

**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 20, 2020  
9:30 a.m.*

	<b>I.</b>	<b>Call to Order</b>	Howard Gibbs Vice Chair
<b>9:30 a.m.</b>	<b>II.</b>	<b>Action Items</b>	Joel Grosser
		<u><b>Joint Use</b></u>	
		1. <a href="#">Contract No.: WAS-12-063-AA-RA -- Protective Services, Allied Universal Security Services</a>	
		2. <a href="#">Contract No.:18-PR-DMS-49 – Annual Maintenance and Repair of Electrical Power Distribution Equipment, M.C. Dean</a>	
		<u><b>Non-Joint Use</b></u>	
		1. None	
<b>9:40 a.m.</b>	<b>III.</b>	<b>AWTP Status Update</b>	Aklile Tesfaye
		1. <a href="#">BPAWTP Performance</a>	
<b>9:50 a.m.</b>	<b>IV.</b>	<b>10-Year CIP Follow-up Questions</b>	Len Benson
<b>10:15 a.m.</b>	<b>V.</b>	<b>Action Item</b>	Matt Brown
		<u><b>Joint Use</b></u>	
		1. <a href="#">FY 2020 – FY 2029 Proposed Capital Improvement Program (10-Year Disbursement Plan and Lifetime Budget)</a>	
<b>10:25 a.m.</b>	<b>VI.</b>	<b>CIP Quarterly Update</b>	Paul Guttridge
<b>10:35 a.m.</b>	<b>VII.</b>	<b>Clean Rivers Project Status Update</b>	Carlton Ray
<b>10:45 a.m.</b>	<b>VIII.</b>	<b>Procurement Update</b>	Matt Brown/Dan Bae
<b>10:55 a.m.</b>	<b>IX.</b>	<b>Assessing Contractor Responsiveness, Responsibility</b>	

**and Overview of EPA Outreach Program**      Corey Gray/Rudy Gonzalez

**11:10 a.m.    X.      Other Business / Emerging Issues**

**11:15 a.m.    XI.     Executive Session\***

**11:30 a.m.    XII.    Adjournment**

Howard Gibbs  
Vice Chair

\* 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)(2); legal, confidential or privileged matters under D.C. Official Code § 2-575(b)(4)(A); 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); train and develop members of a public body and staff under D.C. Official Codes § 2-575(b)(12); 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. 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 2020]**
2. Sr. VP, CIP Project Delivery: Provide an update regarding existing bid evaluation process, including Contractor compliance with MBE/WBE participation goals and historical performance meeting the goals. **[On Current Agenda]**
3. Vice President, Information Technology, DC Water: provide a briefing on the Authority’s efforts to meet evolving cyber security threats. **[On Current Agenda]**
4. EVP, Customer Experience: Update on the AMI installations e.g. percent of residential customers with replaced meters. **[Will be presented at the DC Retail Water and Sewer Committee meeting on February 25, 2020]**
5. Sr. VP & Chief Engineer: Provide a detailed briefing on the 10-year CIP Lifetime Budget (i.e., \$11.45B) including actual spent-to-date information. **[On Current Agenda]**
6. Sr. VP & Chief Engineer: Update the 10-year CIP Disbursement Forecast slides and show what the required funding levels would need to be, past FY29, as well as layering in the risk and sensitivity costs if this Proposed CIP budget is approved and implemented. **[On Current Agenda]**

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

**ACTION REQUESTED**

**GOODS AND SERVICES CONTRACT OPTION YEAR  
PROTECTIVE SERVICES  
(Joint Use)**

Approval to exercise option year 7 for the protective services in the amount of \$5,436,000.00

**CONTRACTOR/SUB/VENDOR INFORMATION**

<b>PRIME:</b>	<b>SUBS:</b>	<b>PARTICIPATION:</b>
Allied Universal Security Services 1551 N. Tustin Avenue Suite 650 Santa Ana, CA 92705	Preeminent Protective Services Inc. 1050 17 <sup>th</sup> Street, NW, Suite 600 Washington, DC 20036 LSBE	21.3%

**DESCRIPTION AND PURPOSE**

Base Year Contract Value:	\$4,934,348.12
Base Year Contract Date:	12-16-2012 – 12-15-2013
Option Year 1 – Option Year 4 Value:	\$20,143,632.25
Option Year 1 – Option Year 4 Dates:	01-16-2014 – 02-13-2018
Option Year 5 Value:	\$5,847,481.76
Option Year 5 Dates:	02-14-2018 – 02-13-2019
Option Year 6 Value:	\$5,300,000.00
Option Year 6 Dates:	02-14-2019 – 02-13-2020
Prior Modification Value	\$891,102.47
Prior Modification Dates:	12-16-2012 – 03-13-2020
<b>Option Year 7 Value:</b>	<b>\$5,436,000.00</b>
<b>Option Year 7 Dates:</b>	<b>03-14-2020 – 03-13-2021</b>

**Purpose of the Contract:**

The purpose of this contract is to purchase protective services. The contractor, Allied Universal Security, provide protective services for all of DC Water’s facilities and personnel.

**Contract Scope:**

The contract will provide highly trained and reliable commissioned Special Police Officers (SPOs) to safeguard DC Water’s property and personnel, to prevent and deter unauthorized access or removal of property, and to assist DC Water in all other security related matters.

**Spending Previous year:**

Cumulative Contract Value:	12-16-2012 to 03-13-2020: \$37,116,564.60
Cumulative Contract Spending:	12-16-2012 to 10-01-2019: \$34,539,431.53

**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.

**PROCUREMENT INFORMATION**

<b>Contract Type:</b>	Fixed	<b>Award Based On:</b>	Highest Rated Offeror
<b>Commodity:</b>	Security	<b>Contract Number:</b>	WAS-12-063-AA-RA
<b>Contractor Market:</b>	Open Market with Preference Points for Local and Small Businesses		

**BUDGET INFORMATION**

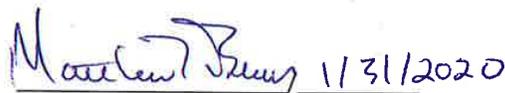
<b>Funding:</b>	Operating	<b>Department:</b>	Department of Security
<b>Service Area:</b>	Blue Plains AWTP	<b>Department Head:</b>	Ivelisse Cassas

**ESTIMATED USER SHARE INFORMATION**

User	Share %	Dollar Amount
District of Columbia	84.61%	\$4,599,399.60
Washington Suburban Sanitary Commission	11.11%	\$603,939.60
Fairfax County	2.74%	\$148,946.40
Loudoun County	1.33%	\$72,298.80
Other (PI)	0.21%	\$11,415.60
<b>TOTAL ESTIMATED DOLLAR AMOUNT</b>	<b>100.00%</b>	<b>\$5,436,000.00</b>

  
 Maureen Holman  
 EVP of Administration  
 Date 1/29/2020

  
 Dan Bae  
 VP of Procurement and Compliance  
 Date 1/29/2020

  
 Matthew T. Brown  
 CFO and EVP of Finance and Procurement  
 Date 1/31/2020

\_\_\_\_\_  
 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**

**ANNUAL MAINTENANCE AND REPAIR OF ELECTRICAL POWER DISTRIBUTION EQUIPMENT**

**(Joint Use)**

Approval to add funding to the subject contract to support maintenance and repair of high voltage electrical power distribution equipment in the amount of \$1,120,000.00.

**CONTRACTOR/SUB/VENDOR INFORMATION**

<b>PRIME:</b> M.C. Dean Inc. 1765 Greensboro Station Place Tysons, VA 22102	<b>SUBS:</b> N/A	<b>PARTICIPATION:</b> N/A
--	---------------------	------------------------------

**DESCRIPTION AND PURPOSE**

Original Contract Value:	\$2,117,000.00
Original Contract Dates:	11-10-2018 — 11-09-2019
No. of Option Years in Contract:	2
Option Year 1 Value:	\$0.00
Option Year 1 Dates:	11-10-2019 — 11-09-2020
<b>Option Year 1 Additional Funding Value:</b>	<b>\$1,120,000.00</b>
<b>Option Year 1 Additional Funding Dates:</b>	<b>03-15-2020 – 11-09-2020</b>

**Purpose of the Contract:**

DC Water’s Department of Maintenance Services (DMS) and Department of Pumping Operations (DPO) has a continuing need for annual maintenance of high voltage switchgear (power distribution) equipment throughout DC Water facilities. Switchgear is the combination of electrical disconnect switches, fuses or circuit breakers used to control, protect and isolate electrical equipment. Switchgear is used both to de-energize equipment to allow work to be done and to clear faults downstream.

**Contract Scope:**

DMS and DPO require a qualified contractor to provide up to 11 experienced power distribution test technicians and one supervisor, along with replacement parts for repair, calibration and annual maintenance of high voltage switchgear equipment and other associated devices at various DC Water facilities under the direction of DC Water’s Contracting Officer’s Technical Representative (COTR).

Interruption of high-voltage maintenance can result in catastrophic failures and an inability to continue DC Water’s critical operations. High-voltage power distribution maintenance is outsourced due to the extensive experience and technical expertise required, limited local resources and high costs for these specialized personnel.

DMS is requesting an additional contract amount of \$1,120,000 to fully fund their portion of the contract for these services through end of Option Year 1. Additional funding is needed as the maintenance cycle for FY20 includes the preventive maintenance of several unit and area substations that are performed on a biennial basis, as well as, the first year of maintenance for the new Wet Weather Treatment facility. The additional amount of \$1,120,000 is included in the approved FY20 budget.

**Spending Previous Year:**

Cumulative Contract Value:	11-10-2018 to 11-09-2020: \$2,117,000.00
Cumulative Contract Spending:	11-10-2018 to 12-31-2019: \$1,503,729.77

**Contractor’s Past Performance:**

According to the COTR, the Contractor’s performance and quality of work all meet DC Water’s requirements.

**PROCUREMENT INFORMATION**

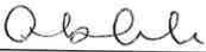
<b>Contract Type:</b>	Fixed Price	<b>Award Based On:</b>	Best Value
<b>Commodity:</b>	Maintenance Services	<b>Contract Number:</b>	18-PR-DMS-49
<b>Contractor Market:</b>	Open Market with Preference Points		

**BUDGET INFORMATION**

<b>Funding:</b>	Operating	<b>Department:</b>	DMS
<b>Project Area:</b>	Blue Plains	<b>Department Head:</b>	Elkin Hernandez

**ESTIMATED USER SHARE INFORMATION**

User	Share %	Dollar Amount
District of Columbia	45.15%	\$505,680.00
Washington Suburban Sanitary Commission	39.61%	\$443,682.00
Fairfax County	9.76%	\$109,312.00
Loudoun Water	4.74%	\$53,088.00
Other (PI)	0.74%	\$8,288.00
<b>TOTAL ESTIMATED DOLLAR AMOUNT</b>	<b>100.00%</b>	<b>\$1,120,000.00</b>

  
 Aklile Tesfaye  
 VP, Wastewater Operations  
 Blue Plains  
 Date: 1/30/20

  
 Matthew T. Brown  
 EVP, Finance and Procurement  
 Date: 2/7/2020

  
 Dan Bae  
 VP, Procurement and Compliance  
 Date: 1/30/2020

\_\_\_\_\_  
 David L. Gadis  
 CEO and General Manager  
 Date



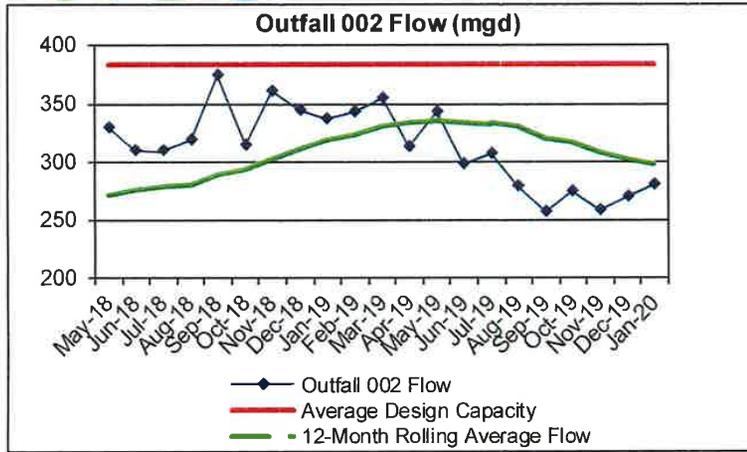
# Blue Plains Advanced Wastewater Treatment Plant Performance Report

Environmental Quality and Operations Committee

February 2020



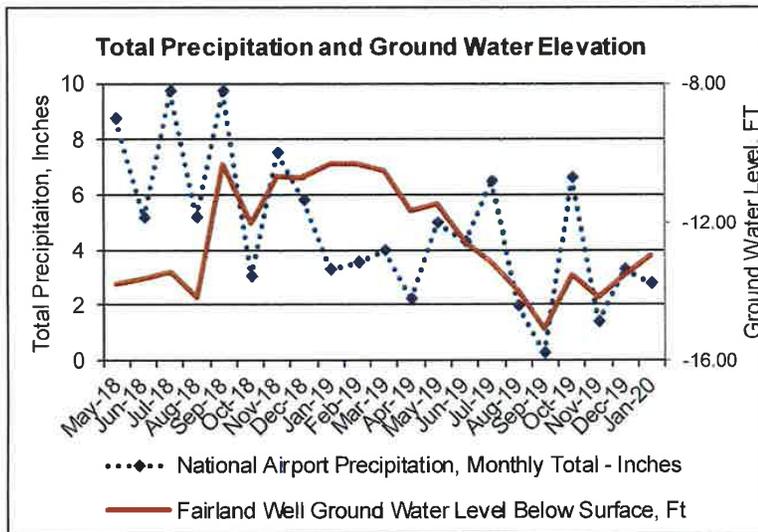
# Complete Treatment Performance



❑ 12-Month Rolling Average Flow, ending January 2020, is below 300 MGD

❑ Plant Influent Flow correlates with long term ground water elevation below surface

❑ Plant performance was excellent with all effluent quality requirements well below or within the NPDES permit requirements





## Wet Weather Treatment Facility Performance

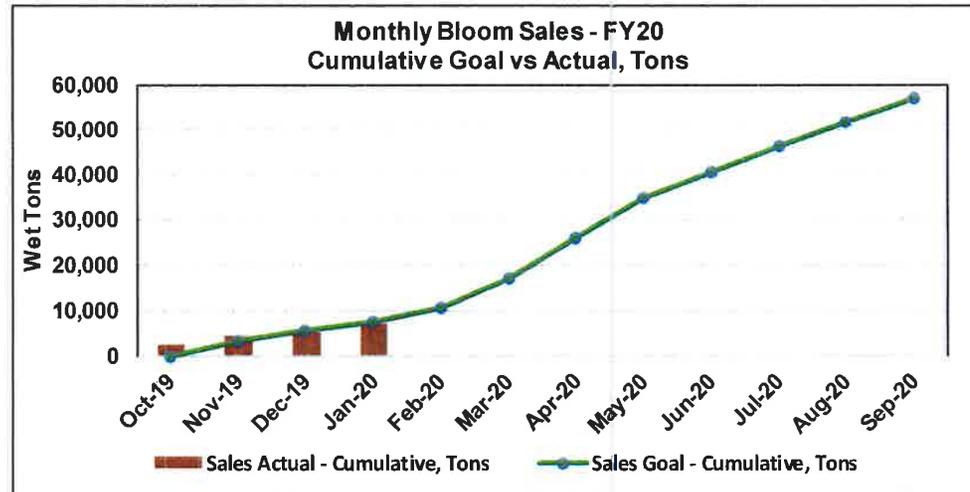
	December 2019	January 2020
<b>Total Precipitation, inches</b>	<b>3.28</b>	<b>2.79</b>
<b>Total Volume Captured and Treated, MG*</b>	<b>80</b>	<b>142</b>
➤ <b>Directed to Complete Treatment, MG</b>	<b>80</b>	<b>142</b>
➤ <b>Discharged to Outfall 001, MG</b>	<b>0</b>	<b>0</b>
<b>Measured Overflow, MG</b>	<b>0</b>	<b>0</b>
➤ <b>Percent Captured, %</b>	<b>100</b>	<b>100</b>

\*MG = Million Gallons



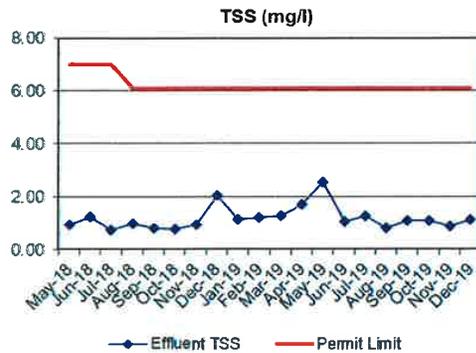
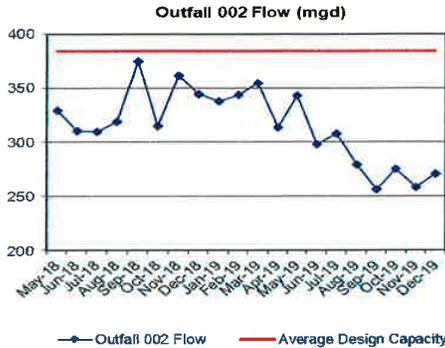
## Class A Biosolids Quality & Bloom Marketing

- ❑ All biosolids produced met Class A Exceptional Quality (EQ) requirements required by EPA.
- ❑ Fecal Coliform values on daily process monitoring samples remained below the 1,000 MPN/gram required for Class A biosolids - consistent with the low levels measured historically
- ❑ Bloom Marketing: ~1,912 tons marketed in January 2019
- ❑ Marketing goal during fiscal year 2020: 60,000 tons (~40% of production)



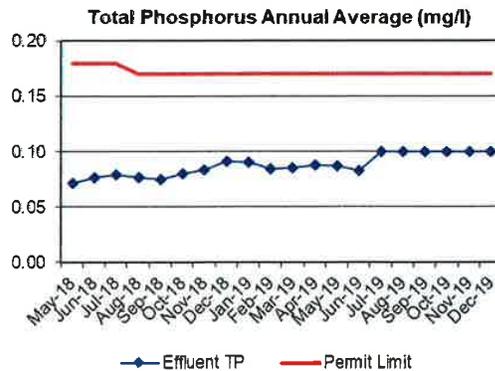
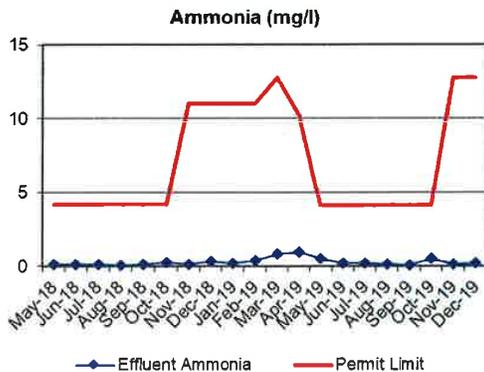
## BLUE PLAINS ADVANCED WASTEWATER TREATMENT PLANT PERFORMANCE REPORT – DECEMBER 2019

Average plant performance for the month of December 2019 was excellent with all effluent parameters well below the seven-day and monthly NPDES permit requirements. The monthly average flow through complete treatment and discharge to outfall 002, was 271 MGD. There was no treated captured combined flow directed to Outfall 001 during this period. The following figures compare the plant performance with the corresponding NPDES permit limits.



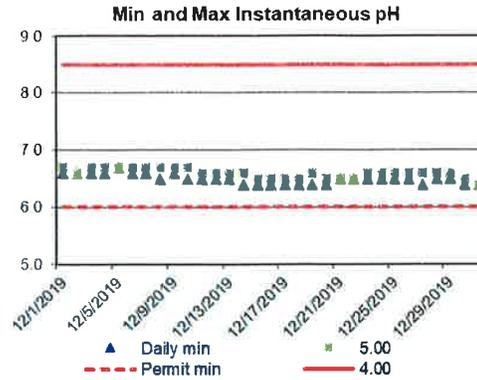
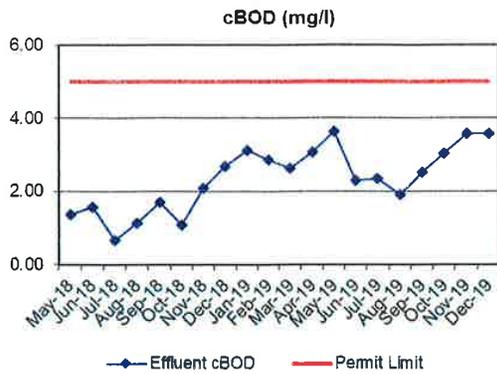
This graph illustrates the monthly average influent flow to the plant. The design average flow is 384 MGD. Blue Plains has a four-hour peak flow capacity of 555 MGD through complete treatment. Once the plant is at capacity, up to 225 MGD of additional captured combined system flow from the tunnel can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

Effluent Total Suspended Solids (TSS) is a measurement of the amount of solid material that remains suspended after treatment. The effluent TSS concentration for the month averaged 1.1 mg/L, which is below the 6.1 mg/L permit limit.



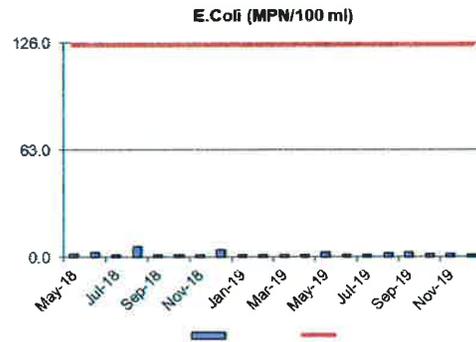
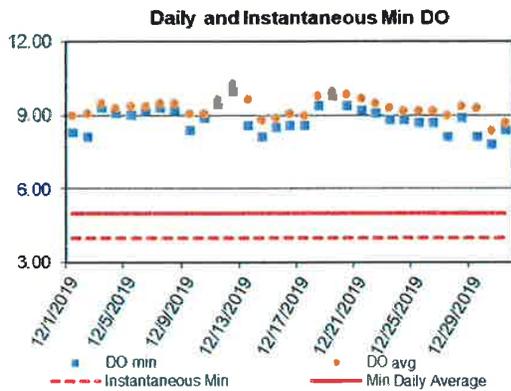
The Ammonia Nitrogen (NH<sub>3</sub>-N) is a measurement of the nitrogen found in ammonia. For the month, effluent NH<sub>3</sub>-N concentration averaged 0.20 mg/L and is below the 4.1 mg/L seasonal limit.

The Total Phosphorus (TP) is a measurement of the particulate and dissolved phosphorus in the effluent. The 12-month rolling average effluent TP concentration is 0.10 mg/L, which is below the 0.17 mg/L limit.



Carbonaceous Biochemical Oxygen Demand (CBOD) is a measurement of the amount of oxygen required for the decomposition of organic materials. The effluent CBOD concentration averaged 3.57 mg/L, which is below the 5.0 mg/L limit.

pH is a measurement of 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.

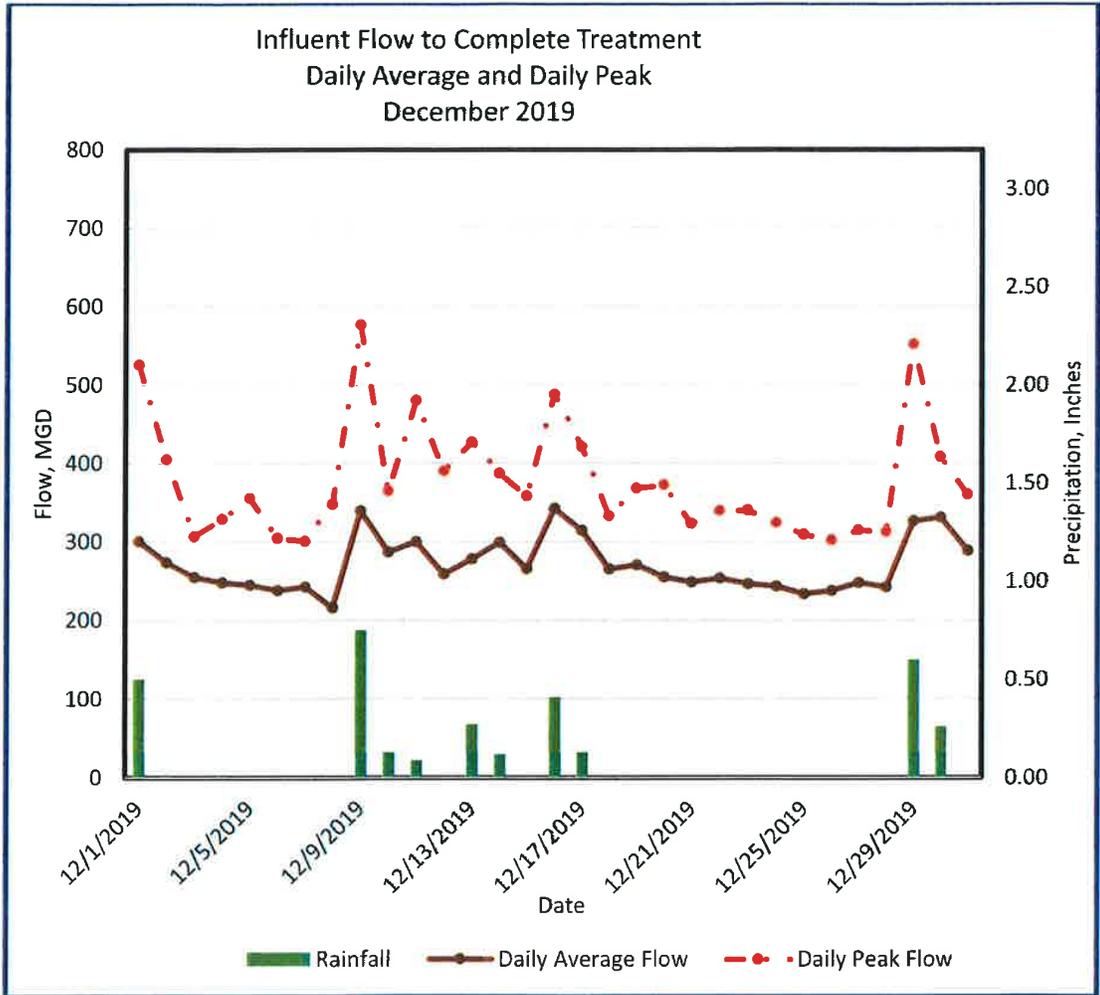


Dissolved Oxygen (DO) is a measure of the atmospheric oxygen dissolved in water. The DO readings for the month are within the permit limits. The minimum daily average is 8.4 mg/L. The minimum instantaneous DO reading is 7.8 mg/L. The minimum daily average and instantaneous permit limits are 5.0 mg/L and 4.0 mg/L, respectively.

E. coli is an indicator of disease causing organisms (pathogens). The E. coli permit limit is 126/100mL. The E coli geometric mean is 1.2 /100mL, and well below the permit limit.

### Wet Weather Impact on Plant Performance

During the month of December 2019, the Washington Metropolitan Region received below average precipitation (3.28 inches vs normal of 3.05 inches) as measured at the National Airport. There was no treated captured combined flow directed to Outfall 001 during this period.



## **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 The WWTF, along with the first section of the Anacostia Tunnel System were placed in operation, three days in advance of the March 23<sup>rd</sup> Consent Decree date.



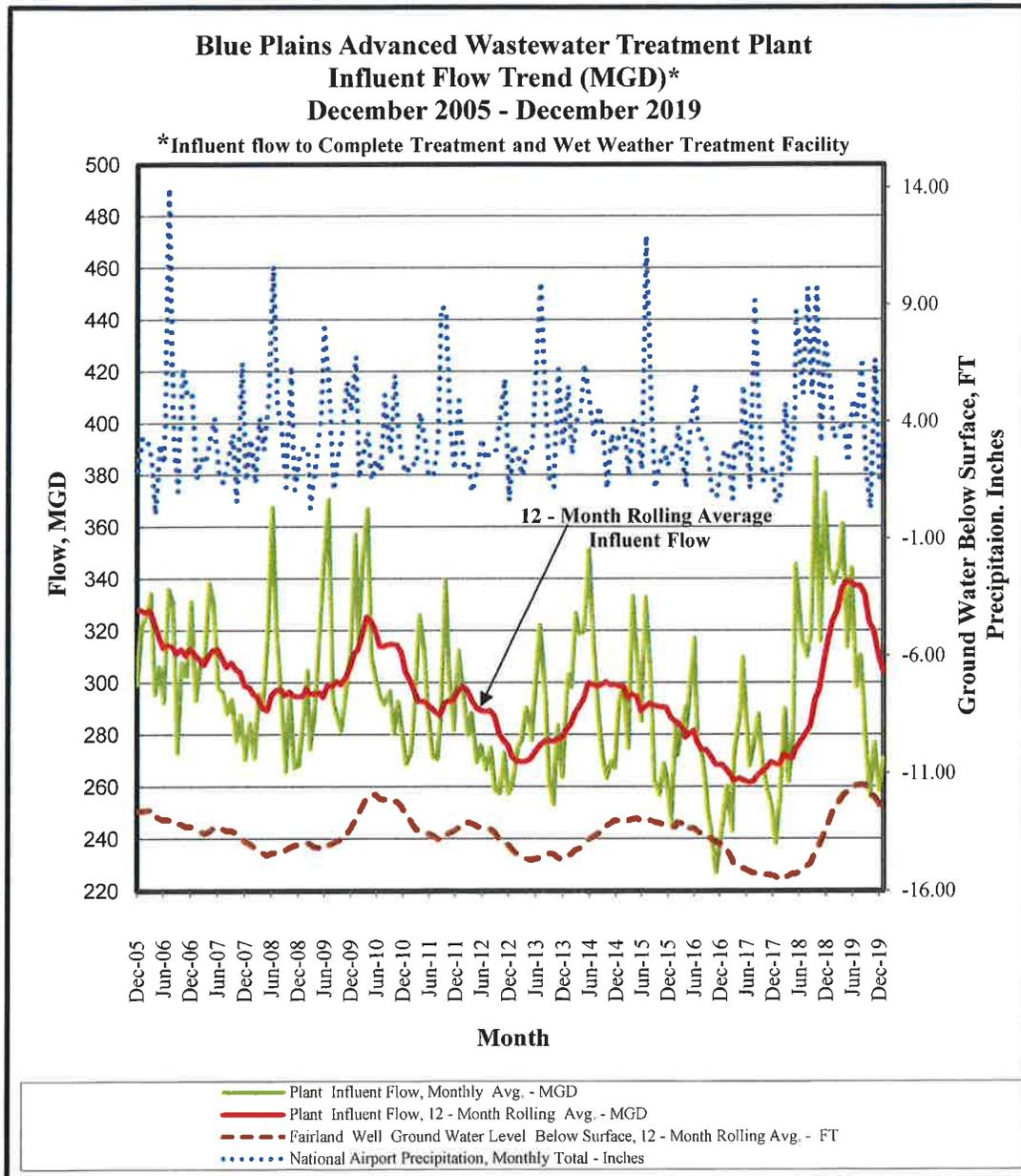
Aerial rendering of the Wet Weather Treatment Facility

### **Performance**

During the month of December, a total of 80 million gallons (MG) of wet weather flow captured in the tunnel system, was pumped, directly to the Complete Treatment Plant. There was no discharge of treated captured combined flow to Outfall 001. The treated flow was directed to the main plant to maximize complete treatment. 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 2019, the total volume pumped and treated through the WWTF is 6,919 MG. During the same period, 3,209 wet tons of screenings and grit (trash, debris, sediment) were removed, that would otherwise have been discharged into the Anacostia River.

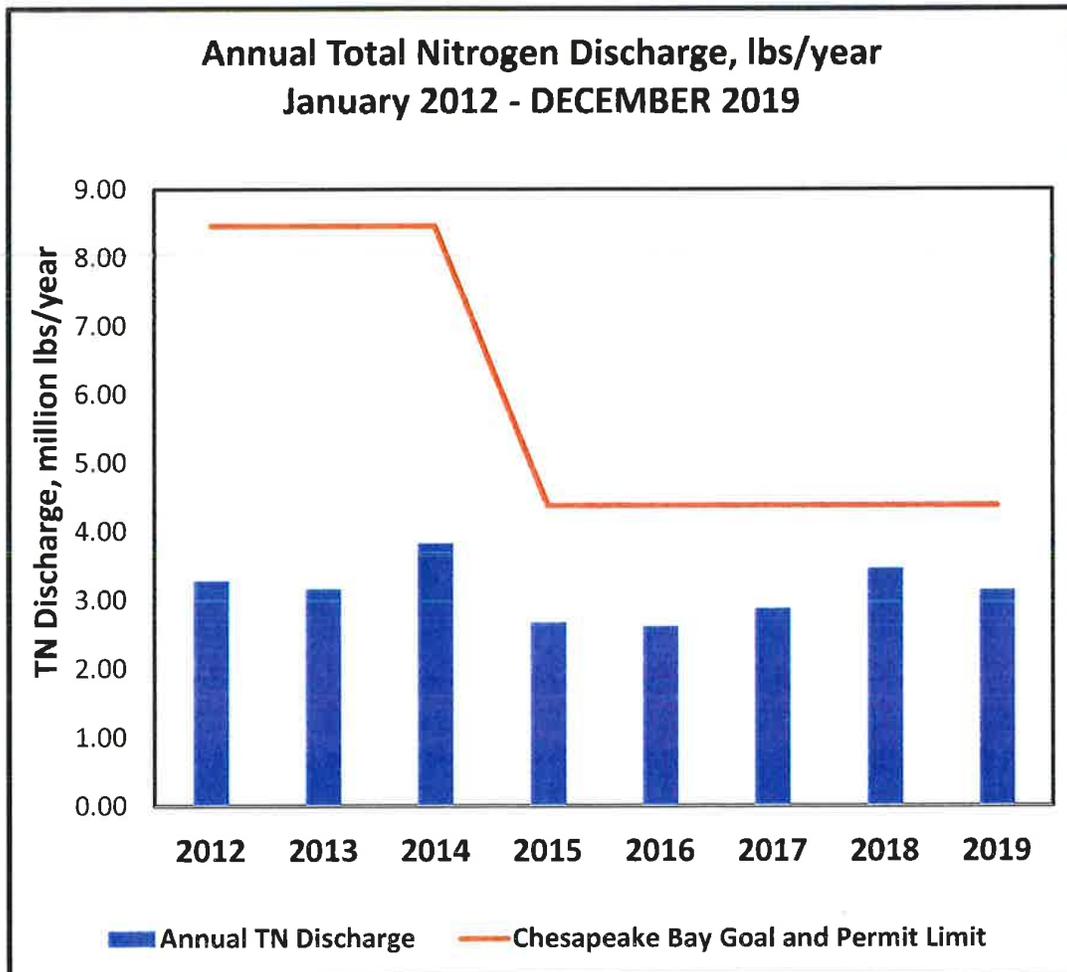
### Plant Influent Flow Trend

The graph below shows a long-term influent flow trend to the plant ending December 2019. While for any given month the flow is weather dependent, the 12-month rolling average influent flow exceeded 300 MGD since November 2018.



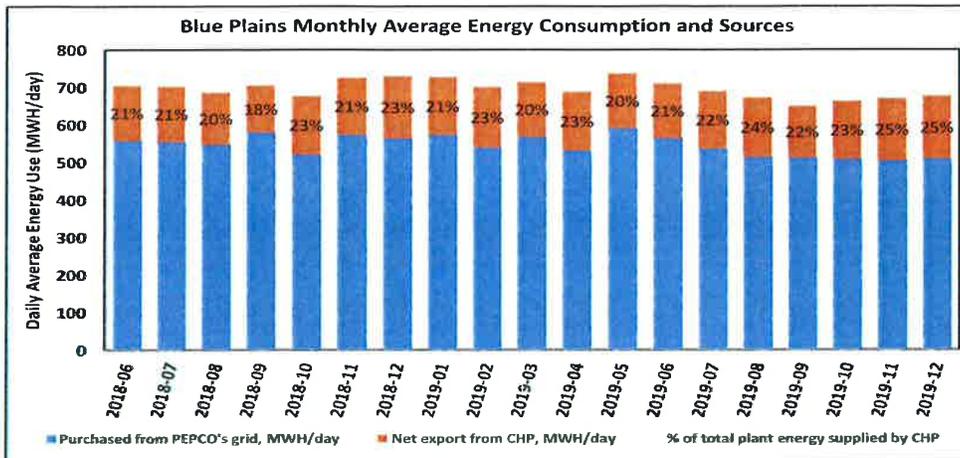
**Blue Plains Total Nitrogen (TN) Removal – Performance**

The graph below shows total annual nitrogen discharge, in million pounds per year, over an 8-year period ending December 2019. In December 2019, the monthly average TN concentration and total load in the complete treatment effluent were 2.57 mg/L and 182,993 lbs., respectively. The total pounds of nitrogen discharged in the complete treatment effluent during the current calendar year (through December 2019) is 3,139,111 lbs. and on track to remain below the NPDES permit discharge limit of 4,377,580 lbs. /year. The performance corresponds to average flow of 303 MGD, maximum month flow of 355 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, maximum month flows of 485 MGD, and operating wastewater temperatures below 12°C.



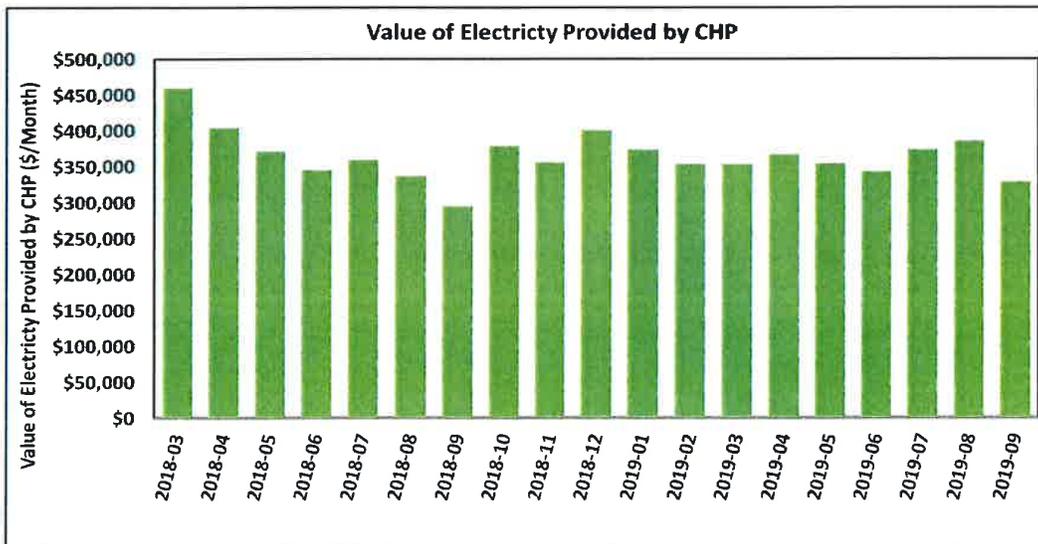
### Blue Plains Electricity Generation and Usage

In December 2019, the average energy consumed at Blue Plains was 677 megawatt hours per day (MWH/day) or 2.73 MWH of electricity per million gallons of wastewater processed through complete treatment. The Combined Heat and Power (CHP) facility generated an average of 168 MWH/day, making up for 25% of total energy consumed at Blue Plains. The remaining 504 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 generated by CHP by assuming unit price of \$78/MWH of electricity.



## **Water Quality & Pretreatment**

The Blue Plains Water Quality & Pretreatment group manages the Industrial Pretreatment Program, including temporary dewatering dischargers (construction dewatering, etc.) and dental dischargers, as well as the Hauled Waste Program. Staff also provide specialized sampling and program management support for the Blue Plains NPDES permit, including low level PCB and mercury monitoring as well as storm water management and regulatory compliance support. In addition, staff supported a 7-day collection system sampling program this month to evaluate loadings from one location each in the District and contributing jurisdictions.

### Industrial Pretreatment Program

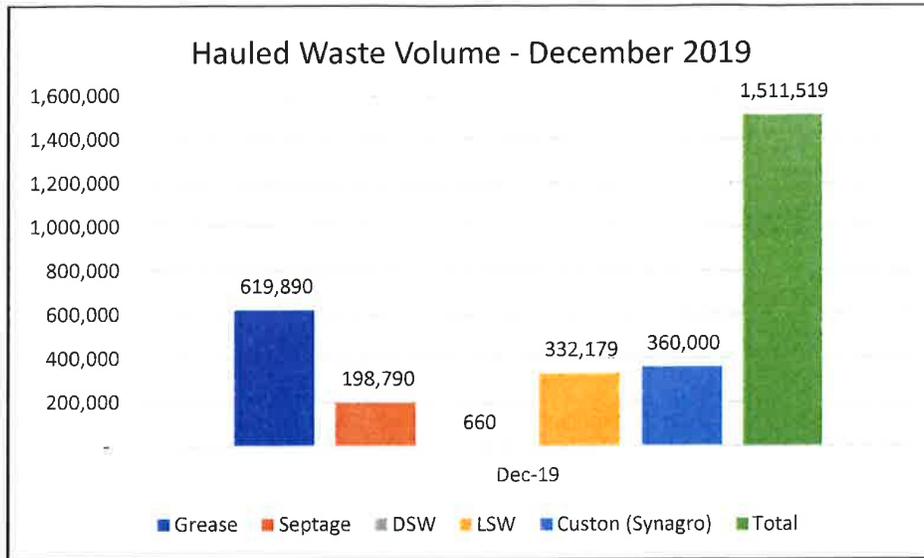
DC Water currently manages nine (9) Significant Industrial User (SIU) and nineteen (19) Non-Significant Industrial User (NSIU) wastewater discharge permits. One SIU permit was reclassified and issued as an NSIU permit (District Apartments) and one NSIU permit was renewed (Government Publishing Office). One NSIU permit (DC Consolidated Forensic Lab) was administratively extended pending submittal of sampling data and two NSIU permits for hospitals (VA Medical Center and Children's National Hospital) were administratively extended pending legal review of a proposed General Permit for all hospitals in the District. All SIUs and NSIUs are currently in compliance with discharge standards.

DC Water currently manages 111 Temporary Discharge Authorization (TDA) permits, primarily for construction site discharges of groundwater and/or surface runoff in the combined sewer area. Seven new TDA permits were issued this month. All TDA permittees are currently in compliance with discharge standards.

### Hauled Waste Program

DC Water currently manages 37 Waste Hauler permits for discharge of domestic septage, portable toilet waste, grease trap waste, groundwater or surface runoff, and other types of waste (if approved in advance and meet pretreatment standards). Two Waste Hauler permits were renewed this month.

DC Water received 636 hauled waste loads (1,511,519 gallons) from permitted haulers this month. Manifest forms from each truck entering the plant are collected by the security guards and picked up daily by Pretreatment staff and information is manually entered into an access database. Two hauled waste samples were collected this month.



**Revenue Generation**

The following billing (revenue) and receivables (cash) occurred this month for Groundwater/Retail Sewer (GWRS) billing for disposal fees in accordance with TDA permits issued under the Industrial Pretreatment Program, Industrial User (IU) billing for high strength waste, permitting fees, and annual compliance fees issued under the Industrial Pretreatment Program, and Waste Hauler (WH) billing for permitting and disposal fees issued under the Hauled Waste Program:

Cat. Code	FY 20 (Oct-Dec) Revenue Posted	FY 20 (Oct-Dec) Cash Received
GWRS	\$1,692.53	\$2,016.40
IU	\$90,909.63	\$54,312.34
WH	\$203,800.18	\$188,853.51
<b>Total</b>	<b>\$296,402.34</b>	<b>\$245,182.25</b>



# CIP Lifetime Budgets / Risks & Sensitivities

Presentation to the Environmental Quality and Operations Committee

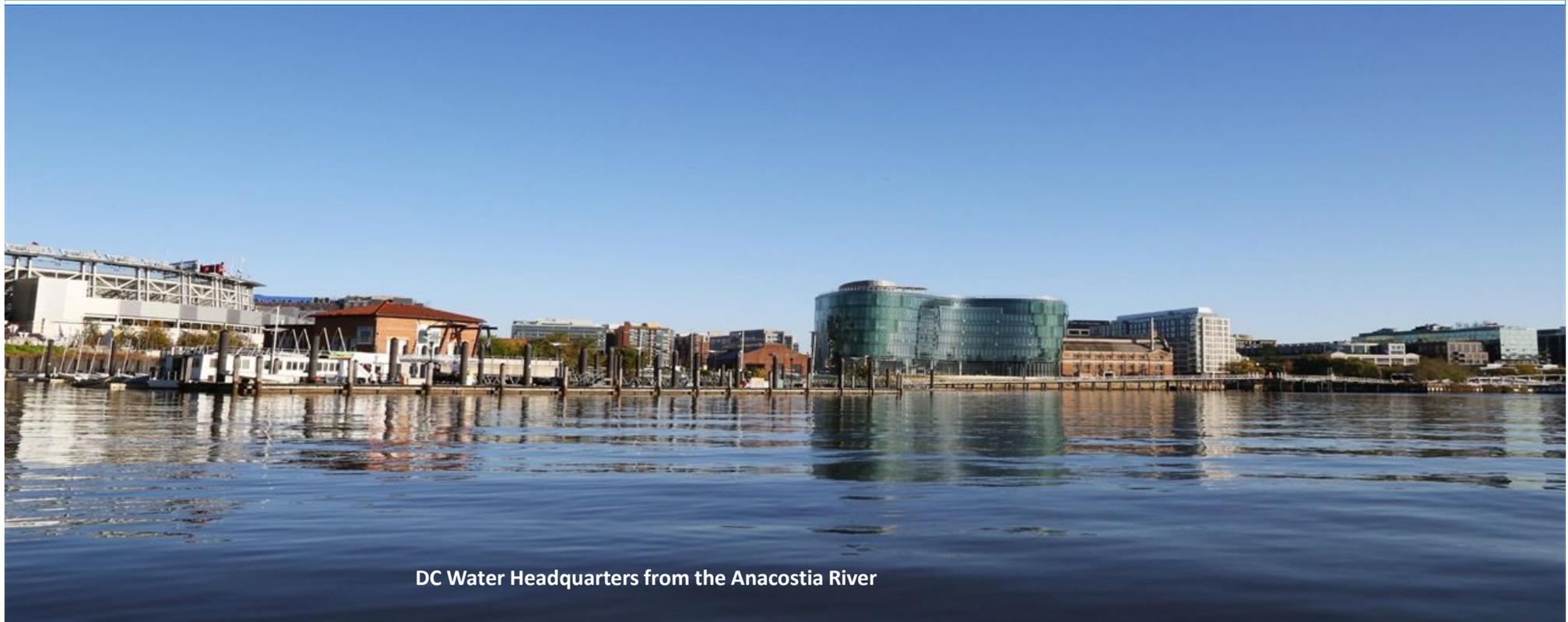
February 20, 2020

**Adam Ortiz, Chair**

---

**District of Columbia Water and Sewer Authority**

**Leonard R. Benson, Senior Vice President and Chief Engineer**



DC Water Headquarters from the Anacostia River



**Capital Improvement Program  
Responses to Questions:  
Lifetime Budgets & Risks  
Leonard Benson**



# Agenda

- I. Capital Improvement Program .....4
- II. FY 20-29 CIP Budget Questions.....5
- III. Lifetime Budget vs Disbursements.....6
- IV. Lifetime example and Budget Book detail ..... 10
- V. Risks/Sensitivities Cost Impacts..... 13
- VI. Actions .....20
- VII. Current Status ..... 21



# Proposed FY 20-29 CIP Budget

## The 10-year capital program Engineering Projects:

- Begins the implementation of the “Modified Baseline” approved last year, and adds additional funds to reach 1.5% replacement plans for water and sewer infrastructure within the ten-year plan, balancing infrastructure renewal and affordability
- Fully funds the **Clean Rivers** program to meet all consent decree deadlines
- Funds **non-process facilities** including the new Fleet and Sewer Facilities, renovations to the Historic Main Pump Station, and restoration of the Main & O campus seawall
- At **Blue Plains** funds upgrades to Screens, Grit and Primary Facilities, and Process Control Computer System, Efficiency Improvements, and Long-term Concrete Rehabilitation projects
- Advances major rehabilitation of **sanitary collection sewers**, upgrades to sewer pump stations, rehabilitation of the Potomac Interceptor and increased funding to ramp up to 1.5% replacements per year starting FY 2027 and onwards for the **small diameter water mains** and **small sewer lines**
- Includes carryover from prior year to complete the Enterprise Resource Planning (ERP) and Advanced Meter Infrastructure (AMI) projects, and increased funding for Fleet, pumps and other equipment



Screens, Grit & Primary Facilities Upgrades



6<sup>th</sup> St SW



# 10-Year Engineering CIP Options Compared

Service Area	Approved Baseline \$4.4B (FY19-28)	Proposed Baseline \$4.9B (FY20-29)	Asset Management \$5.4B (FY19-28)	Fully Funded \$5.8B (FY20-29)
<b>Clean Rivers</b>	Fully funded to meet Consent Decree	Fully funded to meet Consent Decree	Fully funded to meet Consent Decree	Fully funded to meet Consent Decree
<b>Wastewater</b>	Fully 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	Fully funded to meet NPDES Permit and established levels of service
<b>Stormwater</b>	Fully funded	Fully funded	Fully funded	Fully funded
<b>Water</b>				
Pump Stations & Storage Facilities	Generally funded	Fully funded	Fully Funded	Fully Funded
Small Diameter Water Mains	Underfunded; (Funded to meet 1% per year replacement level - [11 mi/year])	Increased funding to ramp up to 1.5% per year replacement level from FY 2027 onwards. [16.5 mi/year]	Fully funded to ramp up to 2% replacement level [22 mi/year]	Fully funded to ramp up to 2% replacement level [22 mi/year]
Large Diameter Water Mains	Generally funded	Generally funded	Generally funded	Fully Funded
<b>Sewer</b>				
Pump Stations	Fully funded	Fully funded	Fully funded	Fully funded
Sewer Lines < 60" diameter	Underfunded (Funded to ramp up to 1.0% per year rehabilitation level [17.5 mi/year] by FY 2023)	Increased funding to ramp up to 1.5% per year rehabilitation level from FY 2027 onwards. [26 mi/year]	Fully funded to ramp up to 2.3% rehabilitation level [40 mi/year]	Fully funded to ramp up to 2.3% rehabilitation level [40 mi/year]
Sewer Lines ≥ 60"	Generally Funded	Generally Funded	Generally Funded	Fully funded
<b>Non Process</b>	Fully funded	Fully funded	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

### Questions from Environmental Quality and Operations Committee January 16, 2020 Meeting:

- 1. Sr. VP & Chief Engineer: Provide a detailed briefing on the 10-year CIP Lifetime Budget (i.e., \$11.45B) including actual spent-to-date information.**
- 2. Sr. VP & Chief Engineer: Update the 10-year CIP Disbursement Forecast slides and show what the required funding levels would need to be, past FY29, as well as layering in the risk and sensitivity costs if this Proposed CIP budget is approved and implemented.**



# Proposed FY20 – FY29 CIP

## FY20-29 10-year CIP

- The overall increase to Capital Projects compared to the FY19-28 plan is **\$493M**

- The **10-year CIP** disbursements total is: **\$4.921 Billion**

**Total Lifetime Budget** of approved and proposed projects is: **\$11.453 Billion**

\$ in thousands	Run 6 - FY2020-2019 Proposed Disbursement Plan											Approved Base (FY20-29)		
	FY20*	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	10-Yr Total	**Lifetime	^10-Yr Total	Delta
<b>NON PROCESS FACILITIES</b>														
Facility Land Use	42,066	31,849	20,665	6,831	11,058	10,396	3,901	3,553	3,560	3,600	137,479	221,841	126,358	(11,121)
Subtotal	<b>42,066</b>	<b>31,849</b>	<b>20,665</b>	<b>6,831</b>	<b>11,058</b>	<b>10,396</b>	<b>3,901</b>	<b>3,553</b>	<b>3,560</b>	<b>3,600</b>	<b>137,479</b>	<b>221,841</b>	<b>126,358</b>	<b>(11,121)</b>
<b>WASTEWATER TREATMENT</b>														
Liquid Processing	24,516	42,496	43,069	48,748	44,909	31,792	66,989	68,544	99,413	103,740	574,216	1,266,857	635,675	61,459
Plantwide	17,387	32,784	42,213	30,735	37,879	23,127	18,231	25,062	20,506	9,902	257,826	525,997	209,807	(48,019)
Solids Processing	19,847	27,314	27,424	25,852	22,754	15,761	12,658	6,027	10,476	12,858	180,971	924,507	138,068	(42,903)
Enhanced Nitrogen Removal Facilities	15,786	382	672	1,897	1,770	-	-	2,206	1,861	11,665	36,239	980,940	63,374	27,135
Subtotal	<b>77,536</b>	<b>102,976</b>	<b>113,378</b>	<b>107,232</b>	<b>107,312</b>	<b>70,680</b>	<b>97,878</b>	<b>101,839</b>	<b>132,256</b>	<b>138,165</b>	<b>1,049,252</b>	<b>3,698,301</b>	<b>1,046,924</b>	<b>(2,328)</b>
<b>COMBINED SEWER OVERFLOW</b>														
DC Clean Rivers Program	162,197	147,565	179,833	129,272	67,536	59,909	148,771	103,265	88,890	115,049	1,202,288	2,764,255	1,189,779	(12,509)
Combined Sewer Program Management	1,287	1,792	2,237	2,972	3,028	2,050	2,629	2,515	3,125	2,519	24,154	77,756	24,327	173
Combined Sewer Overflow Program	7,952	7,701	10,579	13,581	13,703	6,518	4,070	5,057	5,847	9,916	84,924	199,729	59,795	(25,129)
Subtotal	<b>171,436</b>	<b>157,058</b>	<b>192,649</b>	<b>145,824</b>	<b>84,267</b>	<b>68,476</b>	<b>155,470</b>	<b>110,837</b>	<b>97,863</b>	<b>127,484</b>	<b>1,311,366</b>	<b>3,041,740</b>	<b>1,273,901</b>	<b>(37,465)</b>
<b>STORMWATER</b>														
Storm Local Drainage Program	12	22	688	594	1,267	1,948	1,164	1,792	1,970	1,709	11,166	18,025	9,749	(1,417)
Storm On-Going Program	1,011	631	1,109	837	866	526	875	843	1,084	1,287	9,069	11,540	7,591	(1,478)
Storm Pumping Facilities	5,310	8,392	4,923	2,259	2,854	1,865	1,698	1,353	3,430	1,755	33,839	61,204	49,311	15,472
Storm DDOT Projects	-	-	-	-	-	-	-	-	-	-	-	3,237	-	-
Stormwater Program Management	410	445	582	367	405	321	464	318	385	306	4,003	12,889	2,538	(1,465)
Stormwater Trunk/Force Sewers	126	141	233	113	-	-	-	-	-	-	613	15,510	255	(358)
Subtotal	<b>6,869</b>	<b>9,631</b>	<b>7,535</b>	<b>4,170</b>	<b>5,392</b>	<b>4,660</b>	<b>4,201</b>	<b>4,306</b>	<b>6,869</b>	<b>5,057</b>	<b>58,690</b>	<b>122,404</b>	<b>69,444</b>	<b>10,754</b>
<b>SANITARY SEWER</b>														
Sanitary Collection System	4,613	8,134	33,564	18,009	24,312	33,040	52,923	68,745	65,771	61,043	370,154	569,040	297,321	(72,833)
Sanitary On-Going Projects	12,099	12,327	13,711	13,667	14,185	15,019	15,253	15,111	15,312	14,842	141,529	217,969	143,428	1,899
Sanitary Pumping Facilities	2,570	5,995	6,924	8,240	5,068	10,468	11,639	11,933	27,732	33,628	124,196	270,778	121,119	(3,077)
Sanitary Program Management	4,150	5,464	7,014	5,132	3,913	3,103	3,174	3,900	4,064	4,335	44,250	119,050	42,933	(1,317)
Interceptor/Trunk Force Sewers	21,501	32,006	54,327	43,062	44,084	76,710	76,826	77,100	62,993	60,184	548,794	918,096	481,440	(67,354)
Subtotal	<b>44,933</b>	<b>63,926</b>	<b>115,541</b>	<b>88,110</b>	<b>91,562</b>	<b>138,341</b>	<b>159,814</b>	<b>176,789</b>	<b>175,873</b>	<b>174,032</b>	<b>1,228,922</b>	<b>2,094,934</b>	<b>1,086,241</b>	<b>(142,681)</b>
<b>WATER</b>														
Water Distribution Systems	33,872	60,464	62,606	65,093	58,654	64,372	65,350	99,075	117,595	121,131	748,211	1,446,953	669,041	(79,170)
Water Lead Program	4,711	5,408	5,387	5,456	5,627	5,719	5,496	5,744	5,877	5,692	55,117	243,504	64,536	9,419
Water On-Going Projects	10,532	11,075	12,297	13,351	15,199	16,789	18,583	20,447	22,981	23,506	164,761	217,972	163,517	(1,243)
Water Pumping Facilities	1,525	2,650	12,169	6,284	2,567	4,218	7,446	4,163	2,328	-	43,350	85,344	35,794	(7,556)
DDOT Water Projects	1,721	10	8	-	-	-	-	-	-	-	1,739	33,933	84	(1,655)
Water Storage Facilities	6,216	4,318	10,399	13,963	5,610	4,783	11,334	8,985	694	1,360	67,662	155,164	49,158	(18,504)
Water Service Program Management	3,587	4,752	6,012	4,854	5,248	5,884	8,110	8,376	5,441	3,008	55,272	90,944	55,698	426
Subtotal	<b>62,163</b>	<b>88,677</b>	<b>108,878</b>	<b>109,000</b>	<b>92,905</b>	<b>101,765</b>	<b>116,319</b>	<b>146,791</b>	<b>154,916</b>	<b>154,697</b>	<b>1,136,112</b>	<b>2,273,813</b>	<b>1,037,828</b>	<b>(98,284)</b>
<b>CAPITAL PROJECTS</b>	<b>405,004</b>	<b>454,118</b>	<b>558,645</b>	<b>461,168</b>	<b>392,496</b>	<b>394,318</b>	<b>537,584</b>	<b>544,115</b>	<b>571,336</b>	<b>603,035</b>	<b>4,921,820</b>	<b>11,453,033</b>	<b>4,640,696</b>	<b>(281,124)</b>

NOTES: \* FY20 ceiling includes FY19 carry over of \$24,517 M  
 \*\* Lifetime budget is the total budget, including available budget and the actual spent to date  
 ^ The 10-yr total comparison is calculated for the same period FY20-29, i.e. last years Approved (Run5c) years FY20-28 plus this year's new FY29, compared to this proposed Run 6 FY20-29

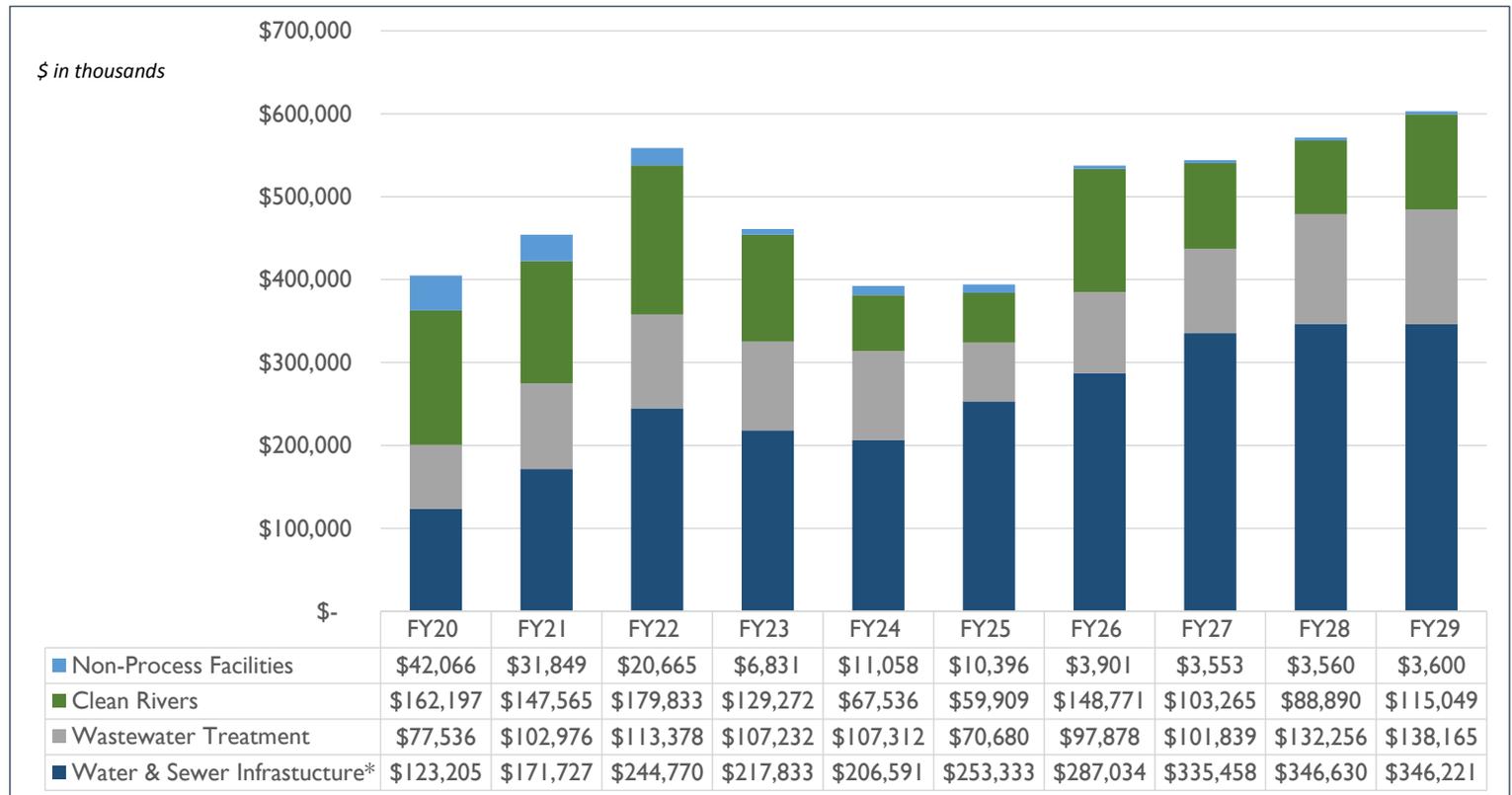


# 10-Year CIP Disbursements Forecast

## FY20-29 10-year CIP

The 10-year CIP disbursements are calculated based on:

- Remaining Commitments
- Received Bids
- Detailed estimates
- Schedule dates
- and corresponding cost-curves in the P6 schedule



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

- Cash disbursements basis



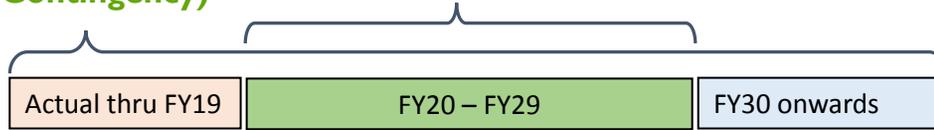
# Lifetime Budget vs 10-year Disbursements Forecast

## Lifetime Budget vs forecast Disbursements

Lifetime Budget captures all costs of approved projects active during the period of FY20-29 window, including those that started before FY20 and those finishing beyond FY29.

**CIP Ten-Year (\$4.9B) = Cost to Complete within 10-yr window**

**Lifetime Budget (\$11.4B) = Actual to date + Cost to Complete (+Contingency)**



Activity Name	Original Total Cost	Cost to Date	Cost to Complete	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29
<b>0000 Current WASA CIP</b>	<b>\$1,173,840,934</b>	<b>\$4,565,336,563</b>	<b>\$5,788,434,979</b>										
<b>A - Non Process Facilities</b>	<b>\$27,283,445</b>	<b>\$70,624,155</b>	<b>\$133,580,029</b>										
0100 Facility Renovation	\$27,283,445	\$70,624,155	\$133,580,029										
0100 Name Renovation Building	\$76,093,998	\$73,427,236	\$3,875,662										
0100 Water Systems Laboratory Facilities	\$645,947	\$44,821	\$20,000										
0100 Bryant Street Pump Station Building Modification	\$14,370,000	\$83,260	\$1,875,740										
0100 Fort Reno Pump Station - Field Ops Facility West	\$2,950,000	\$0	\$2,750,000										
0100 Adams B. Q. Renovation & Effects Stormwater	\$10,000,000	\$7,437,794	\$42,303,024										
0100 C-OF Renovation	\$12,300,000	\$283,144	\$8,280,756										
0100 C-W Renovation and Construction	\$2,500,000	\$46,000	\$1,934,184										
0100 Hazardous Waste Deep Remediation	\$1,832,000	\$0	\$1,800,000										
0100 Non-Process Area - HVAC And Roofing Project	\$28,000,000	\$0	\$28,000,000										
0100 Anacostia Pump Station - Field Ops East	\$2,200,000	\$0	\$2,000,000										
0100 Bryant Street Parking Modifications	\$4,000,000	\$0	\$4,000,000										
0100 Adams B. Q. Sewer Rehabilitation (Phase 2) H2O2	\$12,000,000	\$0	\$12,000,000										
0100 Adams B. Q. Sewer Rehabilitation - Inverse Reorder	\$13,000,000	\$0	\$13,000,000										
<b>B - Waste Water Treatment</b>	<b>\$1,652,243,355</b>	<b>\$1,881,345,868</b>	<b>\$1,315,099,171</b>										
0 - Conventional Sewer Collection	\$1,038,190,000	\$1,762,282,219	\$1,250,572,722										
0 - Storm Water	\$122,403,795	\$24,245,673	\$63,735,655										
3 - Secondary Sewer	\$2,034,479,381	\$290,315,298	\$1,477,094,801										
<b>W - Water</b>	<b>\$2,177,292,000</b>	<b>\$3,102,737,617</b>	<b>\$3,265,922,079</b>										
0 - Water Distribution Systems	\$1,345,335,724	\$187,445,334	\$665,922,064										
0100 Large Diameter Water Main 3	\$19,780,463	\$6,720,245	\$9,283,534										
0100 Small Diameter Water Main Rehab 3.2	\$483,174,888	\$2,400,142	\$1,002,485										
0100 Small Diameter Water Main Rehab 3.3	\$43,070,032	\$1,469,869	\$1,469,869										
0100 Small Diameter Water Main Rehab 3.4	\$5,778,030	\$3,406,956	\$2,482,750										
0100 Street Water Main Rehab - Phase 1	\$13,339,422	\$5,316,426	\$6,044,524										
0100 20 Low Service Main & PIV	\$6,334,154	\$6,833,234	\$5,037,401										
0100 Water Main Rehab Phase 2	\$9,525,710	\$2,213,483	\$2,381,563										
0100 Fire Hydrant Replacement Program - Phase 2	\$28,510,000	\$15,368,160	\$68,371,774										
0100 Small Diameter Water Main Rehab 3.5	\$12,000,000	\$0	\$4,253,655										
0100 Large Valve Replacement (Contract 3-7)	\$13,880,022	\$1,473,242	\$11,000,000										
0100 Small Diameter Water Main Rehab 3	\$15,670,896	\$12,547,186	\$2,296,508										
0100 Small Diameter Water Main Rehab 9	\$21,300,000	\$2,189,800	\$1,600,000										
0100 Small Diameter Water Main Rehab 10	\$48,293,892	\$2,288,584	\$3,450,453										
0100 Small Diameter Water Main Rehab 13	\$4,835,086	\$9,513,000	\$3,789,782										
0100 Small Diameter Water Main Rehab 16	\$52,800,000	\$0	\$43,725,000										
0100 Large Valve Replacement (Contract 13-13)	\$19,614,281	\$1,016,132	\$565,724										
0100 Large Dia Water Main Rep 3 - 2 & 3	\$83,320,000	\$0	\$70,720,000										
0100 Large Diameter Water Main Replacement 0 - 7 & 8	\$89,840,000	\$0	\$72,510,000										
0100 Large Diameter Water Main Replacement 0 - 10	\$76,400,000	\$0	\$66,450,000										
0100 Small Diameter Water Main Rehab 18	\$46,380,000	\$0	\$32,475,000										
0100 Small Diameter Water Main Rehab 19	\$59,590,000	\$0	\$3,580,152										
0100 Small Diameter Water Main Rehab 20	\$43,300,000	\$0	\$14,425,000										
0100 Small Diameter Water Main Rehab 21	\$43,400,000	\$0	\$14,880,000										
0100 Small Diameter Water Main Rehab 22	\$44,520,000	\$0	\$7,695,000										
0100 Small Diameter Water Main Rehab 23	\$45,780,000	\$0	\$19,775,000										
0100 Small Diameter Water Main Rehab 24	\$48,000,000	\$0	\$43,925,000										



# dc water is life Lifetime vs 10-year Disb. - Project Example

## Examples of a Projects Lifetime Budget vs 10-yr Disbursements

- The Cost forecast is based on Cost to Complete (CTC)
- The Lifetime Budget is equal to the Budgeted Total Cost

OM01 Lifetime is \$6M = Actual to date (\$4M) + Cost to Complete (\$2M)

CIP Ten-Year (\$2M) within 10-yr window



S	Actn Statu	Bud Yr	Activity ID	Activity Name	Start	Finish	Budgeted Total Cost /	Cost to Date	Cost to Complete		FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
			OM01	Hot Water/Steam System - Grit and Screens	03/01/2017 A	07/31/2021	\$6,076,101	\$4,106,606	\$1,961,444														
			OM44201000	East Grit & Screens - Hot water	03/01/2017 A	04/30/2021	\$3,038,050	\$2,265,713	\$772,337														
			OM44010000	West Grit & Screens - Hot water	06/01/2018 A	07/31/2021	\$3,008,051	\$1,810,893	\$1,189,107														
			OM13100000	Design - E & W Grit/Screening	03/01/2017 A	01/31/2018	\$30,000	\$30,000	\$0														

- The above cost loaded schedule generates the Budget Book CIP Section



# Lifetime Budget Detail in Budget Book

## Budget Book CIP Details

- The CIP has 290+ Projects, and the budget book has details on each including description and IMA cost share % splits
- There are 7,500+ activities in the schedule
- The disbursements table is the 10-year forecast
- The commitments table is based on the lifetime budget and the date the activity starts

Capital Project Detail Pages summary overview financial plan rates/rev **capital** financing departmental glossary

FY 2020 - FY 2029

<b>Service Area Title:</b>	Wastewater Treatment Service Area	<b>Project Dates</b> Start: FY 2023 Completion: FY 2031
<b>Program Title:</b>	Liquid Processing	
<b>Project ID/Project Title:</b>	B7 - Primary Sedimentation Tank Odor Scrubbers	
<b>Managing Department:</b>	Department of Wastewater Engineering	
<b>EPMC:</b>	NRPM - Nitrogen Removal Program Manager	
<b>Priority:</b>	Good Engineering, Low pay back, Mission / Function over long term	
<b>Project Description:</b>	This project includes the design and construction of air scrubbing units to treat captured odorous off-gases from the liquid surface of wastewater in the primary tanks and flowing over weirs. Project B6 Primary Sedimentation Tank Covers is proposed as a separate project which is pre-requisite to the treatment of foul air. This project, B7, addresses the treatment needs for the captured air and includes design and construction of two single-stage wet chemical (high pH only) odor scrubbers for foul air treatment on the East and West primary treatment facilities. Active foul air will be withdrawn from air tight head spaces provided by full tank coverage. Scrubbers will treat captured foul air (hydrogen sulfide and total reduced sulfur compounds) from 36 existing Primary Sedimentation Tanks.	
<b>Impact on Operations:</b>	This project will improve environmental conditions for DC Water operations and maintenance personnel by reducing odors.	

---

**Effective Funding by User (percent):**

DC -	41.22%	<b>Previous Approved Lifetime Budget</b> \$45,870,000 <b>Current Approved Lifetime Budget</b> \$45,870,000 <b>Lifetime Budget Increase/Decrease</b> \$0 <b>Allocated Labor as of FY 2018</b> \$0
EPA/Fed -	0.00%	
WSSC -	45.84%	
Fairfax -	8.38%	
Loudoun/PI -	0.84%	

	Pre FY 2020	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Post FY 2029
<b>Disbursements Budget</b>	0	0	0	0	0	0	686	98	1,736	1,104	12,671	23,613
<b>Commitments Budget</b>	0	0	0	0	0	0	981	750	3,695	0	40,444	0

(projected disbursements do not include contingencies; commitments budget does not include labor) (\$ in thousands)

For the budget book details FY19-28 refer to DC water website: <https://www.dwater.com/budget-and-financial-planning>

### Questions from Environmental Quality and Operations Committee January 16, 2020 Meeting:

**1. Sr. VP & Chief Engineer: Provide a detailed briefing on the 10-year CIP Lifetime Budget (i.e., \$11.45B) including actual spent-to-date information.**

**2. Sr. VP & Chief Engineer: Update the 10-year CIP Disbursement Forecast slides and show what the required funding levels would need to be, past FY29, as well as layering in the risk and sensitivity costs if this Proposed CIP budget is approved and implemented.**



## CIP Risks/Sensitivities

### Regulatory/Consent Decree/Permitting

- E. Coli Total Maximum Daily Load (TMDL) – lawsuit by environmental groups seeking more restrictive TMDL
- EPA developing new Anacostia River trash TMDL
- MS4 permit – rehabilitation of Stormwater Outfalls, total scope and cost unknown (currently \$5 million 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
- Potential regulation requirements for contaminants (e.g. Polychlorinated Biphenyls (PCBs))
- 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
- Sanitary Sewer Overflows (SSO) – Risk of SSO Consent Decree
- Odor control for secondary treatment at Blue Plains



## CIP Risks/Sensitivities (cont.)

### Blue Plains Process Optimization & Revenue Opportunities

- Full Plant Deammonification (>\$60 million)
- Additional capacity for Digesters, Thermal Hydrolysis and Combined Heat and Power
- Resource Recovery (Hot Water Heating Loop; Sludge Drying)

### Other:

- Lead Service Replacement Program
- DDOT and Pepco DC Power Line Undergrounding (DC PLUG) – (\$57 million, DC Water Share is 50% = \$28 million)
- Condition assessment of large sewers could lead to additional CIP needs
- Washington Aqueduct
  - Federally Owned Water Main Repairs (\$86 million, all DC Water)
  - Travilah Quarry Acquisition & Outfitting  
(Current discussion in range of \$750 million to \$1 Billion, cost sharing unknown)
  - Advanced Treatment Facilities (\$375 million, DC Water share = \$280 million)
  - Transmission and Storage upgrades (\$300 million, DC Water Share = \$225 million)



## Risks Cost Forecast

Potential Cost Impacts developed from high-level cost estimates and schedule of Risks & Sensitivities using the following guidelines:

- 💧 Cost Estimates are mostly at a high-level (concept design) with both High & Low ranges
- 💧 Schedule dates are broad (nearest years starting & finishing) both Early & Late ranges
- 💧 Subsequent Risk Ranges based on:
  - Highest Impact (Highest value for Estimate range / Earliest potential Schedule)
  - Moderate Impact (Lowest value for Estimate range / Latest potential Schedule)
  - Lowest Impact – (No risks occur at all, Baseline CIP only)
- 💧 Probability is not accounted for in this high-level analysis as it is unquantifiable at this time

The table on the following slide lists the high/low estimates & schedules



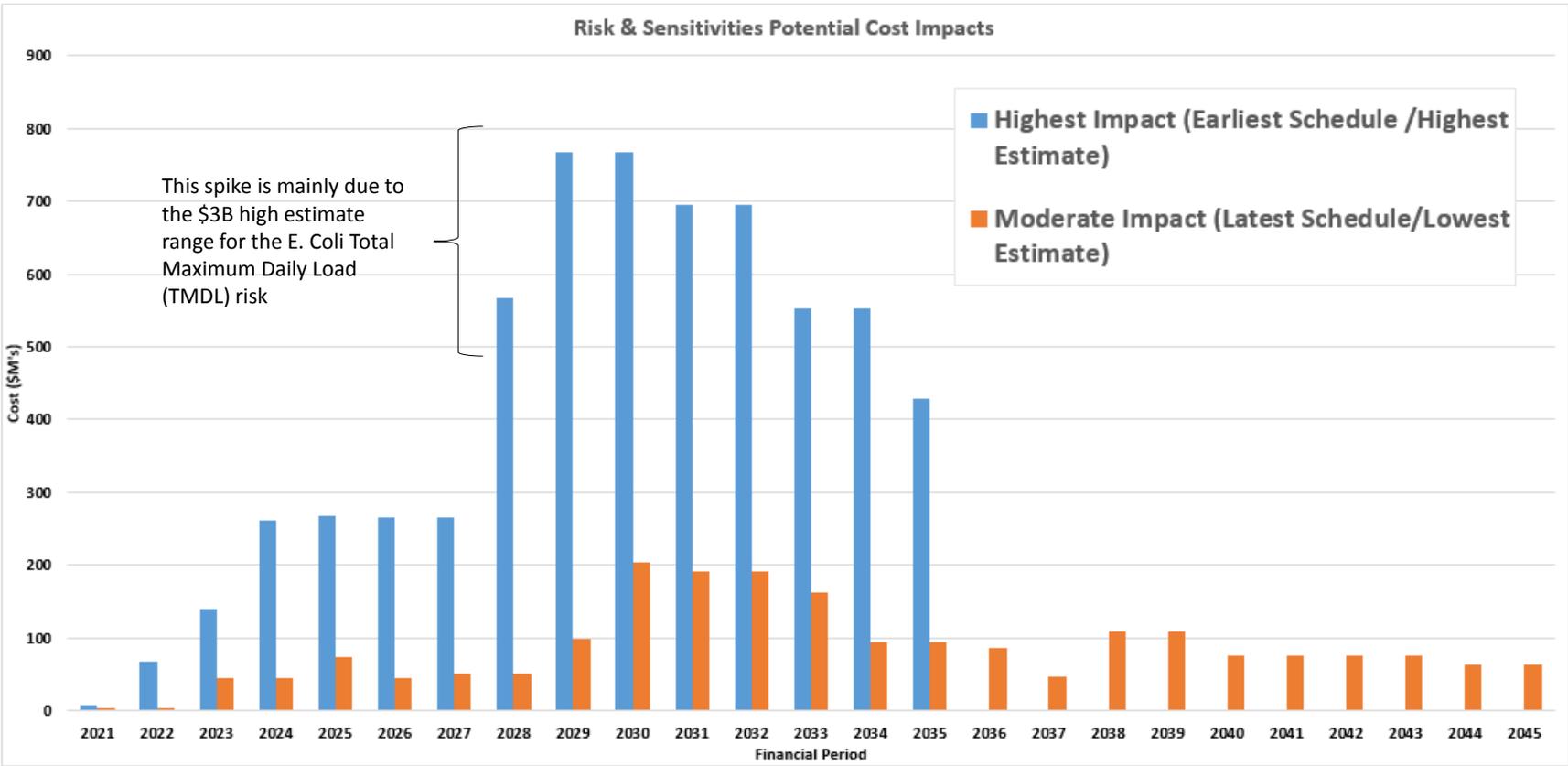
## CIP Risks/Sensitivities – Impacts Table

Risk/Sensitivity	Low Cost Estimate	High Cost Estimate	Earliest Schedule	Latest Schedule
Full Plant Deammonification (>\$60 million)	\$60M	\$180M	FY24-FY34	FY29-FY39
Additional capacity for Digesters, Thermal Hydrolysis and Combined Heat and Power	\$300M	\$675M	FY24-FY34	FY29-FY39
Resource Recovery (Hot Water Heating Loop; Sludge Drying)	\$3M	\$500M	FY24-FY34	FY29-FY39
Condition assessment of large sewers could lead to additional CIP needs	\$70M	\$140M	FY22-FY29	FY23-FY30
Condition assessment of large diameter water mains could lead to additional CIP needs	\$35M	\$49M	FY22-FY29	FY23-FY30
WA: Federally Owned Water Main Repairs (\$86 million, all DC Water)	\$86M	\$86M	FY22-FY24	FY23-FY25
WA: Travilah Quarry Acquisition & Outfitting (Current discussion in range of \$750 million to \$1Billion, cost sharing estimated as \$280-375M)	\$280M	\$375M	FY29-FY35	FY30-FY36
WA: Advanced Treatment Facilities (\$375 million, DC Water share = \$280 million)	\$280M	\$310M	FY29-FY32	FY30-FY33
WA: Transmission and Storage upgrades (\$300 million, DC Water Share = \$225 million)	\$225M	\$250M	FY23-FY30	FY25-FY32
DDOT and Pepco DC Power Line Undergrounding (DC PLUG) – (\$57 million, DC Water Share is 50% = \$28 million)	\$28M	\$52M	FY20-FY28	FY21-FY29
Lead Service Replacement Program	\$200M	\$400M	FY23-FY32	FY29-FY43
Anacostia River Sediment Clean-up - Early Action Plan	\$1M	\$5M	FY21-FY25	FY23-FY27
Anacostia River Sediment Clean-up - Long Term	\$25M	\$200M	FY25-FY30	FY27-FY35
E. Coli Total Maximum Daily Load (TMDL) – lawsuit by environmental groups seeking more restrictive TMDL	\$500M	\$3,000M	FY28-FY35	FY38-FY45
Odor control for secondary treatment at Blue Plains	\$40M	\$82M	FY22-FY30	FY27-FY35
<b>Totals</b>	<b>\$2,133M</b>	<b>\$6,304M</b>	<b>FY21-FY35</b>	<b>FY21-FY45</b>

The above table translates into the cost forecasts on the following slide

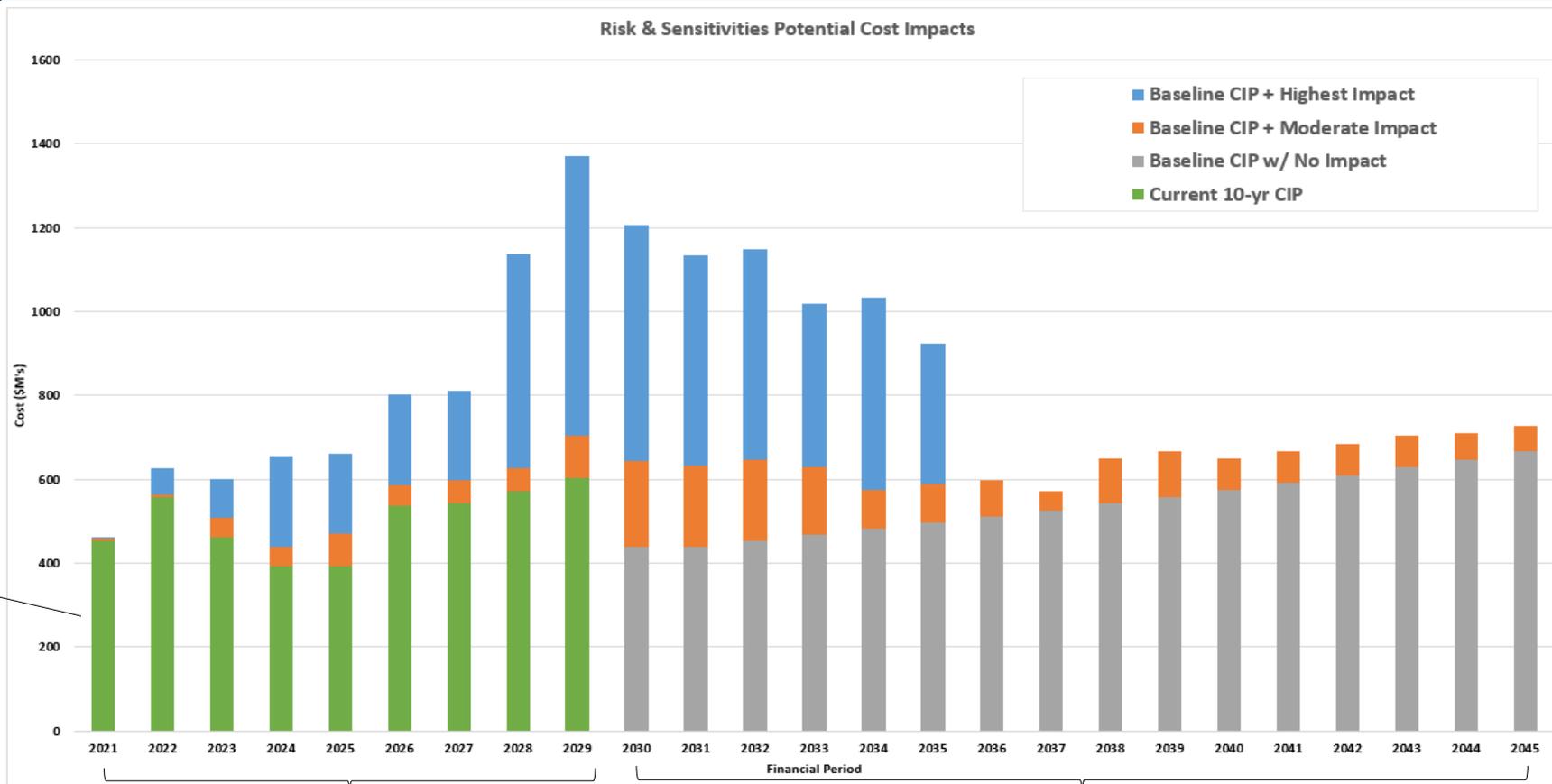


# Risk Impacts Forecast





# Risk Impacts + Proposed Baseline CIP Forecast



CIP baseline FY30-45 w/ inflation 3% (Note: DCCR ends in FY30)

Current CIP baseline FY20-29 (DCCR ends FY30)

CIP baseline FY30 onwards based on program averages adjusted for inflation 3%



# Summary of 10-Year CIP for Approval

💧 The proposed ten-year CIP comprises the capital projects (\$4.921B) and additional capital programs (\$528M). Total \$5.450 Billion.

Service Area (\$000's)	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	10-Yr Total	Last Year's CIP	(Increase) /Decrease
Non-Process Facilities	\$ 42,066	\$ 31,849	\$ 20,665	\$ 6,831	\$ 11,058	\$ 10,396	\$ 3,901	\$ 3,553	\$ 3,560	\$ 3,600	\$ 137,479	\$ 138,067	\$ 588
Wastewater Treatment	77,536	102,976	113,378	107,232	107,312	70,680	97,878	101,839	132,256	138,165	1,049,252	978,738	(70,514)
Clean Rivers	162,197	147,565	179,833	129,272	67,536	59,909	148,771	103,265	88,890	115,049	1,202,288	1,262,589	60,301
Combined Sewer	9,239	9,493	12,816	16,553	16,731	8,568	6,699	7,572	8,972	12,435	109,078	79,178	(29,900)
Stormwater	6,869	9,631	7,535	4,170	5,392	4,660	4,201	4,306	6,869	5,057	58,690	68,608	9,918
Sanitary Sewer	44,933	63,926	115,541	88,110	91,562	138,341	159,814	176,789	175,873	174,032	1,228,922	957,135	(271,787)
Water	62,163	88,677	108,878	109,000	92,905	101,765	116,319	146,791	154,916	154,697	1,136,112	945,015	(191,097)
<b>CAPITAL PROJECTS</b>	<b>405,004</b>	<b>454,118</b>	<b>558,645</b>	<b>461,168</b>	<b>392,496</b>	<b>394,318</b>	<b>537,584</b>	<b>544,115</b>	<b>571,337</b>	<b>603,035</b>	<b>4,921,821</b>	<b>4,429,330</b>	<b>(492,491)</b>
Capital Equipment	31,703	37,207	33,790	32,315	33,000	33,000	33,000	33,000	33,000	33,000	333,015	340,324	7,309
Washington Aqueduct	15,515	16,266	18,572	37,841	12,699	33,875	9,508	12,863	24,068	13,971	195,178	187,127	(8,051)
<b>ADDITIONAL CAPITAL PROGRAMS</b>	<b>47,218</b>	<b>53,473</b>	<b>52,362</b>	<b>70,156</b>	<b>45,698</b>	<b>66,875</b>	<b>42,509</b>	<b>45,863</b>	<b>57,068</b>	<b>46,971</b>	<b>528,193</b>	<b>527,450</b>	<b>(743)</b>
<b>TOTAL CIP</b>	<b>\$ 452,223</b>	<b>\$ 507,590</b>	<b>\$ 611,008</b>	<b>\$ 531,322</b>	<b>\$ 438,194</b>	<b>\$ 461,193</b>	<b>\$ 580,093</b>	<b>\$ 589,978</b>	<b>\$ 628,404</b>	<b>\$ 650,006</b>	<b>\$ 5,450,013</b>	<b>\$ 4,956,780</b>	<b>\$ (493,233)</b>
Last Years CIP	420,342	467,016	561,724	530,006	422,607	450,358	585,454	535,666	544,490	439,117	4,956,780		
(Increase)/Decrease	(31,880)	(40,574)	(49,284)	(1,317)	(15,587)	(10,835)	5,361	(54,312)	(83,914)	(210,890)	(493,232)		



## Action Items

### **ACTION ITEM 6B: FY 2020 – FY 2029 Proposed Capital Improvement Program (10-Year Disbursement Plan and Lifetime Budget)**

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

**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 \$5.4 billion.

**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 \$12.4 billion.



# CIP – Attachment I

Capital Improvement Program												Attachment A-1	
10-Year Disbursement Plan - projected annual cash disbursements, \$ in thousands												10-Yr Total	Lifetime Budget
	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029			
<b>NON PROCESS FACILITIES</b>													
Facility Land Use	42,066	31,849	20,665	6,831	11,058	10,396	3,901	3,553	3,560	3,600	137,479	221,841	
Subtotal	<b>42,066</b>	<b>31,849</b>	<b>20,665</b>	<b>6,831</b>	<b>11,058</b>	<b>10,396</b>	<b>3,901</b>	<b>3,553</b>	<b>3,560</b>	<b>3,600</b>	<b>137,479</b>	<b>221,841</b>	
<b>WASTEWATER TREATMENT</b>													
Liquid Processing	24,516	42,496	43,069	48,748	44,909	31,792	66,989	68,544	99,413	103,740	574,216	1,266,857	
Plantwide	17,387	32,784	42,213	30,735	37,879	23,127	18,231	25,062	20,506	9,902	257,826	525,997	
Solids Processing	19,847	27,314	27,424	25,852	22,754	15,761	12,658	6,027	10,476	12,858	180,971	924,507	
Enhanced Nitrogen Removal Facilities	15,786	382	672	1,897	1,770	-	-	2,206	1,861	11,665	36,239	980,940	
Subtotal	<b>77,536</b>	<b>102,976</b>	<b>113,378</b>	<b>107,232</b>	<b>107,312</b>	<b>70,680</b>	<b>97,878</b>	<b>101,839</b>	<b>132,256</b>	<b>138,165</b>	<b>1,049,252</b>	<b>3,698,301</b>	
<b>COMBINED SEWER OVERFLOW</b>													
DC Clean Rivers Program	162,197	147,565	179,833	129,272	67,536	59,909	148,771	103,265	88,890	115,049	1,202,288	2,764,255	
Combined Sewer Program Management	1,287	1,792	2,237	2,972	3,028	2,050	2,629	2,515	3,125	2,519	24,154	77,756	
Combined Sewer Overflow Program	7,952	7,701	10,579	13,581	13,703	6,518	4,070	5,057	5,847	9,916	84,924	199,729	
Subtotal	<b>171,436</b>	<b>157,058</b>	<b>192,649</b>	<b>145,824</b>	<b>84,267</b>	<b>68,476</b>	<b>155,470</b>	<b>110,837</b>	<b>97,863</b>	<b>127,484</b>	<b>1,311,366</b>	<b>3,041,740</b>	
<b>STORMWATER</b>													
Storm Local Drainage Program	12	22	688	594	1,267	1,948	1,164	1,792	1,970	1,709	11,166	18,025	
Storm On-Going Program	1,011	631	1,109	837	866	526	875	843	1,084	1,287	9,069	11,540	
Storm Pumping Facilities	5,310	8,392	4,923	2,259	2,854	1,865	1,698	1,353	3,430	1,755	33,839	61,204	
Storm DDOT Projects	-	-	-	-	-	-	-	-	-	-	-	3,237	
Stormwater Program Management	410	445	582	367	405	321	464	318	385	306	4,003	12,889	
Stormwater Trunk/Force Sewers	126	141	233	113	-	-	-	-	-	-	613	15,510	
Subtotal	<b>6,869</b>	<b>9,631</b>	<b>7,535</b>	<b>4,170</b>	<b>5,392</b>	<b>4,660</b>	<b>4,201</b>	<b>4,306</b>	<b>6,869</b>	<b>5,057</b>	<b>58,690</b>	<b>122,404</b>	
<b>SANITARY SEWER</b>													
Sanitary Collection System	4,613	8,134	33,564	18,009	24,312	33,040	52,923	68,745	65,771	61,043	370,154	569,040	
Sanitary On-Going Projects	12,099	12,327	13,711	13,667	14,185	15,019	15,253	15,111	15,312	14,842	141,529	217,969	
Sanitary Pumping Facilities	2,570	5,995	6,924	8,240	5,068	10,468	11,639	11,933	27,732	33,628	124,196	270,778	
Sanitary Program Management	4,150	5,464	7,014	5,132	3,913	3,103	3,174	3,900	4,064	4,335	44,250	119,050	
Interceptor/Trunk Force Sewers	21,501	32,006	54,327	43,062	44,084	76,710	76,826	77,100	62,993	60,184	548,794	918,096	
Subtotal	<b>44,933</b>	<b>63,926</b>	<b>115,541</b>	<b>88,110</b>	<b>91,562</b>	<b>138,341</b>	<b>159,814</b>	<b>176,789</b>	<b>175,873</b>	<b>174,032</b>	<b>1,228,922</b>	<b>2,094,934</b>	
<b>WATER</b>													
Water Distribution Systems	33,872	60,464	62,606	65,093	58,654	64,372	65,350	99,075	117,595	121,131	748,211	1,446,953	
Water Lead Program	4,711	5,408	5,387	5,456	5,627	5,719	5,496	5,744	5,877	5,692	55,117	243,504	
Water On-Going Projects	10,532	11,075	12,297	13,351	15,199	16,789	18,583	20,447	22,981	23,506	164,761	217,972	
Water Pumping Facilities	1,525	2,650	12,169	6,284	2,567	4,218	7,446	4,163	2,328	-	43,350	85,344	
DDOT Water Projects	1,721	10	8	-	-	-	-	-	-	-	1,739	33,933	
Water Storage Facilities	6,216	4,318	10,399	13,963	5,610	4,783	11,334	8,985	694	1,360	67,662	155,164	
Water Service Program Management	3,587	4,752	6,012	4,854	5,248	5,884	8,110	8,376	5,441	3,008	55,272	90,944	
Subtotal	<b>62,163</b>	<b>88,677</b>	<b>108,878</b>	<b>109,000</b>	<b>92,905</b>	<b>101,765</b>	<b>116,319</b>	<b>146,791</b>	<b>154,916</b>	<b>154,697</b>	<b>1,136,112</b>	<b>2,273,813</b>	
<b>CAPITAL PROJECTS</b>												<b>405,004</b>	<b>11,453,035</b>
<b>CAPITAL EQUIPMENT</b>												17,105	284,722
<b>ONGOING METER REPLACEMENT</b>												5,498	31,868
<b>ERP PROJECT (Financial &amp; HCM)</b>												9,100	16,425
Subtotal	<b>31,703</b>	<b>37,207</b>	<b>33,790</b>	<b>32,315</b>	<b>33,000</b>	<b>33,000</b>	<b>33,000</b>	<b>33,000</b>	<b>33,000</b>	<b>33,000</b>	<b>333,015</b>	<b>333,015</b>	
<b>WASHINGTON AQUEDUCT</b>												15,515	195,178
<b>ADDITIONAL CAPITAL PROGRAMS</b>												47,218	528,193
<b>LABOR</b>												53,473	409,370
<b>TOTAL CAPITAL BUDGETS</b>												<b>452,223</b>	<b>12,390,598</b>



# Budget Adoption Calendar

- 💧 Wholesale Customer Briefing – held **January 10**
- 💧 Committee Reviews – **January**
- 💧 Recommendations & Actions – **February**



	Environmental Quality & Operations	DC Retail Water & Sewer Rates	Finance & Budget
FY 2020 - FY 2029 Capital Budget (Disbursements & Lifetime)	Action Required		Action Required
FY 2021 Operating Budget			Action Required
Intent to Reimburse Capital Expenditures with Proceeds of a Borrowing			Action Required
FY 2020 – FY 2029 Financial Plan		Action Required	Action Required
FY 2021 & 2022 Rates, Charges & Fees		Action Required	

- 💧 Board Adoption – **March 5**

**FINANCE AND BUDGET COMMITTEE  
FISCAL YEAR 2020 – FY 2029 PROPOSED CAPITAL IMPROVEMENT  
PROGRAM  
ACTION ITEM**

**ACTION ITEM 6B: FY 2020 – FY 2029 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 \$5.4 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 \$12.4 billion.

**Capital Improvement Program**

10-Year Disbursement Plan - projected annual cash disbursements, \$ in thousands

Attachment A-1

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	10-Yr Total	Lifetime Budget
<b>NON PROCESS FACILITIES</b>												
Facility Land Use	42,066	31,849	20,665	6,831	11,058	10,396	3,901	3,553	3,560	3,600	137,479	221,841
Subtotal	<b>42,066</b>	<b>31,849</b>	<b>20,665</b>	<b>6,831</b>	<b>11,058</b>	<b>10,396</b>	<b>3,901</b>	<b>3,553</b>	<b>3,560</b>	<b>3,600</b>	<b>137,479</b>	<b>221,841</b>
<b>WASTEWATER TREATMENT</b>												
Liquid Processing	24,516	42,496	43,069	48,748	44,909	31,792	66,989	68,544	99,413	103,740	574,216	1,266,857
Plantwide	17,387	32,784	42,213	30,735	37,879	23,127	18,231	25,062	20,506	9,902	257,826	525,997
Solids Processing	19,847	27,314	27,424	25,852	22,754	15,761	12,658	6,027	10,476	12,858	180,971	924,507
Enhanced Nitrogen Removal Facilities	15,786	382	672	1,897	1,770	-	-	2,206	1,861	11,665	36,239	980,940
Subtotal	<b>77,536</b>	<b>102,976</b>	<b>113,378</b>	<b>107,232</b>	<b>107,312</b>	<b>70,680</b>	<b>97,878</b>	<b>101,839</b>	<b>132,256</b>	<b>138,165</b>	<b>1,049,252</b>	<b>3,698,301</b>
<b>COMBINED SEWER OVERFLOW</b>												
DC Clean Rivers Program	162,197	147,565	179,833	129,272	67,536	59,909	148,771	103,265	88,890	115,049	1,202,288	2,764,255
Combined Sewer Program Management	1,287	1,792	2,237	2,972	3,028	2,050	2,629	2,515	3,125	2,519	24,154	77,756
Combined Sewer Overflow Program	7,952	7,701	10,579	13,581	13,703	6,518	4,070	5,057	5,847	9,916	84,924	199,729
Subtotal	<b>171,436</b>	<b>157,058</b>	<b>192,649</b>	<b>145,824</b>	<b>84,267</b>	<b>68,476</b>	<b>155,470</b>	<b>110,837</b>	<b>97,863</b>	<b>127,484</b>	<b>1,311,366</b>	<b>3,041,740</b>
<b>STORMWATER</b>												
Storm Local Drainage Program	12	22	688	594	1,267	1,948	1,164	1,792	1,970	1,709	11,166	18,025
Storm On-Going Program	1,011	631	1,109	837	866	526	875	843	1,084	1,287	9,069	11,540
Storm Pumping Facilities	5,310	8,392	4,923	2,259	2,854	1,865	1,698	1,353	3,430	1,755	33,839	61,204
Storm DDOT Projects	-	-	-	-	-	-	-	-	-	-	-	3,237
Stormwater Program Managemet	410	445	582	367	405	321	464	318	385	306	4,003	12,889
Stormwater Trunk/Force Sewers	126	141	233	113	-	-	-	-	-	-	613	15,510
Subtotal	<b>6,869</b>	<b>9,631</b>	<b>7,535</b>	<b>4,170</b>	<b>5,392</b>	<b>4,660</b>	<b>4,201</b>	<b>4,306</b>	<b>6,869</b>	<b>5,057</b>	<b>58,690</b>	<b>122,404</b>
<b>SANITARY SEWER</b>												
Sanitary Collection System	4,613	8,134	33,564	18,009	24,312	33,040	52,923	68,745	65,771	61,043	370,154	569,040
Sanitary On-Going Projectsss	12,099	12,327	13,711	13,667	14,185	15,019	15,253	15,111	15,312	14,842	141,529	217,969
Sanitary Pumping Facilities	2,570	5,995	6,924	8,240	5,068	10,468	11,639	11,933	27,732	33,628	124,196	270,778
Sanitary Program Management	4,150	5,464	7,014	5,132	3,913	3,103	3,174	3,900	4,064	4,335	44,250	119,050
Interceptor/Trunk Force Sewers	21,501	32,006	54,327	43,062	44,084	76,710	76,826	77,100	62,993	60,184	548,794	918,096
Subtotal	<b>44,933</b>	<b>63,926</b>	<b>115,541</b>	<b>88,110</b>	<b>91,562</b>	<b>138,341</b>	<b>159,814</b>	<b>176,789</b>	<b>175,873</b>	<b>174,032</b>	<b>1,228,922</b>	<b>2,094,934</b>
<b>WATER</b>												
Water Distribution Systems	33,872	60,464	62,606	65,093	58,654	64,372	65,350	99,075	117,595	121,131	748,211	1,446,953
Water Lead Program	4,711	5,408	5,387	5,456	5,627	5,719	5,496	5,744	5,877	5,692	55,117	243,504
Water On-Going Projects	10,532	11,075	12,297	13,351	15,199	16,789	18,583	20,447	22,981	23,506	164,761	217,972
Water Pumping Facilities	1,525	2,650	12,169	6,284	2,567	4,218	7,446	4,163	2,328	-	43,350	85,344
DDOT Water Projects	1,721	10	8	-	-	-	-	-	-	-	-	1,739
Water Storage Facilities	6,216	4,318	10,399	13,963	5,610	4,783	11,334	8,985	694	1,360	67,662	155,164
Water Service Program Management	3,587	4,752	6,012	4,854	5,248	5,884	8,110	8,376	5,441	3,008	55,272	90,944
Subtotal	<b>62,163</b>	<b>88,677</b>	<b>108,878</b>	<b>109,000</b>	<b>92,905</b>	<b>101,765</b>	<b>116,319</b>	<b>146,791</b>	<b>154,916</b>	<b>154,697</b>	<b>1,136,112</b>	<b>2,273,813</b>
<b>CAPITAL PROJECTS</b>	<b>405,004</b>	<b>454,118</b>	<b>558,645</b>	<b>461,168</b>	<b>392,496</b>	<b>394,318</b>	<b>537,584</b>	<b>544,115</b>	<b>571,337</b>	<b>603,035</b>	<b>4,921,821</b>	<b>11,453,035</b>
<b>CAPITAL EQUIPMENT</b>												
	17,105	27,327	30,485	29,385	30,070	30,070	30,070	30,070	30,070	30,070	284,722	<b>284,722</b>
<b>ONGOING METER REPLACEMENT</b>												
	5,498	2,930	2,930	2,930	2,930	2,930	2,930	2,930	2,930	2,930	31,868	<b>31,868</b>
<b>ERP PROJECT (Financial &amp; HCM)</b>												
	9,100	6,950	375	-	-	-	-	-	-	-	16,425	<b>16,425</b>
Subtotal	31,703	37,207	33,790	32,315	33,000	33,000	33,000	33,000	33,000	33,000	333,015	333,015
<b>WASHINGTON AQUEDUCT</b>												
	15,515	16,266	18,572	37,841	12,699	33,875	9,508	12,863	24,068	13,971	195,178	195,178
<b>ADDITIONAL CAPITAL PROGRAMS</b>	<b>47,218</b>	<b>53,473</b>	<b>52,362</b>	<b>70,156</b>	<b>45,699</b>	<b>66,875</b>	<b>42,508</b>	<b>45,863</b>	<b>57,068</b>	<b>46,971</b>	<b>528,193</b>	<b>528,193</b>
<b>LABOR</b>												
												409,370
<b>TOTAL CAPITAL BUDGETS</b>	<b>452,223</b>	<b>507,590</b>	<b>611,008</b>	<b>531,323</b>	<b>438,195</b>	<b>461,193</b>	<b>580,092</b>	<b>589,978</b>	<b>628,404</b>	<b>650,006</b>	<b>5,450,013</b>	<b>12,390,598</b>

# **District of Columbia Water and Sewer Authority**

## **Capital Improvement Program Report**



**FY-2020 1<sup>st</sup> Quarter  
October 1<sup>st</sup> through December 31<sup>st</sup>, 2019**

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

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

**February 2020**

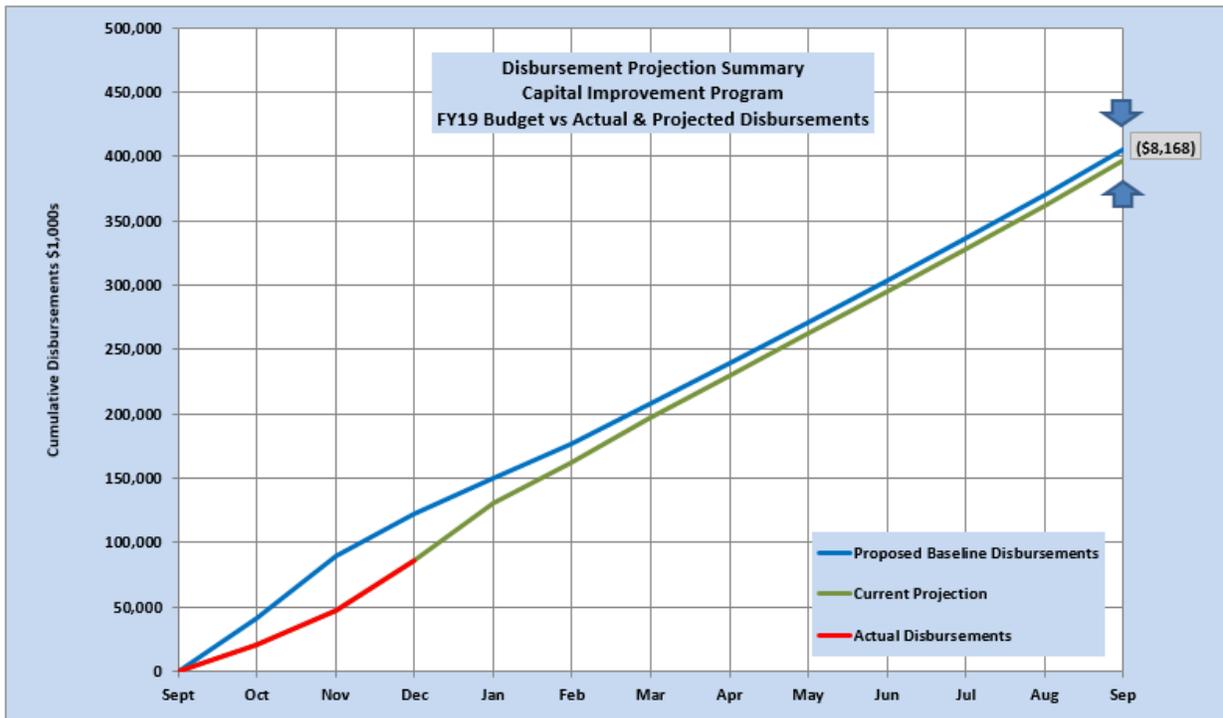


## Capital Improvement Program Report 1<sup>st</sup> Quarter FY2020

### CIP Disbursement Performance

Current projected program disbursements through the end of the fiscal year compared with the proposed FY20 baseline are shown in the chart below:

### Disbursement Summary



Current projected fiscal year 2020 CIP disbursements are \$396,837,000 through the end of September 2019, which is on track to meet the proposed baseline disbursement projection of \$405,004,000.

Current disbursement projections within the service areas are as follows:

**Non-Process Facilities**

Baseline Disbursements	\$42,066,000
Projected Disbursements	\$40,464,000 (\$1.6M below baseline projection)

There are no significant project variances for this service area currently projected over the fiscal year.

The spending through the first Quarter is \$4.5M, which is \$2.0M below the baseline. This underspending is mainly due to the delay in awarding the Fleet Facility and Sewer Headquarters construction contracts.



## Capital Improvement Program Report 1<sup>st</sup> Quarter FY2020

### **Wastewater Treatment Service Area**

Baseline Disbursements	\$77,536,000
Projected Disbursements	\$75,488,000 (\$2.1M below baseline projection)

There are no significant project variances for this service area currently projected over the fiscal year.

The spending through the first Quarter is \$10.1M, which is \$14.8M below the baseline. This is primarily from underspending in the Liquid Processing Program Area (\$3.4M) due to disbursements for the Upgrades to Filtration Influent Pumps 1-10 and Replacement of Influent Screens being lower than anticipated during the construction startup period. The spending on these projects is expected to recover by the end of the fiscal year. Furthermore, lower disbursements in the ENR Facilities Program Area (\$8.9M below baseline) are due to continued negotiations to close out the contract for the Tunnel Dewatering Pumping Station/Enhanced Clarification Facility, which had been planned to be closed out in the first quarter.

For clarity, the Combined Sewer Overflow (CSO) Service Area comments are addressed separately by the CSO and DC Clean Rivers Program Areas:

### **CSO Service Area**

Baseline Disbursements	\$7,952,000
Projected Disbursements	\$6,913,000 (\$1.0M below baseline projection)

Lower disbursements are due to invoicing lag on the work on the O Street Station ventilation system.

### **DC Clean Rivers Program Area**

Baseline Disbursements	\$162,197,000
Actual Disbursements	\$165,941,000 (\$3.7M above baseline projection)

There are no significant project variances for this service area currently projected over the fiscal year.

The overspending through the first quarter is mainly attributable to the Northeast Boundary Tunnel work progress in the field. The DCCR team currently anticipates the spending to meet the baseline forecast by year end

### **Stormwater Service Area**

Baseline Disbursements	\$6,869,000
Projected Disbursements	\$6,576,000 (\$0.3M below baseline projection)

There are no significant project variances for this service area currently projected over the fiscal year.



## Capital Improvement Program Report 1<sup>st</sup> Quarter FY2020

---

### **Sanitary Sewer Service Area**

Baseline Disbursements	\$44,934,000
Projected Disbursements	\$41,692,000 (\$3.6M below baseline projection)

Significant project variances are listed below:

- *Sanitary Trunk Sewers Program Area – (\$4.4M below baseline)*
  - The first quarter disbursements for project IL - Creekbed Sewer Rehabilitation 2 were \$1.4M below baseline, mainly attributable to a delay in the contract closeout.
  - The disbursements for project LZ00 - Potomac Interceptor Projects - Rehab Phase 2 were \$1.4M below baseline, mainly attributable to the administrative charges expected in the first quarter did not materialize.

### **Water Service Area**

Baseline Disbursements	\$62,163,000
Projected Disbursements	\$58,602,000 (\$3.6M below baseline projection)

There are no significant project variances for this service area currently projected over the fiscal year.

Significant project variances for the first quarter are listed below:

- *Water Distribution System Program (\$9.5M below baseline projection)*
  - The first quarter underspending is mainly attributable to delays in closing out Small Diameter Water Main contracts in Project DE - Small Diameter Water Main Rehab 12 and Project O3 - Small Diameter Water Main Rehab 11.
- *Water Ongoing Program Area (\$1.8M below baseline projection)*
  - This area is below the forecast but within the expected limits of the forecasting accuracy as the number and size of water main breaks are difficult to predict year on year.



## Capital Improvement Program Report 1<sup>st</sup> Quarter FY2020

### 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
F100	Small Diameter Water Main Repl. 13a	Construction	No	\$5M - \$10M	EQ & Ops Jan	Feb
F100	Small Diameter Water Main Repl. 13d	Construction	No	\$5M - \$10M	EQ & Ops Mar	Apr
F100	Small Diameter Water Main Repl. 13c	Construction	No	\$5M - \$10M	EQ & Ops Apr	May
F200	Small Diameter Water Main Repl. 14a	Construction	No	\$10M - \$15M	EQ & Ops Jun	Jul



## Capital Improvement Program Report 1<sup>st</sup> Quarter FY2020

### Schedule - Key Performance Indicators Capital Improvement Program

**Summary:**

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

#	Performance
4	KPIs completed within threshold
0	KPIs completed outside threshold
4	Total KPIs completed to date
30	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	FA03	Soldiers Home Reservoir Upgrade	Construction Start Milestone	10-Oct-19	10-Oct-19	<b>09-Oct-19</b>	1	✓
Q1	NG02	Stormwater Pumping Stations Rehabilitation Phase 2	Design Start Milestone	30-Dec-19	30-Dec-19	<b>26-Dec-19</b>	4	✓
Q1	UC06	Upgrades to Filtration Influent Pumps 1-10	Construction Start Milestone	10-Oct-19	10-Oct-19	<b>10-Oct-19</b>	0	✓
Q2	F101	Small Diameter Water Main Repl 13A	Construction Start Milestone	12-Mar-20	12-Mar-20			☐
Q2	F102	Small Diameter Water Main Repl 13B	Construction Start Milestone	16-Feb-20	16-Feb-20			☐
Q2	FQ02	Main PS Upgrades - NFPA, Odor Control, LAPS	Design Start Milestone	29-Jan-20	29-Jan-20			☐
Q2	HX01	SDWM Renewal 16A	Design Start Milestone	02-Jan-20	02-Jan-20	<b>27-Nov-19</b>	36	✓
Q2	JF03	Construction of Flood Seawall Segment C	Construction Start Milestone	13-Jan-20	13-Jan-20			☐



## Capital Improvement Program Report 1<sup>st</sup> Quarter FY2020

Quarter	Job Code	Job Name	Activity Name	Due Date (Baseline)	Estimated Complete Date	Actual Complete Date	Variance (positive is early)	Met within 90 days
Q2	LZ04	PI Phase 2 Pipe Rehab at Potomac Crossing	Design Start Milestone	03-Mar-20	03-Mar-20			
Q2	LZ06	PI Phase 4 Pipe Rehab at Fairfax & Loudoun Co.	Design Start Milestone	01-Jan-20	01-Jan-20			
Q2	LZ09	PI Phase 6 Pipe Rehab at Clara Barton Pkwy and I-495	Design Start Milestone	29-Feb-20	29-Feb-20			<input type="checkbox"/>
Q2	LZ07	PI Phase 5 Pipe Rehab between MH31 and MH30	Design-Build NTP	23-Feb-20	23-Feb-20			<input type="checkbox"/>
Q3	C904	66" Low Service Steel Main at 8th Street NE & SE	Construction Substantial Completion	30-Apr-20	30-Apr-20			<input type="checkbox"/>
Q3	F103	Small Diameter Water Main Repl 13C	Construction Start Milestone	15-Apr-20	15-Apr-20			<input type="checkbox"/>
Q3	F104	Small Diameter Water Main Repl 13D	Construction Start Milestone	15-May-20	15-May-20			<input type="checkbox"/>
Q3	HX02	Small Diameter Water Main Repl 16B	Design Start Milestone	01-Apr-20	01-Apr-20			
Q3	IL10	Creekbed Sewer Rehabilitation Rock Creek Oregon Avenue	Construction Substantial Completion	30-Apr-20	30-Apr-20			<input type="checkbox"/>
Q3	J001	B Street/New Jersey Ave. Trunk Sewer Rehab and Cleaning Phase 1	Construction Substantial Completion	22-May-20	22-May-20			<input type="checkbox"/>
Q3	RC07	Major Sewer Rehab 1-5 Northeast Boundary	Design Start Milestone	22-May-20	22-May-20			<input type="checkbox"/>
Q4	BV01	RWWPS No. 2 Upgrades	Construction Substantial Completion Milestone	02-Jul-20	02-Jul-20			<input type="checkbox"/>
Q4	DR02	Low Area Trunk Sewer - Rehabilitation	Construction Substantial Completion	10-Jul-20	10-Jul-20			<input type="checkbox"/>
Q4	F201	Small Diameter Water Main Repl 14A	Construction Start Milestone	05-Aug-20	05-Aug-20			<input type="checkbox"/>
Q4	F202	Small Diameter Water Main Repl 14B	Construction Start Milestone	15-Aug-20	15-Aug-20			<input type="checkbox"/>
Q4	F203	Small Diameter Water Main Repl 14C	Construction Start Milestone	03-Sep-20	03-Sep-20			<input type="checkbox"/>
Q4	HX03	Small Diameter Water Main Repl 16C	Design Start Milestone	01-Jul-20	01-Jul-20			<input type="checkbox"/>
Q4	I801	Large Valve Replacements 11R	Construction Substantial Completion	29-Sep-20	29-Sep-20			<input type="checkbox"/>



## Capital Improvement Program Report 1<sup>st</sup> Quarter FY2020

Quarter	Job Code	Job Name	Activity Name	Due Date (Baseline)	Estimated Complete Date	Actual Complete Date	Variance (positive is early)	Met within 90 days
Q4	IC01	Electrical & Power Monitoring Systems	Design Start Milestone	28-Sep-20	28-Sep-20			<input type="checkbox"/>
Q4	LD00	Pre-Dewatering Additional Centrifuges	Design Start Milestone	21-Sep-20	21-Sep-20			<input type="checkbox"/>
Q4	NG05	Stormwater Pump Station Rehab - 1st and D	Construction Start Milestone	01-Sep-20	01-Sep-20			<input type="checkbox"/>
Q4	SC01	Main & O Seawall Restoration (Phase 2 HQO)	Design Start Milestone	29-Aug-20	29-Aug-20			<input type="checkbox"/>

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



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

---

*Briefing on:*

***DC Clean Rivers Project  
Quarterly Update***

*Briefing for:*

***Environmental Quality & Operations Committee Meeting***

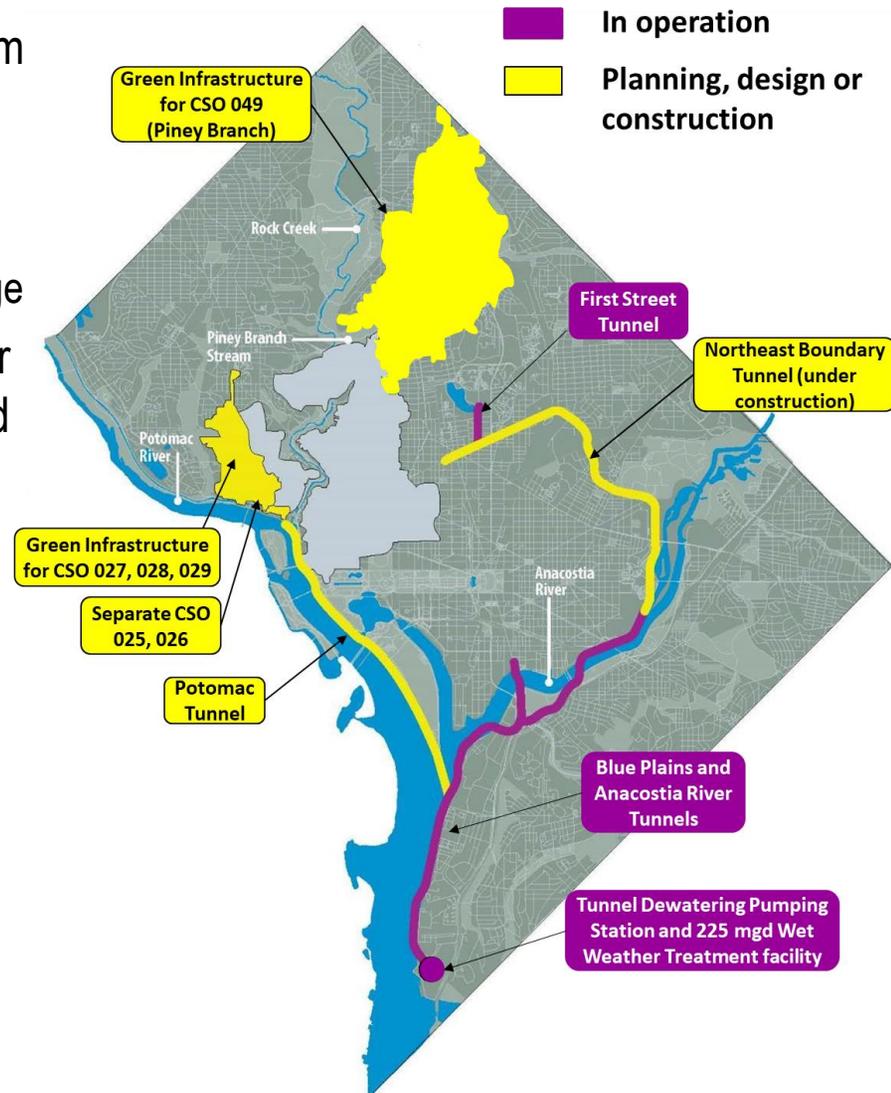
**February 20, 2020**



**DCWATER.COM**

# Project Status

- First phase of Anacostia River tunnel system commissioned on March 20, 2018
  - Provides control for all CSOs along the Anacostia River
  - Provides about 100 million gallons of storage
- Northeast Boundary Tunnel, currently under construction, will increase CSO storage and flood risk mitigation
  - Adds about 90 million gallons of storage
- Green infrastructure (GI) projects in Rock Creek and Potomac River are completed and in post-construction monitoring
- CSO 025/026 Sewer Separation Project currently in design. Procurement starting in March 2020.
- Potomac River Tunnel design underway



# Anacostia Tunnel System Performance Since March 20, 2018

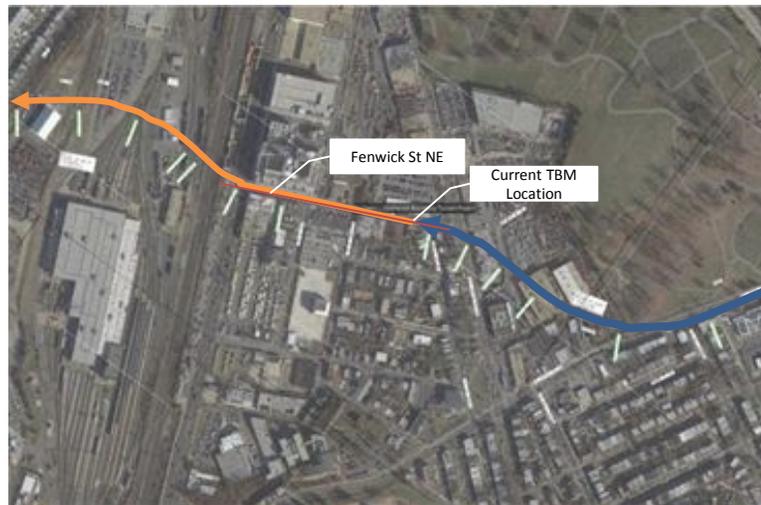
Month	Rainfall, DCA Gauge (IN)	Volume Captured by Tunnel (MG)	Measured Overflow (MG)	% Captured
March 20 -31, 2018	1.48	20	0	100%
April 2018	3.59	249	10	96.0%
May 2018	8.73	860	13	98.5%
June 2018	5.21	265	47	85.0%
July 2018	9.73	679	260	72.3%
August 2018	5.19	334	14	95.9%
September 2018	9.73	784	116	87.1%
October 2018	3.06	164	0	100%
November 2018	7.57	777	5	99.3%
December 2018	5.82	468	100	82.3%
January 2019	3.30	259	0	100%
February 2019	3.52	74	0	100%
March 2019	4.00	337	46	87.9%
April 2019	2.24	77	0.1	99.9%
May 2019	4.97	311	1	99.7%
June 2019	4.27	134	0.1	100%
July 2019	6.49	339	77	81.4%
August 2019	1.99	186	22	89.3%
September 2019	0.25	19	0	100%
October 2019	6.66	450	18	96.2%
November 2019	1.37	55	0	100%
December 2019	2.80	80	0	100%
January 2020 (DRAFT)	2.79	142	0	100%
<b>Total</b>	<b>104.76</b>	<b>7,061</b>	<b>731</b>	<b>90.6%</b>

- Over **7 billion** gallons captured to date
- Nearly 3,200 tons of trash, debris, and other solids captured
- Exceeding predicted capture rate (90%>80%)
- First year in operation was the wettest year on record for the District of Columbia

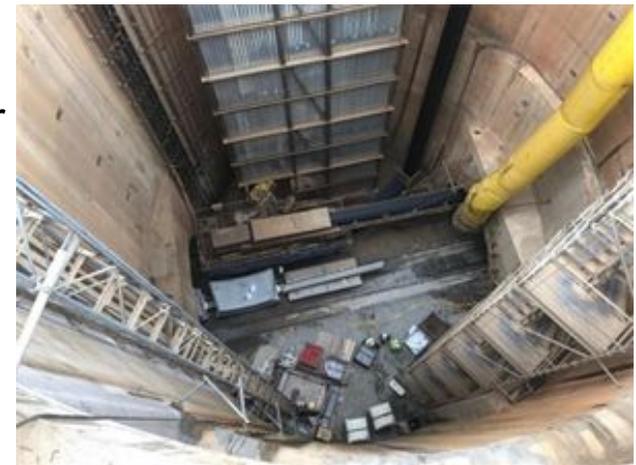


Trash and Debris Removed from CSO Captured by Tunnel at ECF Fine Screens

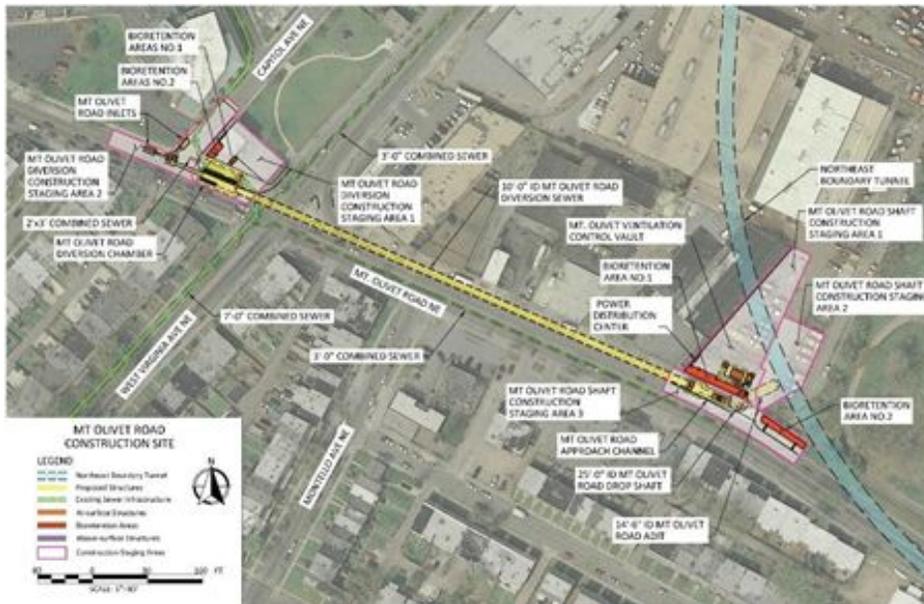
# Division J – Northeast Boundary Tunnel Construction Progress - Tunnel



- TBM excavated 13,711+ LF (51.5%)
- Successfully crossed under new soccer field near RFK stadium, Langston Golf Course, Arboretum, Mount Olivet Rd including Tier 1A 30" and 20" watermains
- Installed 2<sup>nd</sup> conveyor belt booster
- 20,100 LF of tunnel segments fabricated (75%)
- Replaced two rows of tail shield brushes
- Currently mining under Fenwick Street NE



# Division J – Northeast Boundary Tunnel Construction Progress – Mt. Olivet Road



- Completed slurry wall repairs
- Completed shaft excavation
- Completed shaft concrete base slab
- Currently working on the shaft liner walls



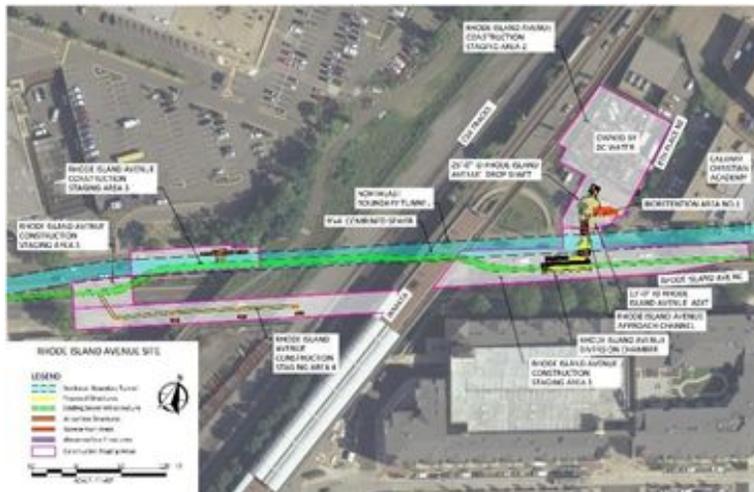
# Division J – Northeast Boundary Tunnel Construction Progress – W Street



- Completed slurry wall repairs
- Completed shaft excavation
- Working on retaining wall backfill
- Working on shaft base slab concrete placement and liner walls



# Division J – Northeast Boundary Tunnel Construction Progress – Rhode Island Ave



- Completed jet grout installation for shaft base plug
- Completed median removal at Rhode Island Ave
- Completed capping of 8" water line
- Continue adit jet grout columns



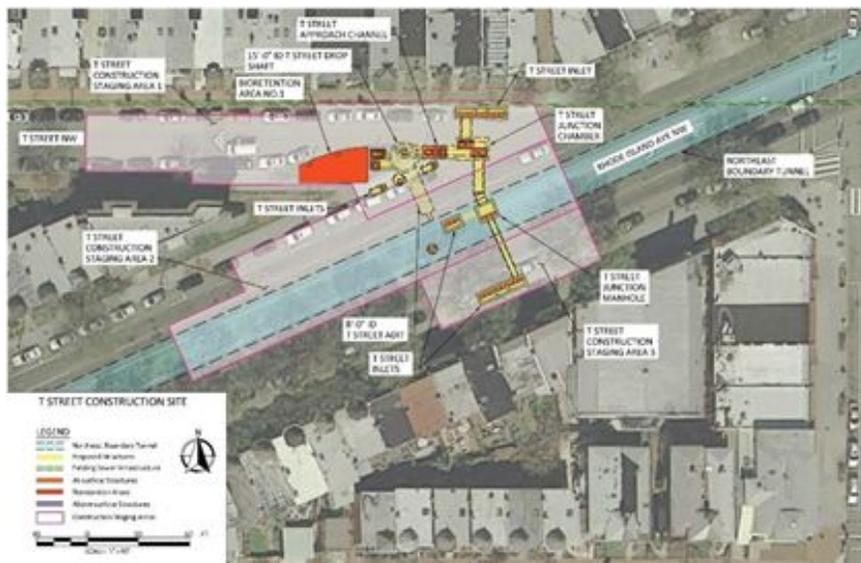


# Division J – Northeast Boundary Tunnel Construction Progress – Pumping Station



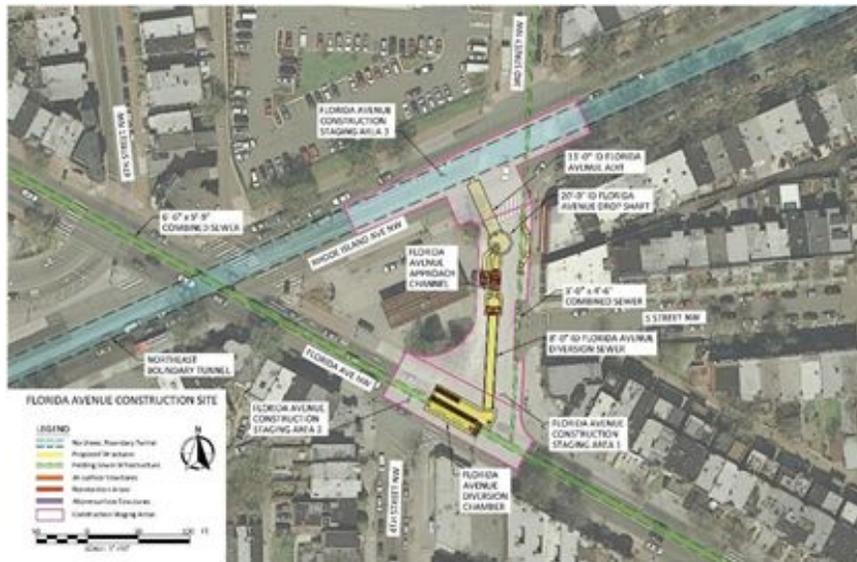
- Completed setup of sewer/storm bypass
- Completed capping of 6” water line
- Continued installation of shape array on 48” water line
- Localized removal of conflicting utilities
- Preparing to start the test columns for jet grouting

# Division J – Northeast Boundary Tunnel Construction Progress – T Street



- Evaluating concurrent occupation of T Street and Pumping Station sites with Design Builder
- Completed preliminary utility investigation.

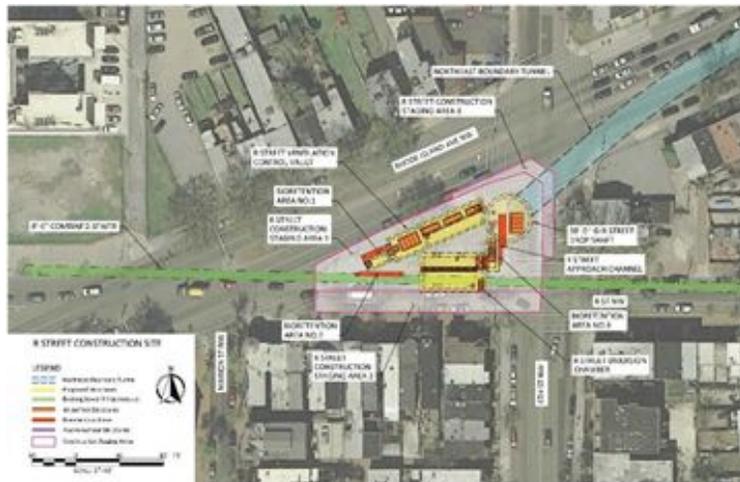
# Division J – Northeast Boundary Tunnel Construction Progress – Florida Ave



- Completed secant piles for Florida Ave drop shaft for support of excavation system
- Installed manholes for Tier 1A sewer
- Completed removal of median in Rhode Island Ave
- Mobilized to Florida Ave (FLA-CSA3).
- Completed secant piles for Florida Ave diversion chamber



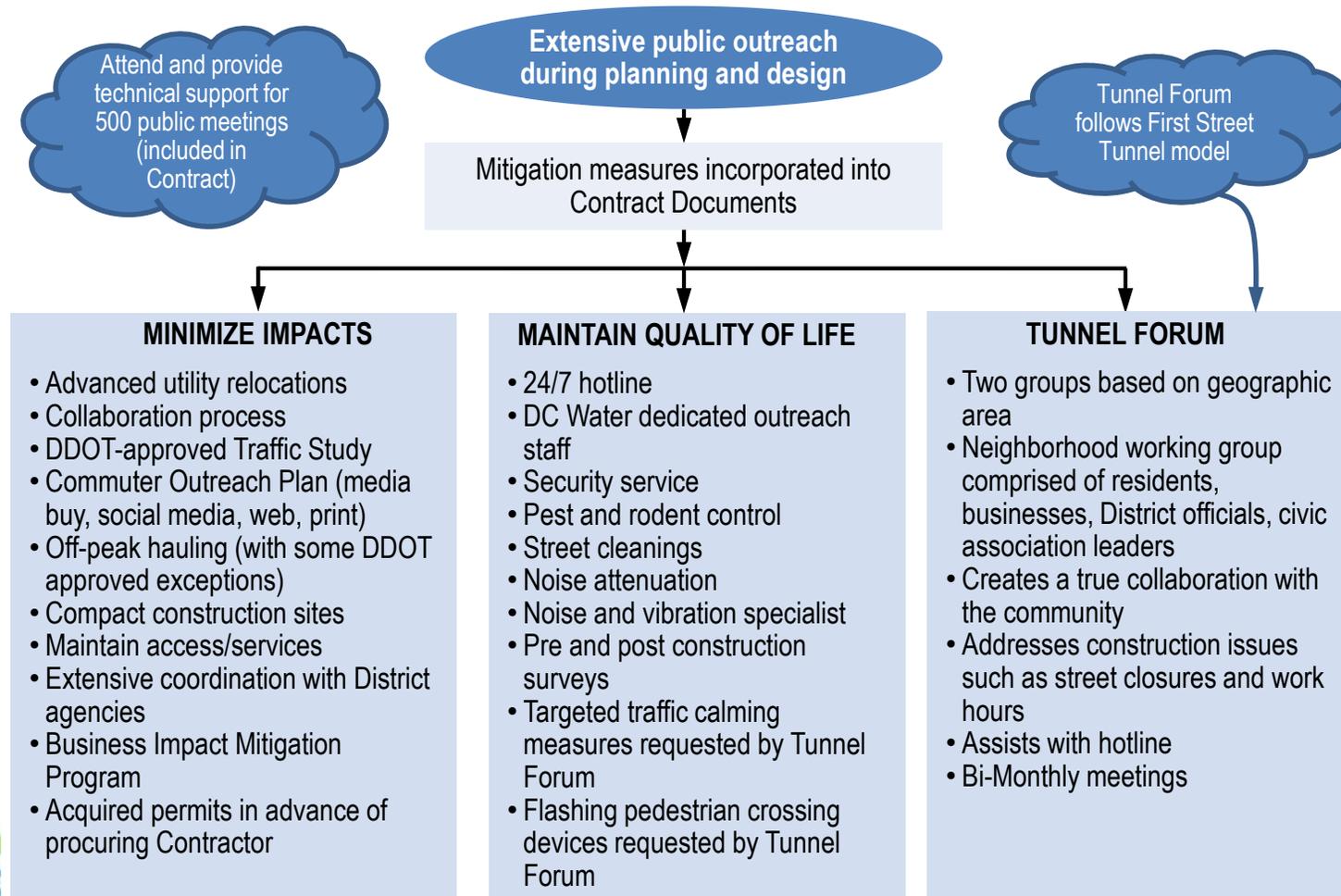
# Division J – Northeast Boundary Tunnel Construction Progress – R Street



- DDOT traffic signal control cabinet relocated
- Installed shaft geotechnical instrumentation
- Constructed guide walls for RS drop shaft
- Completed RS drop shaft slurry wall construction



# Division J – Northeast Boundary Tunnel Community Impact Mitigation



## DC Water Partnering with 3 Main Street Organizations to Enhance Local Business Patronage during Construction



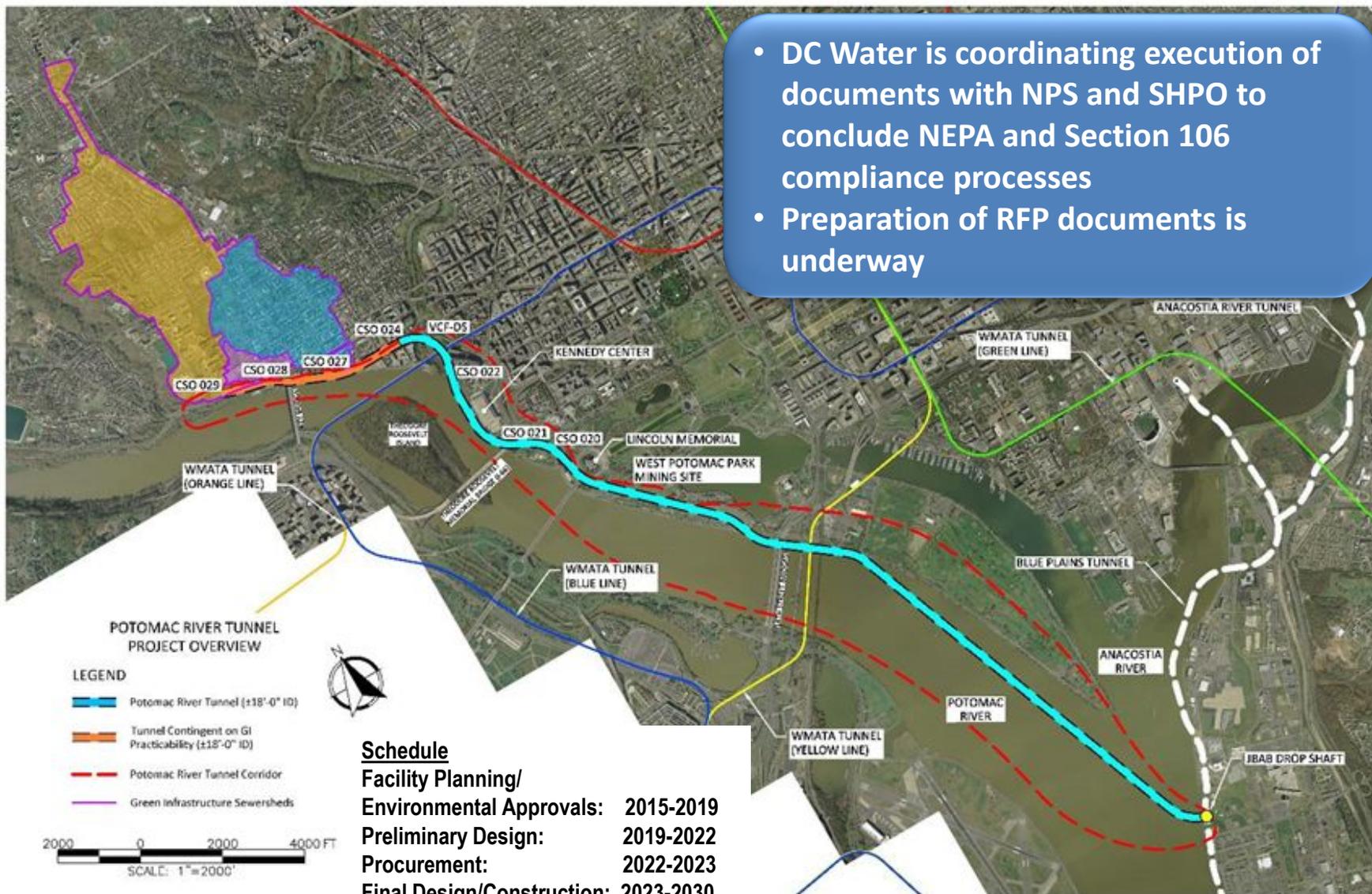
### Main Street Organizations

- 510(c)(3) Non-Profits
- Goal is to support patronage of local business during construction
- **2019 Funds Spent:** \$298,181 on marketing and branding refresh, e-visibility, print ads, coupons, events and event subsidies, storefront refresh, scrim wrap, signage, lighting, technical assistance. Examples:
  - Leased 60 parking spaces for businesses
  - Façade improvements at Abem Family Market
  - Improved website for GP Autoservcies
  - Storefront overhaul for VT nails
  - Exterior lighting near The Family Laundromat
  - Many others
- **2020 Plans:** \$450,000 on façade improvements, interior upgrades, marketing and promotions, new #SustainCampaign focus, print ads, explore inventory diversity, social media promotion, technical assistance

### Commuter Outreach Program

- **Traffic Advisories and Newsletters:** Distributed to media, residents, and businesses with updates of construction site activity impacts such as lane and street closures, parking restrictions, pedestrian and bicycle detours, and work schedules and durations.
- **Media Buy:** 2019 Campaign Funds Spent Total \$250,000 on on-air project messages on WTOP and WHUR radio stations, reaching over 1.5 million listeners in 6 months. An interview of Carlton Ray occurred on the WHUR radio program The Daily Drum, with over 400,000 listeners.
- **24/7 hotline:** Callers to the hotline are able to access information without leaving a message. Received 5 messages from callers and responded directly to each to answer questions about the project and construction.

# Potomac River Tunnel



# CSO 025/026 Sewer Separation Project

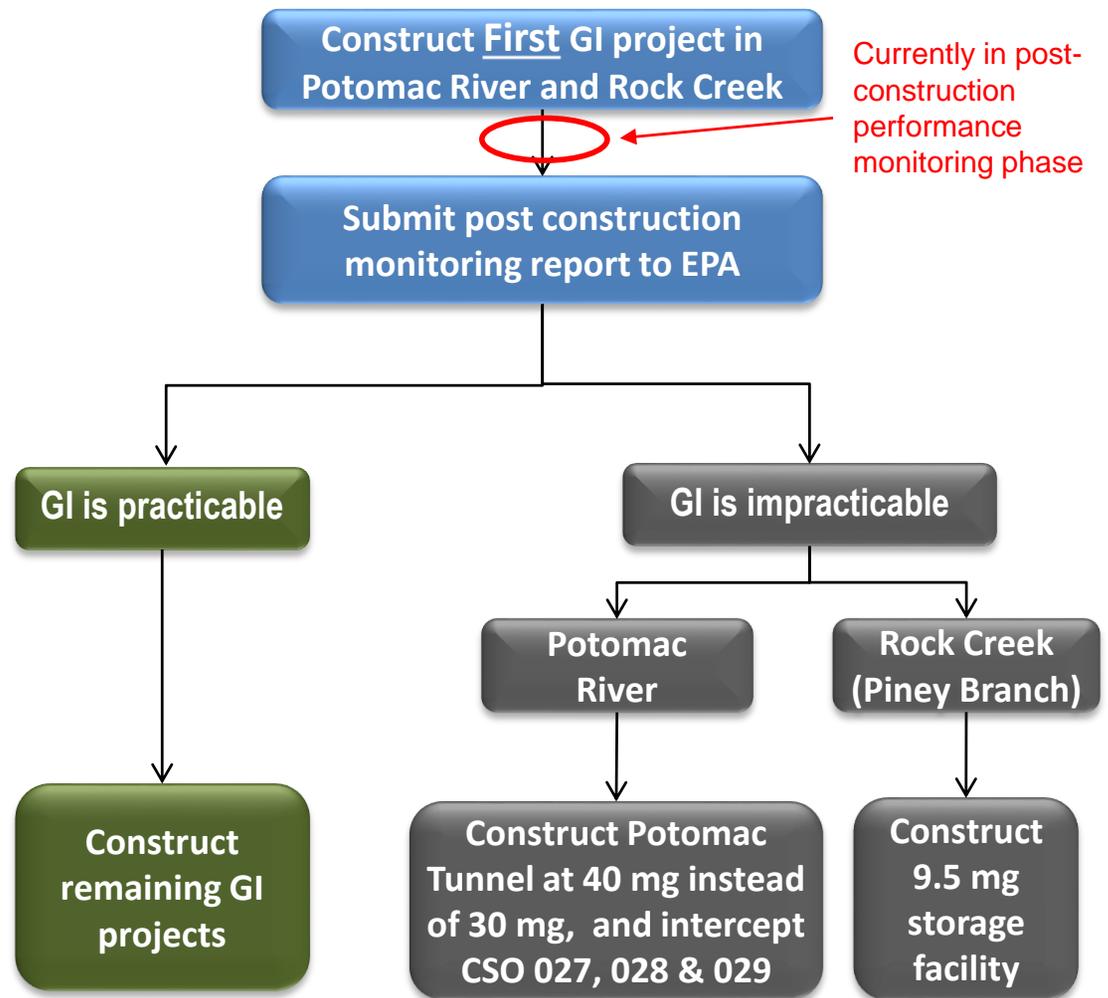
- Briefing on project was provided during ANC 2E monthly meeting in the Georgetown Business Improvement District on December 2, 2019.
- 90% RFP Contract Documents were submitted for DC Water and outside agency review on December 3, 2019. Comments were due and received by December 30, 2019.
- Revision of documents is ongoing and responses to comments will be provided to reviewers.
- Project procurement responsibilities confirmed during meeting with DC Water Procurement on January 24, 2020. Coordination with DC Water Procurement is ongoing.
- Industry Outreach Meeting scheduled for March 4, 2020.
- RFP Documents to be issued on March 11, 2020.



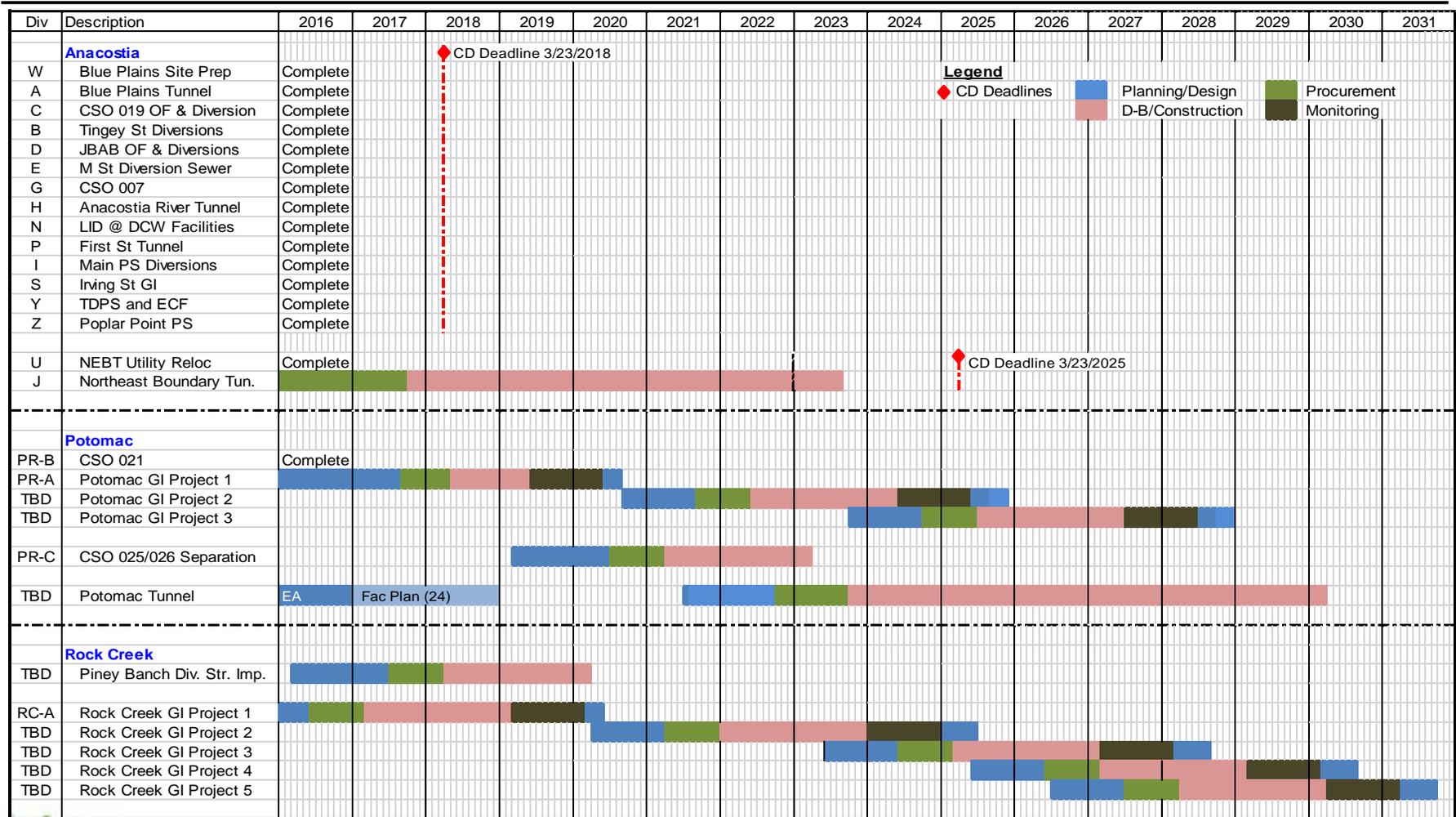
# Green Infrastructure Post Construction Monitoring and Practicability Assessment

Project	Impervious acres managed @ 1.2"	Place in operation deadline
Potomac River Project 1	44	Complete
<b>Practicability assessment</b> →		
Potomac River Project 2	46	2024
Potomac River Project 3	43	2027
Subtotal	<b>133</b>	
Rock Creek Project 1	20	Complete
<b>Practicability assessment</b> →		
Rock Creek Project 2	75	2024
Rock Creek Project 3	90	2027
Rock Creek Project 4	90	2029
Rock Creek Project 5	90	2030
Subtotal	<b>365</b>	
<b>Grand Total</b>	<b>498</b>	

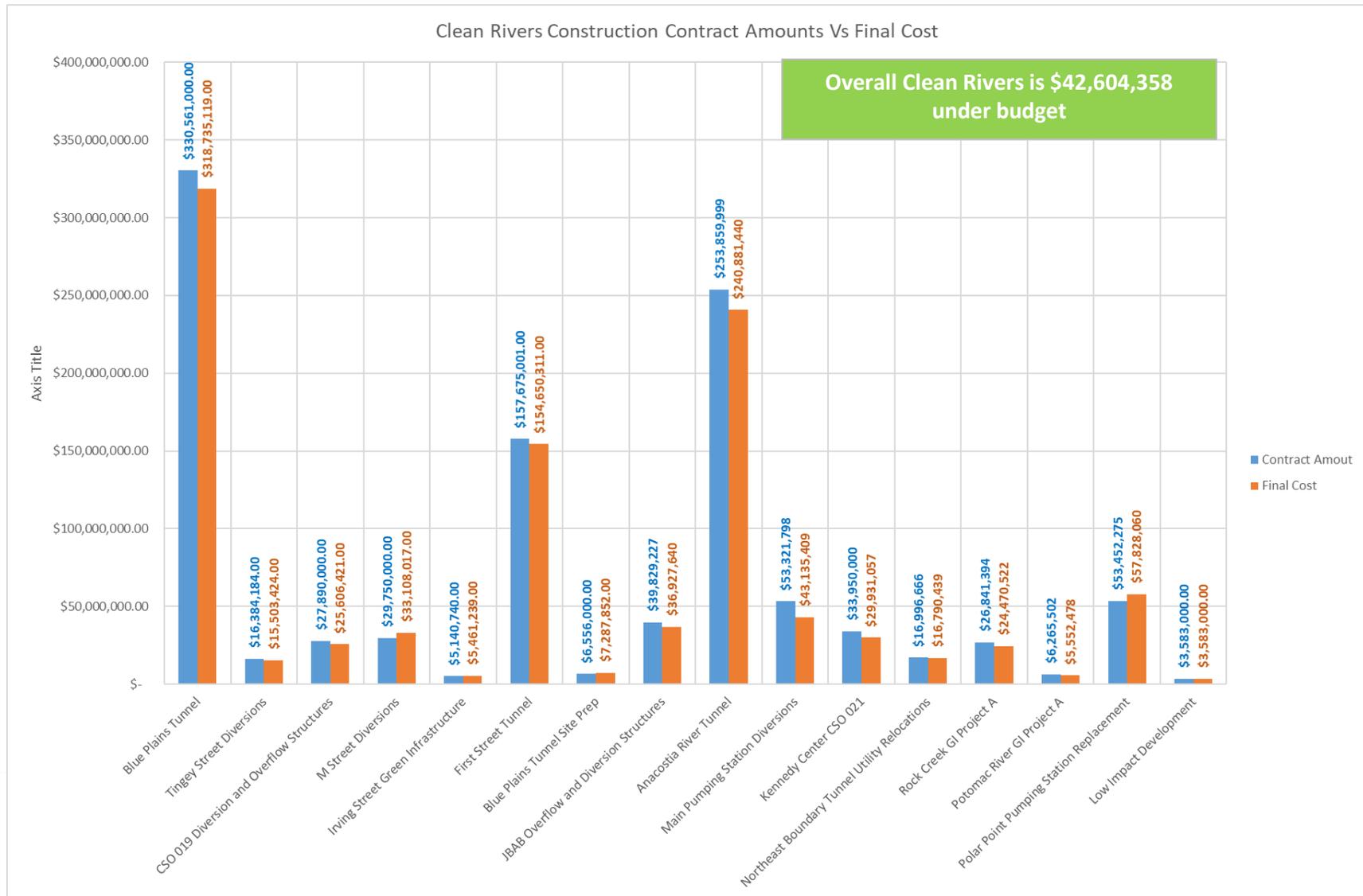
- GI Team provided an in-depth update on GI at the January 2020 EQ&Ops meeting.



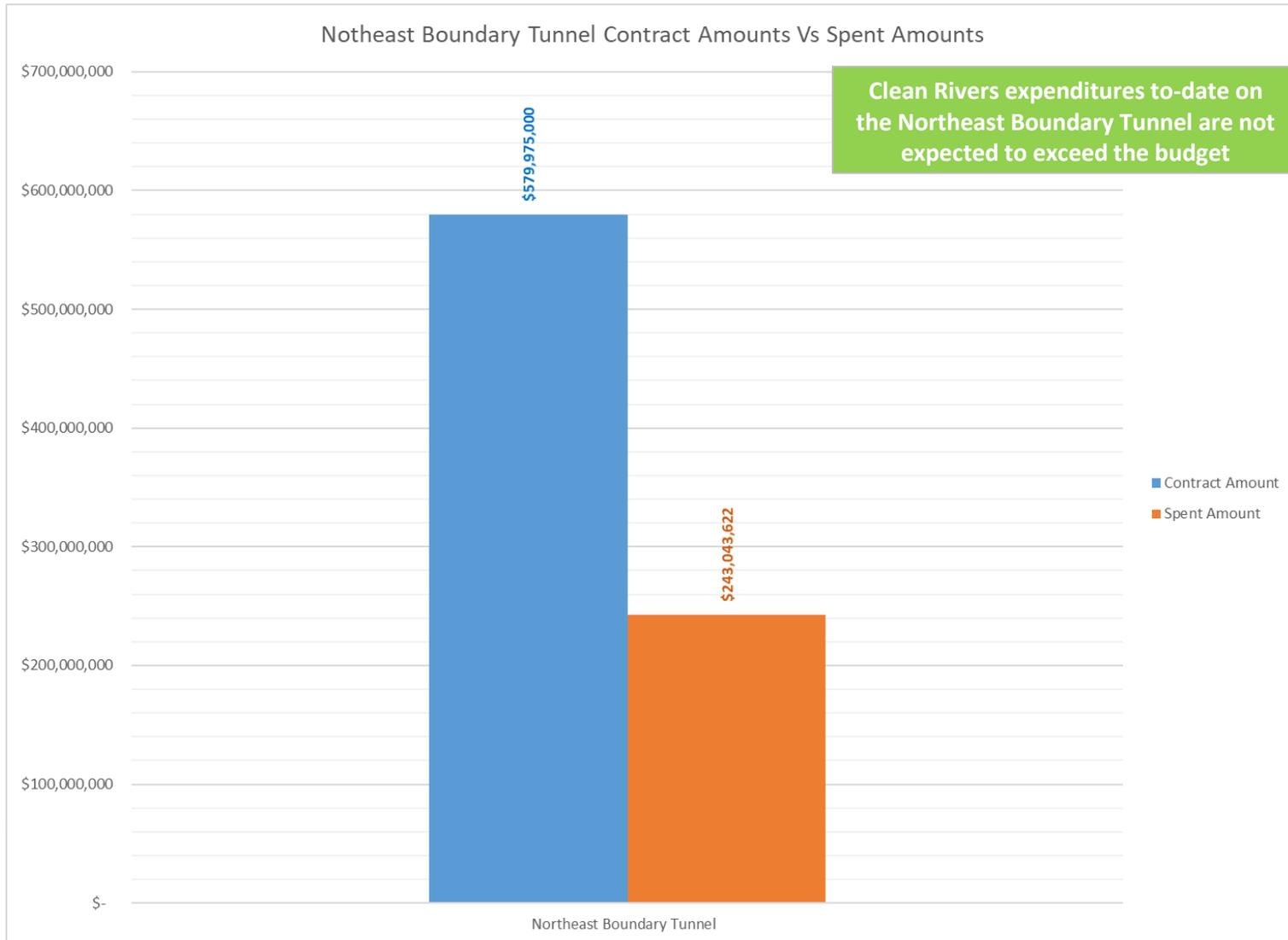
# DC Clean Rivers Schedule



# Clean Rivers Budget for Completed Contracts

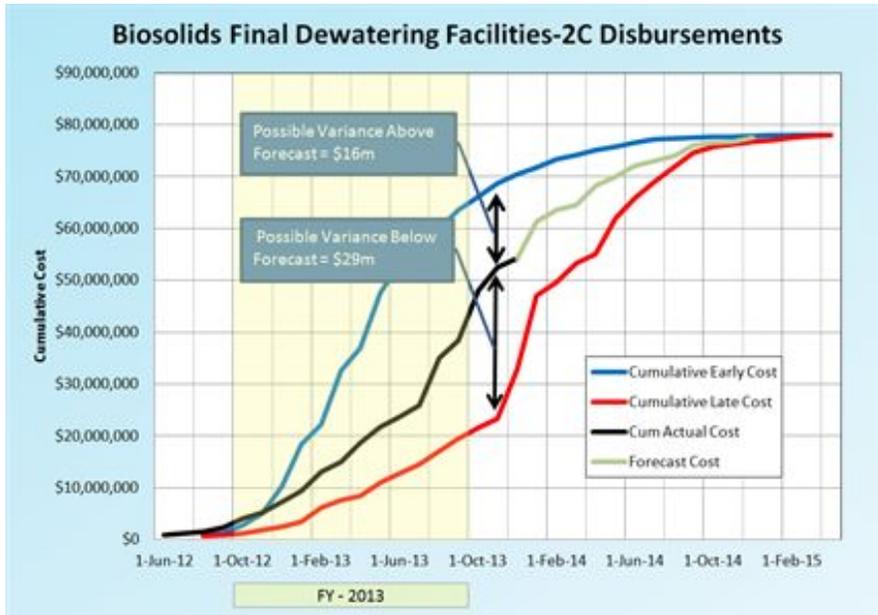


# Clean Rivers Budget for Northeast Boundary Tunnel



# Clean Rivers Disbursements

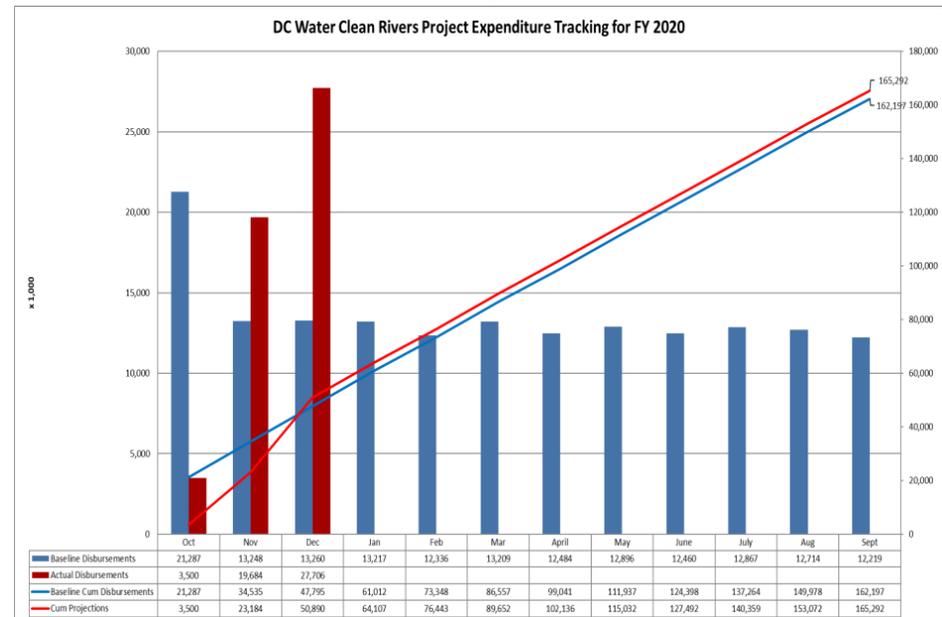
Contractor can complete noncritical work early or late and still be on time; two different curves.



“A comparison of actual disbursements with projected disbursements is not an accurate indicator of project, program, service area or CIP health !”

Source: Dave McLaughlin March 2014 presentation to EQ&SS and Finance & Budget Committees

Clean Rivers is projected to meet its planned disbursements for fiscal year 2020



Monthly variances between planned and actual disbursements have administrative origin (delayed submittal of invoices by the Northeast Boundary Tunnel Design Builder).



# Procurement Update

**Presentation to the Environmental Quality and Operations Committee  
February 20, 2020**

---

**District of Columbia Water and Sewer Authority  
Dan Bae, VP of Procurement and Compliance**



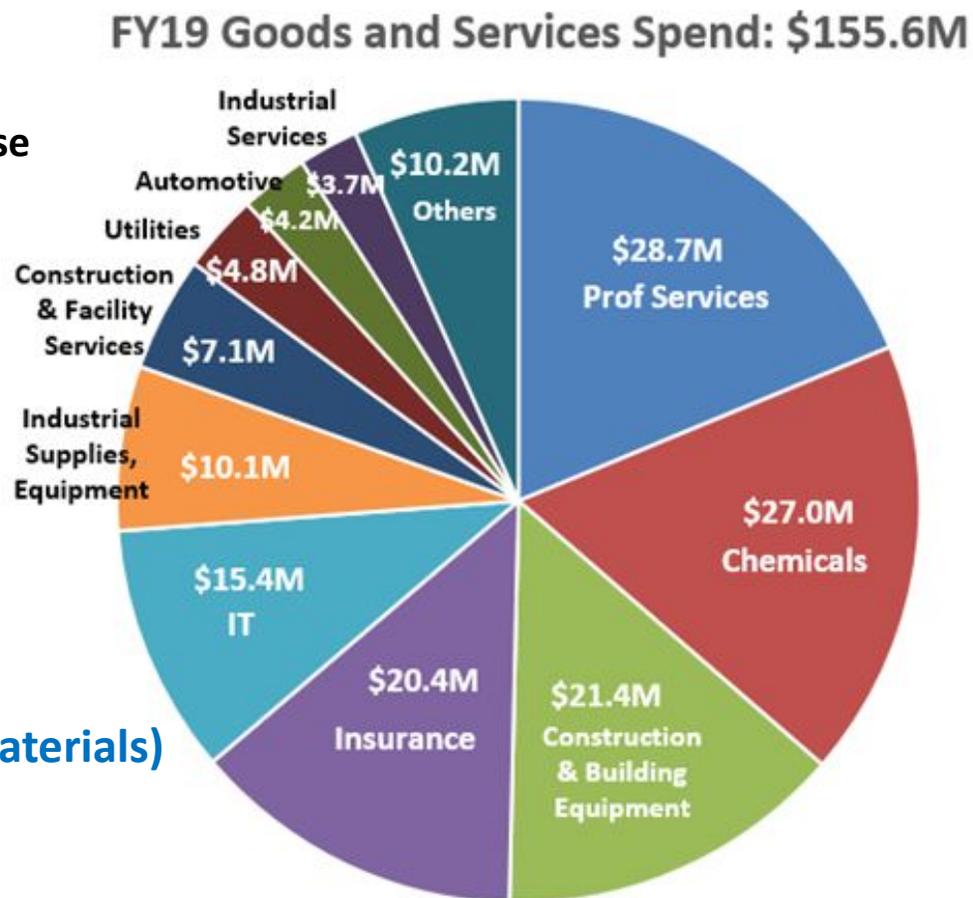
DC Water Headquarters from the Anacostia River

# Purpose

- **Provide review of previous Goods and Services Procurement Transformation**
- **Update the Committee on Procurement Transformation in Capital Procurement**
  - **Opportunities**
  - **Progress to Date**
  - **Next Steps**

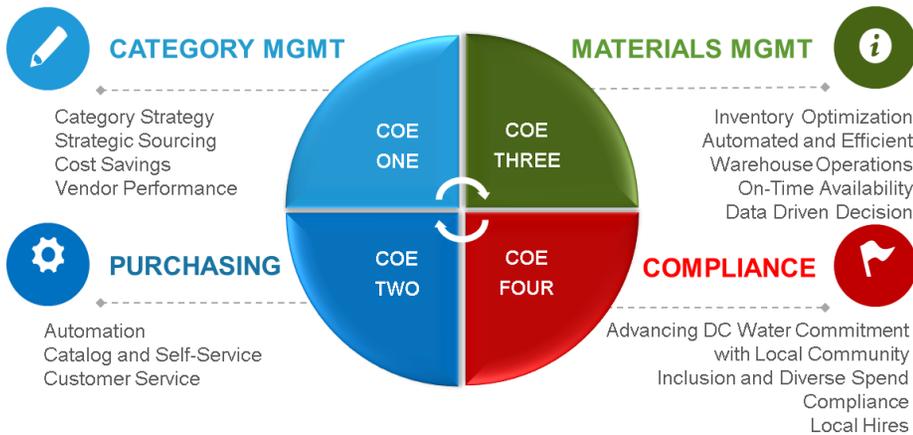
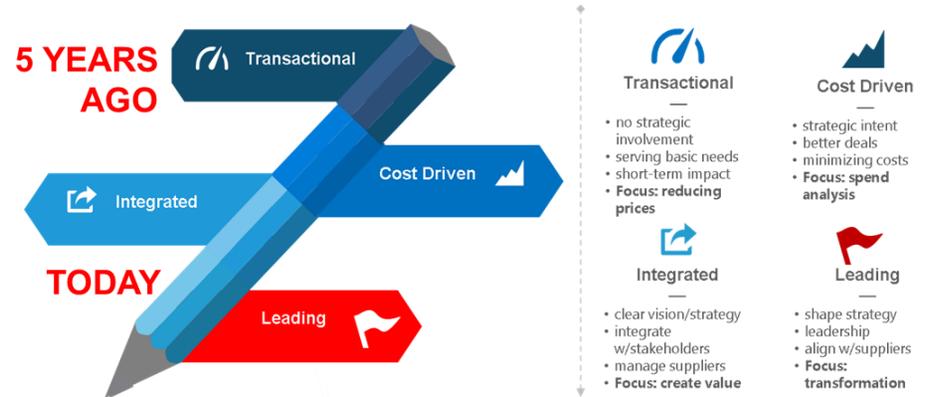
# Goods and Services Procurement: FY2019 Snapshot

- **Employees: 34**
  - 22: Large procurement
  - 4: Small, micro, P/T cards, operations
  - 13: materials management & warehouse
  - 5: Contract Compliance
- **Spend managed: \$155.6M**
- **Contracts managed: 153**
- **Active vendors: 1,600+**
- **Purchase Orders (PO): 5,380**
  - Goods and Services: 1,396
  - Materials Management: 4,384
  - Capital projects: 50
- **Materials Management (Operational Materials)**
  - # of SKUs managed: 25,639
  - Total spend: \$12M
  - Active vendors: 287



# Goods and Services Procurement Transformation

- **Goods and Service Procurement transformation began five years ago**
  - **Clerical function needed to become a strategic function.**
- **Today we are an integrated function with each department, providing value added service.**



- **Organized into Four COEs (Center of Excellence):**
  - **Category Management**
  - **Purchasing Operations**
  - **Materials Management**
  - **Compliance**
- **Each COE is led by subject matter experts and has been adopting industry’s best practice in their core process.**

# Goods and Services Procurement Transformation: Talent and Best Practice

- **Diversified talent**

- Many with technical and advanced degrees
- 10-25 years of procurement experience from different private industries
- Diverse category expertise: construction, chemical, electro-mechanical, MRO, IT, etc.
- Each COE is led and operated by subject matter experts of process



- **Adopted Category Management and Strategic Sourcing Practice**

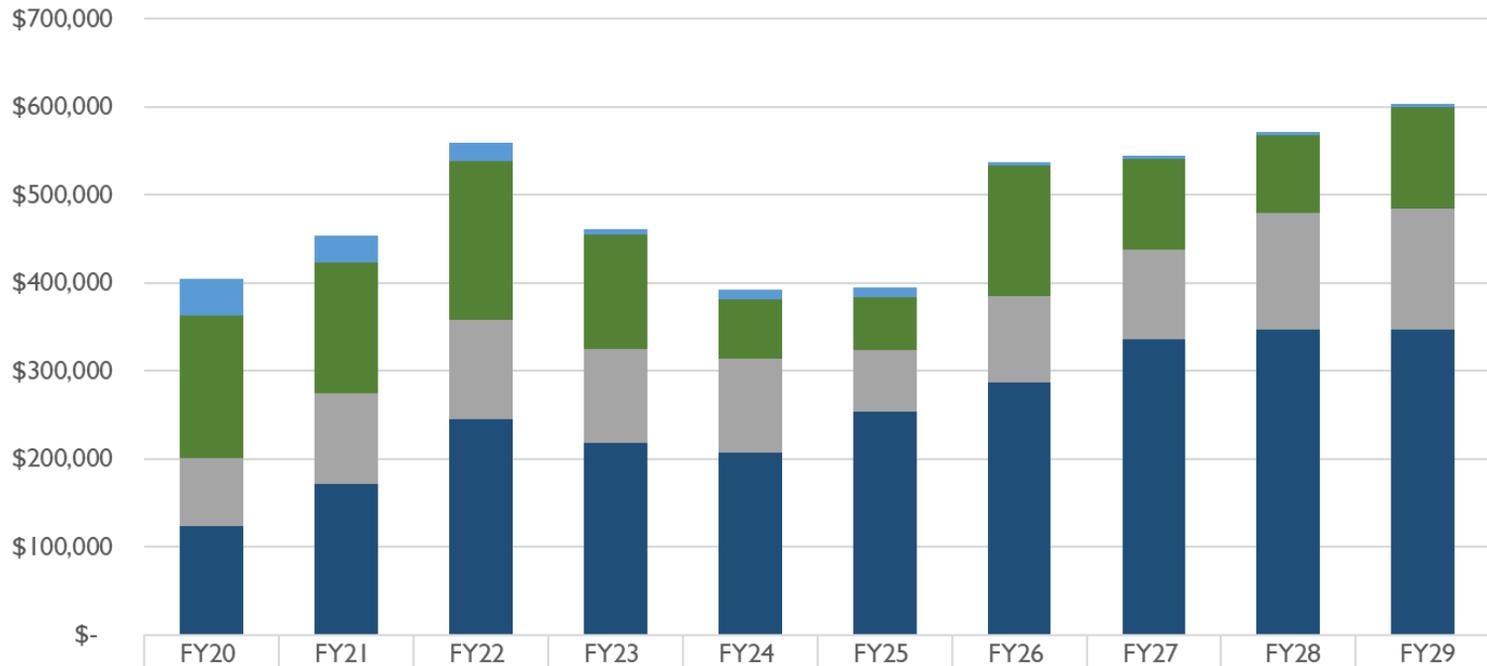
- Early engagement from planning stage
- Gain consensus on procurement strategy
- Provide a procurement advisory service
- Bring market and category expertise
- Proactively identify and solve potential vendor risks
- Generate savings

# Procurement Introduction: Results in Goods and Services

- **Cost savings generated: \$37.6M during FY2016 – FY2019**
- **Reduced contracting time: 6-12 mos → 2-6 mos**
- **Improved PO process time: 2-4 mos → < 3days**
- **Increased critical operational inventory availability:**
  - **80% available from inventory**
  - **Rest available with less than 3-day lead time**
- **Improved inventory accuracy: <60% → 98%**
- **Provide a strategic vendor base for critical products and services**
- **More efficient paperless process and workflow**

# Procurement Transformation in Capital Procurement

# CIP 10-Year Cash Disbursement Forecast: \$400 - 600M per year (in \$000's)



	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29
■ Non-Process Facilities	\$42,066	\$31,849	\$20,665	\$6,831	\$11,058	\$10,396	\$3,901	\$3,553	\$3,560	\$3,600
■ Clean Rivers	\$162,197	\$147,565	\$179,833	\$129,272	\$67,536	\$59,909	\$148,771	\$103,265	\$88,890	\$115,049
■ Wastewater Treatment	\$77,536	\$102,976	\$113,378	\$107,232	\$107,312	\$70,680	\$97,878	\$101,839	\$132,256	\$138,165
■ Water & Sewer Infrastructure*	\$123,205	\$171,727	\$244,770	\$217,833	\$206,591	\$253,333	\$287,034	\$335,458	\$346,630	\$346,221

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

# Key Opportunities in the Capital Procurement

## FINANCIAL IMPROVEMENT

---

- **Cost reduction** from stronger competition and negotiation process in the solicitation process
- **Increase vendor participation**, including small/local/disadvantaged businesses

## TRANSPARENCY AND ACCOUNTABILITY

---

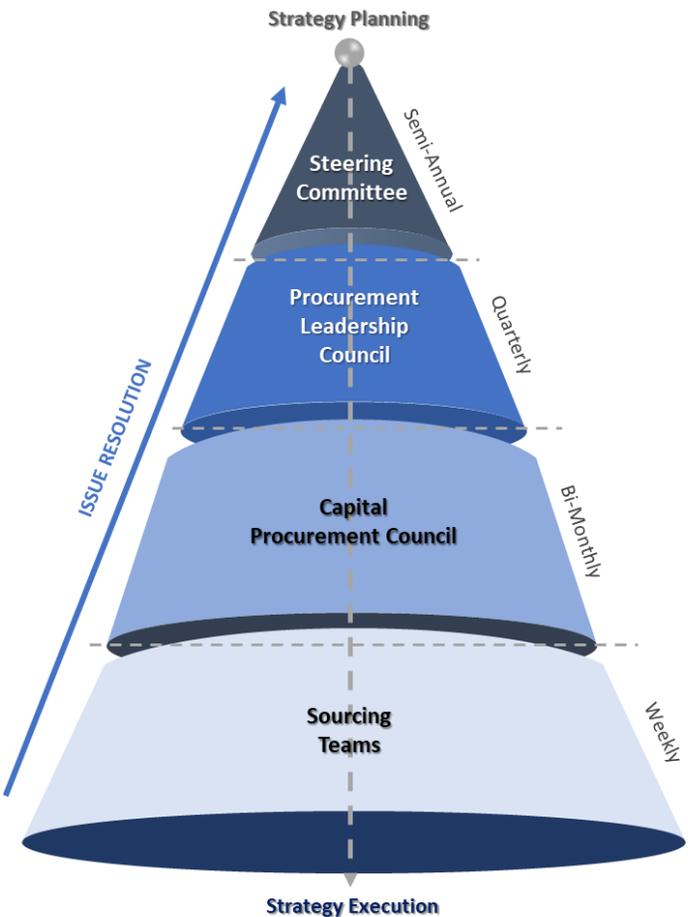
- Increase **transparency** and **accountability**
- Introduce **agility** to procurement process
- Create **consistency** across procurement processes

## PROCESS EXCELLENCE

- Apply **best practices** by Procurement Subject Matter Experts
- **Embed** Compliance, Legal Affairs, and Safety into the process
- **Mitigate** potential conflicts of interest and liabilities
- **Reduce dependence** on outside consultants

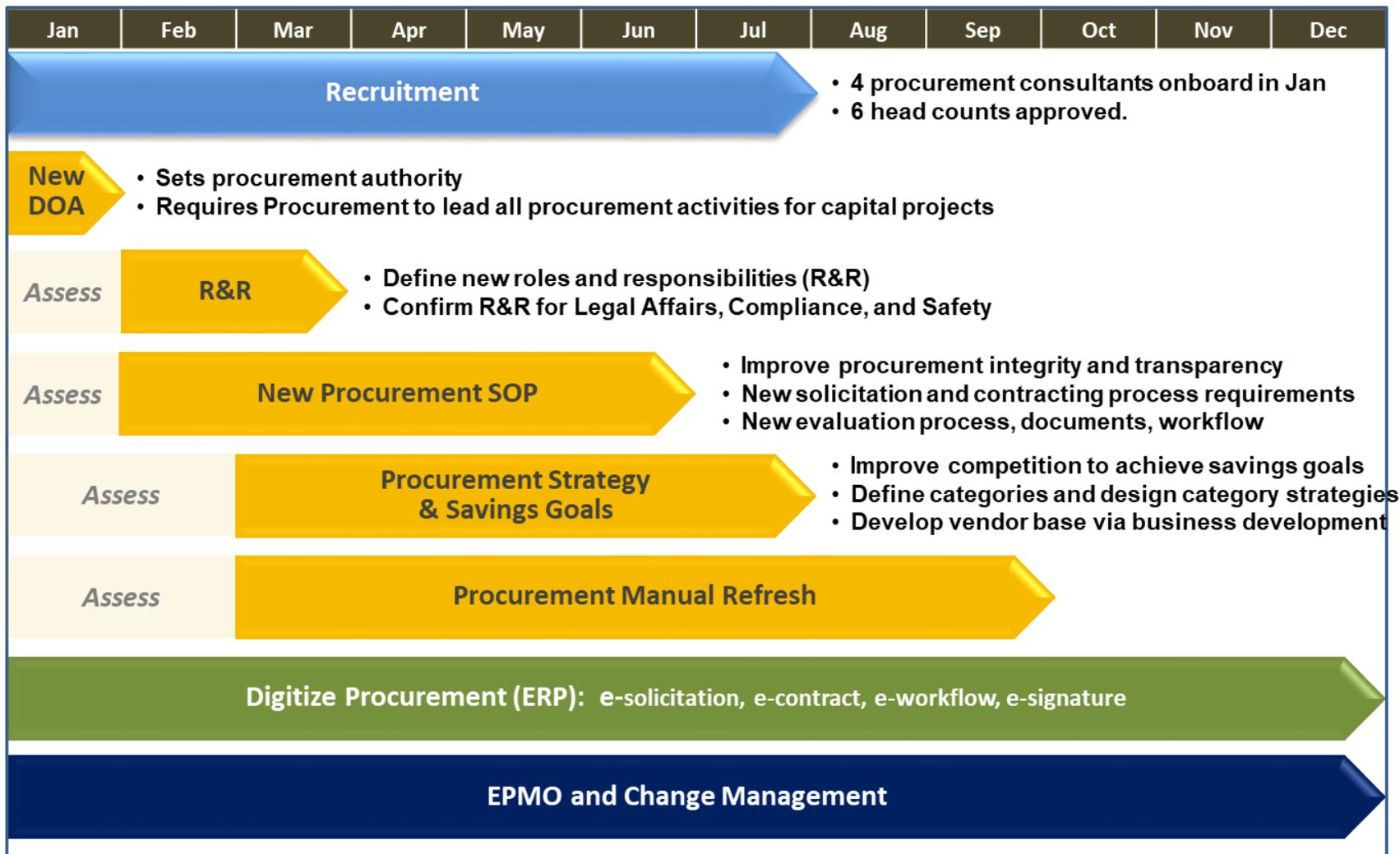
# Capital Procurement Launch

- In FY2019, DC Water made a commitment to an integrated and centralized procurement team
- Procurement Steering Committee is established – executive level
- EPMO is established to provide a framework and governance for the procurement transformation
- Procurement Leadership Council is launched to lead the change management – director and manager levels
- New Director of Capital Procurement is hired
- Headcount and budget for the capital procurement team are approved



# Capital Procurement Transformation Next Steps

2020



# New Procurement Delegation of Authority (DOA) is complete

## • Challenges with current DOAs:

- **Procurement & contracting authority on capital projects are not with Procurement Department**
  - Procurement is unable to set the procurement strategy and process
- **Creates exposure to potential risk and liabilities**
  - Segregation of duties / conflict of interest issues
    - “Approving” contracts vs. “Managing” vendors
  - Accountability, visibility, and transparency issues
    - Lacks visibility in budget, spending, change orders, task orders, allowance
- **Creates a process bottleneck**
  - Low DOA of VP of Procurement and Compliance is \$500K in total cumulative contract value when most CIP contract values already exceed this amount. Therefore, all must be processed by CEO.

## • New DOA:

- **All contracting authorities are consolidated with Procurement for both Capital Projects & Goods and Services**
- **VP and Directors of Procurement are delegated with full administrative authorities:**
  - Setting procurement strategy, solicitation process, evaluation committee, negotiations, contract approval, award, etc.
- **Any contract modifications (including task orders, change orders, allowance) will be approved by Procurement first**
- **New contract execution authority to increase speed and efficiency:**
  - New Contract up to \$1M in total contract value (including any option years)
  - Contract modification less than \$500K
  - If cumulative total of contract modification exceed \$1M, BOD approval is required
- **Unchanged:**
  - **CEO is the Chief Contracting Officer**
  - **BOD contract approval authority**
  - **Approval for the construction field change order directives remains with Engineering**

# Q&A



# Assessing Contractor Responsiveness, Responsibility & Overview of EPA Outreach Program

Presentation to the Environmental Quality and Operations Committee  
January 16, 2020

**DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY**



*Thrust Block Installation at Rhode Island Ave & 6<sup>th</sup> ST NW*



*Small Diameter Water Main Replacement*

*Optimization, Accountability,  
and Transparency*



## Assessing Contractor Responsiveness and Responsibility

### **Responsiveness:**

(Procurement Manual Sections 6.2.8, 6.4.1)

- “comply in all material respects with the Instructions for Bidders.”
- Required forms and documentation
- Bid price is fair and reasonable

### **Responsibility:**

(Procurement Manual Section 25.2)

- Have the adequate financial resources to perform the contract
- Be able to comply with the required schedule
- Integrity & reliability which will assure good faith performance
- Have a satisfactory performance record



## Assessing Contractor Responsiveness and Responsibility

### Determining Responsiveness

- Does bid contain a definite, unqualified offer to meet the material terms of the solicitation?
- Material terms go the substance of the bid as it relates to price, quantity, quality or delivery
- Qualifying MBE/WBE outreach conducted? (Documentation of Good Faith Efforts)
- Other indicators include:
  - Are addenda acknowledged?
  - Bonds submitted and correct?
  - Authorized agent signed bid documents?
  - Contractor registered business in DC?
  - Contractor licensed/ certified for work?



## Assessing Contractor Responsiveness and Responsibility

### Is The Low Bidder Responsible?

- Proposed management staffing plan? (foreman, superintendent, project manager, office management)
- Past Performance? With DC Water? Outside DC Water?
- Project work plan and schedule?
- How will the contractor achieve project milestones?
- Financial strength of bidder and existing other contracts?
- Ethical or past business integrity issues?
- Tax status?
- Safety record?
- Internet search
- Work scopes for MBE/WBE?
- Confirmation that a firm is not barred by the Office of Federal Contract Compliance Programs
- Review of any findings of firm with the National Labor Relations Board



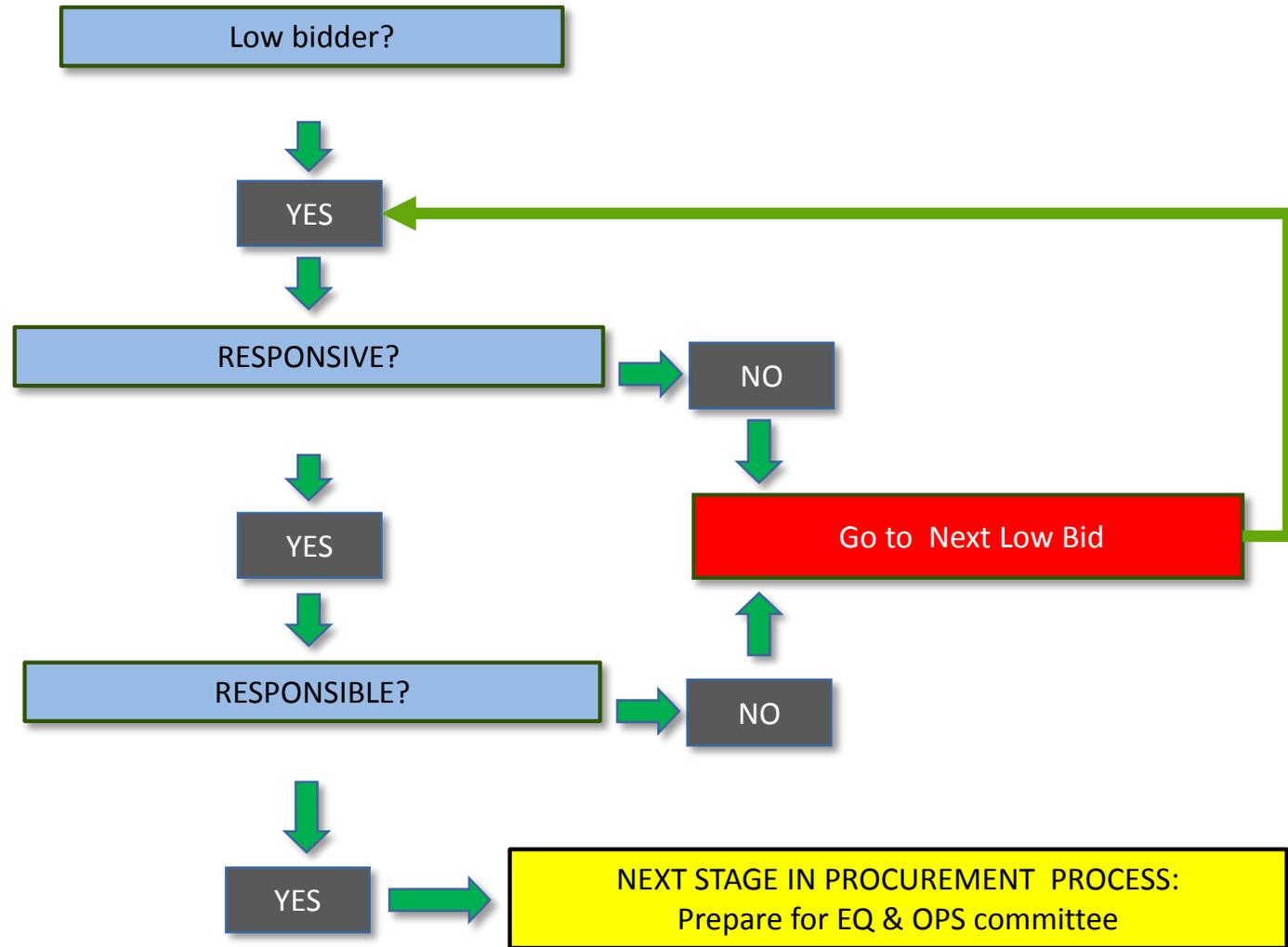
## Assessing Contractor Responsiveness and Responsibility

Post-bid/Pre-award (pre-FACT sheet) interview with the low bidder to assess **Responsibility**

- DCW Q&A on responsibility criteria
- DCW interview team includes:
  - DCW design engineer
  - Design consultant
  - DCW CM team
  - DCW program manager
  - DCW program services staff
  - DCW quality control staff
  - DCW operations
  - DCW safety
- DCW prepares a Determination and Findings to document Responsible Study for Award that includes:
  - Evaluation of Fair and Reasonable Cost
  - Contact references to evaluate Contractor's past performance



# Assessing Contractor Responsiveness and Responsibility





## Assessing Contractor Responsiveness and Responsibility

Acceptable Outreach BUT falls short of the goals – why?

Technical components

Innovations by contractor

Market conditions



IS THIS OK to award?

YES

Demonstration of Outreach = critical

Outreach cannot be altered after bid received.



DCW Procurement efforts to assist contractors?  
(with outreach)

Training sessions, post bid meetings



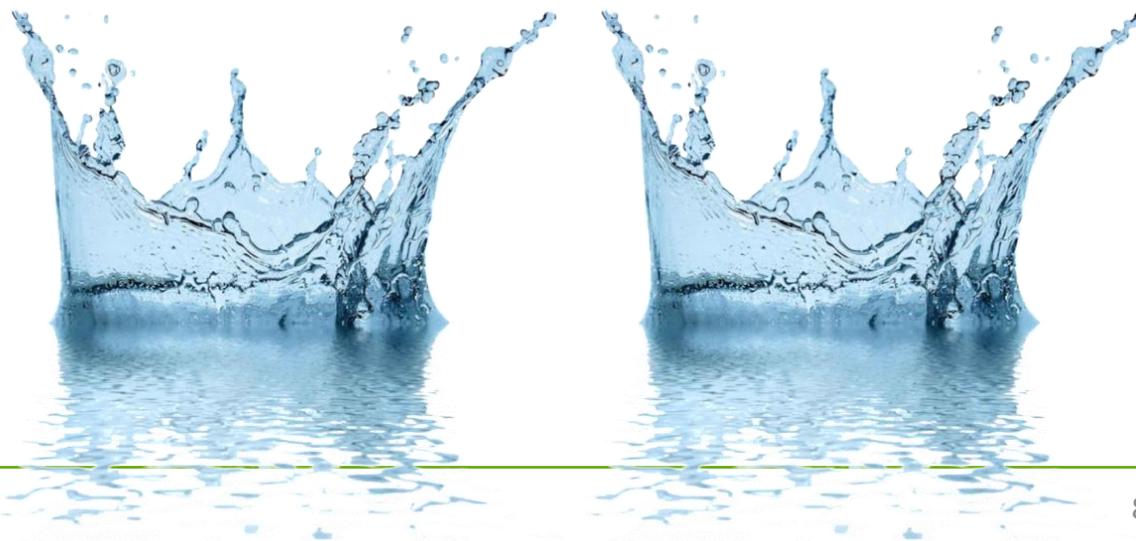
## Monitoring and Reporting

Monitoring of certified firm participation done via:

- Confirmation of fact sheets
- Subcontractor Approval Request (SAR) Form review
- Pay App reviews
- Site Visits

Certified Firm utilization reporting done to the Governance Committee

- Reporting Total firm participation
- Goals vs Achievement





## Monitoring and Reporting

### FY 2017 Procurement Results – EPA Eligible Participation

#### Eligible Design Projects (4) Total Value: \$17,992,198

##### MBE Utilization

- Avg MBE Goal (as indicated on the Fact Sheets): 28.1%
- Range: 28.6% Highest Goal/ 28% Lowest Goal

##### Actual MBE Participation

	DCW MBE	%
Award	\$ 4,969,432.49	27.6%

Number of Projects Meeting (Expected to Meet) the MBE Goal: 3

##### WBE Utilization

- Avg WBE Goal (as indicated on the Fact Sheets): 5.1%
- Range: 8.5% Highest Goal/ 4% Lowest Goal

##### Actual WBE Participation

	DCW WBE	%
Award	\$ 1,363,099.86	7.6%

Number of Projects Meeting (Expected to Meet) the WBE Goal: 4

Four (4) projects were awarded as Design Build. There were separate goals on the design and construction portions of the project. For the purposes of this report, the design and construction components are analyzed separately.



## Monitoring and Reporting

### FY 2017 Procurement Results – EPA Eligible Participation

**Eligible Construction Projects (28)**  
**Total Value: \$525,620,679.29**

#### MBE Utilization

- Avg MBE Goal (as indicated on the Fact Sheets): 29.3%
- Range: 35.1% Highest Goal/ 0% Lowest Goal

#### Actual MBE Participation

	DCW MBE	%
Award	\$ 107,172,790.83	20.4%

Number of Projects Meeting (Expected to Meet) the MBE Goal: 22

#### WBE Utilization

- Avg WBE Goal (as indicated on the Fact Sheets): 5.5%
- Range: 6.2% Highest Goal/ 0% Lowest Goal

#### Actual WBE Participation

	DCW WBE	%
Award	\$ 21,879,195.03	4.2%

Number of Projects Meeting (Expected to Meet) the WBE Goal: 26



# Appendix



## Overview of the Environmental Protection Agency’s (EPA) Fair Share Program

- DC Water’s 2019-2021 Fair Share Objectives are:

Services	Fair Share Objectives (%)	
	MBE	WBE
Professional (A/E Agreements)	28%	4%
Construction	32%	6%

- Objectives are set triennially based on an Availability Analysis conducted on businesses located in EPA’s Region 3 (DC, DE, MD, PA, VA and WV)
- DC Water’s policy is to meet or exceed EPA objectives for MBE and WBE participation at all tiers

**Goals not Quotas**



## EPA Good Faith Efforts (per 40 CFR 33 part C):

1. Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities
2. Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date
3. Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs
4. Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually
5. Use the services of the SBA and the Minority Business Development Agency of the Department of Commerce

Outreach is the key to expanding the pool of potential subcontractors & increasing competition

**Unsatisfactory evidence of outreach=NONRESPONSIVE = reject bid**



## Fair Share Objectives - Required Forms (Pre-Award)

- Contractor's Intent to Subcontract with M/WBE's
  - This form captures the prime's acknowledgement of DC Water's objectives and mandatory Good Faith Efforts, as well as the prime's intention to use certified firms
- DBE Subcontractor Performance Form
  - This form captures an intended subcontractors description of work to be performed for the prime contractor and the price of work submitted to the prime
- DBE Subcontractor Utilization Form
  - This form captures the prime's actual/anticipated use of certified subcontractors and the estimated dollar amount of each subcontract
- Good Faith Efforts Checklist/Documentation of Outreach Efforts:
  - Advertisements
  - Emails (outgoing and incoming)
  - Faxes (cover sheets and transmittal records)
  - Call logs
  - Response logs
  - EPA Mandatory Forms
  - Current DBE certification



**Questions?**