



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

Meeting of the
Environmental Quality and Operations Committee

**Thursday, July 18, 2024
9:30 a.m.**

Microsoft Teams meeting
Join on your computer, mobile app
[Click here to join the meeting](#)

Meeting ID: 294 613 320 197

Passcode: bnrsud

Or call in (audio only)

[+1 202-753-6714,,699206352#](#)

Phone Conference ID: 699 206 352#

9:30 a.m.	I	Call to Order	Sarah Motsch, Chair
	II	Roll Call	Michelle Rhodd Board Secretary
9:35 a.m.	III	BPAWTP Update	Nicholas Passarelli
9:40 a.m.	IV	Clean Rivers Project Quarterly Status Update	Moussa Wone
9:50 a.m.	V	Lead Free DC Update	William Elledge
10:05 a.m.	VI	Filter Influent Pumps Vibration Issue Resolution	Ryu Suzuki
10:20 a.m.	VII	CIP Planning Process Briefing	David Parker Paul Guttridge
10:35 a.m.	VIII	Action Items	David Parker John Pappajohn
		<u>Joint Use</u>	
		1. Contract No. 10465 - Sodium Bisulfite – PVS Chemical Solutions, Inc.	
		2. Contract No. 10466 – Sodium Bisulfite – Southern Ionics, Inc.	
		3. Contract No. 10467 – Sodium Hypochlorite – Kuehne Chemical Co. Inc.	
		4. Contract No. 200110 – Public Space Restoration Contract FY22-FY25 – Capitol Paving of D.C.	
		<u>Non-Joint Use</u>	
		1. Contract No. 220010 – Inspection and Cleaning for Local Sewers – RedZone Robotics, Inc.	
10:50 a.m.	IX	Other Business/Emerging Issues	
10:55 a.m.	X	Executive Session*	Sarah Motsch
11:00 a.m.	XI	Adjournment	Sarah Motsch

Follow-up Items from Prior Meetings:

1. Getachew Melsew (Sr. Manager, Planning, Engineering): To provide copy of white paper on the equity analysis benefits and either a presentation to the full Board or the opportunity for Board Members to observe a training session on the equity analysis tool and dashboard. **Responses will be provided in January.**
2. William Elledge (Director, Engineering and Technical Services): Provide a cost estimate for the new parallel Potomac Interceptor River Crossing pipe that has the added benefit of creating redundancy. The committee would like to be informed prior to the geotechnical equipment helicopter fly in. **Responses will be provided in July.**

¹The 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 Complete Treatment Performance
Environmental Quality & Operations Committee
July 18, 2024

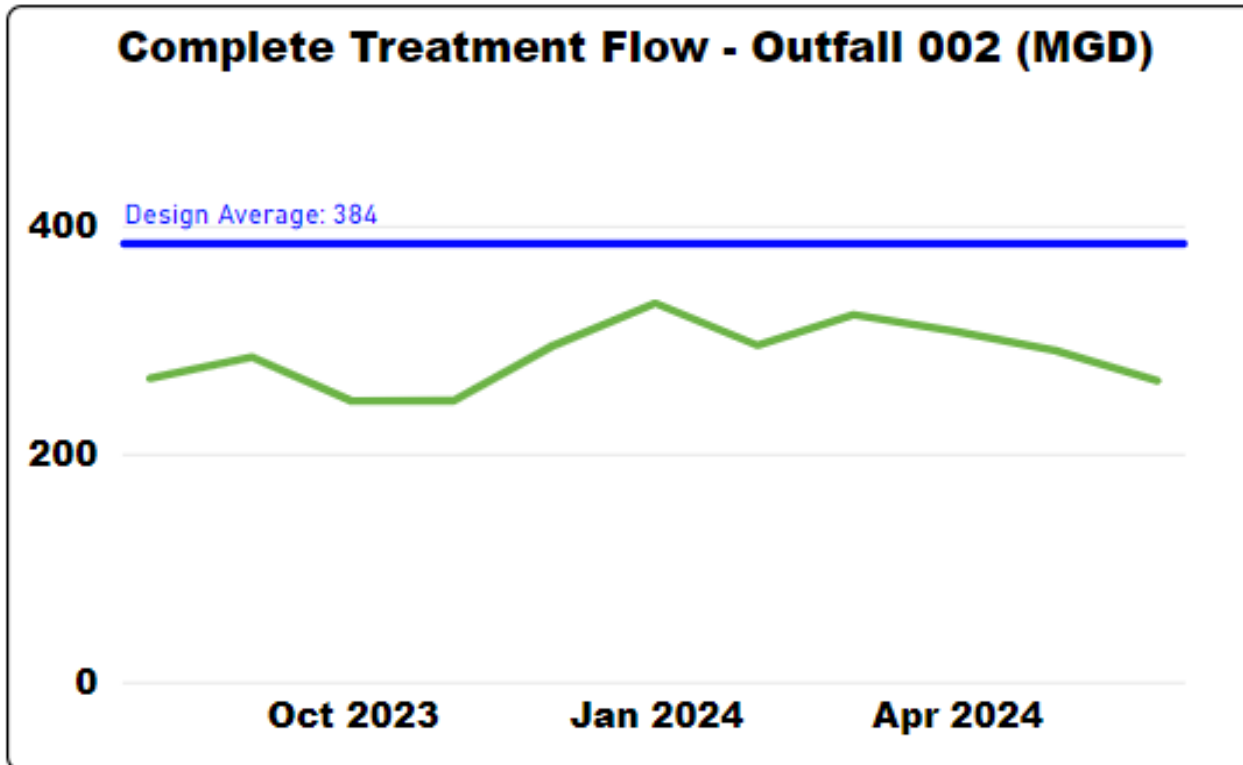


Nicholas Passarelli
Vice President, Wastewater Treatment Operations



Operational Performance Complete Treatment

Monthly Average Flow Trend to Complete Treatment (MGD)



All weekly and monthly NPDES permit requirements were met

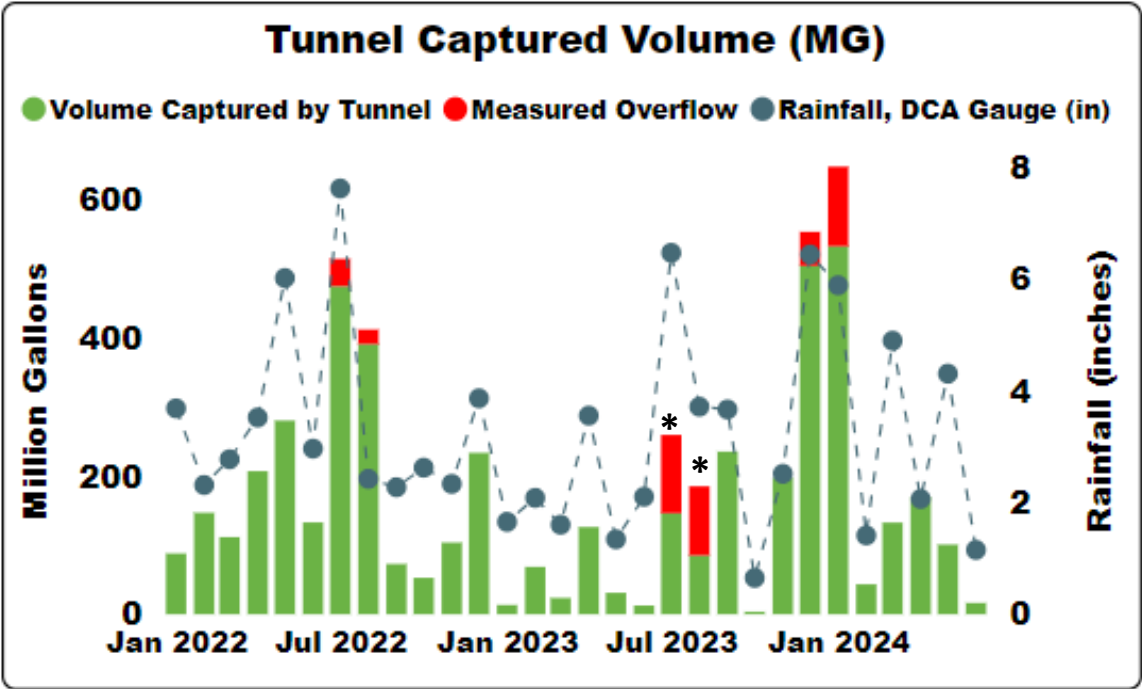
Average Outfall 002 flow for June: 264 MGD

Peak Day flow for June: 5th, at 302 MGD



Operational Performance Tunnel Systems and Wet Weather Treatment

Anacostia River Tunnel System Performance 2022 – 2024 (Through June 2024)



Total System Performance from Start-Up (2018-2023)

	Anacostia River Tunnel System
Number of events	290
Volume Captured, MG	16,229
Volume to CSO, MG	1,538
Percent Captured, %	91.0

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

1443 MG of volume captured by Anacostia River Tunnel System in Calendar Year 2023 through December, with 262 MG overflow

* - CSO 019 diversion to tunnel was out of service July 5 - Aug 29, 2023, for commissioning of Northeast Boundary Tunnel, causing temporary increase in overflows. Necessary for safety of workers in tunnel. EPA/DOEE advised in advance.

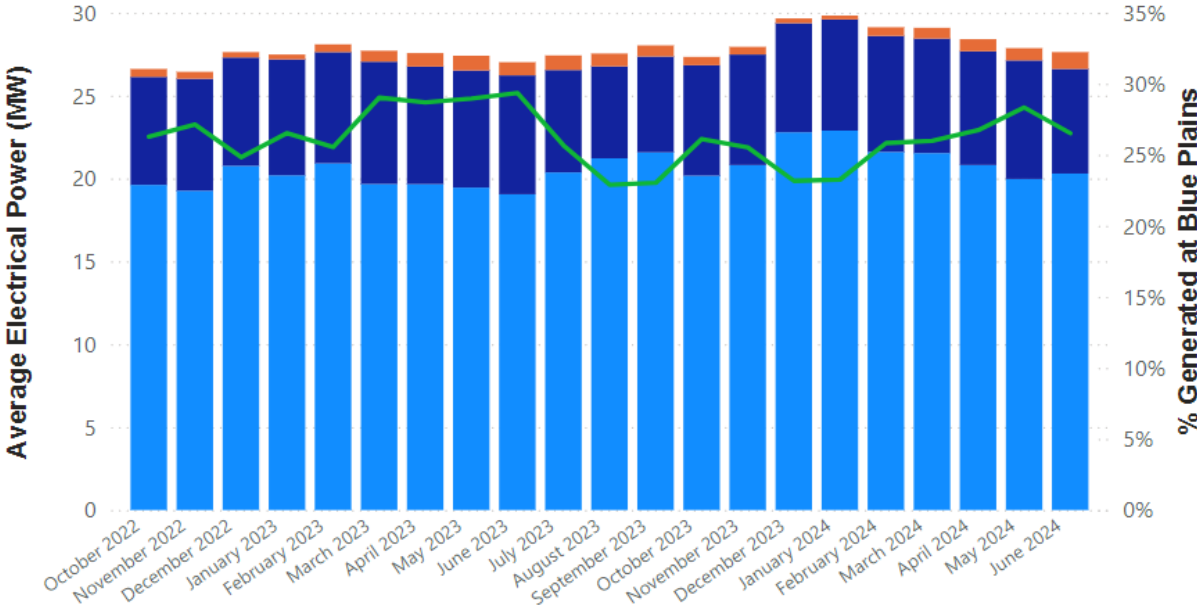


Operational Performance Electrical Energy Use and Generation

Blue Plains Electrical Energy Use and Generation

Blue Plains Electrical Report

● Purchased from Power Grid ● CHP Onsite Generation ● Solar Onsite Generation ● % Generated at Blue Plains



27% of electricity was generated onsite

Combined Heat and Power (CHP) facility produced an average of 7.7 megawatts (MW), with 6.3 MW net to Blue Plains grid

Solar System produced an additional 1.01 MW of power on average

Total electricity consumption at Blue Plains averaged 27.6 MW

DC Water purchased an average of 20.3 MW of electricity from PEPCO

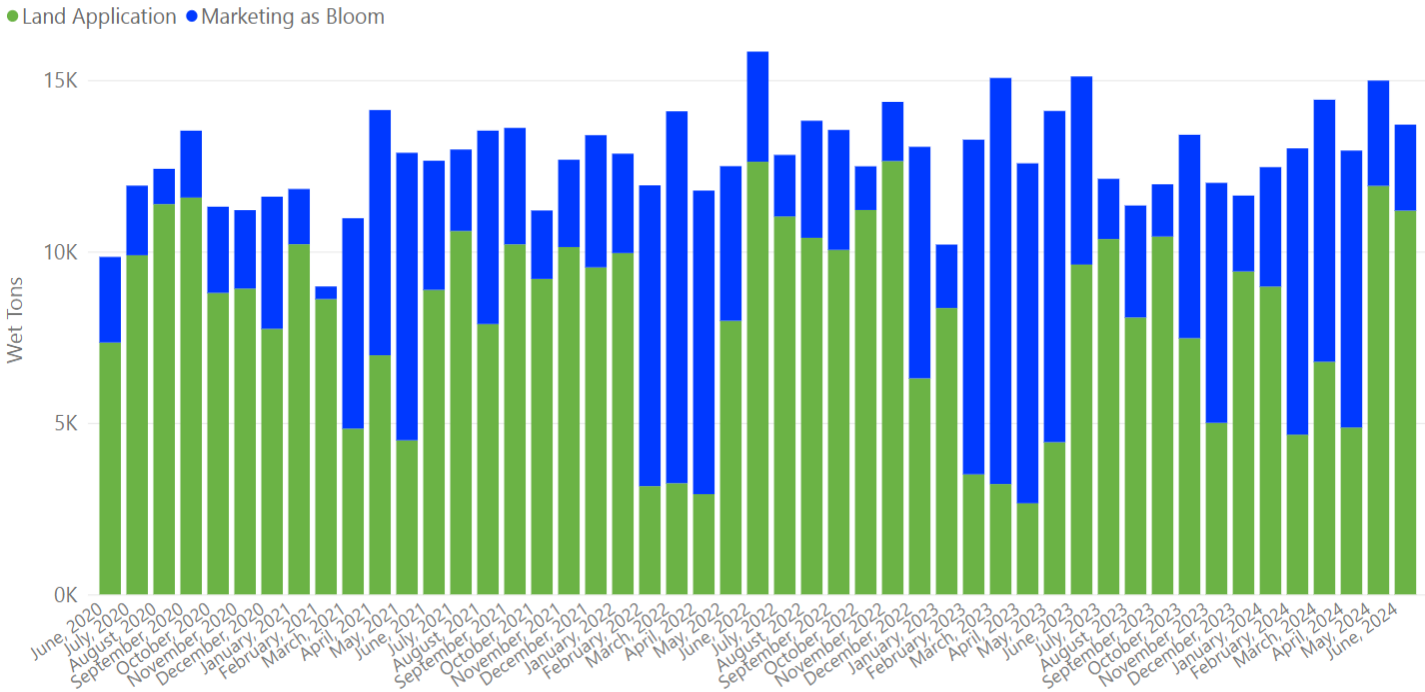
Total Purchased Power Savings FY24 through April: **\$1,511,900**

Note: Total Purchase Power Savings based on actual grid power invoicing to DC Water and power produced on site at CHP & Solar Panels.



Operational Performance Class A Biosolids Production

Total Production of Class A Biosolids and Beneficial Reuse by Type



In June, Blue Drop sold approximately 2,508 tons of Bloom; for a total of 48,935 tons towards the FY24 goal of 65,000 tons.

Blue Plains Produced 13,703 tons of biosolids for the month with the remaining 11,195 tons managed through land application contracts.



Clean Rivers Project Status Update



Clean Rivers Project Status Update

Environmental Quality & Operations Committee

July 18, 2024



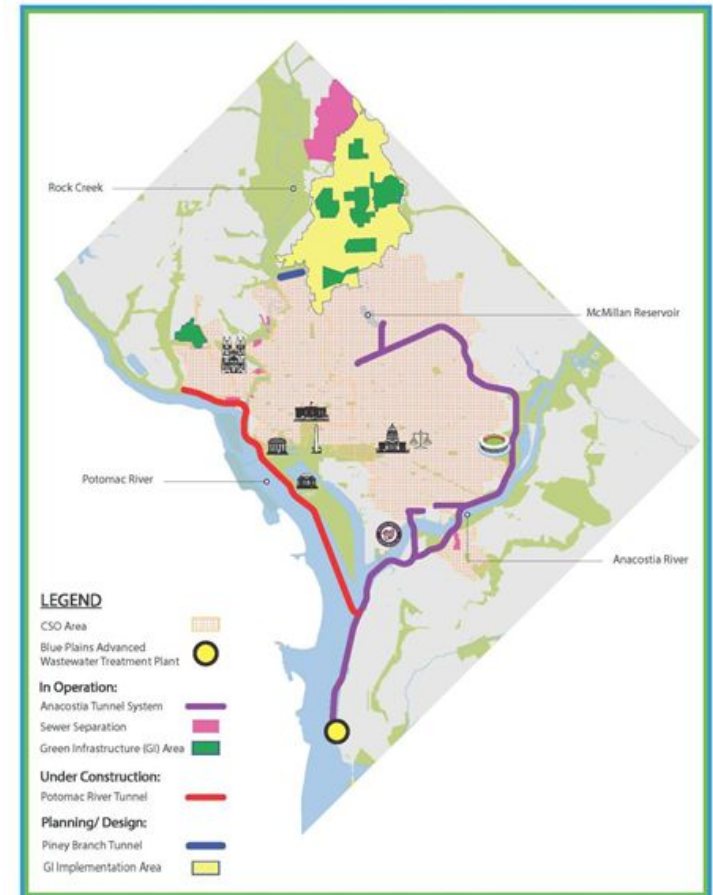
Moussa Wone
Vice President, DC Clean Rivers Project



DC Clean Rivers Project Snapshot



Area	Status
Anacostia	
Anacostia Tunnel System	<ul style="list-style-type: none"> Completed the construction of all CSO Controls NEBT Contractor completed 95% of restoration and pavement work System captured more than 17.2 billion gallons of CSOs and 10,813 tons of trash as of June 2024
Potomac	
Potomac River Tunnel Construction	<ul style="list-style-type: none"> Design-builder has mobilized to West Potomac Park (WPP) site and is constructing relocated Ohio Drive
Rock Creek	
Green Infrastructure Project C	<ul style="list-style-type: none"> Request for Qualifications/Proposal (RFQ/P) issued May 6 Qualifications/Proposals received June 18 Evaluation underway
Piney Branch Tunnel	<ul style="list-style-type: none"> Environmental Assessment (EA) and 90% design underway Industry outreach held on May 25 RFQ/P issued on May 9 Qualifications received June 13 Evaluation underway

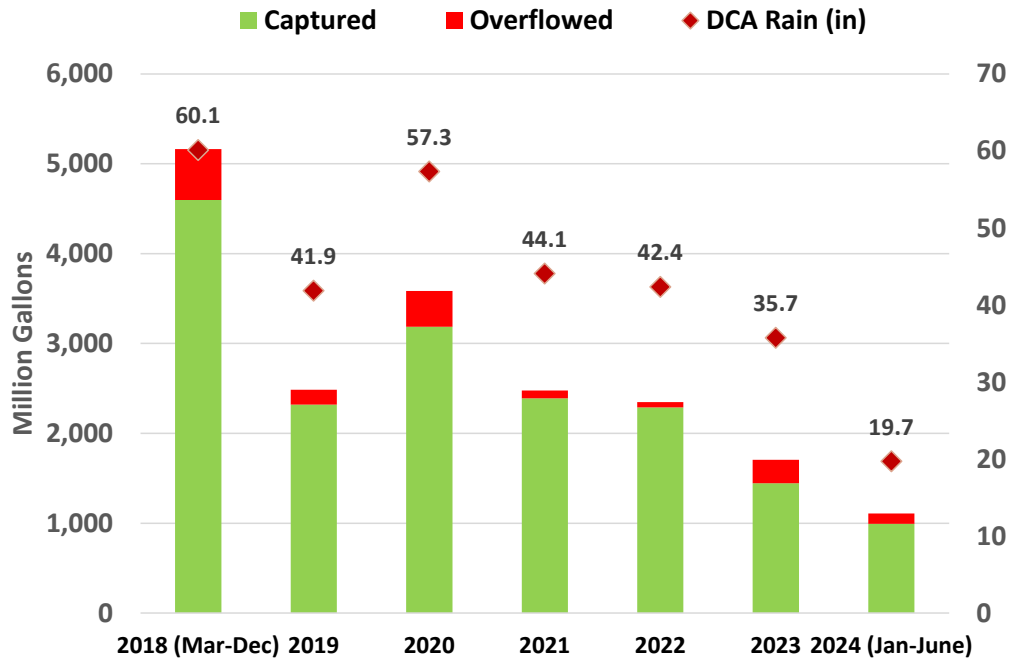




Anacostia Tunnel System Performance



Anacostia Tunnel System Performance



- Over **17.2 billion gallons of CSOs** captured Mar 2018 – June 2024
- Over **10,813 tons of trash**, debris, and other solids captured
- Exceeding predicted capture rate (91% > 80%)

National Airport Rainfall (inches)



Trash, Debris and Solids Removal from Screening Shaft at Tunnel Dewatering Pumping Station



Division J – Northeast Boundary Tunnel



- 95% of restoration work complete
- Remaining Work
 - Full depth pavement at R Street and Rhode Island Avenue
 - Communication cable pulling at Lincoln Road
 - Testing equipment at the W Street Ventilation Control Facility



New Left Turn lane at Lincoln Road



R Street - Site Restoration - Artwork



1st Street and Rhode Island Avenue



Pump Station - Site Restoration

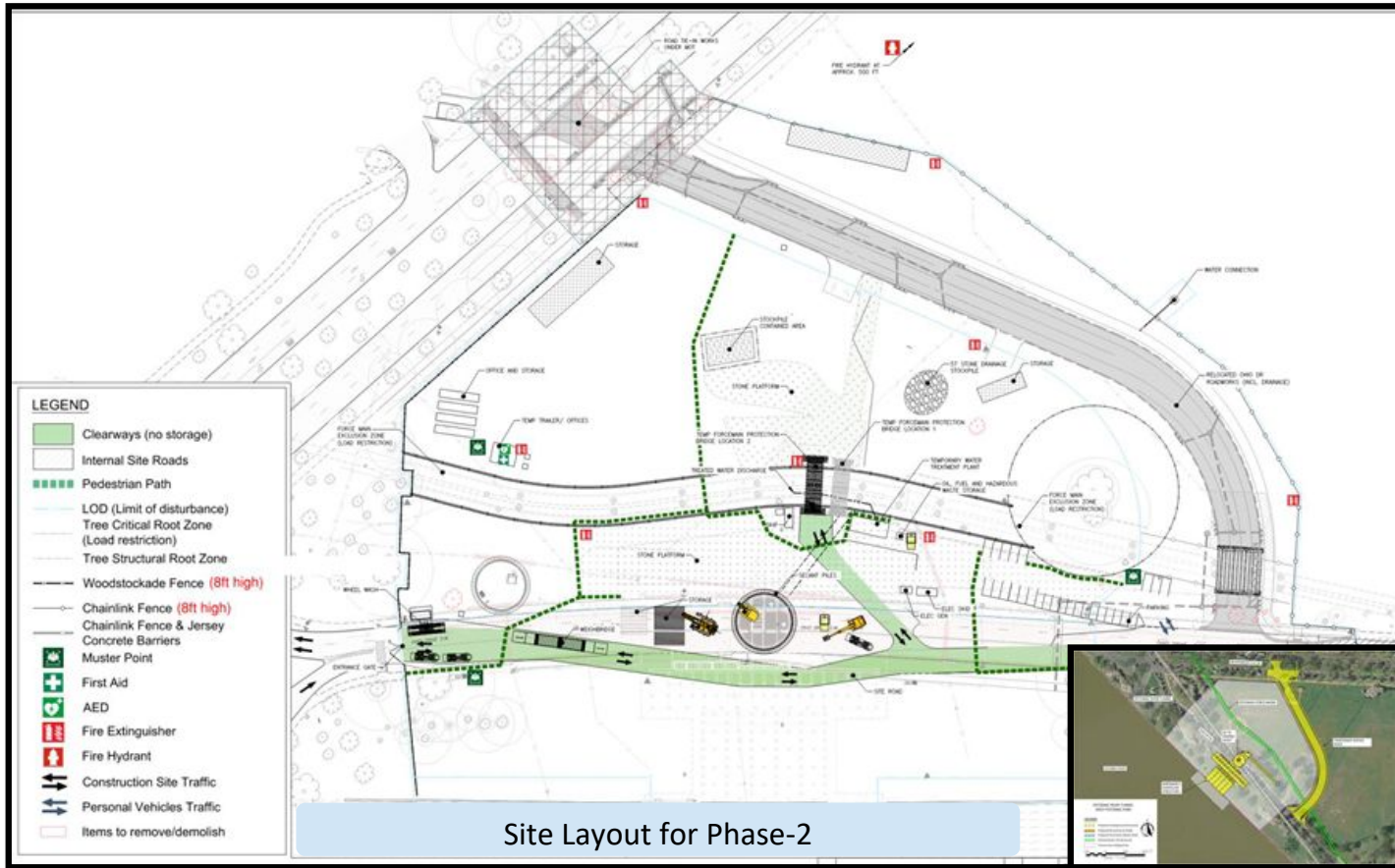


W Street - Ventilation Control Facility



Potomac River Tunnel West Potomac Park Construction Site Mining Site

Anticipated Construction:
Feb 2024 through 2030



Design and Construction Progress:

- Developing design packages
- Began installing storm drain structures for the bypass road.
- Closed the existing Ohio Dr. on June 17, 2024.
- Continued work on site setup.

Upcoming Work:

- Install piles for the temporary bridges over the forcemain.
- Begin roadwork on Independence Ave.
- Install guide wall and secant piles for WPP mining shaft.



Division PRT-B – Construction Photos



Groundbreaking Ceremony at WPP



Drill Rig for Temporary Bridge Piles



Storm Drain Structures for Bypass Road



Storm Drain Structures for Bypass Road



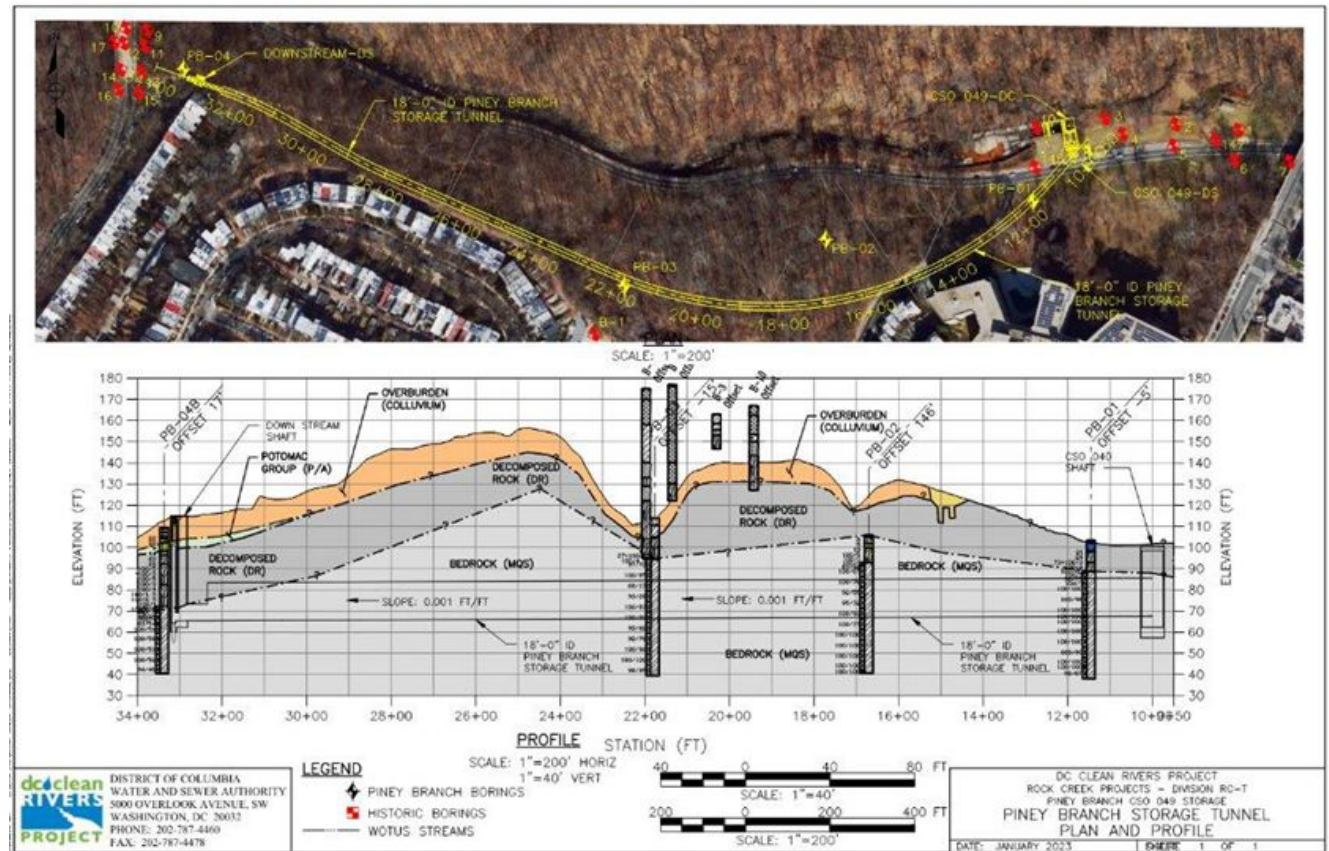
CSO-22 Pre-Mobilization Potholing



Piney Branch Tunnel



- Piney Branch is the largest CSO to Rock Creek
- Drainage area is more than 2,300 acres
- Tunnel intercepts CSO at outfall and provides storage
- Discharge captured CSO back into sewer system by gravity (no pumping station) after storm
- Environmental Assessment underway with National Park Service





Piney Branch Tunnel



- Geotechnical investigations underway to collect data for construction
- Dye testing conducted in June 2024
- Environmental Assessment and design being advanced
- Procurement underway to select Construction Manager at Risk (CMAR) to construct tunnel
 - RFQ/P issued May 9
 - Qualifications received June 13
 - Evaluation underway



Geotechnical Investigation



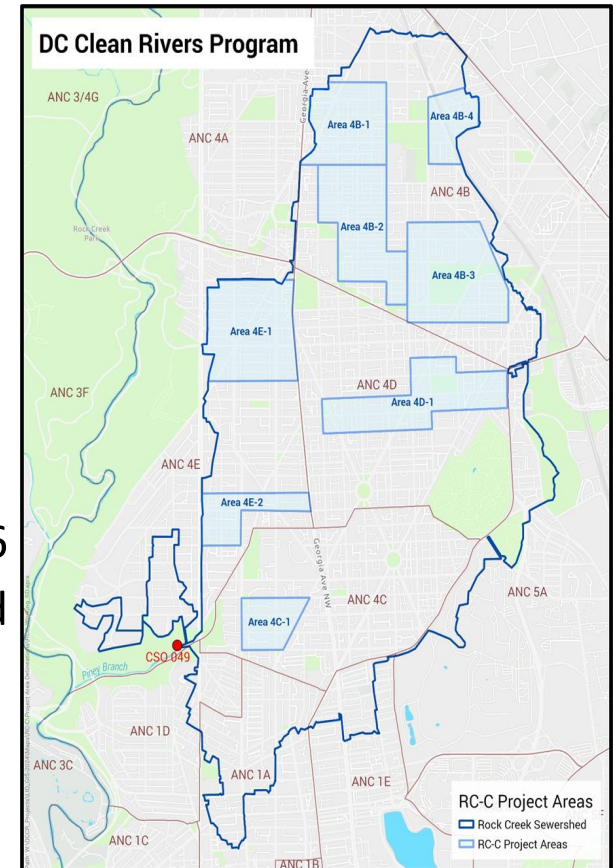
Dye Testing



Rock Creek Green Infrastructure Project C



- Manage stormwater from 25 impervious acres to the 1.2" Retention Standard
- 90% Design development underway
- Final Project Description issued to Environmental Protection Agency (EPA) on June 10, 2024
- Procurement underway to select Construction Manager at Risk (CMAR)
 - Request for Qualification/Proposal (RFQ/P) issued May 6
 - Statement of Qualifications/Proposals (SOQs/P) received June 18
 - SOQs Evaluation underway



dc DC Clean Rivers Public Outreach Efforts



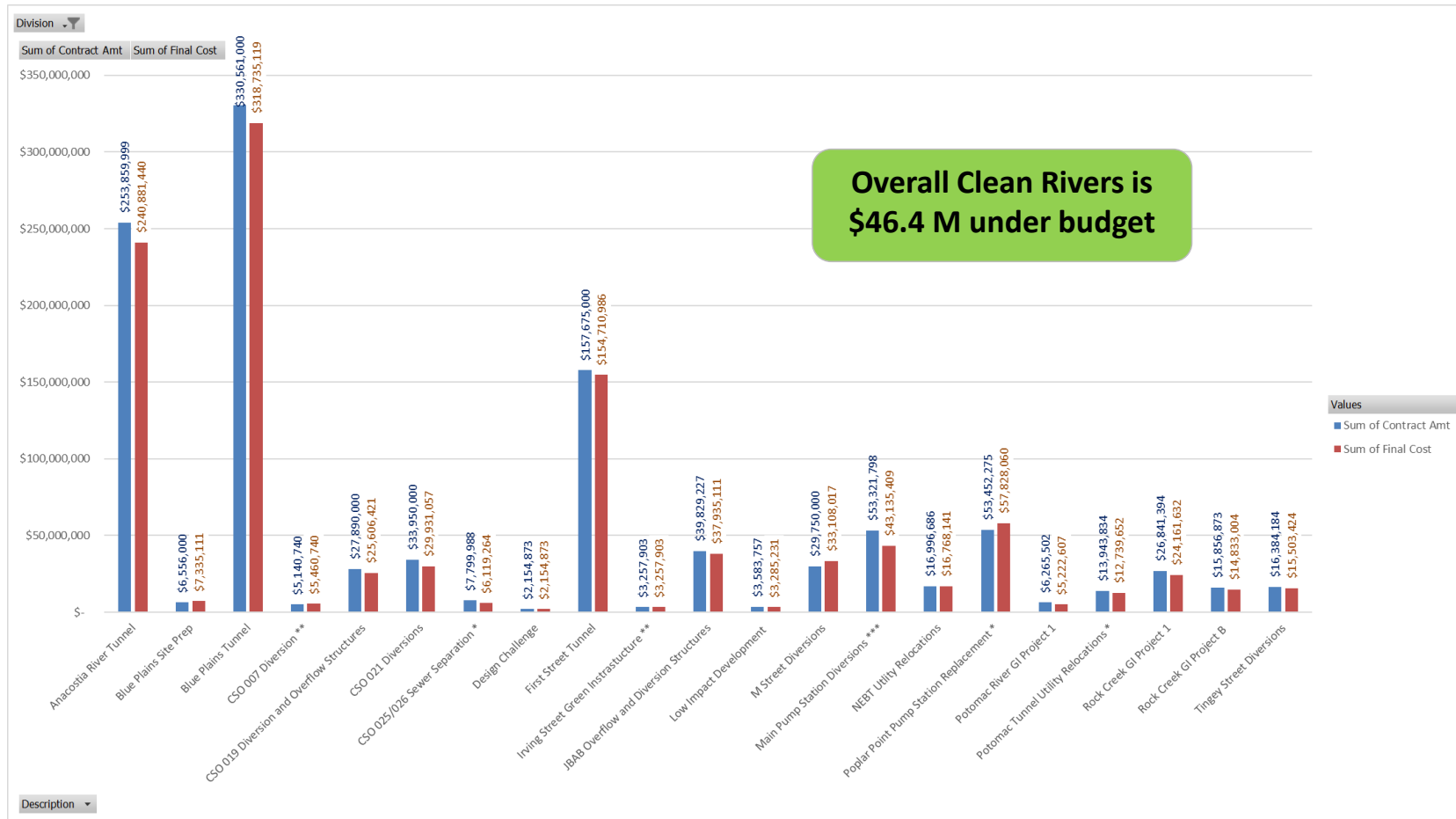
Category	Activities:
Rock Creek Project C	<ul style="list-style-type: none"> Updated DC Water's Rock Creek Project C project webpage as needed.
Piney Branch Tunnel	<ul style="list-style-type: none"> Outreach to residents impacted by construction. Distributed public notices about preliminary investigations for CCTV and geotechnical investigations.
Potomac River Tunnel	<ul style="list-style-type: none"> Distributed West Potomac Park (WPP) traffic advisories about Ohio Drive Closure and Independence Avenue Tie-in work. Hosted the Potomac River Tunnel Groundbreaking media event at the WPP site on May 21, 2024.
Northeast Boundary Tunnel	<ul style="list-style-type: none"> Continue updating the community about restoration work at NEBT construction sites.



Potomac Tunnel groundbreaking Ceremony



Clean Rivers Budget



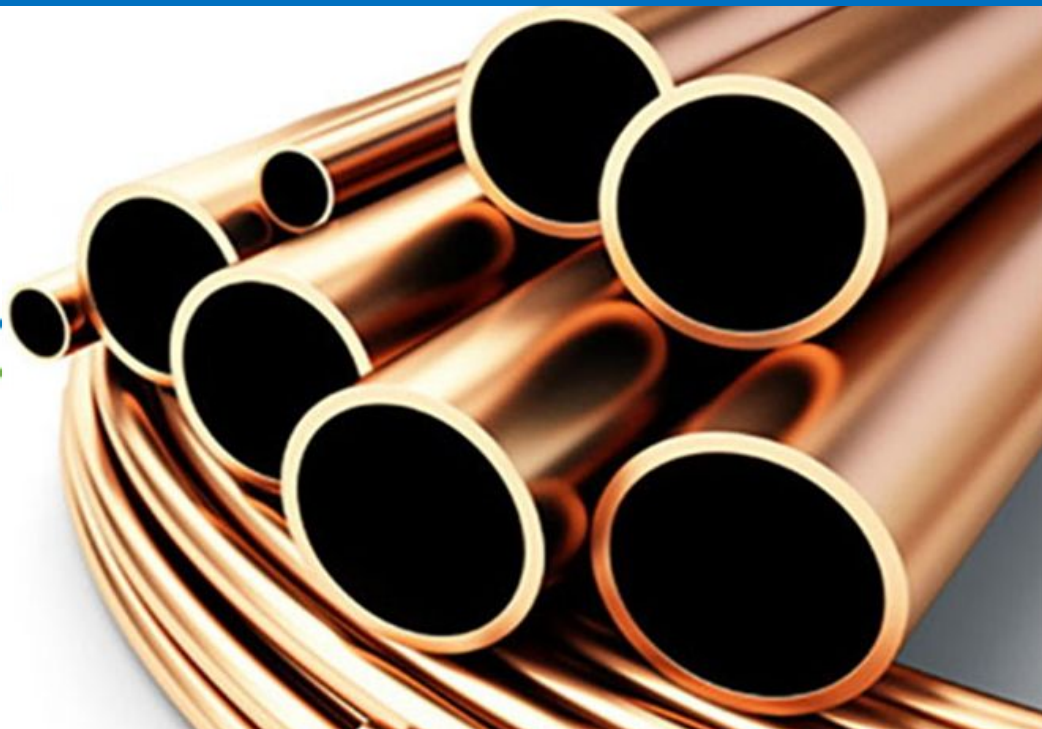


Lead Free DC Update



Lead Free DC Update
Environmental Quality & Operations Committee
July 18, 2024

Imagine a city
without lead.



William Elledge, PE
Director, Engineering and Technical Sciences



FY24 KPI Dashboard





Replacement Dashboard





Program Dashboard



DC WATER Lead Free DC
Lead Service Line Replacement Program Status*

Lead Free DC Program Status

Display Category	Premise Count	Percent Total
■ Verified Non-Lead	35,521	27.8%
■ Suspected Non-Lead	61,398	48.1%
■ No Information	12,142	9.5%
■ Suspected Lead	9,448	7.4%
■ Verified Lead	9,088	7.1%

Lead Service Line Replacement Progress Meter

● Completed ● Remaining

Completed LSLRs	Remaining LSLRs
6,053	41,157

Replacements

Estimated LSLRs	Completed LSLRs
41,157	6,053
Estimated Remaining LSLRs	Percent Complete
35,104	14.7%

Pipe Material Verifications

Premises with Material Verified	Percent of DC Verified
44,609	35.0%

Useful Links

[Lead Inventory Map](#)
[LEDC Construction Dashboard](#)

* Data displayed is from 10/1/2019 to 7/10/2024



MSA - Certified Firm Utilization



Task Report for LFDC

Contract/ Task Number	Contract/ Task Name	Company Name	Amount	Contract/ Task Executed Date	Contract/ Task Duration
230030.01	LSLR Program Construction Package 7	Capitol Paving of DC, Inc.	9,292,335.00	07/25/2023	415
230030.02	LSLR Program Construction Package 8	Ft. Myer Construction Corporation	9,067,565.00	07/25/2023	273
230030.03	LSLR Program Construction Package 9	Anchor Construction Corporation	1,995,008.00	07/25/2023	273
230030.04	LSLR Program Construction Package 10	The Ford Design Group	1,165,315.89	07/27/2023	273
230030.09	LSLR Program Construction Package 15	Capitol Paving of DC, Inc.	43,746,263.00	02/15/2024	811
230030.10	LSLR Program Construction Package 16	Spiniello Companies	33,823,445.00	03/06/2024	804
Total:			99,089,931.89		



MSA - Certified Firm Utilization



230030.01 - Construction Package 7 - Capitol Paving

Company Name	Type of work to be performed	Certification Type (LBE, LSBE, MBE, DBE, WBE)	Certification number	Certified By	Estimated Dollar Amount	Utilization Percentage
S & J Service, Inc	Water Service Connections	MBE	08-030	MDOT	\$4,646,168.00	50%
Royal Construction Corporation	Supply Asphalt Related Work Materials	WBE, DBE	SBSD N.814845	SBSD	\$545,748.00	5.9%
Acorn Supply & Distributing Inc	Supply Concrete Related Work Materials	MBE, DBE	89-685	MDOT	\$848,108.00	9.1%



MSA - Certified Firm Utilization



230030.02 - Construction Package 8 - Ft. Myer

Company Name	Type of work to be performed	Certification Type (LBE, LSBE, MBE, DBE, WBE)	Certification number	Certified By	Estimated Dollar Amount	Utilization Percentage
S & J Service, Inc.	Lead Service Line Replacement	MBE	08-030	MDOT	\$7,635,794.25	35%
United Construction Services, LLC	Materials, Lead Service Line Replacement	WBE MBE MBE	WBE171261 2085 17-450	WBENC DDOT MDOT	\$3,72,483.25	15%



MSA - Certified Firm Utilization



230030.03 - Construction Package 9 - Anchor Construction

Company Name	Type of work to be performed	Certification Type (LBE, LSBE, MBE, DBE, WBE)	Certification number	Certified By	Estimated Dollar Amount	Utilization Percentage
Metro Paving	Paving & Asphalt	MBE	2131	DDOT	\$ 500,000	25.06
AJK Enterprise	Trucking and Hauling	MBE	09-735	MDOT	\$ 57,000	2.85
S & J Service	Utilities	MBE	08-030	MDOT	\$ 145,000	7.26
United Construction	Utilities	WBE	1701261	WBE	\$ 302,000	15.13



MSA - Certified Firm Utilization



230030.04 - Construction Package 10 - Ford Design Group

Company Name	Type of work to be performed	Certification Type (LBE, LSBE, MBE, DBE, WBE)	Certification number	Certified By	Estimated Dollar Amount	Utilization Percentage
PEER Consultants, P.C.	Traffic Control, Safety Officer, GIS, MRO Supplies, Permitting, Data Collection, Scheduling, Project Admin/Doc Control	WBE, MBE, LSBE	04-004509	City of Baltimore	\$538,000	1.4%
McKissack McKissack of Washington, Inc.	Homeowner coordination, safety, permitting, data collection & reporting	WBE	WBE1702088	WBENC	\$442,800	1.22%
ElectroScan, Inc.	Swordfish tool and possible lead service surveys	N/A	N/A	N/A		
W K Freeland Properties LLC/ American Construct LLC / EEC Excavation LLC	All work related to the installation and remediation of water pipes in the District of Columbia	DBE	LSDZRVE10897052024	DSLBD	\$7,776,002	21.85%
Manuel Luis Construction Co., Inc.	Asphalt and concrete restoration	WBE	2005116175	WBENC	\$12,753,399	35.38%
Shrewsberry & Associates, LLC	QA/QC	DBE	DBE0002004	DC UCP	\$54,110	0.15%
Kim Engineering, Inc.	Surveying	DBE	94-054	MDOT		
Sheladia Associates, Inc.	Permitting	MBE	CR10052	NMSDC		
Cavalla Construction	Field Crew Support	WBE	#21-377586	City of Baltimore	\$9,375,397	26%
Savin Engineers, PC	Construction inspection, office engineering	DBE	SAM Cage Code 32CC5	Self-certified (SBA)		



MSA - Certified Firm Utilization



230030.07 - Construction Package 15 - Capitol Paving

Subcontractor Name/ Company Name	DBE, WBE, or N/A	Certified By:	Estimated. Dollar Amount:	DBE/WBE Utilization Percentage:
OMNI Excavators, Inc.	<input checked="" type="checkbox"/> DBE <input type="checkbox"/> WBE <input type="checkbox"/> N/A	MDOT	\$3,500,000.00	8.08%
Phoenix Constructions LLC	<input checked="" type="checkbox"/> DBE <input type="checkbox"/> WBE <input type="checkbox"/> N/A	DDOT	\$3,500,000.00	8.08%
Al's Twin Air, LLC	<input checked="" type="checkbox"/> DBE <input type="checkbox"/> WBE <input type="checkbox"/> N/A	DSLBD	\$2,629,400.00	6.07%
Resources Industries LLC	<input type="checkbox"/> DBE <input checked="" type="checkbox"/> WBE <input type="checkbox"/> N/A	WBENC	\$800,000.00	1.85%



MSA - Certified Firm Utilization



230030.08 - Construction Package 16 - Spiniello

Subcontractor Name/ Company Name	DBE, WBE, or N/A	Certified By:	Estimated. Dollar Amount:	DBE/WBE Utilization Percentage:
METRO PAVING CORPORATION	<input checked="" type="checkbox"/> DBE <input type="checkbox"/> WBE <input type="checkbox"/> N/A	MDOT	\$5,279,120.00	15.61%
AMERIGAL CONSTRUCTION COMPANY, INC.	<input checked="" type="checkbox"/> DBE <input type="checkbox"/> WBE <input type="checkbox"/> N/A	LDBE	\$2,052,807.00	6.07%
Al's Twin Air, LLC	<input checked="" type="checkbox"/> DBE <input type="checkbox"/> WBE <input type="checkbox"/> N/A	DSLBD	\$712,665.00	2.11%
Construx LLC	<input checked="" type="checkbox"/> DBE <input type="checkbox"/> WBE <input type="checkbox"/> N/A	DSLBD	\$3,793,618.00	11.22%



Completed Activities Q3



- Completed **457 replacements** in the quarter. Surpassed **6,000 replacements** since the program launched. Completed **176 private side replacements** using District funds.
- Participated in events to raise awareness and increase program participation including;
 - Healthy Homes Fair,
 - Ward 3 Party at the Promenade,
 - Mayor’s Annual Senior Fest
 - DOEE Anacostia River Youth Environmental Summit,
 - Pilgrim Baptist Church Health Fair,
 - Africa on the Avenue, and
 - Anacostia River Festival.
- Started construction on Construction Packages 15 and 16. Issued solicitations under the Master Services Agreement for Construction Packages 18 and 19.
- Extended **full time employment opportunities to 13 graduates** of the 2023 Community Activators Program
- Achieved 27%, 39%, 13% and 9% signed agreements for Construction Packages 15, 16, 18 and 19 respectively.





Upcoming Activities



- Send follow up ANC notices for areas where construction work will start.
- Present at ANC meetings with active construction.
- Conduct 1-on-1 meetings and events with Community Based Organizations (CBO) and faith-based outreach.
- Start construction on Block-by-Block construction packages 18 and 19.
- Welcome a new 2024 Community Activators cohort and begin the job training program
- Execute DDOT MOU
- Send recommended legislation language to DC Council





Filter Influent Pumps vibration issue resolution



Filter Influent Pumps vibration issue resolution

Environmental Quality & Operations Committee
July 18, 2024



Ryu Suzuki
Director, Department of Wastewater Engineering



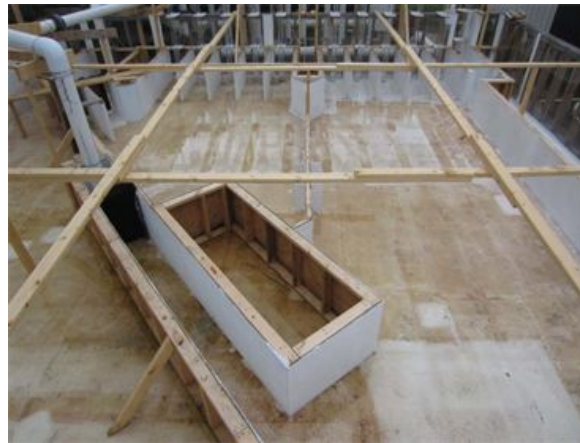
History



- The previous Filter Influent Pumps (FIPs) were installed during the 1999 Filtration Facility Pumping Systems Upgrade to replace the originally installed 1976 propeller style pumps.
- In 2009 it was discovered that the pumps were experiencing vane-tip cavitation causing damage to the pump bell.
- Stainless steel liners were added to protect the pump bowl but damage continued.



Hydraulic Modeling

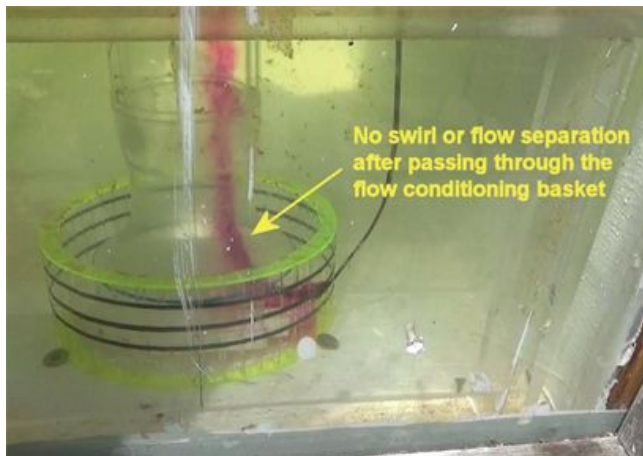


- Hydraulic modeling performed at Verdantas Flow Labs
- Previously Clemson Engineering Hydraulics – acquired by Verdantas in 2023
- Modeled over 1200 pump intakes
- 60,000 sq. ft indoor facility (Anderson, SC)
- Typically have 20-25 model studies going in the lab at any given time





Hydraulic Modeling



- As part of the design of the new pumps, a physical hydraulic study of the pump intake was conducted at a hydraulic laboratory.
- A 1:9.8 scale model was constructed, and tests were conducted to determine the nature and severity of any adverse hydraulic conditions that may affect the pump performance.
- The study showed that the existing pump configuration was causing turbulent flow into the pump that was well outside of acceptable criteria.
- The study recommended remediation measures including a flow conditioning basket installed on the floor enveloping the pump intake.
- The recommended modifications resulted in uniform conditions at the pump bell entrance.



New Filter Influent Pump Installation



- New Filter Influent Pumps were installed between 2021 and 2022 with enhancements.
- High pump and motor vibration were encountered during commissioning.



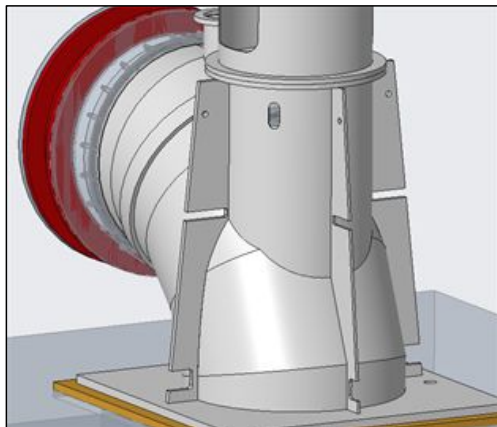
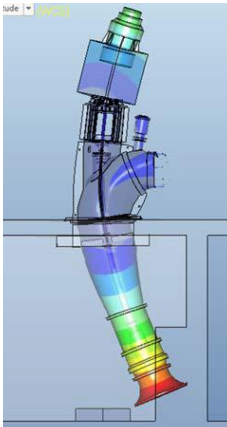
Resonance Frequency



- Commissioning of FIP-6 indicated a resonance condition that induced unacceptably high vibrations in the pump.
- If you ping a wine glass, the note that you hear is the frequency that object likes to vibrate at. It's the object's resonant frequency.
- When a singer holds a note that is the natural frequency of the thin glass, it begins to vibrate at the resonant frequency.
- The vibrations are amplified by the input of energy by the singer's voice until the glass finally breaks.
- Rotational motion can cause resonance in a pump system.
- Excessive vibration can occur if the natural frequency of the pump is close to the operating speed of the pump.



High Vibration

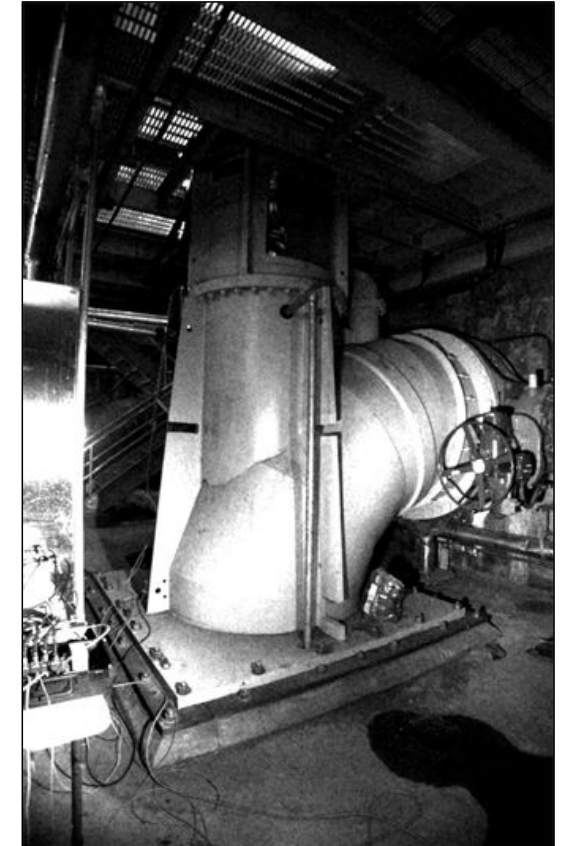
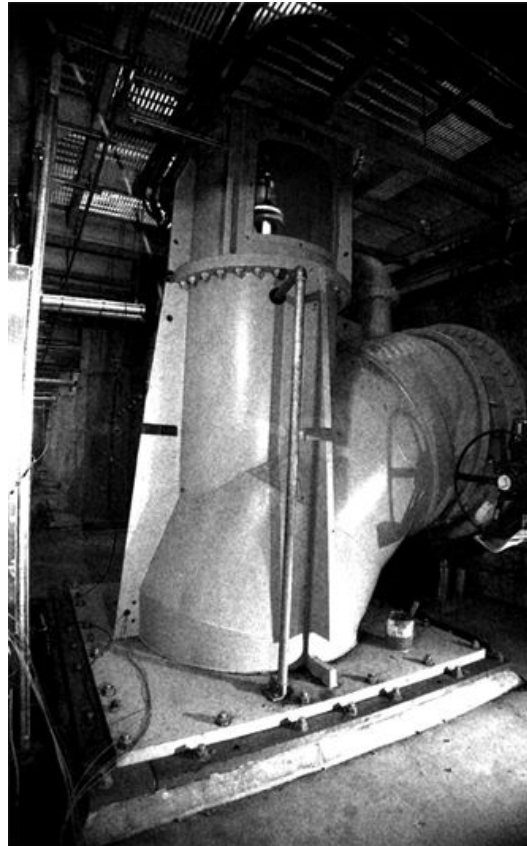


- New Filter Influent Pumps were installed between 2021 and 2022.
- High pump and motor vibration was encountered during commissioning.
- The pump manufacturer tried to stiffen the pump by adding stiffness to the motor pedestal with no success.
- The pump manufacturer performed a Finite Element Analysis (FEA) of the pump system and recommended that slots be added to reduce the pump stiffness.
- Slots were cut into the pumps at specific locations.
- This reduced the vibration in most pumps, but vibration levels were still a concern.
- The manufacturer insisted that DC Water accept the pumps.



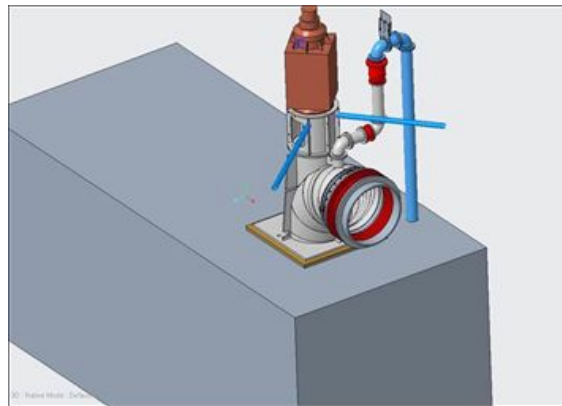
DC Water's Response

- DC Water engaged a third-party vibration expert.
- Performed a FEA analysis of the building foundation and pump system.
- Found the natural frequency of the pump was within 10% of the operating frequency even with slots cut out.
- Recommended stiffening the pump system so the margin of separation was at least 15%.
- Videos are from Mechanical Solutions, Inc. VibVue® Motion Magnification Video
- The software exaggerates the pump movements for easy visualization





Results After Adding Bracing



- After installing the motor supports and testing the pumps, all vibrations went down significantly across the board.
- All pumps operate within the Hydraulic Institutes recommendations at all points within the operating range and all pumps have greater than 20% separation margin between their operating range and natural frequencies.



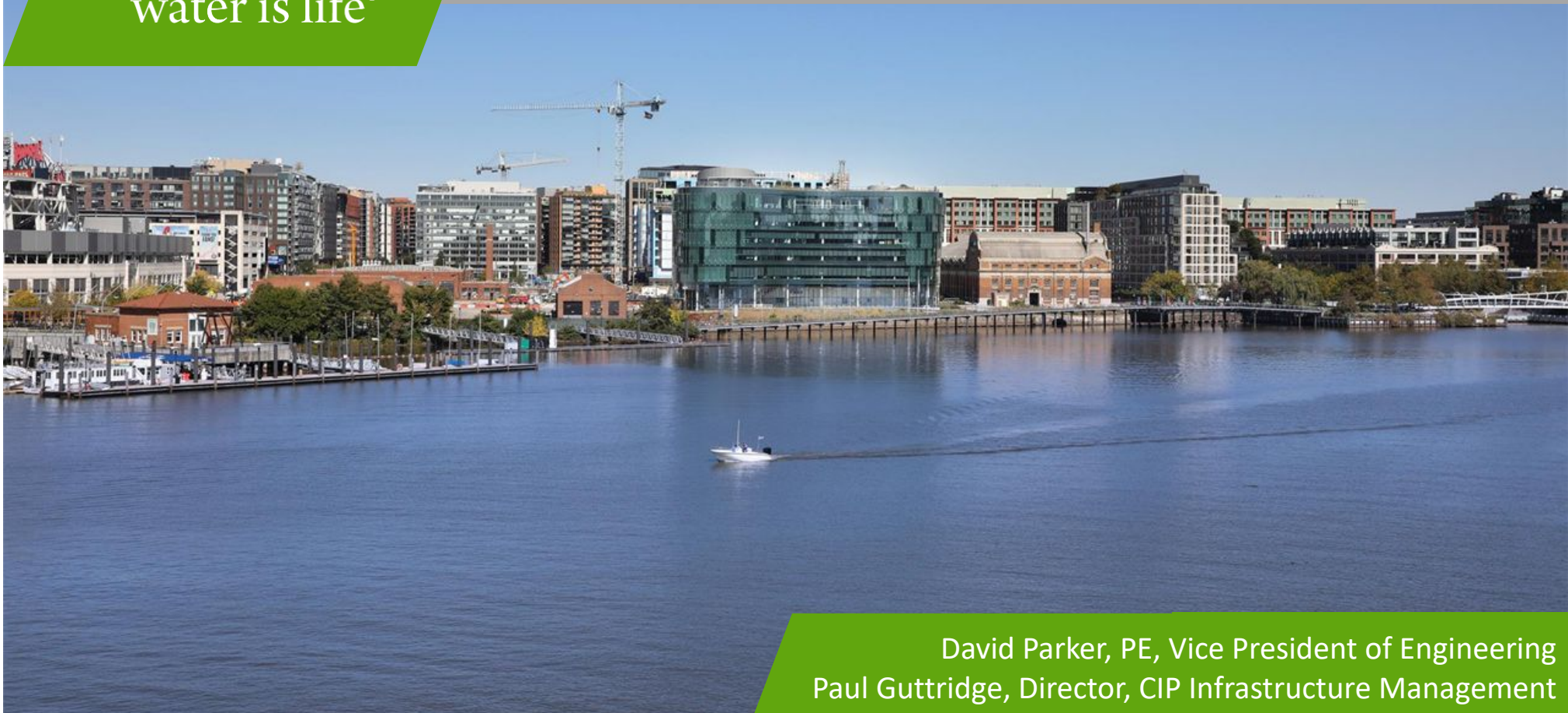
CIP Planning Process Briefing



CIP Planning Process Briefing

Environmental Quality & Operations Committee

July 18, 2024



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

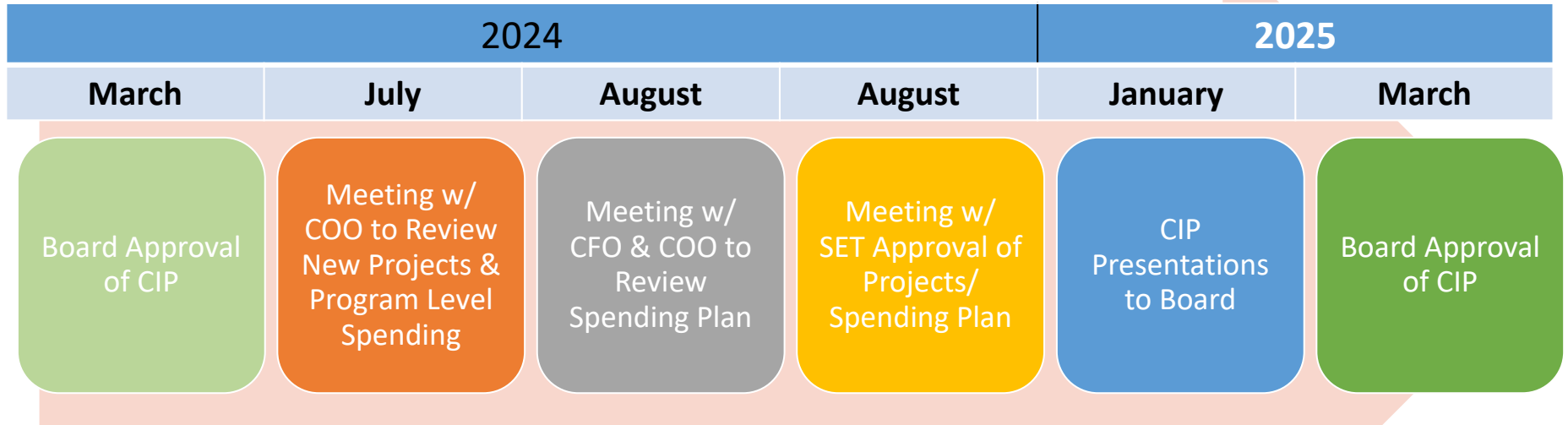


CIP Planning Process Briefing

1. Budget cycle Overview
2. Driving Principles that Influence CIP Planning and Priorities
3. New CIP Updates under Review
4. Risks and Opportunities



FY25-34 CIP Budget Cycle – Key Milestones





CIP Driving Principles High Level

Balancing Equity and Affordability with the Additional Investments

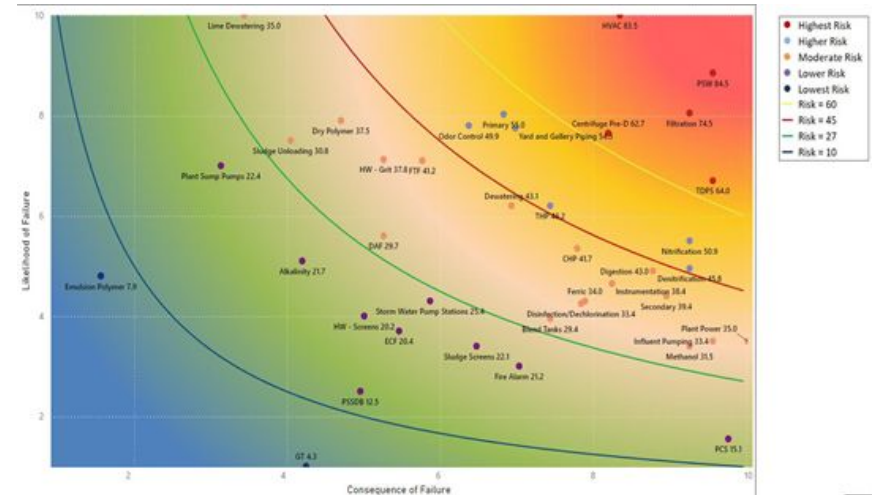
- Comply with Consent Decrees, laws, permits and regulations
- Improve Health and Safety issues
- Replace assets with public exposure that show accelerated failure (Condition assessments determine likelihood of failure) (e.g. Sewer overflow, water main break, boil water alert)
- Minimize adverse environmental impacts (e.g. Sewer spill to watercourse)
- Actively manage risk of asset failure through inspection, condition assessments and rehabilitations to avoid/prevent failures and maintain established levels of service
- Consider projects that provide return on investment and reducing O&M cost (e.g. resource recovery)
- Improve customer service and satisfaction (e.g. water quality or pressure, minimize disruptions due to unplanned failures)
- Invest in projects for resiliency and sustainability (e.g. New reservoir, reduce aging infrastructure, address climate change)





Considerations for Proposed New CIP Requests

- Increase replacement and rehabilitation rate of water and sewer linear assets annually, from 1.5% and 1% respectively, to 2.5%.
- Incorporate inflation forecast assumptions to reflect market realities.
- Address needs arising from trunk sewer and large water main condition assessments
- Address high risk vertical assets at Blue Plains, water and sewer pump stations
- Amend Lead Free DC Program to meet current regulations
- Continue meeting Long Term Control Plan Consent Decree requirements (DCCR)
- Anticipated Washington Aqueduct Improvements
- Water supply resilience



Risk Reduction Strategies:

- Project consolidation to attract new contractors and reduce administrative burden
- Embrace Collaborative Delivery to attract new contractors, reduce risk and accelerate schedules



Address Aging Infrastructure

Goal: Achieve a balance between asset age and remaining useful life

- Higher replacement rate needed to address historical under investment
- Target value: median remaining service life is 40-60% of expected service life

Age (years)	Water	Sewer
Median age	79	89
Expected service life	115	110

Replacement or Rehab Rate (Full Replacement/Rehab Duration)	Target Value reached in Year ...	
	Water	Sewer
1% (100 years)	2113	2117*
1.5% (67 Years)	2066*	2073
2.5% (40 Years)	2042	2046

* Current budget includes ramping up to 1.5% and 1% per year, respectively, for small diameter water main and small local sewers





Risks We Are Monitoring

- Washington Aqueduct Capital Program Uncertainties (PFAS & Future Capital Expenses)
- Water Supply (Source & Storage Volume; Reliability and Resilience)
- Stormwater System Performance
 - New MS4 permit requirements and Cost of service study for stormwater is currently underway
- Unfunded Major Buried Infrastructure Needs
- Regulatory
 - Per- and Polyfluoroalkyl Substances (PFAS) (Water and Biosolids)
 - New National Pollutant Discharge Elimination System (NPDES) Permit
 - New DOEE Odor Control Regulations
 - Sanitary Survey Results due January 2024
- Climate Change – Seawalls, Facility Hardening, CSO Program, Stormwater Capacity
- Anacostia river sediment contamination (PCBs)
- Cured In Place Pipe curing methods



Opportunities - Optimization and Revenue

- Programmatic Approach to capture Federal and Industry Funding Opportunities
- Blue Plains Process Pilots
 - Process intensification Technologies (Granulated Sludge and Tube Settlers to Increase sludge settleability)
 - Blue Plains PdNA (Partial Denitrification-Annamox) Pilot to Reduce Cost and Dependence on Chemicals
- Implement Resource Recovery Options
 - Opportunities for Additional biogas utilization
 - Expansion of Solar Power Generation
 - Heat Recovery Options at Blue Plains / Sewer Heat Recovery for District Heating
- Implement a Microgrid within Blue Plains - Optimal Renewable Energy Distribution
- Diversify Bloom Products Marketing and storage for optimum sales

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

ACTION REQUESTED

**GOODS AND SERVICES CONTRACT AWARD
SODIUM BISULFITE
(Joint Use)**

Approval to exercise base year and to approve funding for the base year and all option years (OY1 – OY2) for the supply and delivery of Sodium Bisulfite in the amount of \$3,496,000.00.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME: PVS Chemical Solutions, Inc. 10900 Harper Avenue Detroit, MI 48213	SUBS: N/A	PARTICIPATION: N/A
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DESCRIPTION AND PURPOSE

Base Period Contract Value:	\$1,131,000.00
Base Period Contract Dates:	10-01-2024 —09-30-2025
No. of Option Years in Contract:	2
Total Option Year 1-2 Value:	\$2,365,000.00
Option Year 1-2 Dates:	10-01-2025 —09-30-2027
Total Number of Proposal	2

Purpose of the Contract:

This contract is to supply and deliver Sodium Bisulfite to the Department of Wastewater Treatment (DWT) at DC Water. Sodium Bisulfite removes residual chlorine from effluent water, and its use is required to meet environmental standards.

Contract Scope:

To ensure supply security, Sodium Bisulfite was awarded to two companies with independent supply chains. PVS Chemical Inc. is awarded 70% (this request) and Southern Ionics is awarded 30% of DC Water’s requirements.

This contract action exercises the base year. Option years will be exercised annually.

Supplier Selection:

Open-market Request for Qualification (RFQ) DCW-SOL-24-10375 for the supply and delivery of sodium bisulfite was issued on March 25, 2024. All suppliers were invited to participate in the RFQ. Two companies responded to an RFQ intended to solicit proposal for supply and delivery of new sodium bisulfite requirements. Both suppliers are incumbent of current sodium bisulfite to DC Water. DC Water negotiated with two suppliers. The final selection is based on technical evaluation and pricing.

PROCUREMENT INFORMATION

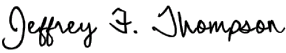
Contract Type:	Good and Services	Award Based On:	Best Value
Commodity:	Sodium Bisulfite	Contract Number:	10465
Contractor Market:	Open Market		

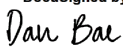
BUDGET INFORMATION


Funding:	Operating	Department:	Wastewater Treatment
Project Area:	Blue Plains	Department Head:	Nicholas Passarelli

ESTIMATED USER SHARE INFORMATION

User - Operating	Share %	Dollar Amount
District of Columbia	43.27%	\$1,512,719.20
Washington Suburban Sanitary Commission	41.18%	\$1,439,652.80
Fairfax County	10.02%	\$350,299.20
Loudoun Water	4.81%	\$168,157.60
Potomac Interceptor	0.72%	\$25,171.20
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$3,496,000.00

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 Jeffrey F. Thompson Date
 Chief Operating Officer, EVP

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 Dan Bae Date
 VP and Chief Procurement Officer

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 Matthew T. Brown Date
 CFO and Executive Vice-President of
 Finance, Procurement and Compliance

 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 AWARD
SODIUM BISULFITE
(Joint Use)**

Approval to exercise base year and to approve funding for the base year and all option years (OY1 – OY2) for the supply and delivery of Sodium Bisulfite in the amount of \$1,500,000.00.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME: Southern Ionics Inc. 579 Commerce Street West Point, MS 39773	SUBS: N/A	PARTICIPATION: N/A
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DESCRIPTION AND PURPOSE

Base Period Contract Value:	\$485,000.00
Base Period Contract Dates:	10-01-2024 —09-30-2025
No. of Option Years in Contract:	2
Total Option Year 1-2 Value:	\$1,015,000.00
Option Year 1-2 Dates:	10-01-2025 —09-30-2027
Total Number of Proposal	2

Purpose of the Contract:

This contract is to supply and deliver Sodium Bisulfite to the Department of Wastewater Treatment (DWT) at DC Water. Sodium Bisulfite removes residual chlorine from effluent water, and its use is required to meet environmental standards.

Contract Scope:

To ensure supply security, Sodium Bisulfite was awarded to two companies with independent supply chains. Southern Ionics is awarded 30% (this request) and PVS Chemical inc. is awarded 70% of DC Water requirements.

This contract action exercises the base year. Option years will be exercised annually.

Supplier Selection:

Open-market Request for Qualification (RFQ) DCW-SOL-24-10375 for the supply and delivery of sodium bisulfite was issued on March 25, 2024. All suppliers were invited to participate in the RFQ. Two companies responded to an RFQ intended to solicit proposal for supply and delivery of new sodium bisulfite requirements. Both suppliers are incumbent of current sodium bisulfite to DC Water. DC Water negotiated with two suppliers. The final selection is based on technical evaluation and pricing.

PROCUREMENT INFORMATION

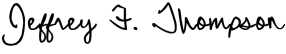
Contract Type:	Good and Services	Award Based On:	Best Value
Commodity:	Sodium Bisulfite	Contract Number:	10466
Contractor Market:	Open Market		


BUDGET INFORMATION


Funding:	Operating	Department:	Wastewater Treatment
Project Area:	Blue Plains	Department Head:	Nicholas Passarelli

ESTIMATED USER SHARE INFORMATION

User - Operating	Share %	Dollar Amount
District of Columbia	43.27%	\$649,050.00
Washington Suburban Sanitary Commission	41.18%	\$617,700.00
Fairfax County	10.02%	\$150,300.00
Loudoun Water	4.81%	\$72,150.00
Potomac Interceptor	0.72%	\$10,800.00
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$1,500,000.00

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 Dan Bae Date
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 Matthew T. Brown Date
 CFO and Executive Vice-President of
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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

GOODS AND SERVICES CONTRACT AWARD

**SODIUM HYPOCHLORITE
(Joint Use)**

Approval to exercise base year and to approve funding for the base year and all option years (OY1 – OY2) for the delivery of sodium hypochlorite in the amount of \$24,164,000.00.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME: Kuehne Chemical Co. Inc. 86 N. Hackensack Ave. S. Kearny, NJ 07032	SUBS: N/A	PARTICIPATION: N/A
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DESCRIPTION AND PURPOSE

Base Period Contract Value:	\$7,815,000.00
Base Period Contract Dates:	10-01-2024 – 09-30-2025
No. of Option Years in Contract:	2
Total Option Year 1-2 Value:	\$16,349,000.00
Option Year 1-2 Dates:	10-01-2025 – 09-30-2027
Total Number of Proposal	2

Purpose of the Contract:

To supply and deliver sodium hypochlorite. Sodium hypochlorite is used for disinfection and odor control.

Contract Scope:

DC Water has an on-going need for sodium hypochlorite. At the Blue Plains Advanced Wastewater Treatment Facility, it is primarily used for outfall disinfection, but also to control biological growth on multimedia filters, and for odor control in the scrubbers.

This contract action exercises the base year. Option years will be exercised annually.

Supplier Selection:

Open-market Request for Qualification (RFQ) DCW-SOL-24-10379 for the supply and delivery of Sodium Hypochlorite was issued on May 3, 2024. All Chemical suppliers were invited to participate in the RFQ. Kuehne Chemical is only one that responded to an RFQ intended to solicit proposal for supply and delivery of new sodium hypochlorite requirements. Kuehne is incumbent of current sodium hypochlorite to DC water.

PROCUREMENT INFORMATION

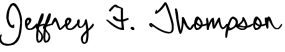
Contract Type:	Goods and Services	Award Based On:	Best Value
Commodity:	Sodium Hypochlorite	Contract Number:	10467
Contractor Market:	Open Market		


BUDGET INFORMATION


Funding:	Operating	Department:	Wastewater Treatment
Project Area:	Blue Plains AWTP	Department Head:	Nicholas Passarelli

ESTIMATED USER SHARE INFORMATION

User - Operating	Share %	Dollar Amount
District of Columbia	43.27%	\$10,455,762.80
Washington Suburban Sanitary Commission	41.18%	\$9,950,735.20
Fairfax County	10.02%	\$2,421,232.80
Loudoun Water	4.81%	\$1,162,288.40
Other (PI)	0.72%	\$173,980.80
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$24,164,000.00

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 Dan Bae Date
 VP and Chief Procurement Officer

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 Matthew T. Brown Date
 CFO and Executive Vice-President of
 Finance, Procurement and Compliance

_____/_____
 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:
Public Space Restoration Contract FY22- FY25
(Joint Use)**

Approval to execute Change Order No. 001 for \$21,061,000.00 to complete contract term and exercising 2 option years. The modification exceeds the Chief Executive Officer’s approval authority.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
Capitol Paving of D.C. 2211 Channing St NE Washington, DC 20018	United Construction Services, LLC Washington, DC DBE	35.0%
	Royal Construction Materials McLean, VA WBE	10.0%

DESCRIPTION AND PURPOSE

Original Contract Value:	\$21,880,658.00
Value of this Change Order:	\$21,061,000.00*
Cumulative CO Amount, including this CO:	\$21,061,000.00
Total Contract Value, including this CO:	\$42,941,658.00
Original Contract Time:	1096 Calendar Days (3 Years, 0 Months)
Time extension, this CO:	730 Calendar Days
Total CO contract time extension:	730 Calendar Days (2 Option Years)
Contract Start Date (NTP):	01-05-2022
Contract Completion Date:	01-05-2027
Cumulative CO % of Original Contract:	96.3%*
Contract completion %:	85.9%

*Additional funds to complete original contract term and exercising of 2 option years.

Purpose of the Contract:

- DC Water is required to permanently restore all paved and non-paved public space areas - roadways, sidewalks, tree spaces, and other structures that are damaged or disturbed during infrastructure rehabilitation and repair activities. The Public Space Restoration Contract provides permanent restoration and pavement services for Water and Sewer construction locations in public space.

Original Contract Scope:

- Restore and/or replace asphalt and concrete roadways, brick and concrete sidewalks, landscaped areas, and other miscellaneous repairs that result from excavations performed during water and sewer infrastructure rehabilitation and repair activities in public space.
- Scope of work is developed and issued as task orders and as needed. Restoration work is at various locations throughout Washington, DC. The nature, extent, and location of the work for each task order varies.
- The water and sewer operations, on an annual basis, typically generate an average of 1,700 task orders for public space restorations.

Previous Change Order Scope:

- N/A

Current Change Order Scope:

- This Change Order is to exercise the 2 option years using existing bid item prices, increasing the contract value by \$19,168,000.00 and extending the contract period through January 5, 2027.
- Due to greater than anticipated need for public space restoration throughout this contract, this request also includes \$1,893,000.00 to ensure sufficient funding for the original current contract period through January 4, 2025.

PROCUREMENT INFORMATION

Contract Type:	Unit Price	Award Based On:	Request for Proposal, Best Value
Commodity:	Construction	Contract Number:	200110
Contractor Market:	Open Market		

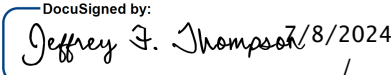
BUDGET INFORMATION


Funding:	Capital	Department:	Water Services
Service Area:	Water, Sanitary	Department Head:	Chris Collier
Project:	KZ, BW, L6, NW		

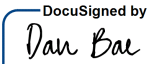
****ESTIMATED USER SHARE INFORMATION**

User	Share %	Dollar Amount
District of Columbia	100.00%	\$21,061,000.00
Federal Funds	0.00%	\$
Washington Suburban Sanitary Commission	0.00%	\$
Fairfax County	0.00%	\$
Loudoun County & Potomac Interceptor	0.00%	\$
Total Estimated Dollar Amount	100.00%	\$21,061,000.00

** Work under this contract will be assigned as needed under specific task orders. It is anticipated that Joint Use work may be assigned during the contract period. As tasks are developed for work associated with specific facilities and costs are developed, the individual users will be notified and billed according to agreed cost sharing.

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 Jeffrey F. Thompson / 7/8/2024
 Date
 Chief Operating Officer and EVP

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 Matthew T. Brown / 7/8/2024
 Date
 Chief Financial Officer and EVP
 Finance, Procurement and Compliance

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 Dan Bae / 7/8/2024
 Date
 VP and Chief Procurement Officer

 David L. Gadis / Date
 Chief Executive Officer and General Manager

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

ACTION REQUESTED

CONSTRUCTION CONTRACT CHANGE ORDER

**Inspection and Cleaning for Local Sewers
(Non-Joint Use)**

Approval to execute Change Order No. 03 for \$2,229,763.16. The modification exceeds the Chief Executive Officer's approval authority.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
RedZone Robotics, Inc 195 Thorn Hill Rd Suite 110 Warrendale, PA 15086 <u>Headquarters</u> Warrendale, PA 15086	Arthur Engineering Services, LLC Laurel, MD DBE	23.0%
	EBA Engineering Inc. Laurel, MD DBE	1.0%
	Cube Root Corporation Washington DC DBE	1.0%
	Sunrise Safety Services, Inc Glen Burnie, MD WBE	5.0%
	Traffic Services & Control, LLC Oxon Hill, MD WBE	5.0%

DBE Total Participation = 25.0% WBE Total Participation = 10.0%

DESCRIPTION AND PURPOSE

Original Contract Value:	\$5,998,550.00
Total of Previous Change Orders:	\$ 0.00
Current Contract Value:	\$5,998,550.00
Value of this Change Order:	\$2,229,763.16
Total Contract Value, including this CO:	\$8,228,313.16
Original Contract Time:	1,095 Days (3 Years, 0 Months)
Time extension, this CO:	392 Days
Total CO contract time extension:	392 Days (1 Year, 1 month)
Contract Start Date (NTP):	03-10-2022
Anticipated Contract Completion Date:	04-06-2026
Cumulative CO % of Original Contract:	37.2%
Contract completion %:	72.0%

Purpose of the Contract:

This contract is needed to procure qualified contractors to help DC Water with the assessment of local sewers. Under this contract, DC Water plans to inspect a total of 120 miles of local sewers from FY22 to FY25.

Original Contract Scope:

- Project management including coordination with internal and external agencies,
- Preparation of traffic control plans, and acquisition of permits.
- Closed Circuit Television (CCTV) inspection of approximately 190,000 linear feet of combined and sanitary sewers.
- Light cleaning and CCTV inspection of approximately 190,000 linear feet of sanitary sewers.

- Combined CCTV/Sonar inspection of approximately 158,000 linear feet of sanitary sewers.
- Sonar inspection of approximately 1,500 linear feet of combined and sanitary sewers.
- Laser/CCTV inspection of approximately 32,000 linear feet of combined and sanitary sewers.
- Multi-Sensor Inspection of approximately 62,000 linear feet of combined and sanitary sewers.
- Inspection of approximately 1,800 manholes and structures.

Previous Change Order Scope:

- Modify the unit price for traffic control plans.
- Adding new line items and unit prices to inspect storm sewers using CCTV, Laser and Sonar.

Current Change Order Scope

- This change order is to extend the contract to perform original contract scope activities for an additional year while a new Sewer Program Management Contract is procured which will cover Local Sewer Inspection Activities going forward.

PROCUREMENT INFORMATION


Contract Type:	Unit Price	Award Based On:	Best Value
Commodity:	Construction	Contract Number:	220010
Contractor Market:	Open Market		


BUDGET INFORMATION

Funding:	Capital	Department:	Engineering and Technical Services	
Service Area:	Sanitary	Department Head:	Ryu Suzuki	
Project:	QX			

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	100.00%	\$ 2,229,763.16
Washington Suburban Sanitary Commission	0.00%	\$
Fairfax County	0.00%	\$
Loudoun County & Potomac Interceptor	0.00%	\$
Total Estimated Dollar Amount	100.00%	\$ 2,229,763.16

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