

# DPW Bureau of Water & Wastewater

FY 2026-2031 CIP  
January 16, 2025



BALTIMORE CITY  
DEPARTMENT OF  
PUBLIC WORKS

# Department of Public Works

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**Mission:** We support the health, environment, and economy of the City and region by providing customers with safe drinking water and keeping our neighborhoods and waterways clean.

**Vision:** To be a strong proponent and protector of our environment and the health and vitality of our communities.

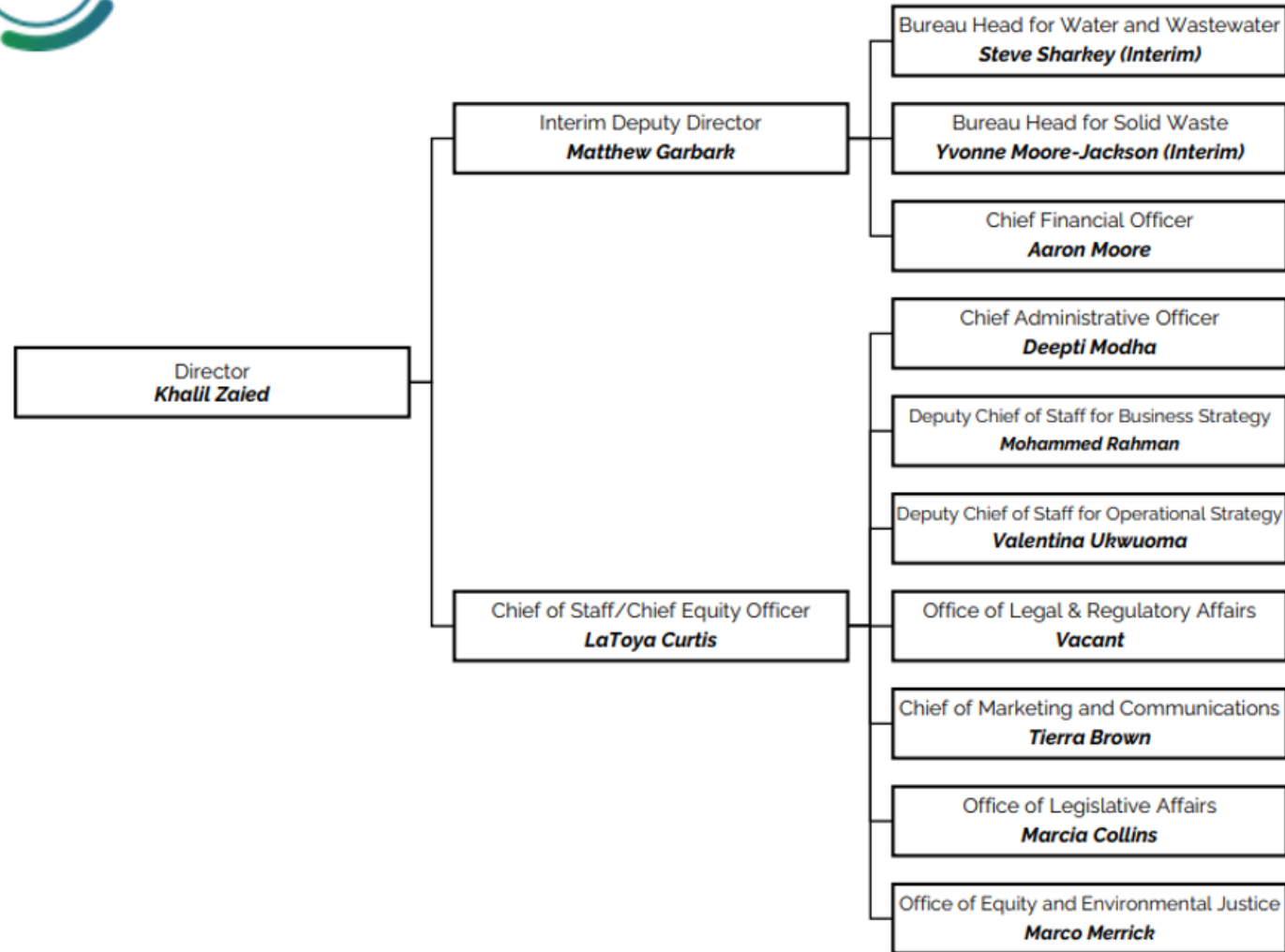




Baltimore City Department of Public Works

As of November 22, 2024

Executive Leadership Team Organizational Chart



# FY 2025 Operating Budget

DPW's Fiscal 2025 funding allocation is over \$732 million.

The breakdown of DPW's funding across the bureaus is below\*:

DPW Bureaus	FY 25 Funding
Bureau of Solid Waste	134,335,014
Bureau of Water & Wastewater	338,174,021
DPW Administration	259,999,535

\*Funding amounts provided by Workday which may differ from funding allocations found in Baltimore City's Fiscal 2025 Ordinance of Estimates due to budget amendments and/or revisions.

# FY 2025 Capital Budget

DPW's Fiscal 2025 funding allocation is \$399 million.

The breakdown of DPW's funding across the bureaus is below:

DPW Bureaus	FY 25 Funding
Bureau of Solid Waste	7,250,000
Bureau of Water & Wastewater	392,128,054



# Bureau of Water & Wastewater

# Bureau of Water & Wastewater Assets

## Drinking Water



- 3 raw water reservoirs
- 3 water filtration plants
- 20 finished water pumping stations
- 1 raw water pumping station
- 3,800 miles of water mains
- 700 miles of public water connections
- 9,100 fire hydrants (City); 15,150 fire hydrants (County)

## Wastewater



- 2 wastewater treatment plants
- 1,500 miles of sanitary mains
- 8 major wastewater pumping stations
- 10 minor pumping stations

## Stormwater



- 5 watersheds; 4 shared
- 59 miles of coastline
- 116 miles of streams
- 1,146 miles of storm drain pipes
- 52,438 storm drain inlets
- 27,561 manholes
- 1,709 outfalls

# Asset Management

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- Both Water and Wastewater Facilities have computerized maintenance management systems (CMMS)
  - These systems track work orders, repairs costs and associated time, etc. to substantiate repair vs. replace decisions.
- Asset Management staff use various systems (ArcGIS, CMMS, Cityworks, etc.) to build project business cases to prioritize CIP projects for both utility services and at the treatment facilities.
- This is all done to elongate the life of our assets and equipment while still maintaining tight compliance standards.





**Legend**

- Water Treatment Plant
- Chlorination Plant
- Water Pump Station
- Water Tank

**Reservoir**

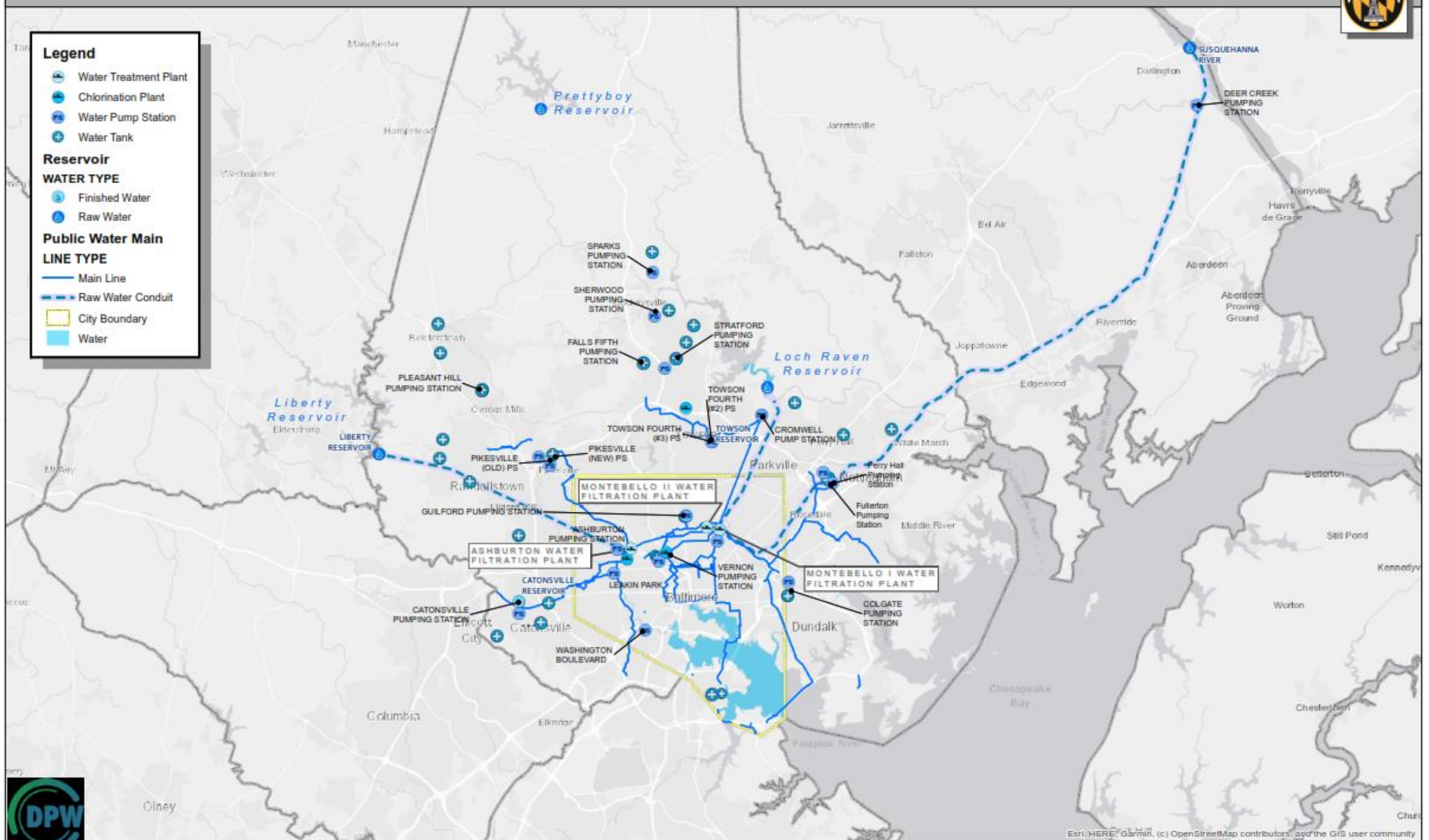
**WATER TYPE**

- Finished Water
- Raw Water

**Public Water Main**

**LINE TYPE**

- Main Line
- Raw Water Conduit
- City Boundary
- Water





**Legend**

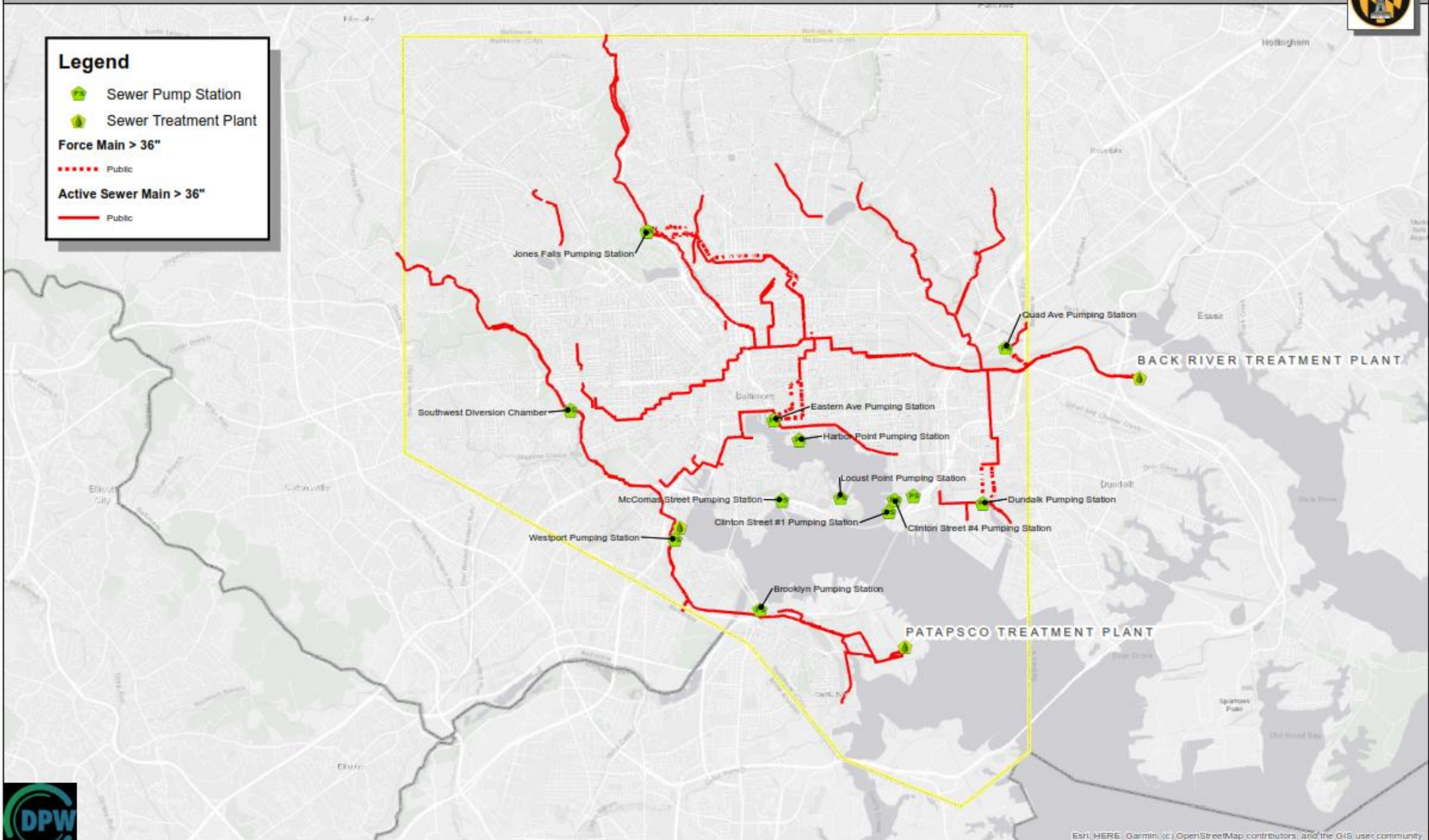
- Sewer Pump Station
- Sewer Treatment Plant

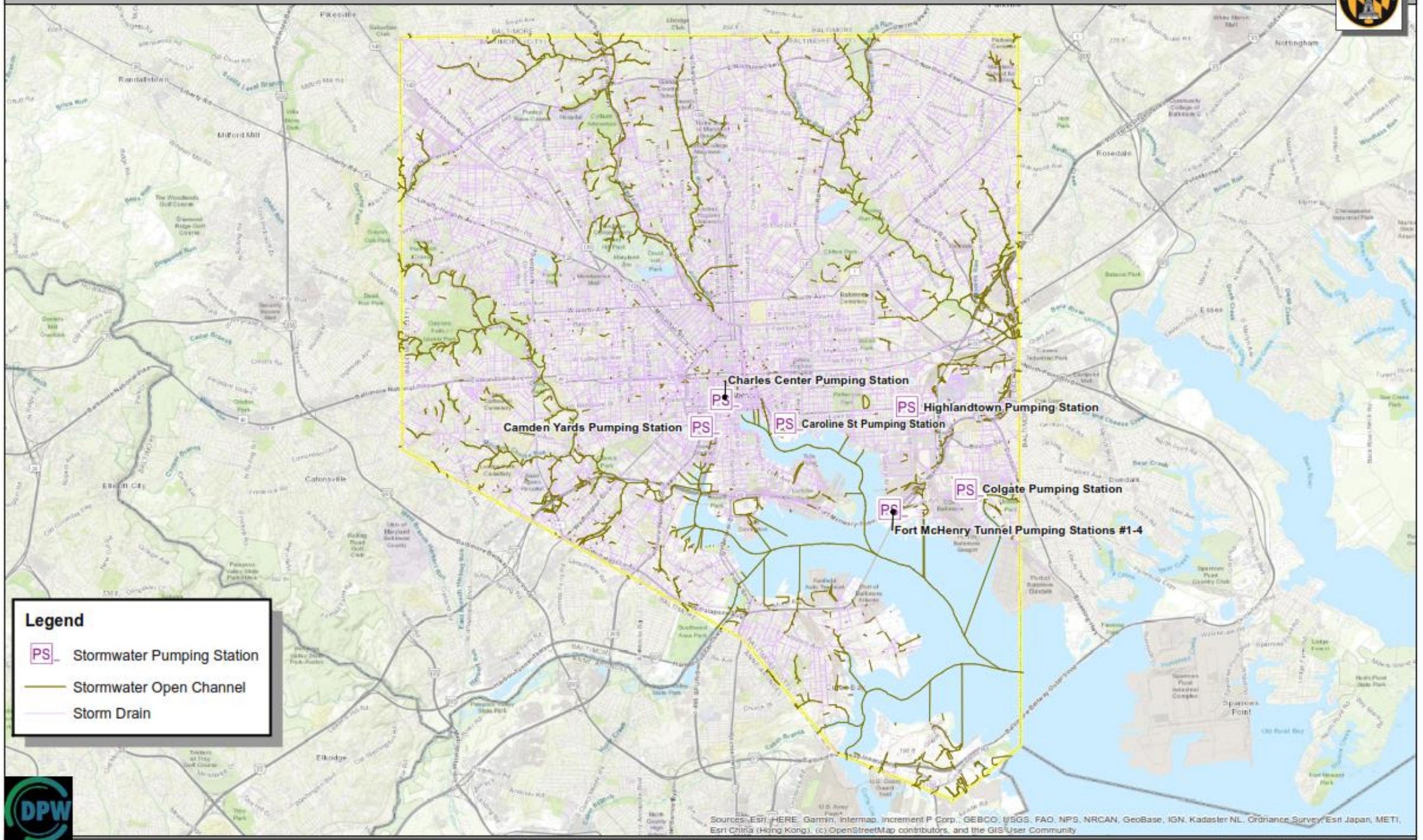
**Force Main > 36"**

- Public



**Active Sewer Main > 36"**

- Public





### Legend

-  Stormwater Pumping Station
-  Stormwater Open Channel
-  Storm Drain



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

# Baltimore City Drinking Water System

RESERVOIRS

TREATMENT

PUMPING STATIONS

STORAGE TANKS

DISTRIBUTION

RESIDENCES

1



A raw water pump station pumps water from a source into the water treatment plant

2



Water enters a water treatment plant facility for filtration and disinfection

3



Clean, treated water is pumped to water storage tanks

4



Water is stored in storage tanks until it is needed

5



Clean, safe drinking water is piped out to homes, businesses and schools

6



Residents can enjoy quality water

# Baltimore City Wastewater Treatment System

WASTEWATER SOURCES

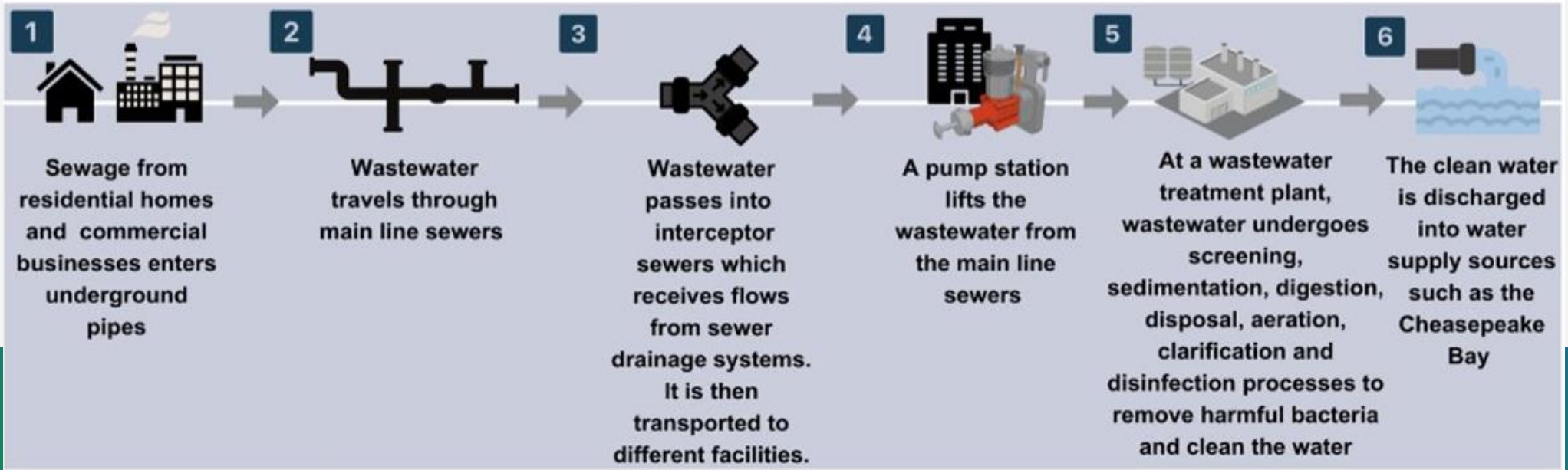
COLLECTION SYSTEM

CONVEYANCE SYSTEM

PUMPING STATIONS

TREATMENT

DISCHARGE



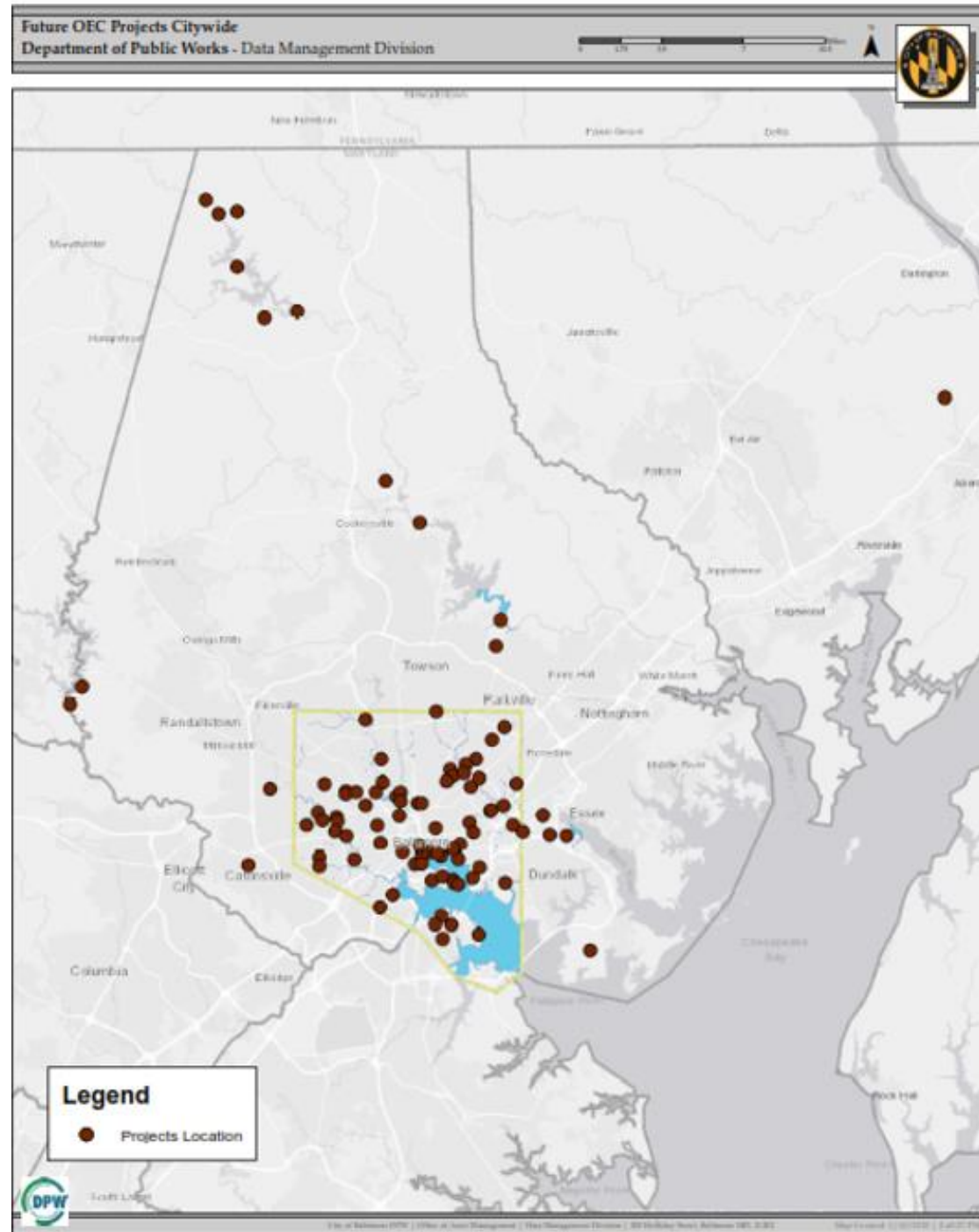
**FY 2026  
Requests  
\$534 Million**

<b>Fund</b>	<b>Name</b>	<b>Requests (\$ in millions)</b>
9956	Wastewater	257
9958	Stormwater	40
9960	Water	237

**FY 2026-2031  
Requests  
\$3.3 Billion**

<b>Fund</b>	<b>Name</b>	<b>Requests (\$ in millions)</b>
9956	Wastewater	1,574
9958	Stormwater	317
9960	Water	1,452

# CIP Project Locations





# Fund 9956: Wastewater Utility



# Plans Guiding Capital Budget: Wastewater Facilities Consent Decree

- Effective November 2023
  - 31 of 40 Consent Decree requirements completed with concrete deadlines
  - 12 requirements are continuous for the life of the Consent Decree

Back River	Anticipated Completion Date
SC 992 Egg Shaped Digester Rehabilitation	September 2027
SC 1037 Sand Filter Rehabilitation	Fall 2029
Patapsco	Anticipated Completion Date
SC 938 Grit Facility Rehabilitation	December 2027
SC 994 Clarifier 3 Rehabilitation	Spring 2028
Automate Chlorine Contact Scum Log	January 31, 2025
Bypass Signage Buoy	April 2025

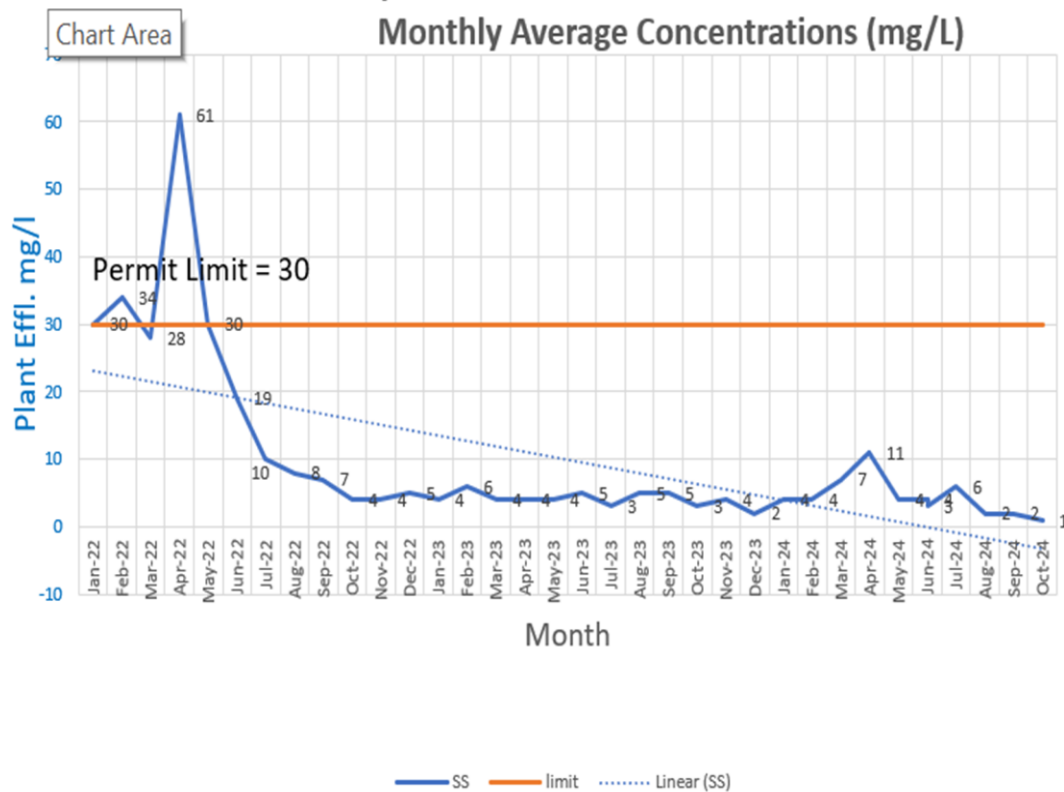
Back River and Patapsco

Asset management plan implementation – February 2025

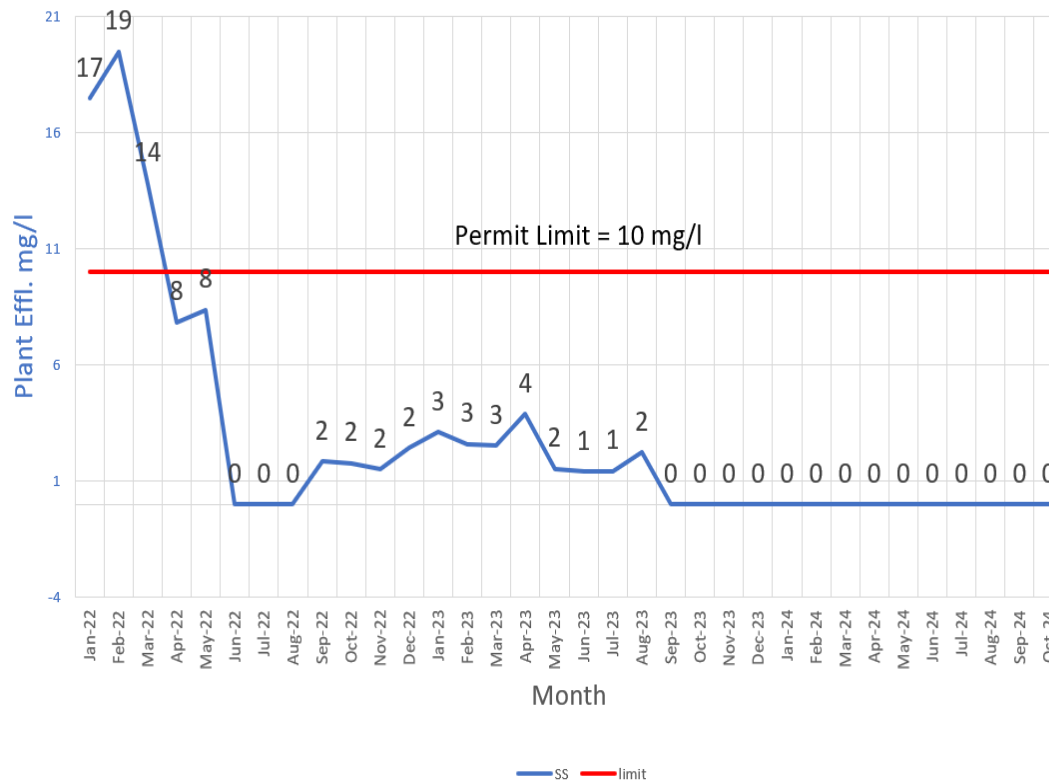
# Plant Effluent Quality

**Suspended solids from treated wastewater are significantly lower than permitted levels**

City of Baltimore, Patapsco W.W.T.P.  
Suspended Solids Concentration - Outfall 001A  
Monthly Average Concentrations (mg/L)

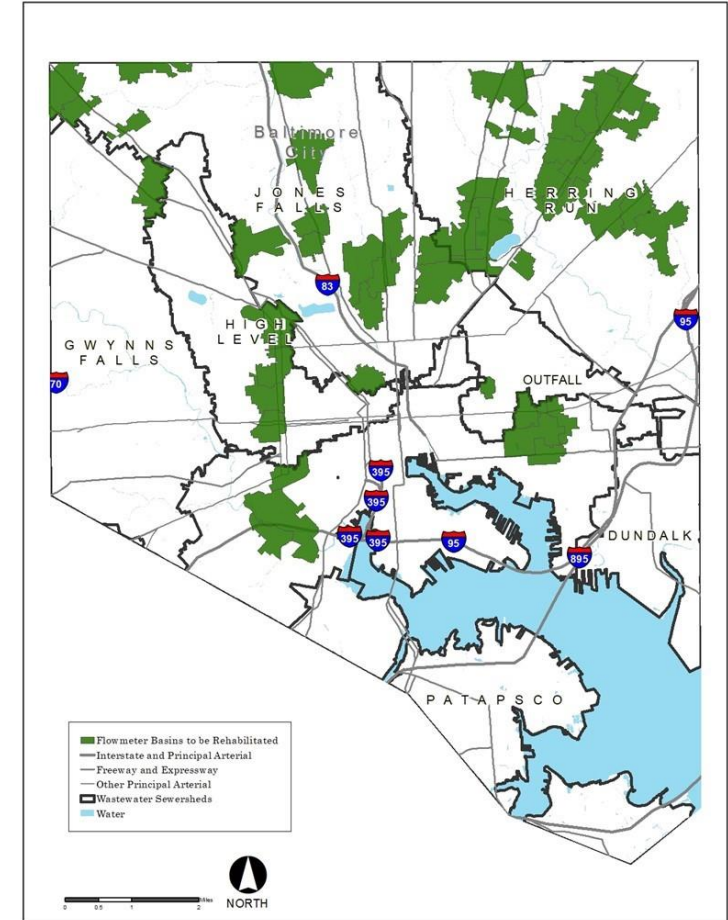


City of Baltimore, Back River W.W.T.P.  
S.S. Concentration Outfall 001  
Monthly Average

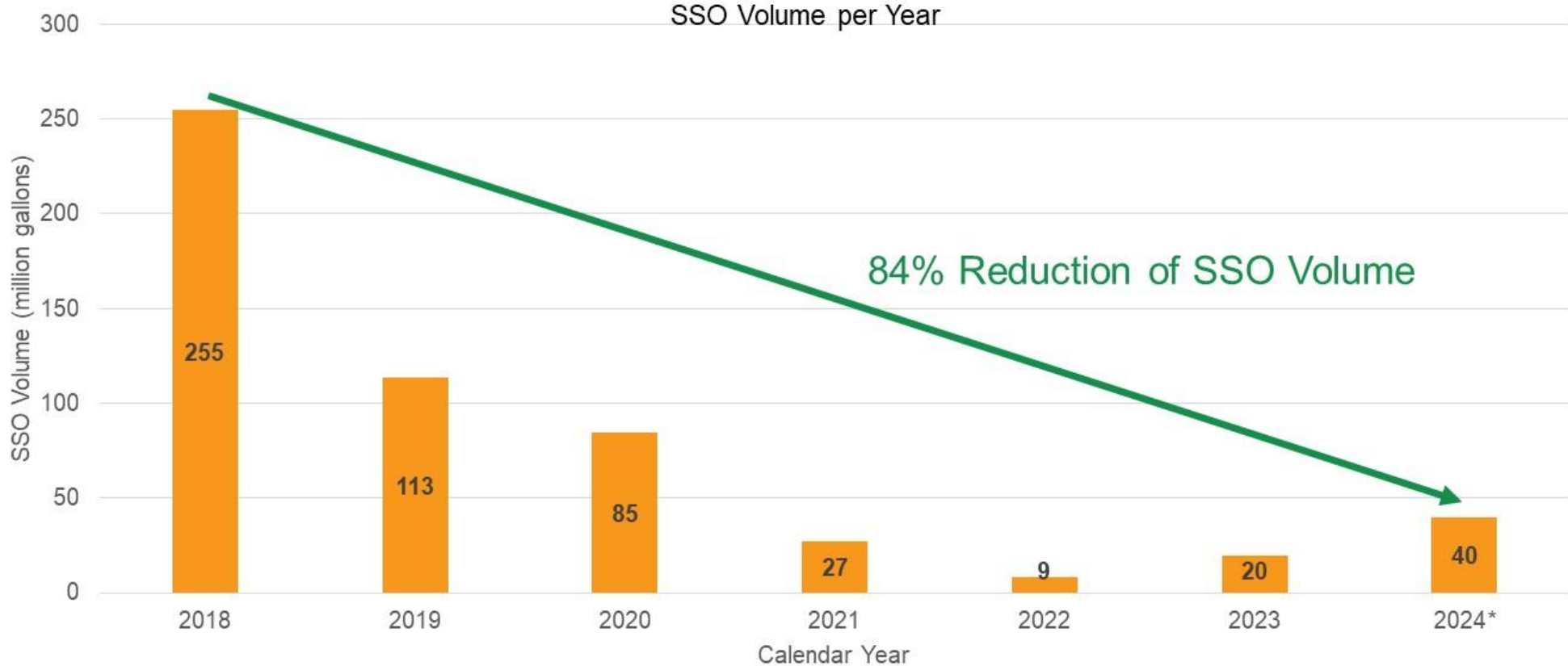


# Plans Guiding Capital Budget: Modified Consent Decree Phase II

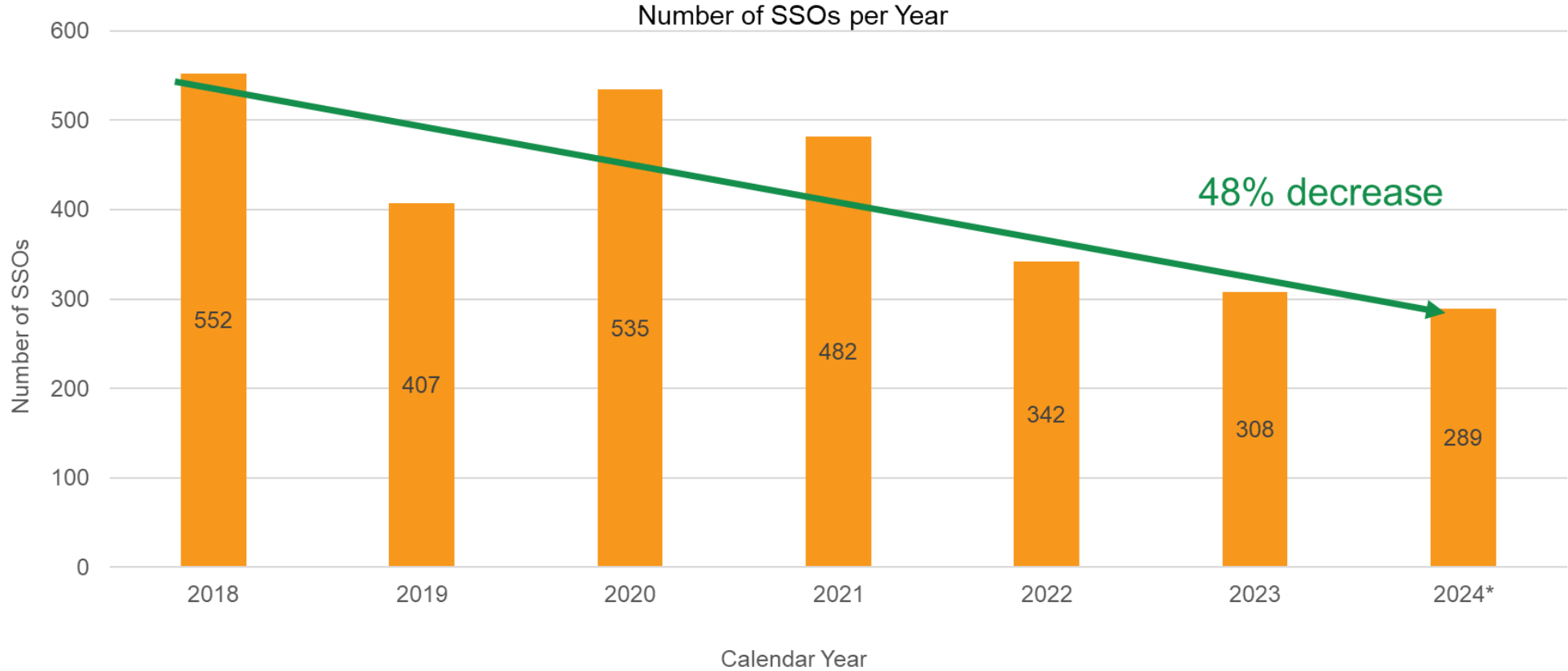
- MCD Phase II deadline – December 31, 2030
  - Original plan submitted on May 31, 2023
  - Revised plan submitted on October 18, 2024
    - Improvements to reduce inflow/infiltration
    - 1 hydraulic capacity improvement project
    - Continued focus on reducing dry-weather SSOs
    - Hydraulic modeling partnership with Baltimore County
      - Identify potential regional improvements that will eliminate the engineered overflow structures in both municipalities and improve water quality for the region.



# Recent Accomplishments: SSO Reduction



# Recent Accomplishments: SSO Reduction



\*Through December 10, 2024





# Work in Progress: Wastewater Utilities

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SC 1019 (PRJ002211)

CCTV Inspection of Sanitary Sewers in  
Northern Baltimore City

Estimated Total Cost: \$7.4M

Completion Date: May 2026



# Work in Progress: Wastewater Utilities

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SC 946R (PRJ000938)

Sanitary Sewer Collection System

Improvements in the Jones

Falls Sewershed – Glen Avenue Subbasin

Estimated Total Cost: \$6.4M

Completion Date: June 2025



# Work in Progress: Wastewater Facilities Design

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SC983 Improvements to the PST Scum Collection System at Patapsco WWTP  
Design completed – Construction Started August 2024

SC987 Improvements to Return Sludge Pumping Station No. 2 at Patapsco WWTP  
Design completed – Construction Started August 2024

SC994 Clarifiers and Gravity Sludge Thickeners Rehabilitation at Patapsco WWTP  
Design completed – Bids open

SC1024 Truck Scale House Replacement at Back River WWTP  
Design completed – awarded for construction







# Recent Accomplishments: Wastewater Facilities Construction

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SC926RR Electrical Distribution System Reliability at Patapsco WWTP  
85% Complete

SC927 Electrical Distribution System Reliability at Back River WWTP  
95% Complete

SC954 Primary Settling Tanks 3 & 4 at Back River WWTP  
95% Complete

SC992R Egg Shaped Digester Rehabilitation Improvements at Back River WWTP  
30% Complete

SC1024 Truck Scale House Replacement at Back River WWTP NTP January 2025



# FY 2026 Requests (1 of 2)

**Total: \$256.8 million across 25 projects**

**Sources: Utility PAYGO, utility revenue bonds, County appropriations, and Federal grants**

Title	PRJ #	Request (\$)
SC938 Patapsco Headworks	PRJ000380	4,000,000
Sanitary Sewer Replacement and Rehabilitation	PRJ000412	5,000,000
SC992 Egg Shaped Digester	PRJ000457	3,452,972
SC979 Dundalk Pumping Sta Rehabilitation	PRJ000474	31,657,047
Project 1294 Consent Decree PM	PRJ000635	10,000,000
SC949 Rehabilitation Stony Run Pumping	PRJ000922	8,390,104
SC935 Sparrows Pt Alt Outfall	PRJ000943	31,050,000
SC926 Patapsco WWTP Power Rel	PRJ001046	5,213,626
WC1373 Urgent Needs Large Meters WW	PRJ001161	10,000,000
Electrical Systems Upgrades	PRJ001205	2,426,577
SC969 Lane Siphon and Armistead Run	PRJ001234	3,414,320
SC982 Eastern Ave Pumping Station	PRJ001426	25,759,200
SC1028 Outfall 156	PRJ002370	11,000,000



# FY 2026 Requests (2 of 2)

**Total: \$256.8 million across 25 projects**

Title	PRJ #	Request (\$)
SC 1037 Effluent Filter Rehabilitation at Back River	PRJ002774	2,400,000
SC1009 Project 1330J Phase II Jones Falls Sewershed	PRJ002818	10,622,818
SC1010 Project 1330RK Phase II Jones Falls Sewershed	PRJ002819	7,850,000
SC-1023 High Rate Facility Renovation at BRWWTP	PRJ002950	2,000,000
SC-993 Jones Falls Pumping Station Capacity Upgrade	PRJ002958	12,250,000
SC 1039 Urgent Needs Improvements to Baltimore City	PRJ003143	11,050,000
SC 1041 Construction Management Services for Waste	PRJ003145	2,500,000
SC 1042 Construction Management Services for Waste	PRJ003149	4,400,000
Rehabilitation and Improvements to Sanitary Sewers	PRJ003498	19,980,000
HR Hyd Herring Run Phase II Sewershed Improvements	PRJ003502	3,888,000
LL Hyd LL Phase II Sewershed Improvements for 5-Year	PRJ003503	4,320,000
Project 1404 On-Call Program Management Services	PRJ003514	24,200,000



# Request Highlight: SC 1028 Large Diameter Cleaning of the Outfall Interceptor

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PRJ002370

Funding sources: Wastewater revenue bonds

Construction: July 2025 to July 2028

Estimated Cost: \$11 million



## Request Highlight: SC 969 Horner Lane Siphon Rehabilitation at Armistead Run

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PRJ001234

Funding sources: Wastewater revenue bonds

Construction: August 2025 to September 2026

Estimated Cost: \$9.5 million



# Fund 9958: Stormwater Utility

# Plans Guiding Capital Budget: MS4 Permit

- The storm drain system is regulated by the federal Clean Water Act, specifically, a National Pollutant Discharge Elimination System Municipal Separate Storm Sewer (**MS4**) permit.
- Additional stormwater best management practices (BMPs) must be implemented for an equivalent of 3,696 acres of impervious area restoration by the end of the permit term, November 2026.

MARYLAND DEPARTMENT OF THE ENVIRONMENT  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGE PERMIT

PART I. IDENTIFICATION

A. **Permit Number:** 20-DP-3315 MD0068292

B. **Permit Area**

This permit covers all stormwater discharges into, through, or from the municipal separate storm sewer system (MS4) owned or operated jurisdiction-wide by Baltimore City, Maryland.

C. **Effective Date:** November 5, 2021

D. **Expiration Date:** November 4, 2026

PART II. DEFINITIONS

Terms used in this permit are defined in relevant chapters of Title 40 of the Code of Federal Regulations (CFR) Parts 122-124 and the Code of Maryland Regulations (COMAR) 26.08.01, 26.17.01, and 26.17.02. Terms not defined in CFR or COMAR shall have the meanings attributed by common use.

PART III. WATER QUALITY

Baltimore City must manage, implement, and enforce stormwater management programs in accordance with the Clean Water Act (CWA) and corresponding stormwater National Pollutant Discharge Elimination System (NPDES) regulations, 40 CFR Parts 122-124, to meet the following requirements:

1. Effectively prohibit pollutants in stormwater discharges or other unauthorized discharges into, through, or from the MS4 as necessary to comply with Maryland's receiving water quality standards;
2. Attain applicable stormwater wasteload allocations (WLAs) for each established or approved Total Maximum Daily Load (TMDL) for each receiving water body, consistent with Title 33 of the U.S. Code (USC) § 1342(p)(3)(B)(iii); 40 CFR § 122.44(k)(2) and (3); and

1

# Recent Accomplishments: SDC 7788R Seamon Ave Step Pool Conveyance and Emergency Slope Repair

PRJ000663

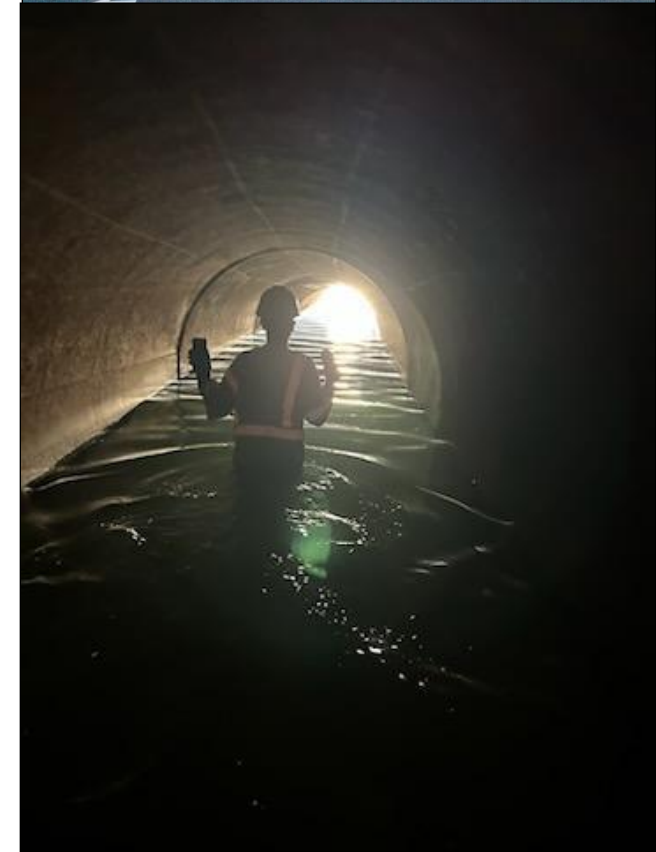
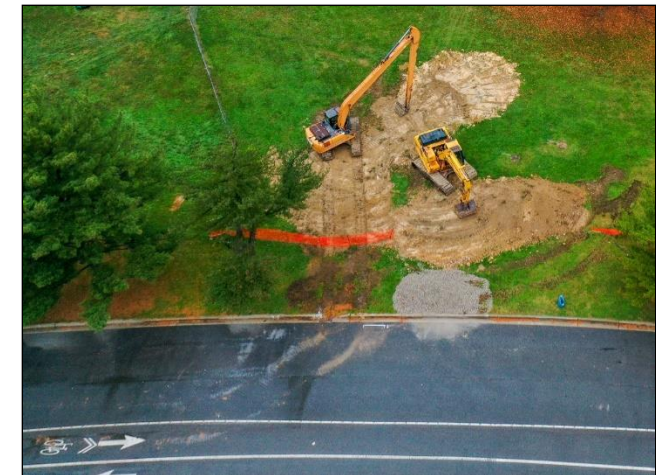




# Recent Accomplishments SDC 7801 Tiffany Run Sinkhole

PRJ0002845

- November 2022 - 108” storm drain failed
  - No effects to system operation
- September 2023 – work paused due to ground movement
- January 5, 2025 - 84” water main re-activated
  - Improved water quality
  - Improved system reliability and sustainability



# FY 2026 Requests (1 of 1)

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**Total: \$39.8 million across 7 projects**

**Sources: Utility PAYGO, utility revenue bonds, State loans, and Federal grants**

\*This request reflects intended pass-through funding from the State to the South Baltimore Gateway Partnership pending an MOU with the City.

Title	PRJ #	Request (\$)
MS4 Permit Requirements	PRJ002415	15,275,000
SDC 7773 Gwynns Falls Drainage	PRJ002509	603,223
SDC 7802 Hillen Road and 35th Street Storm Drain Improvement	PRJ002935	528,223
Middle Branch Resiliency Initiative*	PRJ003180	20,669,588
ER 4133 Batch I ESD Design	PRJ003445	800,000
ER 4136 Batch II ESD Design	PRJ003446	800,000
ER 4138 Batch III ESD Design	PRJ003447	1,100,000



# Request Highlight: SDC 7773 Gwynns Falls Drainage at Frederick Ave

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PRJ002509

Funding sources: Stormwater revenue bonds,  
Federal grants

Study & Design: March 2025 – October 2026

Construction: Spring 2027

Estimated Cost: \$40 Million



# Request Highlight: ER 4133 Batch I Environmental Site Design

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PRJ003445

Funding sources: Stormwater revenue bonds

Design & Construction: October 2025 to December 2028

Estimated Cost: \$20 million



# Fund 9960: Water Utility

# Recent Accomplishments: Water Main Replacement Program

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- Heavily tuberculated pipe typically found during water main replacement projects.
- Sample taken from WC 1315 Hillen and Pen Lucy North Neighborhoods (PRJ00 2575).

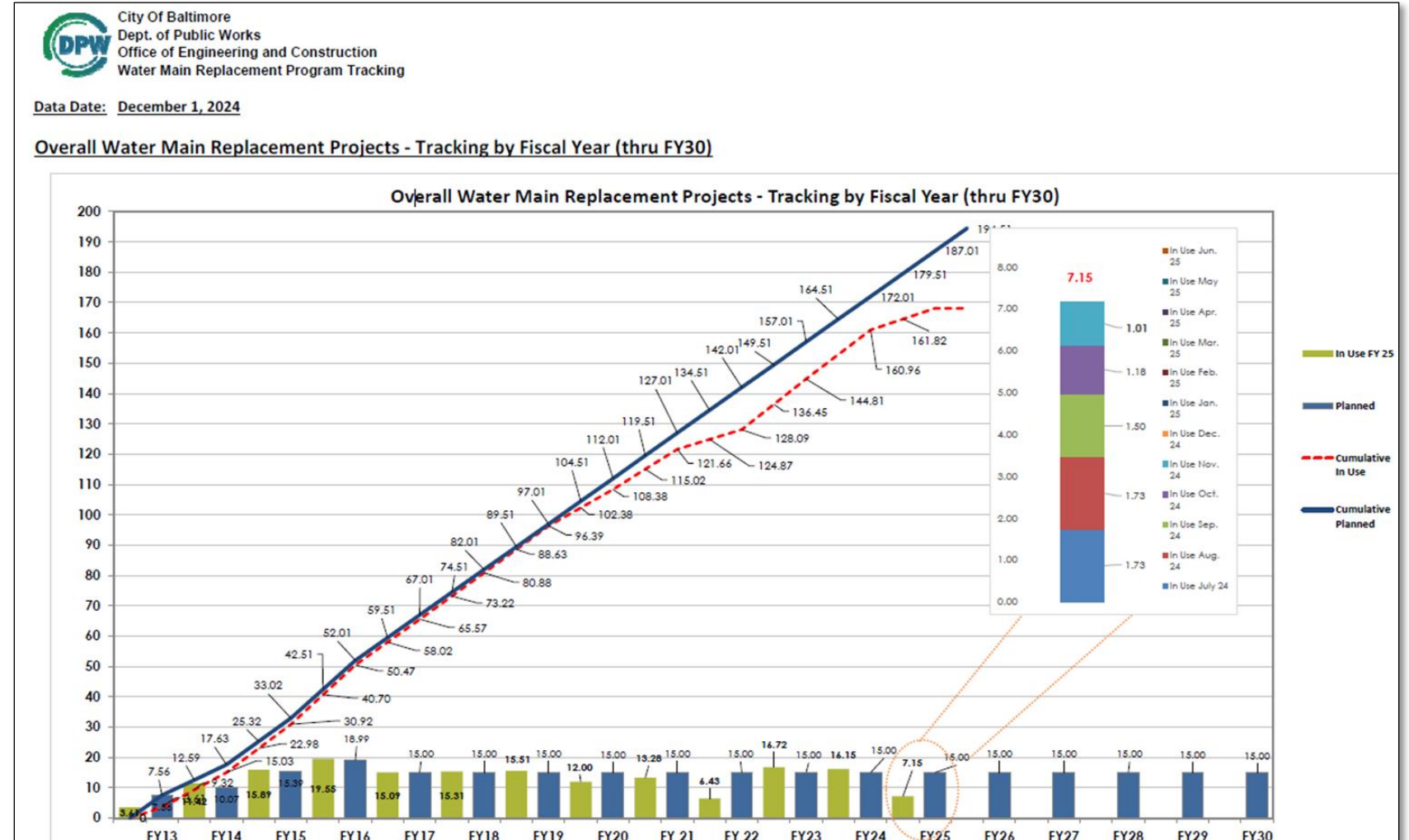
# Recent Accomplishments: Water Main Replacement Program

FY23: 16.72 Miles

FY24: 16.15 Miles

Average Age of Water Main:

- 68 years
- Reduced from 160+ miles since start of Renewal Program in 2013





Dec 10, 2024 at 10:53  
WC 1396 : Montebello Plant 2 Sedimentation Basins 5-6-7 Structural R  
Pic by John Ogt

## Recent Accomplishments: Water Facilities Construction

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WC 1396 : All 3 basins structural repair at Montebello Plant II  
Construction started 9/2024, ends 11/2027

WC 1397 : Filter Control Panel Upgrades at Montebello Plant I & II  
Construction Started 10/2024, ends 10/2026



# Recent Accomplishments: Lead and Copper Rule Revisions

- Initial inventory submitted October 10, 2024
- DPW continues field investigations to identify lead and galvanized service lines
  - Predictive model to reduce the amount of field inspections
  - 1,000+ Swordfish inspections completed to date
- Service Line Status
  - 66 lead
  - 391 galvanized requiring replacement
  - 208,416 unknown
- Complete your survey!



[www.servicelinepartnership.baltimorecity.gov](http://www.servicelinepartnership.baltimorecity.gov)

A vertical poster titled "WATER SERVICE LINE INSPECTION NOTICE". At the top, it features the City of Baltimore logo, a circular graphic with a red dashed line, and the DPW logo. Below these is a black and yellow banner with the text "BALTIMORE SERVICE LINE PARTNERSHIP". The main title "WATER SERVICE LINE INSPECTION NOTICE" is in large white letters on a red background. A black and yellow hazard stripe runs horizontally across the middle. The text "Dear Customer:" is followed by a paragraph: "An Electro Scan representative may conduct a water service line inspection at this address on". Below this is a line for "Date:" and a line for "Morning \_\_\_\_ Afternoon \_\_\_\_". The section "What to Expect:" is followed by a paragraph: "The Electro Scan representative will:" and a bulleted list: "• insert a tool directly into the service line to verify the material", "• flush from an outside hose bib", and "• submit material findings for inclusion in the initial pipe inventory." Below the text is a photograph of a person in an orange shirt and hard hat using a tool on a service line. To the right of the person is a cutaway diagram of a house showing the service line entering the ground. At the bottom, a black and yellow hazard stripe is present, and the text reads: "If you want to be present during the inspection, call the Electro Scan scheduling line at (667) 843-9500."/>

**Dear Customer:**  
An Electro Scan representative may conduct a water service line inspection at this address on  
Date: \_\_\_\_\_  
Morning \_\_\_\_ Afternoon \_\_\_\_

**What to Expect:**  
The Electro Scan representative will:

- insert a tool directly into the service line to verify the material
- flush from an outside hose bib
- submit material findings for inclusion in the initial pipe inventory.

If you want to be present during the inspection, call the Electro Scan scheduling line at (667) 843-9500.

# FY 2026 Requests (1 of 2)

**Total: \$237.1 million across 24 projects**

**Sources: Utility PAYGO, utility revenue bonds,  
and County appropriations**

Title	PRJ #	Request (\$)
Watershed Bridge Maintenance	PRJ000191	2,376,000
WM Keswick Rd and Vicinity	PRJ000519	6,000,000
Project 1201 Large Diameter Maintenance	PRJ000700	15,120,000
Watershed Rd and Culvert Maintenance	PRJ000832	3,240,000
Construction Reserve Meter Replacement	PRJ000863	10,000,000
Ashburton Water Pumping Station	PRJ000968	4,081,584
Leakin Park Pump Station Rehabilitation	PRJ001040	16,054,000
Construction Reserve Valve and Hydrant R	PRJ001182	2,700,000
WC1285 Caroline WM Replacement	PRJ001223	8,000,000
Urgent Needs Water Facilities	PRJ001395	1,400,000
Project 1185.3 WC 1313 and WC 1312	PRJ001410	10,688,064
WC 1392 20 Inch Franklinton	PRJ002009	19,050,000

# FY 2026 Requests (2 of 2)

**Total: \$237.1 million across 24 projects**

Title	PRJ #	Request (\$)
WC 1413R Montebello Lake Dredging	PRJ002233	5,670,000
WC 1430 Water Main Replacement at Various	PRJ002562	17,303,544
WC TBD On-Call Design & Engineering Services	PRJ002569	5,454,000
Conckling St., Russell St, & Vicinity WM Replacement	PRJ002701	7,658,895
Needs Water Infrastructure FY26 – Contract I	PRJ003158	10,195,200
Needs Water Infrastructure FY26 – Contract II	PRJ003159	10,195,200
Needs Water Infrastructure FY26 – Contract III	PRJ003160	10,195,200
WC 1318 Downtown, Bolton Hill, Guilford Neighborhoods & V	PRJ003453	46,447,015
WC 1271 Cross St & Vicinity WM Replacement	PRJ003461	353,048
WC 1273 Forest Park & Vicinity WM Replacement	PRJ003462	151,598
Project 1404 On-Call Program Management Services	PRJ003515	19,800,000
County Billing Reconciliation	PRJ003516	5,000,000



# Request Highlight: WC 1199 Ashburton Water Pumping Station



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PRJ000968

Funding sources: Water revenue bonds, County revenue

Construction: July 2025 – August 2027

Estimated Cost: \$60 million

Dec 31, 2024 at 9:43:04 AM  
7521 Lake Dr  
Wo#1250119

Dec 29, 2024 at 11:52:09 PM  
10100 York rd  
Wo#689005

# Request Highlight: Meter Replacement Program

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PRJ000863

Funding sources: Water and Wastewater revenue  
bonds, County appropriations

Construction: July 2025

Estimated Cost: \$20 million/year



# Policy Issues & Partnerships

# Future CIP Considerations: PFAS/PFOA and other Contaminants of Emerging Concerns

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- PFAS detected in Liberty Reservoir
  - DPW is coordinating with Carroll County and MDE to identify PFAS generators
- Current PFAS testing at source water reservoirs is well below the 4ppt regulatory limit
- Pending new PFAS regulations for land application of biosolids could limit future composting efforts (MDE Land Management Administration)
- Limiting land application would require additional processing burden by 3rd party vendor which would require additional CIP investments
- Current PFAS efforts involve quarterly testing, source tracking, and mitigation of significant industrial users (SIUs)
- Future considerations could require additional treatment (ie. Pyrolysis, incineration, etc.)
- Current CIP efforts will meet current permit requirements and new permit being issued within 2025. Additional more stringent regulations could come within next 5 years. (MDE Water Science Administration)



# Equity in the CIP

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## Small Business Development

- Approximately 410 firms have graduated from DPW's SBD Training Program with over \$4 million in contract awards
- SBD 2024 Training Cohort had 32 participants with 3 members of the 2024 cohort awarded contracts
- 2024 Baltimore City Program Training Partners
  - Mayor's Office of Infrastructure Development
  - Mayor's Office of SMBA&D
  - Department of Civil Rights
  - Department of General Services
  - Department of Finance – Procurement
  - Recreation and Parks

## Unbundling Initiative

- Create opportunities and build capacity for Baltimore-based businesses to receive on-the-job hands-on training.
- Contractor selected by Baltimore City Design Build Executive Committee (DBEC) procurement process.
- Selected Contractor to provide:
  - Administration, Construction Management, Mentoring, Support, Training, and more
- Selected Contractor has identified 7 local small businesses as potential Future General Contractors (FGC's).





# Questions?



B A L T I M O R E C I T Y

**DEPARTMENT OF  
PUBLIC WORKS**