



**Proposed FY2022 – 2031 Capital Improvement Program
Presentation to Environmental Quality and Operations Committee • January 20, 2022**





**Current CIP
Overview**

**Proposed CIP
Overview by
Priorities**

**CIP Program
by Program
Investments**

**Infrastructure
Bill**

**Additional
Programs**

DC Water

- Our responsibilities include managing over **\$7.5 billion in assets**, including the world's largest Advance Wastewater Treatment and Resource Recovery Facility, Blue Plains.
- We make infrastructure investments that help protect **\$122 billion in the District's GDP**.
- For every **\$1 million** we invest in capital, there is an economic impact of **15.5 jobs** (direct, indirect and induced).
- DC Water's **economic impact, over 10 years, is an estimated 83,700 jobs**.



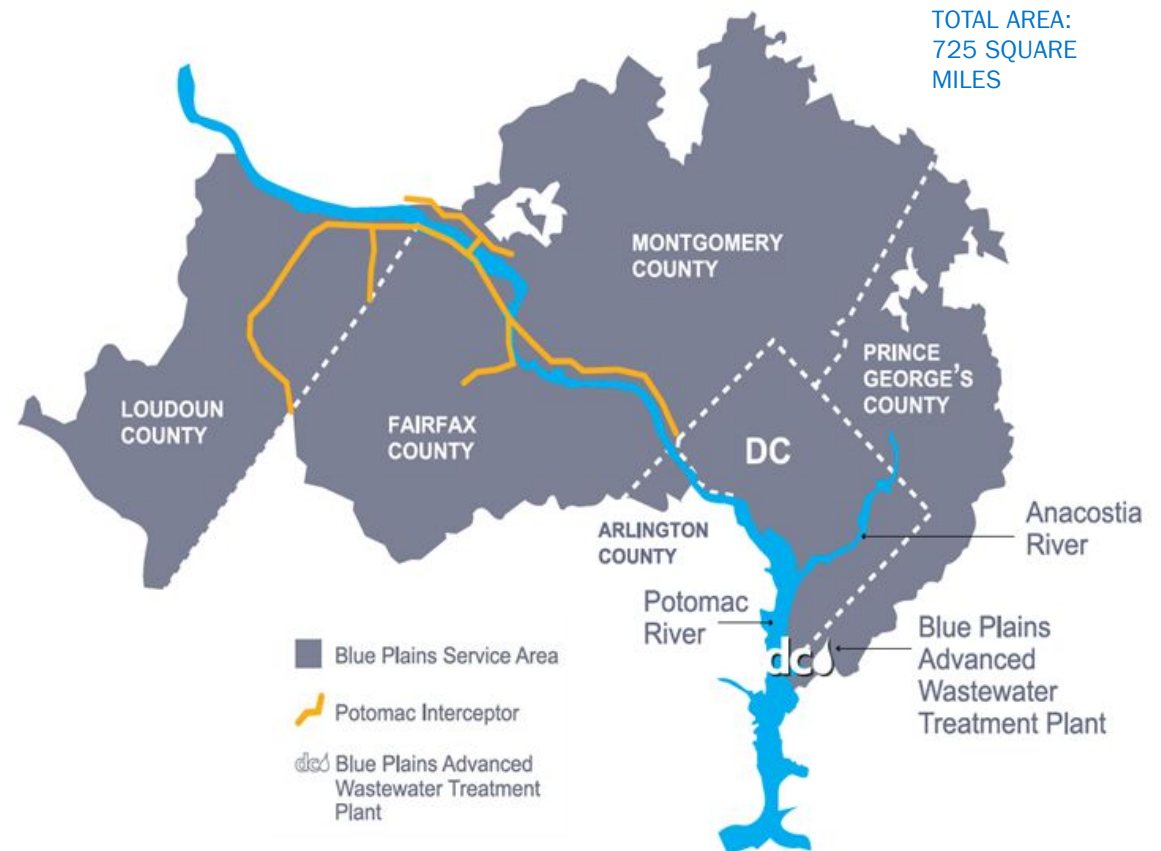


DC Water System Overview

To distribute drinking water, DC Water operates more than **1,350 miles** of pipes, **four** pumping stations, five reservoirs, four elevated water storage tanks, 43,860 valves and 9,500 public hydrants.

To collect wastewater, DC Water operates **1,800 miles** of sanitary and combined sewers, 22 flow-metering stations, and **nine** off-site wastewater pumping stations.

To treat wastewater, DC Water operates the **Blue Plains** Advanced Wastewater Treatment Plant, the largest advanced wastewater treatment facility in the world.



Current (Approved FY21-30) DC Water CIP Highlights

\$4.9B*

Current 10-Yr total

\$11.2B

Current Lifetime
Budget

\$390M**

Average annual
expenditures

39% Construction
34% A/E

Total participation***
(DBE,WBE,CBE)

267

Number of planned
projects

150

Number of active
projects

**Current Approved FY21-30 CIP*

***Average of Last 5 years 2017-2021 spending*

****Average Participation for FY18 to FY21*

Active = Projects with spending forecast in FY22

Planned = Total # Projects in 10-year plan

Capital Projects only – excludes Capital Equipment and Washington Aqueduct spending forecast



The Capital Improvement Program

- The **proposed ten-year CIP budget of \$6.4 billion** includes previous amendments to the FY 2022 budget for the Lead Free DC initiative, 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 10-yr	(Increase)/ Decrease	Lifetime Budget
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-yr Total			
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
	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		Lifetime 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)

DC Water Budget Overview

FY2022-2031 Proposed Capital Investments of \$6.4 billion



Fully Funds DC Clean Rivers and other CSO projects to meet Consent Decree requirements



\$375.3

Invests in process equipment, specialized vehicles, and information technology infrastructure; establishes funding for the innovation program

Invests in the Aqueduct's capital infrastructure



\$102.2 million



Constructs the new Fleet and Sewer Facilities, renovates the Historic Main Pump Station, and restores the Main & O campus seawall

Continues investment in Water & Sewer infrastructure



\$629.3M to remove all lead service lines by **2030**



\$1.2 billion

Ramps up to 1.5% replacement for small diameter water mains per year in FY 2028 and beyond



\$1.4 billion

Ramps up to 1.0% rehabilitation for small sewer lines per year in FY 2024 and beyond



Improves stormwater pump stations to relieve local flooding

\$1.2 billion

Funds rehabilitation and upgrades at Blue Plains





Proposed Changes to 10-year CIP by Service Area

Program Increases

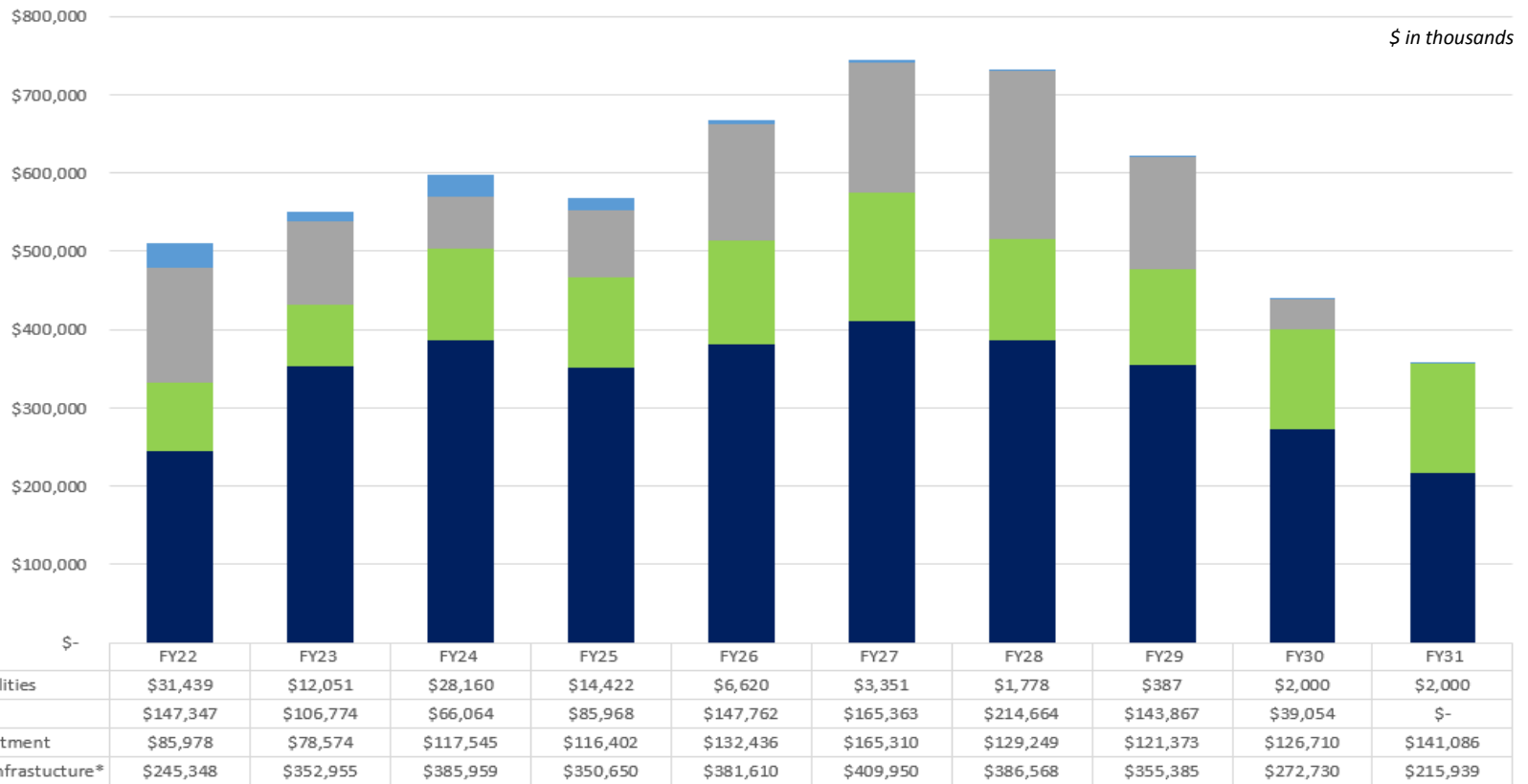
- Wastewater – By \$56M to \$1.21B
- DCCR – By \$89M to \$1.12B (\$232M Lifetime budget increase)
- CSO – By \$5M to \$100M
- Stormwater – By \$1M to \$65M
- Sewer – By \$50M to \$1.36B
- Water – By \$682M to \$1.83B (includes LFDC \$629M)
- Capital Equipment – By \$39M to \$375 million
- Washington Aqueduct – By \$74M to \$254 million

Program Decrease

- Non-Process – By \$8M to \$102M (\$6M Lifetime budget increase)



DC Water 10-Year CIP Projects Spending Projection



*Includes the following Service Areas: Water, Sanitary Sewer, Stormwater, and non-Clean Rivers portion of Combined Sewer Overflow Capital Projects only – excludes Capital Equipment and Washington Aqueduct spending forecast



Prioritization of CIP Spending



- As large regulatory mandated projects are completed, increased investments can be made in our aging water and sewer infrastructure

Higher Priority → Lower Priority

	1A		2A	2B	2C	2D	3A		3B	
	Mandates		Health & Safety	Board Policy	Potential Failure	High Profile Good Neighbor	Good Engineering High Payback		Good Engineering Lower Payback	
	Agreements, Regulatory standards, Court orders, Issues and Permits requirements, Stipulated Agreements, Etc.		Required to address Public Safety	Undertaken as a result of the Board's commitment to outside agencies	Related to Facilities in danger of failing, or critical to meeting permit requirements	Address Public concerns	Need to fulfill Mission and upgrade Facilities		Lower priority Projects	
FY 2022	\$154,484	27%	\$15,029	\$150,006	\$37,778	\$1,971	\$139,063	25%	\$69,176	\$567,507
FY 2023	\$106,827	17%	\$55,821	\$187,621	\$45,608	\$964	\$161,338	25%	\$88,825	647,004
FY 2024	\$66,090	10%	\$22,047	\$155,503	\$45,047	\$699	\$216,669	32%	\$162,579	668,633
FY 2025	\$85,968	14%	\$7,998	\$144,127	\$51,131	\$1,736	\$193,652	31%	\$135,302	619,914
FY 2026	\$147,762	20%	\$11,743	\$134,922	\$37,683	\$1,189	\$237,784	32%	\$164,842	735,924
FY 2027	\$165,363	20%	\$23,506	\$120,645	\$57,975	\$1,621	\$247,881	30%	\$205,919	822,910
FY 2028	\$214,664	27%	\$12,922	\$130,675	\$48,912	\$2,712	\$191,334	24%	\$181,967	783,185
FY 2029	\$143,867	21%	\$4,455	\$140,653	\$27,111	\$0	\$188,048	28%	\$165,022	669,155
FY 2030	\$39,054	8%	\$2,680	\$68,989	\$40,732	\$0	\$176,511	36%	\$168,563	496,528
FY 2031	\$0	0%	\$2,516	\$68,037	\$19,560	\$0	\$124,905	31%	\$194,121	409,139
Total	\$1,124,077		\$158,715	\$1,301,178	\$411,536	\$10,891	\$1,877,185		\$1,536,316	\$6,419,899
% of Total	17.5%		2.5%	20.3%	6.4%	0.2%	29.2%		23.9%	

\$ in thousands - Cash disbursements basis



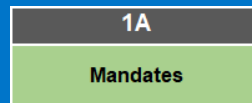
CIP by Priority

10-Year Capital Projects - Total \$5.79 billion, an increase of \$870 million

Dominant Priority Secondary Priority



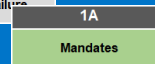
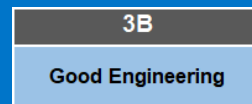
DC Clean Rivers
\$1.12 B



Anacostia, Potomac and Rock Creek



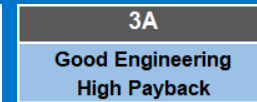
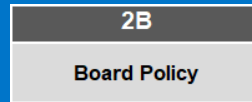
Blue Plains
\$1.21 B



Blue Plains Switchgear, Biosolids Blending Development Center, Blue Plains Solids Processing Building



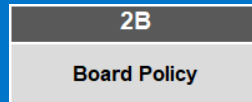
Water
\$1.20 B



Small Diameter Water Main Replacements, Fire Hydrant Replacements, Large Diameter Water Main Rehabs



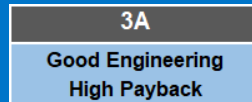
LFDC
\$629 M



Lead Free DC



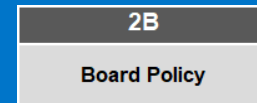
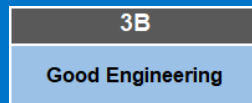
Sewer
\$1.36 B



Local Sewer Rehabs, Potomac Interceptor Rehabs, Major Sewer Rehabs



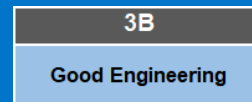
Non-Process
\$102 M



Main and O redevelopment Efforts,

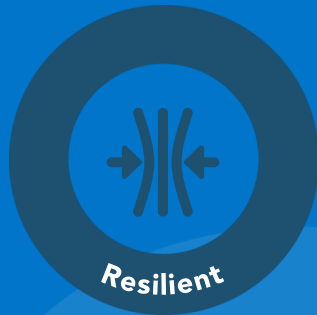


Stormwater
\$65 M



Storm Water Pump Stations Rehab, Storm Sewer Rehabs

DC Water CIP Program by Program Investments



Wastewater Blue Plains (\$1.22 billion)

Program Portfolio

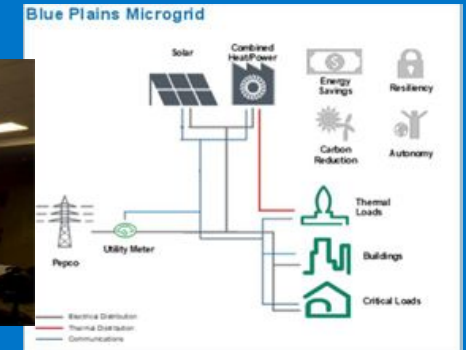


Liquid Processing - \$658 million

384 MGD Average; 780 MGD Peak



Plantwide - \$282 million

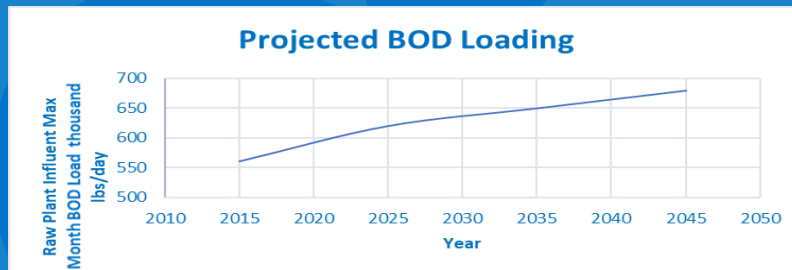


Solids Processing - \$214 million



Enhanced Nitrogen Removal Facilities - \$60 million

>90% complete; Expansion of secondary treatment to meet nitrogen discharge permit limit with future load





Blue Plains Major Projects – Investments for Reliability



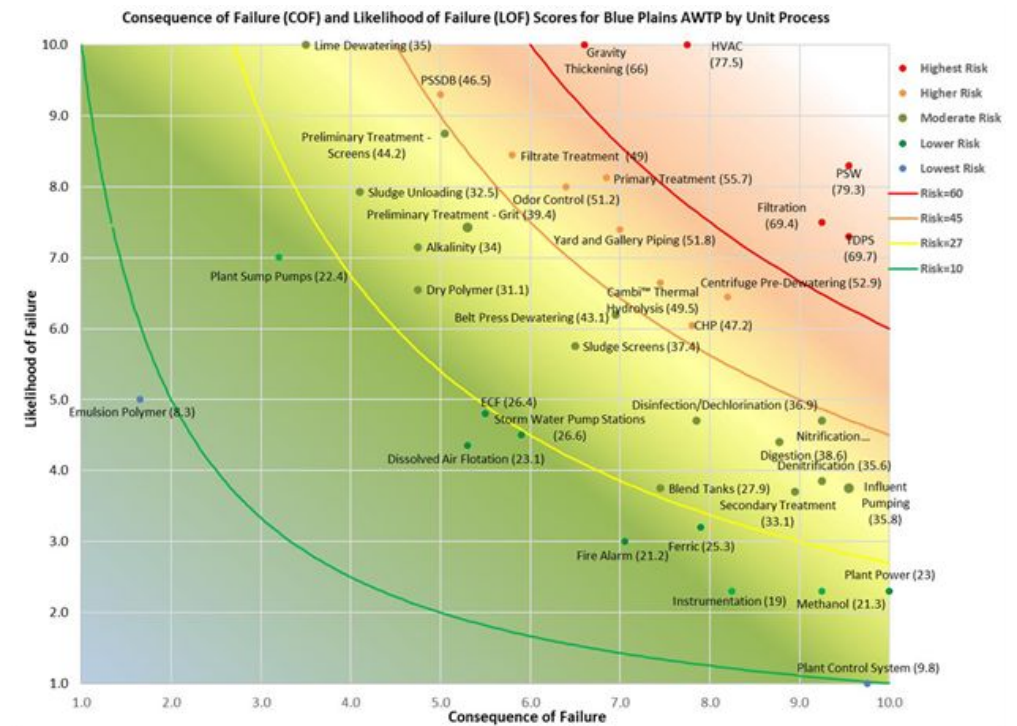
68 Planned projects to address plant reliability



Filter Influent Pump Installation



Gravity Thickener Phase 2





Blue Plains Major Projects – Investments for Sustainability and Resilience



Design-Build Project to install remaining portions of floodwall to protect Blue Plains from 500-year frequency event.

Biosolids Curing Pad to produce cured product and diversify product market.



Solar Panels to be installed on roof of Curing Pad



Sewer (\$1.36 billion)

Program Portfolio



Sanitary interceptor/trunk sewers/force mains \$639 million

- Program is for 170 miles of sewers
- Assessment of about 10 miles of Sanitary interceptor/trunk/force mains a year.
- Rehabilitation major sewers such as Anacostia Force Main and Gravity Sewer, Potomac Interceptor, and others.



Sewer Ongoing \$144 million

- Inspection of 1,400 miles <12-inch diameter local sewers at 12 mi/month.
- Cleaning and root control
- Emergency repair of collapsed and broken sewers.



Sanitary Collection Sewers \$326 million

- Inspection of about 40 miles of collection sewers (>12-in and <60-in dia.) a year.
- Rehabilitation of 1% of the collection sewers a year as of 2024.

Sewer (\$1.36 billion)

Program Portfolio



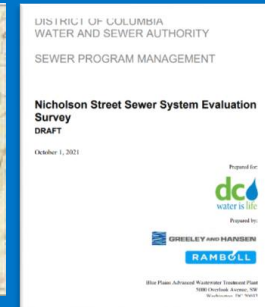
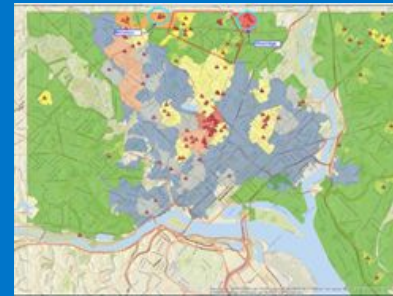
Sanitary Pumping Facilities \$170 million

- Maintain compliance with consent decree for firm capacity
- Address reliability and resiliency for climate change and flood hazards
- SCADA, Electrical, Mechanical
- Code Compliance, Safety



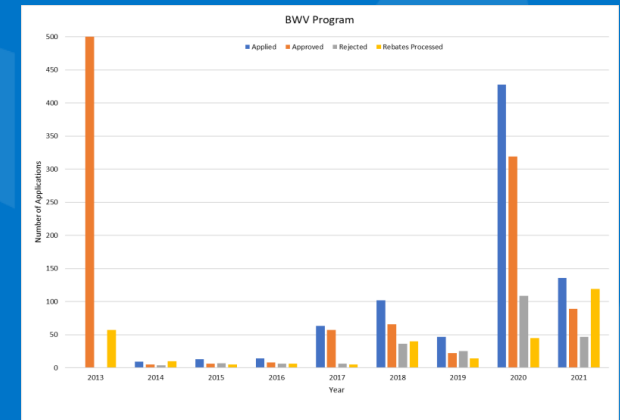
Sewer Program Management \$84 million

- September 10, 2020 Flooding Study and BWV Program



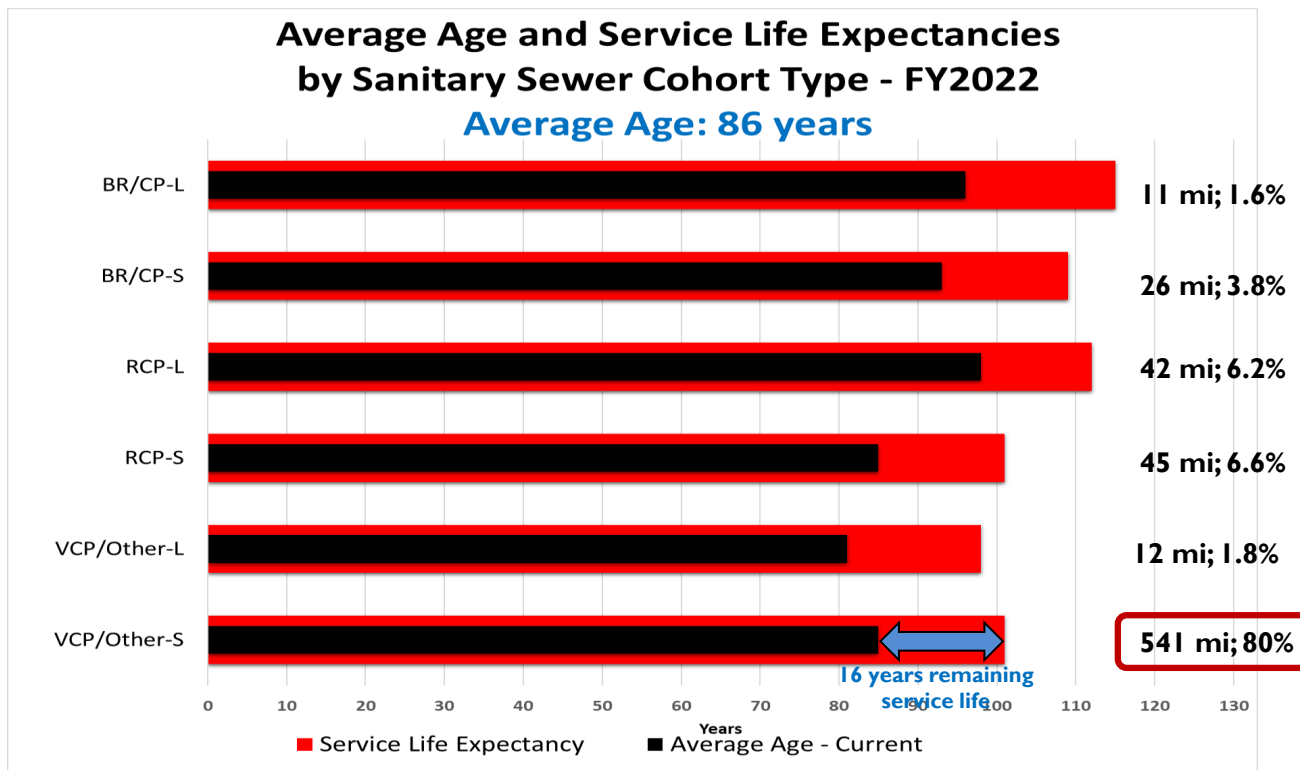
Limited SSES:

- Smoke testing
- Flow testing
- CCTV Inspection



dc Sewer System Age

Average Age and Service Life Expectancies by Sanitary Sewer Material Type



Small SEWER
Average Age
86 Years
541 miles with
16 years life
remaining

Combined Sewer Overflow without Clean Rivers (\$100 million) and Stormwater (\$65 million) Program Portfolios



- Maintain compliance with consent decree for firm capacity at CSO pump stations
- Address reliability and resiliency for climate change and flood hazards

Combined Sewer Overflow \$100 million



- Main Pump Station
- Potomac Pump Station
- Inflatable Dams at CSO Outfalls

16 Stormwater Pumping Facilities \$43 million



- Pumps, Electrical, and code compliance upgrades
- SCADA monitoring and control
- Safety and security

Water (\$1.83 billion)

Program Portfolio



Water Distribution \$880 million



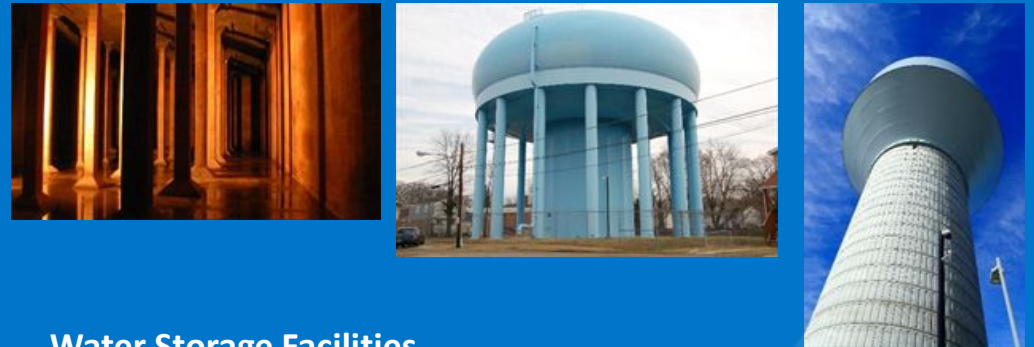
Small Diameter Water Main Replacement:

- Currently 1% goal; additional budget needed to ramp up to 1.5% starting FY28.
- As of now, 60 miles replaced, 21 miles in construction, 49 miles in design, 17 miles in planning.

Large Diameter Water Mains:

- Restart Large Valve Replacement (LVR) Program.
- Continue inspecting 5 miles/year.

Water Storage Facilities \$51 million



Water Storage Facilities

- 7 active storage facilities
 - 5 storage facilities scheduled for upgrades
- 2 storage facilities will be mothballed
- Construct a new storage facility in 2nd High - feasibility

Water Pumping Stations \$42 million

- Upgrade 4 pumping stations: Bryant Street, Ft Reno, and Anacostia and 16th St.

Water (\$1.83 billion)

Program Portfolio



Water Ongoing \$177 million

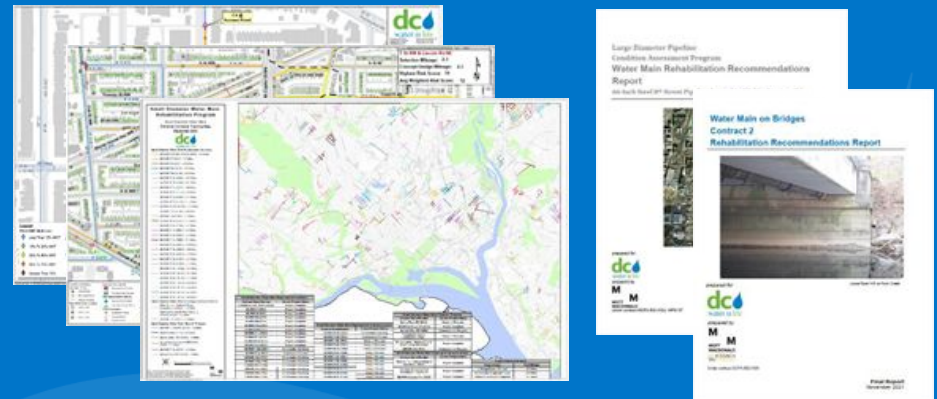
- Fire hydrant replacement
- Valve replacement
- Replacement of distribution mains with WQ issues
- Flushing of the water distribution system
- Repair pipe breaks



Third Street Tunnel Water Main Repair



Water Program Management \$51 million

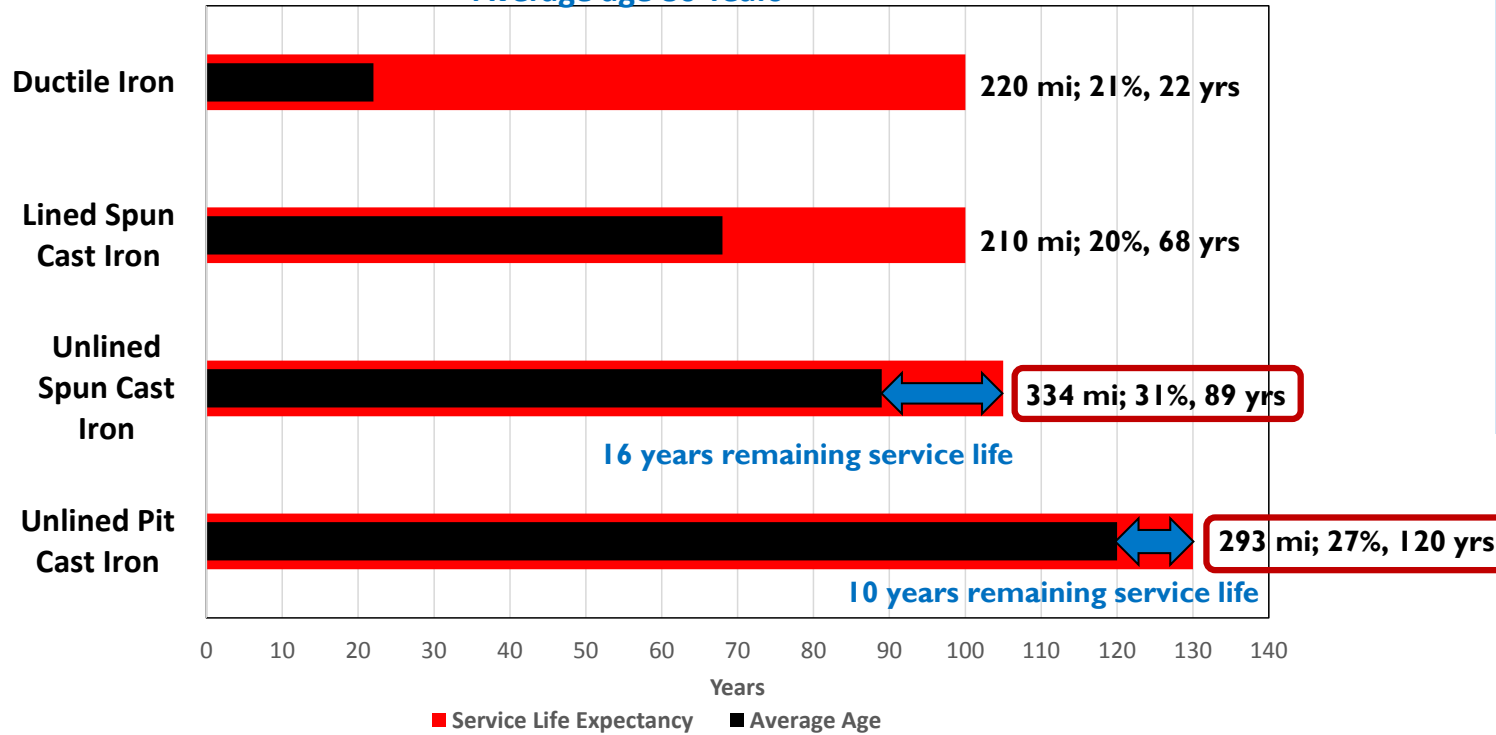


- Vulnerability assessment and emergency response support
- District Metering
- Asset Management of water mains
- Master Plan / Facilities Plan support
- Water assets feasibility studies
- Planning support, project development for CIP projects
- Water System Program strategy development support

dc Water System Age

Average Age and Service Life Expectancies by SDWM Cohort pipe material

Average Age and Service Life Expectancies
Small Dia. Water Mains Cohort Type - FY2022
Average age 80 Years

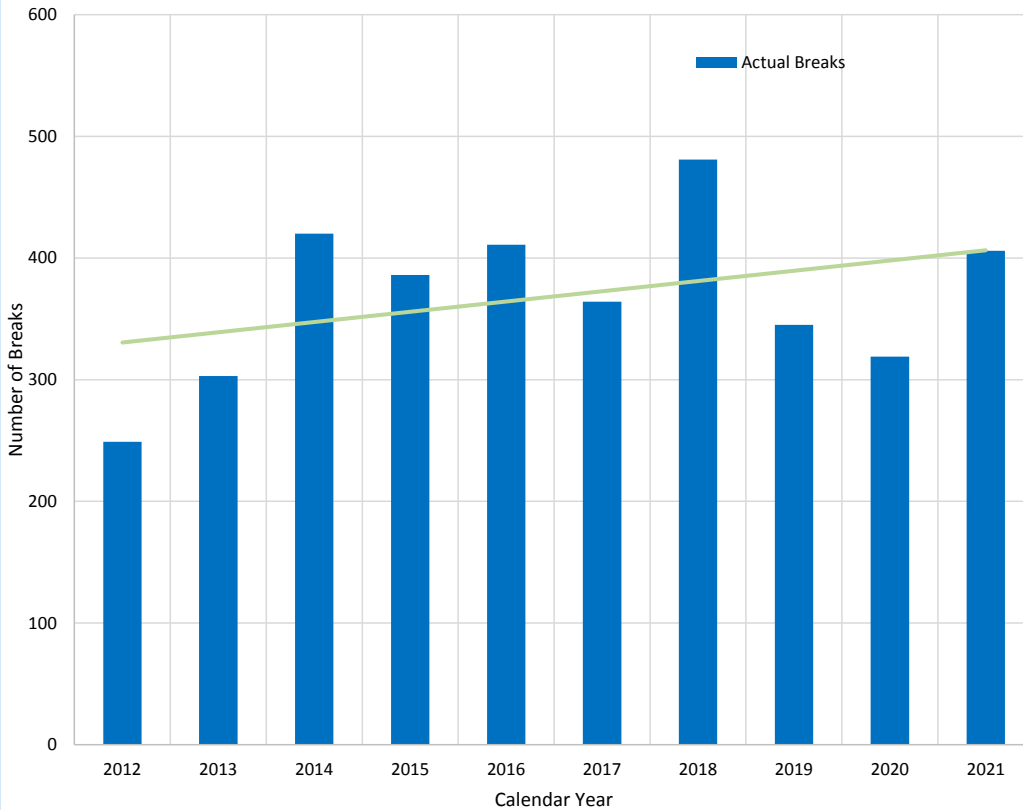


WATER
1,063 miles
Average Age 80
Years
**627 miles with
less than 16 years
life remaining**

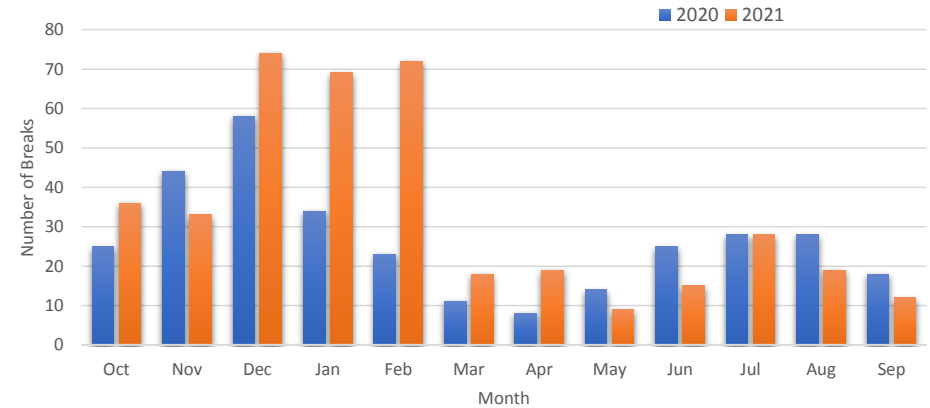


Small Diameter Water Mains – Break History

Distribution System Water Mains
Total Main Breaks

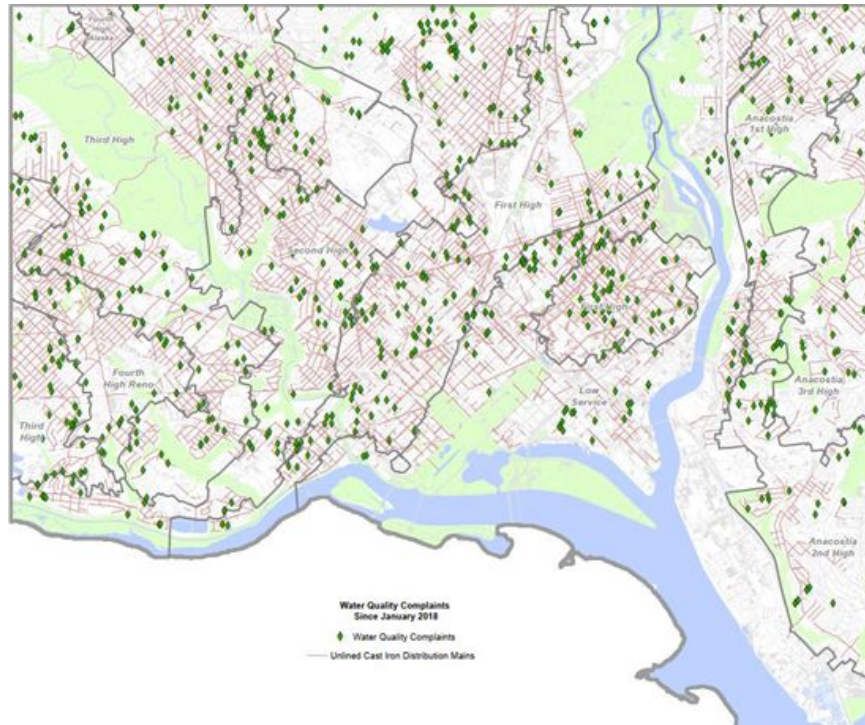


Confirmed Water Main Breaks
In FY2020 & 2021



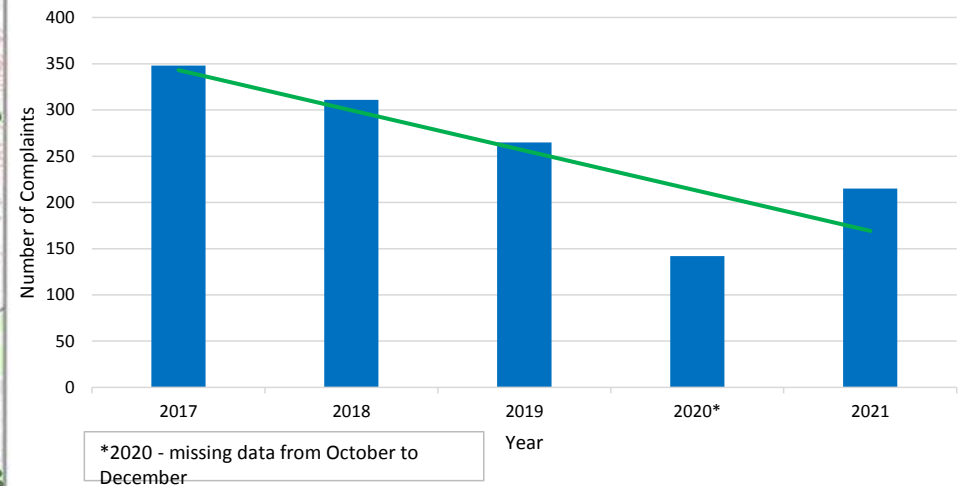
- The AWWA Partnership for Safe Water Distribution System Optimization Program goal for a fully optimized distribution system is 15 breaks/100 miles/year
- DC Water averages 35 breaks/100miles/year

dc Water Quality Data



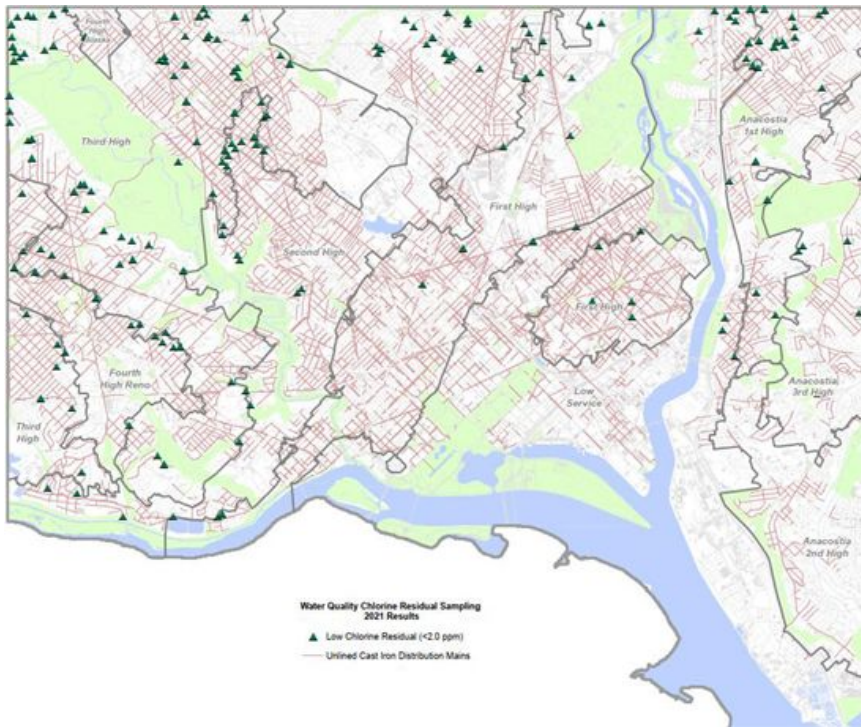
Water Quality (WQ) Complaints (2018 – 2021)

Number of Water Quality Complaints by Year

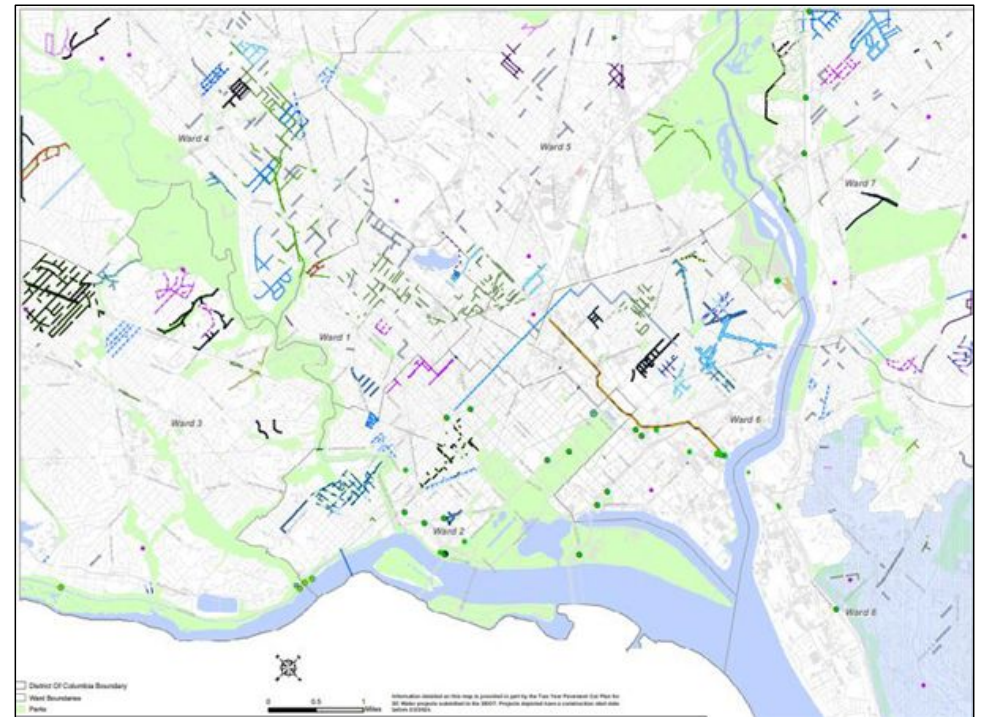


- ~60% of the SDWM budget allocated to WQ
- Flushing and other operations help to address WQ complaints

dc Water Quality Data



Water Quality Sampling, Chlorine Residual Results (2021)



CIP Projects- two year look ahead (Jan. 2022)

dc Lead Free DC (LFDC) Program



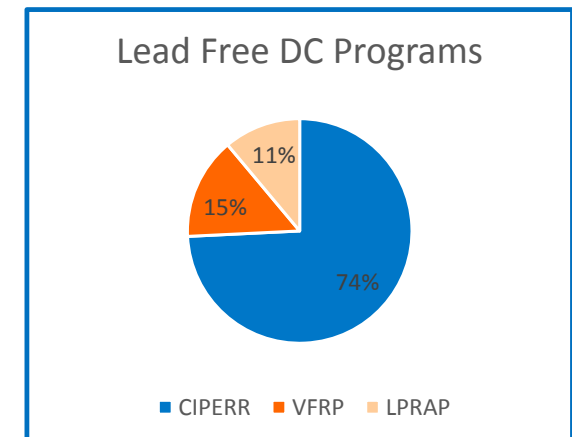
- Lead Free DC Initiative will replace more than 28,000 service lines with lead or galvanized-iron pipe by 2030
- DC Water developed a model to use water quality and health equity data to prioritize lead service line replacement projects for vulnerable populations most impacted by lead exposure in historically underserved communities
- Ranks blocks according to the health benefit and social impact of lead service line replacement so that projects can be funded and executed equitably
- Estimated cost of **\$629 million** for replacement work, plus additional and separate funds for small diameter water main replacement

Table: LFDC Proposed Budget

\$ in thousands

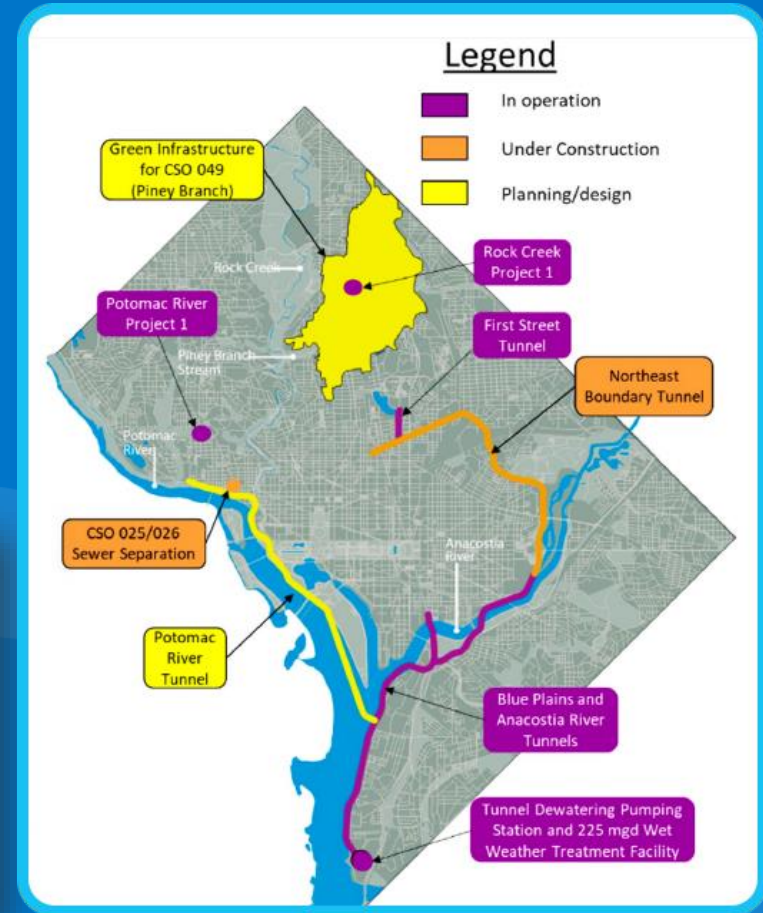
Program	Public Side	Private Side	Total FY22-30
CIPERR	\$ 409,523	\$ 57,007	\$ 466,530
VFRP	\$ 84,307	\$ 7,951	\$ 92,258
LPRAP		\$ 70,163	\$ 70,163
Total	\$ 493,830	\$ 135,121	\$ 628,951

Capital Improvement Project and Emergency Repair Replacement ("CIPERR")	Lead Pipe Replacement Assistance Program ("LPRAP")	Voluntary Full Replacement Program ("VFRP")
<ul style="list-style-type: none"> ■ Public Space: Lead ■ Private Property: Lead 	<ul style="list-style-type: none"> ■ Public Space: Non-Lead ■ Private Property: Lead 	<ul style="list-style-type: none"> ■ Public Space: Lead ■ Private Property: Lead
<ul style="list-style-type: none"> ■ DC Water pays 100% of public-side costs ■ The District pays 100% of private-side replacement costs 	<ul style="list-style-type: none"> ■ The District pays 50-100% of private-side replacement costs 	<ul style="list-style-type: none"> ■ DC Water pays 100% of public-side costs ■ Property owner pays 100% of private-side replacement costs
<ul style="list-style-type: none"> ■ DC Water-initiated replacements during planned CIP work and emergency repairs 	<ul style="list-style-type: none"> ■ Customer-initiated replacements 	<ul style="list-style-type: none"> ■ Customer-initiated replacements



DC Clean Rivers (\$1.12 Billion) Program Portfolio

- Anacostia LTCP Projects (\$188 million)
- Potomac LTCP Projects (\$742 million)
- Rock Creek LTCP Projects (\$187 million)



dc Clean Rivers – What Has Been Achieved?

- Approx. \$1.88 billion has been invested
- Achieved:

Receiving Water	CSO Volume Reduction (mg/avg yr)	
	Current	Ultimate Target
Anacostia <ul style="list-style-type: none"> • Anacostia Tunnel • Sewer separation • Rehab pump stations and inflatable dams 	90%	98%
Potomac <ul style="list-style-type: none"> • Rehab pump stations and inflatable dams 	40%	93%
Rock Creek <ul style="list-style-type: none"> • GI, sewer separation and diversion improvements 	13%	90%
Total System	67%	96%



Anacostia Tunnel from Mar 2018 – Nov 2021:

- Over **12.4 billion gallons** and **7,854 tons of trash**, debris, and other solids captured
- 90% capture (80% planned)



Clean Rivers – What Will Remaining Projects Achieve?

Area	Description	Status as of Jan 2022	Construction Timeframe	Approx. Remaining Cost (\$M)
CY - Anacostia				
Northeast Boundary Tunnel	90 mg tunnel	Construction	2017-2023	\$188
CZ – Potomac				
CSO 025/026 Separation	Separate 2 CSO areas	Construction	2021-2022	\$742
Potomac Tunnel – Advance Utility Construction	Electric services & utility relocation	Construction	2021-2023	
Potomac Tunnel Construction	29,000' of 18' ID tunnel	Design	2023-2030	
DZ - Rock Creek				
Rock Creek GI Project B	22 ac of GI	Construction	2022-2024	\$187
Rock Creek GI Project C	25 ac of GI	No activity	2025-2027	
Rock Creek GI Project D	25 ac of GI	No activity	2028-2030	
Piney Branch Storage	4.2 mg storage facility	NEPA	2026-2029	

Project Performance

- Increase CSO capture from 90% to 98%
- Flooding relief in Northeast Boundary
- Increase CSO capture from 40% to 93%
- Increase CSO capture from 13% to 90%



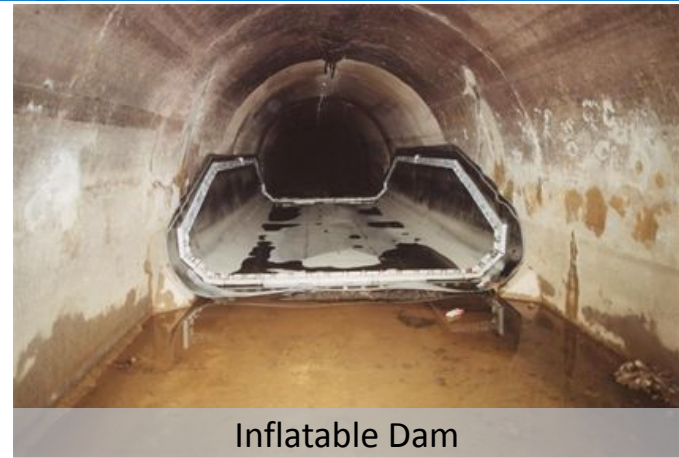
dc Clean Rivers – Project Benefits

- CSO reduction – meets District Water Quality Standards
- Flooding relief in Northeast Boundary
- Provides equalization enabling nutrient reduction at Blue Plains to meet Chesapeake Bay TMDL
- Resiliency:
 - Provides redundancy when Blue Plains is out of service
 - Provides redundancy for pumping stations in the system, in the event of outage or to perform planned work

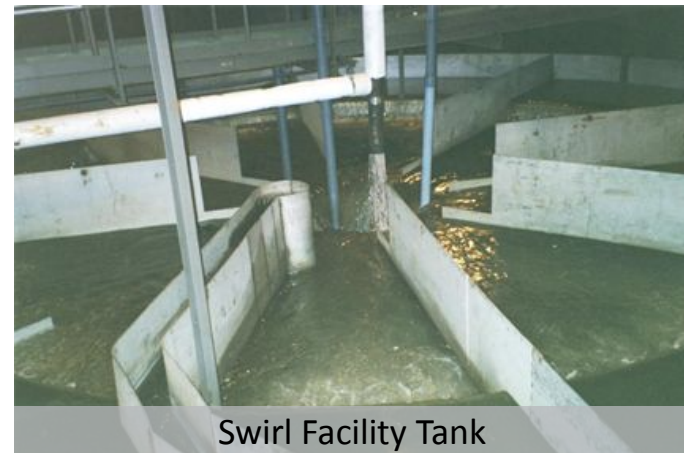


dc Clean Rivers – Project Benefits

- Eliminates five (5) inflatable dams
 - Three (3) on Anacostia River (completed)
 - Two (2) on Potomac River (upcoming as part of Potomac Tunnel)
- Eliminates Swirl Facility near RFK Stadium (completed)
- Benefits
 - Reduces risk of flooding
 - Reduces system complexity and costs
 - Reduces O&M costs – estimated savings of \$1 million/yr.



Inflatable Dam



Swirl Facility Tank

Non-Process Facilities (\$102 million)

Program Portfolio



Main and O Redevelopment Efforts \$22 million



Sewer Services Facility



Main & O Seawall Restoration \$12 million

575 Linear Feet



Historic Building Restoration, Main Pump Station \$15 million

Built 1904



Floatable Debris Dock Replacement \$5 million



Non-Process Facilities (\$102 million)

Program Portfolio



COF/CMF Renovations \$6 million



Bryant St Pump Station Building Modifications \$12 million



Roof and HVAC Replacements \$19 million

1.9 million sf total roof area and over 2,000 HVAC assets



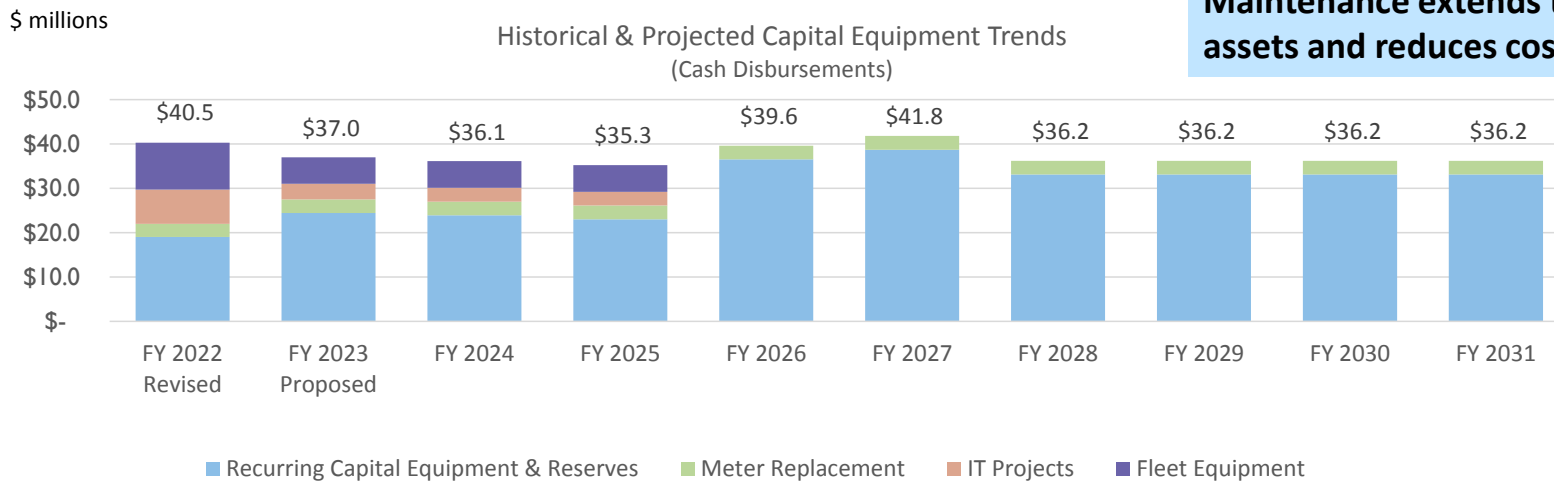
DC Water Capital Equipment



dc Capital Equipment

- The overall FY 2022 budget is \$40.5 million and reflects the Board-approved carry-over of \$4.5 million from FY 2021 for the purchase of vehicles (anticipated for delivery in FY 2022)
- Ten-year disbursements of \$375.3 million for capital equipment include:
 - **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 \$18 million from FY 2023 through FY 2025 to reduce backlog and help ensure that crews have the required equipment such as backhoes, jet-vacs, small and large dump trucks to meet operational needs

Preventive/Predictive/Proactive Maintenance extends the life of assets and reduces cost.

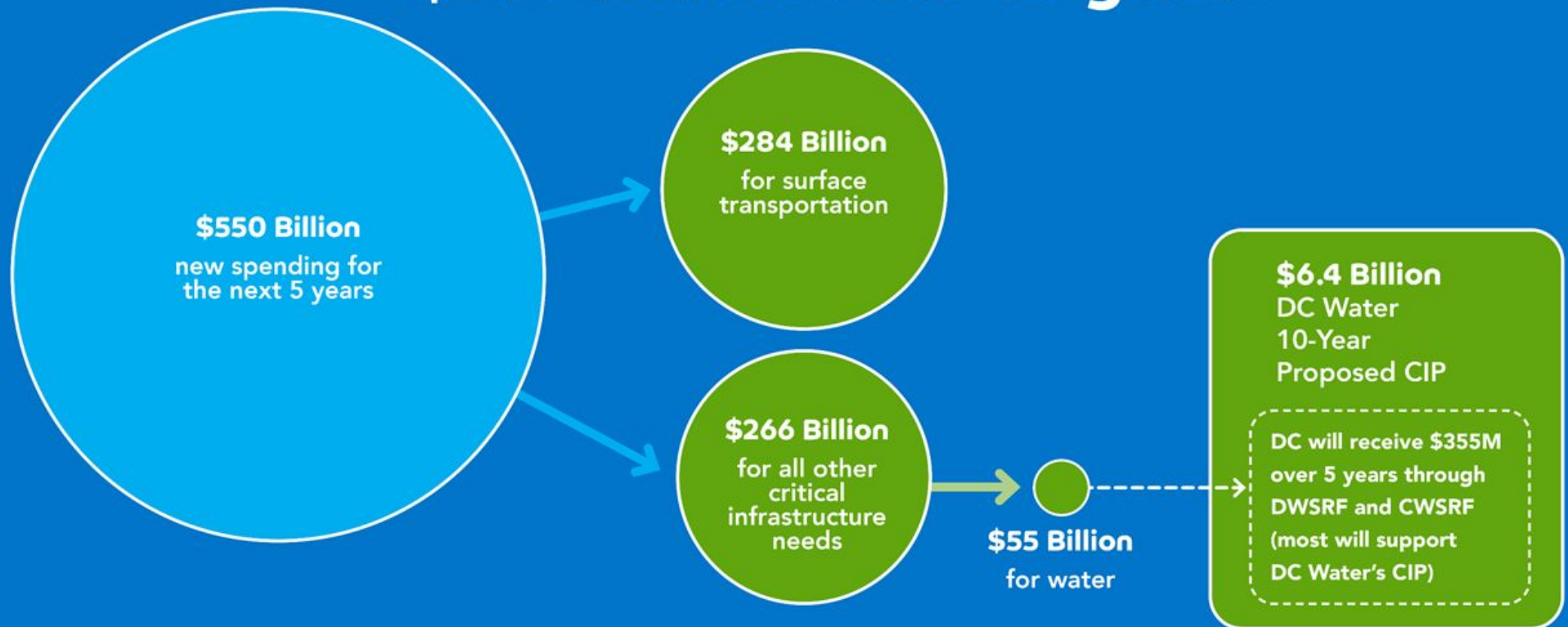


Infrastructure Bill Funding

The background of the slide is a solid blue color. In the lower half, there are large, faint, light-blue decorative elements. On the left, there is a large, stylized letter 'd'. In the center, there is a large, stylized letter 'c'. On the right, there is a large, light-blue teardrop shape pointing downwards.

Infrastructure Investment and Jobs Act

\$1.2 Trillion over 10 years





Federal/Infrastructure Funding Safe Drinking and Clean Water



Source	Anticipated DC Water 2022 to 2026 Total	Prospective Eligible Projects	DC Match
Clean Water Baseline (Current Grants)	\$15.0M	Wastewater Treatment, Sewer System	45%
Clean Water Supplemental	\$57.9M	Wastewater Treatment, Sewer System, Green Infrastructure	10% years 1 and 2 20% years 3 to 5
Clean Water Emerging Contaminants	\$4.8M*	Wastewater treatment research projects	0%
Drinking Water Baseline (Current Grants)	\$54.1M	Small Diameter Water mains, Water Storage Facilities, Water pump stations	20%
Drinking Water Supplemental	\$100.9M	Small Diameter Water mains, Water Storage Facilities, Water pump stations	10% years 1 and 2 20% years 3 to 5
Drinking Water Lead Service Lines	\$86.9M**	Lead Free DC Program. Public and Private side eligible	0%
Drinking Water Emerging Contaminants	\$38.2M*	Washington Aqueduct emerging contaminant projects	0%

* \$'s are DC Total, DC Water anticipated undetermined. **Additional \$47.8M anticipated for 2026 to 2030 for total of \$134.8M

Based on competing projects, DC Dept. of Energy & Environment (DOEE) determines allocations to DC Water



Infrastructure Investment and Jobs Act Funding Alignment

President's Infrastructure Bill Priorities	Infrastructure Investment and Jobs Act (pre-Reconciliation)	Proposed Projects/Program Areas
\$15 billion in the EPA's DWSRF and Water Infrastructure Improvements for the Nation Act (WIIN) for lead service line replacement	<ul style="list-style-type: none"> • \$15B Lead (DWSRF/WIIN) • CDBG Funding 	<ul style="list-style-type: none"> • Lead Free DC (Unfunded costs for LSLs, restoration and program management; limited water main replacement)
Upgrade and modernize America's drinking water, wastewater, and stormwater systems, tackle new contaminants, and support clean water infrastructure	<ul style="list-style-type: none"> • \$11.7B CWSRF • \$11.7B DWSRF • \$5B PFAS • \$1.4B Sewer Overflow/Stormwater Reuse Grants • \$900M Other water provisions • \$665M (ACOE) water-related environmental infrastructure assistance; Continuing Authorities Program (CAP) • \$110B Roads and Bridges (GI and Stormwater facilities) • \$1B - BRIC Program • \$3.5B FEMA • \$1B Cybersecurity Grant Program 	<ul style="list-style-type: none"> • Water Distribution System, Pumping and Storage • Wastewater Treatment • Sanitary Sewer • Stormwater • Washington Aqueduct CIP • Alternative Water Supply (Travilah)
Spur jobs modernizing power generation and delivering clean electricity	<ul style="list-style-type: none"> • \$5B Electric Grid Reliability and Resilience • \$250M Rural and Municipal Utility Advanced Cybersecurity Grant/Technical Assistance Program • \$550M Energy Efficiency and Conservation Block Grant • \$7.5B Electric Vehicles • \$2.5B Charging and Refueling Grant Program • \$5B EV Charging Formula Program 	<ul style="list-style-type: none"> • Solar • Thermal Energy Recovery • Renewable Natural Gas

Opportunities, Risks and Sensitivities





Opportunities - Optimization and Revenue

- Programmatic Access to capture Federal and Industry Funding Opportunities
- Implement Granulation (Increasing sludge density) Technologies to Reduce Cost of Future Capacity
- Full Plant Deammonification (nitrogen removal with Annamox) to reduce Cost and Dependence on Chemicals
- Enhance/Expand Class A Biosolids Processing Facilities to Increase Biogas Production
 - Receiving facilities for Fats, Oils, Grease / Food Waste
- Implement Resource Recovery Options
 - 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 - Optimal Renewable Energy Distribution
- Diversify Bloom Products and Marketing



Risks and Sensitivities

- Stormwater System Repair and Maintenance
- Supply Chain Disruption and Inflation
- Regulatory
 - Total Maximum Daily Load (TMDL) – Trash, Bacteria, PCBs, PFAS, CEC
 - Watershed Implementation Plans (WIPs) – Nitrogen from behind Conowingo Dam
 - Permitting – New NPDES Permit Conditions
 - Biosolids Land Application – PFAS, CEC, Phosphorus
 - Consent Decrees – Sewer System Overflow
- Climate Change – Seawall, Facility Hardening, CSO Program, Stormwater Capacity
- Community Driven Odor Control Infrastructure – Blue Plains, Main & O pumps stations
- Washington Aqueduct Capital Program Uncertainties and Potential for Privatization

Washington Aqueduct CIP





FY2023 and FY2024 CIP Budgets



FY2023 \$81.8M, FY2024 \$47.7M

Budget Increase:

DC Water's share (FY2023 ~\$59.55M, FY2024 ~\$34.73M)

- Budgets reflect costs of total project vs. costs of partial repairs to aging infrastructure
- Cost Drivers
 - Underfunded projects due to increased project costs
 - Partial repairs prolonged total project completion creating increased future costs for customers
 - Stalled/delayed projects now require additional funding



Asset Management Strategy



Path Forward:

Asset management driven capital planning

FEM Database – assessing efficiency

Assess aging infrastructure

Revise 10-year CIP/CIP prioritization

Acquisition strategy



