



DISTRICT OF COLUMBIA  
WATER AND SEWER AUTHORITY  
Board of Directors

Meeting of the  
Environmental Quality and Operations Committee

**Thursday, May 18, 2022**  
**9:30 a.m.**

Microsoft Teams meeting  
Join on your computer, mobile app

[Click here to join the meeting](#)

Meeting ID: 253 852 644 717

Passcode: RtimmeE

**Or call in (audio only)**

[+1 202-753-6714,,578973231#](#)

Phone Conference ID: 578 973 231#

- |            |      |                                                                                                                  |                                           |
|------------|------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 9:30 a.m.  | I.   | <b>Call to Order</b>                                                                                             | Howard Gibbs, Vice Chair                  |
|            | II.  | <b>Roll Call</b>                                                                                                 | Michelle Rhodd<br>Board Secretary         |
| 9:35 a.m.  | III. | <b>BPAWTP Performance Update</b>                                                                                 | Nicholas Passarelli                       |
| 9:40 a.m.  | IV   | <b>Asset Management – Vertical Assets</b>                                                                        | Theresa Bruton                            |
| 9:55 a.m.  | V    | <b>Equity Factored into CIP Prioritization</b>                                                                   | Getachew Melsew                           |
| 10:10 a.m. | VI   | <b>Quarterly CIP Update</b>                                                                                      | Paul Guttridge<br>Dave Parker             |
| 10:25 a.m. | VII  | <b>Action Items</b>                                                                                              | Moussa Wone<br>Joel Grosser, David Parker |
|            |      | <b><u>Joint Use</u></b>                                                                                          |                                           |
|            |      | 1. Agreement No. DCFA-533 Potomac River Tunnel Contact B – Tunnel System Construction – EPC Consultants          |                                           |
|            |      | 2. Contract No. 19-PR-DWT-15 – Centrifuge Dewatering Polymer, Option Year 4 - Polydyne                           |                                           |
|            |      | <b><u>Non-Joint Use</u></b>                                                                                      |                                           |
|            |      | 1. Contract No. 150140 Change Order – Constitution Avenue Area Water Main Replacement– Sagres Construction Corp. |                                           |
| 10:50 a.m. | VIII | <b>Other Business/Emerging Issues</b>                                                                            |                                           |
| 10:55 a.m. | IX   | <b>Executive Session*</b>                                                                                        |                                           |
| 11:00 a.m. | X    | <b>Adjournment</b>                                                                                               | Howard Gibbs                              |

**Follow-up Items from Prior Meetings:**

1. David Parker (VP, Engineering): To arrange a presentation to the Committee on DC Water's approach to incorporating equity considerations in the prioritization of CIP infrastructure projects. **Presentation to be delivered at May 2023 Committee.**

<sup>1</sup>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 certain matters, including but not limited to: matters prohibited from public disclosure pursuant to a court order or law under D.C. Official Code § 2-575(b)(1); terms for negotiating a contract, including an employment contract, under D.C. Official Code § 2-575(b)(2); obtain legal advice and preserve attorney-client privilege or settlement terms under D.C. Official Code § 2-575(b)(4)(A); collective bargaining negotiations under D.C. Official Code § 2-575(b)(5); facility security matters 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); third-party proprietary matters under D.C. Official Code § 2-575(b)(11); train and develop Board members and staff under D.C. Official Codes § 2-575(b)(12); adjudication action under D.C. Official Code § 2-575(b)(13); civil or criminal matters or violations of laws or regulations where disclosure to the public may harm the investigation under D.C. Official Code § 2-575(b)(14); and other matters provided under the Act.



# ***BPAWTP UPDATE***



# Blue Plains AWTP – IMA Regional Committee Standard Updates

May 18, 2023



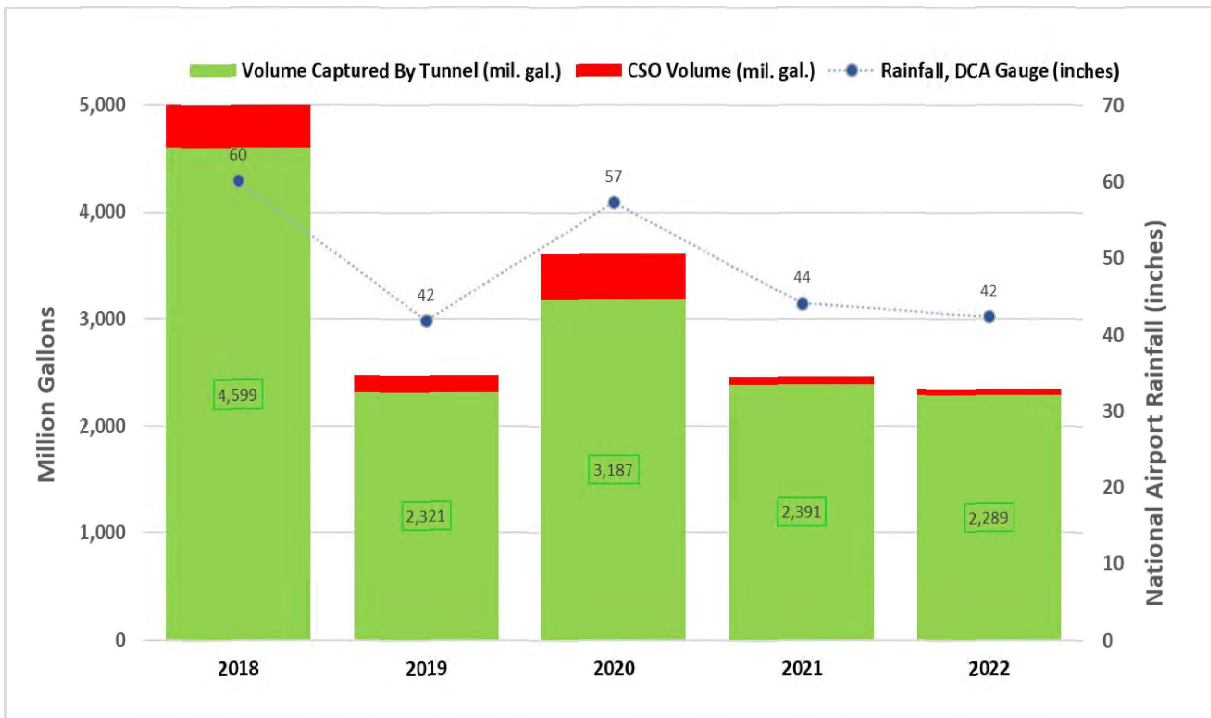
Nicholas Passarelli, VP, Wastewater Treatment Operations





# Operational Performance Tunnel Systems and Wet Weather Treatment

## Anacostia River Tunnel System Annual Performance 2018 - 2022



## Total System Annual Performance 2018-2022

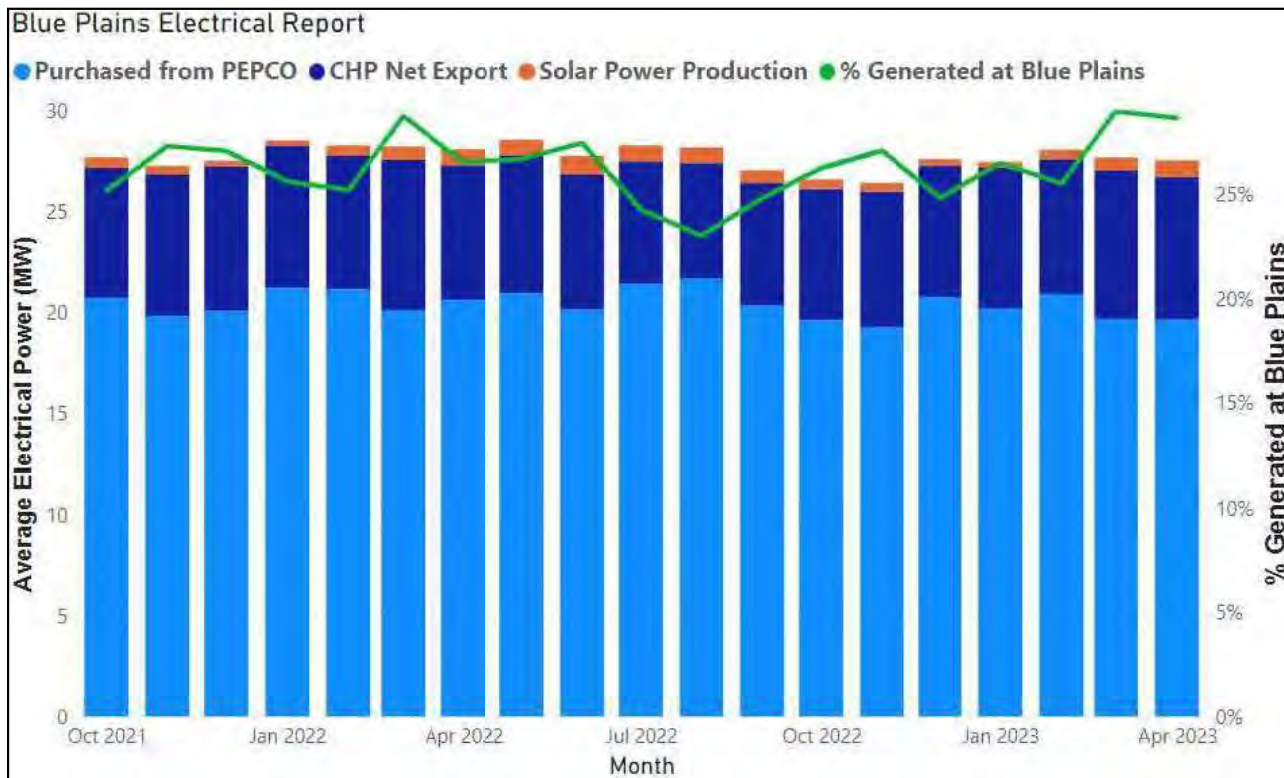
	Anacostia River Tunnel System	Total System
Number of events	61	398
Volume Captured, MG	14,786	18,177
Volume to CSO, MG	1,342	6,943
Percent Captured, %	91.7	72.4

Note: Total System includes Anacostia, Potomac, and Rock Creek  
 MG ~ Million Gallons  
 CSO~ Combined Sewer Overflow



# Operational Performance Electrical Energy Use and Generation

## Blue Plains Electrical Energy Use and Generation

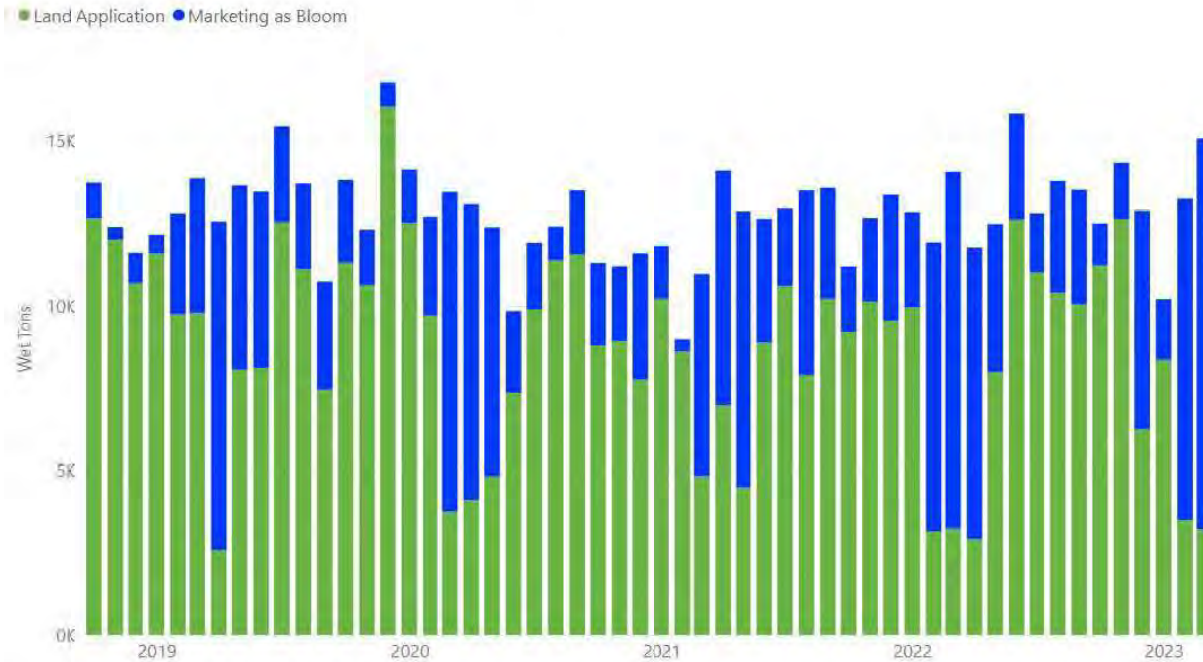


- 29% of electricity was generated onsite
- Combined Heat and Power (CHP) facility produced an average of 8.5 megawatts (MW), with 7.1 MW net to Blue Plains grid
- Solar System produced an additional 0.8 MW of power on average
- Total electricity consumption at Blue Plains averaged 27.6 MW
- DC Water purchased an average of 19.7 MW of electricity from PEPCO



# Operational Performance Class A Biosolids Production

## Total Production of Class A Biosolids and Beneficial Reuse by Type



- In March, a total of 15,072 of Class A Biosolids were sold and/or recycled and met EPA's Exceptional Quality (EQ) requirements. This averaged 486 wet tons per day, some of which was held over in temporary storage at Blue Plains from February.

- In March, Blue Drop sold 11,852 tons of Bloom, which exceeded the goal of 8,308 tons. This was a new record high for a month, and over 1,000 tons more than last March.

- FY 2023 total through the end of March is 33,187 wet tons

- Marketing is on track to meet our sales goal of 58,000 tons.

# *Asset Management (Vertical Assets)*





Asset Management – Vertical Assets  
Environmental Quality & Operations Committee  
May 18, 2023



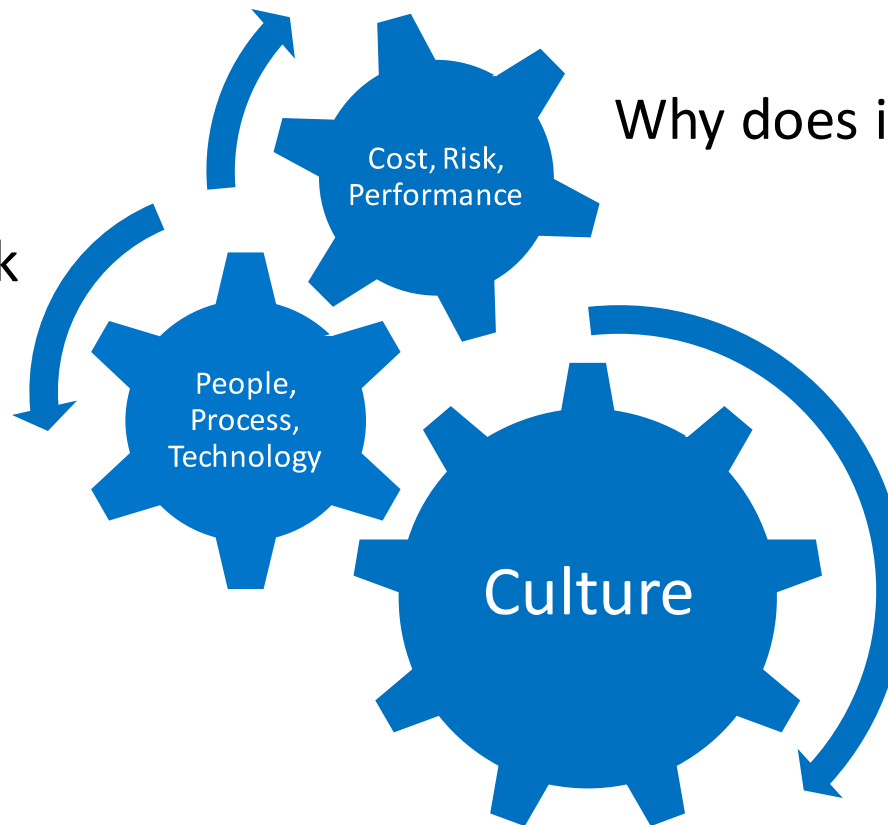
Theresa Bruton, Asset Manager – Blue Plains





# Culture is the Biggest Driver

What does that look like for Asset Management?



Why does it matter?

Culture is what people do when no one is watching





# 10 Years of Asset Management and Reliability



## Organizing CMMS

- Asset Taxonomy
- Work Flow
- ISO Hierarchy
- Asset Criticality Development

2012



## Sustainability

- SOP & MOC
- Continuous QA/QC
- CMMS Training
- Reliability Training
- Planning/Scheduling

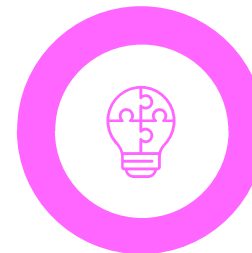
2016



## Data in Action

- RCM on Critical Systems
- PM Optimization/PdM Program
- KPIs
- Mobile solutions
- Scheduling tool

2018



## Analytics/ Business Intelligence

- KPIs & Data Visualization
- Risk Analysis – O&M/ Capital Planning
- BIM & Digital Twin
- Machine Learning

Ongoing



## Digital Twin: Data Driven Decisions





# KPI – Equipment Level of Service



## WWTP - Critical Assets Availability Report

LEGEND: ACCEPTABLE IOOS IMMEDIATE

AREA

All

### FY23 - Year to Date Count

Monthly Trend - Average Count of Critical Systems Availability

FY23 - Average Count of Critical Systems Availability

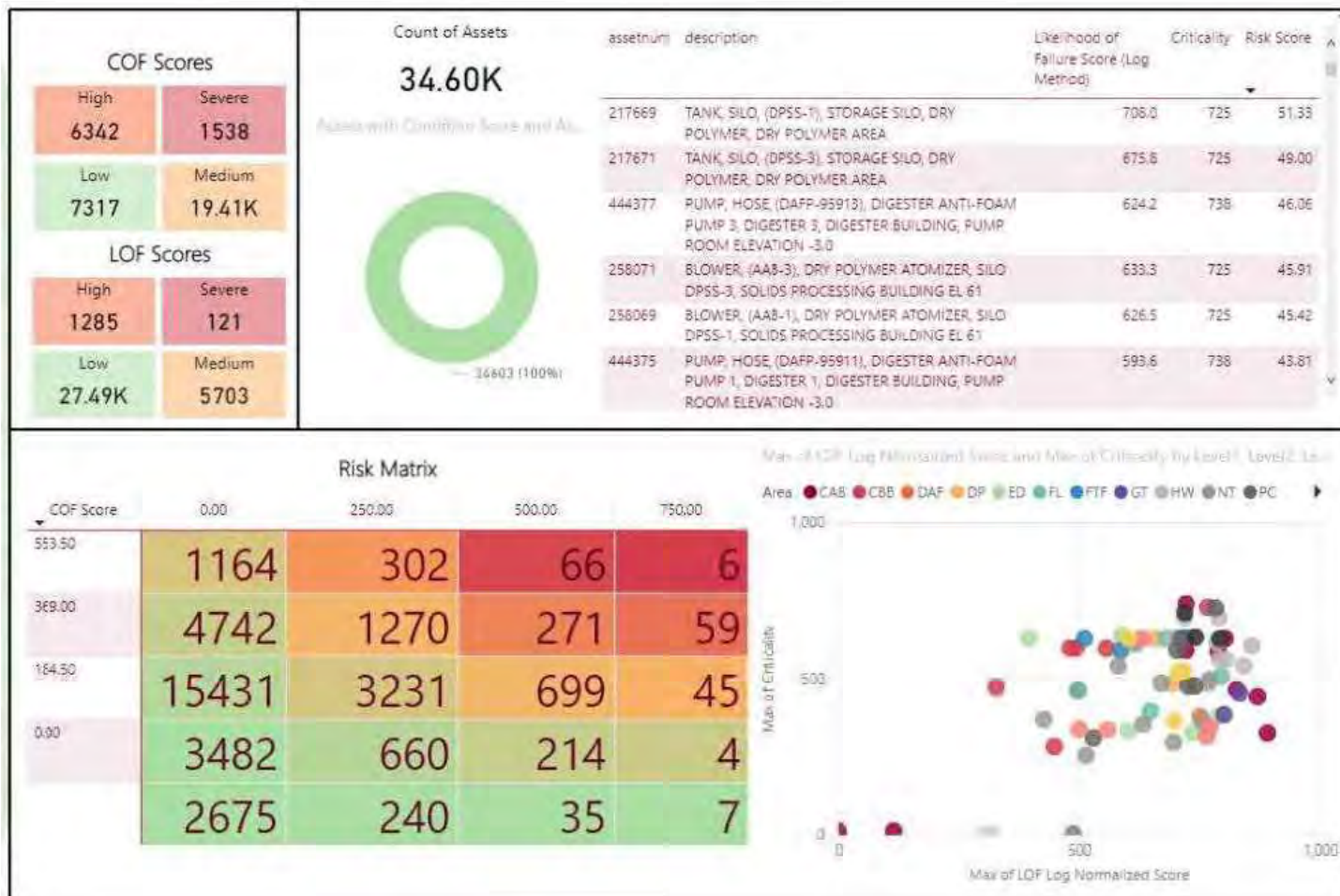
### Weekly Report

[ week of: 2/26/2023 ]

#### Critical Assets Availability - Weekly Report

AREA	System	Total Units	Available Units	Availability	IOOS
HW	RWWPS 1	6	6	100%	0
HW	RWWPS 2	9	9	100%	0
HW	WEST SCREENS	4	4	100%	0
HW	WEST GRIT BRIDGES	2	1	50%	1
HW	EAST SCREENS	9	9	100%	0
HW	EAST GRIT BRIDGES	6	5	83%	1
HW	WEST GRIT BLOWERS	2	2	100%	0
HW	EAST GRIT BLOWERS	3	1	33%	2
HW	ODOR CONTROL - WEST HW	1	1	100%	0
HW	ODOR CONTROL - EAST HW	1	1	100%	0
HW	HVAC - GCB1 FANS	4	4	100%	0
HW	HVAC - GSL1 FANS	1	1	100%	0
HW	HVAC - RWWPS2 FANS	2	2	100%	0
HW	HVAC - GCB2 FANS	8	8	100%	0
PT	WEST PRIMARY SEDIMENTATION	16	15	94%	1
PT	EAST PRIMARY SEDIMENTATION	20	19	95%	1
ST	SECONDARY BLOWER	6	6	100%	0
ST	WEST SECONDARY SEDIMENTATION	12	12	100%	0
ST	EAST SECONDARY SEDIMENTATION	12	12	100%	0
ST	WASTE LIQUOR RETURN PUMPS	6	6	100%	0
DP	DPSB SECONDARY	4	4	100%	0
DP	DPSB NITRIFICATION	4	4	100%	0
DP	SECONDARY EFFLUENT PUMPS	4	2	50%	2
NT	NITRIFICATION BLOWER	5	4	80%	1
NT	NITRIFICATION SEDIMENTATION	28	26	93%	2
NT	DENITRIFICATION PUMP	6	6	100%	0
NT	METHANOL UNLOADING	2	2	100%	0
NT	METHANOL FEED	4	4	100%	0

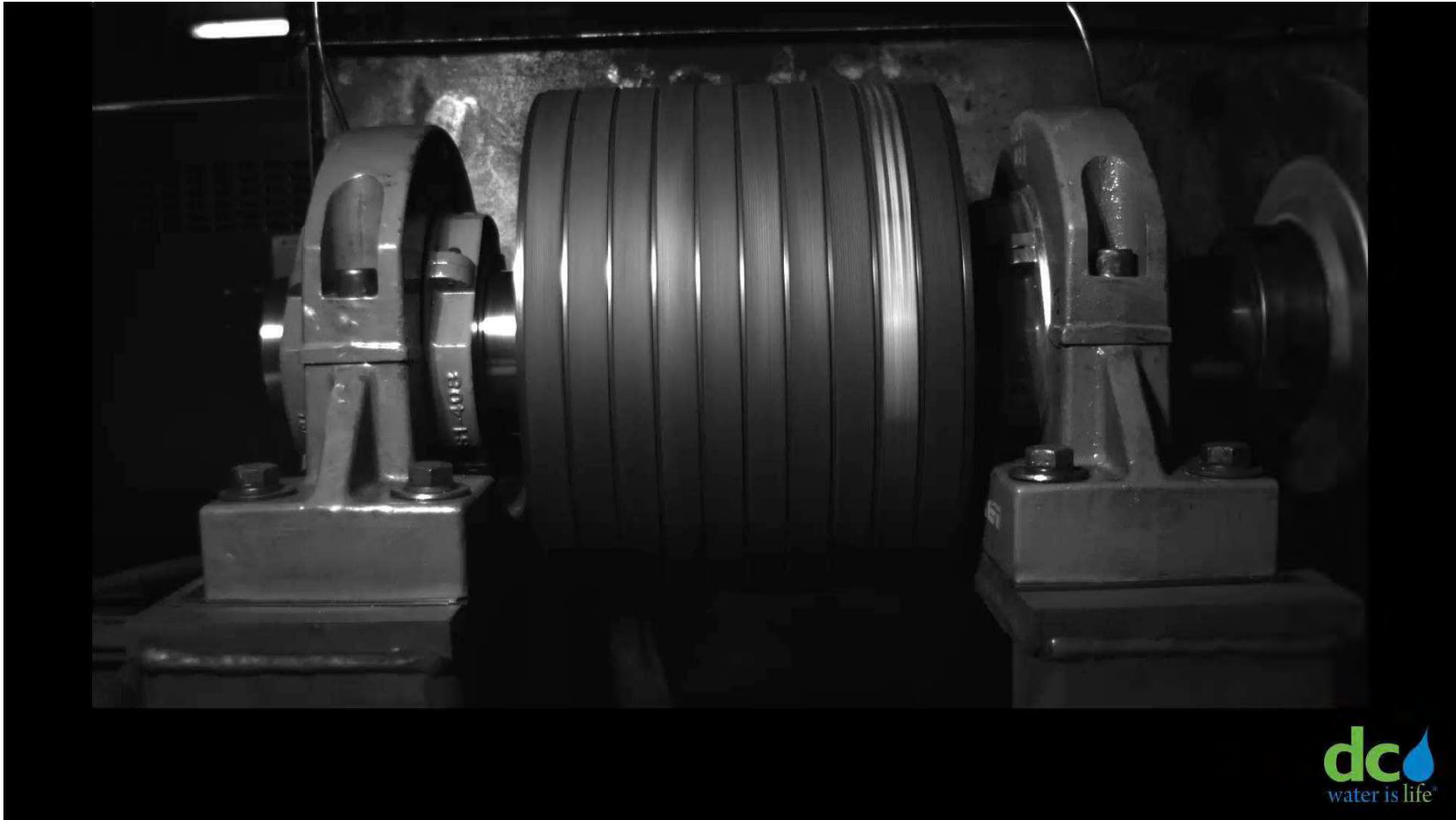
Area	WO#	WO_Description	Status	Priority	Location_Description	Asset_Description
CAE	21-289551	(INV) Belt Press "A" conveyor has 4 lower rollers that are not turn...	RTS	3	CONVEYOR, ASSEMBLY, PBC-A, BELT FILTER PRESS GROUP A, FINAL DEWATERIN...	CONVEYOR, PRESS BE.T, (PBC-A), FINAL DEWATERING BU...
CAE	21-290526	BFP B5 needs Roller 3,5,9,11 and 13 Replaced or Recoated. (Requ...	WCONTR	3	BELT PRESS, ASSEMBLY, BFP-B5, BELT FILTER PRESS GROUP B, FINAL DEWATERIN...	BELT PRESS, (BFP-B5), FINAL DEWATERING BUILDING, PRES...
CAE	21-559552	Pre-D screen 6 has reached the max adjustment and need to be r...	RTS	4	SCREEN, ASSEMBLY, SS-63136, SLUDGE SCREEN 6, SLUDGE SCREEN SYSTEM, SL...	SCREEN (SS-63136), SOLIDS SCREEN 6, SOLIDS SCREENING...
CAE	22-202738	BFP B5 has 2600 hrs. and will need to have both belts replaced. (...	WCONTR	3	BELT PRESS, ASSEMBLY, BFP-B5, BELT FILTER PRESS GROUP B, FINAL DEWATERIN...	BELT PRESS, (BFP-B5), FINAL DEWATERING BUILDING, PRES...
CAE	22-202800	BFP B5 has 2600 hrs. and will need to have both belts replaced. (...	WCONTR	3	BELT PRESS, ASSEMBLY, BFP-B5, BELT FILTER PRESS GROUP B, FINAL DEWATERIN...	BELT PRESS, (BFP-B5), FINAL DEWATERING BUILDING, PRES...
CAE	22-304373	HWWBP 2 kicking out on drive fault. INVESTIGATE	INPRG	3	PUMP, ASSEMBLY, HWWBP-2, HIGH WASHWATER BOOSTER PUMP 2, FINAL DE...	PUMP, CENTRIFUGAL, (HWWBP-2), HIGH CAPACITY WASI...
CAE	22-340547	THPPF-5 discharge pressure needs to be inspected, it has been r...	WPLAN	3	PUMP, ASSEMBLY, THPPF-63255, THP STREAM 3 FEED PUMP 5 THERMAL HYDR...	TRANSMITTER, DIFFERENTIAL PRESSURE, (PIT-63255), THP...







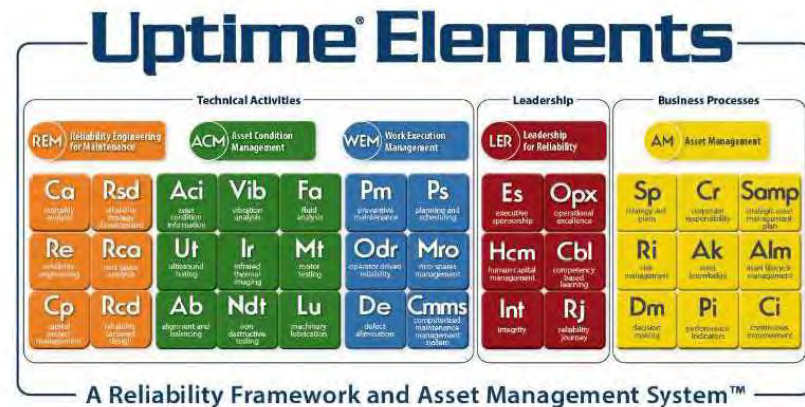
# Technology to Increase Efficiency





# Continue to Invest in People- Training and Certification

- 40 + Leading Blue Participants
- 41 CRL (Certified Reliability Leader)
- 3 CMM (Certified Maintenance Manager)
- 8 CMRP (Certified Maintenance Reliability Professional)
- 325 Uptime Element Users
- 5 Machinery Lubrication Technician (MLT) – Level 1
- 5 vibration - Level 1, and 2 vibration Level 2
- 5 Ultrasound - Level 1
- 4 RDI Motion Amplification camera
- 15 Infrared Thermography – Level 1&2
- 1 Infrared Thermography – Level 3





# Asset Management – 10 years later



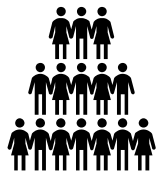
Solid foundation  
of asset data



Connected  
Data



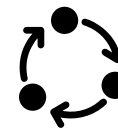
Dashboards manage risk,  
cost and performance



Technology  
increase efficiency  
for front line staff



Continuous  
Improvement - Never  
stop learning



Culture that Improves and  
Sustains Asset Management  
and Reliability



# *Equity Factored Into CIP Prioritization*



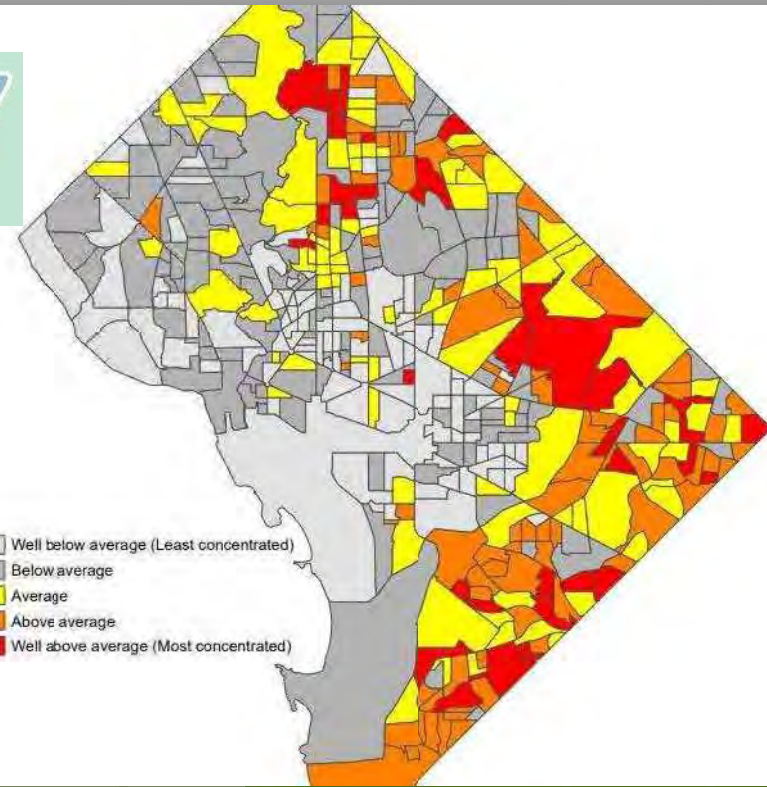
# Equity Factored Into CIP Prioritization

## Environmental Quality & Operations Committee

May 18, 2023



EQUITY



Getachew Melsew – Senior Manager, Planning, DETS



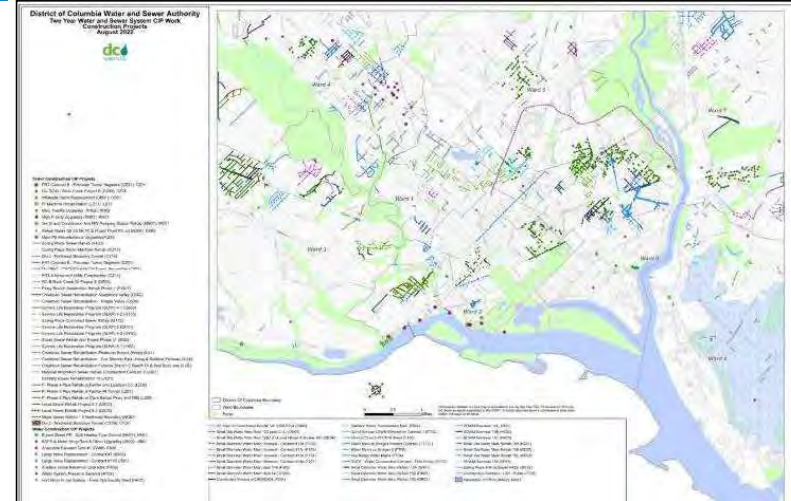
# Overview

Equity is the intentional investment of resources and planning in vulnerable communities so that they:

- (1) have access to safe, clean, affordable drinking water and wastewater services,
- (2) have voice (meaningful involvement) in decision-making processes and
- (3) share in the economic, social, and environmental benefits services provided by DC Water.

**Vulnerable Communities** are communities that face historic or contemporary barriers to economic and social opportunities and a healthy environment.<sup>(1)</sup>

<sup>(1)</sup><https://www.raceforward.org/about/what-is-racial-equity-key-concepts>



Source: <https://longbranch.apsva.us/equity/>



# Project Prioritization Criteria

1. Risk Scores – programs (small diameter WMs, Local Sewers, linear assessments)

2. Benefit Scores – all other projects

Criteria	Weight ( $\omega$ )
Regulatory Compliance	27%
Health and Safety	20%
Risk Reduction	18%
Financial Benefits	11%
System Capacity and Growth	8%
Public Image	7%
Supplemental Benefits	5%
Coordination with Other Projects	4%

$$\text{Total Benefit Score} = \sum_{i=1}^8 b_i * \omega_i$$

$\omega$  is weight

$b$  is benefit score – the extent to which the project addresses a criteria (performance scale)



- Equity consideration:
  - Boost a project’s priority so that projects benefiting vulnerable communities are given priority over others.
  - Dedicate projects to address needs of vulnerable communities.





# “Equity Ramp Up” in CIP Prioritization

## Driver

- Equitable Imperative
  - Embed equitable infrastructure decision-making.
  - Empower communities through equitable projects.

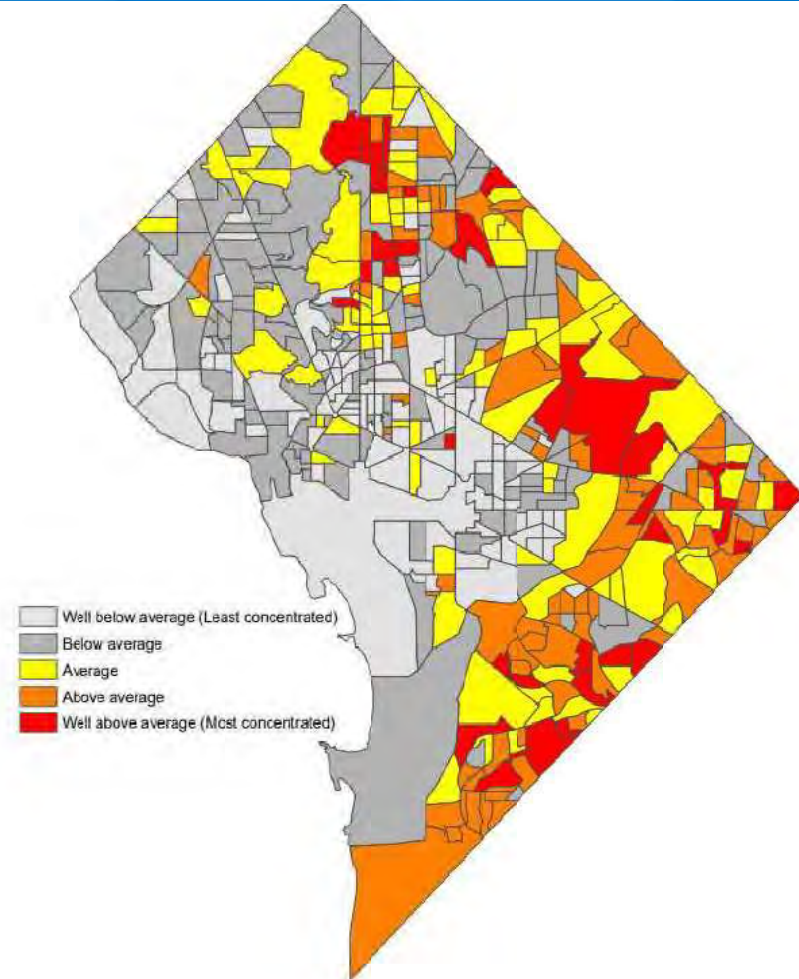
Thresholds	Description	EI Score	Ramp Up
<50%	Well below average (least concentrated)	0	100 %
50-60%	Below average	1	112.5 %
60-80%	Average	2	125 %
80-90%	Above average	3	150 %
90-100%	Well above average (most concentrated)	4	200 %

## What contributes to Equity Index (EI)?

- Demographic Indicators - Six indicators

	Parameters	Used (Y/N)
Demographic Indicator	Percentile for % low income	1
	Percentile for % less than high school education	1
	Percentile for % linguistically isolated	1
	Percentile for % under age 5	1
	Percentile for % over age 64	1
	Percentile for Demographic Index	0
	Percentile for % people of color	1

- Environmental Indicators – 11 indicators



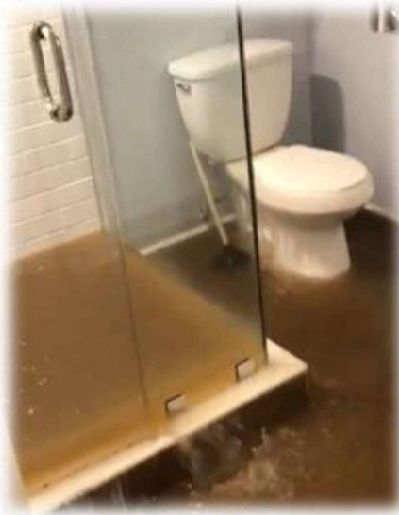


## Vulnerable customer experiences and concerns

- How does a broken water main or sewer pipe affect someone in a more vulnerable household?



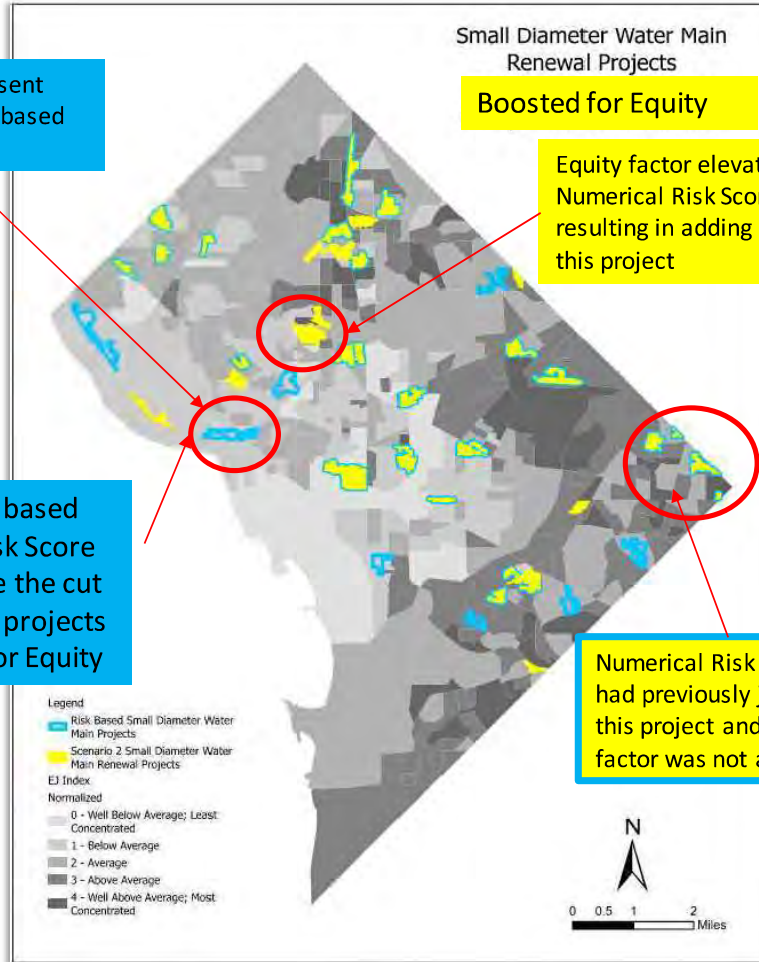
- How does a basement sewer backup affect a more vulnerable household?



- How do more vulnerable customers view the safety and quality of our drinking water? Are they spending disproportionately on bottled water?
- How can our project prioritization and scoping better reflect these varied impacts and vulnerable community needs?



# Equity Ramp Up Effect on project prioritization



## Enhancing equity outcomes

**Community Needs**

- No Basement Sewer Backups
- No Sinkholes
- Water Quality
- Water Pressure
- Resilient to Storms, Disruption

**Infrastructure Needs**

- Proactive repair
- Efficient use of funding to keep rates affordable
- Distributed network investments

**Scope, Budget, Priorities, Funding**

- Where, when and how work is done
- Pace of rehab vs. condition
- Facilities Planning Schedule and Equity Integration





# Coming Fall 2023 and Beyond



Equity Analysis Tool  
and Dashboard



Community  
Engagement



Training Team  
members



Work with City  
Programs



Ongoing process  
with iterations



# *Quarterly CIP Update*



CIP Quarterly Update  
Environmental Quality & Operations Committee  
May 18, 2023



David Parker, Vice President of Engineering  
Paul Guttridge, Director, CIP Infrastructure Management

- FY23 Quarter 2 CIP Progress by Service Area
  - Non-Process
  - DC Clean Rivers (DCCR)
  - Blue Plains
  - Water
  - Combined Sewer Overflow (CSO)/Storm/Sewer
  - Lead Free DC (LFDC)
- FY23 CIP Quarter 2 Budget Update





# Non-Process Facilities

## FY2023 Progress

### Planning

- a. Roofing & HVAC Assessments: Phase 1 complete, Working on Phase 2
- b. Main & O Seawall: Change to Scope – Pursuing full seawall replacement due to high cost to certify existing seawall
- c. Concept Design Underway – Bryant St and Main PS Upgrades, COF Reno, Ft Reno Upgrades Spring 2023

### Procurement

Request for Proposal Documents Underway for the Following Projects:

- a. Floatable Debris Docks Design-Build – RFP March 2023
- b. Bryant Street Parking Design – DCFA-535 Design BOA
- c. Anacostia Pump Station Design – DCFA-535 Design BOA
- d. Fort Reno Watchman’s Lodge Design – RFP August 2023
- e. Blue Plains SB-1 Warehouse Reno – RFP August 2023

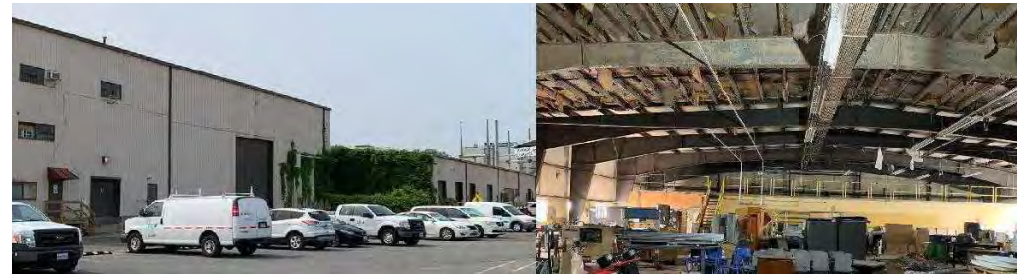
### Construction

- a. HVAC Replacements at Blue Plains Facilities - \$900K
- b. Sidewalk Installation at Main PS - \$260K

## Fort Reno Renovation



## Blue Plains SB-1 Warehouse Renovation



## Blue Plains COF Renovation





# DC Clean Rivers

## Projects in Construction: (see next 2 slides)

Div. J, Northeast Boundary Tunnel

Div. PR-C, CSO 025/026 Separation

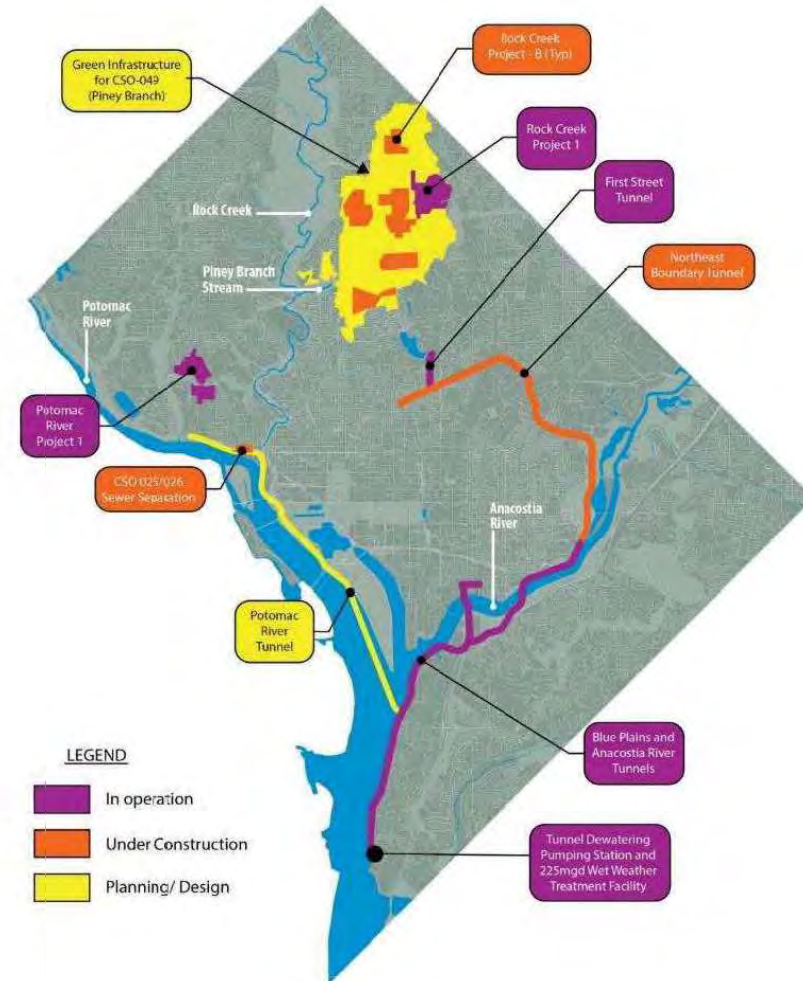
Div. PRT-A, Potomac Tunnel Advance Utility

Div. RC-B, Green Infrastructure Project B

## Upcoming Project:

Potomac River Tunnel:

- Project is in procurement
- Technical and cost proposals received end of April 2023
- NTP: Nov 2023
- Construction: 2024 – 2030

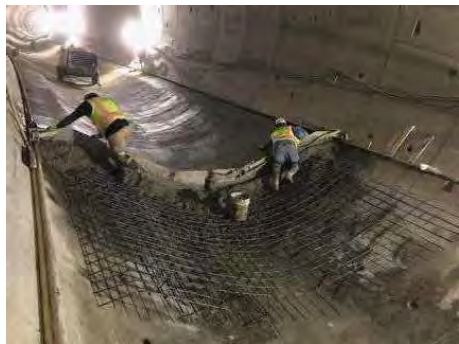






# Clean Rivers Construction Projects (1 of 2)

Div J Northeast Boundary Tunnel		Div PR-C, CSO 025/026 Sewer Separation	
Purpose	CSO control & flood mitigation in NEB Area	Purpose	Separate 2 CSOs in Georgetown
Scope	5.5 miles of 23' dia. tunnel, shafts and diversions	Scope	Construct new sanitary and storm sewers
Phase	Construction	Phase	Construction
Contract Value	\$ 579,975,000	Contract Value	\$ 7,799,988
% Complete	97%	% Complete	91%
Schedule	Summer 2023, ahead of 3/23/2025 Consent Decree deadline	Schedule	Completed separation ahead of Consent Decree deadline of 3/23/2023
Progress	Finalizing remaining work on remaining near surface structures. Working on final stretch of concrete invert in tunnel	Progress	Site restoration and close out activities underway



NEBT – Concrete Invert



FL Ave – Flap Gate



Str 44 Work at Wisconsin Ave



31<sup>st</sup> Street – Manhole Testing





# Clean Rivers Construction Projects (2 of 2)

Div PRT-A, Pot Tunnel Advance Utility Construction	
Purpose	Bring power to future Potomac Tunnel work sites
Scope	Electrical duct banks, manholes and appurtenances
Phase	Construction
Contract Value	\$13,943,834
% Complete	99%
Schedule	Fall 2023, in advance of Potomac Tunnel (no Consent Decree deadline)
Progress	Substantially complete. Working on site restoration.



Installing Duct Bank at CSO 029



Backfilling Duct Bank at CSO 029

Div RC-B, Rock Creek Green Infrastructure Project B	
Purpose	CSO control for Rock Creek
Scope	Alley permeable pavement and bioretention facilities
Phase	Construction
Contract Value	\$ 15,856,873
% Complete	59%
Schedule	Consent Decree deadline 1/23/2024
Progress	27 alleys completed, 2 under construction 17 bioretention completed, 1 under construction



Alley Permeable Pavement (APP-51-05)



Alley Permeable Pavement (APP-66-08)



# Blue Plains Advanced Wastewater Treatment Plant

## FY2023 Progress

### Planning

- Over **60** Tasks including planning studies at various stages of completion
- Flood Wall Sections AB&D – Preparing solicitation documents
- NTP issued for Electrical Improvements and Microgrid Roadmap Study

### Design

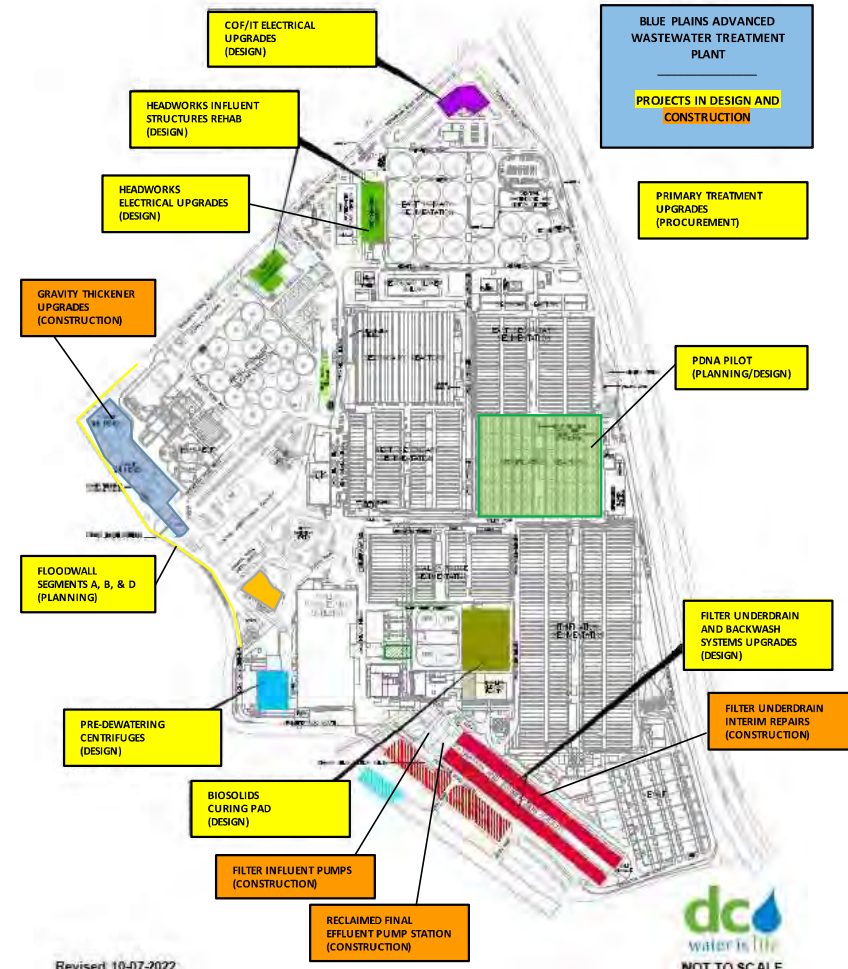
- 9 projects under design with total construction value of \$160M

### Procurement

- Awarded Basic Order Engineering Agreement for Design Services to 3 consulting firms
- New RFP to be issued for Primary Treatment Upgrades
- Solar Phase II

### Construction

- Gravity Thickener Upgrades Phase 2 on track for Substantial Completion
- Commissioning and vibration analysis of all ten (10) Filter Influent Pumps continue
- Reclaimed Final Effluent Pump System on track
- Interim Filter Underdrain Repairs ongoing
- Notice to Proceed issued to four (4) new MFU contracts





# Blue Plains Advanced Wastewater Treatment Plant

## Spotlight Project – Gravity Thickener Upgrades Phase 2

### **Healthy, Safe & Well** - *A Safe DC Water For All, Above All Else*

- Over 22,000 manhours worked between the contracting and construction management team has resulted in **Zero (0)** safety incidents and lost days.

### **Reliable** - *Safeguarding a high performing network of systems and Assets*

- Successfully declared Beneficial Occupancy for the following three (3) systems:
- *PSSDB Ventilation System*
- *Flow Distribution Structure and Flow Control Valves*
- *Gravity Thickener Tanks #1 and #3*

### **Resilient** - *Securing Assets Through Value-Driven Asset Management*

- During Q2, this project has upgraded and turned over 82 new assets to DC Water Operations.
- The integration of these assets will increase our operational efficiency, decrease our failure risks, and aid the value-driven approach into our asset management plan

### **Sustainable** - *Identifying Innovative Funding and Financing*

- The construction project has successfully completed \$1,294,301 in construction work to which \$1,035,440.80 is eligible for reimbursement from the EPA.

### **Equitable** - *Ensuring Inclusive and Diverse Representation*

- During Q2, \$285,156 construction dollars was completed and invoiced from Certified Business partners.
- Project is on target to meet the 32% (DBE) and 6% (WBE) participation goals







# Blue Plains Ongoing Construction Projects

**Gravity Thickener Upgrades  
GT-1 through GT-10**



**Filter Influent Pumps 1-10  
Replacement Project**



**Grit Chamber Baffle Wall Project**



**Interim Filter Rebuild Project**



**Reclaimed Final Effluent Pump  
Station Upgrades**







# CSO, Sanitary, Stormwater Linear

## FY2023 Progress

### Planning

- Conducting emergency design to repair defect found in East West Outfall.
- This inspection and the ongoing repair prevented a major sinkhole.

### Design

- Completed design for Northeast Boundary Trunk Sewer, initiated construction procurement

### Construction

- Completed Oregon Ave Sewer Replacement (see photo top right)
- Conducted water test on new MH 31.5 (see photo to right)
- Conducting air quality monitoring at Soapstone (see photo bottom right). Results this far, as expected, are far below action levels



Potomac Interceptor @ MH31: Water Test



Oregon Ave: Final Restoration



Soapstone: Air Quality Sampling



# Water Linear

## FY2023 Progress

### Planning

- Concept Design of 5 projects are ongoing.
- Six projects have been transitioned to design.

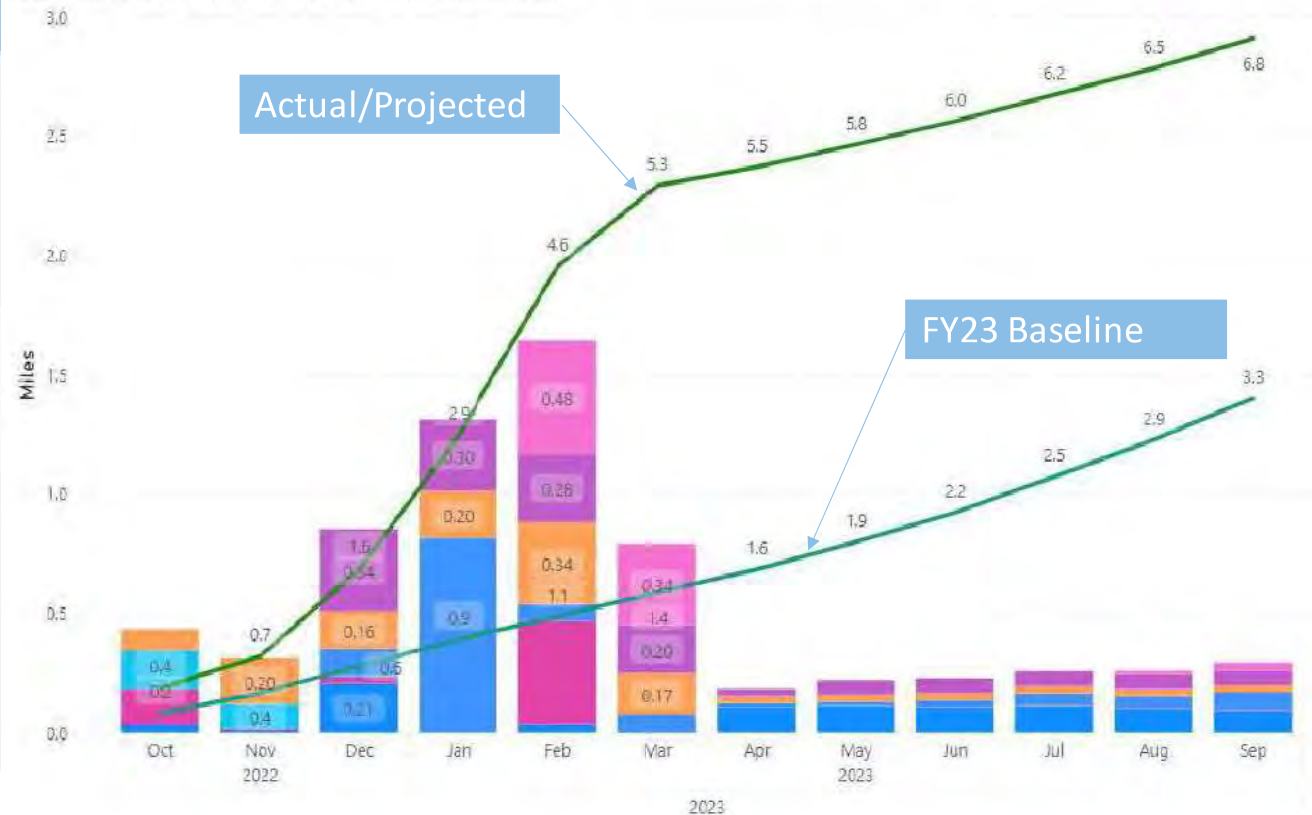
### Design

- Completed bid documents for another Small Diameter Water Main

### Construction

- Exceeded monthly production rates for installation
- Well above baseline plan (see dashboard); Below goal of 1% annual replacement rate

SDWMRP: FY23 Actual/Planned Water Main Renewed







# Lead Free DC Program

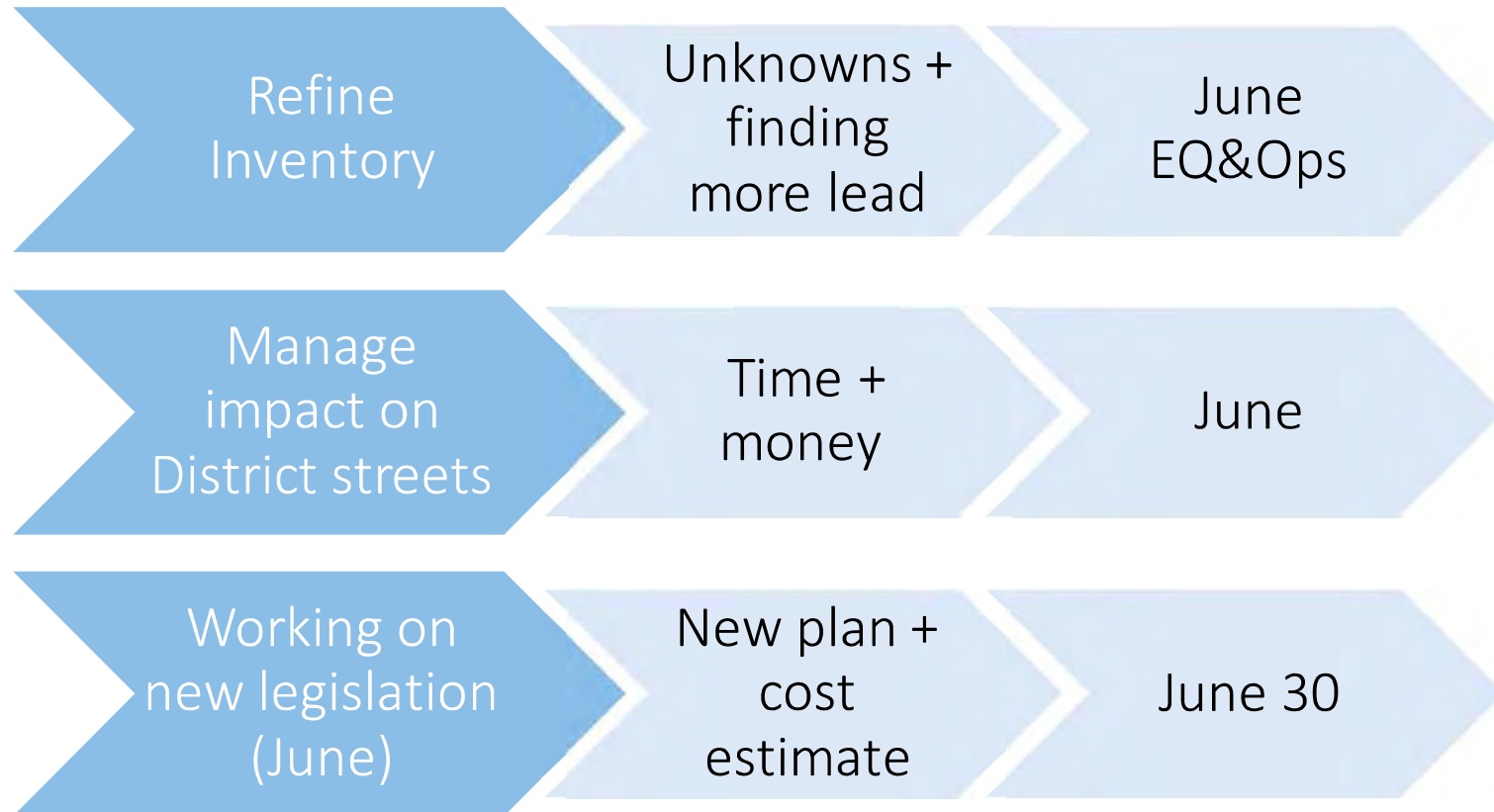
## FY2023 Progress

- Submitted all permits for construction packages 5 & 6. All permits for packages 7-10 will be submitted to DDOT by mid-June.
- Continuing discussions with DDOT about MOU for the LFDC program.
- DC Water and LFG participated in the Waterpalooza for elementary school children.
- Completed initial public canvassing for Construction Package 5 & 6; 45% sign up. Outreach for all packages continuing.
- Presented at 5 Advisory Neighborhood Commission (ANC) meetings with 7 scheduled in May/June.
- Conducted [kickoff](#) with Department of Employment Services (DOES) for Community Activators apprenticeship program (photo to right)
- Starting next set of construction packages.





# Impacts of Lead Free DC on CIP







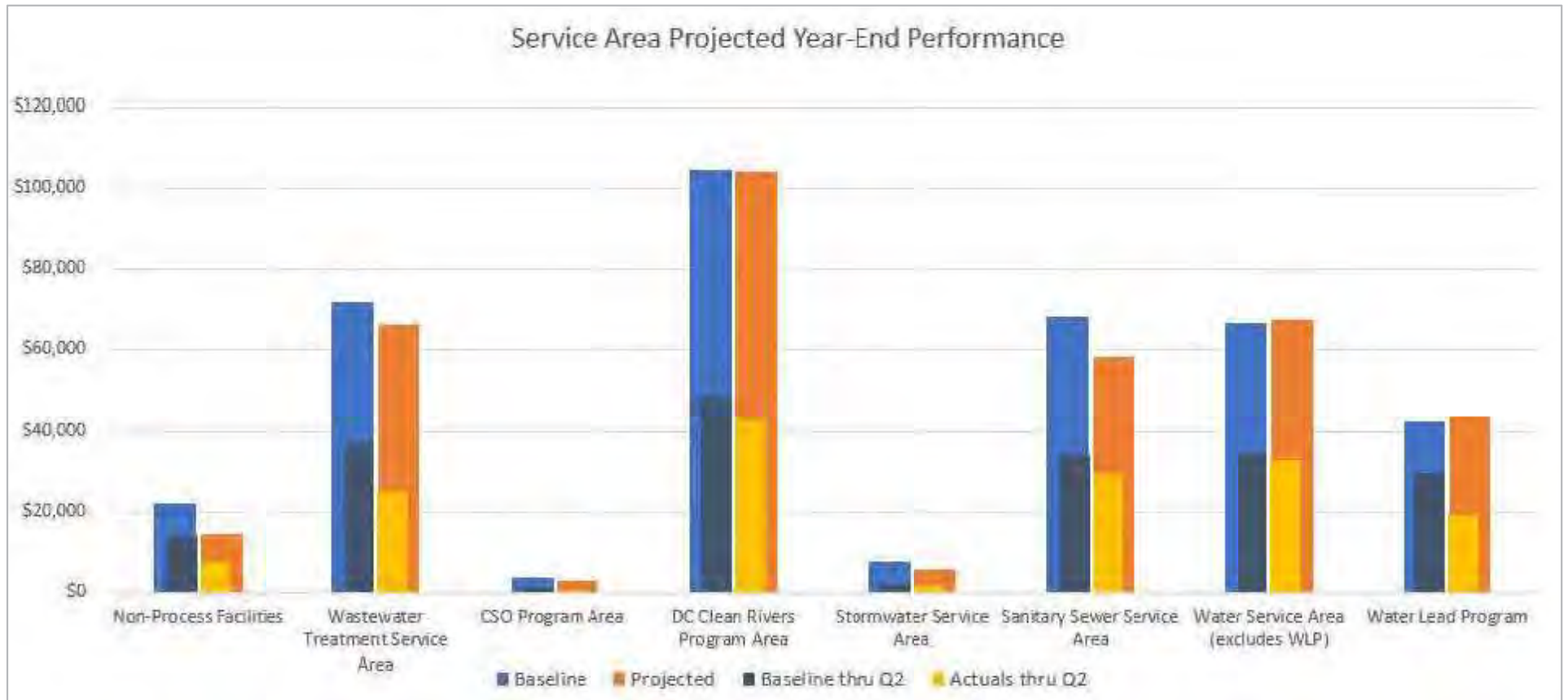
## FY23 CIP Disbursement Performance

- The Baseline projection for FY23 was developed to better align with the anticipated execution of the planned work. Total Baseline budget is \$386.5M
- The current projection for total program disbursements through the end of the fiscal year compared with the FY23 baseline budget are shown in the chart (right).
- The fiscal year 2023 thru Q2 CIP disbursements were **\$159M**. We anticipate achieving approximately 90% of the baseline plan by the end of the year.





# FY23 Performance by Service Area





## FY23 CIP Q2 Performance by Service Area

- **Non-Process Facilities – Current forecast underspending of \$7.7M (baseline \$22M, forecast \$14.5M):**
  - HH Main and O Relocation (Fleet and Sewer Facilities) – Temporary occupancy permit achieved for Fleet Management Facility. Final contract closeout will be later this fiscal year.
- **Wastewater Treatment Service Area – Current forecast underspending of \$6M (baseline \$72M, forecast \$66M):**
  - Delayed MFU work (supply chain issues and design changes) lowered Q2 spending.
  - Gravity Thickener Upgrades and Filtration Influent Pumps both on track for completion in FY23.
- **CSO Program Area – On target**
- **DC Clean Rivers Program Area – On target:**
  - The place-in-operation timeframe remains mid-2023 for North East Boundary Tunnel, ahead of the March 23, 2025, Consent Decree deadline.



## FY23 CIP Highlights by Service Area (Continued)

- **Stormwater Service Area – On target**
- **Sanitary Sewer Service Area – current forecast underspending of \$10M (baseline \$68M, forecast \$58M):**
  - Current underspending on Potomac Interceptor @ MH31 contract is due to a lag in invoicing, anticipate recovery by year end
  - Soapstone permit delays have been extensive; all permits and permissions are now in hand; Cured in Place Pipe installation started April, impacts to productivity due to technical issues
  - Sewer Ongoing program forecast anticipated to be slightly under by year-end
- **Water Service Area – On target**
  - Water Distribution program forecast to be over baseline by year-end, partially due to payment carry over from FY22 and better than anticipated performance.
  - Water Ongoing program forecast anticipated to be slightly under by year-end





# Schedule - Key Performance Indicators

## Summary of FY23 Key Performance Indicators (KPIs):

	Performance
32	Total KPIs due this year
13	KPIs completed within threshold
4	KPIs outside threshold (>90 days)

## Q2 KPIs achieved within the 90-day threshold:

Job	Job Name	KPI type	Due Date (Baseline)	Actual Completion Date
F104	Small Diameter Water Main Repl 13D	Construction Substantial Completion	30-Jan-23	27-Jan-23
EK01	Long Term Rehabilitation - Main Pump Station - Ph. 1	Concept Design Start Milestone	1-Feb-23	22-Feb-23
AL05	Plantwide Projects Program Management	Construction Start Milestone - MFU8	28-Feb-23	5-Apr-23
CZ05	CSO 025/026 Separation	Consent Decree Construction Substantial Completion KPI	23-Mar-23	17-Mar-23
AL05	Plantwide Projects Program Management	Design Start Milestone (BOA-11)	28-Jun-23	13-Apr-23
F202	Small Diameter Water Main Repl 14B	Construction Substantial Completion	3-Apr-23	3-Feb-23
HX01	SDWM Renewal 16A	Construction Start Milestone	23-Jul-23	29-Mar-23



## Schedule – KPIs continued

### Q2 KPIs not achieved within the 90-day threshold

Job	Job Name	Delta	Comment	Due Date (Baseline)	Est. Completion Date
UC06	Upgrades to Filtration Influent Pumps 1-10	-130	Construction Substantial Completion pending investigation and resolution of pump vibration issue.	22-Nov-22	1-Apr-23
HH01	New Fleet Management Facility	-182	New Fleet Facility: Construction Substantial Completion is pending Final Occupancy Permit.	1-Oct-22	1-Apr-23
I801	Large Valve Replacements 11R	-150	Construction Substantial Completion pending completion of final contract items and final site restoration.	31-Mar-23	28-Aug-23
RJ01	Creekbed Sewer Rehabilitation Rock Creek Sherill Drive & Beach Drive	-121	Design Start experienced protracted task order negotiations in order to get task costs from subconsultants	28-Jan-23	29-May-23

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

**ACTION REQUESTED**

**ENGINEERING SERVICES:**

**Construction Management Services for  
Potomac River Tunnel Contract B – Tunnel System Construction  
(Joint Use)**

Approval to execute an architectural and engineering services contract for \$46,900,000.00.

**CONTRACTOR/SUB/VENDOR INFORMATION**

<b>PRIME:</b>	<b>SUBS:</b>	<b>PARTICIPATION:</b>
EPC Consultants, Inc. 101A Clay Street, #110 San Francisco, CA 94111	Gall Zeidler Consultants, LLC Ashburn, VA DBE	8.9%
	Belstar, Inc. Fairfax, VA DBE	7.6%
	DMY Engineering Consultants, Inc. Chantilly, VA DBE	6.5%
<u>Headquarters</u> San Francisco, CA 94111	Kumi Construction Management Corp. Washington, DC DBE	2.3%
	Keville Enterprises, Inc. Herndon, VA WBE	5.0%
	SZ PM Consultants, Inc. Washington, DC WBE	2.3%

DBE Participation = 25.3% WBE Participation = 7.3%

**DESCRIPTION AND PURPOSE**

Contract Value, Not-To-Exceed: \$46,900,000.00  
 Contract Time: 2,674 Days (7 Years, 4 Months)  
 Anticipated Contract Start Date: 09-05-2023  
 Anticipated Contract Completion Date: 12-31-2030

Other firms submitting proposals/qualification statements:

None

**Purpose of the Contract:**

To provide on-site construction management, contract administration and inspection services during construction of the Division PRT-B - Potomac River Tunnel Contract B Tunnel System including the tunnel and nine (9) major project sites along the project alignment.

This work is required by a Consent Decree.

**Contract Scope:**

Provide construction management (CM), contract administration and inspection services to assist DC Water's Clean Rivers Project during construction of the Division PRT-B - Potomac River Tunnel Contract B Tunnel System.

CM services will be provided for tunnel construction and associated facilities at Joint Base Anacostia Bolling, West Potomac Park, CSO 020, CSO 021, CSO 022, CSO 024, CSO 027, CSO 028 and CSO 029 construction site locations for construction of contract work that includes, but is not limited to, the following:

- Installation of Six (6) large underground diversion chambers, typically 30 to 40 ft deep,
- Install Four (4) 40 to 60 ft diameter shafts, ranging from 80 to 150 ft in depth,
- Construction of three (3) sets of drop and vent shafts, 80 ft deep ranging from 4 ft to 8 ft in diameter, and Four (4) adits, ranging from 7.5 ft to 18.5 ft finished diameter and 57 ft to 140 ft length,
- Underground connections of tunnels to shafts, adits to shafts, and adits to tunnel,

- Construct two (2) emergency overflow structures to the Potomac River, and One (1) 6 ft diameter, 50 ft long diversion sewer constructed by trenchless techniques,
- Commissioning of the tunnel system which involves isolation of select diversion chambers, removal of bulkheads and connection to the existing tunnel system,
- Coordination with the public and third-party entities to ensure maintenance of vehicular, pedestrian, bicycle and transit traffic.
- Site restoration and landscaping.

**PROCUREMENT INFORMATION**

<b>Contract Type:</b>	Cost Plus Fixed Fee	<b>Award Based On:</b>	Highest Ranking Score
<b>Commodity:</b>	Professional Services	<b>Contract Number:</b>	DCFA #533-WSA
<b>Contractor Market:</b>	Open Market		

**BUDGET INFORMATION**

<b>Funding:</b>	Capital	<b>Department:</b>	DC Clean Rivers Project
<b>Service Area:</b>	Combined Sewer Overflow	<b>Department Head:</b>	Moussa Wone
<b>Project:</b>	CZ		

**ESTIMATED USER SHARE INFORMATION**

Long Term Control Plan (LTCP) Allocation (7.1%) <sup>2</sup>

User	Share %	Dollar Amount
District of Columbia	92.90%	\$37,602,846.49
Federal Funds	0.00% <sup>1</sup>	\$0.00
Washington Suburban Sanitary Commission	5.54%	\$2,242,408.71
Fairfax County	1.01%	\$408,814.59
Loudoun County & Potomac Interceptor	0.55%	\$222,621.80
<b>Total Estimated Dollar Amount</b>	<b>100.00%</b>	<b>\$40,476,691.59</b>

Capital 100% DC User Share (CAPM) Allocation <sup>2</sup>

User	Share %	Dollar Amount
District of Columbia	100.00%	\$6,423,308.41
Federal Funds	0.00% <sup>1</sup>	\$0.00
Washington Suburban Sanitary Commission	0.00%	\$0.00
Fairfax County	0.00%	\$0.00
Loudoun County & Potomac Interceptor	0.00%	\$0.00
<b>Total Estimated Dollar Amount</b>	<b>100.00%</b>	<b>\$6,423,308.41</b>

Total Combined Allocation

User	Share %	Dollar Amount
District of Columbia	93.87%	\$44,026,154.90
Federal Funds	0.00% <sup>1</sup>	\$0.00
Washington Suburban Sanitary Commission	4.78%	\$2,242,408.71
Fairfax County	0.87%	\$408,814.59
Loudoun County & Potomac Interceptor	0.47%	\$222,621.80
<b>Total Estimated Dollar Amount</b>	<b>100.00%</b>	<b>\$46,900,000.00</b>

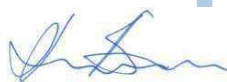
<sup>1</sup> Eligible for Federal Appropriations Funding. Appropriation funding is insufficient to fund all eligible contracts. Federal Appropriations Funding may be used if additional funding becomes available or if other eligible projects are postponed.

<sup>2</sup> Draft cost allocation shown. Final cost allocation to be agreed by Intermunicipal Agreement parties.

**Moussa Wone**

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Date: 2023.05.05 14:51:34  
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Moussa Wone / Date  
VP of DC Clean Rivers Project



Digitally signed by Dan Bae  
DN: C=US, E=dan.bae@dcwater.com,  
O=District of Columbia Water and Sewer  
Authority, OU=VP of Procurement &  
Compliance, CN=Dan Bae  
Date: 2023.05.05 16:18:17-04'00'

Dan Bae / Date  
VP of Procurement

**Matthew T. Brown**

Digitally signed by Matthew T.  
Brown  
Date: 2023.05.09 11:05:23 -04'00'

Matthew T. Brown / Date  
CFO and EVP  
Finance and Procurement

David L. Gadis / Date  
CEO and General Manager



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

**ACTION REQUESTED**

**GOODS AND SERVICES CONTRACT OPTION YEAR**

**CENTRIFUGE PRE-DEWATERING POLYMER  
(Joint Use)**

This contract action is to execute option year 4 in the amount of \$2,100,000.00.

**CONTRACTOR/SUB/VENDOR INFORMATION**

<b>PRIME:</b>	<b>SUBS:</b>	<b>PARTICIPATION:</b>
Polydyne, Inc. One Chemical Plant Road Riceboro, GA 31323	N/A	N/A

**DESCRIPTION AND PURPOSE**

Base Year Contract Value:	\$1,384,900.00
Base Year Contract Dates:	05-01-2019 – 04-30-2020
Option Year 1 Value:	1,600,000.00
Option Year 1 Date:	05-01-2020 – 04-30-2021
Option Year 2 Value:	1,800,000.00
Option Year 2 Date:	05-01-2021 – 04-30-2022
Option Year 3 Value:	2,610,000.00
Option Year 3 Date:	07-01-2022 – 06-30-2023
Prior Modifications Value:	\$1,365,000.00
Prior Modifications Date:	01-18-2020 – 06-30-2022
<b>Option Year 4 Value:</b>	<b>2,100,000.00</b>
<b>Option Year 4 Date:</b>	<b>07-01-2023 – 06-30-2024</b>

**Purpose of the Contract:**

This contract is to supply and deliver centrifuge pre-dewatering polymer to DC Water's Blue Plains Advanced Wastewater Treatment Facility. This polymer conditions biosolids to help remove water in the centrifuge process.

**Contract Scope:**

The centrifuge polymer helps remove water from the biosolids before digestion. Dewatering help reduce water content and increase the solids content in the feed to Thermal Hydrolysis (THP). This conditioning improves the performance of the THP and digestion processes, leading to exceptional-quality Bloom that can be applied for beneficial use.

Polydyne is the only municipal wastewater polymer manufacturer in U.S. capable of meeting DC Water's needs. Procurement is conducting annual market research to evaluate wastewater polymer manufacturers and issue a new solicitation when appropriate.

**Spending Previous Year:**

Cumulative Contract Value:	05-01-2019 to 06-30-2023: \$8,759,900.00
Cumulative Contract Spending:	05-01-2019 to 03-01-2023: \$6,289,018.00

**Contractor's Past Performance:**

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

No LBE/LSBE participation

**PROCUREMENT INFORMATION**

<b>Contract Type:</b>	Good and Services	<b>Award Based On:</b>	Best Value
<b>Commodity:</b>	Pre-Dewatering Polymer	<b>Contract Number:</b>	19-PR-DWT-15
<b>Contractor Market:</b>	Open Market with Preference Points for LBE and LSBE Participation		


**BUDGET INFORMATION**

<b>Funding:</b>	Operating	<b>Department:</b>	Wastewater Treatment
<b>Project Area:</b>	Blue Plains	<b>Department Head:</b>	Aklile Tesfaye

**ESTIMATED USER SHARE INFORMATION**

User - Operating	Share %	Dollar Amount
District of Columbia	42.74%	\$897,540.00
Washington Suburban Sanitary Commission	42.85%	\$899,850.00
Fairfax County	9.16%	\$192,360.00
Loudoun Water	4.53%	\$95,130.00
Other (PI)	0.72%	\$15,120.00
<b>TOTAL ESTIMATED DOLLAR AMOUNT</b>	<b>100.00%</b>	<b>\$2,100,000.00</b>

Aklile Tesfaye                      4/26/23  
 Aklile Tesfaye                      Date  
 VP of Wastewater Operations

 Digitally signed by Dan Bae  
 DN: C=US,  
 E=dan.bae@dewater.com, O=District  
 of Columbia Water and Sewer  
 Authority, OU=VP of Procurement &  
 Compliance, CN=Dan Bae  
 Date: 2023.04.26 17:23:14-04'00'  
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 Dan Bae                                      Date  
 VP of Procurement

**Matthew T. Brown**                      Digitally signed by  
 Matthew T. Brown  
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 Matthew T. Brown                      Date  
 CFO and EVP of Finance and Procurement

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 David L. Gadis                              Date  
 CEO and General Manager

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

**ACTION REQUESTED**

**CONSTRUCTION CONTRACT CHANGE ORDER:  
Constitution Avenue Area Water Main Replacement  
(Non-Joint Use)**

Approval to execute a Change Order No. 01 for \$860,000.00. The modification exceeds the Chief Executive Officer and General Manager's approval authority.

**CONTRACTOR/SUB/VENDOR INFORMATION**

<b>PRIME:</b>	<b>SUBS:</b>	<b>PARTICIPATION:</b>
Sagres Construction Corp. 3680 Wheeler Ave. Suite 300 Alexandria, VA 22304	Phoenix Constructions Capital Heights, MD (DBE)	29.7%
	M & C Hauling Alexandria, VA (DBE)	1.7%
	Dulles Geotechnical Chantilly, VA (DBE)	0.6%
	Acorn Supply White Marsh, MD (WBE)	7.6%

**DESCRIPTION AND PURPOSE**

Original Contract Value:	\$10,887,767.00
Value of this Change Order:	\$860,000.00
Cumulative CO Value, including this CO:	\$860,000.00
Current Contract Value, including this CO:	\$11,747,767.00
Original Contract Time:	540 Days (1 Years, 6 Months)
Time extension, this CO:	60 Days
Total CO contract time extension:	60 Days (0 Years, 2 Months)
Contract Start Date (NTP):	12-20-2021
Anticipated Contract Completion Date:	08-12-2023
Cumulative CO % of Original Contract:	7.9%
Contract completion %:	64.3%

**Purpose of the Contract:**

Replacement of small diameter water mains that have experienced failures, or have a history of low water pressure, or water quality issues across various locations within the District of Columbia.

**Original Contract Scope:**

- Replace 2.1 miles of small diameter water mains ranging from four (4) inches to twelve (12) inches in diameter and associated valves and appurtenances,
- Replace 0.5 miles of 20-inch diameter water main and associated valves and appurtenances. between 4th Street, NE and Constitution Avenue, NE.,
- Replacement of SDWM North from the US Supreme Court,
- Replacement of hydrants and valves within the project limits,
- Provide permanent pavement and surface restoration.

**Previous Change Order Scope:**

N/A

**Current Change Order Scope:**

DC Water is to restore the Fredrick Douglas Court Alley with historic brick in lieu of in-kind material, this change in DDOT design requirements for alleys that reside within Historic Districts was unknown to DC Water at the time of design.

- The existing concrete alley will be demolished and replaced with historic brick pavers.
- Extend the restoration limits from 880 square yards to the full surface area of the Frederick Douglass Court Alley, approximately 1,452 square yards.

**Federal Grant Status:**

This construction contract change is not eligible for Federal grant funding.

**PROCUREMENT INFORMATION**


<b>Contract Type:</b>	Unit Price	<b>Award Based On:</b>	Lowest responsive, responsible bidder
<b>Commodity:</b>	Construction	<b>Contract Number:</b>	150140
<b>Contractor Market:</b>	Open Market		

**BUDGET INFORMATION**


<b>Funding:</b>	Capital	<b>Department:</b>	Engineering and Technical Services
<b>Service Area:</b>	Water	<b>Department Head:</b>	William Elledge
<b>Project:</b>	C9		

**ESTIMATED USER SHARE INFORMATION**

User	Share %	Dollar Amount
District of Columbia	100.00%	\$ 860,000.00
Federal Funds	0.00%	\$
Washington Suburban Sanitary Commission	0.00%	\$
Fairfax County	0.00%	\$
Loudoun County & Potomac Interceptor	0.00%	\$
<b>Total Estimated Dollar Amount</b>	<b>100.00%</b>	<b>\$ 860,000.00</b>

 Digitally signed by David Parker  
 DN: E=David.Parker@dcwater.com,  
 CN=David Parker, OU=Engineering,  
 OU=WASA Users, DC=dcwasa, DC=com  
 Date: 2023.05.05 17:12:39-04'00'

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 David Parker Date  
 VP of Engineering

 Digitally signed by Dan Bae  
 DN: C=US, E=dan.bae@dcwater.com,  
 O=District of Columbia Water and  
 Sewer Authority, OU=VP of  
 Procurement & Compliance, CN=Dan  
 Bae  
 Date: 2023.05.05 17:23:02-04'00'

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 Dan Bae Date  
 VP of Procurement

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 Matthew T. Brown Date  
 CFO and EVP  
 Finance and Procurement

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 David L. Gadis Date  
 CEO and General Manager