DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
Board of Directors

Meeting of the
Environmental Quality and Operations Committee

Thursday, February 17, 2022
9:30 a.m.

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Phone Conference ID: 142 812 080#

9:30 a.m.	**I.**	**Call to Order**	Sarah Motsch Chair
	II.	**Roll Call**	Linda Manley Board Secretary
9:35 a.m.	**III.**	**AWTP Status Update**	Aklile Tesfaye
		1. BPAWTP Performance	
9:45 a.m.	**IV.**	**CIP Quarterly Update**	Paul Guttridge
9:55 a.m.	**V.**	**Proposed FY2022 – FY2031 Capital Improvement Program & Alternative Options**	Kishia Powell
		1. **Action Item:** Recommendation for Approval FY2022 – FY 2031 – Proposed Capital Improvement Program (10-Year Disbursement Plan and Lifetime Budget)	
10:05 a.m.	**VI.**	**Action Items**	Joel Grosser/Kishia Powell
		Joint Use	
		Presentation: Energy Supply Contract Extension	Ernest Jolly
		1. Contract No.: WAS-13-048-AA-SS – Electric Energy Services, Constellation New Energy 2. Contract No.: 20-PR-DFM-18 – Fleet Temporary Staffing, KLSL Consulting 3. Contract No.: DCFA 511 - Filtration Underdrain & Backwash System Upgrades, Carollo Engineers, Inc. 4. Contract No.: 190050 – Water Infrastructure Repair & Replacement Contract, Fort Meyer Construction Corp.	

Presentation: Briefing on Potomac Interceptor Rehabilitation MH at 31 (LZ07) William Elledge

5. Contract No.: 190010 - 190010 Rehab of The PI Between MH31 and MH30 - Phase 2, Ulliman Schutte Construction, LLC

Non-Joint Use

1. None

10:30 a.m.	**VII.**	**DC Clean Rivers Update**	Mousa Wone
10:40 a.m.	**VIII.**	**Soapstone Sewer Rehab Project**	Mark Babbitt
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. VP, Wastewater Operations: To confirm the average concentration of Total Nitrogen (TN) corresponding to the total annual pounds in the complete treatment effluent from BPAWTP **[On Current Agenda: Included in the BPAWTP Report]**
2. Chief Operating Officer (COO): To send the 2017 US Water Alliance Study on the economic impact of capital investment in the water sector across the United States. **[Sent to Board Secretary on January 25, 2022]**
3. Chief Operating Officer (COO): The Committee requested a presentation on CIPP (Cured-In-Place Pipe) rehabilitation methods on DC Water projects in response to the recent news article on the environmental effects of this methodology. Chief Operating Officer noted that a presentation should be ready for presentation at the February EQ&Ops Committee Meeting **[On Current Agenda]**
4. Chief Operating Officer (COO): To provide alternative options for the FY21-FY31 CIP budget with different levels of funding and document the resultant impacts of these levels of funding to the CIP. **[On Current Agenda]**

The DC Water Board of Directors may go into executive session at this meeting pursuant to the District of Columbia Open Meetings Act of 2010, if such action is approved by a majority vote of the Board members who constitute a quorum to discuss: matters prohibited from public disclosure pursuant to a court order or law under D.C. Official Code § 2-575(b)(1); contract negotiations under D.C. Official Code § 2-575(b)(2); legal, confidential or privileged matters under D.C. Official Code § 2-575(b)(4)(A); collective bargaining negotiations under D.C. Official Code § 2-575(b)(5); facility security under D.C. Official Code § 2-575(b)(8); disciplinary matters under D.C. Official Code § 2-575(b)(9); personnel matters under D.C. Official Code § 2-575(b)(10); proprietary matters under D.C. Official Code § 2-575(b)(11); train and develop members of a public body and staff under D.C. Official Codes § 2-575(b)(12); decision in an adjudication action under D.C. Official Code § 2-575(b)(13); civil or criminal matters where disclosure to the public may harm the investigation under D.C. Official Code § 2-575(b)(14), and other matters provided in the Act.

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Wastewater Operations

Blue Plains Advanced Wastewater Treatment Plant – January 2022

Accomplishments & Priorities

Reliability – Implementation of best practices.

Good shaft alignment practice is a key strategy in the maintenance of rotating machines. A machine properly aligned will be a reliable asset to the plant, it will be there when it is needed and will require less scheduled (and unscheduled) maintenance. Operating an improperly aligned machine is asking for a world of problems – everything from vibration issues, wear, and tear on parts; with a smooth-running machine with correct alignment, time is not wasted with adjustments or downtime caused by breakdowns and malfunctions.

The Department of Maintenance Services (DMS) has adopted laser enable alignment as the standard practice. A major advantage of laser alignment tools is their remarkable high accuracy. Another advantage is laser shaft alignment tools come with a computer system that automatically calculates what adjustments are needed and records measured values (which maintenance crews can use both to verify proper installation and watch for trends or changes in equipment movement).

Figure 1. Mechanics from the Department of Maintenance Services perform Laser Alignment as part of installing a new motor in the Biosolids Digester Facility

To prepare for the implementation of the best alignment related practices, in 2021 DMS conducted training for improving our precision maintenance knowledge and capabilities. The classroom instruction, attended by 72 participants, reviewed theoretical and practical concepts and included hands-on practice using desk-top training units. Technical experts from Pruftechnik/Fluke, manufacturer of the laser alignment tools in use at Blue Plains, conducted the training.

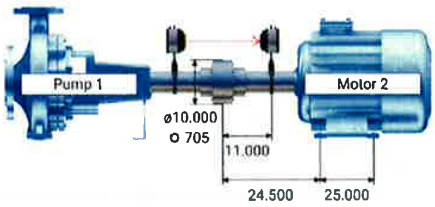
Laser alignment following best practices is a strong step in the journey of improved reliability.

Figure 2. Report on alignment work performed on a pump shows accuracy of measurements between pump components (top) and acceptable alignment tolerance (bottom)

Machine alignment information

Asset ID: Rsp36
Operator: Dom mikey anthony

Dimensions inch

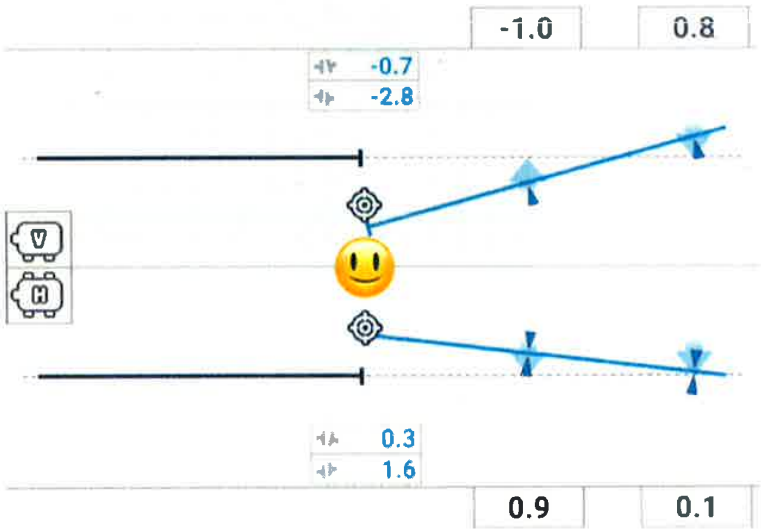


Measurements thou

Coupling #1

	Date	Type	V		H	
	03.02.2022 13:31:40	IntelliSWEEP	-0.7	-182.8	0.3	1.6

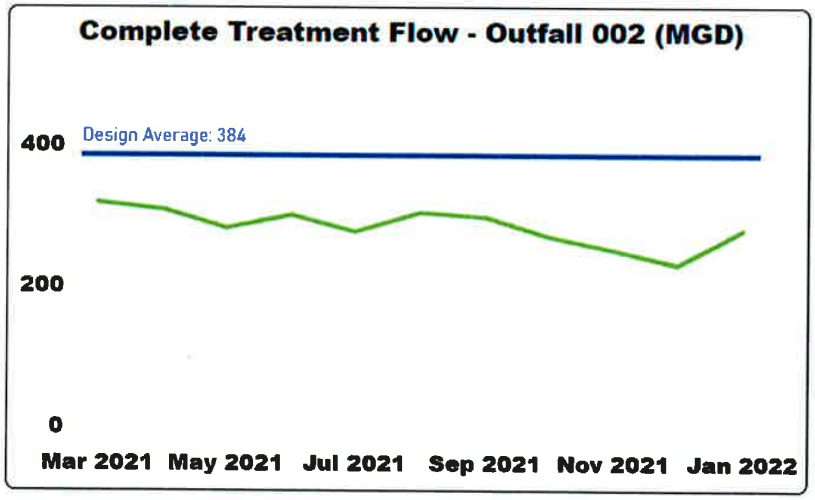
Results thou



Operational Performance

Blue Plains Complete Treatment Performance: The plant performance for the month of January 2022 was excellent with all effluent parameters well below the seven-day and monthly NPDES permit requirements. The monthly average flow through complete treatment (Outfall 002) was 278 MGD. There was no treated captured combined flow directed to Outfall 001 from the Wet Weather Treatment Facility (WWTF).

Figure 3. Monthly Average Influent Flow Trend to Complete Treatment (MGD)

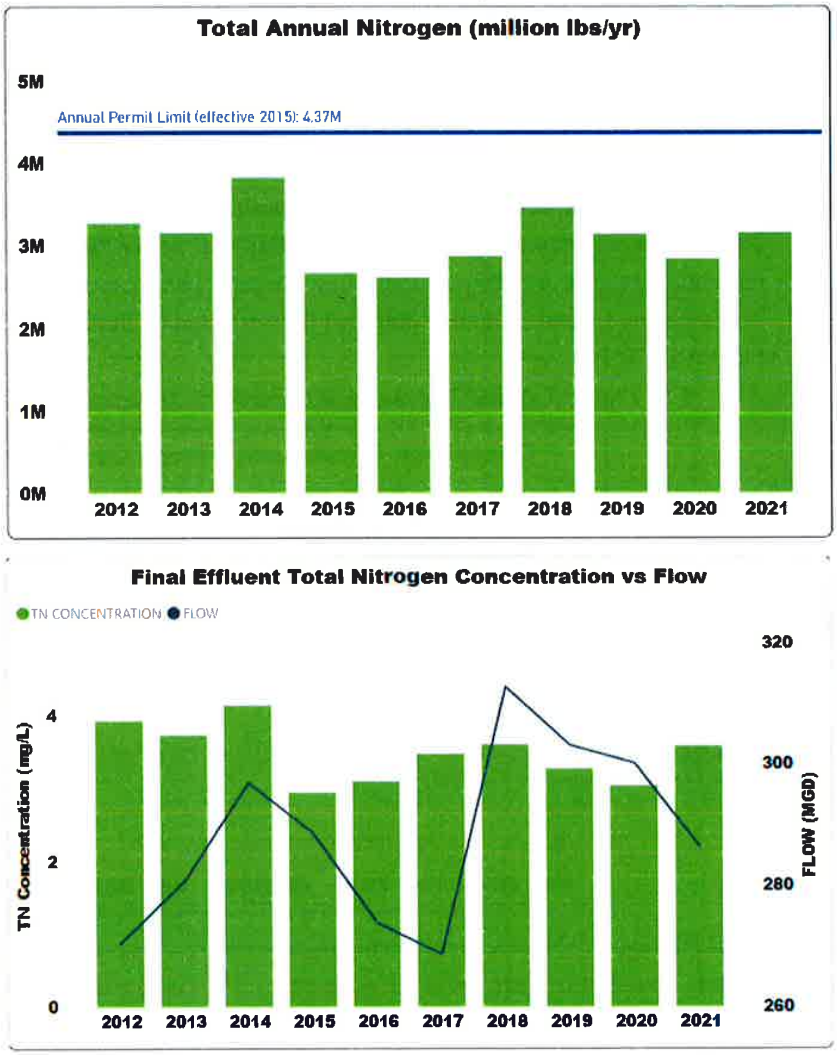


Total Nitrogen (TN) Removal Performance: Figure 4 below show total annual nitrogen discharge, in million pounds per year, as well as average TN concentrations over a 10-year period ending in December 2021. For the calendar year 2021, the total nitrogen discharged through Outfall 002 was approximately 3.16 million pounds or 1.22 million pounds below the 4.37 million pounds required to protect Chesapeake Bay. The TN concentration corresponding to the pounds discharge is 3.58 mg/L.

Factors that affect Blue Plains TN removal performance include variations in the wastewater flow and incoming nitrogen load. Because nitrogen is removed using a biological process, temperature variations can also significantly affect performance. Although the nitrogen removal system for Blue Plains was designed for TN loads corresponding to 384 MGD average flow capacity, and overall performance at the current flows has been excellent, the full TN allocation is needed to account for these normal variations in flow, load, temperature, biological performance, and future loads from growth in the Blue Plains Service Area.

Operational Performance

Figure 4. Blue Plains Total Annual Nitrogen Load (top) and Concentration (bottom) Discharged to Outfall 002.



Operational Performance

Wet Weather Treatment Facility (WWTF) Performance: In January 2022, a total of 88 MG of combined wet weather flow, captured in the tunnel system, was treated through the plant. There was no measured overflow that took place this month (Table 1).

Table 1. Wet Weather Treatment Facility (WWTF) Performance

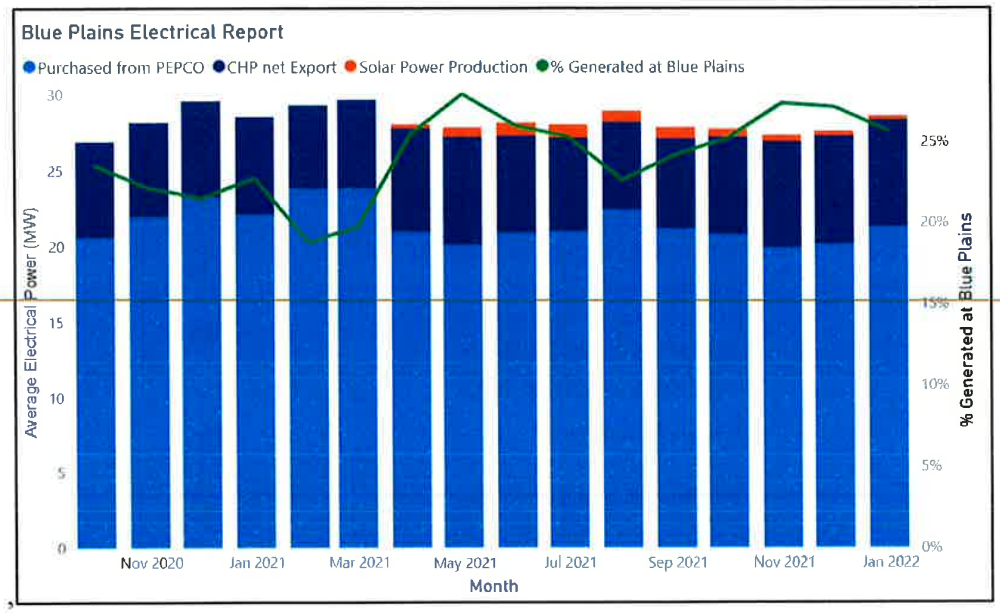
	January 2022*	Calendar Year 2022 (Through January)
Total Precipitation, inches (DCA gauge)	3.68	3.68
Total Volume Captured in the Anacostia Tunnel, MG	88	88
Measured Overflow, MG	0	0
Percent Captured**	100%	100%
Screenings and Grit Capture, tons	71	71

Note: *Based on preliminary data.

**Expected Capture ~80%

Blue Plains Electrical Energy Use and Generation: The Combined Heat and Power (CHP) facility produced an average of 8.4 megawatts (MW) of renewable electricity during this month. Contractually, the CHP performance is evaluated based on the net electricity export to the Blue Plains grid, which averaged 7.1 MW as shown in Figure 5 below. The solar system produced an additional 0.25 MW of power on average. The total electricity consumption at Blue Plains averaged 28.5 MW during the month of January. Out of total electrical consumption, 26% of electricity was generated onsite between CHP and solar panels, which surpassed the plant performance metrics of 20%. DC Water purchased an average of 21.2 MW of electricity from PEPCO as shown in the graph below.

Figure 5. Blue Plains Energy Report – Average Electricity Purchased from PEPCO (light blue), Net Export from CHP (dark blue), Solar Power Production (orange) and % of Total Plant Electricity Use Generated Onsite (green line on right Y-axis)

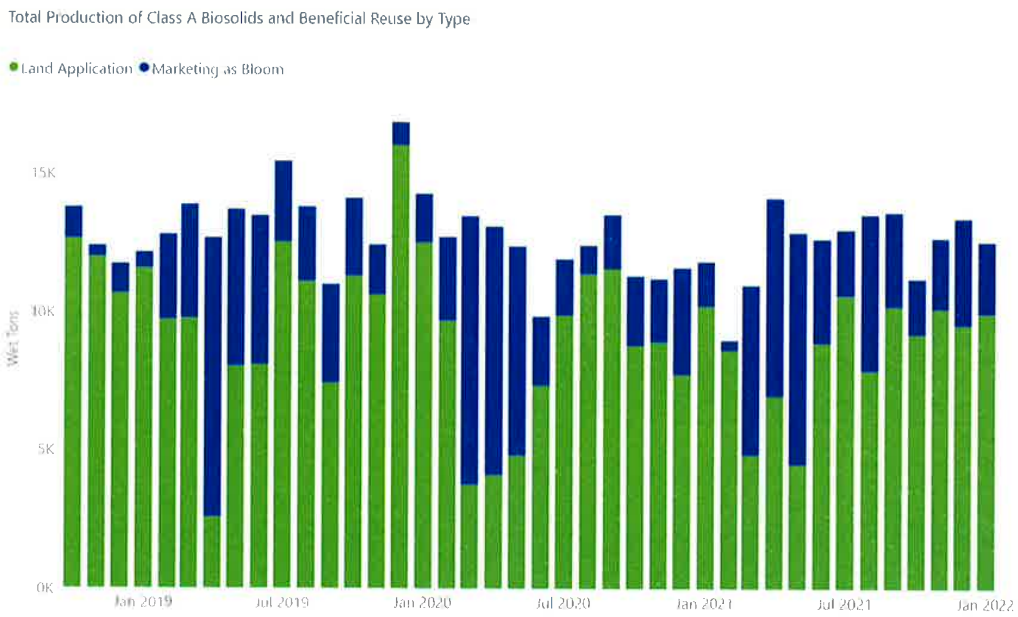


Class A Biosolids Production: In January, biosolids hauling averaged 405 wet tons per day (wtpd). All biosolids produced during the month met Class A Exceptional Quality (EQ) requirements required by EPA. Fecal Coliform values on daily process monitoring samples remained below the 1,000 MPN*/gram required for Class A biosolids - consistent with the low levels measured historically.

*Most Probable Number (MPN) per gram measures statistical probability of number of organisms

Bloom Marketing: The average quantities of Class A biosolids transported and applied on farms and the quantities marketed as Bloom are shown on the graph below. In January, Blue Drop sold 2,590 wet tons of Bloom (Figure 6). The remaining 9,956 wet tons not sold into the market were land applied through DC Water (through Blue Drop) and WSSC contracts.

Figure 6. Tons of Class A Biosolids Produced - October 2018 to January 2022 Marketed as Bloom (blue) and Land Applied (green)



Progress Report

Water Quality & Pretreatment: The Final Rulemaking for the updated pretreatment discharge standards was published in the DC Register and became effective on January 21, 2022. The new rulemaking was forwarded to USEPA Region III on January 31, 2022, along with commitment letters from the jurisdictions with their intent to modify existing Industrial User discharge permits and incorporate the new limits within six months of EPA final approval. EPA final approval is expected in March following a 30-day public notice required for this significant program modification.

Research & Development: The Blue Plains secondary system was switched over from step feed (SF) mode to contact stabilization (CS) mode since summer 2020. From a year of operation under CS mode we can conclude the following:

- CS implementation was done easily at no cost by closing an existing gate and distributing wastewater throughout the later zones.
- CS mode improved bioflocculation, making the sludge stick together better, this led to improved effluent quality and more consistent effluent quality. This was also true under wet weather events and wintertime.
- Good and consistent effluent solids concentration reduce energy demand of downstream processes as we avoid oxidizing those organics.

- Carbon was captured more efficiently under CS mode leading to increased potential for energy recovery. Especially during these winter months, we have been able to send more solids to the biosolids treatment facility and increase biogas production.
- Odor emissions were significantly reduced by this change as well.

Next steps include estimation of potential capacity savings by changing to CS mode and further optimization and control of the return flows to the secondary treatment system to further enhance system performance.

District of Columbia Water and Sewer Authority

Capital Improvement Program Report

FY-2022 1st Quarter
October 1st through December 31st, 2021

Board of Directors
Environmental Quality and Operations Committee

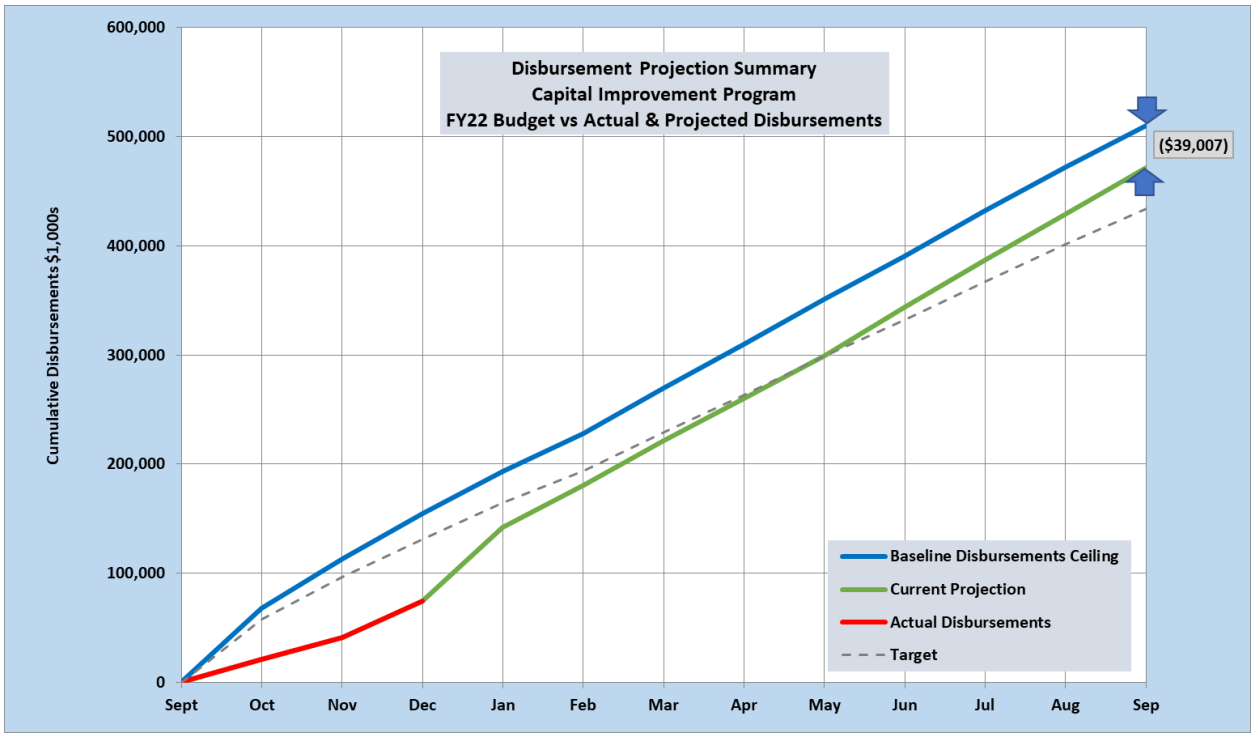
David L. Gadis, CEO and General Manager
Kishia L. Powell, Chief Operating Officer

February 2022

CIP Disbursement Performance

Current projected program disbursements through the end of the fiscal year compared with the proposed FY22 baseline budget ceiling are shown in the chart below:

Disbursement Summary



The current projected fiscal year 2022 CIP disbursements are $471,106,000 through the end of September 2022, which is under the approved baseline ceiling of $510,112,000.

Current disbursement projections within the service areas are as follows:

Non-Process Facilities
Baseline Disbursements $31,439,000
Projected Disbursements $27,753,000 ($3.7M below baseline projection)

Significant project variances are listed below:

- *Facility Land Use Program Area:*

– The forecast disbursements for Project HJ – COF Renovations are $1.4M below baseline. This project was initially put on hold in response to COVID revenue restrictions. The team will likely start on a design concept in FY22 after transitioning the work to the new program manager.

Wastewater Treatment Service Area
Baseline Disbursements $85,979,000
Projected Disbursements $86,784,000 ($0.8M above baseline projection)

Significant project variances are listed below:

- *Liquid Processing Program Area – ($1.5M above baseline)*
  - The forecast disbursements for Project IY – Effluent Filter Upgrade are $1.0M below baseline due to later than anticipated award of the MFU7 construction contract.
  - The forecast disbursements for Project IZ – Replace/Upgrade Influent Screens are $1.8M above baseline due to invoices paid in first quarter FY2022 that were anticipated to be paid in the last quarter of FY2021.
- *Plantwide Projects Program Area – ($2.3M below baseline)*
  - The forecast disbursements for Project TZ – 504I6 - Elec Power Sys - Switchgear are $1.3M below baseline due to an initial scope change necessitating a change order that impacted the start of the construction contract.
- *Solids Processing Program Area – ($1.8M above baseline)*
  – The forecast disbursements for Project BX - Gravity Thickener Upgrades Phase II are $1.8M above the baseline due to the addition of a $1.5M construction change order, work progressing slightly ahead of baseline projection, an invoice paid in first quarter FY2022 that was anticipated to be paid in the last quarter of FY2021.

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

CSO Program Area
Baseline Disbursements $4,919,000
Projected Disbursements $4,872,000 ($47K below baseline projection)

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

DC Clean Rivers Program Area
Baseline Disbursements $147,347,000
Actual Disbursements $139,115,000 ($8.2M below baseline projection)

The DCCR program area is currently projected to be $8.2M below the baseline forecast. This is primarily due construction progress on the Northeast Boundary Tunnel, where work at surface

sites is limited by space, traffic, an uptick in COVID infections, and other factors. Contractor is re-sequencing work to address these challenges. Projected place-in-operation timeframe remains mid-2023, ahead of the March 23, 2025, Consent Decree deadline.

Stormwater Service Area
Baseline Disbursements $7,029,000
Projected Disbursements $5,908,000 ($1.12M below baseline projection)

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

Sanitary Sewer Service Area
Baseline Disbursements $68,086,000
Projected Disbursements $55,450,000 ($12.6M below baseline projection)

Significant project variances for the first quarter are listed below:

- *Interceptor/ Trunk Force Sewers Program Area ($9.1M below baseline)*
  - The disbursements for Project LZ – Potomac Interceptor Projects – Rehab Phase II are $4.4M below the baseline. Negotiations over the Phase II design-build contract for Potomac Interceptor Phase 5 Pipe Rehab are taking longer than anticipated and are impacting the contract schedule.
  - The disbursements for Project RA – Major Sewer Assessment and Heavy Cleaning are $1.3M below the baseline due to a longer than expected procurement period. The work is being repackaged and readvertised.

- *Sanitary On-Going Projects ($2.5M below baseline)*
  - The disbursements for Project M9 – FY2022 - DSS Sanitary Sewer Projects are currently $2.5M below baseline. This is within the limits of forecasting accuracy for this program area as the number and size of emergency work is difficult to predict year-on-year.

Water Service Area
Baseline Disbursements $165,313,000
Projected Disbursements $151,209,000 ($14.1M below baseline projection)

Significant project variances for the first quarter are listed below:

- *Water Distribution System Program ($5.4M below baseline)*
  - The disbursements for Project F1 – Small Diameter Water Main (SDWM) Rehab 13 are currently projected to be $3.3M below the baseline due to multiple SDWM contracts being impacted by DDOT permit issues.

  - The disbursements for Project F2 – Small Diameter Water Main Rehab 14 are currently projected to be $2.8M below the baseline due to contract issues including delay in reissuance of an expired permit prior to construction start and SDWM Contracts progress impacted by DDOT restrictions.
  - The disbursements for Project FT –Water Mains Phase II are currently projected to be $1.1M below the baseline. This is due to inoperable valves needed to isolate the flow in order to execute condition assessment activities. Efforts to fix the valves are ongoing.

- *Water On-Going Projects ($1.2M above baseline)*
  - The disbursements for Project KW – FY2021 - DWS Water Projects, are currently $1.0M above the baseline. This is within the limits of forecasting accuracy for this program area as the number and size of emergency work is difficult to predict year-on-year.

- *Water Lead Free DC Program Area ($10.2M below baseline)*
  - The disbursements for the Lead Free DC (LFDC) program are currently projected to be $10.2M below the baseline. This under spending is directly due to the lower than anticipated participation rates on the Capital Improvement Project and Emergency Repair Replacement (CIPERR) Contracts reducing the corresponding construction spending. The baseline forecast assumed a 90% participation rate, presently the LFDC team is seeing an average of 40% participation per block.

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

All priority 1 projects are on schedule and within budget.

Contract Actions Anticipated – 6 Month Look-Ahead

Project	Name	Contract Type	Joint Use?	Cost Range	Committee	BOD
LZ07	Rehab of Potomac Interceptor between MH31 & 30 (190010)	Construction	Yes	$30M-$35M	EQ & Ops Feb	Mar
GR00	Small Diameter Watermain Rehab 15D	Construction	No	$10M-$15M	EQ & Ops Feb	Mar
IY00	Filter Underdrain and Backwash System Upgrade (DCFA-511)	Design	Yes	$5M-$10M	EQ & Ops Feb	Mar
ST00	Lead Service Line Replacement Contract (Voluntary Program) FY23-FY25	Construction	Yes	$5M-$10M	EQ & Ops Apr	May
CZ00	Potomac River Tunnel Contract A – Advanced Utility Construction	Construction	Yes	$5M-$15M	EQ & Ops Jun	Jul
Multiple	Heavy Cleaning of Major Sewers (220090)	Construction	Yes	$5M-$10M	EQ & Ops Jun	Jul
Multiple	Major Sewer Assessments (220080)	Construction	Yes	$10M-$15M	EQ & Ops Jun	Jul
Multiple	Water Emergency Infrastructure Repair & Replacement FY23-FY25	Construction	No	$15M-$25M	EQ & Ops Jun	Jul
Multiple	Sanitary Sewer Lateral Contract FY23-FY25	Construction	No	$15M-$20M	EQ & Ops Jul	Sep

Capital Improvement Program Report
1st Quarter FY2022

Schedule - Key Performance Indicators
Capital Improvement Program

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

#	Performance
4	KPIs completed within threshold
0	KPIs completed outside threshold (>90)
4	Total KPIs completed to date
33	Total KPIs due this year

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

Quarter	Job Code	Job Name	Activity Name	Due Date (Baseline)	Estimated Complete Date	Actual Complete Date	Variance (positive is early)	Met within 90 days
Q1	GR01	Small Diameter Water Main Rehab. 15A	Construction Start Milestone	15-Dec-21		**20-Dec-21**	-5	✓
Q1	LZ07	PI Phase 5 Pipe Rehab between MH31 and MH30	Phase II Design-Build NTP	15-Dec-21	28-Mar-22		-103	
Q1	DE04	Small Dia Water Main Repl 12B2 (Colonial Village & Bunker Hill)	Construction Substantial Completion	31-Oct-21	31-Mar-22		-156	
Q2	F204	Constitution Avenue w/C902/O304	Construction Start Milestone	13-Jan-22		**20-Dec-21**	23	✓
Q2	GR02	Small Diameter Water Main Rehab 15B	Construction Start Milestone	20-Jan-22	20-Jan-22		0	
Q2	DZ05	RC-B Rock Creek GI Project B	Construction Start Milestone (KPI)	23-Jan-22		**8-Dec-21**	46	✓
Q2	SC01	Main & O Seawall Restoration (Phase 2 HQO)	KPI Design Start Milestone	29-Jan-22	1-May-22		-92	

Capital Improvement Program Report
1st Quarter FY2022

Quarter	Job Code	Job Name	Activity Name	Due Date (Baseline)	Estimated Complete Date	Actual Complete Date	Variance (positive is early)	Met within 90 days
Q2	SD01	Main PS Building Modifications - Historic Restoration	KPI Design Start Milestone	29-Jan-22	1-May-22		-92	
Q2	QG03	Ft. Stanton Reservoir No. 1 Rehabilitation	Design Start Milestone	1-Feb-22	1-Feb-22		0	
Q2	IY10	Filter Underdrain and Backwash System Upgrade (FUBS)	Design Start Milestone	7-Mar-22	7-Mar-22		0	
Q2	HE03	Bryant St. Building A & B Demolition	Design Start Milestone	31-Mar-22	1-Apr-22		-1	
Q2	HH02	New Sewer Services Headquarters	Construction Substantial Completion	28-Feb-22		**20-Oct-21**	132	✓
Q2	IL10	Creekbed Sewer Rehabilitation Rock Creek Oregon Avenue	Construction Substantial Completion	31-Mar-22	30-Jun-22		-90	
Q3	IL06	Creekbed Sewer Rehabilitation Fenwick Branch E Beach Dr & Red Bud Lane	Design Start KPI Milestone	1-Apr-22	1-Apr-22		0	
Q3	IM05	Creekbed Sewer Rehabilitation Oregon Ave. @ St. Johns	Design Start Milestone	1-May-22	1-May-22		0	
Q3	IN02	Rehab of Upper Eastside Interceptor Phase 1	Design Start Milestone	14-May-22	14-May-22		0	
Q3	OB01	Inflatable Dams Replacement	Design Start Milestone	31-May-22	31-May-22		0	
Q3	U502	4th High Reno WSSC Interconnection	Design Start Milestone	1-Jun-22	1-Jun-22		0	
Q3	I302	Biosolids Curing Pad and Solar PV	Design Start Milestone	2-Jun-22	2-Jun-22		0	
Q3	RC01	Rehabilitation of RCMI & Beach Drive Sewers	Design Start Milestone Phase II	4-Jun-22	4-Jun-22		0	
Q3	GR03	Small Diameter Water Main Rehab 15D	Construction Start Milestone	13-Jun-22	13-Jun-22		0	
Q3	DE03	Small Dia Water Main Repl 12C	Construction Start KPI	30-Jun-22	30-Jun-22		0	
Q3	F201	Small Diameter Water Main Repl 14A	Construction Substantial Completion	2-May-22	2-May-22		0	
Q3	F103	Small Diameter Water Main Repl 13C	Construction Substantial Completion	30-Jun-22	30-Jun-22		0	

Capital Improvement Program Report
1st Quarter FY2022

Quarter	Job Code	Job Name	Activity Name	Due Date (Baseline)	Estimated Complete Date	Actual Complete Date	Variance (positive is early)	Met within 90 days
Q4	QS03	Local Sewer Rehab Project 5-3	Design Start Milestone	16-Jul-22	16-Jul-22		0	
Q4	NG05	Stormwater Pump Station Rehab - 1st and D	Construction Start Milestone	3-Aug-22	3-Aug-22		0	
Q4	OE01	FY15 - Plantwide Storm Drainage Improvements	Construction Start Milestone	8-Sep-22	28-Sep-22		-20	
Q4	HX02	Small Diameter Water Main Repl 16B	Construction Start Milestone	23-Sep-22	23-Sep-22		0	
Q4	MC01	Sewer System SCADA	Construction Start Milestone	30-Sep-22	30-Sep-22		0	
Q4	JZ02	Rehab of the 66" Steel 8th St Low Service Main	Design Start Milestone	30-Sep-22	30-Sep-22		0	
Q4	HH01	New Fleet Management Facility	Construction Substantial Completion	30-Jul-22	30-Apr-22		91	
Q4	F104	Small Diameter Water Main Repl 13D	Construction Substantial Completion	21-Aug-22	21-Aug-22		0	
Q4	I801	Large Valve Replacements 11R	Construction Substantial Completion	30-Sep-22	30-Sep-22		0	

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

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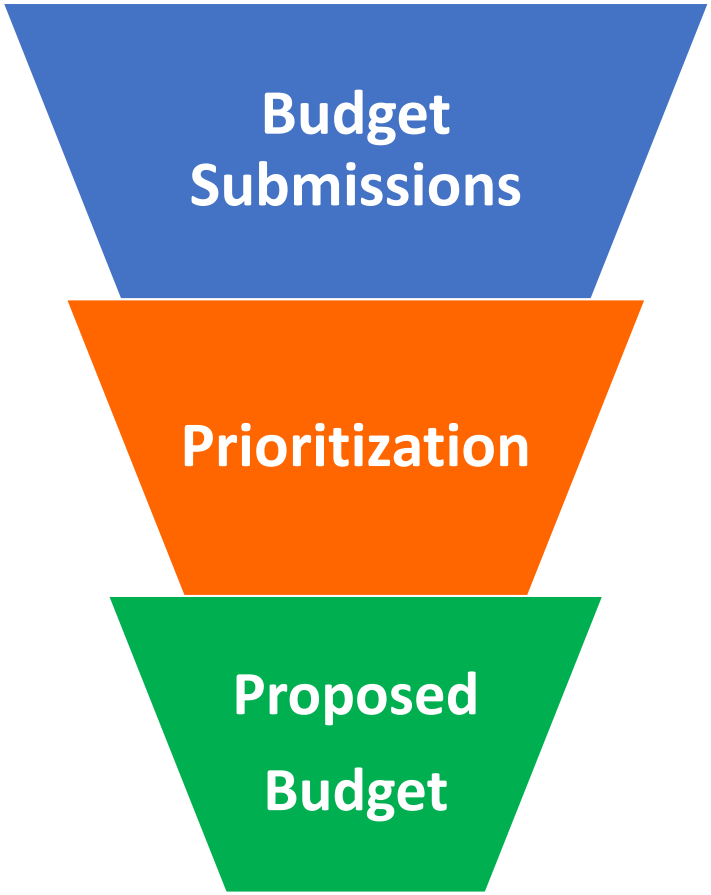
Proposed FY2022 – 2031 Capital Improvement Program & Alternative Options

Presentation to Environmental Quality and Operations Committee • February 17, 2022

Purpose

- Provide an overview of alternative budget and rate options
- Review management's capital budget proposal
- Obtain committee's recommendation to the Board on the following:
  - Proposed FY 2022 – FY 2031 Capital Improvement Program (disbursements and lifetime), including the Proposed FY 2023 Capital Disbursements budget

The Budget Process



- DC Water's collaborative budget process helps ensure a decentralized approach that encourages ideas to be brought forward
- The process is guided by the themes and imperatives in Blueprint 2.0, our strategic plan
- Alternative operating and capital budget scenarios, risks and opportunities, and related rate impacts were evaluated by management
- Proposed budgets and rates are prioritized to balance what we ask from our customers with needs to deliver high quality water services in a safe, environmentally friendly, and efficient manner

3

10-Year CIP Options Compared

Service Area	Approved Baseline $4.9B ($5.4B total**)	Proposed Baseline $5.8B ($6.4B total**)	Fully Funded $6.6B ($7.4B total**)
Clean Rivers	**Fully funded** to meet Consent Decree	**Fully funded (added $233M)** to meet Consent Decree	**Fully funded** to meet Consent Decree
Wastewater	**Fully funded** to meet NPDES Permit and established levels of service	**Fully funded** to meet NPDES Permit and established levels of service	**Fully funded** to meet NPDES Permit and established levels of service
Stormwater*	**Fully funded**	**Fully funded**	**Fully funded**
Water			
Pump Stations & Storage Facilities	**Generally funded**	**Generally funded**	**Fully Funded**
Small Diameter Water Mains	**Funded** to ramp up to **1.5%** per year replacement level from FY2028 onwards. **[16.5 mi/year]**	**Funded** to ramp up to **1.5%** per year replacement level from FY2028 onwards. **[16.5 mi/year]**	**Fully funded to ramp up to 2%** replacement level **[22 mi/year]**
Large Diameter Water Mains	**Generally funded**	**Generally funded**	**Fully Funded**
Lead Free DC Program	**Underfunded –** FY2022 LFDC program fully funded, FY2023-2030 funded for Voluntary Program and LSRs in SDWMs only	**Fully funded** to meet goal LFDC by 2030	**Fully funded** to meet goal LFDC by 2030
Sewer			
Pump Stations	**Fully funded**	**Fully funded**	**Fully funded**
Sewer Lines < 60" diameter	**Funded to ramp up to 1%** per year rehabilitation level **[17.5 mi/year]** by FY2024	**Funded to ramp up to 1%** per year rehabilitation level **[17.5 mi/year]** by FY2024	**Fully funded to ramp up to 2.3%** rehabilitation level **[40 mi/year]**
Sewer Lines ≥ 60"	**Generally Funded**	**Generally Funded**	**Fully funded**
Non-Process	**Fully funded**	**Fully funded**	**Fully funded**

'Generally Funded' = What we know or expect to find can be rehabilitated **'Underfunded'** = What we know or expect to find is not all funded
'Fully Funded' = All needs known or expected are met *Vertical Stormwater assets ** Total = Capital Projects, Capital Equipment & Washington Aqueduct

4

Full Funding

- Fully Funding operating and capital budget needs would add about $130 million in annual spending
  - $100 million would be added each year to expand the capital program ("Fully Funded" option)
    - Accelerate projects in the 10-year CIP to implement deferred critical infrastructure projects for improvement of the sanitary sewer system and service reliability
    - Fully fund ($100 million over ten years) Washington Aqueduct's critical infrastructure rehabilitation needs
    - Fund an additional $10 million of capital equipment each year, would accelerate fleet replacement program and undertake major/large IT projects over ten years
  - $30 million annual increase to the operating budget would fully fund existing vacancies; fund additional headcount to support operations & maintenance, fleet and facilities management, customer care and cyber resilience, CIP delivery and succession planning needs; and meet funding requirements for electricity and chemical costs
  - Cash reserves would increase to meet the days of cash requirements
  - Full funding would increase customer rates (average residential household) by 18.5%, or an additional 12.5% in FY 2023 and an additional 2.0% over the 5.4% recommendation in FY 2024

5

0% Rate Increase Scenario

- Without a rate increase, revenues would *fall by approximately $9 million* from FY2022 and about *$480 million over the ten-year financial plan* as costs continue to increase in FY2023
  - Operating costs including personnel agreements, chemicals, and utilities
  - Debt service costs associated with upcoming $400 million transaction
- Impact would be immediate freeze on hiring and layoff planning
  - More than 200 filled positions would be in danger of elimination leaving staffing shortages in mission critical operations of DC Water
  - Significant customer impacts include extended service disruptions due to water main breaks, delayed hydrant repairs, and delays in addressing sewer related issues and other critical infrastructure failures

6

0% Rate Increase Scenario

- Deferral of:
  - Capital equipment purchases for fleet and other major equipment necessary to maintain critical infrastructure systems
  - Critical maintenance for Blue Plains, Pump Stations, water distribution system, and sewer system which could result in failures
- Deferred maintenance, compliance risks and operations and maintenance staffing shortages at Blue Plains Advanced Resource Recovery Facility; the world's largest facility of its kind
- Inability to meet capital program contribution requirements for critical improvements at Washington Aqueduct including water treatment, storage, and large diameter water transmission mains that cross the District

- Incremental rate scenarios would have similar impacts on operations and the capital program
- Many expenditure categories are "fixed" (like energy, utilities, and chemicals)
  - Budget reductions would be first made to personnel (hiring) and to the capital program
  - Planned improvements to the sewer system would be the first areas targeted for reductions

7

Management Recommendations: Capital Budget

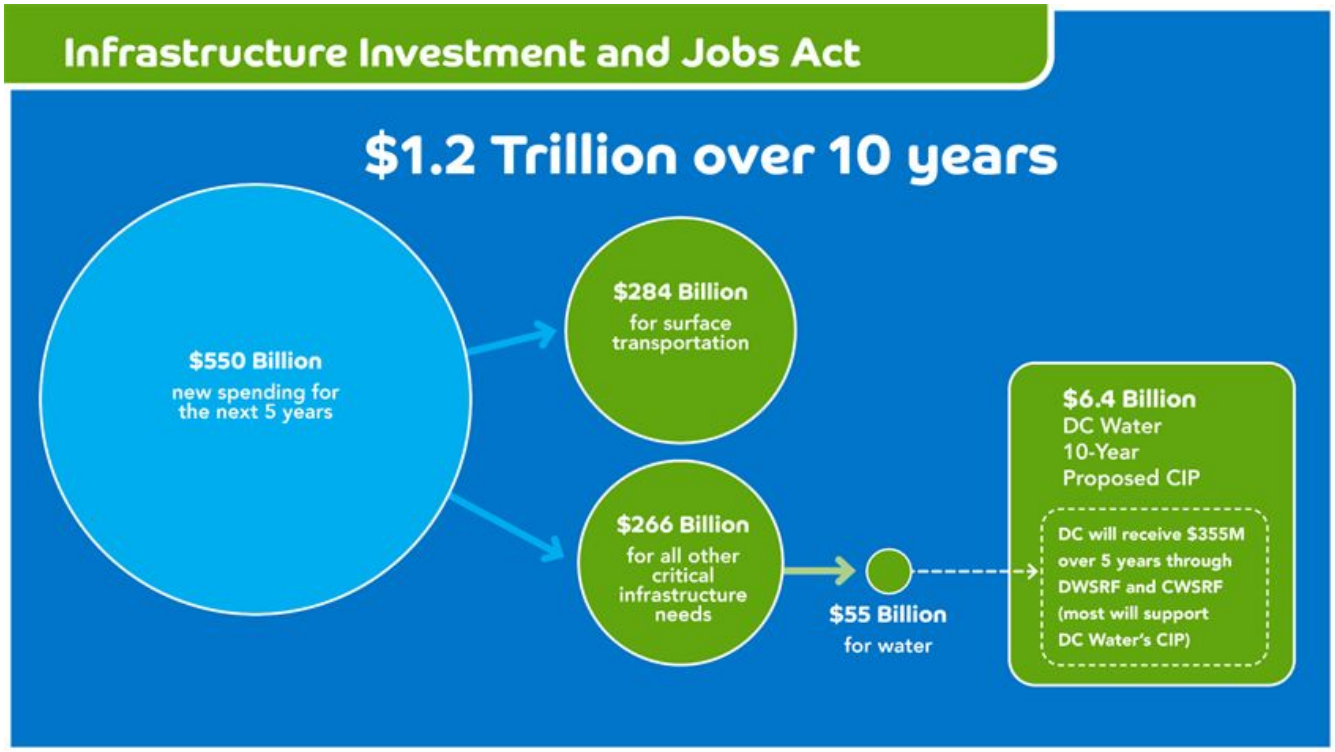
- The **proposed ten-year CIP budget of $6.4 billion** includes previous amendments to the FY 2022 budget for the Lead Free DC program, carry-over of funds for the purchase of vehicles and projected increase in the Aqueduct's capital projects
- The **proposed lifetime budget is $13.38 billion** and covers total commitments, including labor, for active projects prior to, during, and beyond the ten-year window

$ in 000's	FY 2022 - 2031 CIP Disbursement Plan											Last Years	(Increase)/	Lifetime
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-yr Total	!0-yr	Decrease	Budget
NON PROCESS FACILITIES	31,439	12,051	28,160	14,422	6,620	3,351	1,778	387	2,000	2,000	102,208	109,776	7,568	215,847
WASTEWATER TREATMENT	85,978	78,574	117,545	116,402	132,436	165,310	129,249	121,373	126,710	141,086	1,214,664	1,158,991	(55,673)	3,445,105
COMBINED SEWER OVERFLOW	152,267	117,704	77,304	105,185	161,941	171,760	220,123	153,173	51,403	6,306	1,217,166	1,122,976	(94,190)	3,216,072
STORMWATER	7,031	11,527	5,553	5,813	4,985	6,158	4,620	4,499	6,330	8,722	65,236	63,894	(1,342)	120,933
SANITARY SEWER	68,084	103,383	150,828	130,967	160,400	205,946	183,824	149,256	129,368	80,069	1,362,125	1,312,973	(49,152)	2,166,442
WATER	165,313	227,116	218,339	194,652	202,046	191,451	192,665	192,324	124,683	120,842	1,829,430	1,147,717	(681,713)	3,167,891
CAPITAL PROJECTS	510,112	550,355	597,728	567,442	668,428	743,975	732,259	621,011	440,494	359,025	5,790,828	4,916,327	(874,501)	12,332,290
CAPITAL EQUIPMENT	40,519	37,021	36,156	35,307	39,671	41,813	36,203	36,203	36,203	36,203	375,302	336,036	(39,266)	375,302
WASHINGTON AQUEDUCT	16,875	59,628	34,749	17,164	27,825	37,122	14,723	11,940	19,831	13,911	253,768	180,125	(73,643)	253,768
ADDITIONAL CAPITAL PROJECTS	57,394	96,649	70,905	52,471	67,496	78,935	50,926	48,143	56,034	50,114	629,070	516,161	(112,909)	629,070
LABOR														416,097
TOTAL CAPITAL BUDGETS	567,507	647,004	668,633	619,913	735,924	822,910	783,185	669,154	496,528	409,140	6,419,899	5,432,489	(987,410)	13,377,458

														Lifetime
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-yr Total		Budget
Prior Year Board Approved CIP	471,267	476,140	540,585	500,427	499,918	681,280	632,075	568,067	572,262	490,468	-	5,432,489	-	-	12,133,115
Delta (inc)/dec	471,267	(91,367)	(106,419)	(168,206)	(119,995)	(54,644)	(190,836)	(215,119)	(96,892)	(6,060)	(409,140)	(987,410)	-	-	(1,244,343)

8

Infrastructure Investment and Jobs Act



- Funds anticipated are incorporated in the financial and capital plans, and the proposed and forecasted rates
- Dollars anticipated over the five-year period will fund less than a year of DC Water's capital costs

9

Committee Recommendations & Actions

Committees and Meeting Dates	Environmental Quality & Operations February 17, 2022	DC Retail Water & Sewer Rates February 22, 2022	Finance & Budget February 24, 2022
FY 2022 - FY 2031 Capital Budget • Proposed FY 2022 Capital Disbursements • Ten-Year Disbursements • Lifetime Project	Action Required		Action Required
Proposed FY 2023 Operating Expenditure Budget			Action Required
Proposed FY 2023 & 2024 Operating Revenues, Rates and Fees		Action Required	
Intent to Reimburse Capital Expenditures with Proceeds of a Borrowing			Action Required
FY 2022 – FY 2031 Financial Plan		Action Required	Action Required

10

ENVIRONMENTAL QUALITY & OPERATIONS COMMITTEE
FISCAL YEAR 2022 – FY 2031
PROPOSED CAPITAL IMPROVEMENT PROGRAM
ACTION ITEM

ACTION ITEM: FY 2022 – FY 2031 Proposed Capital Improvement Program (Ten-Year Disbursement Plan and Lifetime Budget)

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

a. **Ten-Year Disbursement Plan** – The cash disbursement-based capital plan is utilized to forecast the timing and amount of capital financing, which is the primary basis for projected retail rate increases.

b. **Lifetime Budget** – The project lifetime budget reflects the total costs of each project active during the ten-year planning period. These costs include historical and projected spending, project contingencies, and labor (listed as separate line item).

As shown in Attachment A-1, the Board of Directors will be asked to approve the following:

a. **FY 2022 – FY 2031 Disbursement Plan** – $6.42 billion

b. **Lifetime Budget** – $13.38 billion

Attachment A-1

Capital Improvement Program

($ in thousands)	FY 2022 - 2031 CIP Disbursement Plan											
	Revised Budget FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-yr Total	Lifetime Budget
NON PROCESS FACILITIES												
Facility Land Use	31,439	12,051	28,160	14,422	6,620	3,351	1,778	387	2,000	2,000	102,208	215,847
Subtotal	**31,439**	**12,051**	**28,160**	**14,422**	**6,620**	**3,351**	**1,778**	**387**	**2,000**	**2,000**	**102,208**	**215,847**
WASTEWATER TREATMENT												
Liquid Processing	38,445	38,619	48,123	55,524	72,091	103,072	93,670	68,370	47,909	91,689	657,512	1,241,281
Plantwide	16,672	18,017	35,092	39,270	48,087	47,586	18,673	25,240	23,834	10,018	282,489	502,039
Solids Processing	22,422	19,722	32,546	21,534	12,258	12,445	15,045	16,099	31,675	30,414	214,160	893,604
Enhanced Nitrogen Removal Facilities	8,438	2,216	1,784	74	-	2,206	1,861	11,664	23,293	8,965	60,502	808,182
Subtotal	**85,978**	**78,574**	**117,545**	**116,402**	**132,436**	**165,310**	**129,249**	**121,373**	**126,710**	**141,086**	**1,214,664**	**3,445,105**
COMBINED SEWER OVERFLOW												
DC Clean Rivers Program	147,347	106,774	66,064	85,968	147,762	165,363	214,664	143,867	39,054	-	1,116,863	2,992,358
Combined Sewer Overflow Program	4,919	10,929	11,240	19,218	14,179	6,396	5,459	9,306	12,350	6,306	100,303	223,714
Subtotal	**152,267**	**117,704**	**77,304**	**105,185**	**161,941**	**171,760**	**220,123**	**153,173**	**51,403**	**6,306**	**1,217,166**	**3,216,072**
STORMWATER												
Storm Local Drainage Program	22	197	1,511	2,496	1,072	1,612	1,773	1,357	234	180	10,455	18,025
Storm On-Going Program	1,572	899	866	519	876	842	1,084	1,287	935	900	9,780	9,994
Storm Pumping Facilities	5,232	10,296	3,063	2,584	2,741	3,417	1,417	1,579	4,948	7,642	42,918	64,227
Stormwater Program Managemet	23	35	35	40	230	286	346	275	212	-	1,483	13,178
Stormwater Trunk/Force Sewers	182	99	78	174	67	-	-	-	-	-	600	15,510
Subtotal	**7,031**	**11,527**	**5,553**	**5,813**	**4,985**	**6,158**	**4,620**	**4,499**	**6,330**	**8,722**	**65,236**	**120,933**
SANITARY SEWER												
Sanitary Collection System	1,948	8,147	27,697	34,534	46,713	50,712	47,945	46,871	31,138	30,057	325,762	506,422
Sanitary On-Going Projects	15,617	13,035	14,452	13,200	13,577	13,988	14,395	14,851	15,297	15,289	143,702	215,932
Sanitary Pumping Facilities	2,496	10,895	13,566	8,153	10,959	12,288	25,186	30,469	35,772	20,565	170,349	251,957
Sanitary Program Management	8,471	10,316	9,538	7,897	8,880	9,915	8,887	9,034	7,028	3,497	83,462	191,840
Interceptor/Trunk Force Sewers	39,553	60,990	85,574	67,184	80,271	119,043	87,412	48,030	40,133	10,662	638,851	1,000,291
Subtotal	**68,084**	**103,383**	**150,828**	**130,967**	**160,400**	**205,946**	**183,824**	**149,256**	**129,368**	**80,069**	**1,362,125**	**2,166,442**
WATER												
Water Distribution Systems	82,276	102,848	77,198	65,128	89,029	92,136	91,572	100,969	87,062	91,501	879,719	1,771,888
Lead Free DC Program	56,987	94,377	101,955	100,624	82,147	62,407	62,749	62,550	5,155	-	628,951	812,516
Water On-Going Projects	14,917	15,454	15,870	15,769	15,390	17,669	18,819	20,500	21,500	20,781	176,668	231,960
Water Pumping Facilities	3,581	4,765	12,016	5,559	5,484	2,171	3,297	527	3,084	1,229	41,711	73,904
DDOT Water Projects	-	-	-	-	-	-	-	-	-	-	-	-
Water Storage Facilities	2,645	4,813	8,229	3,651	4,876	9,526	9,147	3,136	3,241	2,211	51,475	156,199
Water Service Program Management	4,907	4,859	3,072	3,921	5,120	7,542	7,080	4,641	4,641	5,120	50,904	121,424
Subtotal	**165,313**	**227,116**	**218,339**	**194,652**	**202,046**	**191,451**	**192,665**	**192,324**	**124,683**	**120,842**	**1,829,430**	**3,167,891**
CAPITAL PROJECTS	510,112	550,355	597,728	567,442	668,428	743,975	732,259	621,011	440,494	359,025	5,790,828	12,332,290
CAPITAL EQUIPMENT	40,519	37,021	36,156	35,307	39,671	41,813	36,203	36,203	36,203	36,203	375,302	375,302
WASHINGTON AQUEDUCT	16,875	59,628	34,749	17,164	27,825	37,122	14,723	11,940	19,831	13,911	253,768	253,768
ADDITIONAL CAPITAL PROJECTS	57,394	96,649	70,905	52,471	67,496	78,935	50,926	48,143	56,034	50,114	629,070	629,070
LABOR												416,097
TOTAL CAPITAL BUDGETS	567,507	647,004	668,633	619,913	735,924	822,910	783,185	669,154	496,528	409,140	6,419,899	13,377,458

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

Briefing on:

Energy Supply Contract Extension Option WAS-13-048-AA-SS

Briefing for:

Environmental Quality and Operations Committee

February 18, 2022

DCWATER.COM

water is life

Wholesale Energy Contract - Constellation New Energy, Inc.

- Provides DC Water access to the Pennsylvania-New Jersey-Maryland (PJM) wholesale competitive electric market to fulfill the electric energy needs for the seven major accounts.
- This Option represents the best value for DC Water
- Alternate option: electricity purchase from Pepco, the local distribution company, at the Standard Offer Service (SOS) rate approved by the DC Public Service Commission
- Savings Realized over Alternate Option using past 3 Years Experience
  - ❖ FY19 - $7.7 million
  - ❖ FY20 - $9.6 million
  - ❖ FY21 - $10 million

dc water is life

Wholesale Energy Contract - Constellation New Energy, Inc.

- Contract – 5 years base with 5 one-year options

  Total Contract Value = $91,375,000

  – $90,585,580 for purchase of generation of electricity and transmission to fund the 5-year base ***(has funded seven years, exceeding base period procurement by two years)***

  – $789,420 to fund electric energy services advising and administration support for the base period

- Requesting Board approval to add additional funding for the remainder of Option year 3 and exercise the remaining two option years as a single action in the amount of $40,050,000.
  - $39,576,348 for purchase of generation of electricity and transmission
  - $473,652 to fund electric energy services advising and administration support for option years 3, 4 and 5

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

ACTION REQUESTED

GOODS AND SERVICES CONTRACT FUNDING FOR OPTION YEARS
ELECTRIC ENERGY SERVICES AND ELECTRICITY GENERATION AND TRANSMISSION
(Joint Use)

Approval to add funding in the amount of $10,050,000.00 for the remainder of fiscal year 2022 and exercise option years 4 and 5 in the amount of $15,000,000.00, respectively for a total of $40,050,000.00.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
Constellation New Energy, Inc. 100 Summit Lake Drive, Suite 410 Valhalla, NY 10595	N/A	N/A

DESCRIPTION AND PURPOSE

Original Contract Value:	$91,375,000.00
Original Contract Dates:	03-12-2014 - 03-11-2019
No. of Option Years in Contract:	5
Option Year 1 Value:	Included in Original Contract Value
Option Year 1 Dates:	03-12-2019 - 03-11-2020
Option Year 1 Modification Value:	Included in Original Contract Value
Option Year 1 Modification Dates:	10-01-2019 – 09-30-2020
Option Year 2 Value:	Included in Original Contract Value
Option Year 2 Dates:	10-01-2020 – 09-30-2021
Option Year 3 Value:	Included in Original Contract Value
Option Year 3 Dates:	10-01-2021– 09-30-2022
Option Year 3 Modification Value:	**$10,050,000.00**
Option Year 3 Modification Dates:	**10-01-2021 – 09-30-2022**
Option Year 4 Value:	**$15,000,000.00**
Option Year 4 Dates:	**10-1-2022 – 9-30-2023**
Option Year 5 Value:	**$15,000,000.00**
Option Year 5 Dates:	**10-01-2023—9-30-2024**

Purpose of Request:

The funds for Option Year 4 and Option Year 5 are being requested earlier than the planned schedule for FY23 and FY24 to allow DC Water to take maximum advantage of soft spots in the wholesale market to lock in block power purchases through September 30, 2024. This request is increasingly critical because of the volatile electric energy market that currently exists and is predicted to last for the next several years.

Purpose of the Contract:

This contract provides Wastewater Treatment Operations and Department of Pumping and Sewer Operations with electricity services and purchased electrical generation capacity. This contract provides DC Water access to the Pennsylvania-New Jersey-Maryland (PJM) wholesale competitive electric market to fulfill the electric energy needs for DC Water's seven (7) major metered locations in the District of Columbia. (PJM is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of 13 states and the District of Columbia.)

Contract Scope:

The contract scope includes providing electric energy market information and advice to DC Water, purchasing of electric energy and PJM ancillary services associated with the electric energy supply for the seven main DC Water designated accounts. The service provider solicits bids for and purchases blocks of capacity and energy from the PJM wholesale market at DC Water's direction. The cost of such block purchases is passed through to DC Water at the Electricity Supplier's actual cost. 85% of the services on this contract are associated with the Department of Wastewater Treatment Operations and 15% with the Department of Pumping and Sewer Operations.

Spending Previous Year:

Cumulative Contract Value:	03-12-2014 - 09-30-2022: $91,375,000.00
Cumulative Contract Spending:	03-12-2014 - 09-30-2021: $85,127,531.00

Contractor's Past Performance:

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

PROCUREMENT INFORMATION

Contract Type:	Fixed Unit Price	**Award Based On:**	Highest Ranked Offeror
Commodity:	Services	**Contract Number:**	WAS-13-048-AA-SS
Contractor Market:	Open Market with Preference for LBE and LSBE Participation		

BUDGET INFORMATION

Funding:	Operating	**Department:**	Wastewater Treatment Operations
Service Area:	Blue Plains	**Department Head:**	Aklile Tesfaye

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	42.79%	$14,566,786.00
Washington Suburban Sanitary Commission	41.94%	$14,277,425.00
Fairfax County	9.83%	$3,346,377.00
Loudoun Water	4.85%	$1,651,061.00
Other (PI)	.59%	$200,851.00
TOTAL ESTIMATED DOLLAR AMOUNT	**100 %**	**$34,042,500.00**

BUDGET INFORMATION

Funding:	Operating	**Department:**	Department of Pumping and Sewer Operations
Service Area:	Other	**Department Head:**	Kenrick St. Louis

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	70.05%	$4,208,254.00
Washington Suburban Sanitary Commission	21.95%	$1,318,646.00
Fairfax County	5.15%	$309,386.00
Loudoun Water	2.54%	$152,591.00
Other (PI)	.31%	$18,623.00
TOTAL ESTIMATED DOLLAR AMOUNT	**100 %**	**$6,007,500.00**

Aklile Tesfaye /2/11/2022
Aklile Tesfaye Date
VP, Wastewater Treatment Operations

Kenrick St. Louis /2/11/2022
Kenrick St. Louis Date
VP, Pumping and Sewer Operations

Matthew T. Brown Digitally signed by Matthew T. Brown Date: 2022.02.11 16:30:14 -05'00' /_____
Matthew T. Brown Date
CFO and EVP of Finance and Procurement

Dan Bae C=US, E=dan.bae@dcwater.com, O=District of Columbia Water and Sewer Authority, OU=VP of Procurement & Compliance, CN=Dan Bae 2022.02.11 16:23:17 -05'00' /_____
Dan Bae Date
VP of 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 OPTION YEAR TWO
FLEET TEMPORARY STAFFING ADDITIONAL FUNDING
(Joint Use - Indirect)

Approve additional funding for Option Year 2 for Temporary Staffing Services for the Fleet Management Department in the amount $1,700,000.00

CONTRACTOR/SUB/VENDOR INFORMATION		
PRIME: KLSL Consulting, LLC 5335 Wisconsin Avenue, Suite 440 Washington, DC 20015	**SUBS:** N/A	**PARTICIPATION:** LSBE - 100%

DESCRIPTION AND PURPOSE

Base Contract Value:	$1,618,558.34
Base Contract Dates:	1/10/2020 – 1/09/2021
Number of Option Years in Contract	2
Modification 1 Value:	$132,070.00
Modification Dates:	1/31/2020 – 1/09/2021
Option Year 1 Value:	$1,864,000.00
Option Year 1 Dates:	1/10/2021 – 1/09/2022
Option Year 2 Value:	$480,000.00
Option Year 2 Dates:	1/10/2022 – 1/09/2023
Additional Funding:	**$1,700,000.00**

Purpose of the Contract:

To supply Temporary Staffing Services to the Fleet Management Department.

Contract Scope:

This contract provides temporary staffing services to maintain DC Water's vehicle and large equipment used throughout the Authority for the Fleet Management Department.

Spending Previous Year:

Cumulative Contract Value:	01/10/2020 – 12/15/2021 - $4,094,628.34
Cumulative Contract Spending:	01/10/2020 – 01/09/2022 - $3,693,660.05

Contractor's Past Performance:

According to the COTR, the Contractor's quality of services, conforms to DC Water's policies, procedures and contract terms; and invoicing all met expectations and requirements.

PROCUREMENT INFORMATION

Contract Type:	Fixed Rate	**Award Based On:**	Best Value
Commodity:	Good and Services	**Contract Number:**	20-PR-DFM-18
Contractor Market:	Open Market with Preference Points for LBE and LSBE Participation		

BUDGET INFORMATION

Funding:	Operating	**Department:**	Fleet
Project Area:	DC Water Wide	**Department Head:**	Tim Fitzgerald

ESTIMATED USER SHARE INFORMATION

User – Operating	Share %	Dollar Amount
District of Columbia	70.05%	$1,190,850.00
Washington Suburban Sanitary Commission	21.95%	$373,150.00
Fairfax County	5.15%	$87,550.00
Loudoun Water	2.54%	$43,180.00
Other (PI)	0.31%	$5,270.00
TOTAL ESTIMATED DOLLAR AMOUNT	**100.00%**	**$1,700,000.00**

Maureen Holman Esq. 2/7/2022

Maureen Holman Date
VP, Shared Services

Dan Bae
C=US, E=dan.bae@dcwater.com, O=District of Columbia Water and Sewer Authority, OU=VP of Procurement & Compliance, CN=Dan Bae
2022.02.07 21:47:51-05'00'

_____/_____

Dan Bae Date
VP of Procurement and Compliance

Matthew T. Brown
Digitally signed by Matthew T. Brown
Date: 2022.02.08 18:05:53 -05'00'

_____/_____

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

_____/_____

David L. Gadis Date
CEO and General Manager

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

ACTION REQUESTED

ENGINEERING SERVICES:

Filter Underdrain and Backwash System Upgrades (Joint Use)

Approval to execute an architectural and engineering services contract not to exceed $7,999,000.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:		PARTICIPATION:
Carollo Engineers, Inc. 901 N Stuart St Arlington, VA 22203	C.C. Johnson & Malhotra, P.C. Washington DC	DBE	18.0%
	Savin Engineers, P.C. Landover, MD	DBE	12.0%
	Sigma Associates, Inc. Washington DC	WBE	5.0%
	PDH Associates, Inc. Potomac, MD	WBE	5.0%
	Mechanical Solutions, Inc. Whippany, NJ		1.4%
Headquarters Phoenix, AZ 85034	Clemson Engineering Hydraulics Anderson, SC		0.5%

DESCRIPTION AND PURPOSE

Contract Value, Not-To-Exceed:	$7,999,000.00	
Contract Time:	2,768 Days	(7 Years, 6 Months)
Anticipated Contract Start Date:	03-29-2022	
Anticipated Contract Completion Date:	10-26-2029	

Other firms submitting proposals/qualification statements:

Arcadis District of Columbia *

Milhouse Engineering and Construction, Inc.

Rummel Klepper & Kahl (RK&K)

Whitman Requardt & Associates, LLP *

* Asterisk indicates short listed firms.

Purpose of the Contract:

Replace the effluent filter underdrains to provide an adequate number of filters available to filter peak flows and enable NPDES permit compliance. Replace washwater pumps and air scour blowers.

Contract Scope:

Provide professional architectural/engineering and related services for the following design elements:

- Concrete and expansion joint rehabilitation for the filter walls, floor, gullet walls and flume channels
- New filter underdrain system, media retention cap (if needed), gravel (if needed), media, and air scour piping within the filter cell
- Washwater system upgrades, including pumps, discharge valves, and washwater pressure reducing valves and air scour system upgrades, including air scour blowers, blower discharge valves located inside the blower buildings and G&H valves located outside at each filter
- Electrical and I&C upgrades needed to support the upgraded mechanical equipment
- Enhanced services during construction

PROCUREMENT INFORMATION

Contract Type:	Fixed Price /Cost Plus Fixed Fee	**Award Based On:**	Highest Ranking Score
Commodity:	Engineering Design Services	**Contract Number:**	DCFA #511-WSA
Contractor Market:	Open Market		

BUDGET INFORMATION

Funding:	Capital	**Department:**	Wastewater Engineering
Service Area:	Wastewater	**Department Head:**	Dave Parker
Project:	IY		

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	41.22%	$3,297,187.80
Federal Funds	0.00%	$
Washington Suburban Sanitary Commission	45.84%	$3,666,741.60
Fairfax County	8.38%	$ 670,316.20
Loudoun County & Potomac Interceptor	4.56%	$ 364,754.40
Total Estimated Dollar Amount	**100.00%**	$7,999,000.00

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Kishia Powell Date
COO and EVP

Dan Bae
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Dan Bae Date
VP Director of Procurement

Matthew T. Brown

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Matthew T. Brown Date
CFO and EVP
Finance and Procurement

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

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

ACTION REQUESTED

CONSTRUCTION CONTRACT CHANGE ORDER:

Water Infrastructure Repair & Replacement Contract FY20-FY22 (Non-Joint Use)

Approval to execute Change Order No. 01 for $7,000,000.00. The modification exceeds the General Manager's approval authority.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:		PARTICIPATION:
Fort Myer Construction Corp. 2237 33rd St NE Washington, DC 20018	S&J Services Hyattsville, MD	**DBE**	32.0%
	United Construction Services LLC Upper Marlboro, MD	**WBE**	6.0%

DESCRIPTION AND PURPOSE

Original Contract Value:	$19,276,080.00	
Value of this Change Order:	$ 7,000,000.00	
Cumulative CO Value, including this CO:	$ 7,000,000.00	
Current Contract Value, including this CO:	$26,276,080.00	
Original Contract Time:	1,095 Calendar Days	(3 Years)
Time extension, this CO:	0 Calendar Days	
Total CO contract time extension:	0 Calendar Days	
Contract Start Date (NTP):	10-01-2019	
Anticipated Contract Completion Date:	09-30-2022	
Cumulative CO % of Original Contract:	36.0%	
Contract completion %:	76.0%	

Purpose of the Contract:

To provide Indefinite Delivery and Indefinite Quantity (IDIQ) emergency water main rehabilitation and replacement of water service line in public and private space at various locations in Washington, DC. Scopes of work will be developed and issued to the contractor on a task order basis as needed by DC Water.

Original Contract Scope:

- Emergency rehabilitation of various size water mains.
- Rehabilitation and replacement of various types of valves, valve castings and valve boxes.
- Rehabilitation and replacement of fire hydrants, fire hydrants leads and lead service lines.
- Rehabilitation and replacement of Water Service Line in Public and Private Space.
- Cleaning and lining of six-, eight- and twelve-inch diameter water mains.
- CCTV Water Main Inspection.

Previous Change Order Scope:

- N/A

Current Change Order Scope:

- This change order is needed to address reduction of crew availability in performing certain rehabilitation due to health and safety precautions related to COVID. Under these restrictions, personnel are not able to work near a fellow coworker in the same excavation or sharing the same vehicle. Due to concerns surrounding the pandemic safety protocol and compounded by frequent

failures in the distribution system, we have seen increased demands on the Water Infrastructure Repair & Replacement (IR&R) contract in support of in-house crews due to the pandemic.

PROCUREMENT INFORMATION

Contract Type:	Unit Price	**Award Based On:**	Lowest responsive, responsible bidder
Commodity:	Construction	**Contract Number:**	190050
Contractor Market:	Open Market		

BUDGET INFORMATION

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

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	100.00%	$7,000,000.00
Washington Suburban Sanitary Commission	0.00%	$
Fairfax County	0.00%	$
Loudoun County & Potomac Interceptor	0.00%	$
Total Estimated Dollar Amount	**100.00%**	**$ 7,000,000.00**

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CFO and EVP
Finance and Procurement

David L. Gadis / Date
CEO and General Manager

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

dc water is life

Briefing on:

Potomac Interceptor Rehabilitation @ MH31 (LZ07)

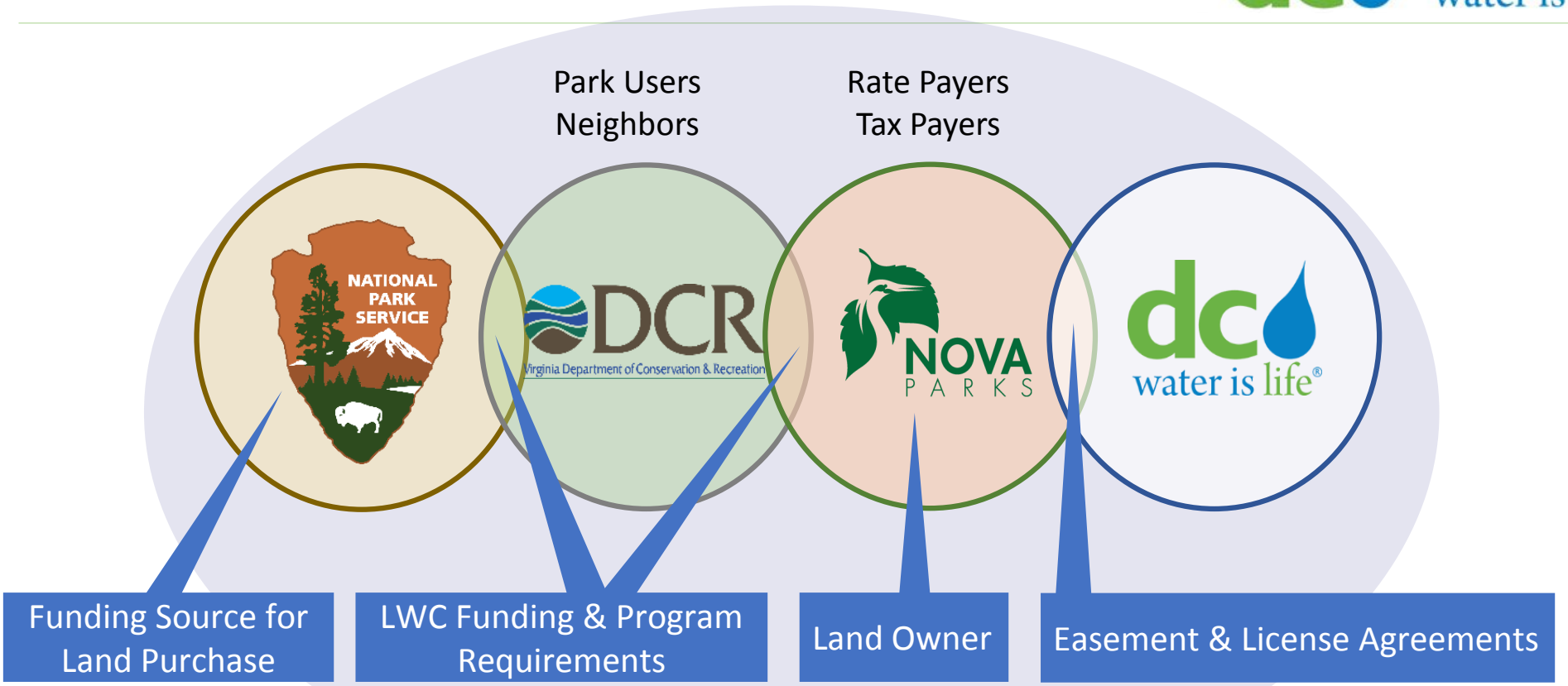
Briefing for:

Environmental Quality and Operations Cmte

February 17, 2021

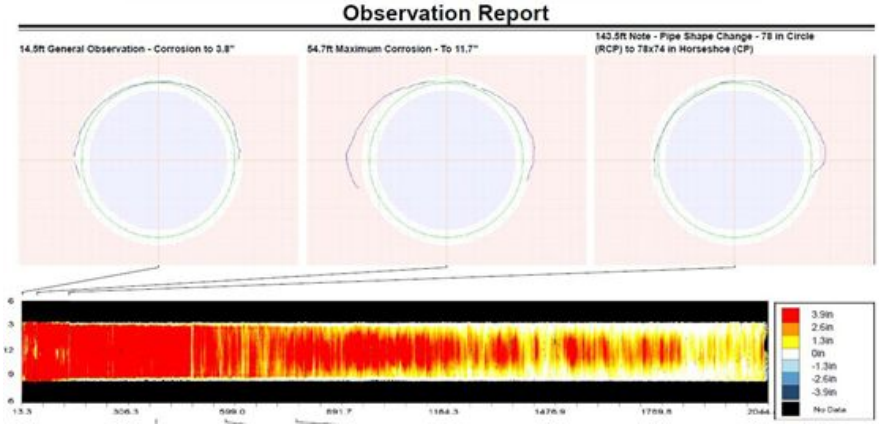
1

Agency & Stakeholder Connections

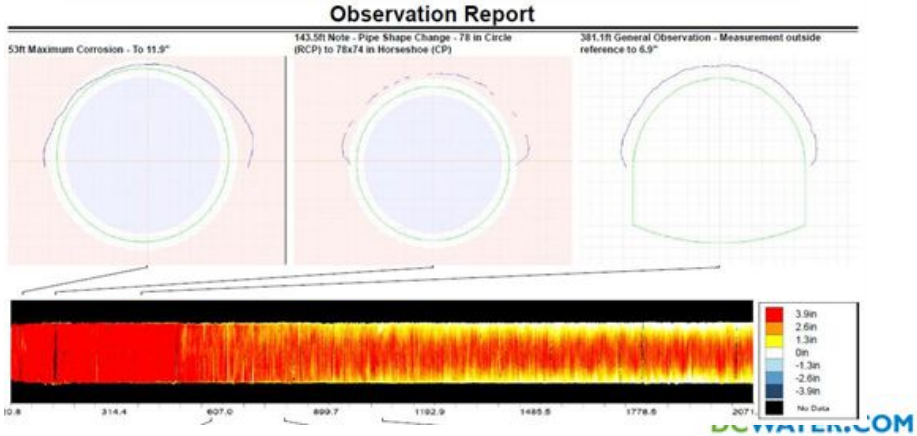


Corrosion Advancing Quickly

2018



2021



Field Changes

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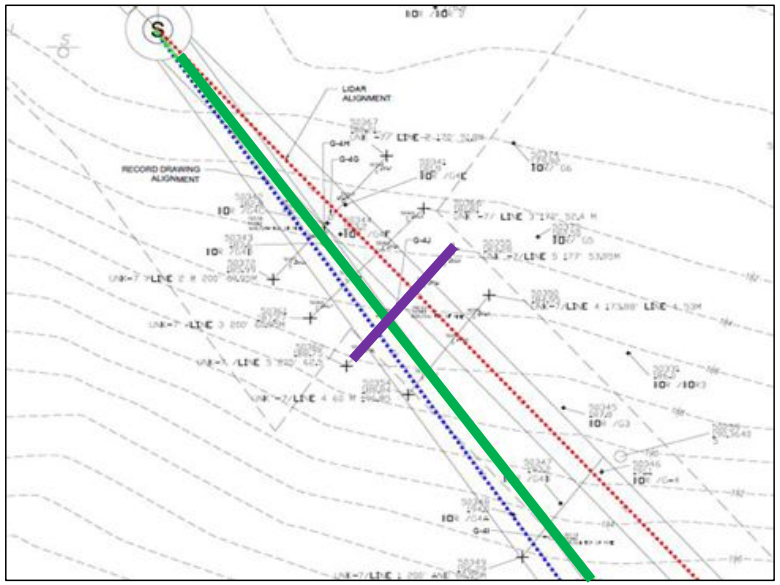
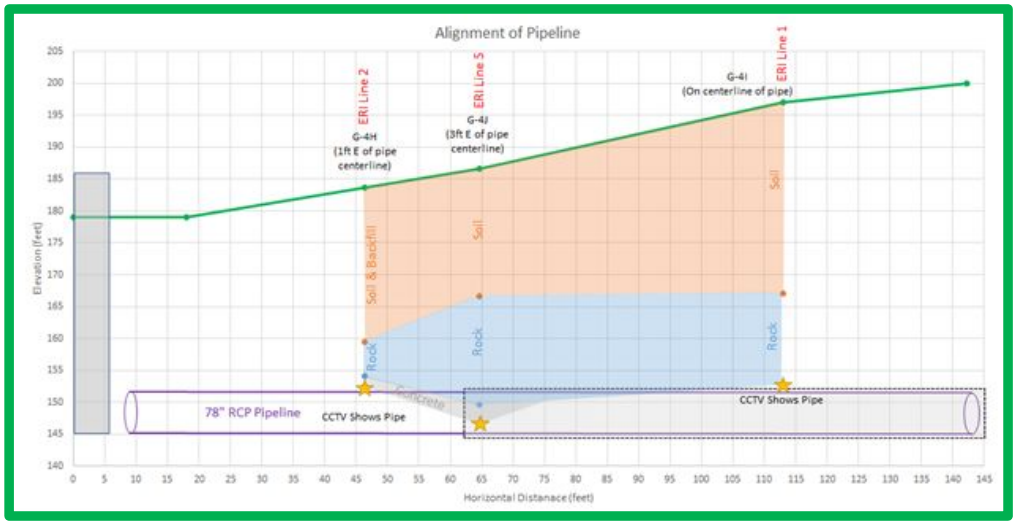
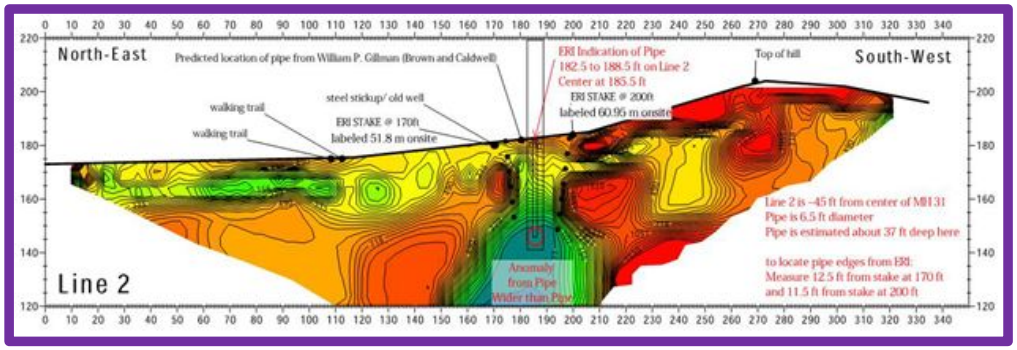
Progressive Design Build

- Alignment
- Rock & Tunnel Location

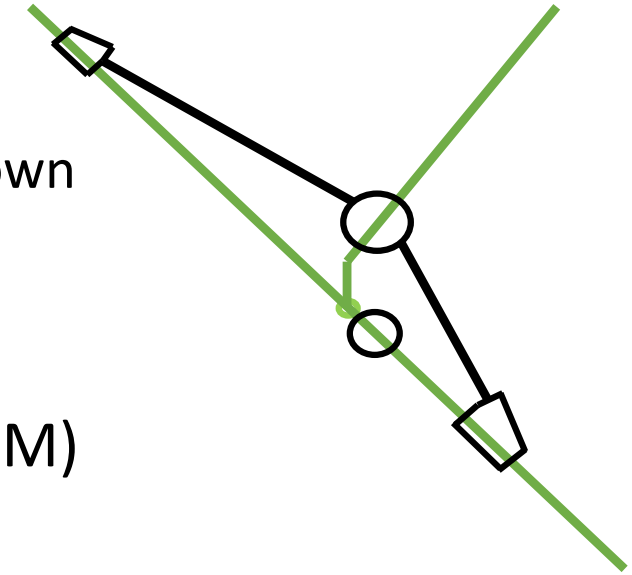






High Risk Project

- Defined risk with real pricing by reducing unknowns
- Chose Progressive Design Build to better manage risks
  - Deep rock excavation: means and methods
  - Better cost data
  - Innovation with info designer couldn't have known
- Created DC Water controlled contingencies
- Designed temporary slipline to mitigate risk
- Eliminate bypass pumping (90mgd; save >$5M)
- Alignment change



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Costs

Total Contract Price	**$29,932,284**
GMP	$26,286,655
DB Cost of Work	$21,946,655
DB Contingencies	$2,500,000
Allowance	*$1,840,000*
DC Water Contingencies	*$3,645,629*

Savings of ~$7.3M before negotiations even started.

Savings of ~$2M during negotiations.

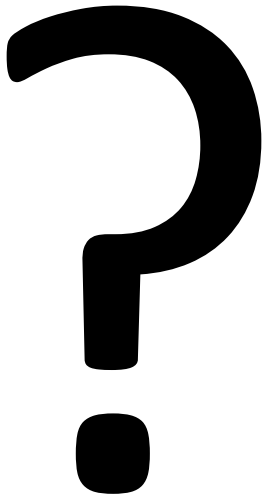
6

Certified Firm Utilization

- Design builder encountered difficulty identifying ready, willing, and able certified firms
- Highly specialized scope of the project

- Design Services will exceed the Participation Goals.
- Construction services will meet reduced Participation Goals.
  - DB's outreach effort included 435 certified firms.
  - Construction will use 16 certified firms.
  - Opportunity for increase through use of allowances and contingencies

Questions



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

ACTION REQUESTED

PROGRESSIVE DESIGN-BUILD CONTRACT - PHASE 2

Rehabilitation of The PI Between MH31 and MH30 (Joint Use)

Approval to execute Phase 2 for $29,932,284. The modification exceeds the Chief Executive Officer's approval authority.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
Ulliman Schutte Construction, LLC 14420 Albemarle Point Place Suite 110 Chantilly, VA 20151 <u>Headquarters</u> Miamisburg, OH 45342	DBE/WBE Planned Goals Design Work DBE Participation WBE Participation Construction Work DBE Participation WBE Participation *See Attachment A	 28.8 % 7.4 % 21.0 % 0.9 %

- Project achieved its DBE/WBE goals through Phase 1.
- Certified firm percentages do not include the work to be performed under contingencies and allowances as the detailed scope for these items is, by definition, unknown. However, as the scopes for these items become available, the prime contractor is committed to working with certified firms to achieve the overall goals for the project.
- Ulliman Schutte established a Mentor-Protégé relationship with one of its subs, Com-Bro, in support of the DBE utilization for this project.

DESCRIPTION AND PURPOSE

Phase 1 Value (Design development) guaranteed max price:	$ 2,561,444.00	
Phase 2 Value (Final Design & Construction) guaranteed max price:	$29,932,284.00	
Current Contract Value, including this Phase:	$32,493,728.00	
Original Contract Time:	540 Days	(1 Year, 6 Months)
Time extension, this Phase:	605 Days	
Total contract time extension:	753 Days	
Contract Start Date (NTP):	05-12-2020	(Phase 1 NTP)
Anticipated Contract Completion Date:	12-17-2023	
Contract completion %:	60% Design Completed	

Purpose of the Contract:
The Potomac Interceptor (PI) provides wastewater conveyance for Loudon, Fairfax, and Montgomery Counties. This contract provides final design and construction services to renew three pipe segments. As a Progressive Design-Build contract, work is completed in two phases:

- Phase I: Design up to 60%.
- Phase II: Completion of design, construction, and restoration.

Phase 1 Scope:

- Complete Phase 1 which is design up to 60%

Phase 2 Scope:

- Complete 60% - 100% design, obtain all required permits before the construction start, and environmental studies related to Land Water Conservation Fund (LWCF).
- Slip line approximately 140 linear feet of existing 78 inch diameter pipe to reduce the collapse risk of the existing deteriorated pipe and facilitate the construction of the downstream junction chamber.
- Build new 66 inch and 78 inch diameter pipes to replace the existing deteriorated 78 inch diameter pipe and 66 inch diameter steep sloped pipe.

- Build three new junction chambers to facilitate the flow diversion from existing pipe to new pipe and back to the existing pipe. One junction chamber will house the vortex flow insert.
- Install a vortex flow insert to dissipate energy at new MH31and reduce high flow velocities downstream.

PROCUREMENT INFORMATION

Contract Type:	Guaranteed Max Price	**Award Based On:**	Qualifications, Technical and delivery Proposals
Commodity:	Design and Construction	**Contract Number:**	190010
Contractor Market:	Open Market		

BUDGET INFORMATION

Funding:	Capital	**Department:**	Engineering and Technical Services
Service Area:	Sanitary	**Department Head:**	Mark Babbitt (Acting)
Project:	LZ		

ESTIMATED USER SHARE INFORMATION

MJ41 – Vortex Flow Insert

User	Share %	Dollar Amount
Fairfax County	48.60%	$ 332,652.91
Loudoun County & Potomac Interceptor	51.40%	$ 351,818.09
Total Estimated Dollar Amount	**100.00%**	**$ 684,471.00**

MJ49 – New Structures and Pipes, Final Design and Permits

User	Share %	Dollar Amount
Washington Suburban Sanitary Commission	17.46%	$ 4,620,307.45
Fairfax County	40.11%	$ 10,614,005.27
Loudoun County & Potomac Interceptor	42.43%	$ 11,227,929.28
Total Estimated Dollar Amount	**100.00%**	**$ 26,462,242.00**

MJ50 – Slip Lining on the existing 78" pipe

User	Share %	Dollar Amount
Washington Suburban Sanitary Commission	39.50%	$ 1,100,300.55
Fairfax County	29.40%	$ 818,957.87
Loudoun County & Potomac Interceptor	31.10%	$ 866,312.58
Total Estimated Dollar Amount	**100.00%**	**$ 2,785,571.00**

Combined Allocation

User	Share %	Dollar Amount
District of Columbia	0.00%	$
Washington Suburban Sanitary Commission	19.11%	$ 5,720,608.00
Fairfax County	39.31%	$ 11,765,616.05
Loudoun County & Potomac Interceptor	41.58%	$ 12,446,059.95
Total Estimated Dollar Amount	**100.00%**	**$ 29,932,284.00**

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COO and EVP

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Finance and Procurement

David L. Gadis / Date
CEO and General Manager

Progressive Design Build Contract 190010
Rehabilitation of the PI between MH31 and MH30
Attachment A - Certified Firm Participation Detailed Table

Phase	Work Area	DBE/WBE Firm	Amount	DBE Percentage	WBE Percentage
Phase 1	Design Work	CEM	$23,872.69	1.27%	
		Schnabel	$244,180.89	12.98%	
		Shrewsberry & Assoc.	$173,764.00	9.24%	
		Aldea	$26,360.00	1.40%	
		Savin Engineers	$121,435.00	6.45%	
		River to Tap (R2T)	$57,211.00	3.04%	
		SZ PM Consultants	$12,465.28	0.66%	
		Precision Measurements	$25,934.28		1.38%
		Dramby	$161,982.75		8.61%
		Subtotal	$847,205.89	35.04%	9.99%
	Construction	DP Consultants	$18,000.00	0.00%	2.65%
		Subtotal	$18,000.00	0.00%	2.65%
Phase 2	Design Work	Shrewsberry & Assoc.	$155,600.00	13.99%	
		Savin Engineers	$81,200.00	7.30%	
		River to Tap (R2T)	$40,177.00	3.61%	
		SZ PM Consultants	$35,707.00	3.21%	
		Precision Measurements	$8,009.00	0.72%	
		Dramby	$82,516.00		7.42%
		Subtotal	$403,209.00	28.83%	7.42%
	Construction	Stocks General Contracting	$805,500.00	3.87%	
		Hi-Mark Construction, LLC	$410,500.00	1.97%	
		Com-Bro Contracting, Inc.	$473,000.00	2.27%	
		Adeb, Inc.	$337,000.00	1.62%	
		G.E. Frisco Company, Inc.	$455,450.00	2.19%	
		Best Fence	$131,000.00	0.63%	
		MVP Steel Specialists, LLC	$455,000.00	2.18%	
		Empire Landscaping	$499,000.00	2.40%	
		E Trucking & Services, LLC	$480,000.00	2.30%	
		Precision Measurements, Inc.	$30,000.00		0.14%
		DP Consultants	$89,620.00		0.43%
		Robnet	$5,000.00		0.02%
		Jernigan Concrete Pumping	$36,000.00		0.17%
		Green Petroleum	$250,000.00	1.20%	
		Dot Drilling	$27,000.00		0.13%
		Dulles Geotechnical and Material Testing	$73,000.00	0.35%	
		Schnabel	$5,000.00	0.02%	
		Subtotal	$4,562,070.00	21.00%	0.90%

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

Briefing on:

DC Clean Rivers Project Quarterly Update

Briefing for:

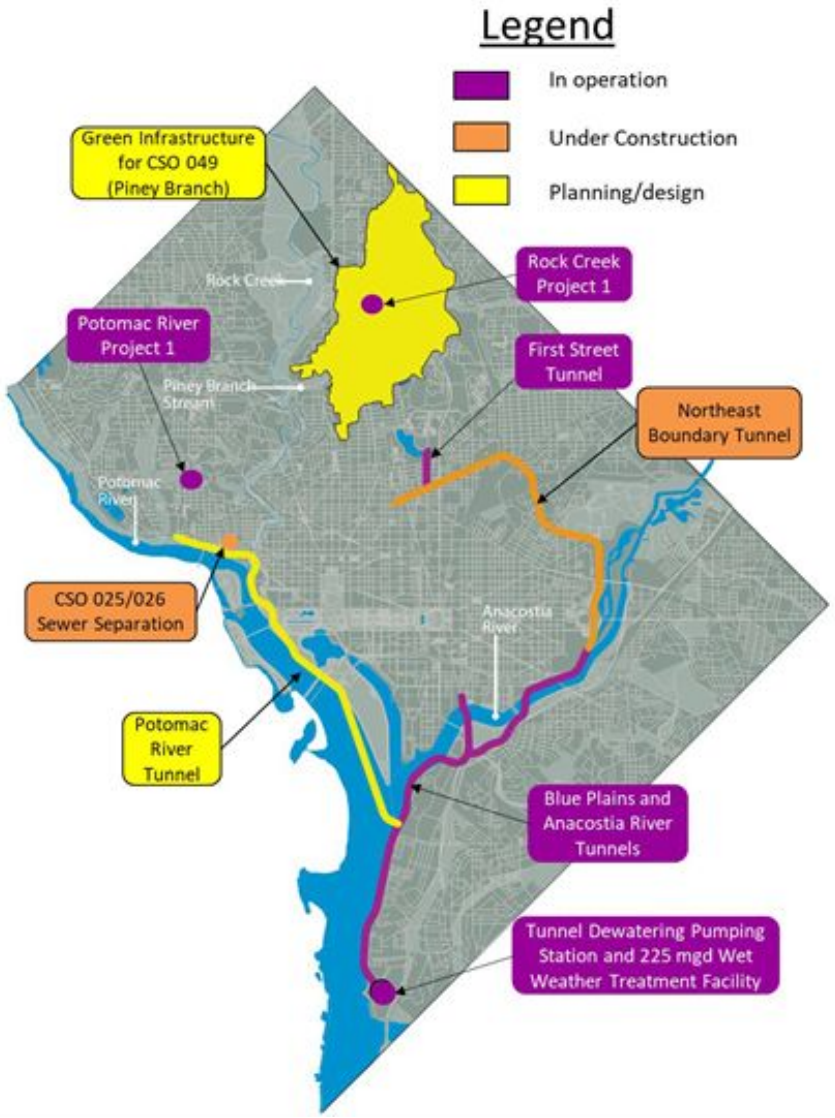
Environmental Quality & Operations Committee Meeting

February 17, 2022

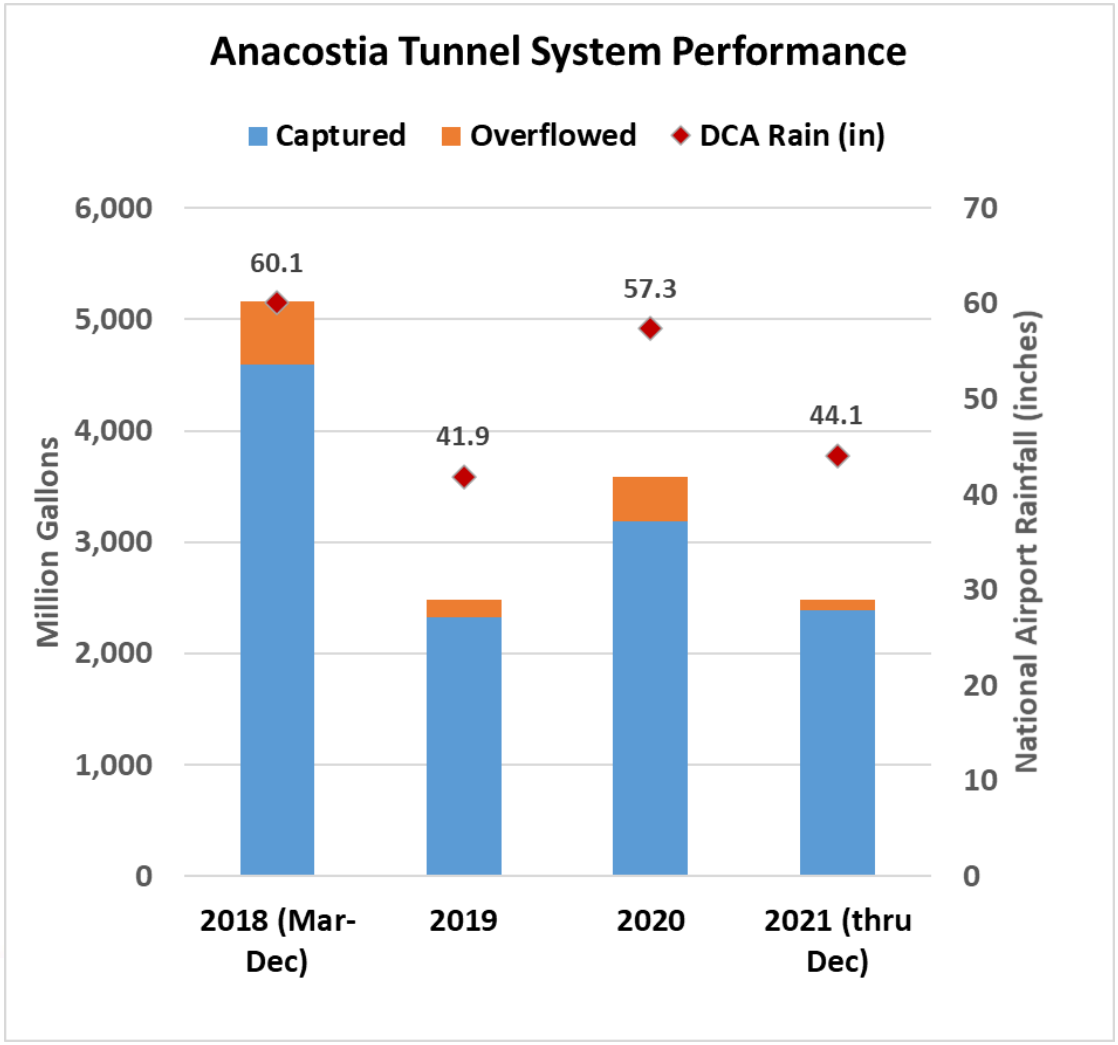
DCWATER.COM

Project Snapshot

Area	Status
Anacostia	
Anacostia Tunnel System	• More than 12.4 billion gallons captured • More than 7,911 tons of trash/debris removed
Northeast Boundary Tunnel	• Near surface structures work at construction sites continues
Potomac	
CSO 025/026 Separation	• Work is currently behind schedule; contractor executing recovery schedule • Installing 15-inch sewer at 31st Street
Potomac Tunnel Advance Utility Construction	• Work ongoing on Independence Ave.
Potomac Tunnel Construction	• 90% RFP prepared January 2022
Rock Creek	
Green Infrastructure (GI)	• Kickoff meeting held January 19, 2022 • Contractor working on submittals



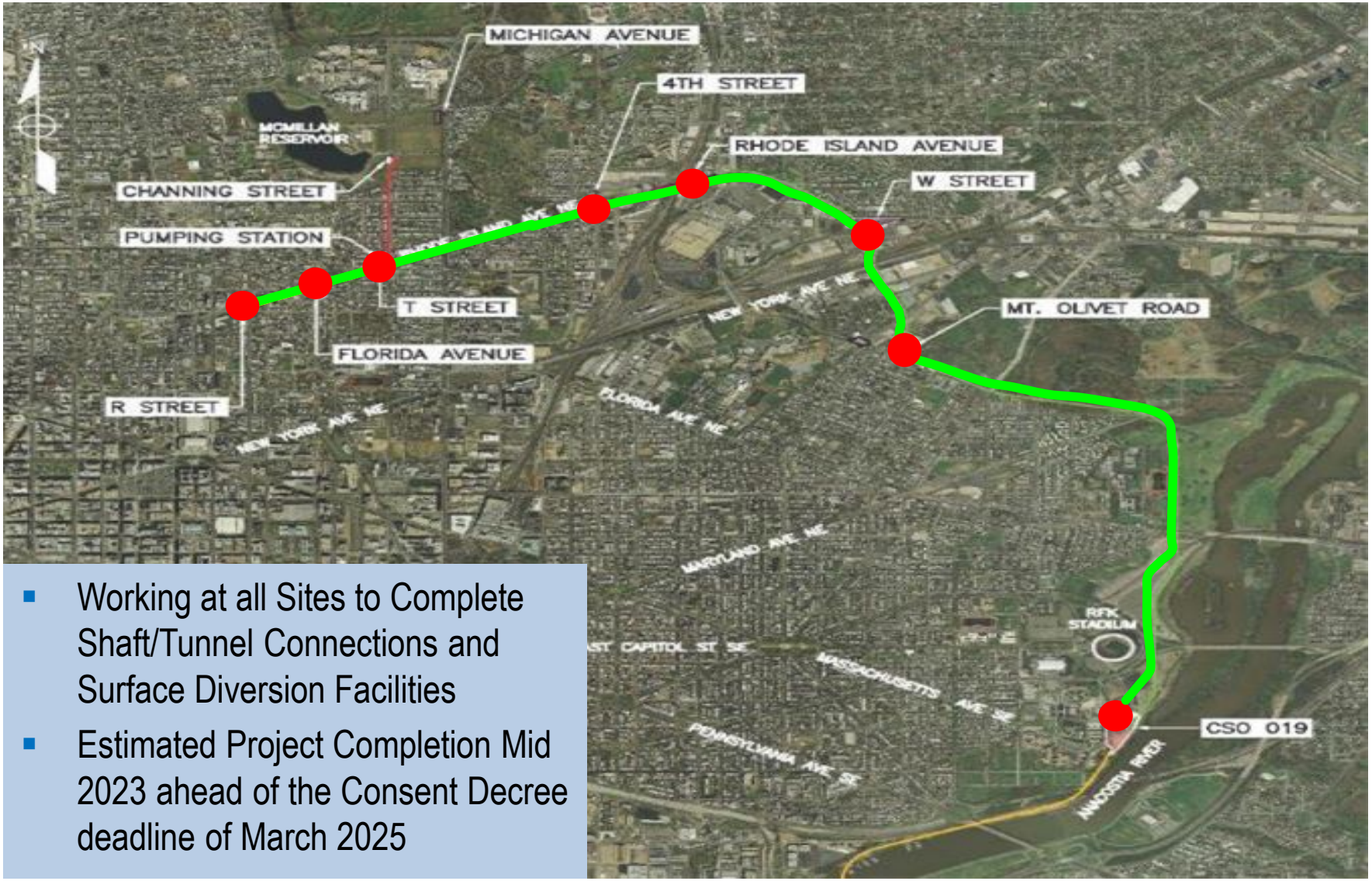
Anacostia Tunnel System Performance



- Over **12.4 billion** gallons captured Mar 2018 – Dec 2021
- Over **7,911 tons** of trash, debris, and other solids captured
- Exceeding predicted capture rate (90%>80%)

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

Division J – Northeast Boundary Tunnel Construction Progress



- Working at all Sites to Complete Shaft/Tunnel Connections and Surface Diversion Facilities
- Estimated Project Completion Mid 2023 ahead of the Consent Decree deadline of March 2025

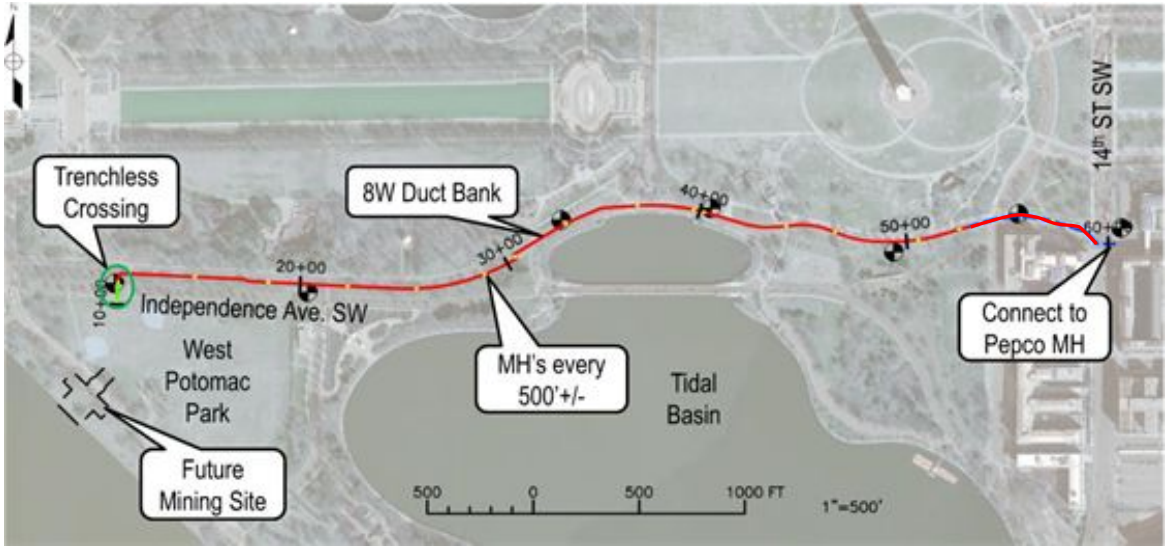
Potomac River Tunnel

Tunnel Contract (Best Value Design-Build):

- 90% RFP: January 2022
- RFQ : issued January 2022; due March 2022
- 100% RFP: June 2022
- NTP: December 2023
- Place in Operation: February 2030

Potomac River Tunnel Contract A Advanced Utility Construction Progress

- Work currently progressing on Independence Avenue west of 14th Street and includes installation of PEPCO electrical vaults



CSA at 14th and Independence Avenue

- Contract work includes installation of high voltage facilities to support the Potomac River Tunnel Contract B (PRT-B) Tunnel Boring Machine as well as low voltage power facilities for the shaft work sites for PRT-B.
- Contract estimated completion date is May 2023

CSO 025/026 Sewer Separation

- Work is currently progressing along 31st Street
  - 15-Inch sewer and manhole installation is approximately 85% complete
  - Preparing for mobilization of Small Boring Unit that will excavate trenchless portion of 15-inch sewer
- Continuing to coordinate with the community to minimize construction impacts
- Upcoming work planned for Structure 44 at the intersection of K Street and Potomac Street

Preparing Trench Box for Sewer Installation at 31st Street

7

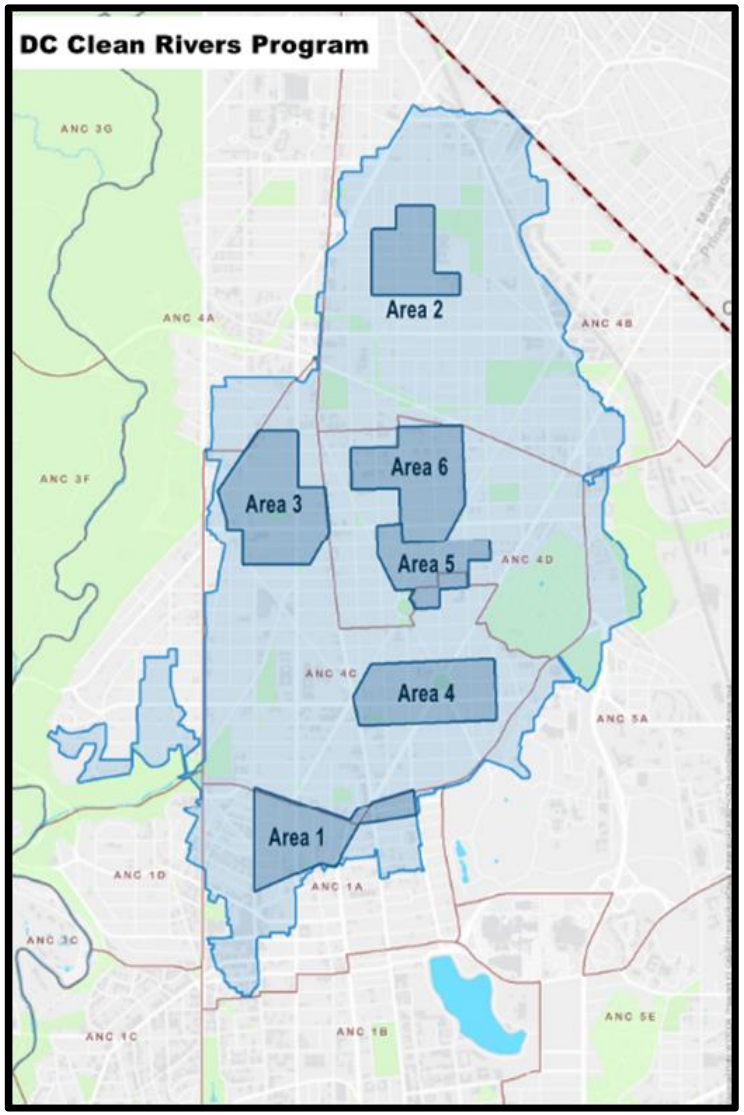
Green Infrastructure
Rock Creek Project B

Consent Decree Requirements

- Manage 22 impervious acres with green infrastructure
- Award Construction by January 23, 2022
- Place in Operation by January 23, 2024

Construction Status Update

- Construction NTP issued December 8, 2021
- Construction Kick-off Meeting held January 19, 2022
- Contractor initial submittals underway
- Construction expect to start March 2022

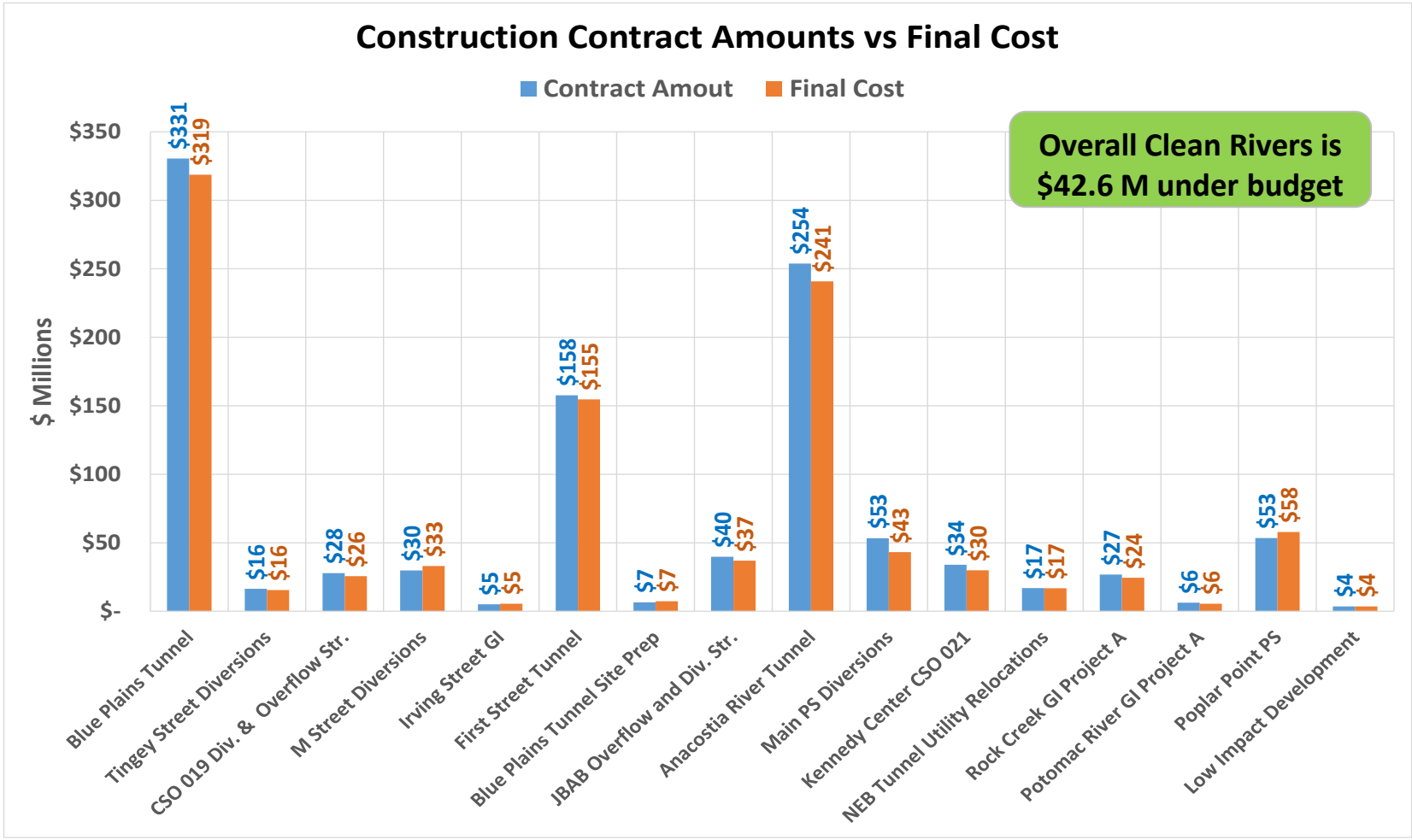


Clean Rivers Public Outreach Efforts

Community Partnerships	• Sponsored the Rhode Island Ave. NE Main Street's Procrastinator's Holiday Market in December. • Provided Business Open signage and better visibility to aid local business affected by construction on 31st Street NW. • Received appreciation from Single Member District 2E05 Commissioner Palmer and Georgetown community for coordinating pretreatment and snow removal activities on South Street NW and 31st Street NW, something the community has always struggled with.
Key Virtual Meetings	• Held Virtual Coordination Meeting in December with DMPED on Northeast Boundary Tunnel Channing Street and Michigan Avenue construction sites. • Continued coordination with DC Committee on Arts and Humanities to amend the existing MOA for DC Water to fund Public Art in Cooper-Gordon Park. • Provided presentations on Potomac River Tunnel Contract A – Advanced Utility Construction Project to Mayor's Office, Ward 2 Councilmembers Office, Georgetown BID, and all Single Member Districts within upcoming Potomac River Tunnel project area.
Community Outreach Program	• Coordinated with Office of Marketing and Communications for DC Water-sponsored articles in the DCist online magazine. December 3rd edition featured "A Tale of Two Tunnels: CSO Control in the District and Boston." December 21st edition featured "DC Water NEBT: Construction Safety For All, Above All Else." • Coordinated South Street NW overnight water shutdown with businesses and residents. Provided frequent updates before and throughout shutdown via door-to-door flyers, emails, website updates, and project hotline. • Provided community stakeholders with information on start of construction at Independence Ave SW site and upcoming construction at CSO 028, as well as updates on construction activities at 31st Street NW.

This map was distributed to residents to highlight traffic pattern changes on Capitol Avenue NE.

Clean Rivers Budget



dc clean RIVERS PROJECT

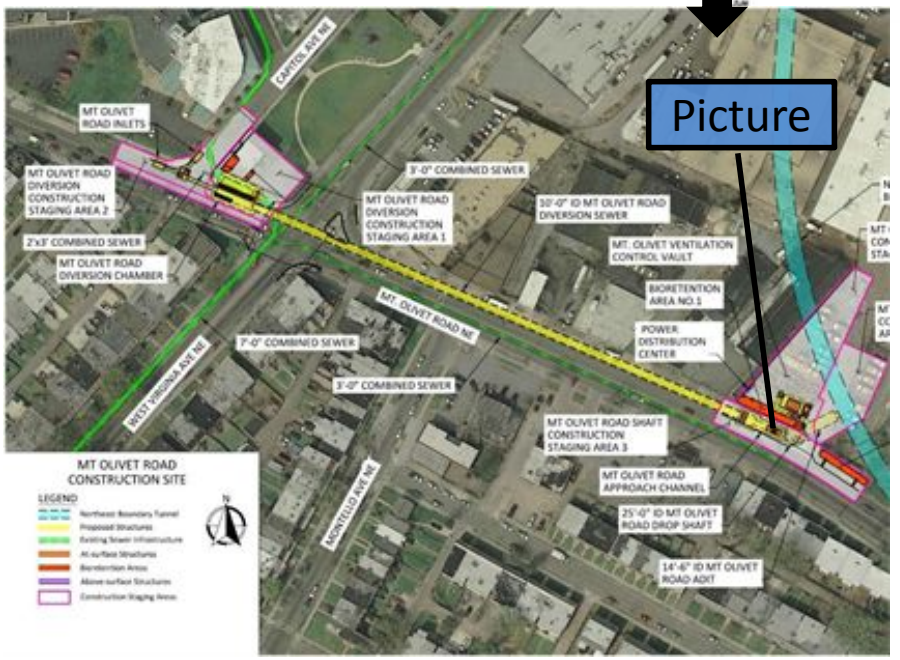
Clean Rivers expenditures on Northeast Boundary Tunnel are not expected to exceed the budget

EXTRA SLIDES

DIVISION J SURFACE WORK DETAILED UPDATES

Division J – Northeast Boundary Tunnel
Construction Progress: Mount Olivet Rd.

Concrete Placement for MOR AC Walls



Drop Shaft Site

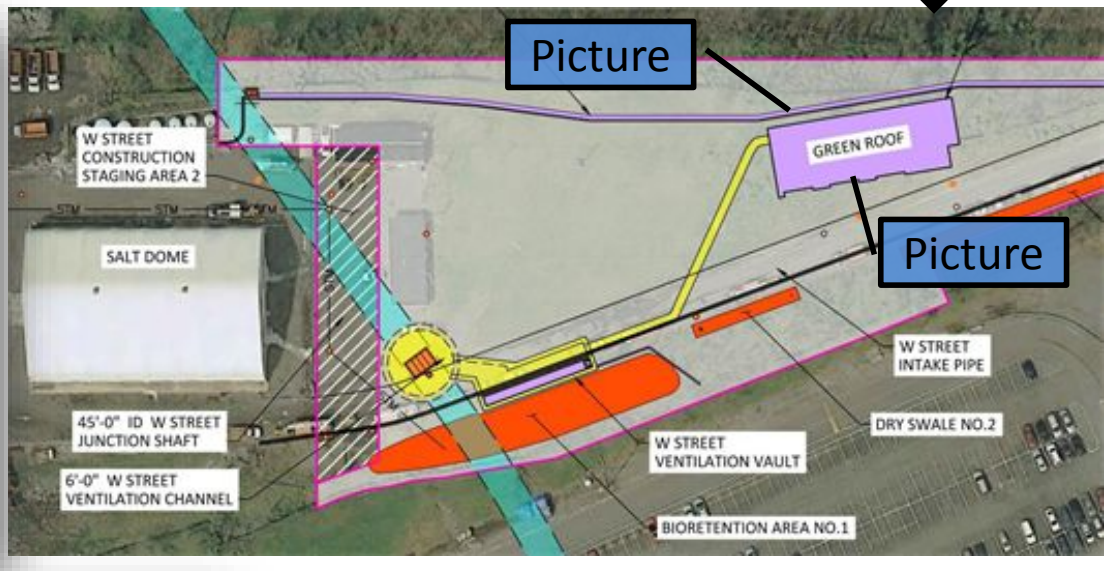
- Working on both connections for the Drop Shaft to the Approach Channel (AC) & Ventilation Control Vault (VCV).
- Concrete work for AC permanent structure (walls) is ongoing.

Diversion Site

- Completed Mt. Olivet Road Diversion Chamber (MOR DC) excavation & ground support. Placed concrete for MOR DC base slab.
- Concrete work for MOR DC permanent structure (walls) is ongoing.
- Excavation for inlets is ongoing.

Division J – Northeast Boundary Tunnel Construction Progress: W Street

Retaining Wall



Ventilation Control Facility

- Install remaining portion of the retaining wall adjacent to Ventilation Control Facility (VCF).
- Working on below grade foundation for VCF.

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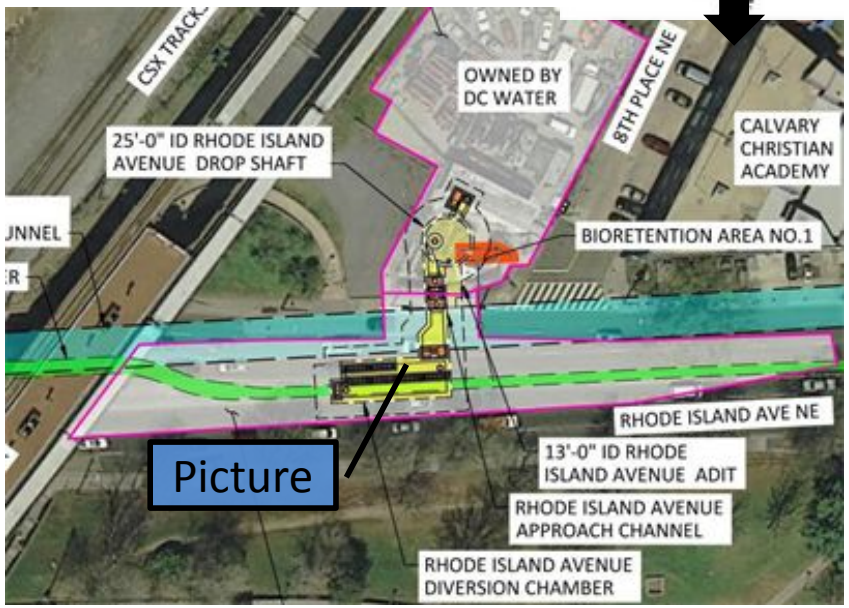
Division J – Northeast Boundary Tunnel
Construction Progress: Rhode Island Ave

Diversion Chamber North Wall Formwork



- Concrete work for Diversion Chamber permanent structure is ongoing.
- Completed Adit vent shelf.
- Shaft internal concrete work is ongoing.
- Completed the Ventilation Vault concrete base slab and lower walls.

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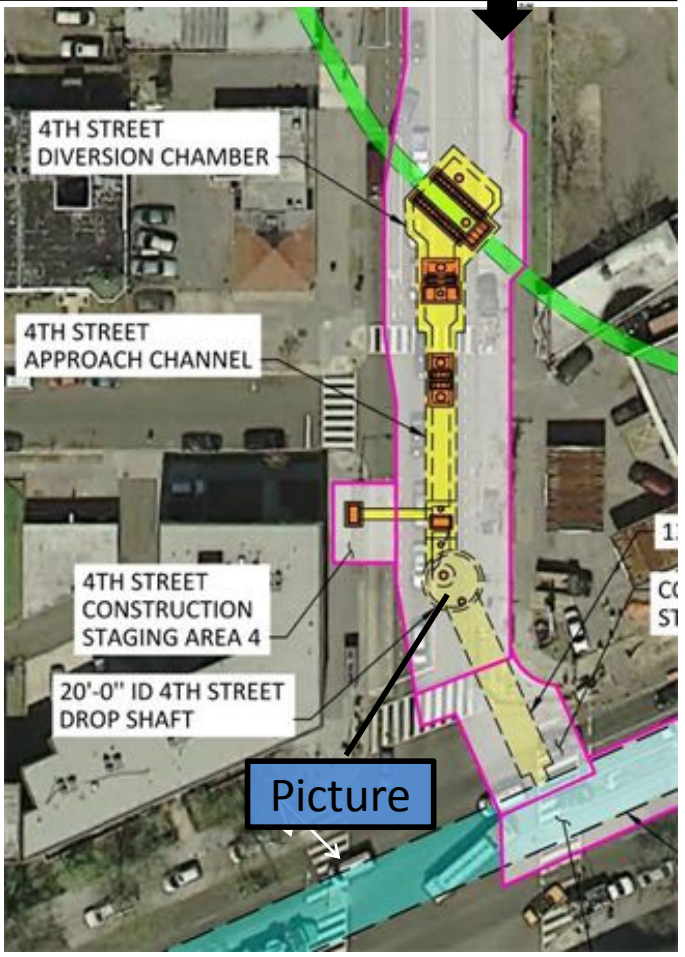
Division J – Northeast Boundary Tunnel
Construction Progress: 4th Street

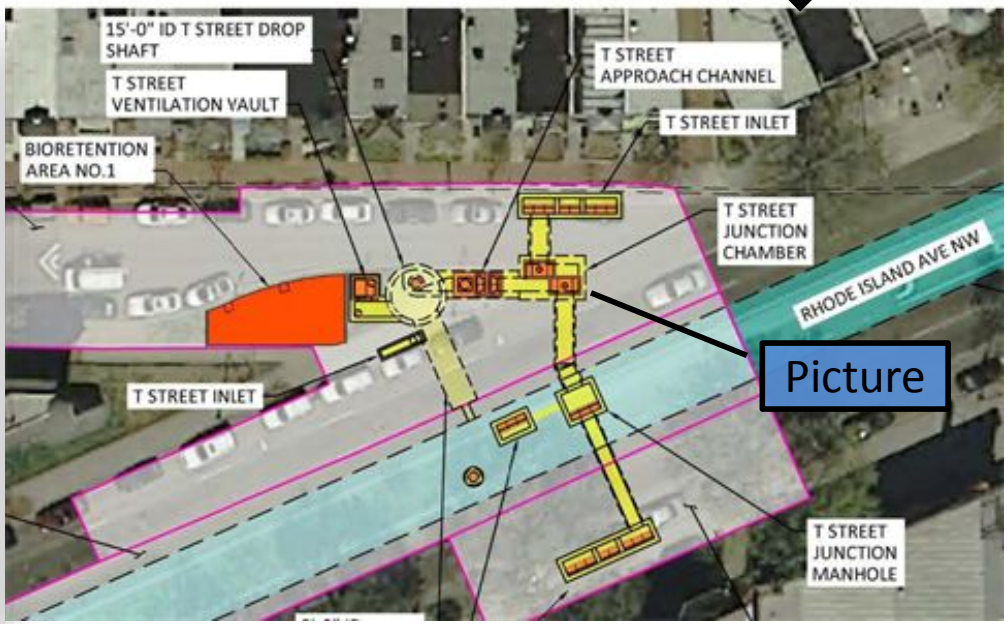
Drop Shaft Cover Backfill



- Completed the Drop Shaft and Ventilation Vault 1 structures.
- Backfilled Diversion Chamber and Approach Channel structures.
- Performing utility restoration work.

Division J – Northeast Boundary Tunnel
Construction Progress: T Street

Junction Chamber Roof



- Completed the Adit/Tunnel connection.
- Shaft internal concrete work is ongoing.
- Completed Approach Channel and Junction Chamber walls.

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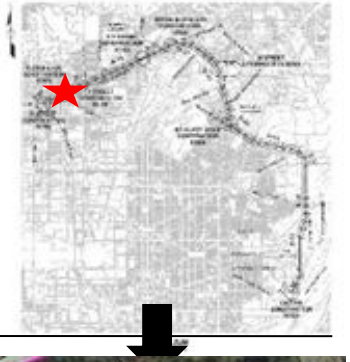
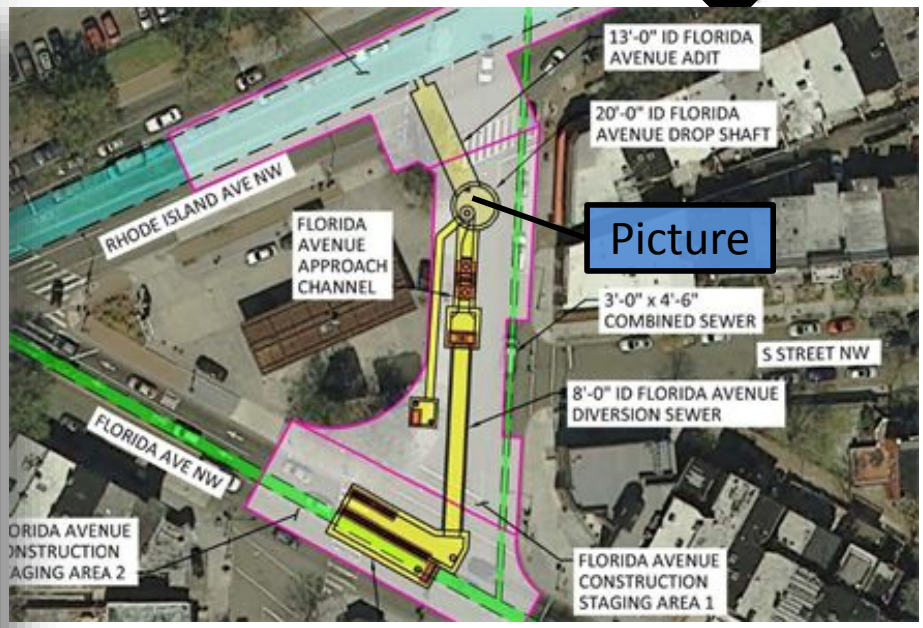
Division J – Northeast Boundary Tunnel
Construction Progress: Florida Ave

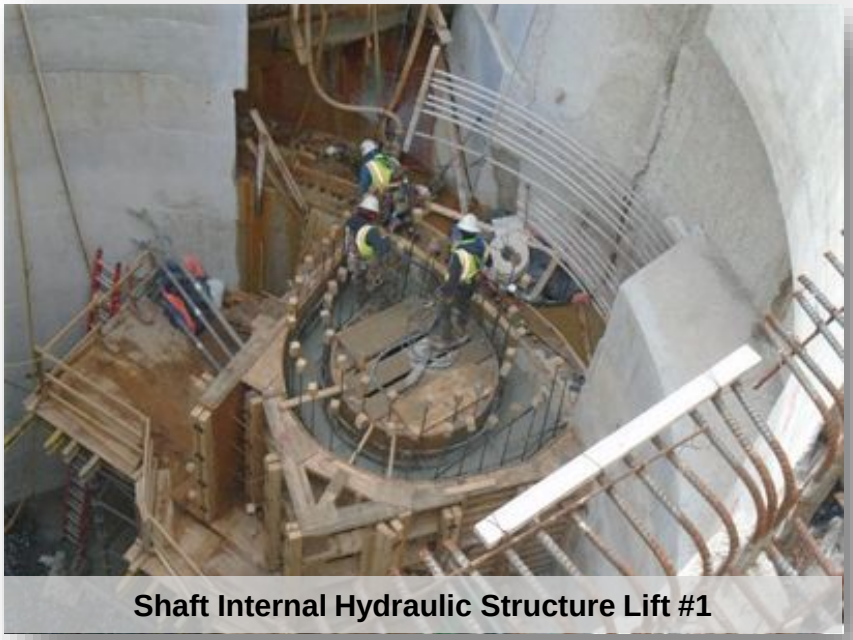


Ground Freeze System in Drop Shaft

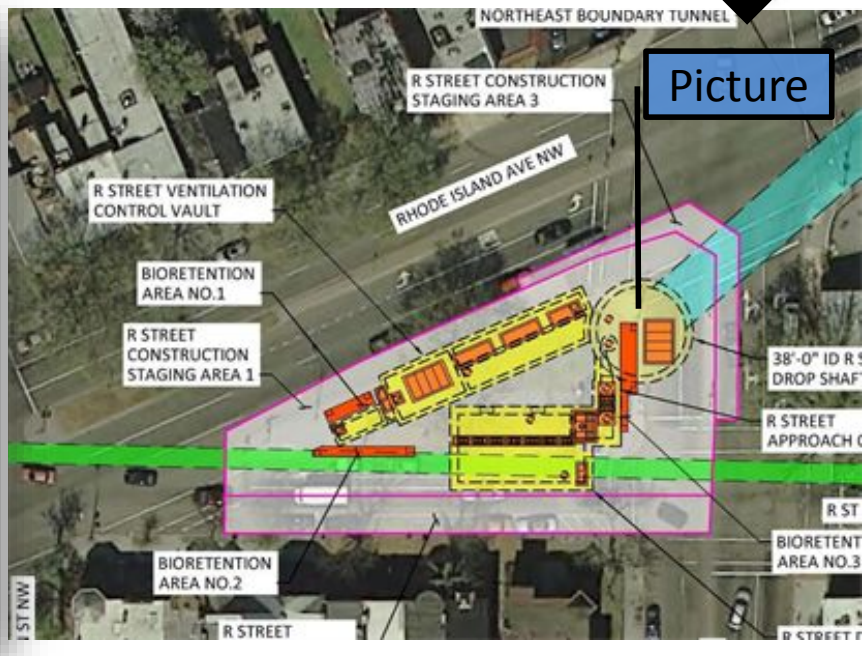


- Ground improvement (freezing) ongoing in preparation for Shaft/Adit connection and Adit excavation.
- Completed Diversion Chamber concrete structure.
- Completed Approach Channel walls.

Division J – Northeast Boundary Tunnel
Construction Progress: R Street



Shaft Internal Hydraulic Structure Lift #1



- Completed Approach Channel and Diversion Chamber concrete walls.
- Shaft internal concrete work is ongoing.

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

Sewer break with creek water infiltration in Soapstone Park (2020)

Fallen trees and eroding creek bank

Exposed sewer pipe and manholes

Creek Bed Sewer Repair and Rehabilitation Project

Soapstone Valley Park

17 February 2022
EQ&Ops Committee

DCWATER.COM

Outline

Sewer break with creek water infiltration in Soapstone Park (2020)

Fallen trees and eroding creek bank

Exposed sewer pipe and manholes

- Project Justification
- Construction Urgency
- Project Timeline
- Community Concerns
- Concern Mitigation Measures
- Questions

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Project Justification

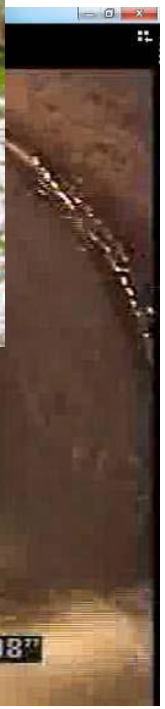
- Soapstone stream restoration and trail erosion damage
- 6,200 linear feet of sewer pipe requiring rehabilitation
- Two impaired stormwater outfalls in need of repair

Construction Urgency

- Protect human health and the environment
  - Deterioration of the sewer causing sewage leaks (7 recorded sewer leaks/overflows since 2014, on average once per year)
  - Exposed pipes vulnerable to damage from falling trees, stones, and ongoing erosion
  - Increasing likelihood of major break that spills sewage into the creek and park
- Alternative is continued emergency repairs
  - Have a much bigger footprint
  - Less opportunity for a thoughtful approach
  - Will not deliver full community benefits

Project benefits include improving eroding Park trails


Exposed Sewer Pipe
Crossing Stream

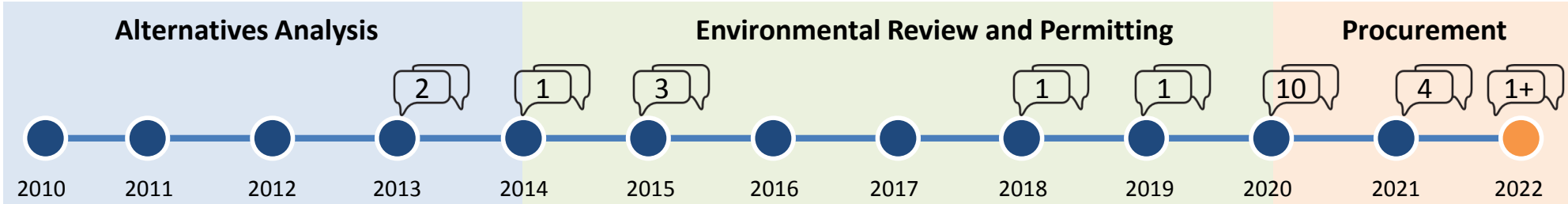

Extensive Water Infiltration
06. 16. 2010
26'08"


Manhole Exposed by
Erosive Stream Channel

5

Project Timeline

23 Public Engagement Activities Since 2013



Repair Options:

- Open Cut
- Trenchless Construction
- Re-route
- Siphon
- Other Trenchless Rehab
- Cured-in-place (CIPP Trenchless

CIPP Trenchless

LOD and construction duration identified as driving criteria, influencing selection of CIPP trenchless method

Iterative Design Process with NPS

EA Publication, Public Review, NEPA completion

Environmental review and permitting process is complex and lengthy for projects on NPS property, establishes LOD.

Open Request for Qualifications on CIPP Trenchless Method

RFP to Qualified Firms

DCW standard practice is "open bid" to foster competitive bidding

6

Community Concerns

- Tree Removal in Park
- Air Quality related to use of CIPP; particularly Steam Curing
- Not using UV for CIPP (community believes it addresses the two issues of concern)

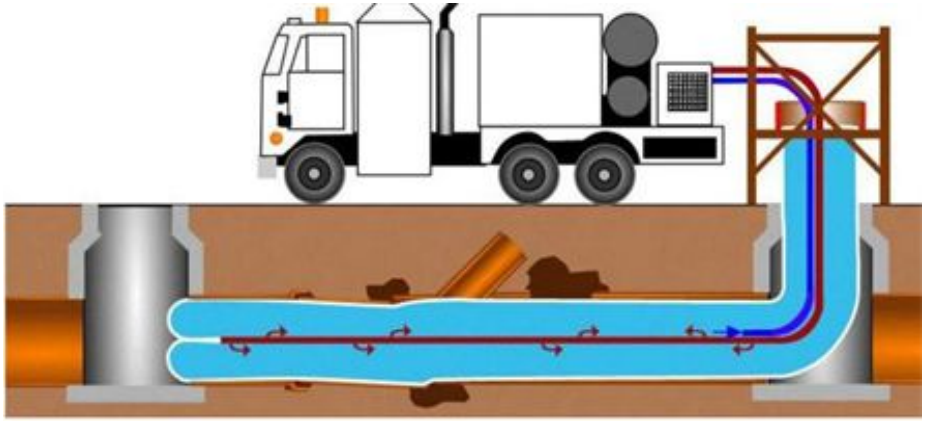
Concern Mitigation Measure – Air Quality

- For this project, DC Water will use a resin that contains no volatile organic compounds (VOCs) and no styrene.
- This will increase the cost of the project but eliminate the risk of VOC emissions.
- This gives DC Water the time to work with DOEE to verify the safe use of standard resin (with steam curing) in DC.
- DC Water is also currently developing decision criteria for the use of No-VOC and styrene-free resin on future projects.

Concern Mitigation - Water Cure Method

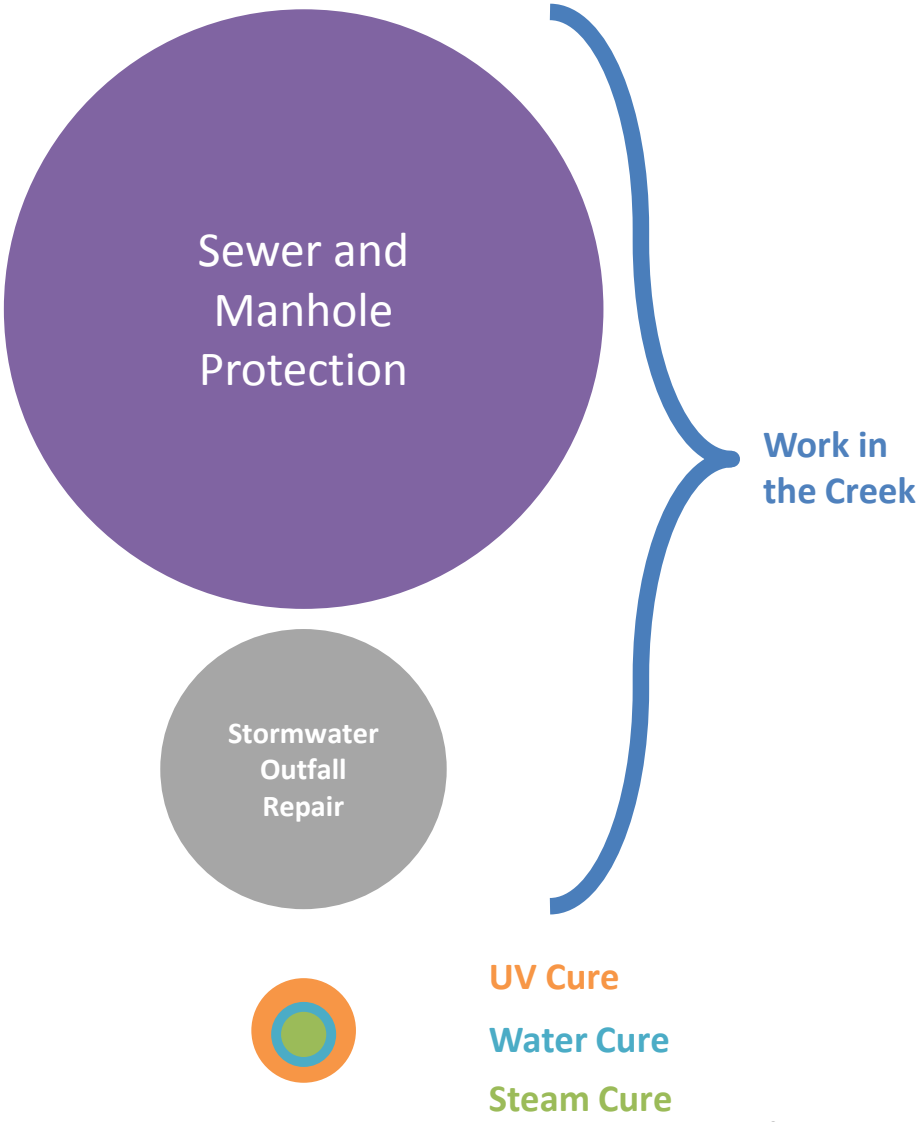
Alternatives Analysis 2011-2013 | **Environmental Review and Permitting** | **Procurement**

- Liner inverted using water
- Cured with hot water
- Cure time 4-8 hours depending on temperature and other conditions
- Water slowly released to sanitary sewer to WWTP
- Can line 1,000 feet – 2,000 feet at one time, can line up to 45-degree bend
- Requires temporary structures to create sufficient hydraulic pressure for cure



Concern Mitigation - Minimizing Tree Impacts

- Number of trees affected is a driving factor in the design.
- Authorized to cut 371 trees.
- Most of the tree impact is to protect exposed manholes and sewers.
- Second most is for work to repair the two stormwater outfalls.
- Tree-cutting **must be complete by March 31** to avoid impacts to federally protected bats.
- UV Method is projected to require a greater number of trees to be cut due to multiple staging requirement



Q&A

Procurement: RFP Response

Alternatives Analysis | Environmental Review and Permitting | Procurement 2020 - 2021

- Six teams submitted including all CIPP technologies
- 3 teams deemed non-responsive
  - Safety
  - Good Faith Effort Documentation
- Remaining teams evaluated for:
  - Company Experience
  - Qualifications and Experience of Key Personnel
  - Capacity
  - Approach / Methodology
  - Subcontracting
  - Price