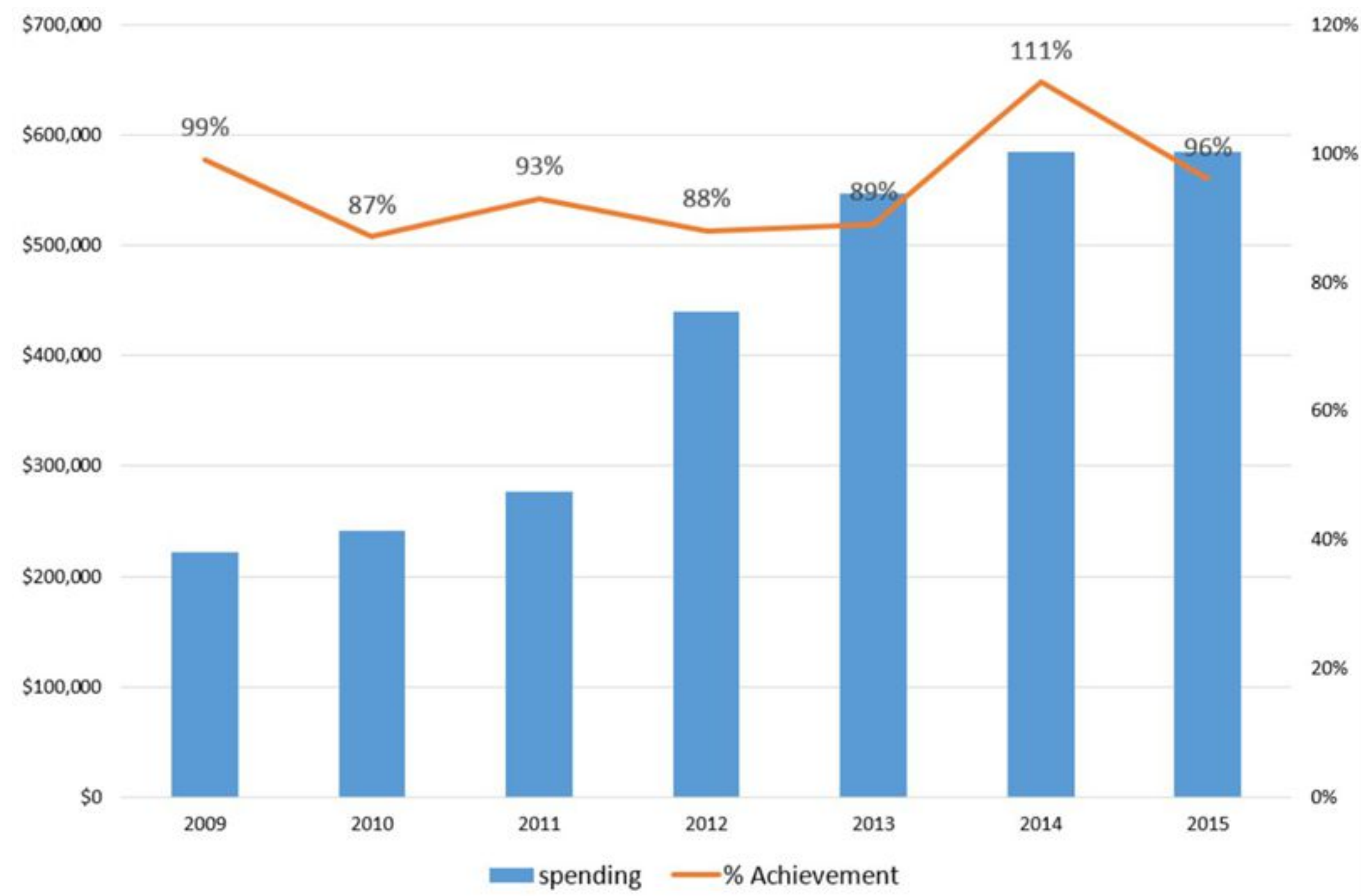


Prioritization of Spending





Historical Accuracy of Annual Disbursement Projections



(\$000's)



Unfunded Projects

Below the Line Projects are not included in the Proposed 10-year Cash Disbursements or Lifetime Budget

💧 Blue Plains – \$229M - for example:

- Full Plant Deammonification - \$45M
- Various Plantwide Rehabilitation Projects - \$33M
- End of useful life rebuild projects - \$71M

💧 Planned Sewer Projects - \$290M – for example:

- Rehab NE Boundary Sewer Phase 2 - \$45M
- Tiber Creek Sewer Lining Ph 1 - \$40M
- Rehab of Influent Sewers - \$81M
- Rehab of Anacostia Force Main - \$16M

💧 Planned Water Projects - \$91M – for example:

- 1 MG 4th High East Storage Tank - \$8M
- Large Valve Replacements - \$18M

(\$'s – Projected Disbursements)



CIP Issues / Sensitivities

Regulatory/Consent Decree:

- MS4 Regulations/Policy - Not in plan. \$'s unknown
- DC Clean Rivers Green Infrastructure Consent Decree (GI CD) Modification – Public Comment over with EPA
- DC Clean Rivers Potomac River and Rock Creek Basin, both green and grey do not include risk allowance
- Blue Plains NPDES Permit renewal 2015 review ongoing
- Chesapeake Bay TMDL 2017 mid term assessment
- TMDL – E coli

Other Risks/Sensitivities:

- Pepco DC Power Line Undergrounding (DC PLUG)
- Blue Plains Odor Control
- FY 2016 Water and Sewer Facility Plan updates likely to identify additional needs
- Ramped up condition assessment on large sewers



Action Item

ACTION ITEM: FY 2016 – FY 2025 Proposed Capital Improvement Program (10-Year Disbursement Plan and Lifetime Budget)

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

- a. **10-Year Disbursement Plan** – The cash disbursement-based capital plan is utilized to forecast the timing and amount of capital financing, which is the primary basis for projected retail rate increases. As shown in Attachment A-1, the Board of Directors will be asked to approve a 10-year disbursement plan of \$3.66 billion.
- a. **Lifetime Budget** – The project lifetime budget reflects the total costs of each project active during the 10-year planning period. These costs include historical and projected spending, project contingencies, and labor (listed as separate line item). As shown in Attachment A-1, the Board of Directors will be asked to approve a lifetime budget of \$10.4 billion.



QUESTIONS?



APPENDIX

10-Year Disbursement Plan & Lifetime Budget

Attachment A-1

\$ in thousands

	FY 2016 - FY 2025 Disbursement Plan										10-Yr Total	Lifetime Budget
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025		
NON PROCESS FACILITIES												
Facility Land Use	\$9,309	\$28,613	\$13,048	\$6,979	\$1,588	\$1,684	\$7,002	\$2,475	\$668	\$2	\$71,368	\$139,297
Subtotal	9,309	28,613	13,048	6,979	1,588	1,684	7,002	2,475	668	2	71,368	139,297
WASTEWATER TREATMENT												
Liquid Processing	16,193	23,871	33,857	38,248	20,311	18,334	21,093	9,546	4,208	9,838	195,439	808,430
Plantwide	15,798	16,207	17,013	22,534	36,598	26,048	28,560	34,936	24,521	16,636	238,853	496,407
Solids Processing	28,652	5,130	8,247	12,912	10,154	16,684	3,448	1,019	780	507	87,531	722,944
Enhanced Nitrogen Removal Facilities	107,994	72,606	53,445	5,834	3,917	947	600	1,252	5,520	23,161	275,277	1,039,198
Subtotal	168,637	117,814	112,562	79,528	70,980	62,014	53,700	46,753	35,028	50,142	797,159	3,066,979
COMBINED SEWER OVERFLOW												
D.C. Clean Rivers	212,012	141,323	130,177	124,526	158,111	135,594	82,990	82,447	77,753	62,581	1,207,515	2,771,514
Program Management	1,832	2,844	3,033	2,333	2,593	2,404	3,890	4,359	3,060	1,846	28,195	64,563
Combined Sewer	9,261	6,958	14,950	19,086	8,567	8,996	8,549	2,860	3,224	12,220	94,671	338,918
Subtotal	223,105	151,125	148,159	145,945	169,272	146,994	95,429	89,666	84,037	76,648	1,330,380	3,174,995
STORMWATER												
Local Drainage	223	66	822	290	8	63	608	265	844	1,024	4,214	16,636
On-Going	459	438	390	455	487	535	693	698	744	463	5,361	12,415
Pumping Facilities	0	126	774	964	78	1,280	4,787	23	0	0	8,031	25,000
DDOT	18	10	26	0	0	0	0	0	0	0	54	3,237
Research and Program Management	256	179	194	158	172	145	230	269	210	163	1,977	12,013
Trunk/Force Sewers	307	611	696	144	0	0	0	0	0	0	1,758	15,597
Subtotal	1,263	1,430	2,902	2,011	745	2,022	6,318	1,256	1,797	1,650	21,396	84,898
SANITARY SEWER												
Collection Sewers	4,190	6,318	7,629	7,108	8,140	17,982	17,299	17,894	21,345	22,394	130,300	338,534
On-Going	7,463	9,299	8,734	7,223	6,334	7,421	7,749	8,139	8,440	8,637	79,440	209,243
Pumping Facilities	2,267	1,743	1,800	795	165	1,378	151	229	0	0	8,528	34,759
Program Management	6,742	12,269	10,382	6,036	5,827	4,840	6,521	7,442	6,756	5,278	72,092	133,321
Interceptor/Trunk Force Sewers	14,124	31,514	25,556	32,053	42,099	19,921	10,723	11,736	13,958	15,893	217,577	713,359
Subtotal	34,786	61,144	54,102	53,215	62,566	51,543	42,443	45,439	50,498	52,201	507,937	1,429,216
WATER												
Distribution Systems	35,667	32,929	25,610	38,203	38,356	36,401	42,808	51,372	57,333	63,136	421,815	1,087,947
Lead Program	1,575	1,171	870	1,547	2,114	2,507	2,885	3,190	3,129	3,633	22,622	208,640
On-Going	5,105	7,116	5,306	6,310	5,931	5,716	5,799	5,879	6,171	6,338	59,672	135,714
Pumping Facilities	3,833	5,083	4,211	2,454	2,105	747	735	1,824	8,468	1,510	30,970	178,399
DDOT	893	627	389	0	0	0	0	0	0	0	1,909	33,933
Storage Facilities	9,515	9,115	3,427	7,420	3,779	7,582	2,459	2,188	1,343	557	47,387	101,834
Program Management	5,288	6,495	5,096	5,042	3,916	6,218	6,471	4,221	4,259	4,816	51,621	101,203
Subtotal	61,878	62,537	44,909	60,975	56,201	59,170	61,158	68,675	80,703	79,790	635,995	1,847,670
CAPITAL PROJECTS	498,977	422,663	375,682	348,654	361,353	323,426	266,052	254,263	252,731	260,434	3,364,235	9,743,055
CAPITAL EQUIPMENT	39,226	38,737	27,127	26,289	10,401	10,035	9,413	9,119	8,896	8,915	188,156	205,861
WASHINGTON AQUEDUCT	10,838	10,838	10,838	10,888	11,018	11,199	11,184	11,054	10,816	9,537	108,209	108,209
ADDITIONAL CAPITAL PROGRAMS	50,063	49,575	37,964	37,177	21,419	21,234	20,597	20,173	19,712	18,452	296,365	314,070
LABOR												352,774
TOTAL CAPITAL BUDGETS	\$549,040	\$472,238	\$413,646	\$385,831	\$382,772	\$344,660	\$286,649	\$274,436	\$272,442	\$278,886	\$3,660,600	\$10,409,899



ASSET MANAGEMENT PROGRAM

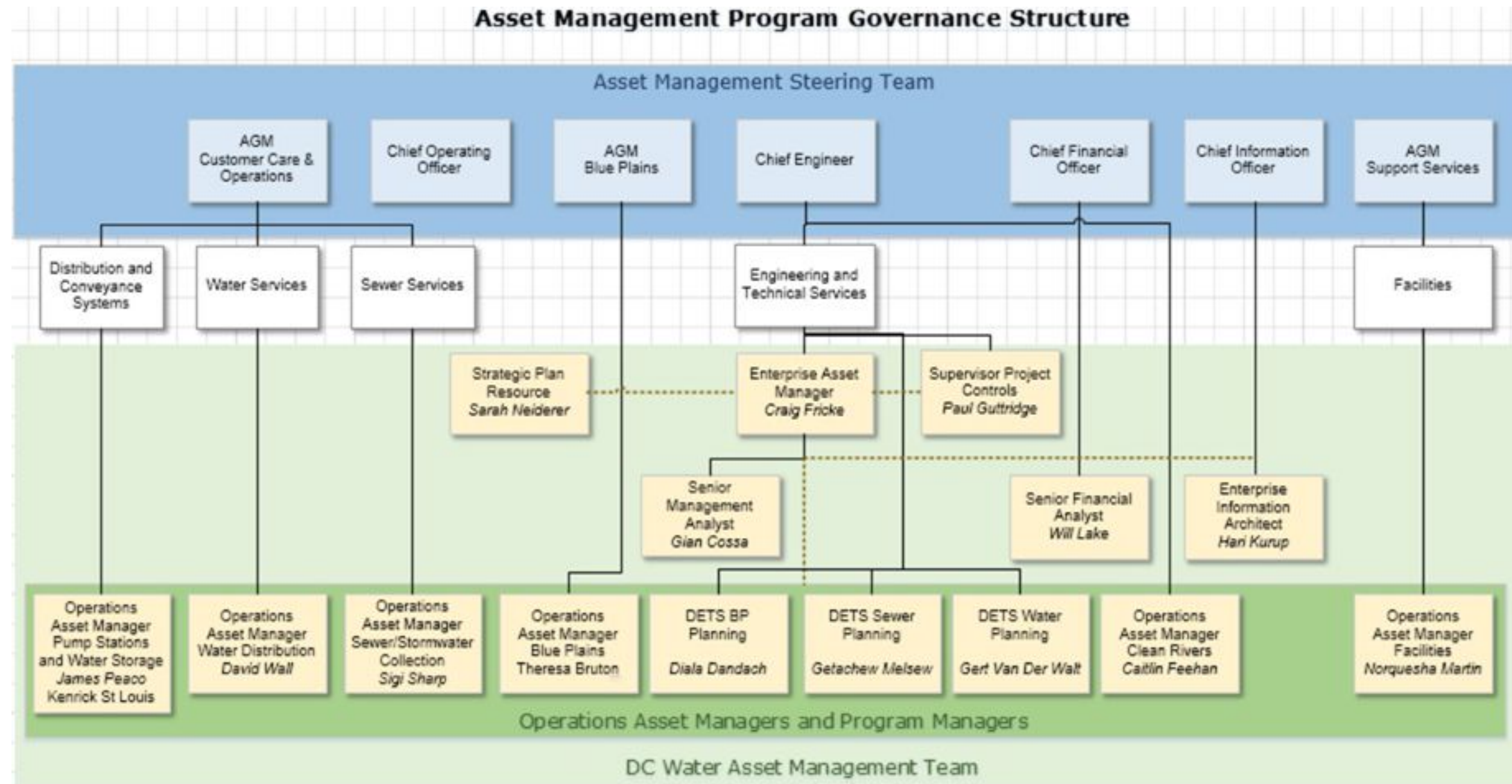


Asset Management
Program Update
Joint Meeting EQ&SS/WQ&WS
November 19, 2015

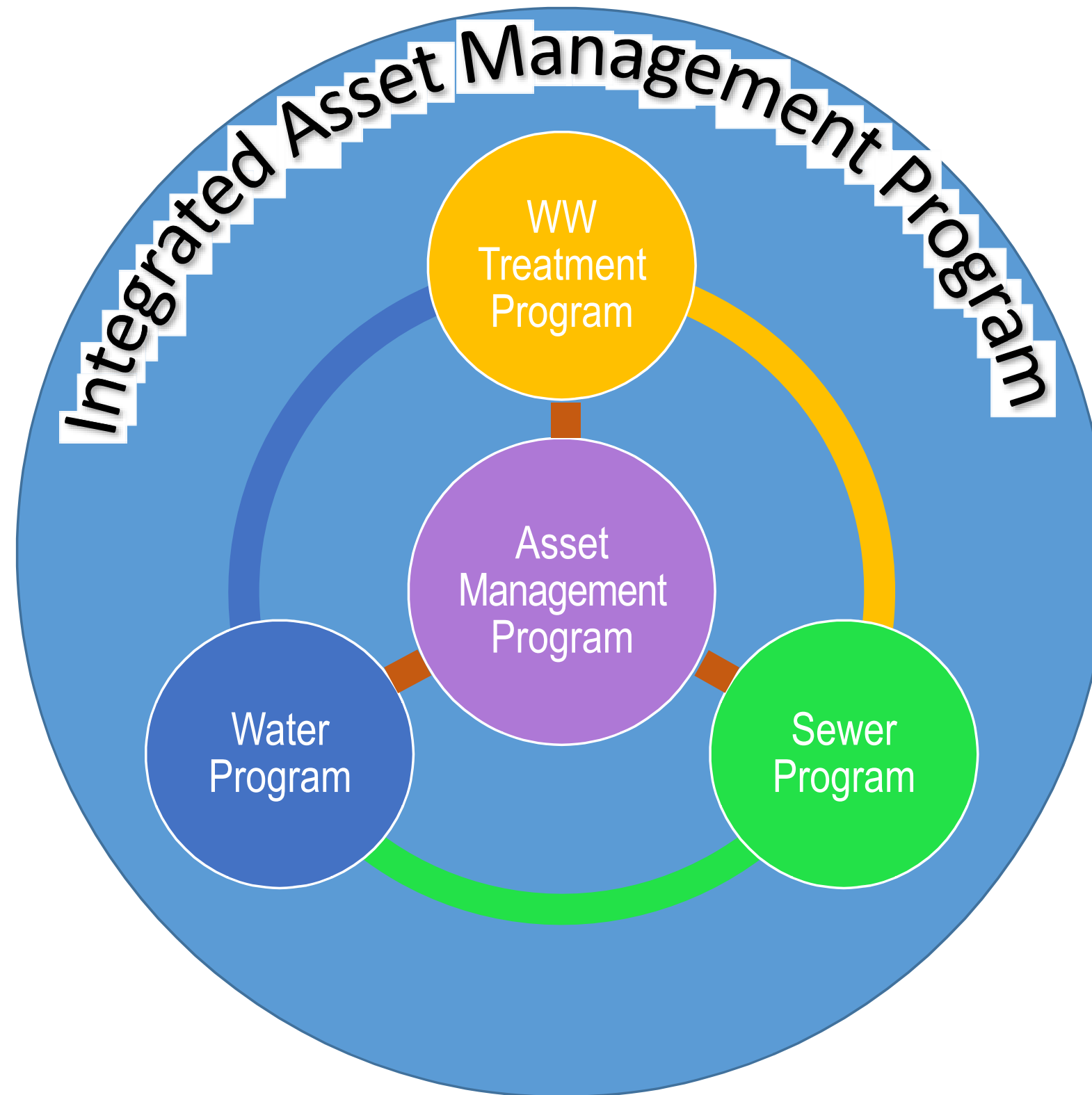
Agenda

- Asset Management Program Governance Structure
 - Steering Team
 - DC Water Asset Management Team (DCWAMT)
- Review of Current Approach and Deliverables
- Status of Ongoing Efforts
 - Top Down Risk Assessment
 - Business Case Evaluation Process and Pilots
 - Capital Project Prioritization Process
 - Key Performance Indicators

Asset Management Program Governance Structure



Current Approach - An *integrated* comprehensive Asset Management Program



Current Approach - Objectives

- Integrate Asset Management activities across the Authority, across all programs and program management consultants
- Focus on strategic objectives and key metrics
- Provide tools and methods to inform crucial decision needs in the short-term
 - Business case evaluation (BCE) framework to help select the most beneficial project at the lowest lifecycle cost among alternatives
 - CIP prioritization criteria and process
 - Performance measures to track progress in managing assets and inform improvement strategies and tactics
- Develop initial Asset Management Plans for Water, Sewer and Wastewater Treatment systems



Current Approach – Key Elements

1. Performance Measurement and Reporting
2. Risk Assessment
3. Business Case Process, Guidelines and Pilots
4. Project Prioritization
5. Benchmarking Support
6. Asset Management Plans
 - Water
 - Sewer
 - Blue Plains
 - Enterprise

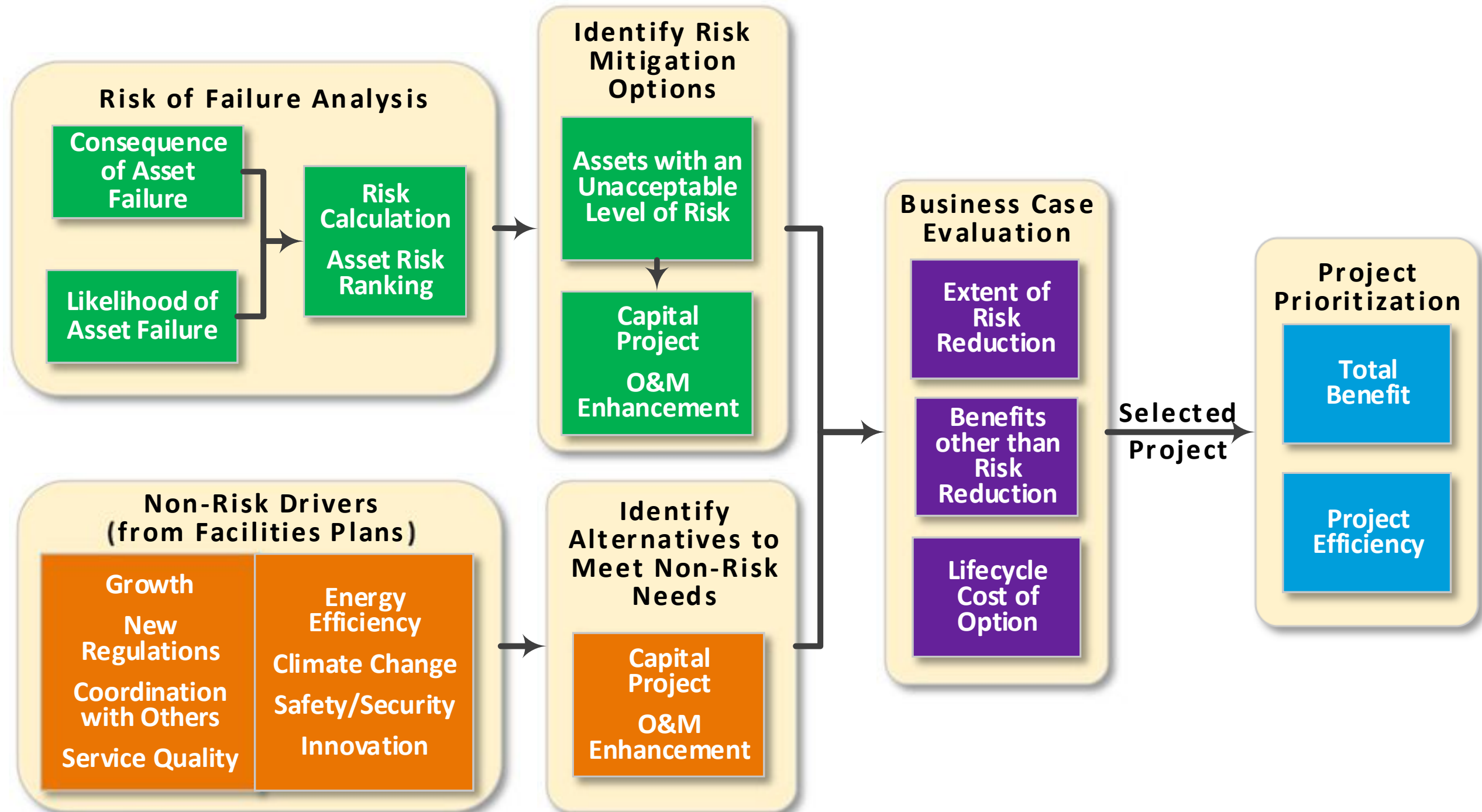


Current Approach – Asset Management Plans

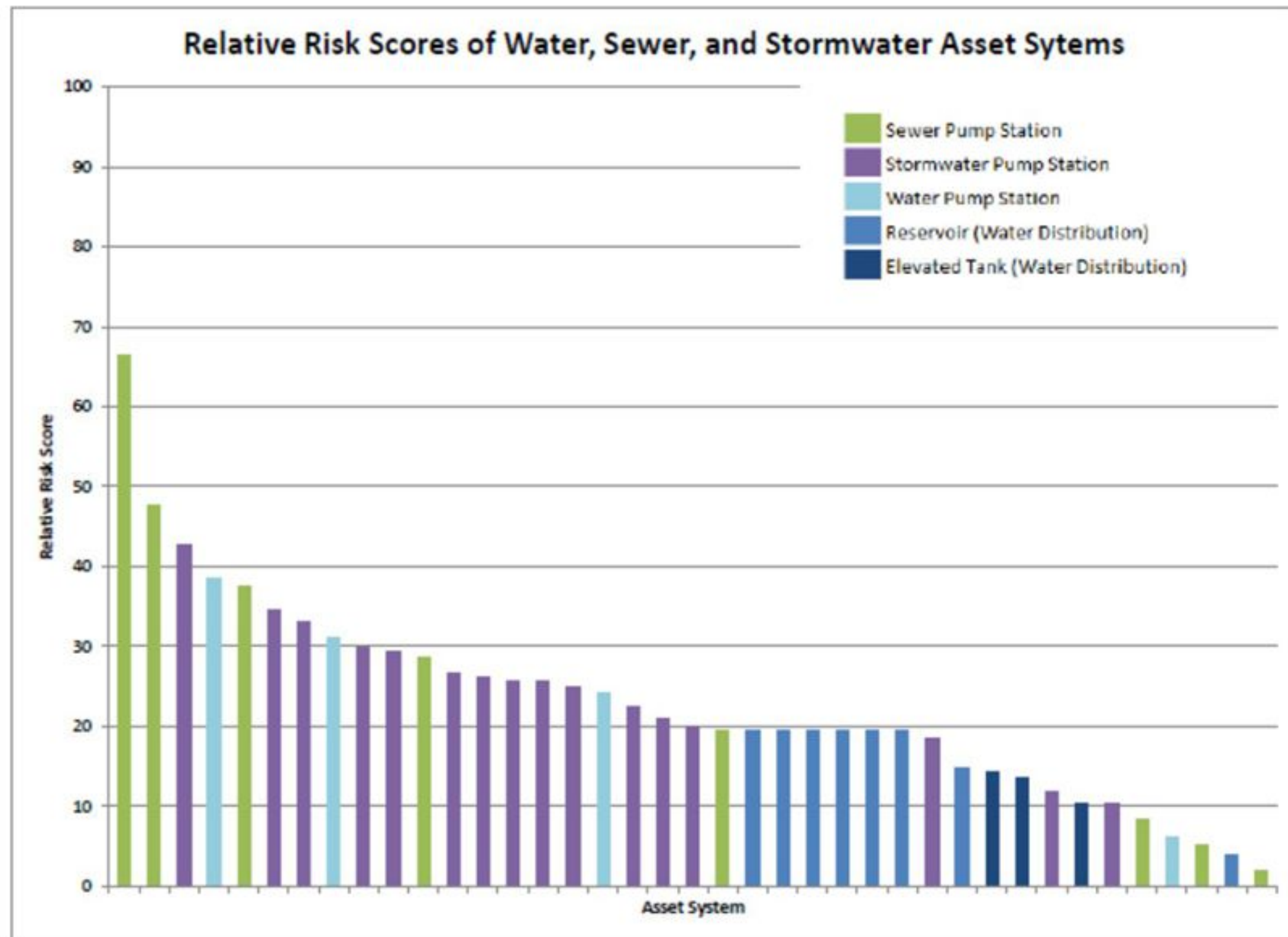
- Leverage Water, Sewer and Blue Plains Facilities Plans
- Turn Facility Plans into Asset Management Plans
 - Risk quantification & “normalization”
 - Incorporation of Level of Service
 - Development of KPI’s and PI’s
 - Predictive modeling & analytics
 - Recommendations:
 - Capital
 - O&M plan
 - Business process improvements
 - Investment plan



The Link from Risk Assessment to Business Case Evaluations to Capital Project Prioritization



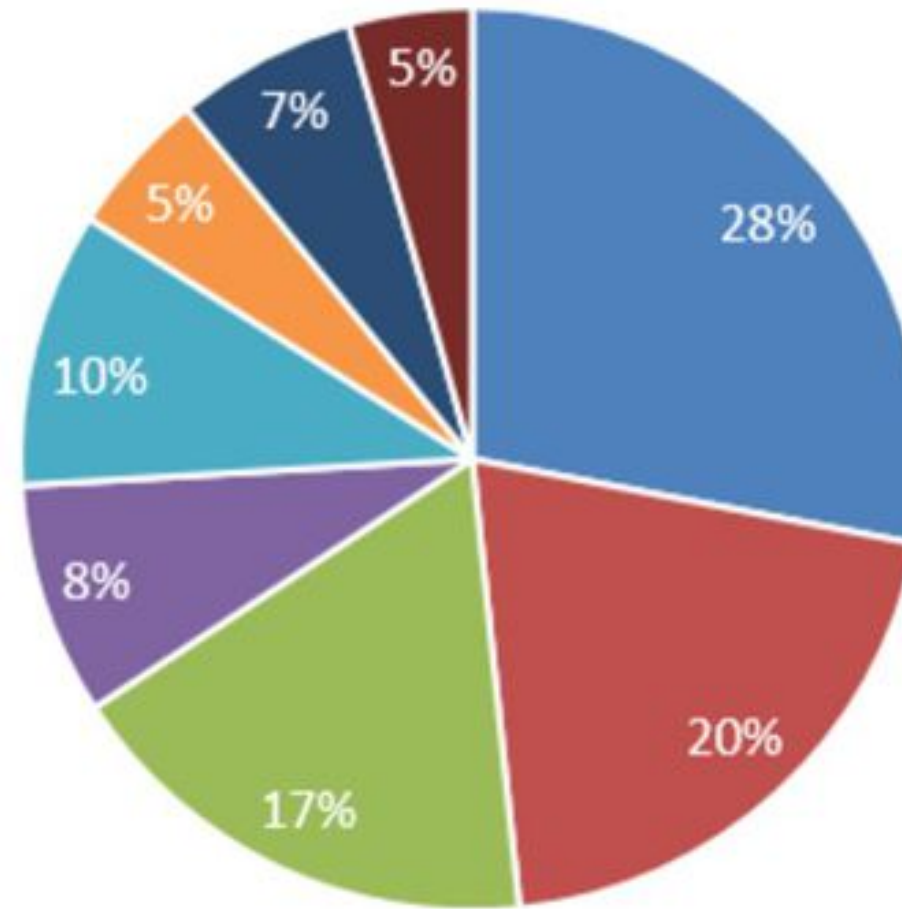
Status – Top Down Risk Assessments



Status – Business Case Evaluation Process and Pilots

- Learning by Doing
- Select One Project from each Service Area
- Proposed Projects
 - Blue Plains: Effluent Filter Upgrades for Plant Service Water
 - Sewer: Anacostia Force Main and Gravity Sewer
 - Water: 4th High West Elevated Tank
- Develop Guidebook & Tools

Status – Capital Project Prioritization Process



■ Regulatory Compliance

■ Risk Reduction

■ Financial Benefits

■ Public Image

■ Health & Safety

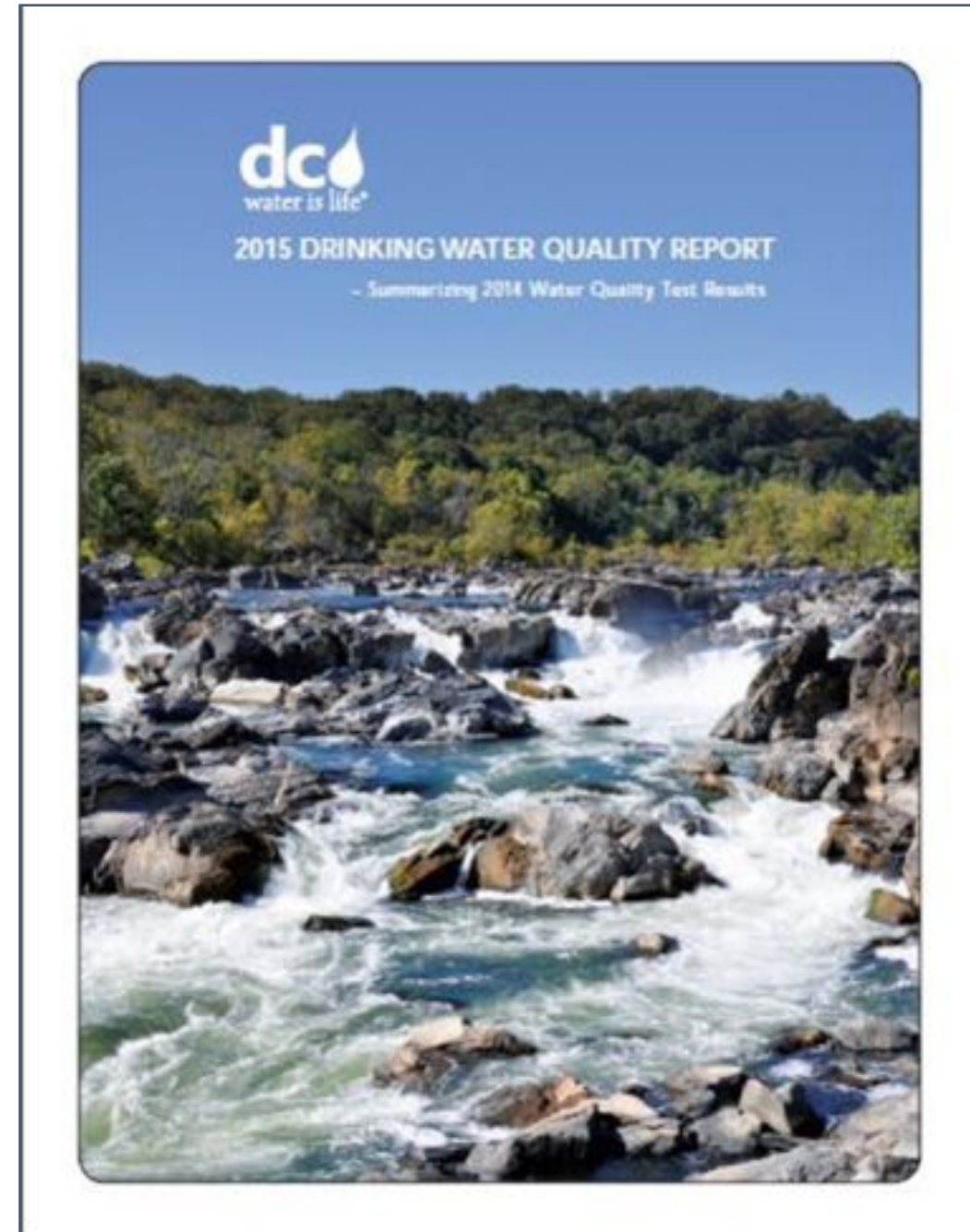
■ System Capacity and Growth

■ Supplemental Benefits

■ Coordination With Other Projects

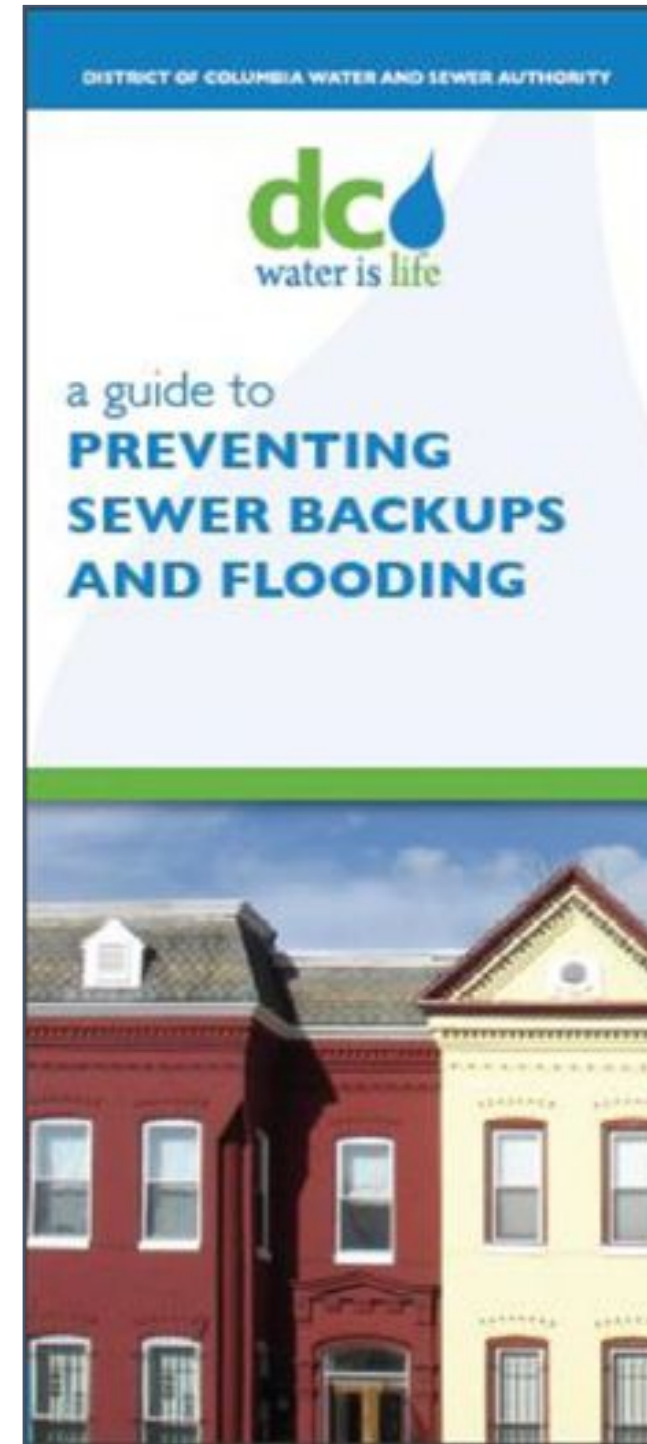
Asset Management Metrics – Water

- Regulatory Compliance
- Water Main Breaks
- Infrastructure Leakage Index
- Customer Complaints
 - Water Quality
 - Water Pressure



Asset Management Metrics – Sewer

- Regulatory Compliance
- Overflows
- Basement Backups
- Odor Complaints



Asset Management Metrics – Vertical Assets

- Regulatory Compliance
- Critical Equipment Availability
- Proactive Maintenance
- Odor Complaints





**JOINT COMMITTEE
ENVIRONMENTAL QUALITY AND SEWERAGE SERVICES
AND
WATER QUALITY AND WATER SERVICES
FISCAL YEAR 2016 – 2025 PROPOSED CAPITAL IMPROVEMENT
PROGRAM
ACTION ITEM**

ACTION ITEM 1: FY 2016 – FY 2025 Proposed Capital Improvement Program (10-Year Disbursement Plan and Lifetime Budget)

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

- a. **10-Year Disbursement Plan** – The cash disbursement-based capital plan is utilized to forecast the timing and amount of capital financing, which is the primary basis for projected retail rate increases. As shown in Attachment A-1, the Board of Directors will be asked to approve a 10-year disbursement plan of \$3.66 billion.
- b. **Lifetime Budget** – The project lifetime budget reflects the total costs of each project active during the 10-year planning period. These costs include historical and projected spending, project contingencies, and labor (listed as separate line item). As shown in Attachment A-1, the Board of Directors will be asked to approve a lifetime budget of \$10.4 billion.

10-Year Disbursement Plan & Lifetime Budget

Attachment A-1

\$ in thousands

	FY 2016 - FY 2025 Disbursement Plan											Lifetime Budget
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	10-Yr Total	
NON PROCESS FACILITIES												
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Subtotal	9,309	28,613	13,048	6,979	1,588	1,684	7,002	2,475	668	2	71,368	139,297
WASTEWATER TREATMENT												
Liquid Processing	16,193	23,871	33,857	38,248	20,311	18,334	21,093	9,546	4,208	9,838	195,499	808,430
Plantwide	15,798	16,207	17,013	22,534	36,598	26,048	28,560	34,936	24,521	16,636	238,853	496,407
Solids Processing	28,652	5,130	8,247	12,912	10,154	16,684	3,448	1,019	780	507	87,531	722,944
Enhanced Nitrogen Removal Facilities	107,994	72,606	53,445	5,834	3,917	947	600	1,252	5,520	23,161	275,277	1,039,198
Subtotal	168,637	117,814	112,562	79,528	70,980	62,014	53,700	46,753	35,028	50,142	797,159	3,066,979
COMBINED SEWER OVERFLOW												
D.C. Clean Rivers	212,012	141,323	130,177	124,526	158,111	135,594	82,990	82,447	77,753	62,581	1,207,515	2,771,514
Program Management	1,832	2,844	3,033	2,333	2,593	2,404	3,890	4,359	3,060	1,846	28,195	64,563
Combined Sewer	9,261	6,958	14,950	19,086	8,567	8,996	8,549	2,860	3,224	12,220	94,671	338,918
Subtotal	223,105	151,125	148,159	145,945	169,272	146,994	95,429	89,666	84,037	76,648	1,330,380	3,174,995
STORMWATER												
Local Drainage	223	66	822	290	8	63	608	265	844	1,024	4,214	16,636
On-Going	459	438	390	455	487	535	693	698	744	463	5,361	12,415
Pumping Facilities	0	126	774	964	78	1,280	4,787	23	0	0	8,031	25,000
DDOT	18	10	26	0	0	0	0	0	0	0	54	3,237
Research and Program Management	256	179	194	158	172	145	230	269	210	163	1,977	12,013
Trunk/Force Sewers	307	611	696	144	0	0	0	0	0	0	1,758	15,597
Subtotal	1,263	1,430	2,902	2,011	745	2,022	6,318	1,256	1,797	1,650	21,396	84,898
SANITARY SEWER												
Collection Sewers	4,190	6,318	7,629	7,108	8,140	17,982	17,299	17,894	21,345	22,394	130,300	338,534
On-Going	7,463	9,299	8,734	7,223	6,334	7,421	7,749	8,139	8,440	8,637	79,440	209,243
Pumping Facilities	2,267	1,743	1,800	795	165	1,378	151	229	0	0	8,528	34,759
Program Management	6,742	12,269	10,382	6,036	5,827	4,840	6,521	7,442	6,756	5,278	72,092	133,321
Interceptor/Trunk Force Sewers	14,124	31,514	25,556	32,053	42,099	19,921	10,723	11,736	13,958	15,893	217,577	713,359
Subtotal	34,786	61,144	54,102	53,215	62,566	51,543	42,443	45,439	50,498	52,201	507,937	1,429,216
WATER												
Distribution Systems	35,667	32,929	25,610	38,203	38,356	36,401	42,808	51,372	57,333	63,136	421,815	1,087,947
Lead Program	1,575	1,171	870	1,547	2,114	2,507	2,885	3,190	3,129	3,633	22,622	208,640
On-Going	5,105	7,116	5,306	6,310	5,931	5,716	5,799	5,879	6,171	6,338	59,672	135,714
Pumping Facilities	3,833	5,083	4,211	2,454	2,105	747	735	1,824	8,468	1,510	30,970	178,399
DDOT	893	627	389	0	0	0	0	0	0	0	1,909	33,933
Storage Facilities	9,515	9,115	3,427	7,420	3,779	7,582	2,459	2,188	1,343	557	47,387	101,834
Program Management	5,288	6,495	5,096	5,042	3,916	6,218	6,471	4,221	4,259	4,616	51,621	101,203
Subtotal	61,878	62,537	44,909	60,975	56,201	59,170	61,158	68,675	80,703	79,790	635,995	1,847,670
CAPITAL PROJECTS	498,977	422,663	375,682	348,654	361,353	323,426	266,052	254,263	252,731	260,434	3,364,235	9,743,055
CAPITAL EQUIPMENT	39,226	38,737	27,127	26,289	10,401	10,035	9,413	9,119	8,896	8,915	188,156	205,861
WASHINGTON AQUEDUCT	10,838	10,838	10,838	10,888	11,018	11,199	11,184	11,054	10,816	9,537	108,209	108,209
ADDITIONAL CAPITAL PROGRAMS	50,063	49,575	37,964	37,177	21,419	21,234	20,597	20,173	19,712	18,452	296,365	314,070
LABOR												352,774
TOTAL CAPITAL BUDGETS	\$549,040	\$472,238	\$413,646	\$385,831	\$382,772	\$344,660	\$286,649	\$274,436	\$272,442	\$278,886	\$3,660,600	\$10,409,899