DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
Board of Directors

Meeting of the
Environmental Quality and Operations Committee

Thursday, January 16, 2025
9:30 a.m.
Microsoft Teams meeting
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Phone conference ID: 807 516 457#

9:30 a.m.	**I**	**Call to Order**	Sarah Motsch Chair
	II	**Roll Call**	Michelle Rhodd Board Secretary
9:35 a.m.	**III**	**BPAWTP Performance Update**	Nicholas Passarelli
9:40 a.m.	**IV**	**Facilities KPI Success**	Brent Christ
9:50 a.m.	**V**	**Ten-year FY25 to FY34 Proposed CIP Budget**	David Parker Matthew Brown
10:30 a.m.	**VI**	**Action Items**	David Parker, Seth Charde/ Moussa Wone/Kevin Bellamy
		Joint Use:	
		1. N/A	
		Non-Joint Use:	
		1. Contract No. 240070 – Construction Manager at Risk (CMAR) Guaranteed Maximum Price (GMP) Amendment No. 1 – Fort Myer Construction Corporation	
10:50 a.m.	**VII**	**Other Business/Emerging Issues**	
10:55 a.m.	**VIII**	**Executive Session***	
11:00 a.m.	**IX**	**Adjournment**	Sarah Motsch

This meeting is governed by the Open Meetings Act. Please address any questions or complaints arising under this meeting to the Office of Open Government at opengovoffice@dc.gov

Follow-up Items from Prior Meetings:

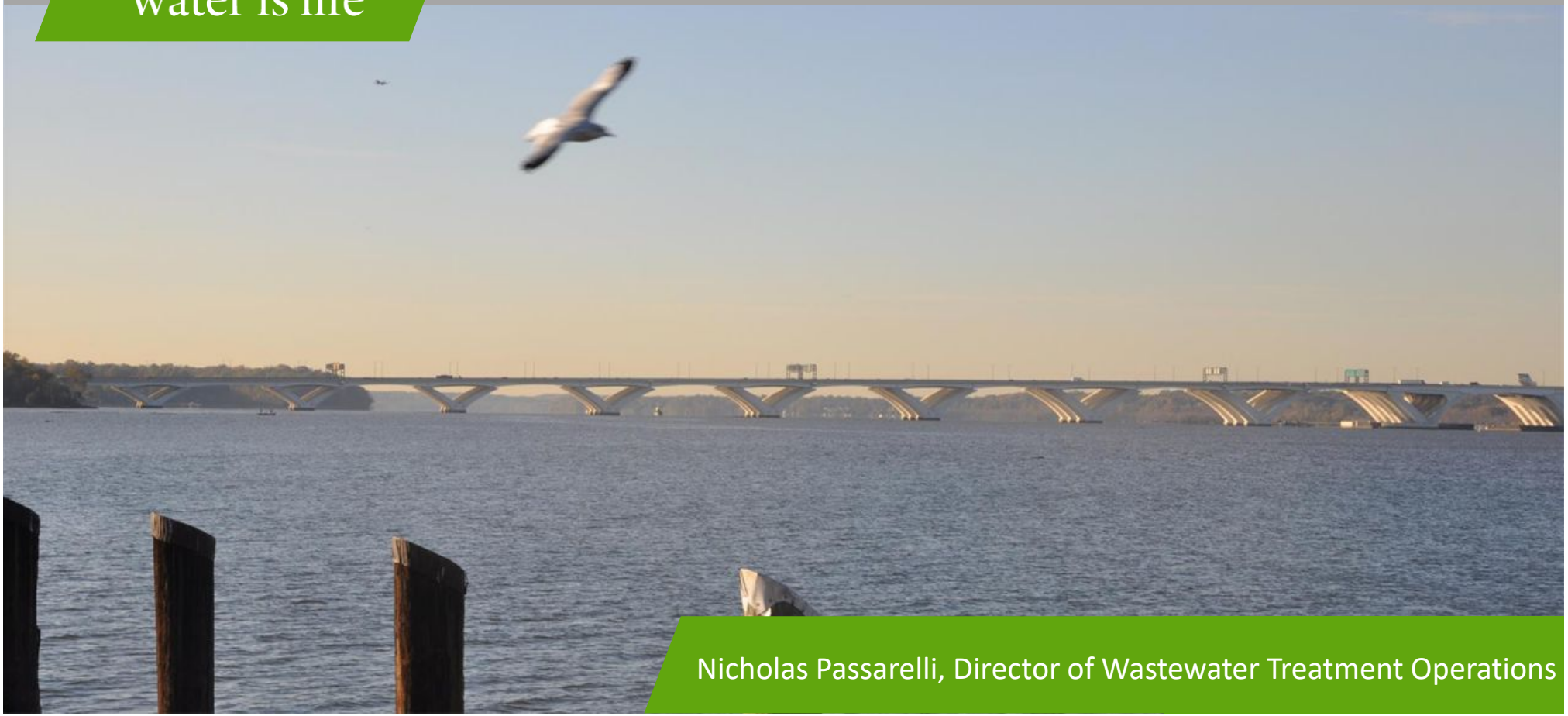
[1]The DC Water Board of Directors may go into executive session at this meeting pursuant to the District of Columbia Open Meetings Act of 2010, if such action is approved by a majority vote of the Board members who constitute a quorum to discuss certain matters, including but not limited to: matters 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 Complete Treatment Performance

Environmental Quality & Operations Committee

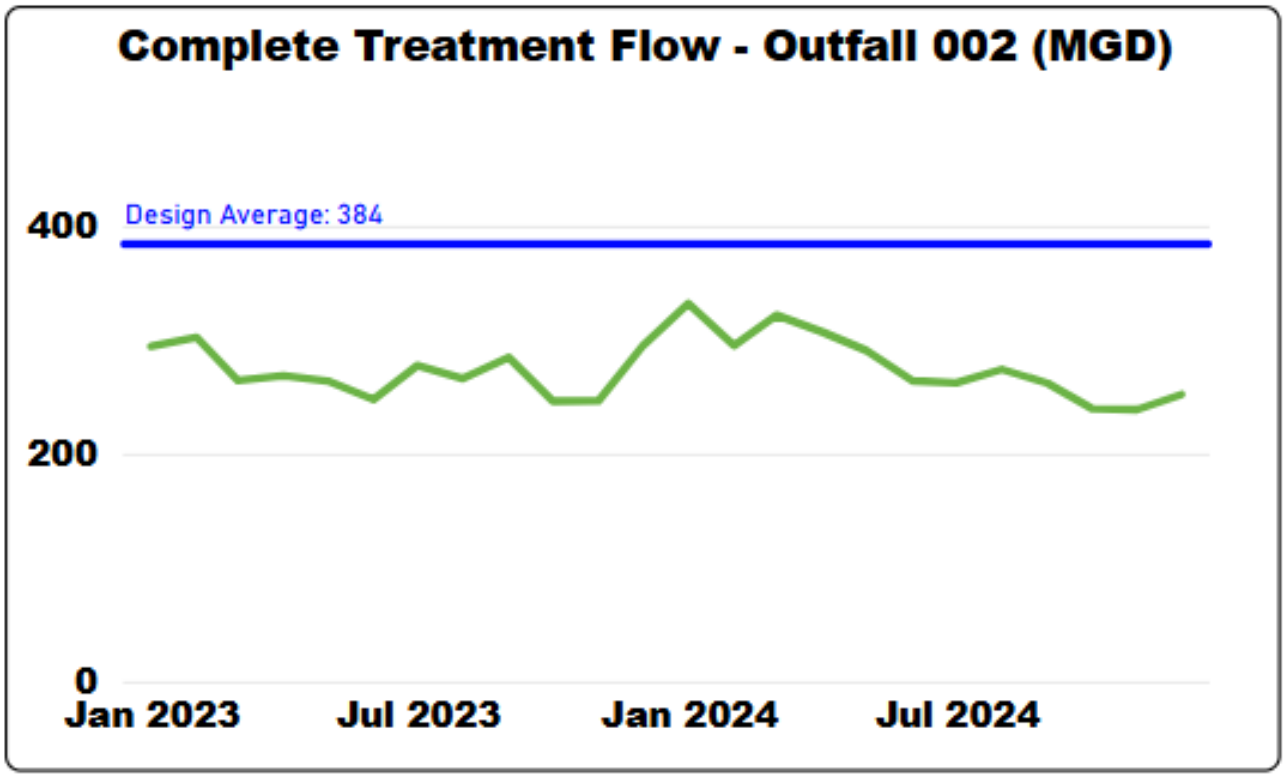
January 16, 2025



Nicholas Passarelli, Director of Wastewater Treatment Operations

Operational Performance
Complete Treatment

Monthly Average Flow Trend to Complete Treatment (MGD)



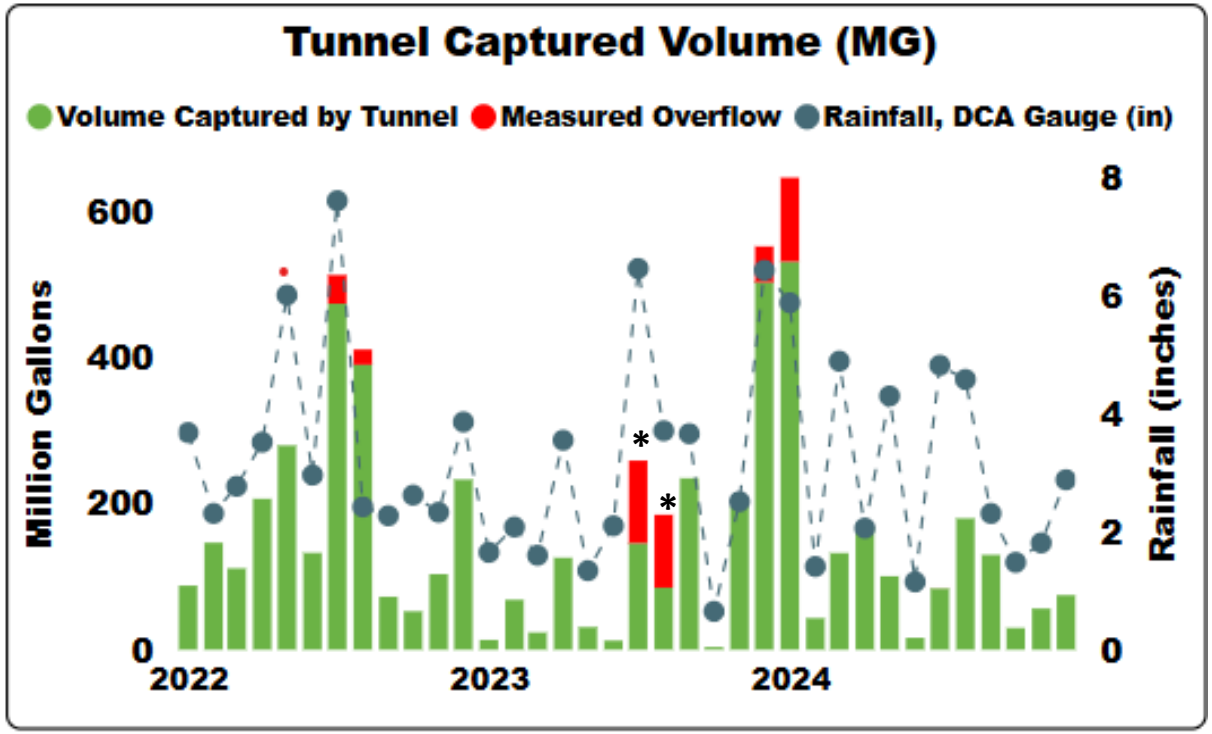
All weekly and monthly NPDES permit requirements were met

Average Outfall 002 flow for December 2024: 252 MGD

Peak Day flow for December 11 at 365 MGD

Operational Performance
Tunnel Systems and Wet Weather Treatment

Anacostia River Tunnel System
Monthly Performance 2022 – 2024 (Through Dec 2024)



* - 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.

Total Annual System Performance from Start-Up (2018-2024)

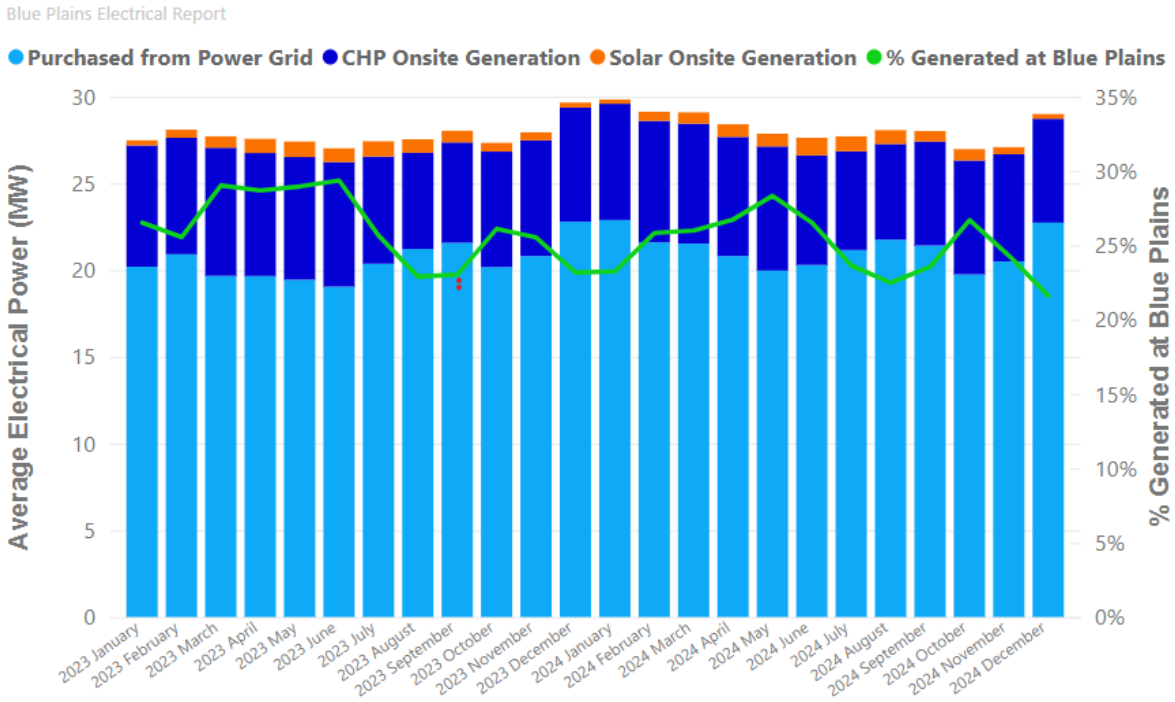
	Anacostia River Tunnel System
Number of events	350
Volume Captured, MG	17,775
Volume to CSO, MG	1,653
Percent Captured, %	91.5

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

1546 MG of volume captured by Anacostia River Tunnel System in Calendar Year 2024 through December, with 115 MG overflow

Operational Performance Electrical Energy Use and Generation

Blue Plains Electrical Energy Use and Generation



22% of electricity was generated onsite

Combined Heat and Power (CHP) facility produced an average of 7.1megawatts (MW), with 6.0 MW net to Blue Plains grid

Solar System produced an additional 0.28 MW of power on average

Total electricity consumption at Blue Plains averaged 29.0 MW

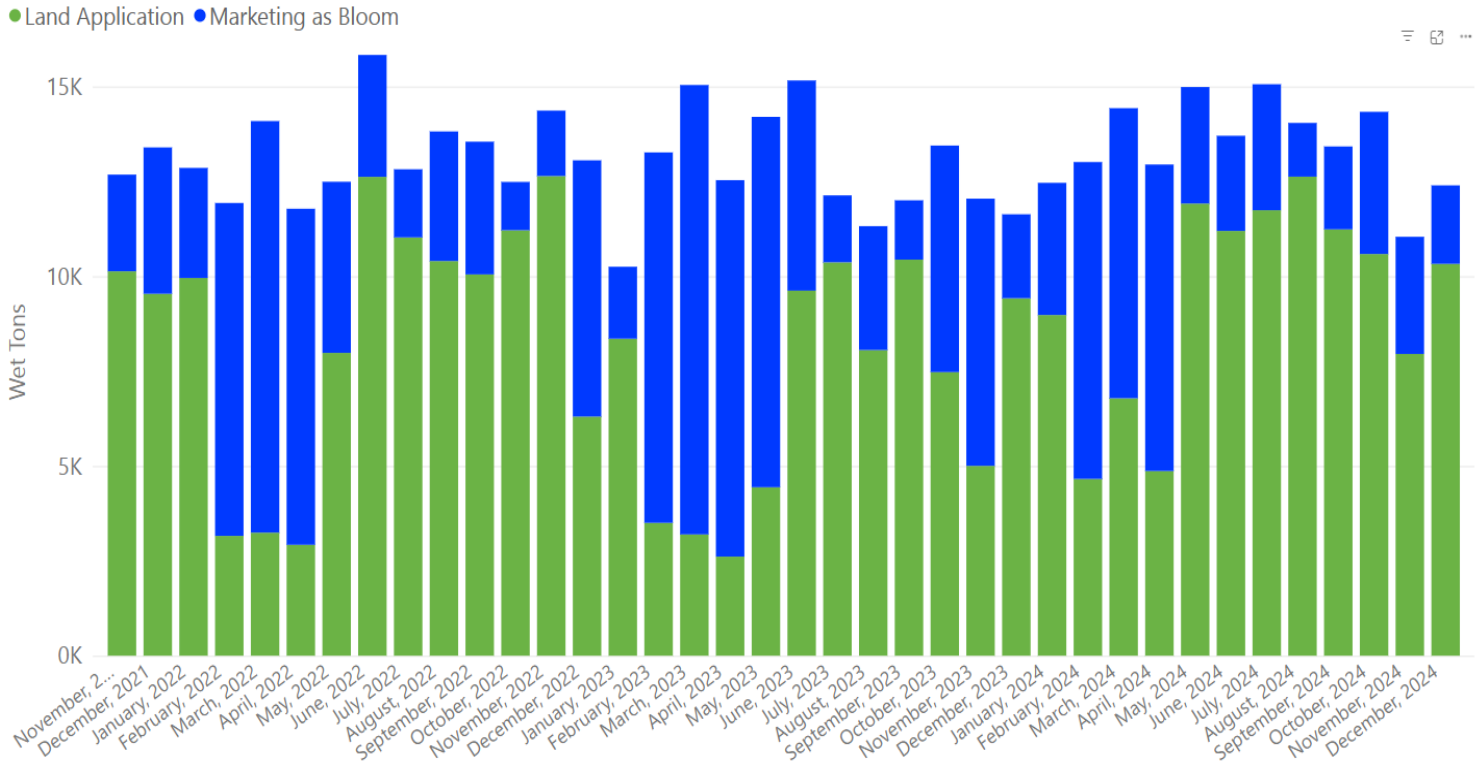
DC Water purchased an average of 22.7 MW of electricity from PEPCO

Total Purchased Power Savings FY2024:
$5,209,000

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 December, Blue Drop sold approximately 2,067 tons of Bloom; for a total of 8,903 tons towards the FY25 goal of 70,000 tons.

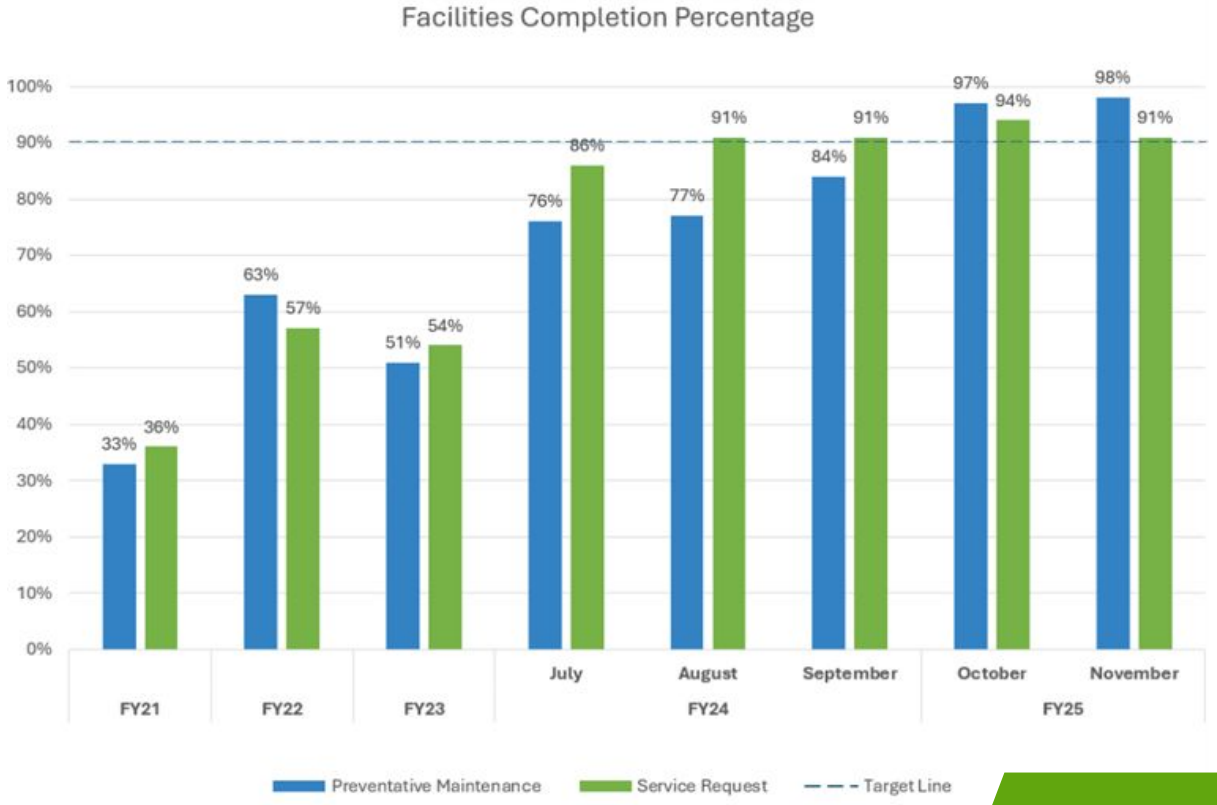
Blue Plains Produced 12,394 tons of biosolids for the month with the remaining 10,328 tons managed through land application contracts.

Facilities KPI Success

Facilities KPI Success

Environmental Quality & Operations Committee

January 16, 2025



Service Requests

Completion Percentage = Service Requests Completed/Service Requests Received

Preventative Maintenance

Completion Percentage = Preventive Maintenance Completed/Preventive Maintenance Scheduled

Brent Christ, Director , Facilities Management

Key Recent Accomplishments and Proposed Actions To Continue Performance

Shift in Culture: Ownership of the work; Work Order System Access

Proactive Business Operations Improvements, Budget Management & Procurement Partnering

Facilities Partnering with Maximo Team: Foremen and Admin staff are receiving 1-on–1 Maximo training

Improved Communications and Management Daily Stand-Up Meeting – Office and Field Ops + Monthly SR/PM Specific Review

Position Reclassification to Include Business Analysts Assessing Work Order Gaps to Identify Opportunities

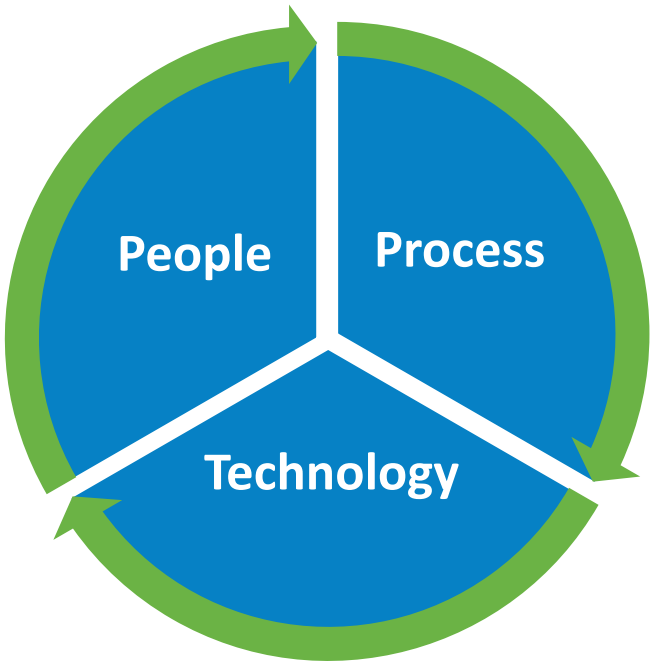
Expand Specialty Consultant Support: Asset Management; Green Infrastructure

Focus on Core Functions, Identify & Shed Non-Core Functions: Outside Events Support (Blue Drop/OMAC); Green Infrastructure. Bottled Water Distribution.

Accomplishments

Proposed Actions

EPMO Organizational & Business Process Assessment



The EPMO has performed an organizational and business process review of the Facilities Management function. The team leveraging generally accepted audit methodologies such as direct employee interviews, reperformance, data analysis, and documentation reviews.

Observations are grouped into 3 core categories: *People, Process, and Technology*

People : This is a review of the organizational structure relative to the function's goals and objectives.

- *Asking the question- Do we have the right people organized the right way to complete the mission.*

Process : This is a review of key facilities management business processes reviewing SOP/SLA documentation, workflows, work locations, employee performance, etc.

Technology : This is a review of the integrated IT solutions support the business unit. This review was limited to Maximo and SharePoint integration.

EPMO Support to Facilities

The path forward through FY2025

dc water is life®

ENTERPRISE PROGRAM MANAGEMENT OFFICE

Navigating Excellence: Guiding DC Water with Data and Direction

People	Review Organizational Structure Conduct Job Analysis Conducted scope review
Processes	Evaluated Process and Procedures Conducted Workflow Analysis Identified Roles and Responsibilities
Technology	Software Market Analysis Conducted Maximo trainings Created SOPs
Accomplishments	KPI Dashboard Yearly Workplan Template Data Driven Decision Making

10-year FY25 to FY34 Proposed CIP Budget

dc water is life®

10-year FY25 to FY34 Proposed CIP Budget

Environmental Quality & Operations Committee

January 16, 2025

Matthew Brown, Chief Financial Officer and Executive Vice President
David Parker, Vice President, Engineering

Budget Calendar

Timeline	Activity	Status
January 13	Budget Workshop with Board of Directors	
	Stakeholder Briefings, Committee Discussions & Reviews	
January 16	Environmental Quality & Operations	
January 22	Wholesale Customer Briefing	
January 24	Office of People's Counsel Briefing	
January 28	Joint DC Retail Water & Sewer Rates and Finance & Budget Committee	
February 6	Board Meeting (No Board Action Required)	
	Committee Reviews, Recommendations & Actions	
February 20	Environmental Quality & Operations	
February 28	DC Retail Water & Sewer Rates	
February 28	Finance & Budget	
March 6	**Board Adoption of Budgets**	
April	Submit Budget via the District to U.S. Congress	
October 1	Fiscal Year 2026 Begins	

The Proposed FY 2026 Budget

- **Proposed Operating Expenditure Budget of $838.1 million**
  - **Operations and Maintenance (O&M)** – $468.6 million for personnel and non-personnel
  - **Debt Service** – $271.5 million and Cash Financed Capital Improvements (CFCI) of $73.9 million
  - **PILOT & ROW** – payments to the District of $24.2 million
- **Capital Budget of $913.4 million and 10-year CIP of $9.62 billion**
  - **Capital Projects** – $8.77 billion for mandated projects, Lead Free DC program, rehabilitation of the Potomac Interceptor, equipment upgrades and rehabilitation at Blue Plains, and continued investments in the aging water and sewer infrastructure
  - **Capital Equipment** – $350.8 million equipment including pumps, motors, meters, backhoes, jet-vacs, catch basin trucks and other aged vehicles to meet operational needs
  - **Washington Aqueduct (WAD)** – $500.8 million for DC Water's share of WAD's capital program
- **Proposed Financial Plan**
  - Includes **previously approved FY 2026 rates and fees**
  - **Forecasts annual rate adjustments** to fund the forecasted operating budget and ten-year CIP
  - **Meets Board financial policy requirements**

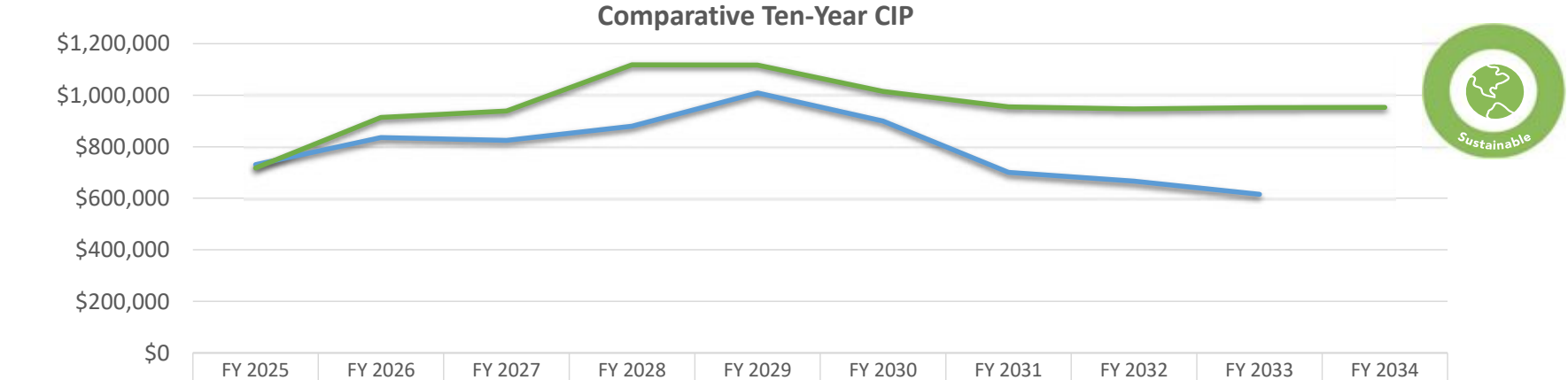
The Capital Improvement Program

- The **proposed ten-year CIP budget of $9.62 billion** includes annual spending estimates for capital construction, capital equipment and DC Water's share of the Aqueduct's capital projects
  - This is a $1.88 billion increase over the Board-approved CIP for the ten-year period
- The **proposed lifetime budget is $17.8 billion** and covers total commitments, including labor, for active projects prior to, during, and beyond the ten-year window

Cash Disbursements ($000's)	FY2025 - FY 2034 CAPITAL IMPROVEMENT PROGRAM											Last Year's	(Increase)	Lifetime
	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	10-yr Total	10-yr	Decrease	Budget
NON PROCESS FACILITIES	$ 18,181	$ 51,570	$ 36,149	$ 16,630	$ 13,006	$ 12,169	$ 16,339	$ 16,393	$ 16,616	$ 16,000	$ 213,052	$ 197,518	$ (15,534)	$ 414,629
WASTEWATER TREATMENT	68,282	106,353	111,659	195,570	188,694	221,431	222,997	215,925	217,553	214,990	1,763,454	1,333,603	(429,851)	3,871,705
COMBINED SEWER OVERFLOW	223,832	250,386	237,349	197,096	138,525	85,911	5,953	-	-	-	1,139,051	1,230,093	91,042	3,421,865
STORMWATER	8,209	17,360	16,440	6,955	3,540	5,131	1,738	2,311	2,554	1,602	65,840	68,551	2,711	151,699
SANITARY SEWER	146,901	148,796	170,931	345,603	399,157	303,342	301,698	302,597	299,314	300,268	2,718,608	1,855,580	(863,028)	3,745,688
WATER	185,094	270,680	297,810	288,118	300,403	314,195	297,381	300,544	307,069	310,652	2,871,946	2,353,028	(518,918)	4,968,489
CAPITAL PROJECTS	650,499	845,145	870,337	1,049,973	1,043,325	942,179	846,106	837,770	843,106	843,512	8,771,952	7,038,373	(1,733,579)	16,574,075
CAPITAL EQUIPMENT	31,477	32,481	32,052	31,825	37,169	37,169	37,169	37,169	37,169	37,169	350,848	347,390	(3,458)	350,848
WASHINGTON AQUEDUCT	35,770	35,770	35,770	35,770	35,770	35,770	71,540	71,540	71,540	71,540	500,780	357,472	(143,308)	500,780
ADDITIONAL CAPITAL PROJECTS	67,247	68,251	67,822	67,595	72,939	72,939	108,709	108,709	108,709	108,709	851,628	704,862	(146,766)	851,628
LABOR														383,495
TOTAL CAPITAL BUDGETS	$ 717,745	$ 913,396	$ 938,159	$ 1,117,568	$ 1,116,264	$ 1,015,118	$ 954,815	$ 946,479	$ 951,815	$ 952,221	$ 9,623,580	$7,743,235	$(1,880,345)	$17,809,199
Board Approved 10yr- CIP	732,139	841,815	829,232	888,890	1,017,465	908,987	709,507	675,467	625,006		7,743,235			
Delta (inc)/dec	14,394	(71,581)	(108,927)	(228,678)	(98,799)	(106,131)	(245,308)	(271,012)	(326,809)	(437,494)	(1,880,345)			

Comparative CIP by Year

- The proposed ten-year CIP budget of $9.6 billion reflects management's commitment to continue to invest in our aging water and sewer infrastructure after the completion of the mandated Clean Rivers program in 2030
- The chart below shows a sustainable CIP with projected annual spending trends that is consistent with the rate sustainability goals outlined in the Blueprint 2.0 and DC Water's rate-setting policies requiring "reliable" revenues

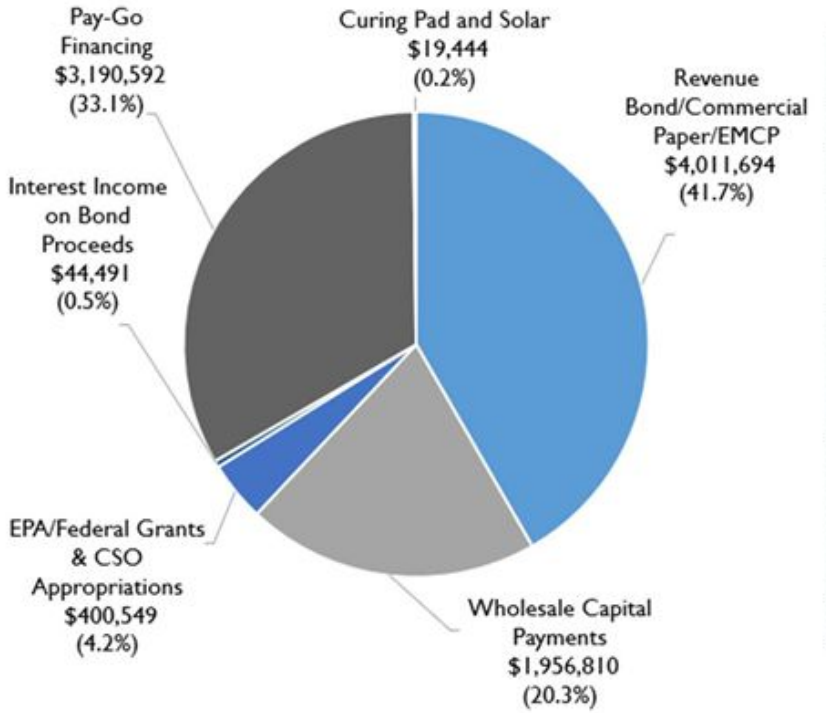


	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034
Board Approved	$730,583	$835,340	$824,196	$879,765	$1,008,340	$899,862	$700,382	$666,342	$615,881	
Proposed CIP	$717,745	$913,396	$938,159	$1,117,568	$1,116,264	$1,015,118	$954,815	$946,479	$951,815	$952,221

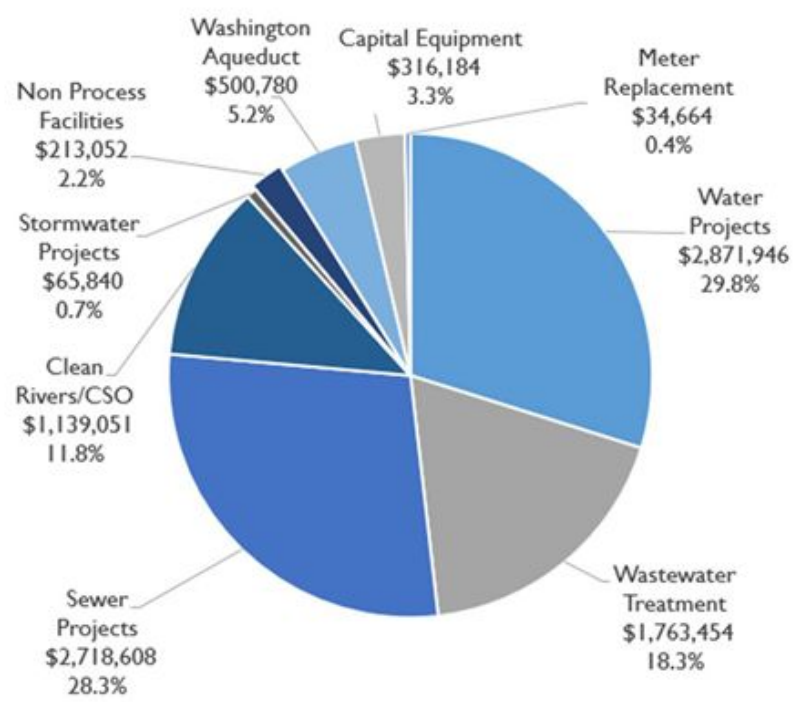
Ten Year CIP: Sources and Uses of Funds

$ in thousands

Sources - $9.62 Billion



Uses - $9.62 Billion



***Acronyms**: Environmental Protection Agency (EPA); Combined Sewer Overflow (CSO); Extendable Municipal Commercial Paper (EMCP)*

Proposed CIP

DC Water Budget Overview

FY2025-2034 Proposed Capital Investments of **$9.6 billion**

Sewer Infrastructure Investments $2.79 billion

Ramps up to 1% rehabilitation for small/local sewer lines per year and invests in high risk trunk sewers.

Water Infrastructure Investments $1.77 billion

Ramps up to 1.5% replacement for small diameter water mains per year.

Blue Plains $1.76 billion

Funds rehabilitation and upgrades including Filters, Primary treatment, and process innovations.

LEAD FREE DC

$1.10 billion
Continue eliminating lead service lines and meet regulatory requirements.

dc clean RIVERS PROJECT

$1.07 billion
Fully funds DC Water Clean Rivers projects to meet Consent Decree requirements

Invests in the Aqueduct's capital infrastructure

$351 million
Invests in process equipment, specialized vehicles, and information technology infrastructure

Renovates Non-Process Facilities including at Blue Plains, Main Pump Station, and Bryant Street Pump Station.

Improves stormwater pump stations to relieve local flooding

The Proposed Budget

The 10-Year $9.62 billion Capital Program, with projected rate increases

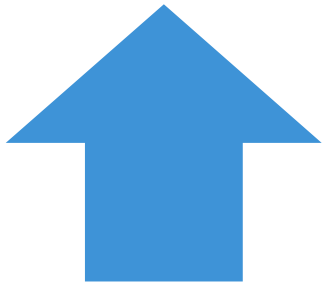
- Fully funds the Clean Rivers Program including completion of the Potomac River tunnel to meet the consent decree requirement by 2030
- Allocates $1.1 billion for the Lead-Free DC program
- Funds more than 150 miles of small diameter water main replacement
- Invests $4.5 billion in the aging water and sewer system infrastructure including full rehabilitation of Potomac Interceptor
- Directs $1.8 billion for major rehabilitation and upgrades at Blue Plains
- Allocates $500.8 million for DC Water's share of the Aqueduct's infrastructure program
- Provides $350.8 million for the purchase/replacement of vehicles, heavy-duty equipment, mechanical equipment, operational facilities, meters, office renovations, and IT projects

DCCR Potomac Tunnel Mining Shaft Construction

Proposed Changes to 10-year CIP by Service Area

Increases

Service Area	Increase	10-yr Total
Non-Process	$15M	$213M
Wastewater	$430M	$1.8B
Sewer	$870M	$2.8B
Water (excluding LFDC)	$152M	$1.8B
LFDC	$367M	$1.1B



Comparison of the Approved 10-yr FY 2024-2033 vs Proposed 10-yr FY 2025-2034

Overall this is a 25% increase across the 10-year window

Decreases

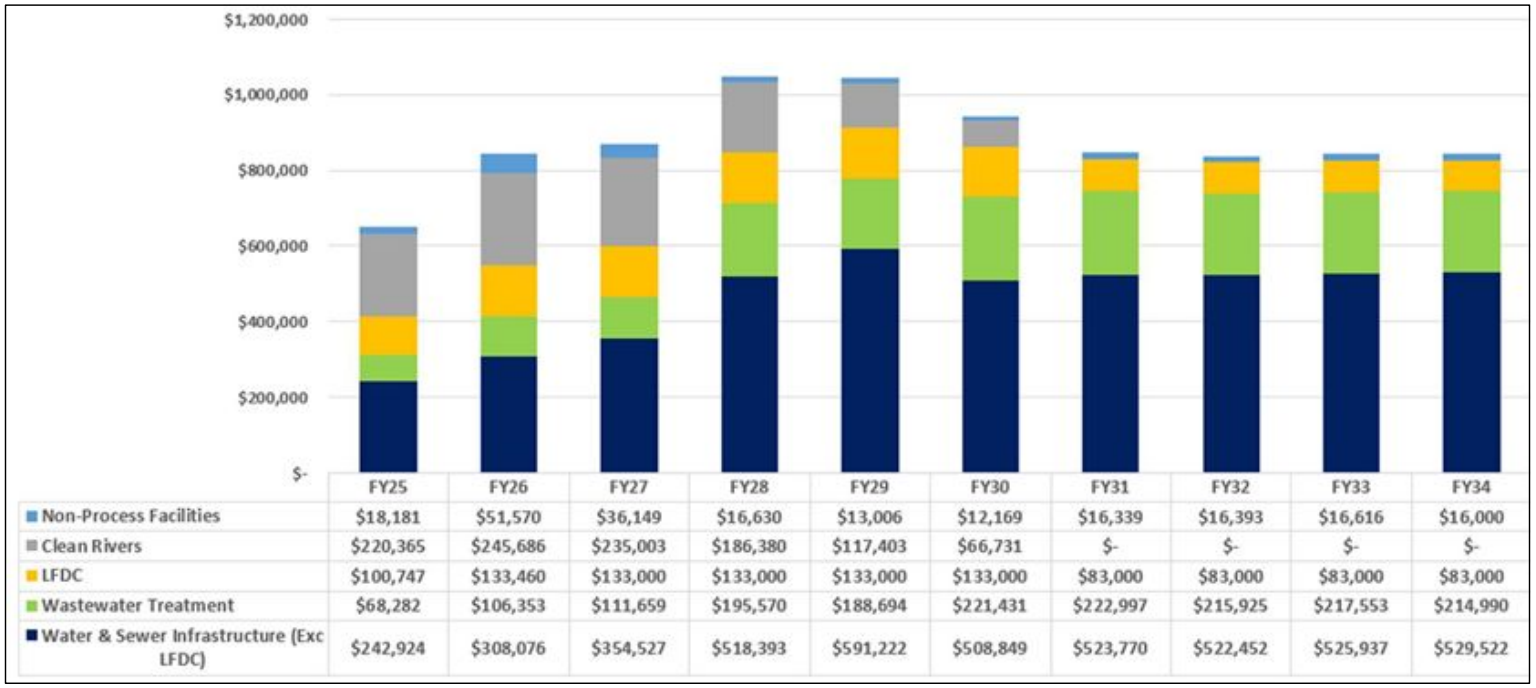
Service Area	Decrease	10-yr Total
Stormwater	$3M	$66M
DCCR (ending 2030)	$98M	$1.1B

We prioritized and only added **necessary projects** this year, there are additional needs that will be discussed later in the presentation

Major Proposed Changes in the 10-Year CIP

Service Area	Project/Cost Driver	10-Year Increase	Cost Allocation
Lead Free DC Program	Brass	$220M	DC
Lead Free DC Program	DDOT Permits	$85M	DC
Wastewater	Odor Control & Second Source	$429M	DC & Wholesale Customers
Sewer & CSO	Potomac Interceptor	$441M	Wholesale Customers
Sewer & CSO	Sewer Rehab (IR & R)	$250M	DC & Wholesale Customers
Sewer & CSO	Small/Local Sewers	$92M	DC
Water	Water Distribution	$61M	DC
Water	Water Storage	$57M	DC
Washington Aqueduct	Future Needs	$143M	DC

Proposed 10-year CIP for Capital Projects



	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
Non-Process Facilities	$18,181	$51,570	$36,149	$16,630	$13,006	$12,169	$16,339	$16,393	$16,616	$16,000
Clean Rivers	$220,365	$245,686	$235,003	$186,380	$117,403	$66,731	$-	$-	$-	$-
LFDC	$100,747	$133,460	$133,000	$133,000	$133,000	$133,000	$83,000	$83,000	$83,000	$83,000
Wastewater Treatment	$68,282	$106,353	$111,659	$195,570	$188,694	$221,431	$222,997	$215,925	$217,553	$214,990
Water & Sewer Infrastructure (Exc LFDC)	$242,924	$308,076	$354,527	$518,393	$591,222	$508,849	$523,770	$522,452	$525,937	$529,522

DCCR spending peaks in FY26/27 and tapers out by 2030

The spending plan for the outer years FY30 and beyond has been levelled out.

Service Area Details of Proposed CIP

Non-Process Facilities ($213M)

Main Pump Station Building Restoration:
$21.2M upgrade the condition of the architectural, structural, mechanical and electrical systems.

Bryant Street Pump Station Envelope Upgrades:
$21.5M, structural, roof and external envelope rehabilitation and upgrades.

Blue Plains Enhancements:
$4.5M, enhance employee and visitor experience; create space for additional treatment processing capacity.

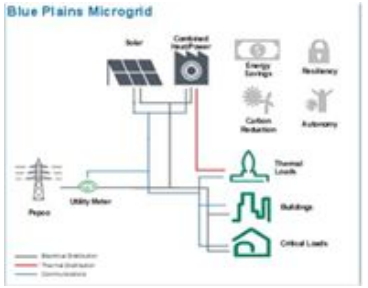
Wastewater Blue Plains ($1.76B)

Overall Increase - $429M

Liquid Processing - $1,050M

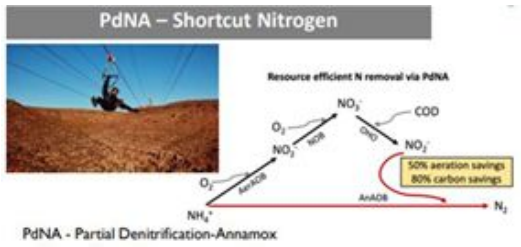
384 MGD Average; 780 MGD Peak

Plantwide - $402M



Solids Processing - $309M

Enhanced Nitrogen Removal Facilities - $0.7M



Blue Plains Major Projects – Investments for Reliability

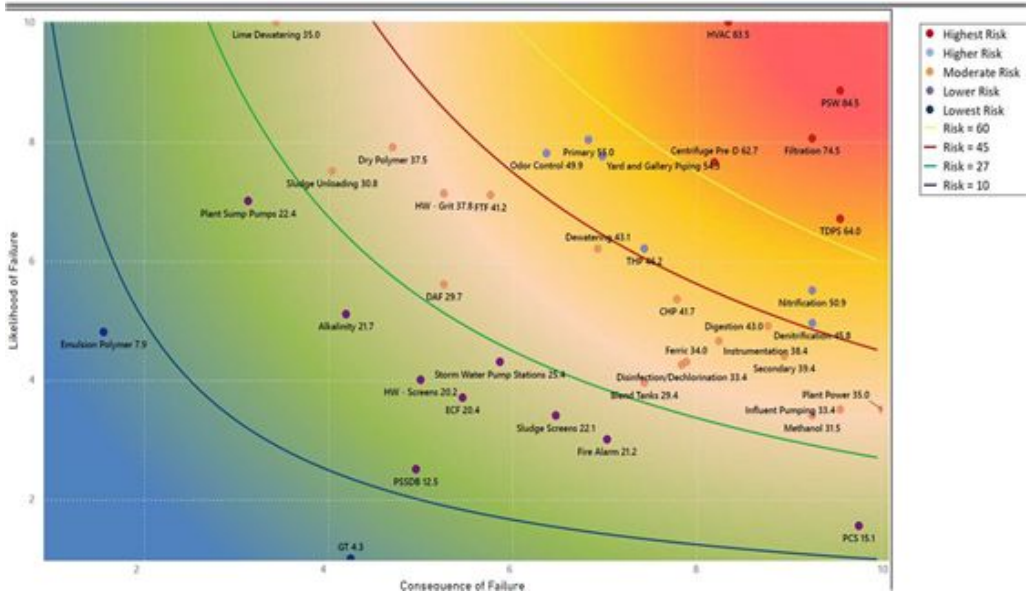
- Asset management best practices
- Project prioritization based on risk ranking
- Rehabilitation and replacement of aging infrastructure
- Data driven decision making

38 Projects Underway this Fiscal Year, 8 in Planning, 9 in Design and 21 in Construction

PSW/PSL/PSC Piping Replacements

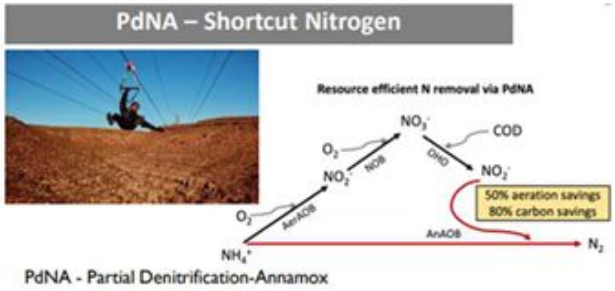
Filter Underdrain Rebuild

Consequence of Failure (COF) and Likelihood of Failure (LOF) Scores for Blue Plains AWTP by Unit Process



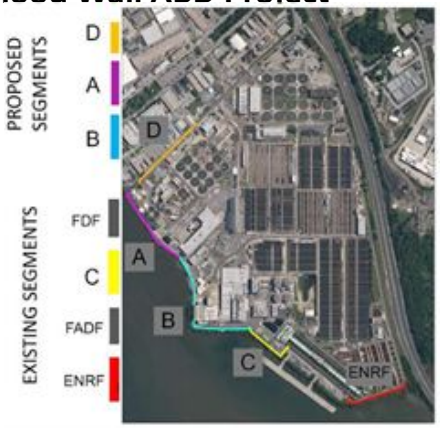
Investments for Sustainability and Resilience

Process Intensification – Secondary and Nitrification



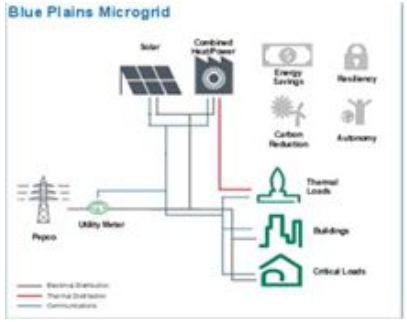
- Innovative research to meet nitrogen discharge permit limit with future load
- Reduced dependence on methanol
- PdNA full scale pilot under construction

Flood Wall ABD Project



- 3,350 LF total
- Reviewing statement of qualifications and proposals

Microgrid Study Project



- Microgrid roadmap study completed
- Roadmap provides recommendations for addressing electrical system reliability and resiliency improvements

Major Blue Plains Projects

Project Name	10-yr Total
Headworks Electrical Upgrades	$72M
Headworks Influent and Effluent Structures Rehabilitation	$34M
Primary Treatment - 20 year Rebuild	$140M
Filters Underdrain and Backwash Systems Upgrade	$144M
20 yr Influent Screens Building Upgrade	$65M
Secondary East and West - 20 year rebuild	$96M
Long-term Concrete Rehabilitation Projects	$68M
Control Systems Replacement	$37M
Electrical Power System Upgrades and Microgrid Studies	$26M
Biosolids Rehabilitation	$80M
DAF Facility 20yr Upgrade	$50M

Headworks Electrical Upgrades

- FY 2025 – FY 2027 Planned Disbursements - $23M
- Total Estimated Project Cost - $72M

Construction of Flood Seawall Segments A, B & D

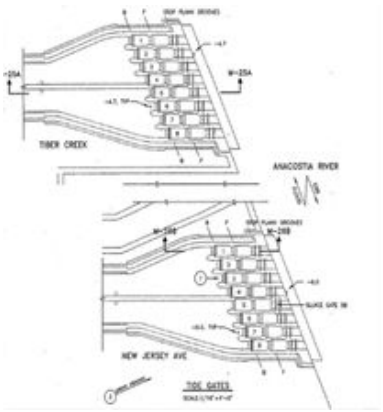
- FY 2025 – FY 2027 Planned Disbursements - $15.6M
- Total Estimated Project Cost - $34M

High and Low Pressure Reclaimed Final Effluent Pumping System Upgrade

- FY 2025 – FY 2027 Planned Disbursements - $3.8M
- Total Estimated Project Cost - $20M

Combined Sewer System and Stormwater Pump Stations ($105M)

Combined Sewer System (CSS) $60M



- Inflatable Dams at CSS Outfalls.
- Tide Gates rehabilitations.
- Main and O street Pump Station long term upgrades.
- Maintain compliance with consent decree for firm capacity at CSS pump stations
- Address reliability and resiliency for climate change and flood hazards

16 Stormwater Pumping Facilities $45M

- 8 stations under design or construction to upgrades that include: Pumps, Electrical, HVAC and code compliance, SCADA, Safety and security.
- 4 stations are partially funded by FEMA grants.
- Major construction upgrades completed at 2 stations

Clean Rivers Project and Potomac Interceptor

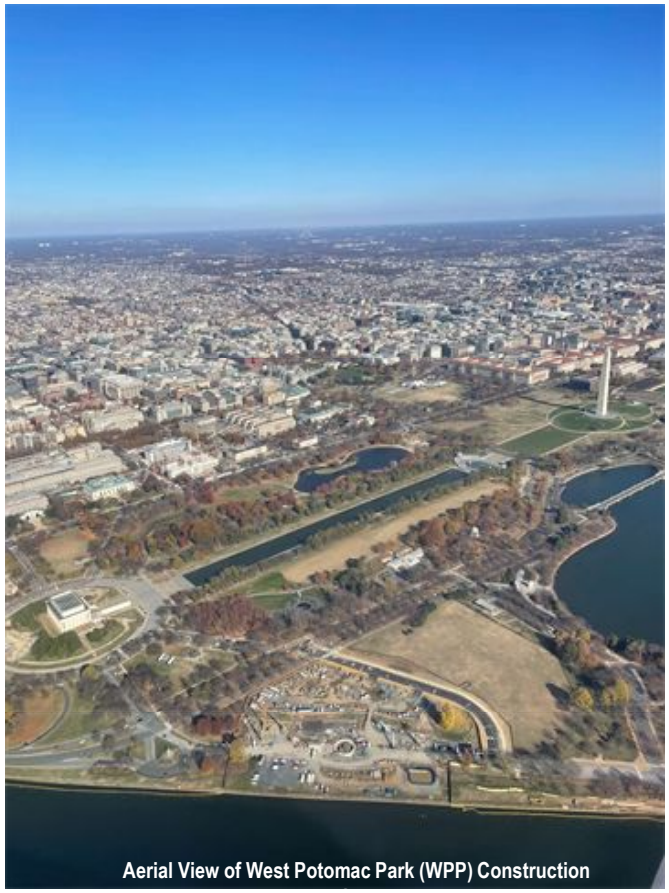
Long-Term Control Plan ($1.07B)

Clean Rivers LTCP 10 -year CIP decreased by $98M

- **Remaining 10-year Budget**
  - Anacostia LTCP Projects ($16.8M)
  - Potomac LTCP Projects ($930.2M)
  - Rock Creek LTCP Projects ($124.6M)


WPP- Overflow and Mining Shaft Excavation


R Street


Aerial View of West Potomac Park (WPP) Construction

Long-Term Control Plan - Continued

Projects in Closeout:

Div J, Northeast Boundary Tunnel

Projects in Construction:

Div PRT-B, Potomac River Tunnel
- NTP issued on Nov. 9, 2023
- Consent Decree Place in Operation Date – February 9, 2030

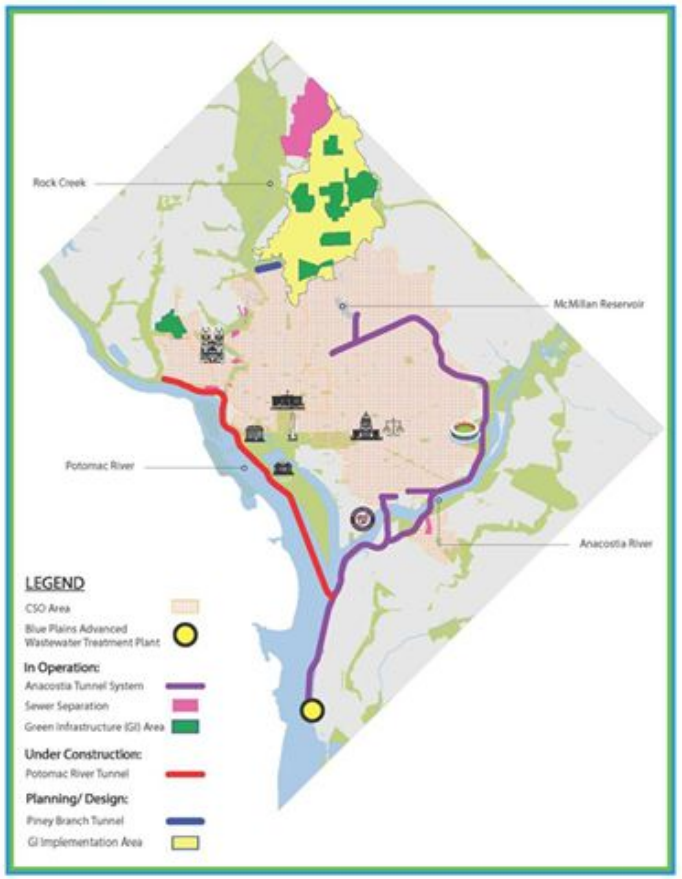
Upcoming Projects:

Div RC-C, Green Infrastructure
- Delivery method – Construction Manager At Risk (CMAR)
- Preconstruction Services - Awarded on September 27, 2024
- Guaranteed Maximum Price (GMP) Amendment - February 2025

Div RC-T, Piney Branch Tunnel
- Delivery method - CMAR
- Preconstruction Awarded on November 12, 2024
- GMP Amendment - December 2025

Div RC-D, Green Infrastructure
- Procurement 2027

Acronyms:
CMAR – Construction Manager at Risk GMP – Guaranteed Maximum Price



Potomac Interceptor (~$667M)

10 -year CIP - $667M, which is a $435M increase compared to the Approved Budget

High Priority Project

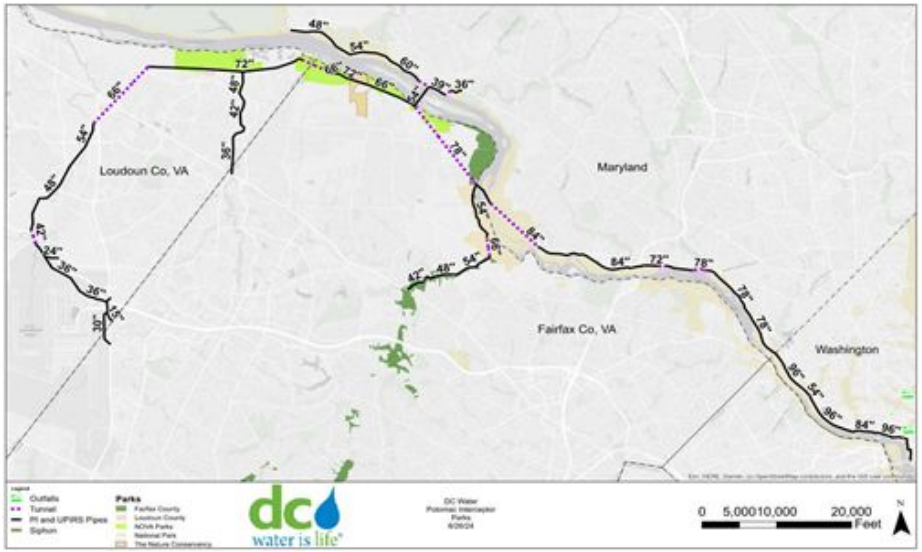
- PI-00: MH 18 – MH 19
  - Completed CCTV
  - Finalizing design repair for 800LF of pipe
  - Developing a procurement approach
  - Repair work scheduled for February/Mar 2025

Upcoming Projects

- PI01: Anglers Inn/Cabin John
  - Delivery method - CMAR
  - RFQ/P for CMAR- February 2025
- PDB Projects
  - RFQ/P for PDB Projects – July 2025

Acronyms:

CCTV – Closed-Circuit Television
PDB – Progressive Design Build
RFQ/P – Request for Qualifications/Proposal
LF – Linear Feet
RFP – Request for Proposal



Potomac Interceptor Corrosion Resulting in Loss and Exposure of Reinforcing

Sanitary Sewer

Sanitary Sewer ($1.86B)

Overall Increase - $863M

Sewer Collection System - $685M

Interceptor/Trunk Force Sewers - $1.34B

Sewer Ongoing - $457M

Sewer Pumping - $190M

Sanitary Sewer System– Investment for Reliability

Risk Based Prioritization

Inspections Performed:

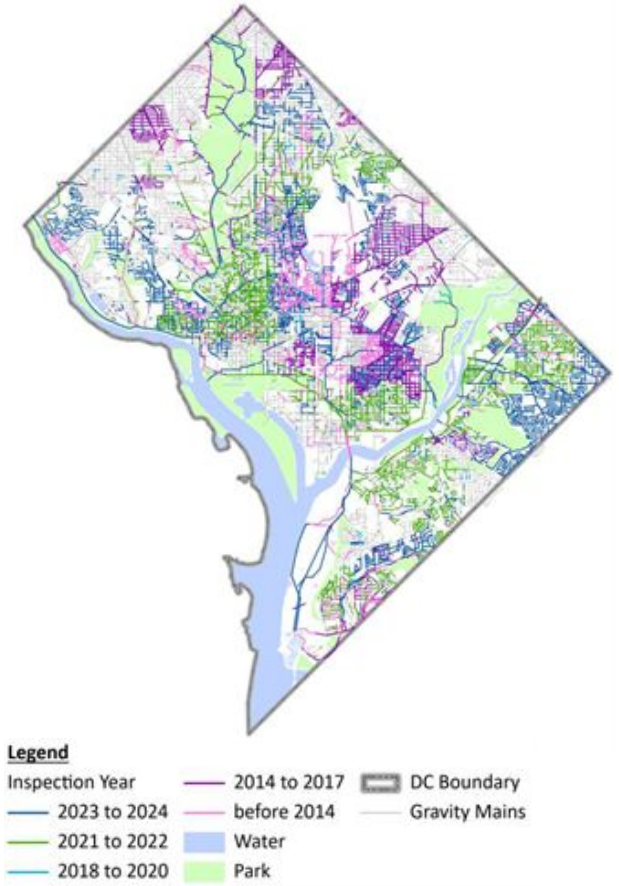
- 42% of entire sewer system Local and Large (incl. storm sewers; excl. DCCR tunnel, UPIRS, and Potomac Interceptor)
- 58% of the combined sewer area and sanitary sewer area (excl. DCCR tunnel, UPIRS, and Potomac Interceptor)

Benefits:

- Impacts of performance or physical failure of assets to vulnerable communities are minimized.
- Improve/maintain level of service to customers
- Enhances overall resiliency of the system

Local Sanitary Sewer Projects

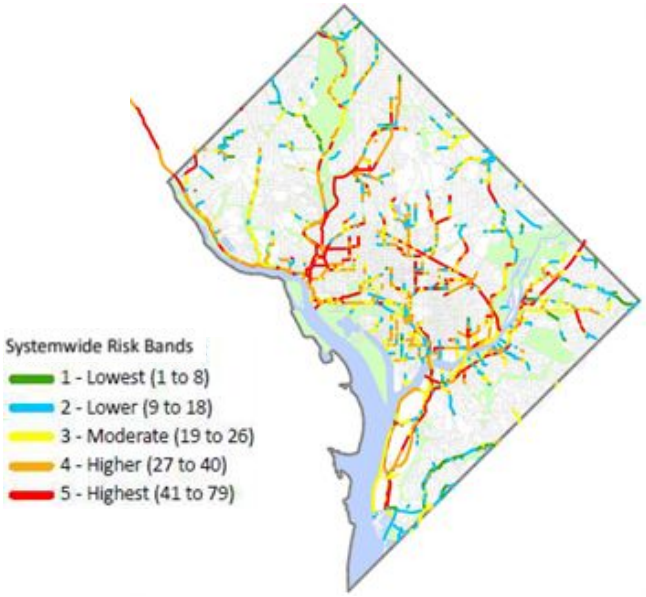
- Current goal is 1% rehabilitation per year prioritized based on results of annual 40 miles of local sewer inspections.



Sanitary Sewer continued

Sanitary interceptor/trunk/ force mains sewers – current approved budget

- 38 miles of major sewer rehabilitation including Anacostia Main Interceptor, East and West Outfall Relief Sewers, and others.



New projects added & requested budget increases:

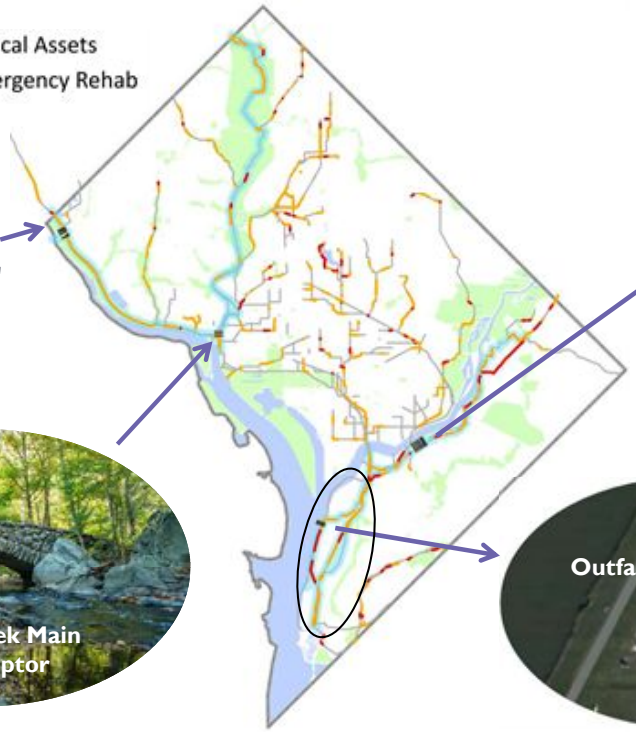
- New Emergency Sewer Rehab funding ($45 million)
- New Capital Project Allowance under Sanitary On-Going ($229 million)
- Identification of additional needs is ongoing and will be further addressed in upcoming CIP cycles

Address risks:

- Provide emergency response contracts
- Discharge of untreated wastewater to the environment
- Interceptors carrying high flows have high consequence of failure impacting large number of customers
- National Pollutant Discharge Elimination System permit violations

Sanitary Sewer continued

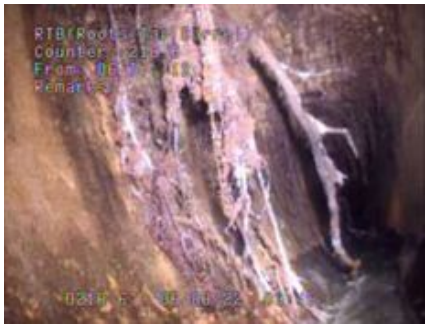
Critical Assets Identified by Recent Inspections



Sanitary Sewer continued

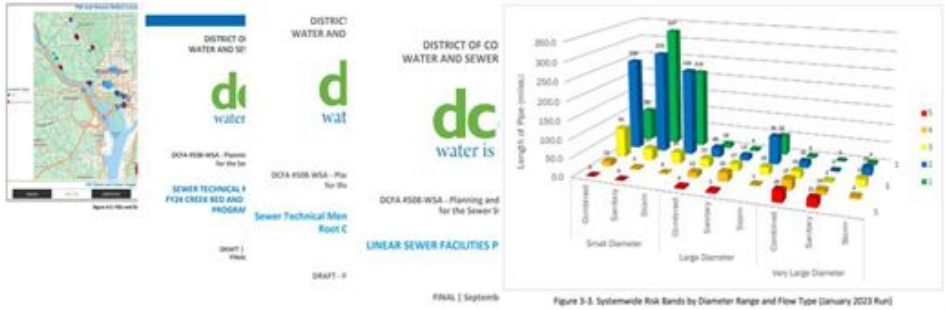
Sanitary Ongoing $456M

- Cleaning and root control
- Emergency repair of collapsed and broken sewers
- Additional funding for Local sewer rehabilitation from FY31 onwards



Sewer Program Engineering Support $42M

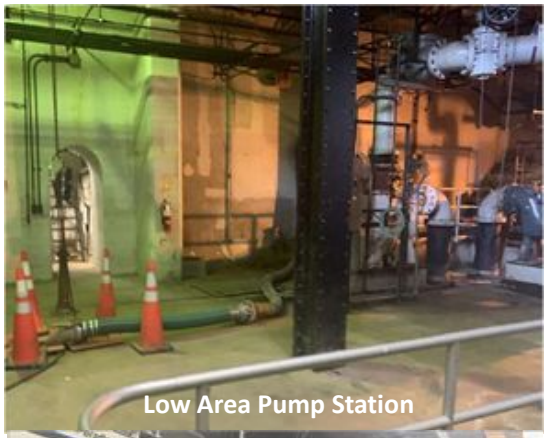
- Staff Augmentation.
- Programmatic Support for: Asset Management, Annual CIP Updates, Creek Bed and MS4 Outfall Program, Third-Party Design Review, Condition Assessment/Inspection Support for Linear assets.
- Prepare Concept Design Reports (CDR)
- Operations support include during sewer emergencies
- Owner's Agent



Sanitary Sewer continued

Sanitary Pumping Facilities $190M

- Maintain compliance with consent decree for firm capacity
- Address reliability and resiliency for climate change and flood hazards
- SCADA, Electrical, Process Mechanical upgrades
- Code Compliance, Safety and HVAC improvements
- Security Upgrades
- Solids handling improvements
- Variable Speed Drives upgrades


Low Area Pump Station


Rock Creek Pump Station


Existing Potomac Pump Station VFDs


Main PS Sewer and Storm Pumps

Water ($2.87B)

Overall Increase - $519M

Water Distribution System - $1.21B


Lead Free DC - $1.1B


Water Pumping Facilities - $43M


Water Storage Facilities- $251M


Water – Investment For Reliability

Water Distribution System Program Area - Summary

- Ramp up to 1.5% replacement rate per year for small diameter water mains.
- Anacostia 3rd high Pressure improvements
- Upgrades to Interconnections with WSSC water system
- Replacement of distribution mains with Water Quality and Water Pressure issues
- Critical Valve Replacement Program based on Operations' needs and Water Main Criticality

Benefits:

Impacts of performance or physical failure of assets to customers are minimized.

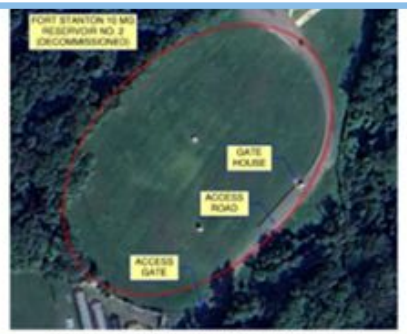
Water continued

Water Storage Facilities
$250.9M

- 7 active storage facilities
- 6 storage facilities scheduled for construction or upgrades
- Increase reservoir storage capacity ($80 million)
- Many structures have exceeded useful life (50-years). Therefore, these projects will address:
  - Regular inspections and upgrades
  - EPA Sanitary Survey requirements

Project QG02: Ft Stanton Reservoir No. 2 Rebuild

Fort Stanton Reservoir No. 2 Key Map



Fort Stanton Reservoir No. 2 Aerial Map

Location:	2 MG (in Fort Stanton Park) SE
Type:	Buried Concrete Reservoir
Description:	The reservoir is a concrete structure and has a 'racetrack' like shape. The structure is 273 feet wide and 413 feet long with a side water depth of about 18 feet.
Overflow Elevation:	258 feet
Invert of Reservoir	240 feet
Minimum Operating Level:	246 feet
Volume of Reservoir:	10 MG
Year of Construction:	Placed into service in 1943

Completed Rehabilitation Work:

Project FA01 was completed in FY14. The work included the following:

- Slope Stabilization
- Joint Seal Repairs

Project FA06 was completed in FY16. The work included the following:

- Reservoir Ventilation Improvements
- Finalization of Cross-Connection Elimination
- Other miscellaneous upgrades and improvements

Planned / Ongoing CIP Work:

Project QG02 begins planning in April 2024 and construction start is August 2027. The scope includes the following:

- Retrofit or construct a new facility in the existing footprint of FSR2.
- Piping connections within the fence.

Water continued

Water Pumping Facilities $43.2M

- Bryant Street PS Spill Header continues construction
- 4th High Reno Booster Pump Station
- Anacostia and Ft. Reno Pump Stations Electrical, Mechanical & Instrumentation Upgrades

Anacostia PS

Main findings:
- Aging and wear of assets

Main activity:
- Replace aging systems
- Inspection and overhaul of pumps

Bryant Street PS

Main findings:
- Aging and wear of assets
- Pumps 4, 5, and 6 (Low zone)
- Pumps 7 and 8 (2H zone)

Main activity:
- Replace aging system
- Inspection and overhaul of pumps and casings
- Address Pumps 4, 5, and 6

Ft. Reno PS

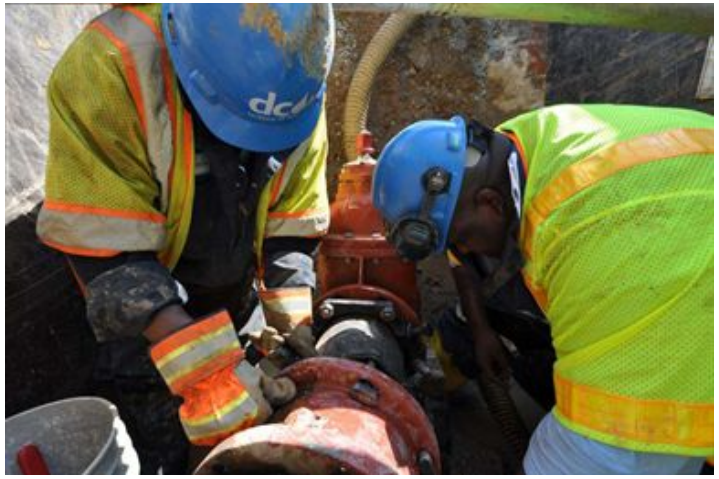
Main findings:
- Pump hydraulics, suction heade
- Aging and wear of assets

Main activity:
- Replace aging systems

Water continued

Water Ongoing $183M

- Fire hydrant replacement
- Valve replacement
- Replacement of distribution mains with Water Quality issues
- Flushing of the water distribution system
- Repair pipe breaks



Water Program Engineering Support $84M

- Program management and administration
- Enterprise Asset Management
- Delivery of the CIP in the Water Service Area
- Planning, and project development for CIP projects
- Planning and execution of inspection and condition assessment programs for linear and vertical assets
- Digital Transformation
- Secondary water source study
- Staff Augmentation for operations support and coordination
- Provide emergency response support

Lead Free DC ($1.1B)

Lead Free DC $1.1B

Overall Increase $367M

- $101M forecast spending in FY 2025
- Replace all lead services
- Confirm material of all services and update inventory
- Conduct community outreach
- Pursue funding sources & grants

37

Collaborative Project Delivery

Collaborative Project Delivery

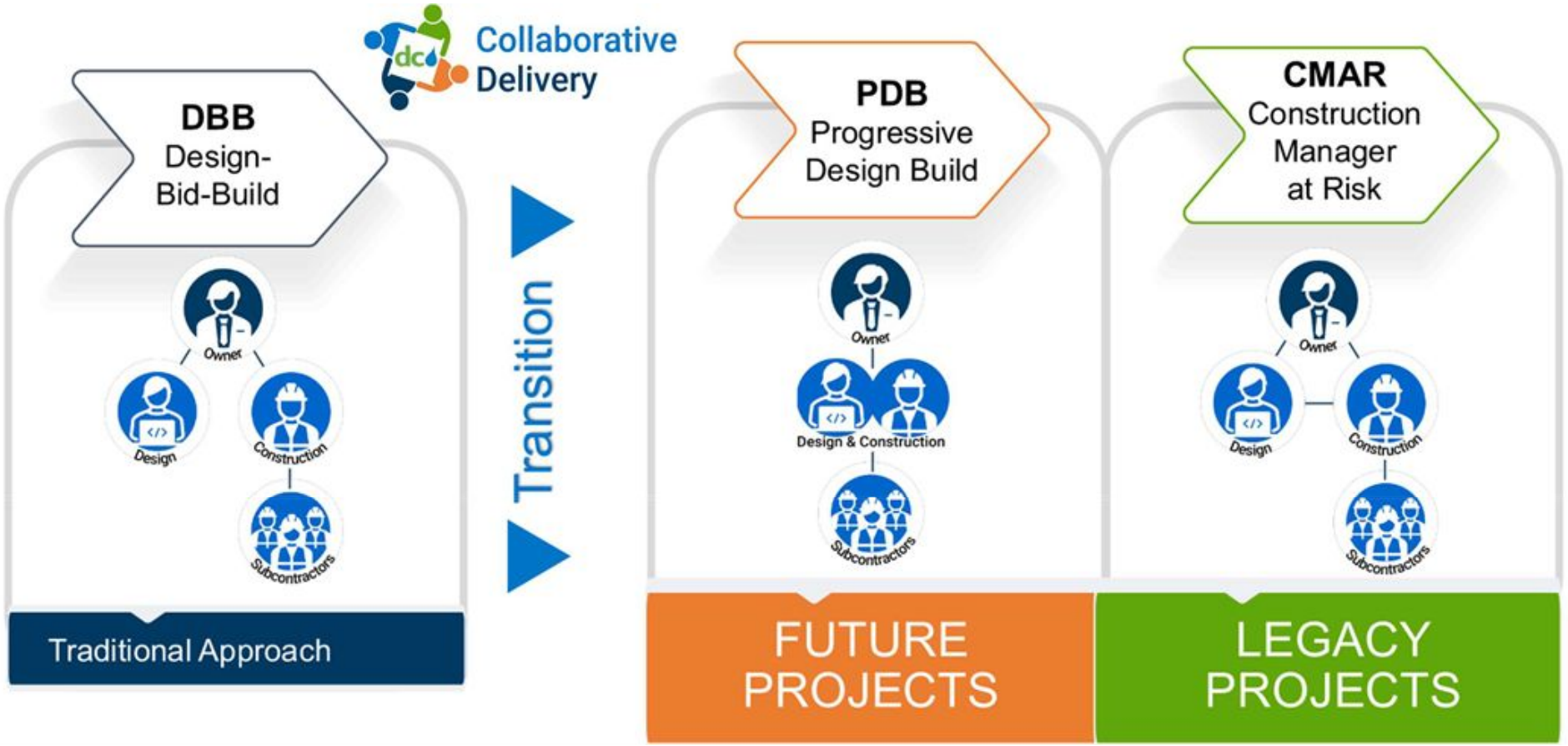
Collaborative Delivery as preferred project delivery method

- Construction Manager at Risk
- Progressive Design-Build

Drivers for DC Water

- Attract high caliber contractors, increase available pool of contractors
- Reduce risks and achieve better project outcomes including quality, schedule, and budget

Collaborative Project Delivery



Trained Staff

Design-Build Institute of America (DBIA) principles are driven by the core belief that design-build projects are best executed within the context of an integrated, collaborative team grounded in an atmosphere of mutual trust, transparency, respect, and open, candid communication.

47
DBIA Trained DC Water Staff

>20
DBIA Certified DC Water Staff

Project Consolidation

Collaborative Delivery

Project No.	Job Name(s)	Budget
1	Anacostia Pump Station Major Upgrades	$13.6M
2	Phase 1 Fort Stanton Reservoir #2 Replacement	$40M
3	Phase 2 Fort Stanton Reservoirs #1	$20M
4	Bryant Street Pumping Station Improvements Phase III	$10M
5	Anacostia 3rd High Pressure Zone Improvement	$41M
6	Anacostia Pump Station Major Upgrades	$13.6M

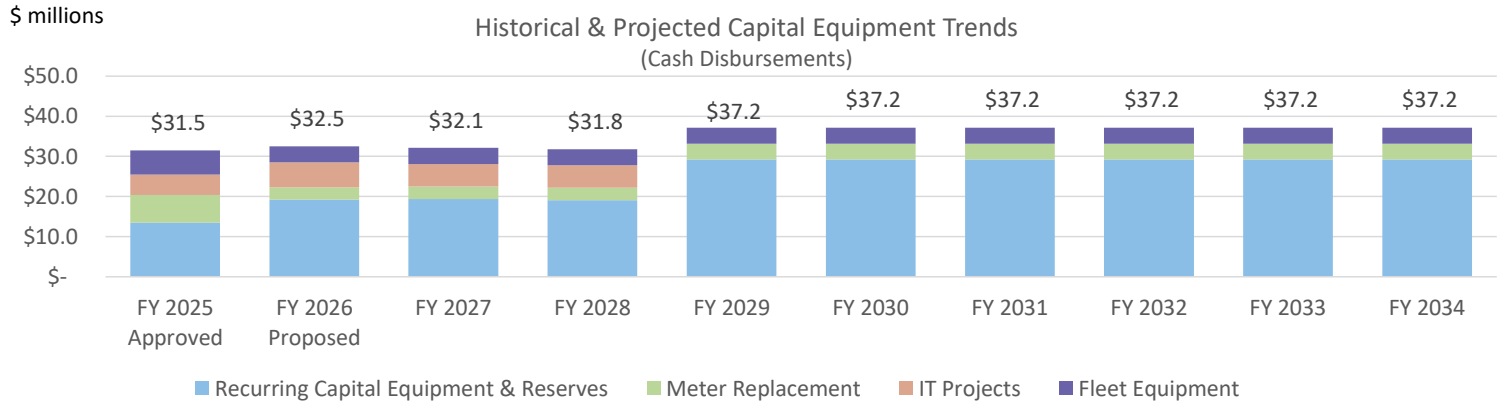
One Progressive Design Build Contract – Water Pumping and Storage Reservoirs

- Streamline procurement timeline.
- Optimize resource management.
- Consider multiple GMPs/Work Packages and independent schedules.
- Flexibility based on material availability, project criticality and permitting challenges.

The Proposed CIP
Cap Equipment and WAD

Capital Equipment

- The Proposed FY 2026 budget is $32.5 million, a net increase of $1 million compared to the FY 2025 budget
- Ten-year disbursements of $350.8 million for capital equipment includes :
  - **Recurring Capital Equipment and Reserves** – This covers the purchase/replacement of pumps, motors, HVACs, roof, renovations, laptops, computers, servers, fire hydrants and includes the Authority-wide reserves for new facilities and unplanned equipment needs
  - **Information Technology (IT) Projects** – Funds new projects and upgrades to various Authority-wide technology systems
  - **Fleet Equipment** – Earmarks funding to ensure that crews have the required equipment such as backhoes, jet-vacs, small and large dump trucks to meet operational needs



Washington Aqueduct

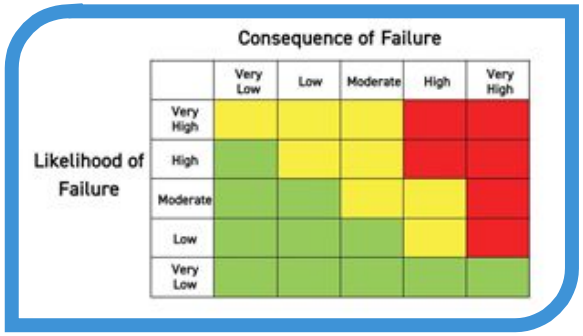
- DC Water's share of the Washington Aqueduct (WAD) 10-year capital program budget is $500.1 million, which includes:
  - The proposed FY 2025 budget is $35.8 million
  - Annual CIP estimates for FY 2025 beyond range from $35.5 to $71.5 million per year
  - This proposed budget includes funding for projects such as: Dalecarlia filtration building upgrades, renovations, roof replacements, HVAC upgrades, and emerging projects

(Cash Disbursements $ in thousands)	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	10-yr Total
WASHINGTON AQUEDUCT	**35,770**	35,770	35,770	35,770	35,770	35,770	71,540	71,540	71,540	71,540	500,780

Needs Beyond the Proposed CIP

Path to Future: More Sustainable CIP

- **Proposed CIP** of $9.6B addresses many of DC Water's critical assets but there is more to do



- **Future ten-year CIP** will consider needs which may be $5B to $10B more than current proposal
  - Rehabilitate large trunk sewers with high consequence of failure
  - Assess and address high risk Large Diameter Water Main defects
  - Address the local sewers backlog 50 years sooner by rehabilitating at 2.5% per year
  - Address small diameter water main backlog 20 years sooner by replacing 27 miles per year vs current 17 miles

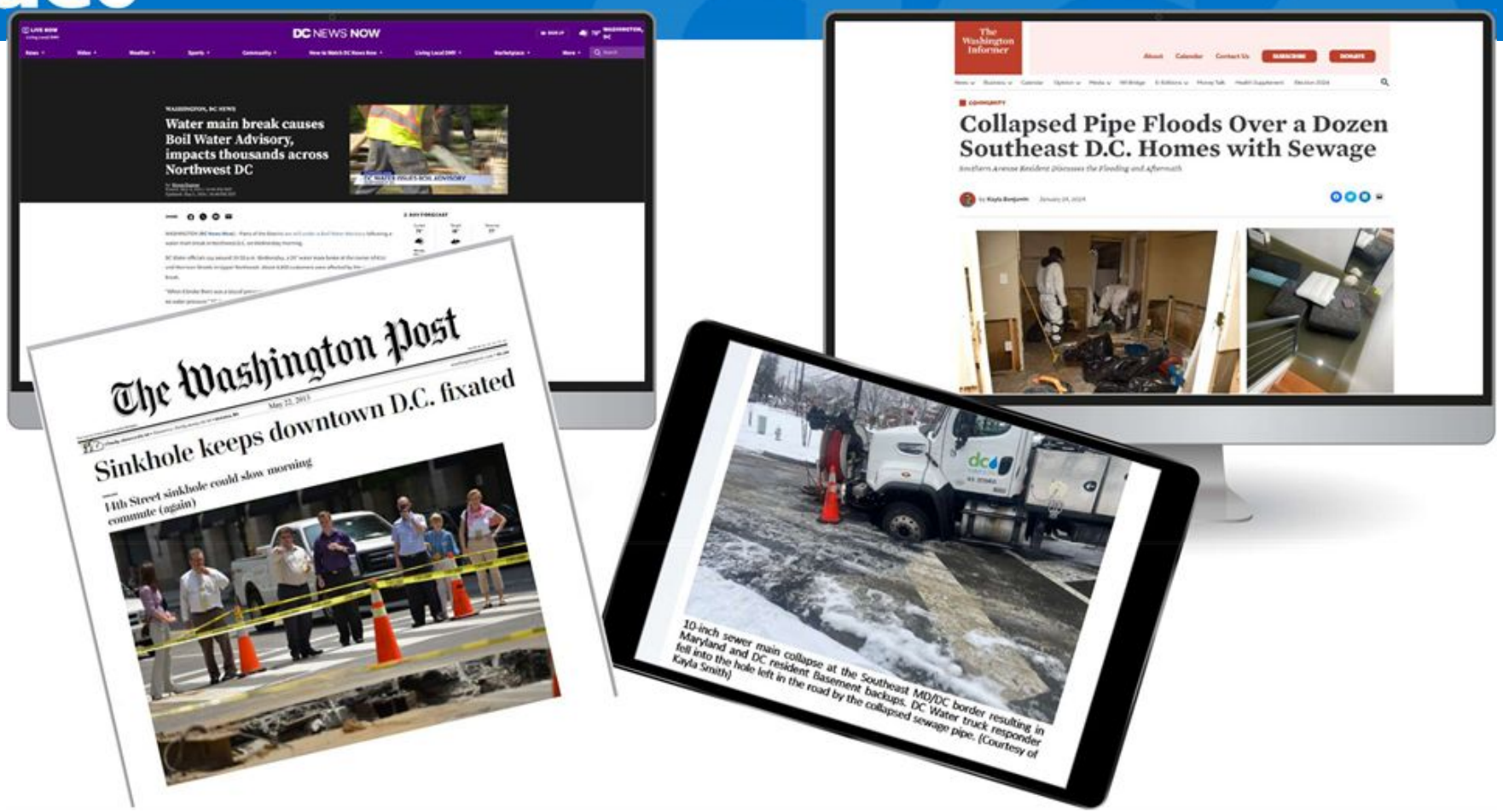
- **Path Forward:** Lay the groundwork for the next year's ten-year CIP budget and two-year rate proposal
  - Continue with condition assessments and collecting operational priorities to further define CIP needs
  - Evaluate customer affordability including required retail rate adjustments and wholesale contributions
  - Confirm inflationary increases are included and Work to identify additional funding sources
  - Deliver presentations throughout 2025 to the various Board Committees and Stakeholders
  - Incorporate findings and feedback into the future (FY26-35) CIP proposal

Critical Customers and Aging Infrastructure

High Consequence of Failure

We have an old system serving our residents and government

Infrastructure in the News



Accelerated Need for Investment

We are at Risk – Recent Large Sewer Emergencies

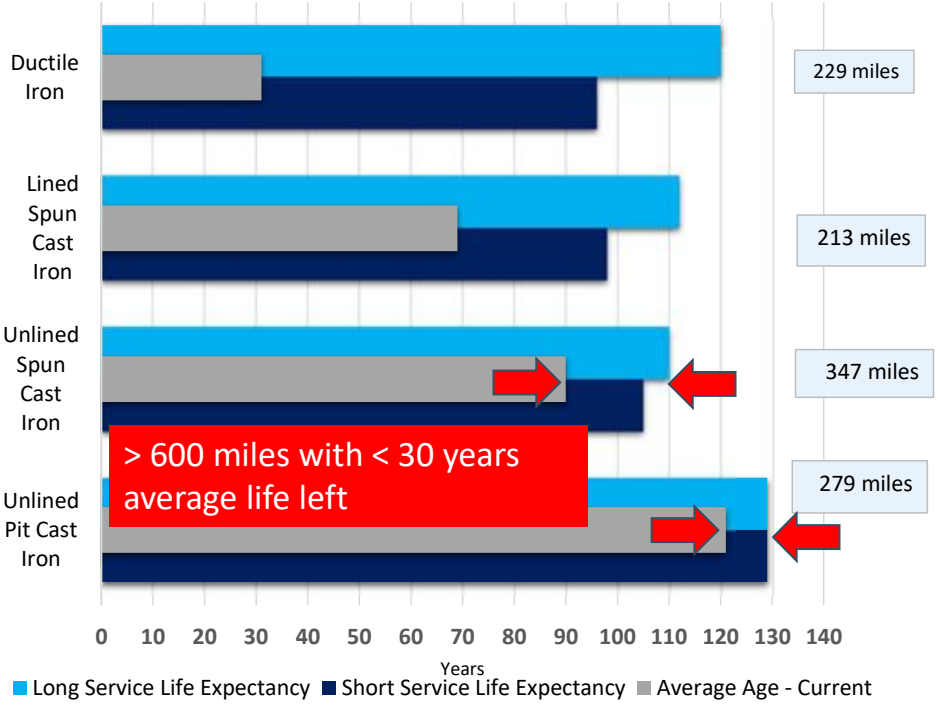
Project Location	Failure (year)	Est. Cost ($)
East/West Outfall Relief Sewer	2023	**$25M**
Glover Park	2023	**$1.8M**
Anacostia Main Interceptor	2023	**$10M**
Potomac Interceptor MH-31	2024	**$10M**
NW Boundary Trunk Sewer *Phase 1 repair only	2024	**$2M***
Tiber Creek Manhole	2024	**$0.8M**

NW Boundary Trunk Sewer

Anacostia Main Interceptor Sinkhole

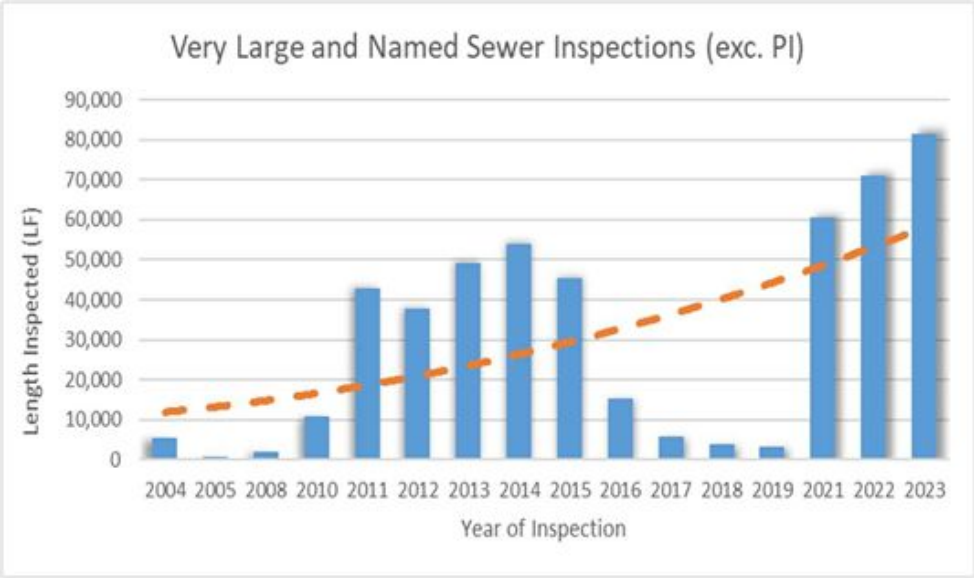
Small Diameter Water Main Life Expectancies

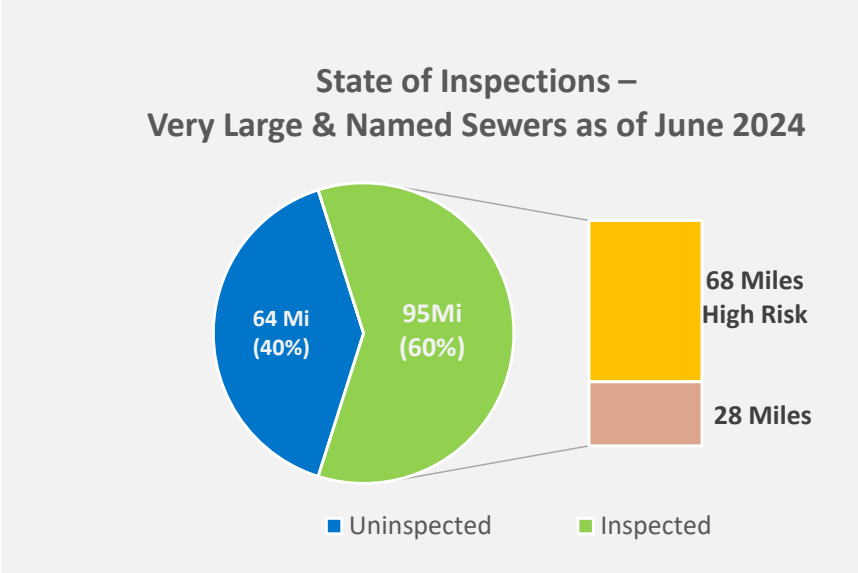
Length Weighted Average Age: 81 years



Large Sewer Risk Assessment

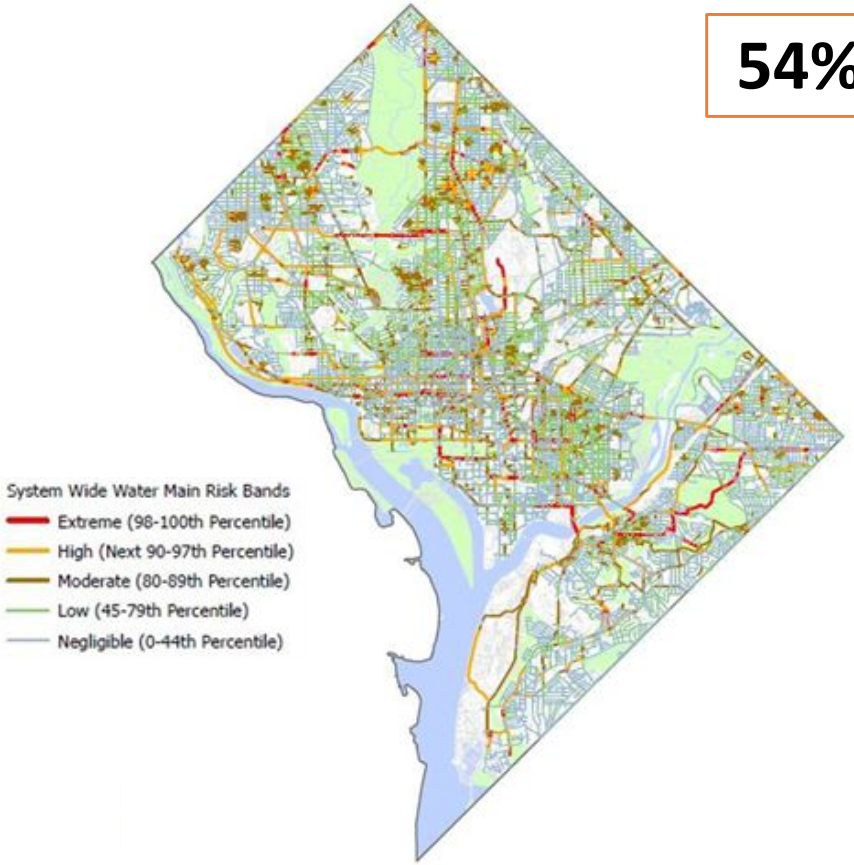
Inspection supports rehabilitation and reliability





72% <u>(68 mi) of inspected</u> high-risk assets show signs of corrosion or have very severe defects.

Large Diameter Water Mains Risk Banding



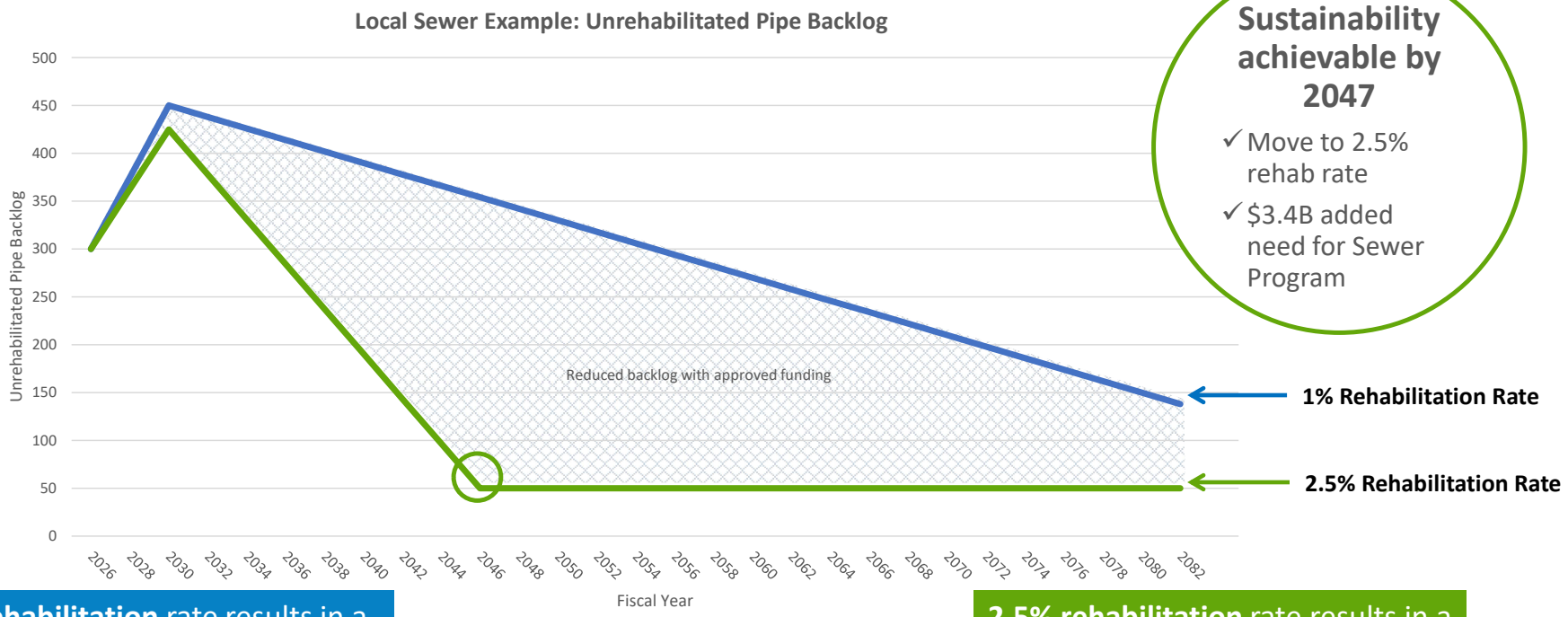
54% of large mains Fall into "Extreme" or "High" Risk

Risk Category	Percent of Large Diameter WMs	FY2023 Large Diameter Mileage
Extreme	**18%**	**41.5**
High	**36%**	**81.1**
Moderate	32%	71
Low	10%	22.9
Negligible	4%	8.3
Total	**100%**	**224.8**

Condition Assessments are not factored into the risk category - except for a small portion of LDWM

For large mains, material, detailed condition results, and consequence of failure are the primary indicators of risk.

Local Sewer Optimal Rehab Rate



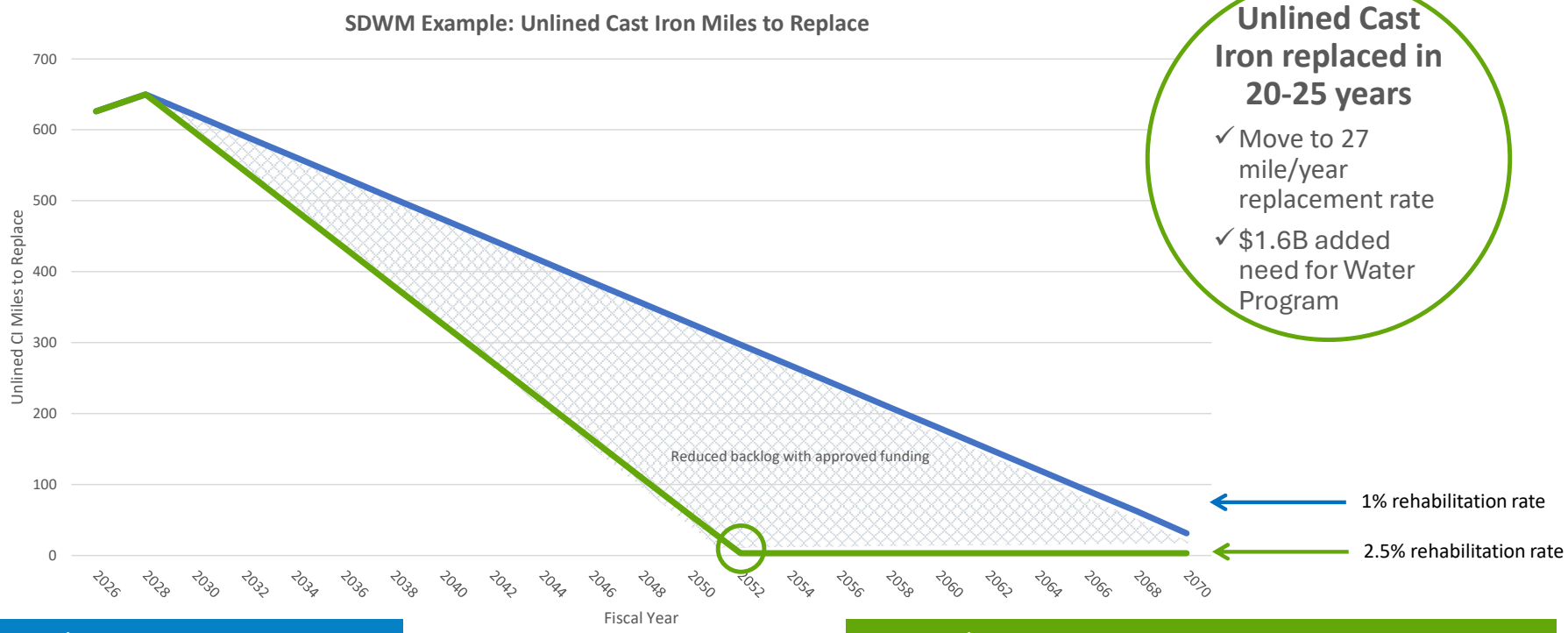
Sustainability achievable by 2047

- ✓ Move to 2.5% rehab rate
- ✓ $3.4B added need for Sewer Program

1% rehabilitation rate results in a **sustainable** backlog of Grade 4 and Grade 5 pipe defects by 2097

2.5% rehabilitation rate results in a **sustainable** backlog of Grade 4 and Grade 5 pipe defects by 2047

Achieve a balance between asset age and remaining useful life



Unlined Cast Iron replaced in 20-25 years

- ✓ Move to 27 mile/year replacement rate
- ✓ $1.6B added need for Water Program

16 mile/year replacement rate addresses backlog in 40 years

27 mile/year replacement rate across water program addresses backlog 15-20 years sooner

Known and Unknown Risks and Opportunities

CIP Risks

Risks we are monitoring:

- Regulatory
  - Per- and Polyfluoroalkyl Substances (PFAS) (Water and Biosolids)
  - New National Pollutant Discharge Elimination System (NPDES) Permit
  - New DOEE Odor Control Regulations
- Climate Change – Seawalls, Facility Hardening, CSO Program, Stormwater Capacity
- Washington Aqueduct Capital Program Uncertainties (PFAS & Future Capital Expenses)
- Anacostia river sediment contamination (PCBs)

Risk mitigation underway:

- Water Supply (Source & Storage Volume; Reliability and Resilience)
- Major Linear Infrastructure Needs with high consequence of failure
- New Lead and Copper Rule Improvements
- Cured In Place Pipe curing methods

CIP Opportunities - Optimization and Revenue

- Programmatic Approach to capture Federal and Industry Funding Opportunities
- Blue Plains Process Research and Development:
  - Pilot for Intensification with Granulated Sludge to Reduce Cost of Future Capacity
  - Blue Plains PdNA (Partial Denitrification-Annamox) Pilot to Reduce Cost and Dependence on Chemicals
- Implement Resource Recovery Options
  - Opportunities for Renewable Natural Gas (RNG)
  - Expansion of Solar Power Generation
  - Heat Recovery Options at Blue Plains / Sewer Heat Recovery for District Heating
- Implement a Microgrid within Blue Plains - Optimize Renewable Energy Distribution
- Diversify Bloom Products Marketing and storage for optimum sales
- CIP execution Improvements – Move from Design-Bid-Build to Collaborative Delivery

Action Items- Rock Creek Green Infrastructure Project C

Rock Creek Green Infrastructure Project C

Environmental Quality & Operations Committee

January 16, 2025

Moussa Wone, Vice President, Clean Rivers Project
Seth Charde, Senior Manager, Green Infrastructure
Kevin Bellamy, Acting Director of Procurement, Capital Programs

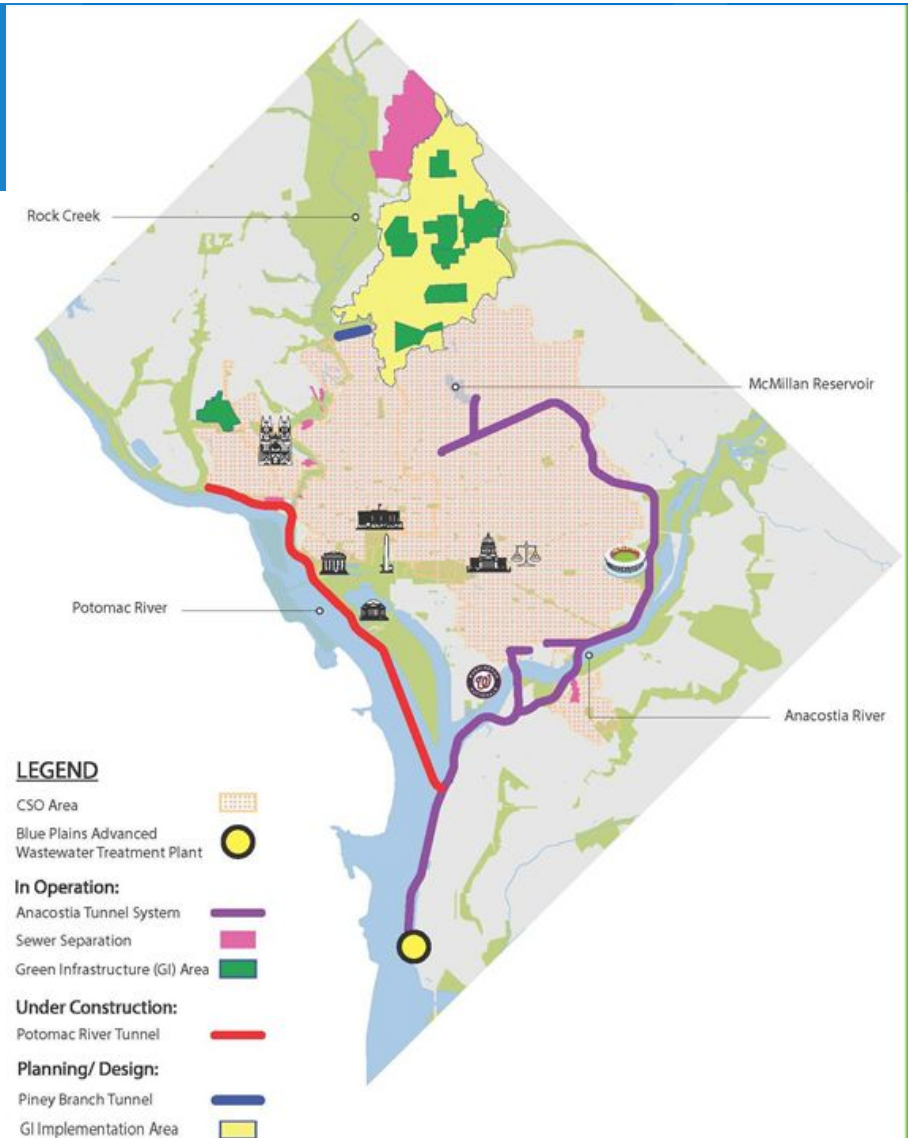
Green Infrastructure Required by Amended Consent Decree

- Construct Green Infrastructure managing 92 impervious acres to 1.2” retention standard in Piney Branch sewer shed

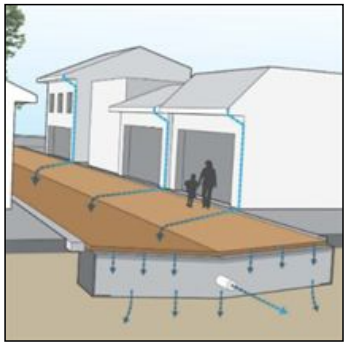
- Projects required:

Area	Status
Project A (20 ac)	• Completed Oct 2018
Project B (22 ac)	• Completed Oct 2023
Project C (25 ac)	• **Award Construction by March 23, 2025** • **Place in Operation by Dec 31, 2027**
Project D (balance to achieve 92 ac)	• Future project, place in operation by March 2030

- Project C is next project required by Consent Decree

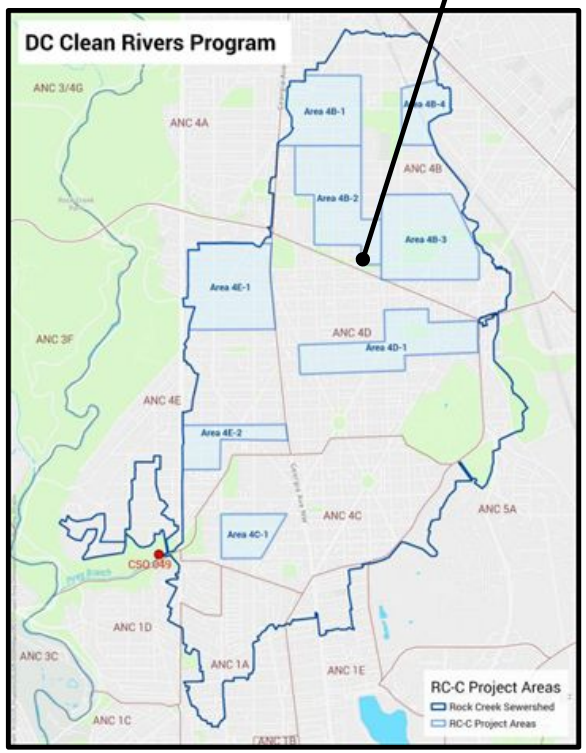


Rock Creek Project C (RC-C) Scope



Alley Permeable Pavement (APP)

- Construct alley permeable pavement in 68 ± alleys managing 25 impervious acres
- Includes environmental, pollution prevention, stormwater controls and “good neighbor” measures (work hours, noise, maintenance of traffic)
- DC Water provides construction oversight to assure compliance
- Similar approach implemented successfully on prior green infrastructure projects

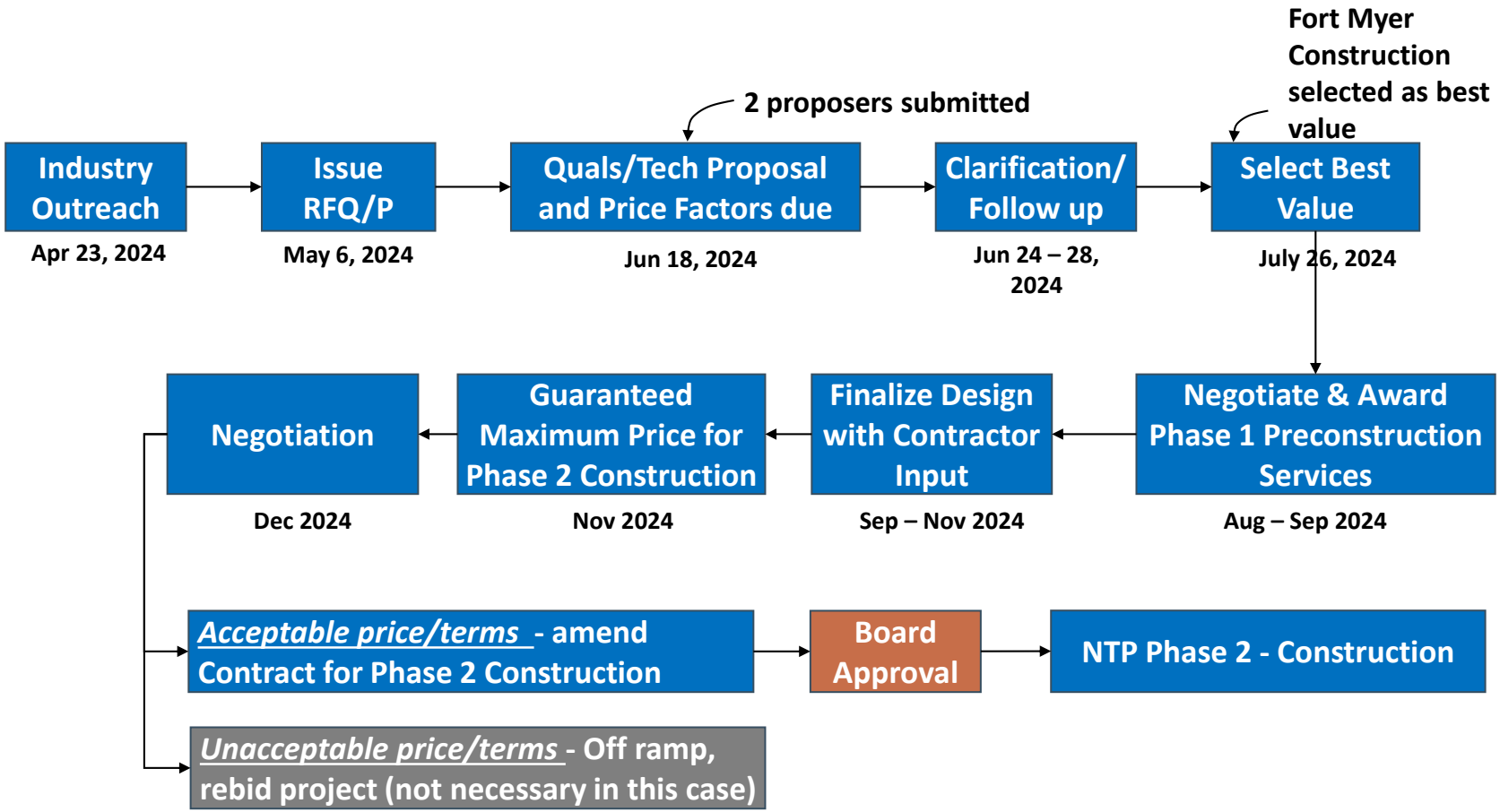


Eight (8) Project Areas in 4 ANCs

Delivery Method: Construction Manager at Risk (CMAR)

- Benefit of greater collaboration between Owner and Contractor before finalizing design
- CMAR has opportunity to visit sites, review 90% Plans and Specifications, and provide input for suggested changes to improve project and mitigate risks
- Goal: better project for all parties (common understanding of scope, minimize risk and unknowns)

Procurement Process



Guaranteed Maximum Price (GMP) Amendment

- CMAR contract for preconstruction services awarded to Fort Myer in the amount of $160,850.00 on September 19, 2024 (within General Manager's approval authority)
- Design optimization/constructability input performed September 20 – November 11, 2024
- GMP negotiations took place from November 12 – December 11, 2024:

Item	Phase 2 Construction Services	Unit Cost ($/per impervious acre)
Negotiated Amount	$ 23,280,575	$868,687
DC Water Estimate Range		
Low Range	$ 22,350,000	$834,000 (rounded)
High Range	$ 23,446,000	$875,000 (rounded)

- DC Water estimate range based on quantity takeoff, past bids on green infrastructure projects and published inflation. Negotiated amount is within acceptable range

Recommendation

- Approve the Construction Management Agreement Amendment No. 1 (GMP Amendment) to Fort Myer Construction Corporation as follows:

Item	Amount
Phase 1: Preconstruction Services (already awarded)	$ 160,850.00
Phase 2: Amendment No. 1 GMP Amendment for Construction	$ 23,280,575.00
Total Contract Value	**$ 23,441,425.00**

Questions

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

ACTION REQUESTED

CONSTRUCTION MANAGER AT RISK (CMAR)

Division RC-C – Rock Creek Project C (GI)
(Non-Joint Use)

Approval to execute Construction Manager at Risk (CMAR) Agreement, Guaranteed Maximum Price Amendment (GMP) Amendment No. 1 for $23,280,575.00

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
Fort Myer Construction Corporation 2237 33rd Street, NE Washington, DC 20018 (CBE)	National Service Contractors (NSC) Washington, DC (CBE)	88.5%

*This project is subject to the Green Infrastructure MOU, which has a 50% CBE Goal.

DESCRIPTION AND PURPOSE

Phase 1: Preconstruction Services Contract Value:	$ 160,850.00	
Phase 2: GMP Amendment No. 1 Value:	$23,280,575.00	
Total Contract Value, including this Amendment:	$23,441,425.00	
Preconstruction Services Duration	75 Days	(2 Months, 15 Days)
Construction Management Agreement Date (Phase 1):	09-19-2024	
Construction Services Duration Contract Time (Phase 2):	856 Days	(2 Years, 4 Months)
Anticipated Construction Services Start Date (NTP):	02-25-2025	
Anticipated Construction Services Completion Date:	06-30-2027	

Purpose of the Contract:

- Provide construction of Division RC-C – Rock Creek Project C (GI) in support of DC Clean Rivers Project.
- This work is required by a Consent Decree.

Contract Scope:

- Construct Green Infrastructure (GI) practices located in the public Right of Way (ROW) to manage 1.2” of rain falling on the equivalent of a minimum of twenty-five (25) impervious acres within the Rock Creek sewershed.
- Project includes the construction of 43 permeable alley facilities.
- The alleys will be constructed utilizing a standardized design. The standardization (depth and check dam spacing) will facilitate efficient construction and lower implementation costs.

Federal Grant Status:

- Construction Manager at Risk Agreement is not eligible for Federal grant funding assistance.

PROCUREMENT INFORMATION

Contract Type:	Lump Sum/Unit Price	**Award Based On:**	Phase 1: Best Value Phase 2: Negotiated GMP
Commodity:	Construction	**Contract Number:**	240070
Contractor Market:	Open Market		

BUDGET INFORMATION

Funding:	Capital	**Department:**	DC Clean Rivers Project
Service Area:	Combined Sewer	**Department Head:**	Moussa Wone
Project:	DZ		

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	100.00%	$23,280,575.00
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%**	**$23,280,575.00**

Signed by:
Jeffrey F. Thompson 1/10/2025
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Jeffrey F. Thompson Date
Chief Operating Officer and EVP

DocuSigned by:
Korey Gray 1/10/2025
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Korey R. Gray Date
VP and Chief Procurement Officer

DocuSigned by:
1/13/2025
262C5D96CC1C4D3...
Matthew T. Brown Date
Chief Financial Officer and EVP
Finance, Procurement and Compliance

David L. Gadis Date
Chief Executive Officer and General Manager