



**DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
Board of Directors**

**Meeting of the
Environmental Quality and Operations
Committee**

HQO- 125 O Street SE, Washington, DC 20003

**Thursday, February 21, 2019
9:30 a.m.**

- | | | |
|-------------------|---|----------------------------|
| | I. Call to Order | Howard Gibbs
Vice-Chair |
| 9:30 a.m. | II. AWTP Status Update | Aklile Tesfaye |
| | 1. BPAWTP Performance | |
| 9:40 a.m. | III. CIP Quarterly Update (By Exception) | Paul Guttridge |
| 9:45 a.m. | IV. 10-Year CIP | Len Benson |
| 10:30 a.m. | V. Action Items | Dan Bae / Len Benson |

Joint Use

1. Contract No. 17-PR-DIT-06 – IT Professional Services, Advance Digital, Ampcus, Inc., Network for the Future, Peak Technology, Sankar, Inc., Susan Fitzgerald & Associates, Inc., Vigilant Technologies, and VTech Solution, Inc.
2. Contract No. 18-PR-DFS-38 – Dewatering Sludge Loading Facility Building Roof Replacement, ADP Consultants
3. Contract No. 15-PR-WWT-52 – Supply and Delivery of Calcium Hydroxide, W. K. Merriman
4. Contract No. 170180 – Miscellaneous Facilities Upgrade - Phase 6 Ulliman Schutte Construction, LLC

Non-Joint Use

1. Contract No. 160010 - Water Main Infrastructure Repair and Replacement Contract, Fort Myer Construction Corp.
- | | | |
|-------------------|---|-------------|
| 10:40 a.m. | VI. CSO, 025, 026 Sewer Separation in Georgetown | Carlton Ray |
| 10:50 a.m. | VII. Other Business / Emerging Issues | |

10:55 a.m. VIII. Executive Session*

11:00 a.m. IX. Adjournment

Howard Gibbs
Vice-Chair

Follow-up Items from Prior Meetings:

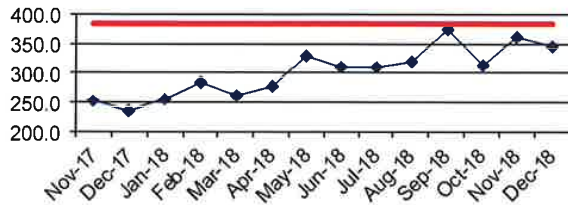
1. The IMA Regional Committee (RC) brief the EQ&Ops Committee on the work of the IMA RC **[Target: April 2019]**
2. SVP & Chief Engineer: Provide additional detail regarding specific impacts to sewage pumping stations for both the 100-year and 500-year flood scenarios. **[Target: March 2019]**
3. EVP, Ops & Engr, DC Water: Provide a briefing to the Committee regarding preventative and corrective maintenance programs on water, storm and sanitary sewer pump stations also including performance of DC Water's SCADA system. **[Target: March 2019]**
4. EVP, Ops & Engr, DC Water: Update on Lead Service Line Replacement Project **[Target: April 2019]**
5. Vice President, Wastewater Operations, DC Water: Provide an overall assessment of the CHP program with respect to its operating costs versus cost savings and revenue generated and present to the Committee during a future meeting. **[Target: April 2019]**
6. Vice President, Information Technology, DC Water: Provide a list of the members of the steering committee and an overview of the Committee's functions. **[Forwarded to BOD Secretary 2/6/19]**

* 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.

BLUE PLAINS ADVANCED WASTEWATER TREATMENT PLANT PERFORMANCE REPORT – DECEMBER 2018

Average plant performance for the month of December, 2018 was excellent with all effluent parameters well below the seven-day and monthly NPDES permit requirements. The monthly average influent flow to complete treatment was 355 MGD. There was 320 million gallons of treated captured combined flows directed to Outfall 001 during this period. The following figures compare the plant performance with the corresponding NPDES permit limits.

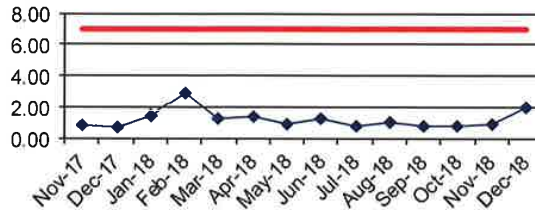
Plant Influent Flow (mgd)



■ Influent Flow — Average Design Capacity

This graph illustrates the monthly average influent flow to the plant. The design average flow is 384 MGD. Blue Plains has a 4-hour peak flow capacity of 555 MGD through complete treatment. Once the plant is at capacity, additional captured combined system flows from the tunnel up to 225 MGD receive enhanced clarification, disinfection and dechlorination.

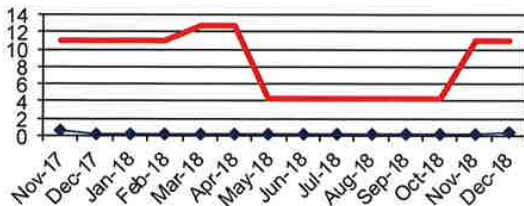
TSS (mg/l)



■ Effluent TSS — Permit Limit

Effluent Total Suspended Solids (TSS) is a measure of the amount of solid material that remains suspended after treatment. The effluent TSS concentration for the month averaged 2.03 mg/L, which is below the 7.0 mg/L permit limit.

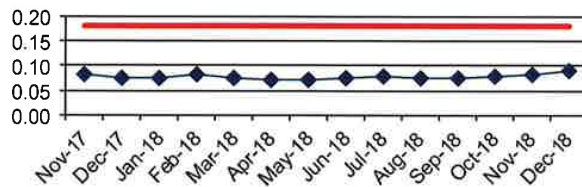
Ammonia (mg/l)



■ Effluent NH3 — Permit Limit

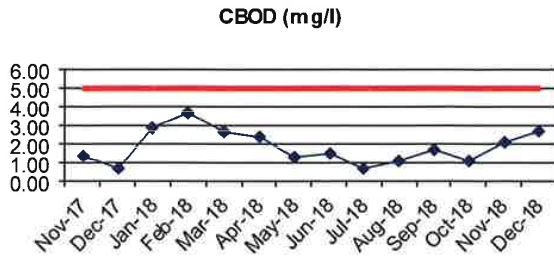
The Ammonia Nitrogen (NH₃-N) is a measure of the nitrogen found in ammonia. For the month, effluent NH₃-N concentration averaged 0.34 mg/L and is below the average 11.1 mg/L limit.

Total Phosphorus Annual Average (mg/l)



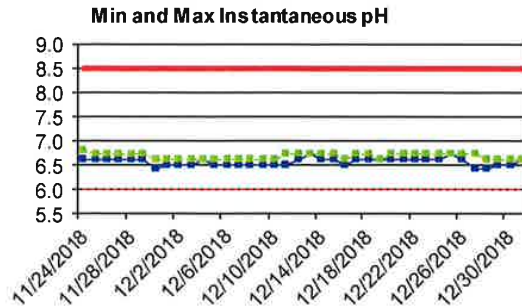
■ Effluent TP — Permit Limit

The Total Phosphorus (TP) is a measure of the particulate and dissolved phosphorus in the effluent. The annual average effluent TP concentration is 0.09 mg/L, which is below the 0.18 mg/L annual average limit.



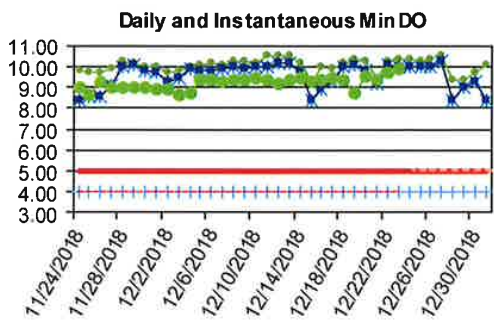
■ Effluent CBOD — Permit Limit

Carbonaceous Biochemical Oxygen Demand (CBOD) is a measure of the amount of dissolved oxygen required for the decomposition of organic materials. The effluent CBOD concentration averaged 2.69 mg/L (partial month), which is below the 5.0 mg/L limit.



● MAX pH ■ MIN pH — Upper Limit - - Lower Limit

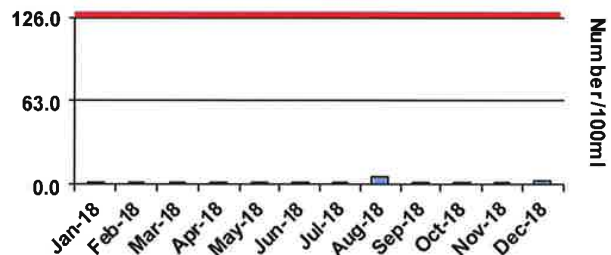
pH is a measure of the intensity of the alkalinity or acidity of the effluent. The minimum and maximum pH observed were 6.4 and 6.7 standard units, respectively. The pH was within the permit limits of 6.0 and 8.5 for minimum and maximum respectively.



● MIN Daily Average ■ Instant MIN DO
— MIN Daily Average Limit - - Instant MIN Limit

Dissolved Oxygen (DO) is a measure of the atmospheric oxygen dissolved in wastewater. The DO readings for the month are within the permit limits. The minimum daily average is 9.3 mg/L. The minimum instantaneous DO reading is 8.4 mg/L. The minimum permit limits are 5.0 mg/L and 4.0 mg/L respectively.

E. coli

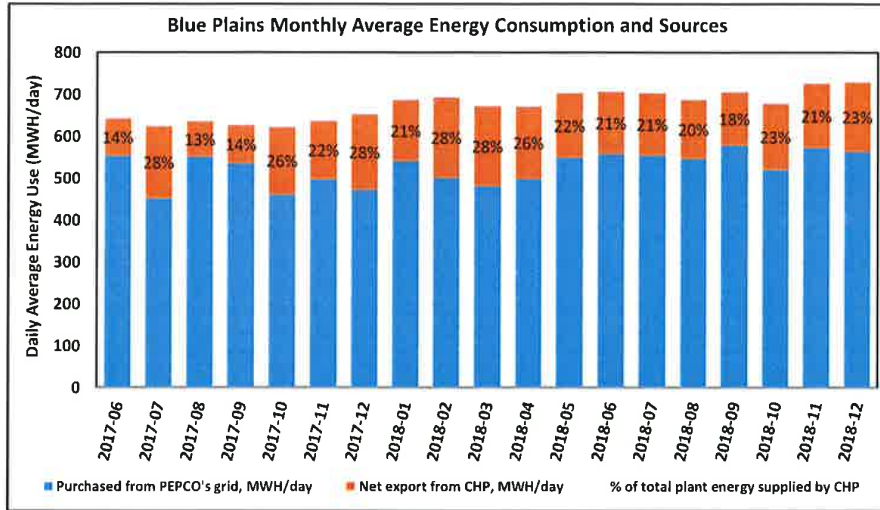


■ E. Coli Geomean — Permit Limit

E.coli is an indicator of disease causing organisms (pathogens). The E.coli permit limit is 126/100mL. The E coli geometric mean is 4.0 /100mL, and well below the permit limit.

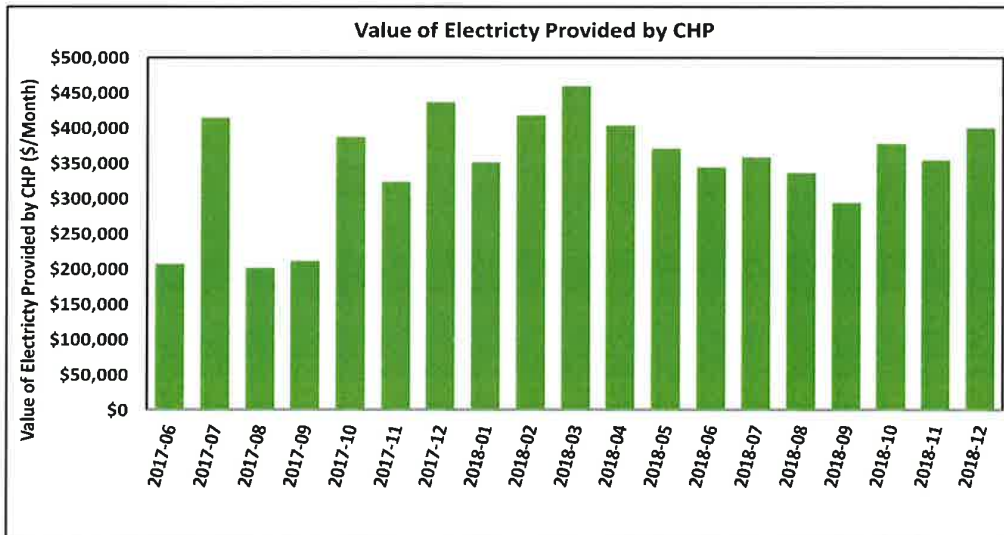
Blue Plains Electricity Generation and Usage

In December 2018, the average energy consumed at Blue Plains was 730 megawatt hours per day (MWH/day) or 2.19 MWH of electricity per million gallons of wastewater processed through complete treatment. The Combined Heat and Power (CHP) facility generated an average of 166 MWH/day, making up for 23% of total energy consumed at Blue Plains. The remaining 564 MWH/day was purchased from PEPCO.



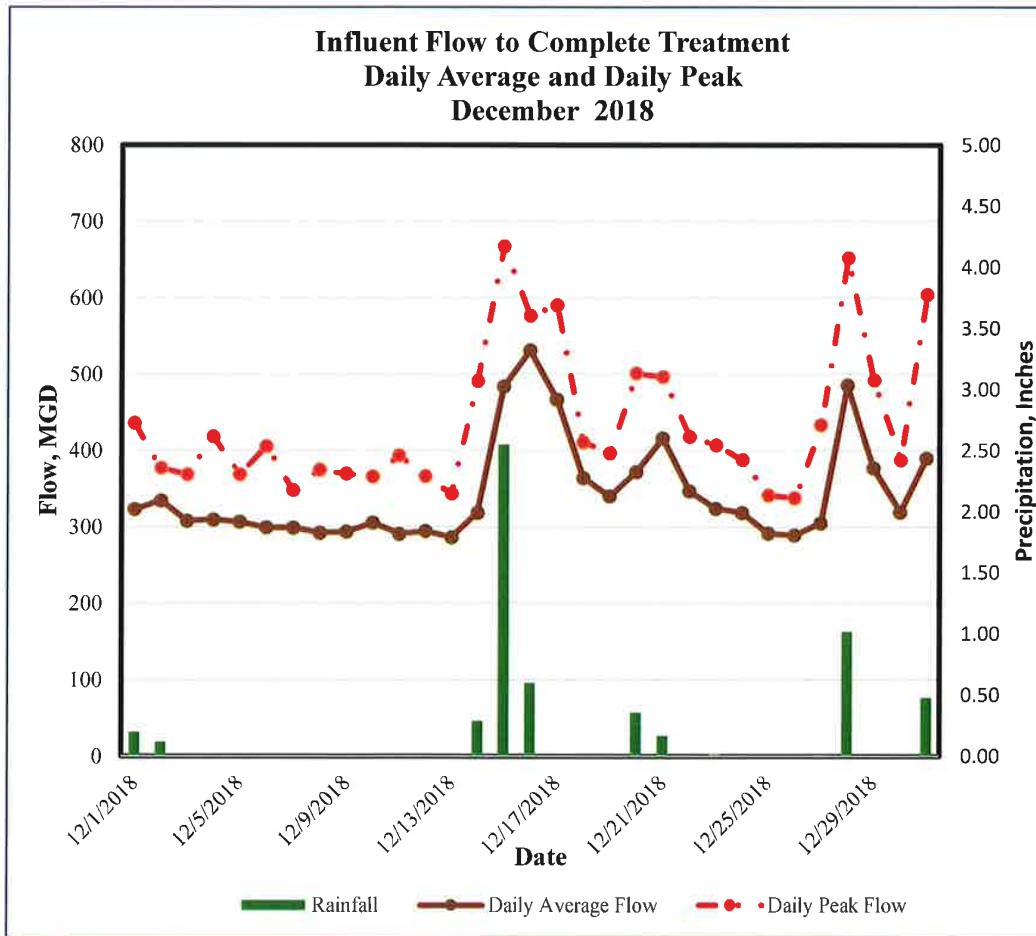
The graph above is based on power monitors installed at the Main Substation and CHP, and reflects average energy consumed at Blue Plains in MWH/day. Of the total use, the energy purchased from PEPCO and net energy supplied by CHP are indicated by the blue and orange highlights, respectively.

The graph below shows the monthly value of the net electricity exported by CHP by assuming unit price of \$78/MWH of electricity.



Wet Weather Impact on Plant Performance

During the month of December 2018, the Washington Metropolitan Region received above average precipitation (5.82 inches vs normal of 3.05 inches) as measured at the National Airport. The wet weather events that occurred during the second and last week of December resulted in peak flows through complete treatment exceeding 650 MGD. The plant's performance was excellent and the events had minimal impact on the quality of the effluent discharge through the complete treatment outfall. All effluent quality parameters were below the weekly and monthly average NPDES permit limits.



Wet Weather Treatment Facility (WWTF) at Blue Plains

Brief Description

The Wet Weather Treatment Facility at Blue Plains provides treatment for Combined Sewer Overflows (CSO) conveyed through the Long Term Control Plan (LTCP) tunnel systems to Blue Plains. With a design capacity of 250 MGD, the facility consists of sub systems including- a flow surcharge wet well and coarse screens, upstream of five 3,000 Horse Power (HP) Tunnel Dewatering Pumps (TDPs). The TDPs lift the flow 156 ft to the above ground Enhanced Clarification Facility (ECF), which comprises of fine screening, grit removal, and high rate clarification (HRC). The effluent from HRC is disinfected and dechlorinated before it's discharged through Outfall 001. When flow rates to the main plant are below the permitted peak flow rates of 555 OR 511 MGD, the effluent from the HRC (or a portion of it) is directed to the main plant for complete treatment. On an average year, the facility is designed to receive approximately 2.6 billion gallons of CSOs and provide treatment with effluent total suspended solids quality comparable to that of Secondary Treatment effluent. The WWTF, along with the first section of the Anacostia Tunnel System were placed in operation, three days in advance of the March 23rd Consent Decree date.



Aerial rendering of the Wet Weather Treatment Facility

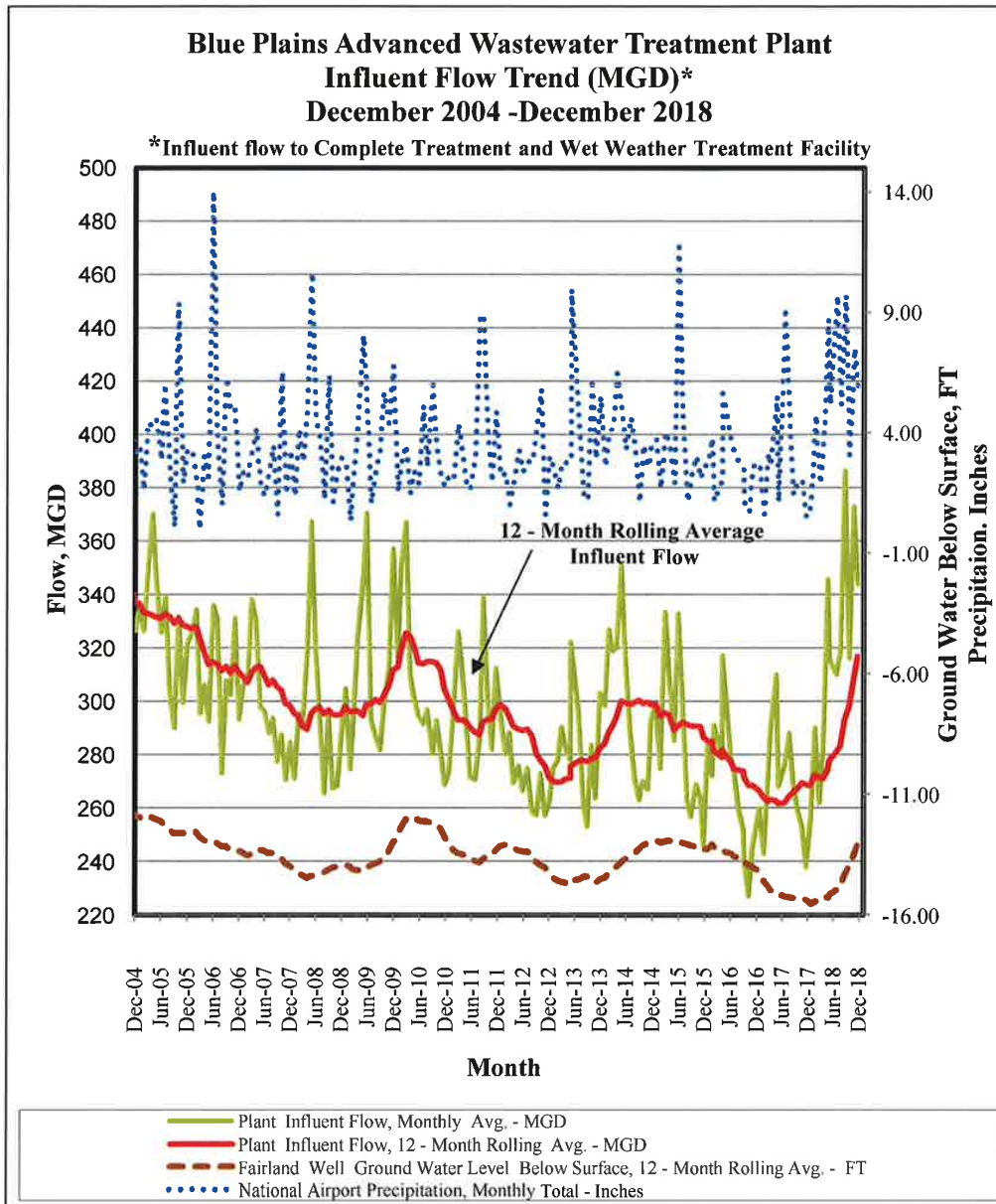
Performance

During the month, a total of 443 million gallons (MG) of CSO captured in the tunnel system, was pumped, and treated using the ECF. A portion of the treated flow or 123 MG was directed to the main plant to maximize complete treatment and the remaining portion of the treated captured combined flow, or 320 MG, was disinfected, dechlorinated and discharged through Outfall 001. The quality of the effluent discharged was within anticipated ranges. Since the commissioning of the first section of the Anacostia River Tunnel Systems and the WWTF on March 20, 2018 and including the wet weather events that occurred in December 2018, the total volume pumped and treated through the WWTF is 4,578 MG. During the same period, over approximately

1,000 wet tons of screenings and grit (trash, debris, sediment) were removed, that would otherwise have been discharged into the Ancostia River.

Plant Influent Flow Trend

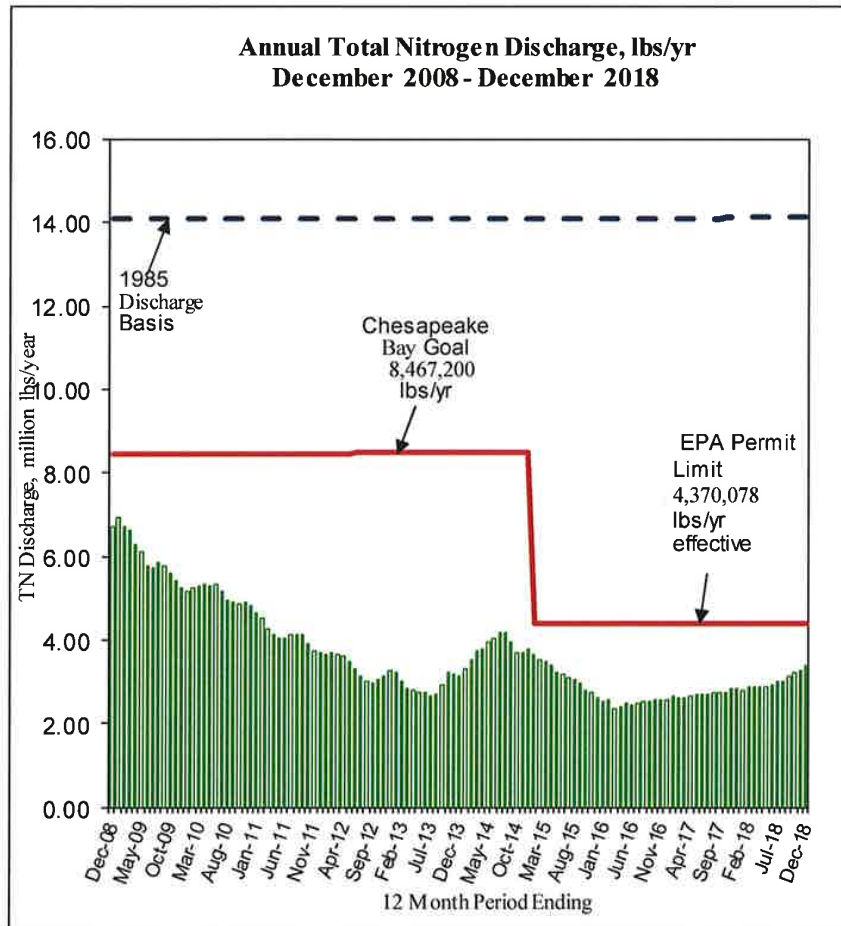
The graph below shows a long-term influent flow trend to the plant ending December 2018. While for any given month the flow is weather dependent, the 12-month rolling average influent flow has remained above 300 MGD since November 2018.



Blue Plains Total Nitrogen (TN) Removal – Performance

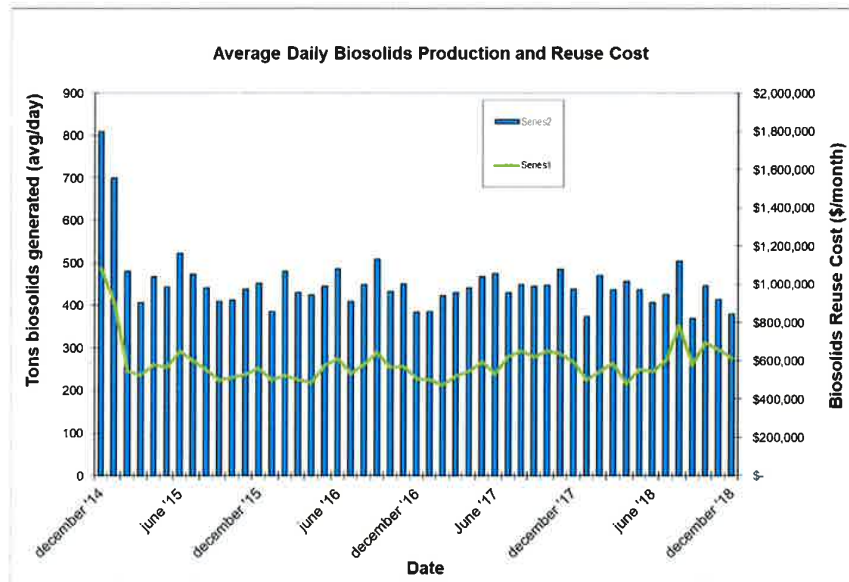
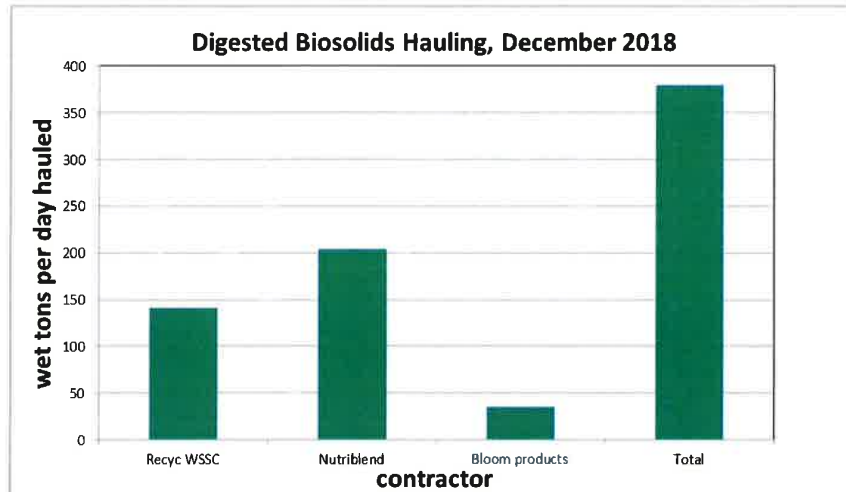
The graph below shows 12-month rolling TN discharge, in million pounds per year, over a 10-year period ending December 2018. In December 2018, the monthly average TN concentration and total load in the complete treatment effluent were 3.85 mg/L and 343,020 lbs., respectively.

The total pounds of nitrogen discharged in the complete treatment effluent during the current calendar year (through December, 2018) is 3,408,820 bs and below the NPDES permit discharge limit of 4,370,078 lbs. /year. The performance corresponds to average flow of 312 MGD and average wastewater temperature above 16 °C observed during the period. The Blue Plains Enhanced Nitrogen Removal Facility (ENRF) is designed to meet the TN discharge limits at influent loads corresponding to annual average flows of 370 MGD and operating wastewater temperatures below 12°C.



RESOURCE RECOVERY

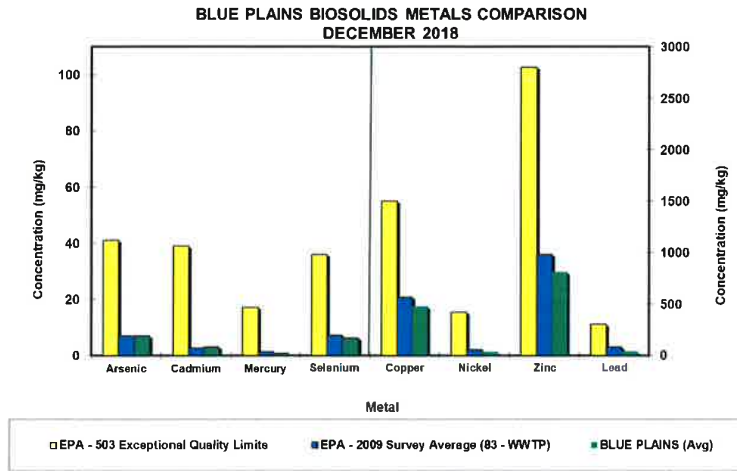
In December, biosolids hauling averaged 379 wet tons per day (wtpd). The average percent solids for the Class A material was 29.6%. The graph below shows average daily biosolids produced and the associated monthly cost for reuse (transportation and application cost) for a three-year period ending December 2018. In December, diesel prices averaged \$3.47/gallon, and with the contractual fuel surcharge, the weighted average biosolids reuse cost (considering the marketed material) was \$43.35 per wet ton.



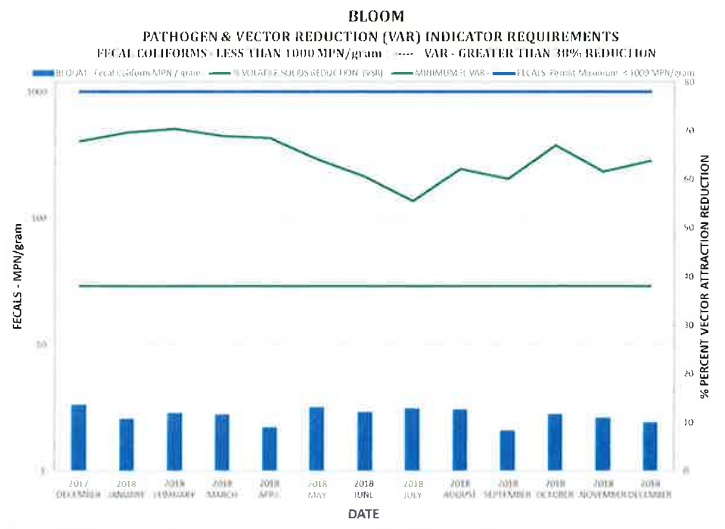
The average quantities of Class A biosolids transported and applied on farms by the two major contracts (WSSC's Recyc and DC Water's Nutriblend) and the quantities marketed as Bloom are shown on the graph above. In December, 1075 wet tons of Bloom were distributed to 8 customers. The marketing goal for the month was 800 tons – this represents the first month that our sales exceeded the goal.

Product Quality

All biosolids produced during the month of December met Class A Exceptional Quality (EQ) requirements required by EPA. The graph below shows the EPA regulated heavy metals average concentrations in the Class A biosolids. The concentrations are considerably below the regulated exceptional quality limits (EPA-503 Exceptional Quality Limits) and the national average (EPA-2009 Survey Average).

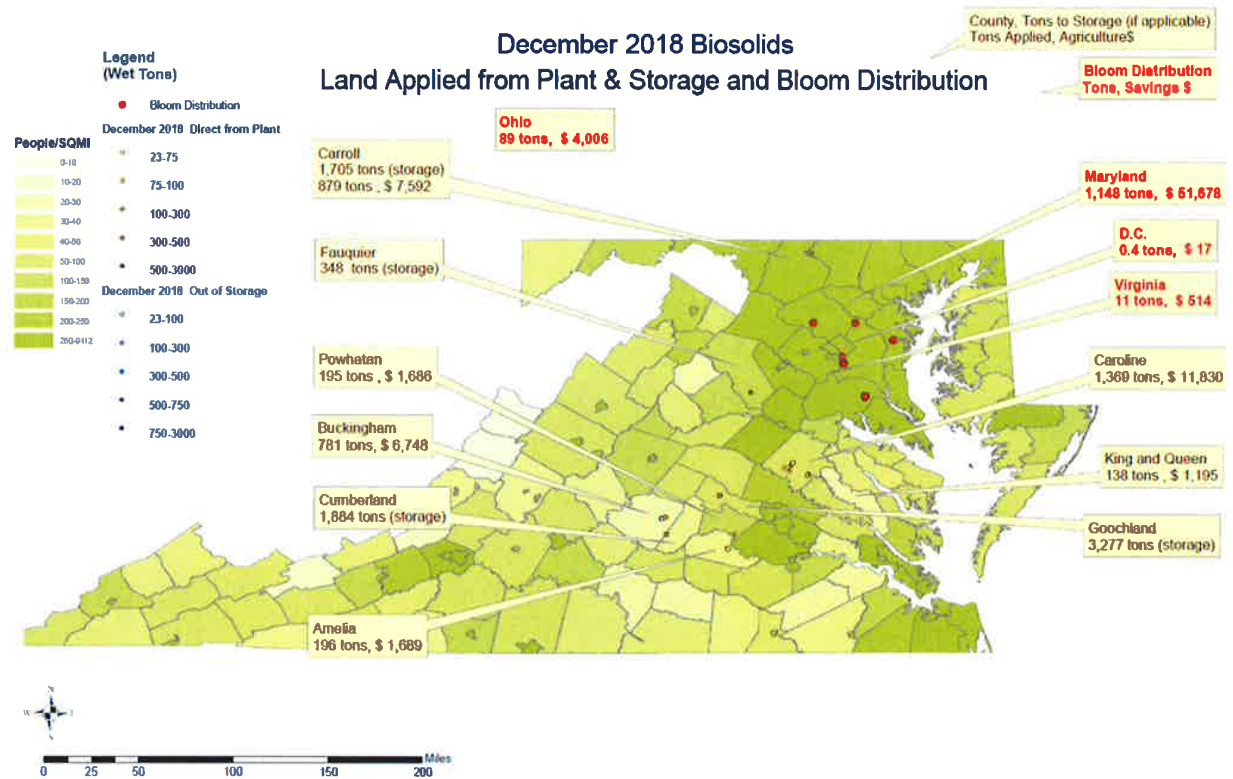


The graph below shows both Vector Attraction Reduction (VAR) and Fecal Coliform (FC) results in the Class A product, both of which are required to maintain the Class A Exceptional Quality (EQ) status. Vector Attraction Reduction is measured by the reduction in Volatile Solids (VS) or organic compounds that are odorous and attract nuisance vectors such as flies and rodent. DC Water anaerobic digesters reduced VS by over 65 percent, well above the required 38 percent minimum. In addition, the graph shows fecal coliforms levels in the Class A product. Fecal coliforms are indicators of disease causing organism (pathogens), and must be below 1,000 MPN/g to meet Class A standards. The FC levels in the Class A product are two orders of magnitude less than the maximum allowable level.



Bloom Reuse and Value Map

This map shows where Bloom was reused on agricultural land and sold into the market as a soil amendment product. The numbers represent the value of the product applied in each county, which accounts for the nitrogen value in the biosolids.



District of Columbia Water and Sewer Authority

Capital Improvement Program Report



**FY-2019 1st Quarter
October 1st through December 31st, 2018**

**Board of Directors
Environmental Quality and Operations Committee**

**David L. Gadis CEO and General Manager
Leonard R. Benson, Senior Vice President and Chief Engineer**

February 2019

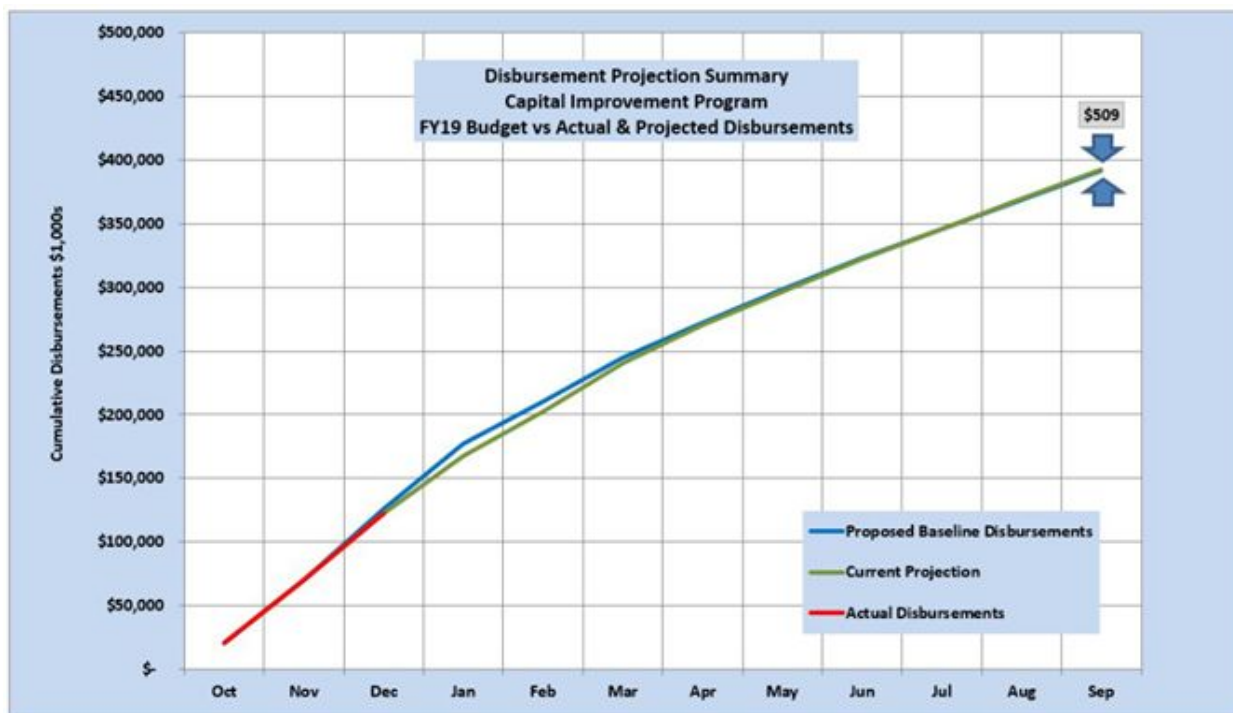


Capital Improvement Program Report 1st Quarter FY2019

CIP Disbursement Performance

Current projected program disbursements through the end of the fiscal year compared with the FY19 baseline are shown in the chart below:

Disbursement Summary



*Note: FY19 Baseline was set in Dec, therefore Oct/Nov Actual disbursements match the Baseline disbursements.

Current projected fiscal year 2019 CIP disbursements are \$392,177,000 through the end of September 2019, which is on track to meet the baseline disbursement projection of \$391,670,000.

Current disbursement projections within the service areas are as follows:

Non-Process Facilities

Baseline Disbursements \$15,309
 Projected Disbursements \$15,248 (\$0.06M below baseline projection)
 There are no significant project variances for this service area.

Wastewater Treatment Service Area

Baseline Disbursements \$69,979,000
 Projected Disbursements \$70,321,000 (\$0.34M above baseline projection)



Capital Improvement Program Report 1st Quarter FY2019

CSO Service Area

Baseline Disbursements \$195,350,000
 Projected Disbursements \$195,199 (\$0.15M below baseline projection)
 There are no significant project variances for this service area.

Stormwater Service Area

Baseline Disbursements \$4,220,000
 Projected Disbursements \$2,791,000 (\$1.4M below baseline projection)
 There are no significant project variances for this service area.

Sanitary Sewer Service Area

Baseline Disbursements \$44,926,000
 Projected Disbursements \$46,024,000 (\$1.1M above baseline projection)
 There are no significant project variances for this service area.

Water Service Area

Baseline Disbursements \$61,884,000
 Projected Disbursements \$62,594,000 (\$0.7M above baseline projection)
 There are no significant project variances for this service area.

Priority 1 Projects (Court Ordered, Stipulated Agreements, etc.)

All priority 1 projects are on schedule and within budget.

Significant Contract Actions Anticipated – 6 Month Look-Ahead

Project	Name	Contract Type	Joint Use?	Cost Range	Committee	BOD
Multiple	Misc. Facilities Upgrades (MFU) 6	Construction	Yes	\$25M - \$30M	EQ & Ops Feb	Mar
BX	Gravity Thickener Upgrades Phase II	Construction	Yes	\$40M - \$45M	EQ & Ops Apr	May
Multiple	Misc. Facilities Upgrades (MFU) 7	Construction	Yes	\$20M - \$30M	EQ & Ops Jun	Jul
Multiple	Water Program Manager	Professional Services	No	\$30M -35M	EQ & Ops Jun	Jul



Capital Improvement Program Report 1st Quarter FY2019

Schedule - Key Performance Indicators Capital Improvement Program

Summary:

For the 1st Quarter, all the Key Performance Indicators (KPIs) completed this period were achieved within 90 days of their target date.

#	Performance
1	KPIs completed within threshold
0	KPIs completed outside threshold
1	Total KPIs completed to date
17	Total KPIs due this year

Reasons for any KPIs not meeting the 90-day threshold this period:

N/A

The table below provides a detailed breakdown of each KPI due date grouped by Quarter:

Quarter	Job Code	Job Name	Activity Name	Due Date (Baseline)	Estimated Complete Date	Actual Complete Date	Variance (positive is early)	Met within 90 days
Q1	DZ02	Div RC-A - Rock Creek Project 1 (GI)	Construction Substantial Completion Milestone (KPI)	9-Oct-18	9-Oct-18	9-Oct-18	0	✓
Q2	J306	National Arboretum Sewer Rehab (Eastside Interceptor)	Construction Substantial Completion	22-Jan-19	22-Jan-19			
Q2	DE02	Small Diameter Water Main Replacement 12B	Construction Substantial Completion	25-Jan-19	25-Jan-19			
Q2	O302	Small Diameter Water Main Replacement 11b	Construction Substantial Completion	1-Feb-19	1-Feb-19			
Q2	MA01	St. Elizabeth Water Tank	Construction Substantial Completion	24-Jan-19	24-Jan-19			
Q2	IL10	Creekbed Sewer Rehabilitation Rock Creek Oregon Avenue	Construction Substantial Completion	19-Feb-19	19-Feb-19			
Q2	AL05	Plantwide Projects Program Management	MFU6 - Start Milestone	1-May-19	1-May-19			



Capital Improvement Program Report 1st Quarter FY2019

Quarter	Job Code	Job Name	Activity Name	Due Date (Baseline)	Estimated Complete Date	Actual Complete Date	Variance (positive is early)	Met within 90 days
Q3	DE01	Small Diameter Water Main Replacement 12A	Construction Substantial Completion	30-Apr-19	30-Apr-19			
Q3	LZ09	PI Phase 6 Pipe Rehab at Clara Barton Pkwy and I495	Design Start Milestone	19-Jun-19	19-Jun-19			
Q3	FQ01	FQ01 Main & O St. PS Intermediate Upgrades	Construction Substantial Completion	30-Jun-19	30-Jun-19			
Q4	QS01	Local Sewer Rehab Project 5-1	Design Start Milestone	15-Jul-19	15-Jul-19			
Q4	C904	66" Low Service Steel Main at 8th Street NE & SE	Construction Substantial Completion	5-Jul-19	5-Jul-19			
Q4	I801	Large Valve Replacements 11R	Construction Substantial Completion	31-Jul-19	31-Jul-19			
Q4	CZ07	Potomac Project 1 (GI)	Substantial Completion Milestone (KPI)	31-Jul-19	31-Jul-19			
Q4	FA03	Soldiers Home Reservoir Upgrade	Construction Start Milestone	8-Aug-19	8-Aug-19			
Q4	UC06	Upgrades to Filtration Influent Pumps 1-10	Construction Start Milestone	13-Aug-19	13-Aug-19			
Q4	OE01	FY15 - Plantwide Storm Drainage Improvements	Construction Start Milestone	17-Sep-19	17-Sep-19			

Table Key: Positive variance = Finishing earlier than baseline plan **Bold** = Actual Date achieved



FY 2019 to FY2028 Proposed CIP Budget

Presentation to the Environmental Quality and Operations Committee

February 21, 2019

Howard Gibbs, Vice Chair

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Leonard R. Benson, Senior Vice President and Chief Engineer



Small Diameter Water Main unlined Cast Iron pipe tuberculation



10th St at Otis St, NE (10" VCP, deformed, broken)

Budget Theme: Stewardship, Accountability & Sustainability



Agenda

- Executive Summary - the CIP 3
- 10-year Options Compared..... 4
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- What we Achieve with the Modified Baseline..... 11
- Program Level spending details 17
- CIP Risks/Sensitivities 34
- Budget Adoption Calendar / Next Steps 36



The CIP

The proposed 10-year disbursements (FY 2019 - FY 2028) of \$4.96 billion increases investment in our aging infrastructure

💧 Capital Construction Projects - \$4.43 billion

- \$1.34 billion fully funds the DC Clean Rivers' project to meet Consent Decree requirements
- Increase of \$44.2 million fully funds Stormwater pump stations, \$68.6 million over ten-years
- \$424.6 million increase in the Sewer Service area to fully fund the pump station requirements, and ramp up to the annual 1% rehabilitation (17.5 mi/year) by FY 2023 for the small sewer lines, ten-year total of \$957 million
- Adds \$214.3 million in the Water Service area for the full replacement of small diameter water mains to achieve 1% per year, totaling \$945 million
- Adds \$122.8 million in the Wastewater Service area to fully fund major rehabilitation for the liquids and biosolids processing projects and meet the NPDES permit, totaling \$978.7 million
- \$138 million to fund Non Process Facilities, like HVAC, Roofs, and Fleet/Sewer Services relocation

💧 Additional Capital Programs - \$527 million

- \$340 million for capital equipment items to meet purchases/replacement of mechanical equipment, operational facilities, vehicle equipment, office renovations, and IT software/hardware
- \$187 million for DC Water's share of WAD's infrastructure improvements to achieve established service levels



10-Year Engineering CIP Options Compared

Service Area	Current Baseline \$3.8B	Modified Baseline \$4.4B	Asset Management \$5.4B
Clean Rivers	Fully funded to meet Consent Decree	Fully funded to meet Consent Decree	Fully funded to meet Consent Decree
Wastewater	Generally funded to meet NPDES Permit and established levels of service	Fully funded to meet NPDES Permit and established levels of service	Fully funded to meet NPDES Permit and established levels of service
Stormwater	Underfunded	Fully funded	Fully funded
Water			
Pump Stations & Storage Facilities	Generally funded to current service levels	Generally funded	Fully funded
Small Diameter WMs	Underfunded; (Funded to meet 1% replacement/rehab goal [11 mi/year]), but only 0.7% a year at full replacement	Underfunded; (Funded to meet 1% per year replacement level - increased cost is due to switch to full replacement [11 mi/year])	Fully funded to ramp up to 2% replacement level [22 mi/year]
Large Diameter WMs	Generally funded	Generally funded	Generally funded
Sewer			
Pump Stations	Underfunded	Fully funded	Fully funded
Sewer Lines < 60" dia.	Substantially underfunded [0.35%; 6.2 mi/year]	Underfunded (Funded to ramp up to 1.0% per year rehabilitation level [17.5 mi/year] by FY23)	Fully funded to ramp up to 2.3% rehabilitation level [40 mi/year]
Sewer Lines ≥ 60"	Generally Funded	Generally Funded	Generally Funded
Non Process	Fully funded for HQ, Fleet and Sewer Operations Facilities, Otherwise Underfunded	Fully funded	Fully funded

'Generally Funded' = What we know or expect to find can be rehabilitated 'Underfunded' = What we know or expect to find is not all funded 'Fully Funded' = All needs known or expected are met



Summary of CIP Options by Program

\$ in thousands

Approved Baseline (+FY28) \$4.1 Billion	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10 yr Total
Non Process Facilities	33,107	18,907	7,860	1,551	25	6,615	7,773	-	-	3,560	79,397
Wastewater Treatment	74,617	77,853	87,960	89,820	69,560	51,607	62,172	117,623	129,252	123,351	883,814
Combined Sewer Overflow	200,343	160,554	148,121	203,086	164,508	79,692	65,611	135,797	92,819	90,884	1,341,415
Stormwater	4,909	2,400	2,312	5,839	1,212	1,784	1,642	1,276	2,133	10,102	33,610
Sanitary Sewer	32,947	34,046	53,050	74,492	73,917	75,912	58,882	60,769	38,672	140,615	643,303
Water	45,747	84,256	62,341	48,241	53,471	88,055	99,661	101,344	89,510	118,378	791,006
Engineering CIP Total	391,670	378,015	361,644	423,029	362,694	303,666	295,742	416,809	352,386	486,890	3,772,545
Additional Capital Programs	47,448	42,327	41,037	22,618	22,618	22,618	22,618	22,618	22,618	22,619	289,139
Approved Total CIP	439,118	420,342	402,681	445,647	385,312	326,284	318,360	439,427	375,004	509,509	4,061,684

Modified Baseline Program \$5.0 Billion	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10 yr Total
Non Process Facilities	15,309	36,002	26,793	20,665	6,831	11,058	10,396	3,901	3,553	3,560	138,067
Wastewater Treatment	69,979	66,620	76,510	97,635	110,047	82,434	81,249	133,338	137,575	123,351	978,738
Combined Sewer Overflow	195,350	151,427	149,230	199,588	160,057	77,935	64,541	150,095	102,660	90,884	1,341,767
Stormwater	4,220	8,571	8,118	8,586	3,725	4,987	7,564	7,494	5,239	10,102	68,608
Sanitary Sewer	44,927	43,646	57,249	85,588	97,220	98,194	115,011	140,020	134,664	140,615	957,135
Water	61,884	71,720	96,300	101,039	84,395	96,491	103,325	106,145	105,338	118,378	945,015
Engineering CIP Total	391,669	377,987	414,200	513,102	462,275	371,098	382,087	540,993	489,029	486,890	4,429,330
Additional Capital Programs	47,448	42,355	52,816	48,622	67,731	51,509	68,272	44,461	46,637	57,600	527,450
Total Modified Baseline CIP	439,117	420,342	467,016	561,724	530,006	422,607	450,359	585,453	535,665	544,490	4,956,780
Increases vs Approved CIP	(1)	(0)	64,335	116,077	144,694	96,323	131,999	146,026	160,661	34,981	895,096

Asset Management \$6.5 Billion	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10 yr Total
Non Process Facilities	29,858	25,023	24,844	13,827	7,368	14,819	8,474	4,699	4,203	4,209	137,324
Wastewater Treatment	79,332	61,577	90,835	95,631	98,586	101,248	128,046	165,588	138,019	117,551	1,076,413
Combined Sewer Overflow	194,678	156,246	151,227	202,584	159,117	73,113	61,239	151,243	102,210	91,453	1,343,109
Stormwater	6,076	10,216	5,957	12,393	10,502	11,957	14,056	14,873	13,625	9,845	109,502
Sanitary Sewer	39,661	65,672	73,524	106,648	141,754	169,990	189,267	196,194	192,779	192,746	1,368,234
Water	62,113	81,566	122,361	105,433	125,400	168,242	182,081	180,030	176,039	179,383	1,382,647
Engineering CIP Total	411,717	400,299	468,748	536,515	542,727	539,370	583,163	712,626	626,875	595,188	5,417,230
Additional Capital Programs	51,996	53,202	56,493	76,500	89,975	121,266	81,928	58,231	395,774	55,895	1,041,261
Total AM CIP	463,712	453,501	525,241	613,015	632,703	660,636	665,091	770,857	1,022,650	651,083	6,458,490
Increases vs Approved CIP	24,595	33,159	122,560	167,367	247,391	334,353	346,732	331,430	647,646	141,574	2,396,806



10-Year CIP: Capital Projects

Modified Baseline CIP

- 1) FY19 & FY20 Total spending for each year has been kept at FY18-27 board approved baseline levels to remain congruent with previously approved 5% rate increases
- 2) Ramp-up to modified Baseline CIP beginning in FY21

Service Area (\$000's)	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	10-Yr Total	Last Year's CIP	(Increase) /Decrease
Non-Process Facilities	15,309	36,002	26,793	20,665	6,831	11,058	10,396	3,901	3,553	3,560	138,067	108,032	(30,036)
Wastewater Treatment	69,979	66,620	76,510	97,635	110,047	82,434	81,249	133,338	137,575	123,351	978,738	855,948	(122,790)
Clean Rivers	187,859	147,208	139,786	191,573	151,411	64,415	55,689	144,295	97,067	83,286	1,262,589	1,313,196	50,607
Combined Sewer	7,491	4,219	9,444	8,015	8,646	13,520	8,852	5,800	5,593	7,598	79,178	119,151	39,973
Stormwater	4,220	8,571	8,118	8,586	3,725	4,987	7,564	7,494	5,239	10,102	68,608	24,452	(44,156)
Sanitary Sewer	44,927	43,646	57,249	85,588	97,220	98,194	115,011	140,020	134,664	140,615	957,135	532,490	(424,645)
Water	61,884	71,720	96,300	101,039	84,395	96,491	103,325	106,145	105,338	118,378	945,015	730,672	(214,343)
CAPITAL PROJECTS	391,669	377,987	414,200	513,102	462,275	371,098	382,087	540,993	489,029	486,890	4,429,330	3,683,941	(745,389)
Capital Equipment	34,518	26,823	36,907	33,086	32,725	36,680	35,540	35,426	34,339	34,279	340,324	198,133	(142,191)
Washington Aqueduct	12,930	15,532	15,909	15,536	35,006	14,830	32,731	9,034	12,298	23,321	187,127	120,052	(67,075)
ADDITIONAL CAPITAL PROGRAMS	47,448	42,355	52,816	48,622	67,731	51,509	68,272	44,461	46,637	57,600	527,450	318,185	(209,265)
TOTAL CIP	439,117	420,342	467,016	561,724	530,006	422,608	450,358	585,454	535,665	544,490	4,956,780	4,002,126	(954,655)
Last Years CIP	439,118	420,342	402,681	445,647	385,312	326,284	318,360	439,427	375,004		4,002,126		
(Increase)/Decrease	1	(0)	(64,335)	(116,077)	(144,694)	(96,324)	(131,998)	(146,027)	(160,661)	(544,490)	(954,655)		



Recommendation Summary

- Current Board-approved Baseline CIP is \$4.0 billion
 - Core CIP is \$3.7 billion, plus \$0.3 billion for Washington Aqueduct & Capital Equipment
- Examination over the last year indicates that the current approved Baseline CIP could present risks to our customers and additional investment is recommended
 - Non Process Facilities require additional funding for HVAC & Roofing replacement programs, Main & O Seawall restoration and historic restoration work
 - Wastewater requires additional funding
 - Three critical wastewater facilities are approaching end of service life during this period
 - Small diameter water infrastructure funded at 1% renewal goal
 - But we now know that replacement is a more prudent approach than rehabilitation, and to meet the 1% goal, additional resources are needed
 - As water mains age, the risk of failure increases
 - The average age is currently over 80 years vs expected service life of 100 to 120 years
 - Water quality complaints will likely increase





Recommendation Summary (cont.)

- Examination over the last year indicates that the current approved Baseline CIP could present risks to our customers and additional investment is recommended
 - As sewer mains age, the risk of failure increases (The average age is currently over 90 years vs expected service life of 110 to 120 years). Small sewer lines are substantially underfunded
 - Stormwater and Sewer pump stations are underfunded
 - Major sewers and large diameter water mains may not be sufficiently funded depending on condition assessment results
 - Risks to our customers include sewer failure, and service disruptions





Alternative: Full Asset Management

- Full \$6.5 billion asset management plan would be most aggressive
 - DC Clean Rivers, Wastewater and Non Process Facilities: Fully funded
 - Water:
 - Pumping stations, storage facilities fully funded
 - Small Diameter Water Main Replacement program fully funded to ramp up to 2% asset management replacement level
 - Large diameter generally funded
 - Sewer/Stormwater:
 - Sewer lines rehabilitation program fully funded to ramp up to 2.7% asset management level
 - Pump stations fully funded
 - But with Clean Rivers expenditures occurring through 2030, this would impact affordability
 - Rates would more than double by 2028
 - Amount of borrowing would be significantly higher than the current financial plan
 - This would significantly burden DC Water customers
 - This is why we are recommending the Modified Baseline CIP for approval
-



What we achieve with the Modified Baseline Plan in FY21 and beyond? *Striking a Balance*

- The Modified Baseline CIP balances financial and affordability concerns with additional investment in our assets that begin to address aging water and sewer infrastructure during this 10 year period
 - Non Process Facilities - \$58 million increase
 - Additional facilities needs including HVAC and roof rehabilitation
 - Wastewater - \$95 million increase
 - Upgrades to Effluent Filters, Secondary and Nitrification treatment processes
 - Stormwater - \$35 million increase
 - Upgrading of storm water pump stations, increasing from \$1M/year to an average of \$5M/year from FY20 onwards



What we achieve with the Modified Baseline Plan in FY21 and beyond? *Striking a Balance* (cont.)

💧 Sanitary Sewers - \$314 million increase

- Condition Assessment:
 - Local Sewers (<60-in), from 35 mi/year to 69 mi/year (50-year cycle to 25-year cycle)
 - Major Sewers (≥60-in), from 7 mi/year to 11 mi/year (25-year cycle to 15-year cycle)
- Rehabilitation:
 - Local Sewers (<60-in), 6 mi/year to 17.5 mi/year
 - Major Sewers (≥60-in), funds address what we know or expect to find
 - Sewer On-going (funding for emergency repairs), increased by 32% (from \$11M/year to \$14.5M/year)

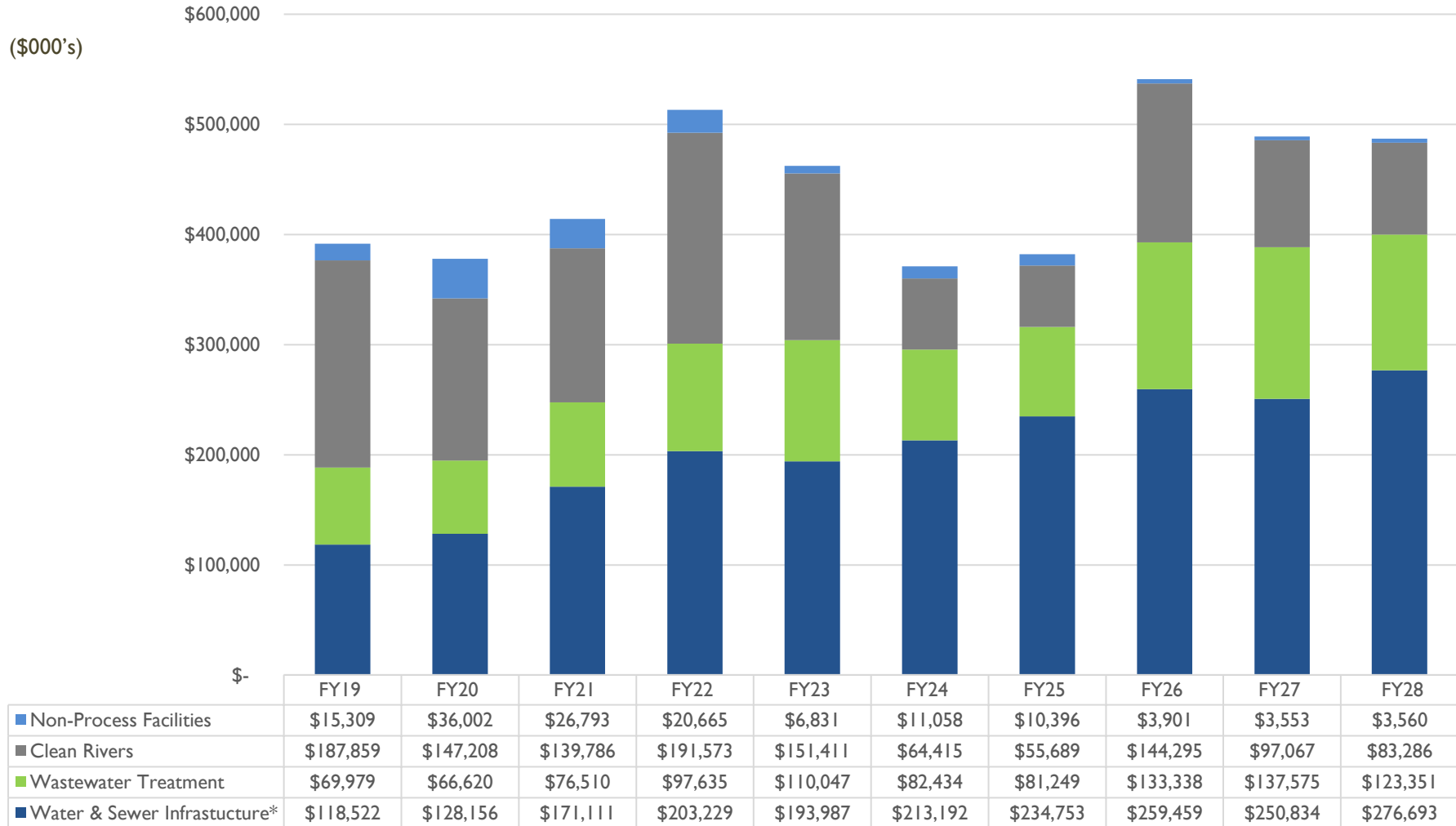
💧 Water - \$154 million increase

- Rehabilitation:
 - Small Dia. Water Mains (<16-in), from 8 mi/year to 11 mi/year
 - Lead Service Lines Replacement, from 150 to 1,000 in public space
 - Water On-going (funding for emergency repairs), increased by 45% (from \$11M/year to \$16M/year)



10-Year CIP Engineering Capital Projects (cont.)

Modified Baseline CIP



* Includes the following Service Areas: Water, Sanitary Sewer, Stormwater, and non-Clean Rivers portion of Combined Sewer Overflow

- Cash disbursements basis



Prioritization of Spending

Modified Baseline CIP

Higher Priority → Lower Priority

	1A		2A		2B	2C	2D	3A		3B	
	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	
											((\$000's))
FY 2019	207,756	53%	8,861	33,472	29,622	8,132	66,939	17%	36,887	\$391,669	
FY 2020	150,388	40%	3,821	67,776	31,559	501	77,500	21%	46,442	\$377,987	
FY 2021	139,790	34%	5,858	72,529	43,818	924	89,926	22%	61,355	\$414,200	
FY 2022	191,411	37%	6,928	53,535	45,035	3,315	126,253	25%	86,625	\$513,102	
FY 2023	151,297	33%	2,099	42,382	48,434	1,179	131,508	28%	85,376	\$462,275	
FY 2024	64,692	17%	5,238	50,055	28,295	163	147,753	40%	74,902	\$371,098	
FY 2025	55,919	15%	12,236	54,634	29,329	675	156,816	41%	72,478	\$382,087	
FY 2026	144,295	27%	18,848	48,081	35,989	2,384	158,864	29%	132,533	\$540,993	
FY 2027	97,067	20%	8,604	44,926	23,933	89	147,874	30%	166,535	\$489,029	
FY 2028	83,286	17%	1,511	65,369	18,116	-	162,606	33%	156,002	\$486,890	
Total	\$1,285,901		\$74,004	\$532,760	\$334,131	\$17,361	\$1,266,038		\$919,135	\$4,429,330	
% of Total	29.0%		1.7%	12.0%	7.5%	0.4%	28.6%		20.8%		

- Cash disbursements basis



Major Initiatives Funded in Modified Baseline CIP

- **DC Clean Rivers (\$1,262M)**
 - Anacostia LTCP Projects (\$631M)
 - Potomac LTCP Projects (\$477M)
 - Rock Creek LTCP Projects (\$155M)

- **Wastewater Blue Plains (\$978M)**
 - Enhanced Nitrogen Removal Facilities (\$78M)
 - Liquid Processing (\$553M)
 - Solids Processing (\$132M)
 - Plantwide (\$216M)

- **Water Program (\$945M)**
 - Water Distribution System (\$579M)
 - Water Lead Program (\$63M)
 - Water Pumping Facilities (\$37M)
 - Water Storage Facilities (\$57M)
 - Water Program & Asset Management (\$58M)
 - Water Ongoing (\$150M)

\$'s – Projected FY 2019 - FY 2028 Disbursements



Major Initiatives Funded in Modified Baseline CIP (cont.)

💧 Sewer Program (\$957M)

- Sanitary Collection Sewers (\$242M)
- Sanitary Pumping Facilities (\$90M)
- Sanitary Interceptor/Trunk/Force Sewers (\$442M)
- Sewer Program & Asset Management (\$42M)
- Sewer Ongoing (\$142M)

💧 Non-Process (\$138M)

- New Headquarters Building (\$10M)
- Main & O Redevelopment Efforts (\$39M)
- Misc. including Roof and HVAC replacements and Historic Building restoration (\$62M)

💧 CSO (\$79M)

- Pump Station & Facilities (\$44M)
- Large Sewers (\$12M)
- Program Management (\$23M)

\$'s – Projected FY 2019 - FY 2028 Disbursements



What we achieve with the Modified Baseline Plan in FY21 and beyond

	Current Baseline	Modified Baseline	Increase (Decrease)
Non Process Facilities	79,397	138,067	58,670
Wastewater Treatment	883,814	978,738	94,924
Clean Rivers	1,228,168	1,262,589	34,421
Combined Sewer Overflow	113,247	79,178	(34,069)
Stormwater	33,610	68,608	34,998
Sanitary Sewer	643,303	957,135	313,832
Water	791,006	945,015	154,009
Engineering CIP Total	3,772,545	4,429,330	656,784

(The following slides provide a detailed breakdown of the Programs within each Service Area)

Service Area	Asset	Current Baseline \$3.8B	Modified Baseline \$4.4B
Non Process		Generally funded (HQ building)	Fully funded – Added HVAC & Roofing needs Anacostia PS, Main & O Seawall Restoration
Clean Rivers		Fully funded to meet Consent Decree	Fully funded to meet Consent Decree
Wastewater		Generally funded to meet NPDES Permit and established levels of service	Fully funded to meet NPDES Permit and established levels of service
Stormwater		Underfunded	Fully funded
Water	Pump Stations & Storage Facilities	Generally funded to current service levels	Generally funded
	Small Diameter WMs	Underfunded; (Funded to meet 1% replacement/rehab goal [11 mi/year]), but only 0.7% a year at full replacement	Underfunded; (Funded to meet 1% per year replacement level -increased cost is due to switch to full replacement [11 mi/year])
	Large Dia. WMs	Generally funded	Generally funded
Sewer	Pump Stations	Underfunded	Fully funded
	Sewer Lines < 60” dia.	Substantially underfunded [0.35%; 6.2 mi/year]	Underfunded (Funded to ramp up to 1.0% per year rehabilitation level [17.5 mi/year] by FY23)
	Sewer Lines ≥ 60”	Generally Funded	Generally Funded



Proposed FY19 – FY28 CIP

The overall increase to Capital Projects over the FY19-28 period is \$656.8M

	5C Run FY 2019 - FY 2028 Proposed Disbursement Plan*											Approved Base (FY19-28)		
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	10-Yr Total	Delta	
NON PROCESS FACILITIES														
Fleet/Sewer Facilities (DC Reimbursement)	\$ 2,037	\$ 22,086	\$ 5,808	\$ 219	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,150		
Fleet/Sewer Facilities (DCW Costs)	1,075	6,012	1,331	-	-	-	-	-	-	-	-	8,418		
Subtotal - Fleet/Sewer Facilities	3,112	28,098	7,139	219	-	-	-	-	-	-	-	38,568		
Other Facilities	12,197	7,903	19,654	20,446	6,831	11,058	10,396	3,901	3,553	3,560		99,499		
Subtotal: Facility Land Use	15,309	36,002	26,793	20,665	6,831	11,058	10,396	3,901	3,553	3,560	138,067	79,397	58,670	
WASTEWATER TREATMENT														
Liquid Processing	21,488	30,915	37,087	48,495	36,646	38,979	41,124	84,082	107,253	107,354	553,422	538,638	14,784	
Plantwide	15,777	20,223	18,885	25,882	39,576	24,810	17,052	25,410	20,726	7,341	215,681	207,314	8,367	
Solids Processing	6,672	10,511	19,988	22,645	30,530	15,286	12,862	3,899	1,186	8,304	131,883	69,524	62,359	
Enhanced Nitrogen Removal Facilities	26,042	4,972	549	614	3,295	3,359	10,211	19,947	8,411	351	77,751	68,337	9,414	
Subtotal	69,979	66,620	76,510	97,635	110,047	82,434	81,249	133,338	137,575	123,351	978,738	883,814	94,924	
COMBINED SEWER OVERFLOW														
DC Clean Rivers	187,859	147,208	139,786	191,573	151,411	64,415	55,689	144,295	97,067	83,286	1,262,589	1,228,168	34,421	
Program Management	1,685	1,241	743	1,482	2,653	4,046	4,310	2,871	1,745	2,718	23,494	24,244	(750)	
Combined Sewer	5,805	2,978	8,701	6,533	5,994	9,473	4,542	2,930	3,848	4,880	55,684	89,003	(33,319)	
Subtotal	195,350	151,427	149,230	199,588	160,057	77,935	64,541	150,095	102,660	90,884	1,341,767	1,341,415	351	
STORMWATER														
Local Drainage	8	17	244	822	770	768	1,410	769	156	3,084	8,048	6,608	1,439	
On-Going	1,056	511	598	929	706	742	451	735	713	919	7,360	7,456	(97)	
Pumping Facilities	1,996	7,877	6,966	6,429	1,909	3,218	5,492	5,792	4,100	5,773	49,553	16,478	33,074	
DDOT	-	-	-	-	-	-	-	-	-	-	-	-	-	
Research and Program Management	1,078	84	223	319	341	260	212	198	269	326	3,310	1,529	1,781	
Trunk/Force Sewers	82	82	87	86	-	-	-	-	-	-	337	1,537	(1,200)	
Subtotal	4,220	8,571	8,118	8,587	3,725	4,987	7,564	7,494	5,239	10,102	68,608	33,610	34,998	
SANITARY SEWER														
Collection Sewers	5,434	2,476	10,012	20,547	21,664	24,747	33,310	42,591	44,337	36,594	241,712	162,211	79,502	
On-Going	13,653	12,842	13,483	13,711	13,667	14,185	15,019	15,253	15,111	15,312	142,239	111,415	30,824	
Pumping Facilities	2,248	1,619	4,868	6,649	6,495	4,935	9,975	10,882	12,457	29,612	89,739	35,992	53,748	
Program Management	3,321	2,452	4,752	6,868	5,073	3,942	3,127	3,334	4,126	4,923	41,919	46,641	(4,722)	
Interceptor/Trunk Force Sewers	20,270	24,257	24,133	37,813	50,321	50,384	53,579	67,961	58,633	54,174	441,526	287,045	154,480	
Subtotal	44,927	43,646	57,249	85,588	97,220	98,194	115,011	140,020	134,664	140,615	957,135	643,303	313,831	
WATER														
Distribution Systems	30,729	40,948	63,054	58,127	49,881	61,921	68,714	62,636	60,526	82,102	578,638	532,054	46,584	
Lead Program	4,338	5,928	6,723	6,307	6,715	7,438	6,544	5,830	6,654	6,706	63,182	16,985	46,197	
On-Going	10,080	10,238	10,126	12,297	13,351	15,199	16,789	18,583	20,447	22,981	150,091	118,704	31,386	
Pumping Facilities	1,199	2,513	6,282	8,110	2,850	3,947	3,095	3,502	3,523	1,974	36,993	28,576	8,417	
DDOT	992	76	3	5	-	-	-	-	-	-	1,076	699	376	
Storage Facilities	9,384	5,223	2,549	8,940	7,526	3,913	3,770	8,779	7,098	-	57,181	35,462	21,719	
Program Management	5,163	6,795	7,562	7,255	4,073	4,073	4,414	6,815	7,089	4,614	57,854	58,526	(672)	
Subtotal	61,884	71,720	96,300	101,039	84,395	96,491	103,325	106,145	105,338	118,377	945,015	791,006	154,008	
CAPITAL PROJECTS*	391,669	377,987	414,200	513,102	462,275	371,098	382,087	540,993	489,029	486,890	4,429,330	3,772,545	656,782	



Blue Plains Program Details

	5C Run FY 2019 - FY 2028 Proposed Disbursement Plan*											Approved Base (FY19-28)	
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY2027	FY2028	10-Yr Total	10-Yr Total	Delta
WASTEWATER TREATMENT													
Liquid Processing	21,488	30,915	37,087	48,495	36,646	38,979	41,124	84,082	107,253	107,354	553,422	538,638	14,784
Plantwide	15,777	20,223	18,885	25,882	39,576	24,810	17,052	25,410	20,726	7,341	215,681	207,314	8,367
Solids Processing	6,672	10,511	19,988	22,645	30,530	15,286	12,862	3,899	1,186	8,304	131,883	69,524	62,359
Enhanced Nitrogen Removal Facilities	26,042	4,972	549	614	3,295	3,359	10,211	19,947	8,411	351	77,751	68,337	9,414
Subtotal	69,979	66,620	76,510	97,635	110,047	82,434	81,249	133,338	137,575	123,351	978,738	883,814	94,924
Approved Baseline FY19-27	74,617	77,853	87,960	89,820	69,560	51,607	62,172	117,623	129,252	123,351	883,814		
Blue Plains Delta last year/this year	(4,638)	(11,233)	(11,450)	7,815	40,487	30,827	19,077	15,715	8,323	0	94,924		(\$ in 1,000's)

Program Area	Current Baseline	Modified Baseline	Increase
Liquid Processing	Blue plains is Generally funded to meet NPDES Permit and established levels of service	Fully funded to meet NPDES Permit and established levels of service. <ul style="list-style-type: none"> • TDPS & ECF Rehabilitation within 10-yr period • Program Management funding was increased to align with new project spending 	\$15M
Plantwide	Blue plains is Generally funded to meet NPDES Permit and established levels of service	Fully funded to meet NPDES Permit and established levels of service. <ul style="list-style-type: none"> • OMAP Startup and commissioning consolidation 	\$8M
Solids Processing	Blue plains is Generally funded to meet NPDES Permit and established levels of service	Fully funded to meet NPDES Permit and established levels of service. Solids Processing \$62M increase includes new projects for; <ul style="list-style-type: none"> • Final Dewatering Facility (FDF) Rehab • Centrifuge Pre-Dewatering Rehab • Cambi Thermal Hydrolysis Rehab • Digestion Rehab • CHP Rehab 	\$62M
Enhanced Nitrogen Removal Facilities (ENRF)	Blue plains is Generally funded to meet NPDES Permit and established levels of service	Fully funded to meet NPDES Permit and established levels of service. The increased spending in the ENR program results from an extension of the closeout date from FY2018 into FY2019 for the recent contracts related to the wet weather treatment facility	\$9M



Water Program Details

	5C Run FY 2019 - FY 2028 Proposed Disbursement Plan*											Approved Base (FY19-28)	
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY2027	FY2028	10-Yr Total	10-Yr Total	Delta
WATER													
Distribution Systems	30,729	40,948	63,054	58,127	49,881	61,921	68,714	62,636	60,526	82,102	578,638	532,054	46,584
Lead Program	4,338	5,928	6,723	6,307	6,715	7,438	6,544	5,830	6,654	6,706	63,182	16,985	46,197
On-Going	10,080	10,238	10,126	12,297	13,351	15,199	16,789	18,583	20,447	22,981	150,091	118,704	31,386
Pumping Facilities	1,199	2,513	6,282	8,110	2,850	3,947	3,095	3,502	3,523	1,974	36,993	28,576	8,417
DDOT	992	76	3	5	-	-	-	-	-	-	1,076	699	376
Storage Facilities	9,384	5,223	2,549	8,940	7,526	3,913	3,770	8,779	7,098	-	57,181	35,462	21,719
Program Management	5,163	6,795	7,562	7,255	4,073	4,073	4,414	6,815	7,089	4,614	57,854	58,526	(672)
Subtotal	61,884	71,720	96,300	101,039	84,395	96,491	103,325	106,145	105,338	118,378	945,015	791,006	154,008
Approved Baseline FY19-27	45,747	84,256	62,341	48,241	53,471	88,055	99,661	101,344	89,510	118,378	791,006		
Water Delta last year/this year	16,137	(12,536)	33,959	52,798	30,924	8,436	3,664	4,801	15,828	0	154,008		(\$ in 1,000's)

Program Area	Current Baseline	Modified Baseline	Increase
Dist. Systems Small Diameter Water Mains (SDWM)	SDWM: Underfunded; (Funded to meet 1% replacement/rehab goal [11 mi/year]), but only 0.7% a year at full replacement (Large Dia. Water Mains Generally funded)	Underfunded; (Funded to meet 1% per year replacement level - increased cost is due to switch to full replacement [11 mi/year]) (Large Dia. Water Mains Generally funded)	\$47M
Lead Program	Funded per the \$2M limit & expected SDWMs	Funded per the expected increase in the on demand program and the corresponding increase in SDWMs Lead Serviceline Replacement work	\$46M
On-Going	Funded to current service levels	Funded to current service levels anticipating some increases based on recent historical trends	\$31M
Water Pumping Facilities	Generally funded to current service levels	Generally funded, \$8M increase includes Water System Sensor Program (WaSSP): Water Quality & Pressure Management	\$8.4M
DDOT	Funded to meet DDOT commitments	Future DDOT projects are included in the Dist Systems program area funding	\$0.4M
Storage Facilities	Generally funded to current service levels	Generally funded to current service levels. Increase includes; St Elizabeth Tower (\$5M) Anacostia First & Second high storage projects (\$17M).	\$22M
Water PgM	Generally Funded – Note; Water program management includes Condition assessments	Generally Funded Funding reduced in FY19 to meet ceiling	(\$0.7M)



Sewer Program Details

	5C Run FY 2019 - FY 2028 Proposed Disbursement Plan*											Approved Base (FY19-28)	
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	10-Yr Total	Delta
SANITARY SEWER													
Collection Sewers	5,434	2,476	10,012	20,547	21,664	24,747	33,310	42,591	44,337	36,594	241,712	162,211	79,502
On-Going	13,653	12,842	13,483	13,711	13,667	14,185	15,019	15,253	15,111	15,312	142,239	111,415	30,824
Pumping Facilities	2,248	1,619	4,868	6,649	6,495	4,935	9,975	10,882	12,457	29,612	89,739	35,992	53,748
Program Management	3,321	2,452	4,752	6,868	5,073	3,942	3,127	3,334	4,126	4,923	41,919	46,641	(4,722)
Interceptor/Trunk Force Sewers	20,270	24,257	24,133	37,813	50,321	50,384	53,579	67,961	58,633	54,174	441,526	287,045	154,480
Subtotal	44,927	43,646	57,249	85,588	97,220	98,194	115,011	140,020	134,664	140,615	957,135	643,303	313,831
Approved Baseline FY19-27	32,947	34,046	53,050	74,492	73,917	75,912	58,882	60,769	38,672	140,615	643,303		
Sewer Delta last year/this year	11,979	9,600	4,198	11,096	23,303	22,282	56,129	79,251	95,992	0	313,831		(\$ in 1,000's)

Program Area	Current Baseline	Modified Baseline	Increase
Collection Sewers	Sewer Lines < 60” dia. Substantially underfunded [0.35%; 6.2 mi/year]	Sewer Lines < 60” dia. Underfunded (Funded to ramp up to 1.0% per year rehabilitation level [17.5 mi/year] by FY23 \$80M increase includes; <ul style="list-style-type: none"> • Ramp-up for local sewer rehabilitation work • Ramp-up for local sewer assessments 	\$80M
Sewer Ongoing	Funded to current service levels	Funded to current service levels anticipating some increases based on recent historical trends	\$31M
Sewer Pumping Facilities	Underfunded	Fully funded to ramp up to 2.3% rehabilitation level [40 mi/year]	\$54M
Sewer Program Management	Generally Funded – Note; Program management includes Condition assessments	Generally Funded Near term funding reduced to align with current projects.	(\$5M)
Sewer Interceptor /Trunk Force Sewers	Sewer Lines ≥ 60” Generally Funded	Sewer Lines ≥ 60” Generally Funded \$154M increase includes; <ul style="list-style-type: none"> • Project increases identified for Potomac Interceptor • Sewer Creekbed project costs increase • The overall spending forecast increased based on reassessment of schedule performance for this program area 	\$154M



Storm Program Details

	5C Run FY 2019 - FY 2028 Proposed Disbursement Plan*											Approved Base (FY19-28)	
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY2027	FY2028	10-Yr Total	10-Yr Total	Delta
STORMWATER													
Local Drainage	8	17	244	822	770	768	1,410	769	156	3,084	8,048	6,608	1,439
On-Going	1,056	511	598	929	706	742	451	735	713	919	7,360	7,456	(97)
Pumping Facilities	1,996	7,877	6,966	6,429	1,909	3,218	5,492	5,792	4,100	5,773	49,553	16,478	33,074
DDOT	-	-	-	-	-	-	-	-	-	-	-	-	-
Research and Program Management	1,078	84	223	319	341	260	212	198	269	326	3,310	1,529	1,781
Trunk/Force Sewers	82	82	87	86	-	-	-	-	-	-	337	1,537	(1,200)
Subtotal	4,220	8,571	8,118	8,587	3,725	4,987	7,564	7,494	5,239	10,102	68,608	33,610	34,998
Approved Baseline FY19-27	4,909	2,400	2,312	5,839	1,212	1,784	1,642	1,276	2,133	10,102	33,610		
Stormwater Delta last year/this year	(688)	6,171	5,806	2,747	2,513	3,203	5,921	6,219	3,106	(0)	34,998		(\$ in 1,000's)

Program Area	Current Baseline	Modified Baseline	Increase
Stormwater local drainage	Storm Service Area generally funded	Storm Service Area generally funded Local drainage \$1.4M increase	\$1.4M
Storm Ongoing	Funded to current service levels	Funded to current service levels	-
Stormwater Pumping Facilities	Stormwater Pump Stations underfunded	Stormwater Pump Stations fully funded , increase includes Floodproofing & Generators projects and Stormwater pumping station rehabilitations	\$33M
DDOT	This program is being absorbed into local drainage program		-
Storm PgM	Storm program management generally funded	Storm program management generally funded , increase needed for additional Pumping Station work	\$1.8M
Trunk/Force Storm sewers	This program is being absorbed into the Trunk Sewer Program		(\$1.2M)



Non-Process Program Details

	5C Run FY 2019 - FY 2028 Proposed Disbursement Plan*											Approved Base (FY19-28)	
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY2027	FY2028	10-Yr Total	10-Yr Total	Delta
NON PROCESS FACILITIES													
Fleet/Sewer Facilities (DC Reimbursement)	\$ 2,037	\$ 22,086	\$ 5,808	\$ 219	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,150		
Fleet/Sewer Facilities (DCW Costs)	1,075	6,012	1,331	-	-	-	-	-	-	-	8,418		
Subtotal - Fleet/Sewer Facilities	3,112	28,098	7,139	219	-	-	-	-	-	-	38,568		
Other Facilities	12,197	7,903	19,654	20,446	6,831	11,058	10,396	3,901	3,553	3,560	99,499		
Subtotal: Facility Land Use	15,309	36,002	26,793	20,665	6,831	11,058	10,396	3,901	3,553	3,560	138,067	79,397	58,670
Approved Baseline FY19-27	33,107	18,907	7,860	1,551	25	6,615	7,773	0	0	3,560	79,397		
Non-Process Delta last year/this year	(17,798)	17,095	18,933	19,114	6,806	4,443	2,623	3,901	3,553	0	58,670		(\$ in 1,000's)

Program Area	Current Baseline	Modified Baseline	Increase
Non-Process	Generally funded	Fully funded – <ul style="list-style-type: none"> HVAC & Roofing needs Water Quality Lab and Fort Reno improvements COF upgrades and modifications Bryant St upgrades and modifications Main & O Seawall Restoration New Floatable Debris Docks Main PS Historic Restoration NOTE: The FY19 forecast spending decrease is mainly due to the Fleet/Sewer Facilities Project schedule being re-baselined with the majority of work now anticipated to be performed in FY20.	\$59M



Clean Rivers/CSO Program Details

	5C Run FY 2019 - FY 2028 Proposed Disbursement Plan*										Approved Base (FY19-28)		
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY2027	FY2028	10-Yr Total	10-Yr Total	Delta
COMBINED SEWER OVERFLOW													
DC Clean Rivers	187,859	147,208	139,786	191,573	151,411	64,415	55,689	144,295	97,067	83,286	1,262,589	1,228,168	34,421
Program Management	1,685	1,241	743	1,482	2,653	4,046	4,310	2,871	1,745	2,718	23,494	24,244	(750)
Combined Sewer	5,805	2,978	8,701	6,533	5,994	9,473	4,542	2,930	3,848	4,880	55,684	89,003	(33,319)
Subtotal	195,350	151,427	149,230	199,588	160,057	77,935	64,541	150,095	102,660	90,884	1,341,767	1,341,415	351
Approved Baseline FY19-27	200,343	160,554	148,121	203,086	164,508	79,692	65,611	135,797	92,819	90,884	1,341,415		
CSO Delta last year/this year	(4,993)	(9,127)	1,109	(3,498)	(4,451)	(1,758)	(1,070)	14,298	9,841	0	351		(\$ in 1,000's)

Program Area	Current Baseline	Modified Baseline	Increase
DC Clean Rivers	Fully funded to meet Consent Decree	There are no overall budget changes to DCCR program area. The \$34M delta over the 10-yr period is from the revised spending forecast (no change to overall budget) based on DCCR detailed forecast analysis	\$34M
Program Management (CSO PgM)	Note: the CSO PgM for CSO only (Clean Rivers PgM is included in the DCCR program area)	PgM to be moved to Sewer Program Area	(\$0.8M)
Combined Sewers	Funded	CSO program area Trunk Sewer projects moved to Sewer Program	(\$33M)



Why do we need the Modified Baseline CIP?

Pump Stations



Pumps with leaking seal



Stormwater Discharge Conduit



Failed Stormwater Pumps



Lack of conveyance, washing and compacting



Why do we need the Modified Baseline CIP? (cont.)

Influent Pumping Stations and Headworks



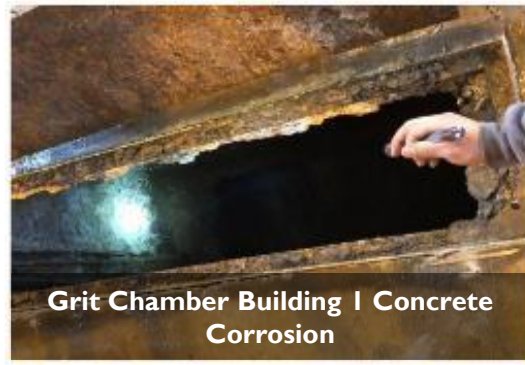
RWWPS 1 1930s Original Motor



RWWPS 1 Worn out Pump



Influent Structures Corrosion



Grit Chamber Building 1 Concrete Corrosion



Grit Chamber 1, Effluent Sluice Gate Corrosion



Influent Structures Corrosion

Influent structures gather and equalize plant influent before RWWPS 1 & 2 wet wells

Headworks remove debris and grit, protecting and improving downstream equipment and performance

Influent Structures	
Brick Lined Sewer	1,500 SF
Box Conduit	68,000 SF
Access Slabs	82,000 lb
RWWPS 1/Grit Chamber Building 1	
Pumps	3 @ 400 hp (80mgd) 2 @ 300 hp (60 mgd) 1 @ 200 hp (40 mgd)
Fine Bar Screens	4 total; 3 duty
Aerated Grit Tanks	4 total; 3 duty
RWWPS 2/Grit Chamber Building 2	
Pumps	4 @ 560 hp (100 mgd) 5 @ 500 hp (100 mgd)
Fine Bar Screens	9 total
Aerated Grit Tanks	12 total; 10 duty

Risk Level - HIGH



Why do we need the Modified Baseline CIP? (cont.)

- 💧 Sewer Linear: minimizes or avoids occurrences of such failures



Sewer sinkhole ,14th Street blocked between New York and Pennsylvania Avenues NW



Montana Ave 18" VCP, deformed, blocked



10" VCP Sewer pipe, installed in 1914, near Morrow Dr NW, located in Rock Creek Park.



10th St at Otis St, NE (10" VCP, deformed, broken

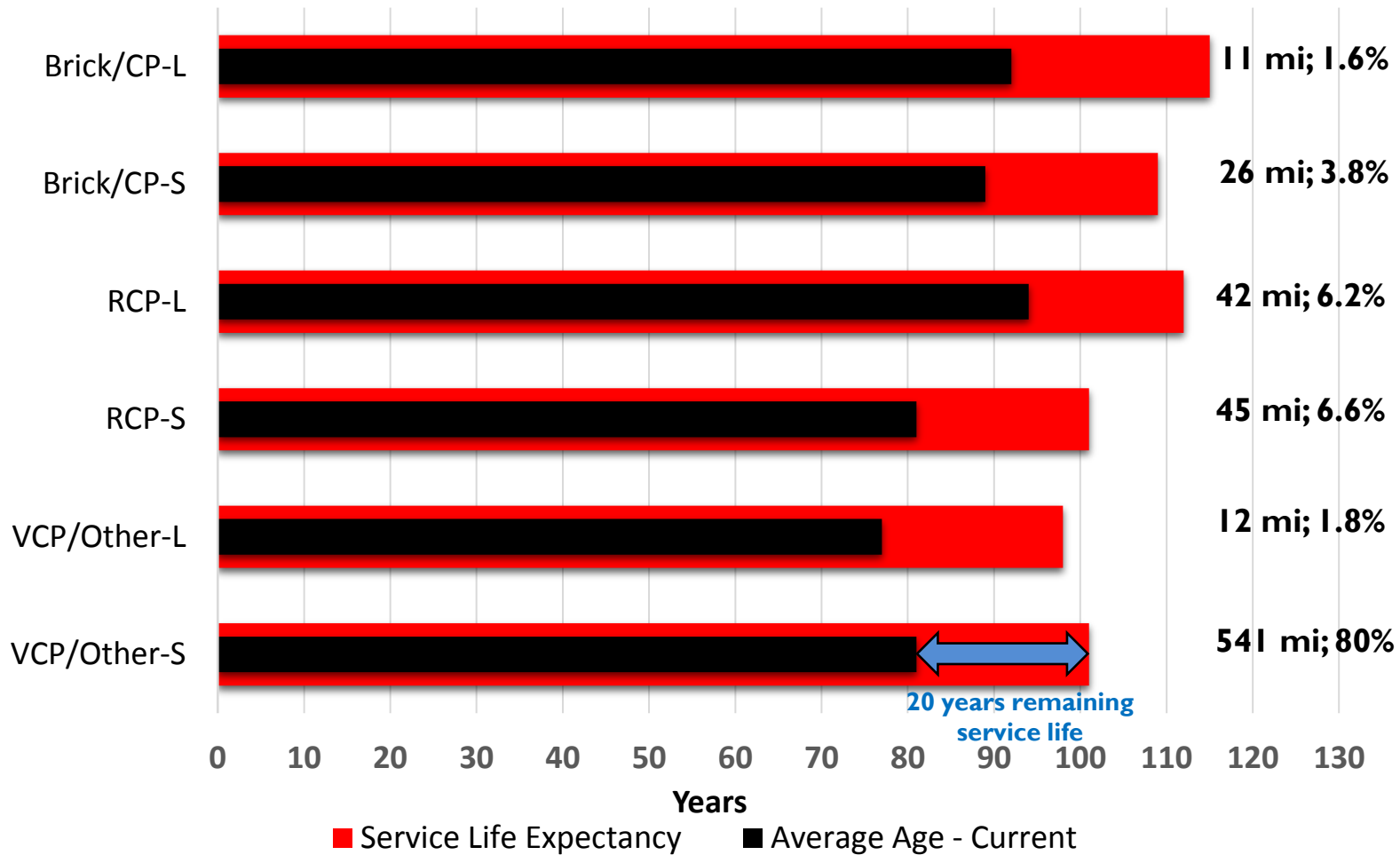


Why do we need the Modified Baseline CIP? (cont.)

Sewer Linear - Sanitary

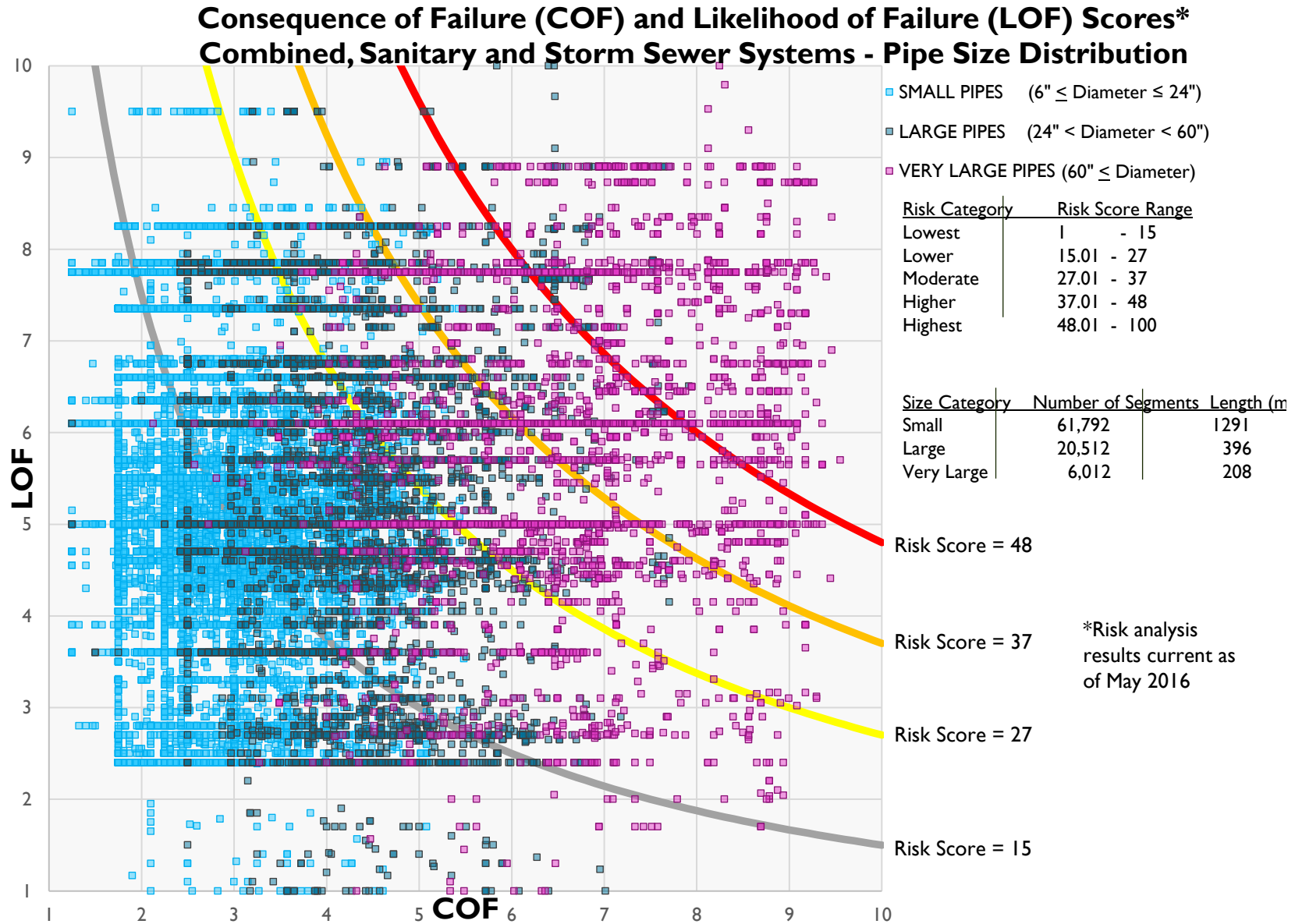
Average Age and Service Life Expectancies by Sanitary Sewer Material Type - FY2018

Average Age: 82 years





Sewer and Storm Pipe Risk Analysis

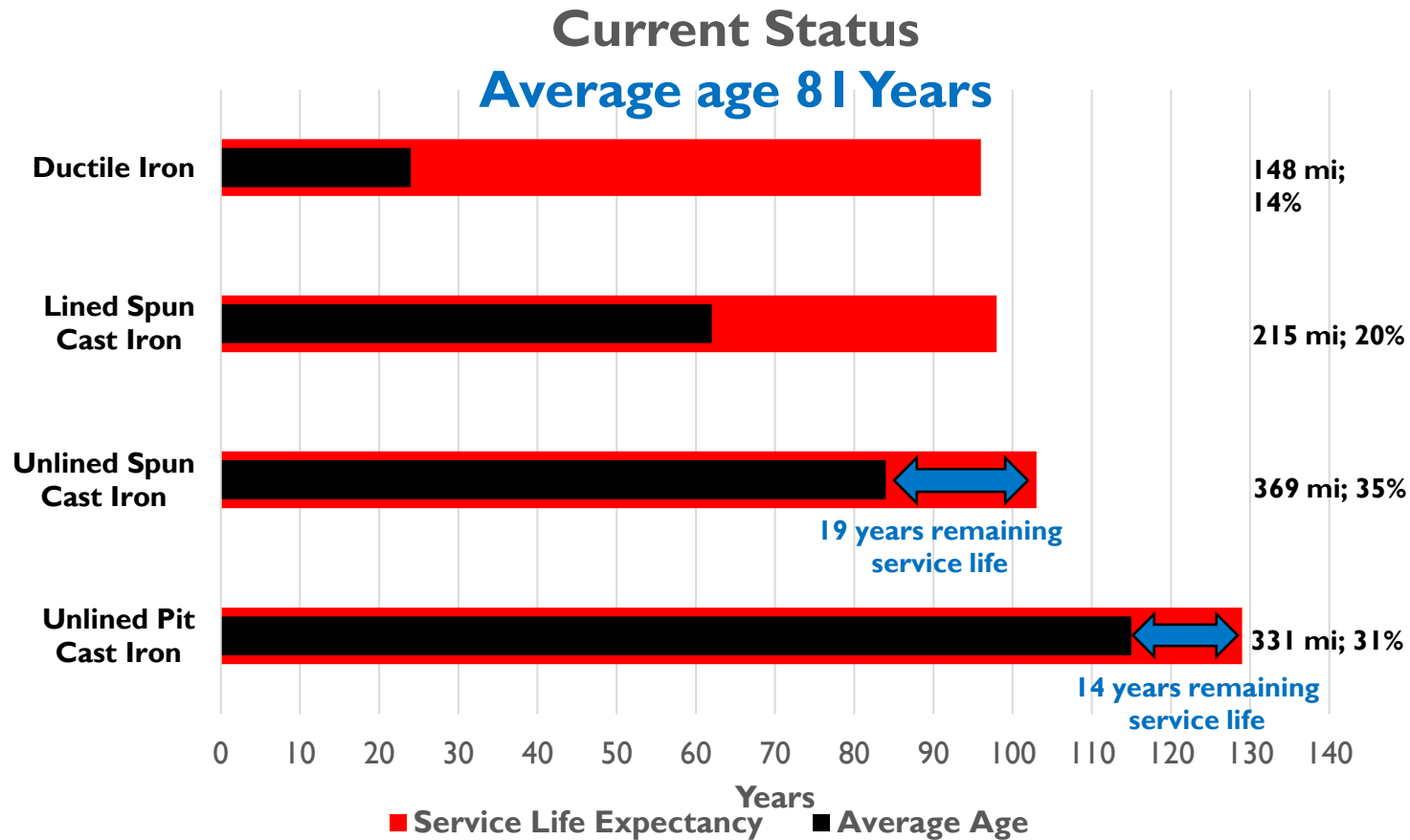




Why do we need the Modified Baseline CIP? (cont.)

Small Diameter Water Mains

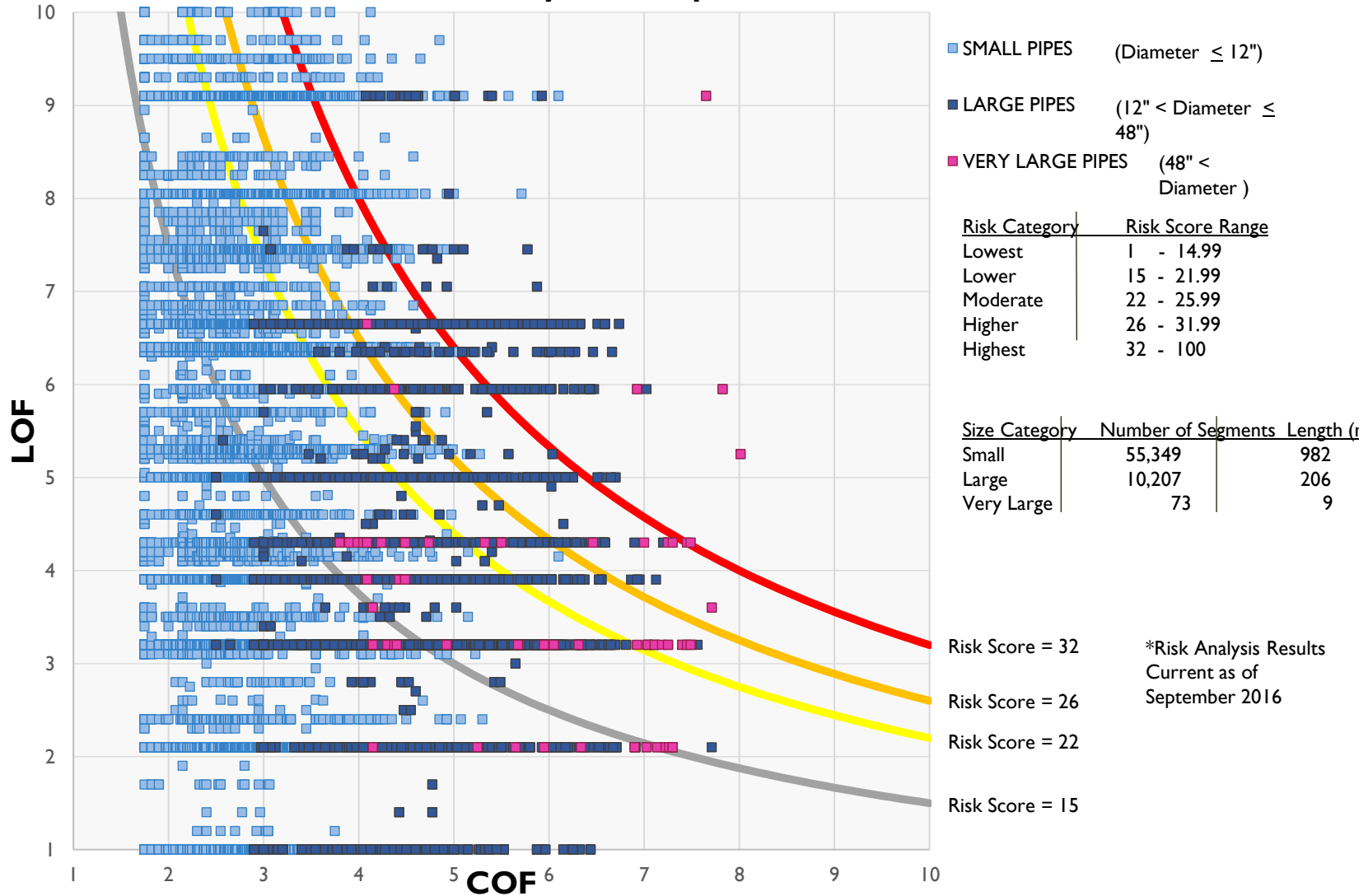
Average Age and Service Life Expectancies by SDWWM Cohort type - FY2018





Water System Risk Analysis

**Consequence of Failure (COF) and Likelihood of Failure (LOF) Scores*
Water System - Pipe Size Distribution**

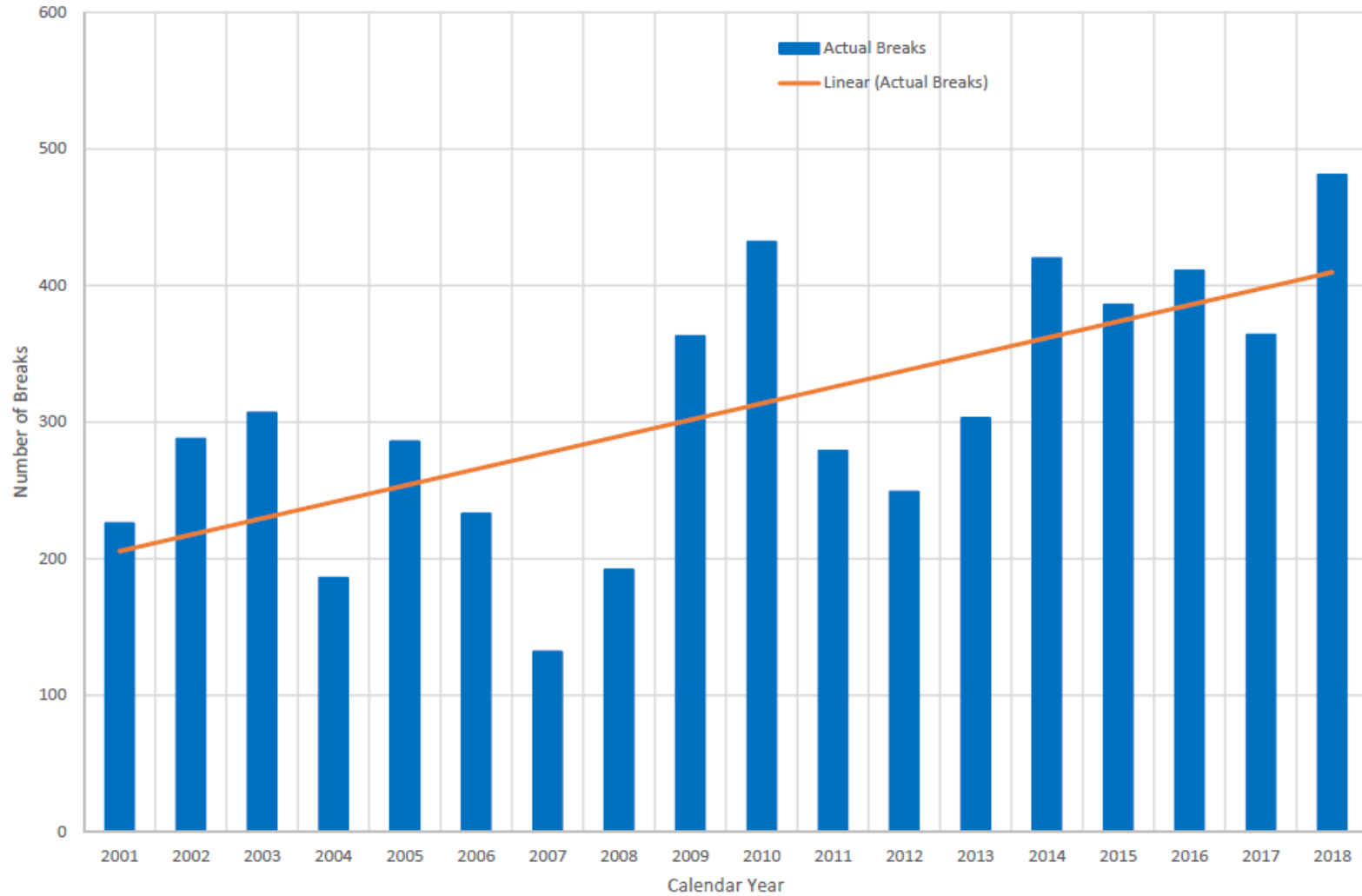




Why do we need the Modified Baseline CIP? (cont.)

Small Diameter Water Mains

Distribution System Water Mains
Total Main Breaks





Why do we need the Modified Baseline CIP? (cont.)

💧 Water Linear: addresses Water Quality complaints & minimizes or avoids such failures



30-inch Tuberculated cast iron pipe (Rhode Island Ave)



Q St. NW Rupture of 30" cast iron pipe c1860,

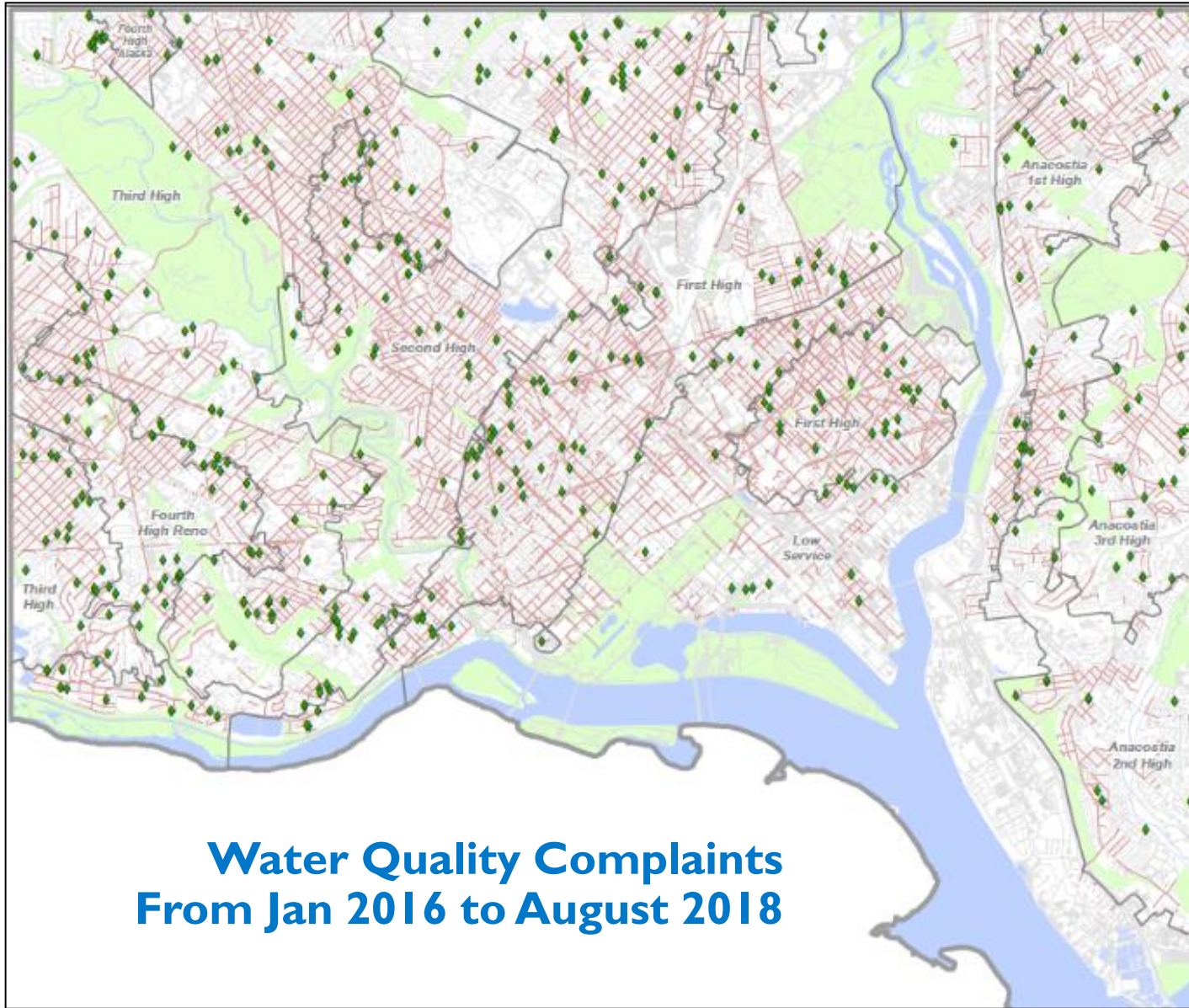


Pipe break, 8-inch tuberculated cast iron pipe Colonial Village





Why do we need the Modified Baseline CIP? (cont.)





CIP Risks/Sensitivities

Regulatory/Consent Decree/Permitting:

- E. Coli Total Maximum Daily Load (TMDL) – lawsuit by environmental groups seeking more restrictive TMDL
- MS4 permit - repair of Stormwater Outfalls, total scope and cost unknown (currently \$5M approved)
- National Parks Service permitting requirements for sewer projects
- Anacostia River Sediment Clean-up
- Chesapeake Bay TMDL – Phase 3 Watershed Implementation Plans being prepared, possible TMDL reassessment in the future
- Green Infrastructure (GI) Practicability Assessment - Clean Rivers practicability assessment of GI to be performed in 2020. Currently, construction of GI in the District is more expensive than originally estimated
- SSOs – risk of SSO Consent Decree
- Blue Plains Odor Control



CIP Risks/Sensitivities (cont.)

Blue Plains Process Optimization & Revenue Opportunities

- Full Plant Deammonification (>\$60M)
- Resource Recovery (Hot Water Heating Loop; Sludge Drying)

Other:

- Lead Service Replacement Program
- Pepco DC Power Line Undergrounding (DC PLUG) – (\$57M, DC Water Share is 50% = \$28M)
- Condition assessment of large sewers could lead to additional CIP needs
- Washington Aqueduct –
 - FY2019-2030 Proposed CIP (\$291M, DC Water share = \$218M)
 - Federally Owned Water Main Repairs (\$86M, all DC Water)
 - Travilah Quarry Acquisition & Outfitting (\$284M, cost sharing unknown)
 - Advanced Treatment Facilities (\$540M, DC Water share = \$405M)



Budget Adoption Calendar

Board Member Questions & Follow Up

- Submit budget-related questions to Board Secretary
- Board Secretary will distribute questions to appropriate staff

Wholesale Customer Briefing - **February 8**

Committee Reviews, Recommendations & Actions – **February & March**

	Environmental Quality & Operations	DC Retail Water & Sewer Rates	Finance & Budget
FY 2019 - FY 2028 Capital Budget (Disbursements & Lifetime)	Action Required		Action Required
FY 2020 Operating Budget			Action Required
Intent to Reimburse Capital Expenditures with Proceeds of a Borrowing			Action Required
FY 2019 – FY 2028 Financial Plan		Action Required	Action Required
FY 2020 Rates, Charges & Fees		Action Required	

Board Adoption – **April 4**

**DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET**

ACTION REQUESTED

**GOODS AND SERVICES CONTRACT MODIFICATION
IT PROFESSIONAL SERVICES**

(Joint Use)

Approval to add \$390,000 to option year 1, and execute option year 2 in the amount of \$5,880,160.00. The total requested funding of \$6,270,160.00 is to be allocated on an as needed basis among the firms listed below.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
Advance Digital Systems* Fairfax, VA-22030	N/A	100%
Ampcus Inc.* Chantilly, VA 20151	N/A	100%
Networking for Future, Inc.* Washington, DC 20004	N/A	100%
Peak Technology Solutions, Inc.* Washington, DC 20036	N/A	100%
Susan Fitzgerald & Associates, Inc.* Washington, DC 20007	N/A	100%
Sankar Inc. Maple Grove, MN 55311	N/A	N/A
Vigilant Technologies, LLC. Troy, MI 48084	N/A	N/A
vTech Solution, Inc.* Washington, DC 20005	N/A	100%

*LBE/LSBE

DESCRIPTION AND PURPOSE

Base Year Contract Value:	\$5,500,000.00
Base Year Contract Dates:	05-01-2017 – 04-30-2018
No. of Option Years in Contract:	2
Base Year Modifications Value:	\$2,889,000.00
Base Year Modifications Dates:	08-16-2017 – 04-30-2018
Option Year 1 Value:	\$0.00
Option Year 1 Dates:	05-01-2018 – 04-30-2019
Option Year 1 Modification Value:	\$390,000.00
Option Year 1 Modification Dates:	03-15-2019 – 04-30-2019
Option Year 2 Value:	\$5,880,160.00
Option Year 2 Dates:	05-01-2019 – 04-30-2020

Purpose and Scope of the Contracts:

Several contractors were selected from an open-market RFP to provide IT staff augmentation and professional services for long and short-term projects when it is not feasible for DC Water to hire permanent staff, or when specialized or unique skills are required. An Indefinite Delivery Indefinite Quantity (IDIQ) contract was executed with each of the above firms; and then DC Water selects from among these approved firms for a project. The scope of the contracts includes Customer Information System (CIS) support, database

administration, Maximo upgrade support, Supervisory Control and Data Acquisition (SCADA) support, and project management as outlined below:

Maximo Software <ul style="list-style-type: none"> • Integration of Kona Field Service • Maximo Anywhere for Plant Operations • Customer Information Billing System Integration 	Local Area (LAN)/Wide Area Network (WAN) <ul style="list-style-type: none"> • Supervisory Control and Data Acquisition System (SCADA) • Disaster Recovery • Daily Maintenance of DC Water internal and external network • Windows Administration <ul style="list-style-type: none"> ➢ Remote Access ➢ Support for Customer Information System ➢ Daily maintenance of DC Water internal network ➢ Storage Administration ➢ Disaster Recovery
Geographical Information System (GIS) <ul style="list-style-type: none"> • Integration of GIS with the Customer Information Billing System 	
Project Management <ul style="list-style-type: none"> • LiveLink Upgrade • Mobility Blue Plains Operations • Mobility Field Operations • Connected Drinking Fountains • Customer Information System 	

Reason for Change:

This modification will allow DC Water to continue to use the contract to fulfill IT professional and staff augmentation services requirements through April 30, 2020.

Spending Previous Years:

Cumulative Contract Value: 05-01-2017 to 04-30-2019: \$8,389,000.00
 Cumulative Contract Spending: 05-01-2017 to 02-05-2019: \$6,950,166.61

Contractors’ Past Performance:

According to the COTR, the Contractor’s timeliness of deliverables, conformance to DC Water’s policies, procedures and contract terms, and invoicing all meet expectations.

PROCUREMENT INFORMATION

Contract Type:	Fixed Hourly Rate	Award Based On:	Competitive Bid; Highest Ratings
Commodity:	Professional Services	Contract Number:	17-PR-DIT-06 A, C, G, H, J, K, L, M
Contractor Market:	Open Market with Preference Points for LBE and LSBE Participation		

BUDGET INFORMATION

Funding:	Operating	Department:	Information Technology
Project Area:	DC Water Wide	Department Head:	Thomas Kuczynski

User – Operating	Share %	Dollar Amount
District of Columbia	83.75%	\$3,940,437.50
Washington Suburban Sanitary Commission	12.09%	\$568,834.50
Fairfax County	2.69%	\$126,564.50
Loudoun Water	1.30%	\$61,165.00
Other (PI)	0.17%	\$7,998.50
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$4,705,000.00

BUDGET INFORMATION

Funding:	Capital Equipment	Department:	Information Technology
Project Area:	DC Water Wide	Department Head:	Thomas Kuczynski

User – Capital Equipment	Share %	Dollar Amount
District of Columbia	72.37%	\$796,070.00
Washington Suburban Sanitary Commission	21.49%	\$236,390.00
Fairfax County	3.97%	\$43,670.00
Loudoun Water	1.78%	\$19,580.00
Other (PI)	0.39%	\$4,290.00
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$1,100,000.00

BUDGET INFORMATION

Funding:	Operating	Department:	Customer Service
Project Area:	DC Water Wide	Department Head:	Carolyn A. Mackool

Non-Joint Use – Operating	Share %	Dollar Amount
District of Columbia	100%	\$130,000.00
Washington Suburban Sanitary Commission	0%	\$0.00
Fairfax County	0%	\$0.00
Loudoun Water	0%	\$0.00
Other (PI)	0%	\$0.00
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$130,000.00

BUDGET INFORMATION


Funding:	Operating	Department:	Department of Pumping
Project Area:	DC Water Wide	Department Head:	Kenrick St. Louis

Joint Use – Operating	Share %	Dollar Amount
District of Columbia	83.75%	\$280,696.5
Washington Suburban Sanitary Commission	12.09%	\$40,520.84
Fairfax County	2.69%	\$9,015.80
Loudoun Water	1.30%	\$4,357.08
Other (PI)	0.17%	\$569.77
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$335,160.00

 1/2/18/19
 Thomas Kuczynski Date
 VP of Information Technology

 2/11/19
 Armon Curd Date
 EVP of Customer Experience

 1/2/18/19
 Akilile Tesfaye Date
 VP of Wastewater Operations

 2/12/19
 Dan Bae Date
 VP of Procurement and Compliance

 1/2/12/19
 Matthew T. Brown Date
 CFO and EVP of Finance and Procurement

 David L. Gadis Date
 General Manager and CEO

**DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET**

ACTION REQUESTED

GOODS AND SERVICES CONTRACT AWARD

**Dewatering Sludge Loading Facility (DSLFL) Building Roof Replacement
(Joint Use)**

Approval to execute a contract award for the DSLFL Building's Roof replacement in the amount of \$1,299,086.88.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME: ADP CONSULTANTS INC 4917 Ames Street, NE. Washington DC 20019 (LSBE)	SUBS: N/A	PARTICIPATION: 100%
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DESCRIPTION AND PURPOSE

Original Contract Value:	\$1,299,086.88
No. of Option Years:	0
Anticipated Contract Start Date:	04-01-2019
Anticipated Base Period Completion	03-01-2020
Proposals Received:	3
Proposal Price Range:	\$1,299,086.88 - \$1,830,550.00
Preference Points Received:	10

Purpose of the Contract:

The Department of Facilities Services (DFS) has a need for a qualified contractor to replace the roof and skylights of the Dewatering Sludge Loading Facility (DSLFL) Building located at Blue-Plains. The roof's current condition shows substantial deterioration and leakage, and the fiberglass skylights are deteriorated and broken.

Contract Scope:

The work to be performed under this contract shall include but not be limited to the following: attend necessary job meetings and furnish competent and full-time supervision, experienced roof mechanics, all materials, tools, equipment and insurance necessary for the rehabilitation of the DSLFL Building roof and skylights.

The skylights material to be used for the new roof is polycarbonate, which has a 10-year warranty and is stronger than the existing material which is Fiberglass. Fiberglass only has a 5-year warranty and is not the industry preferred material.

Supplier Selection:

DC Water advertised a RFP and contacted 12 potential contractors during the solicitation process. However, only 5 attended the mandatory pre-bid visit, and only 3 contractors responded by submitting a proposal. Proposals were received from ADP Consultants Inc, Evergreen Unlimited, and North East Construction. DC Water evaluated ADP's proposal as the highest and recommend them for the new contract award. The newly negotiated value for this construction renovation job will generate \$30,550 cost reduction from the initial proposal.

PROCUREMENT INFORMATION

Contract Type:	Fixed Price	Award Based On:	Highest Rated Proposal
Commodity:	Goods and Services	Contract Number:	18-PR-DFS-38
Contractor Market:	Open Market with Preference Points for LBE and LSBE participation		

BUDGET INFORMATION

Funding:	Capital Project (LS)	Department:	Facilities
Service Area:	Wastewater Treatment	Department Head:	Brent Christ

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	41.22%	\$ 535,483.61
Washington Suburban Sanitary Commission	45.84%	\$ 595,501.43
Fairfax County	8.38%	\$ 108,863.48
Loudoun Water	3.73%	\$ 48,455.94
Other (PI)	0.83%	\$ 10,782.42
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$1,299,086.88


 Maureen Holman
 EVP of Administration
 Date 1/26/2019


 Dan Bae
 VP of Procurement and Compliance
 Date 1/26/19


 Matthew T. Brown
 CFO and EVP of Finance and Procurement
 Date 1/21/19

 David L. Gadis
 CEO and General Manager
 Date

**DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET**

ACTION REQUESTED

GOODS AND SERVICES CONTRACT OPTION YEAR

**Supply and Delivery of Calcium Hydroxide
(Joint Use)**

Approval to exercise option year 3 for the calcium hydroxide (also called "lime slurry") supply and delivery contract in the amount of \$550,000.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME: W.K. Merriman, Inc. 8038 Front River Road Pittsburgh, PA 15225	SUBS: N/A	PARTICIPATION: N/A
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DESCRIPTION AND PURPOSE

Original Contract Value:	\$1,334,400.00
Original Contract Dates:	03-07-2016 – 03-06-2017
No. of Option Years in Contract:	4
Option Year 1 Value:	\$0.00
Option Year 1 Dates:	03-07-2017 – 03-06-2018
Option Year 2 Value:	\$350,000.00
Option Year 2 Dates:	03-07-2018 – 03-06-2019
Prior Modifications Value:	\$150,000.00
Prior Modifications Dates:	01-01-2019—03-06-2019
Option Year 3 Value:	\$550,000.00
Option Year 3 Dates:	03-07-2019 – 03-06-2020

Purpose and Scope of the Contract:

To supply and deliver calcium hydroxide slurry. The calcium hydroxide is used in the Nitrification Facility at Blue Plains for pH control. The requested option year 3 funding is similar to total option year 2 funding.

Spending Previous Year:

Cumulative Contract Value:	03-07-2016 to 03-06-2019: \$1,834,400.00
Cumulative Contract Spending:	03-07-2016 to 01-01-2019: \$1,648,500.00

Contractor's Past Performance:

According to the COTR, the Contractor's quality of products and services, timeliness of deliverables; conformance to DC Water's policies, procedures and contract terms; and invoicing all meet expectations and requirements.

No LSB/LSBE participation

PROCUREMENT INFORMATION

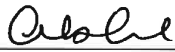
Contract Type:	Good and Services	Award Based On:	Lowest Responsive
Commodity:	Calcium Hydroxide	Contract Number:	15-PR-WWT-52
Contractor Market:	Open Market with Preference Points for LBE and LSBE Participation		

BUDGET INFORMATION

Funding:	Operating	Department:	Wastewater Treatment
Project Area:	Blue Plains AWTP	Department Head:	Aklile Tesfaye

ESTIMATED USER SHARE INFORMATION

User - Operating	Share %	Dollar Amount
District of Columbia	41.90%	\$230,450.00
Washington Suburban Sanitary Commission	43.10%	\$237,050.00
Fairfax County	9.59%	\$52,745.00
Loudoun Water	4.64%	\$25,520.00
Potomac Interceptor	0.77%	\$4,235.00
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$550,000.00

 / 2/4/19
 Aklile Tesfaye Date
 VP of Operation

 / 2/5/19
 Dan Bae Date
 VP of Procurement and Compliance

 / 2/12/19
 Matthew T. Brown Date
 CFO and EVP of Finance and Procurement

_____/_____
 David L. Gadis Date
 CEO and General Manager

**DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET**

ACTION REQUESTED

CONSTRUCTION CONTRACT:

**Miscellaneous Facilities Upgrade – Phase 6
(Joint Use)**

Approval to execute a construction contract for \$27,090,000.00

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
Ulliman Schutte Construction, LLC 7615 Standish Place Rockville, MD 20855	Hi-Mark Construction Group Franklin, OH MBE	23.5%
	G.E. Frisco Company, Inc. Upper Marlboro, MD MBE	8.6%
<u>Headquarters</u> Miamisburg, OH	Ideal Electric Supply Corp Washington DC WBE	6.0%

DESCRIPTION AND PURPOSE

Contract Value, Not-To-Exceed:	\$27,090,000.00
Contract Time:	1500 Days (4 Years, 1 Months)
Anticipated Contract Start Date (NTP):	04-01-2019
Anticipated Contract Completion Date:	05-11-2023
Bid Opening Date:	12-19-2018
Bids Received:	3
Other Bids Received	
American Contracting & Environ. Services, Inc	\$ 27,199,883.00
CPP Construction Co.	\$ 28,834,000.00

Purpose of the Contract:

DC Water has a reoccurring need to have a contractor available to perform emergency and non-emergency repairs on existing process equipment which is beyond routine, preventive and corrective maintenance to avoid potential violations of its NPDES permit that cannot wait for a larger capital project.

Contract Scope:

- Modify and upgrade influent screening equipment at Blue Plains.
- "O" Street Pumping Station heating and ventilation reinstatement.
- Nitrification Blower PLC Replacement.
- Implementation of sync check on existing switchgear secondary main breakers and tie breakers.
- Replacement of two motor control centers in Chlorine Building 2
- Specialized Services as per Task Scope.
- Time and Material work on emergency and non-emergency Task Work Orders.

Federal Grant Status:

- Construction Contract is not eligible for Federal grant funding assistance.

PROCUREMENT INFORMATION

Contract Type:	Fixed Price	Award Based On:	Lowest responsive, responsible bidder
Commodity:	Construction	Contract Number:	170180
Contractor Market:	Open Market		

BUDGET INFORMATION

Funding:	Capital	Department:	Wastewater Engineering
Service Area:	Wastewater	Department Head:	Algynon Collymore (Acting)
Project:	IZ, PE, CV, HL, BX, XZ, FG, OE, TZ, LS, XA, FQ		

ESTIMATED USER SHARE INFORMATION

IZ, PE, CV, HL, BX, XZ, FG, OE TZ, LS, XA - Allocation (Blue Plains Allocation)

User	Share %	Dollar Amount
District of Columbia	41.22%	\$ 9,669,169.55
Washington Suburban Sanitary Commission	45.84%	\$ 10,752,904.70
Fairfax County	8.38%	\$ 1,965,736.07
Loudoun County & Potomac Interceptor	4.56%	\$ 1,069,660.68
Total Estimated Dollar Amount	100.00%	\$ 23,457,471.00

FQ – Allocation (CAPM - O Street Pumping Station)


User	Share %	Dollar Amount
District of Columbia	100.00%	\$ 1,933,960.00
Washington Suburban Sanitary Commission	0.00%	\$
Fairfax County	0.00%	\$
Loudoun County & Potomac Interceptor	0.00%	\$
Total Estimated Dollar Amount	100.00%	\$ 1,933,960.00

FQ – Allocation (MJ-21 - Main Pumping Station)

User	Share %	Dollar Amount
District of Columbia	89.70%	\$ 1,523,616.39
Washington Suburban Sanitary Commission	10.30%	\$ 174,952.61
Fairfax County	0.00%	\$
Loudoun County & Potomac Interceptor	0.00%	\$
Total Estimated Dollar Amount	100.00%	\$ 1,698,569.00

Total Combined Allocation

User	Share %	Dollar Amount
District of Columbia	48.46%	\$ 13,126,745.94
Washington Suburban Sanitary Commission	40.34%	\$ 10,927,857.31
Fairfax County	7.26%	\$ 1,965,736.07
Loudoun County & Potomac Interceptor	3.95%	\$ 1,069,660.68
Total Estimated Dollar Amount	100.00%	\$ 27,090,000.00


 Leonard R. Benson
 Senior Vice President, Chief Engineer
 Date 12-13-19


 Matthew T. Brown
 CFO and EVP of Finance and Procurement
 Date 12/15/19


 Dan Bae
 VP of Procurement and Compliance
 Date 12/14/19

 David L. Gadis
 CEO and General Manager
 Date

**DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET**

ACTION REQUESTED

CONSTRUCTION CONTRACT CHANGE ORDER:

**Water Main Infrastructure Repair and Replacement Contract for FY17 - FY19
(Non-Joint Use)**

Approval to execute Change Order No. 02 not to exceed \$5,000,000.00 The modification exceeds the Chief Executive Officer's approval authority.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
Fort Myer Construction Corporation 2237 33 rd Street, NE Washington, DC 20018	S & J Services, Inc. Hyattsville, MD MBE United Construction Services. LLC Washington, DC WBE	32.0% 6.0%

DESCRIPTION AND PURPOSE

Original Contract Value:	\$ 16,935,772.16
Value of this Change Order:	\$ 5,000,000.00
Cumulative CO Value, including this CO:	\$ 12,000,000.00
Current Contract Value, including this CO:	\$ 28,935,772.16
Contract Time:	1095 Days (3 Years, 0 Months)
Time Extension, this CO:	0 Days
Total CO Contract Time Extension:	0 Days
Contract Start Date (NTP):	10-01-2016
Contract Completion Date:	10-01-2019
Cumulative CO % of Original Contract:	71%
Contract Completion %:	85%

Purpose of the Contract:

To perform emergency and non-emergency water main repair and replacement work.

Original Contract Scope:

- Emergency repair of water distribution assets
- Scheduled repair/replacement of water mains, valves, service lines and hydrants
Special projects such as pipe condition assessments, internal repairs of water mains by joint seal installation or clean and line methods, pumping station/reservoir rehab projects.

Previous Change Order Scope:

- The volume of emergency main repairs increased dramatically in the 2017/2018 winter season. In January 2018 alone, 73 main breaks were repaired at a total cost of nearly \$1.6M.
- This contract was used to undertake numerous special projects that required urgent action including large valve installations.
- Additionally, 543 lead service lines have been replaced to date under the Lead Service Replacement (LSR) Demand Program and 170 Fire Hydrants have been replaced to date.

Current Change Order Scope:

- As of January 2019, a total of 458 water main breaks have been repaired under this contract which is more than anticipated and therefore contract capacity has been exhausted more quickly than expected.
- This Change Order allows further anticipated emergency main breaks to be repaired as well as additional valves, to be replaced thru the end of this fiscal year.
- Two new special projects have currently been assigned to this contract: The Fort Stanton Reservoir #1 Leak Repairs and Installation of Flowmeter on the 30" Main at Fort Stanton.

Federal Grant Status:

- Construction Contract is not eligible for Federal grant funding assistance.

PROCUREMENT INFORMATION

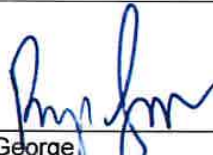
Contract Type:	Unit Price	Award Based On:	Lowest responsive, responsible bidder
Commodity:	Construction	Contract Number:	160010
Contractor Market:	Open Market		


BUDGET INFORMATION

Funding:	Capital	Department:	Water Services
Service Area:	Water	Department Head:	Jason Hughes
Project:	HY		

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	100.00%	\$ 5,000,000.00
Federal Funds	0.00%	\$
Washington Suburban Sanitary Commission	0.00%	\$
Fairfax County	0.00%	\$
Loudoun County & Potomac Interceptor	0.00%	\$
Total Estimated Dollar Amount	100.00%	\$ 5,000,000.00


 _____, 2/12/2019
 Biju George Date
 Executive Vice President,
 Operations and Engineering


 _____, 2/14/19
 Dan Bae Date
 VP of Procurement and Compliance


 _____, 2/14/19
 Matthew T. Brown Date
 CFO and EVP of Finance and Procurement

_____ / _____
 David L. Gadis Date
 CEO and General Manager



District of Columbia Water and Sewer Authority
David L. Gadis, CEO and General Manager

Briefing on:

CSO 025/026 SEWER SEPARATION IN GEORGETOWN

Briefing for:

Environmental Quality and Operations Committee

February 21, 2019



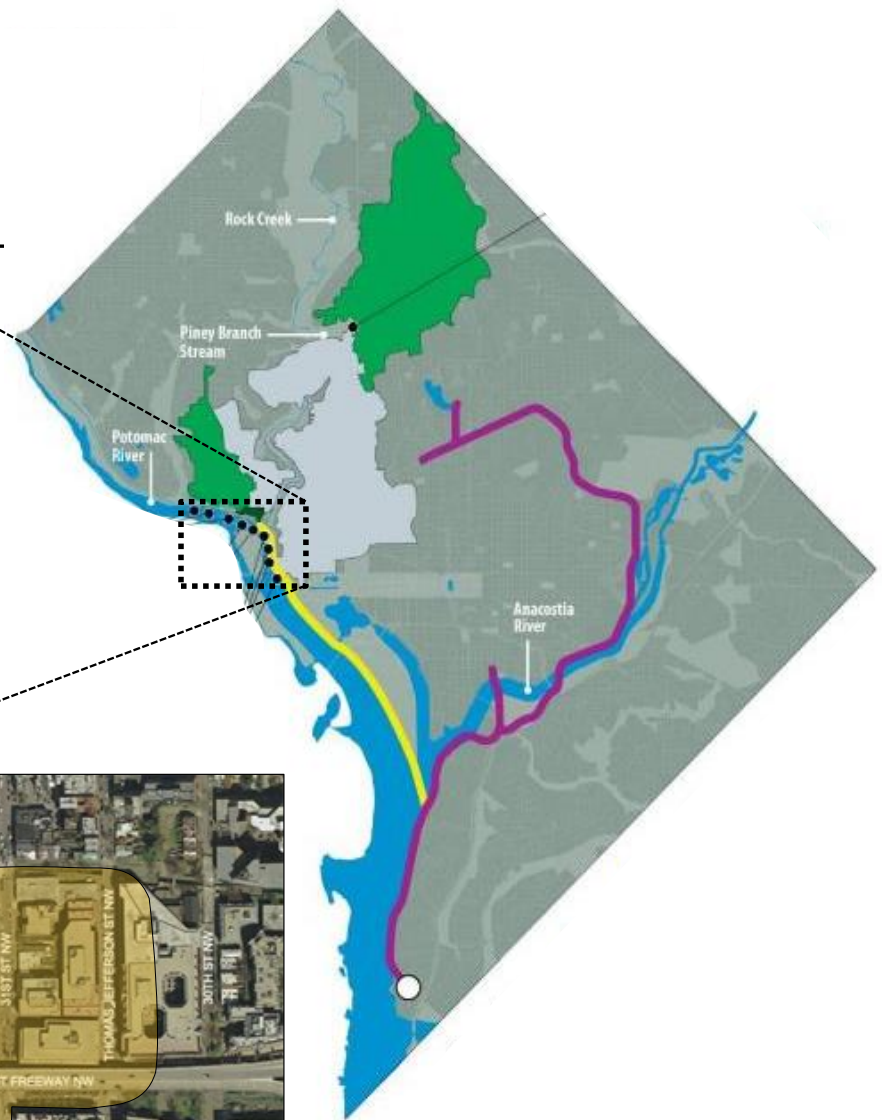
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Agenda

- Consent Decree Requirements
- Project Approach
- Outreach is a Key Component
- Preliminary Project Schedule
- Look Ahead (Near Term)



Consent Decree Requirements



Consent Decree Schedule



- Consent Decree states; "DC Water shall separate the combined sewer system tributary to CSO 025 and 026"
- CSO 025 and 026 are the smallest CSO sewersheds on the Potomac River (CSO 025 \approx 14 acres, CSO 026 \approx 10 acres) ²

Project Approach

Anticipated Work

- Convert combined sewers to storm sewers
- Construct new sanitary sewers
- Reconnect existing sewer laterals to new sanitary sewers
- Utility relocation as required
- Restore area of construction

Investigations Needed

- Topographic and utility survey
- Sewer conditional assessment sewer TV of existing sewers
- Dye testing of sewers in properties to confirm location of sanitary lateral connections to existing sewers
- Geotechnical investigation and borings
- Utility investigation through test pits or pot-holes to identify utility locations

Goal is to minimize impacts to and work on private property

Outreach is a Key Component

- Meet with ANC Commissioner (ANC 2E05) to discuss the project and proposed activities and have ongoing dialogue throughout the project
- Meet with representatives of Ward 2 Councilmember Jack Evan's office to provide project description and proposed activities and have ongoing dialogue throughout the project
- Meet with ANC Commissioners (2E)
- Send mailer to addresses (~100) within project boundary of upcoming investigation (survey, sewer TV, and sewer dye testing)
- Consider developing a project forum group
- Perform public meetings throughout the project
- For any traffic/parking impacts
 - Ensure proper permits are obtained and necessary signage is posted
 - Deliver door-to-door notifications to those impacted
- Continued community outreach throughout project

dc clean RIVERS PROJECT
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY | 5000 OVERLOOK AVENUE, SW | WASHINGTON, DC 20032


DC CLEAN RIVERS PROJECT – UTILITY INVESTIGATION

OVERVIEW
DC Water will be conducting utility investigation activities in the area within the red boundary.
The DC Clean Rivers Project Team is performing utility investigation and survey as part of the overall planning effort for the CSO 025/026 sewer separation project. During these investigations, you may periodically observe staff with survey equipment collecting surface and sewer information.
The sewer separation project for CSO 025/026 is part of DC Water's Clean Rivers Project to reduce the volume of combined sewer overflows to the Potomac River and improve water quality.

IMPORTANT INFORMATION

- Work will begin, weather permitting, on February X, 2019, and continue through March X, 2019, between 7:00 a.m. and 7:00 p.m. on weekdays.
- All necessary permits will be obtained and if needed, corresponding signs will be posted in accordance with the District's requirements if vehicle travel lanes or vehicle parking lanes will be temporarily closed during work hours.
- There will be no work performed on weekends or Federal holidays.

FOR MORE INFORMATION PLEASE CONTACT:
Senior Public Outreach Officer: Amanda Zander, amanda.zander@dcwater.com, (202) 787-4142
DC Clean Rivers Project Email: dcleanrivers@dcwater.com
DC Clean Rivers Project Website: dcwater.com/cleanrivers



Utility Investigation Area located within Red Boundary

dcwater.com

Look Ahead (Near Term)

- Outreach to ANC and Councilmember Jack Evan's staff
- Outreach to community
- Begin field investigation
- Develop preliminary design layout

❖ Thank you!

