

# Sanitary Sewer Modified Consent Decree

## Annual Public Information Meeting

January 19, 2023



BALTIMORE CITY  
DEPARTMENT OF  
PUBLIC WORKS

# Tonight's Agenda

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Opening Remarks

Program Overview and Update

Virtual Open House

Learning Stations







# Welcome by DPW Director

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Jason M. Mitchell

# Meeting Purpose

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- To inform you about the progress of the Modified Consent Decree (MCD) program for the sanitary sewer system
- To answer questions and solicit feedback on program elements
- To connect you with DPW and the work being performed in the City to address sanitary sewer overflows



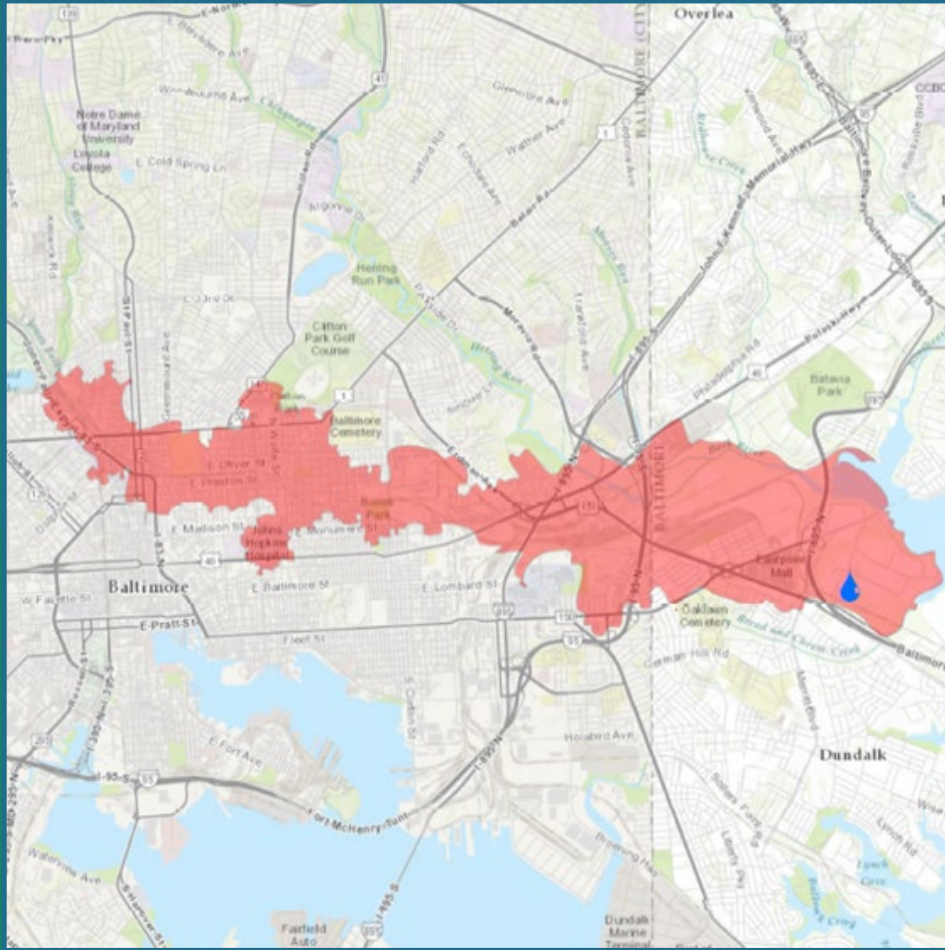
# Program Overview

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- A **Consent Decree** is a legal agreement or settlement that resolves a dispute between parties without admission of guilt or liability
- On September 30, 2002, Baltimore City entered into a Consent Decree with the United States Environmental Protection Agency (EPA), Department of Justice (DOJ) and the Maryland Department of the Environment to address sanitary sewer overflows (SSOs) from the City's collection system

# Program Overview (cont'd)

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The City was not able to comply with the initial Consent Decree deadline, in part, because of a hydraulic restriction discovered at the Back River Wastewater Treatment Plant (WWTP)

# Modified Consent Decree

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Filed by the U.S. District Court on October 10, 2017

- Phase I deadline – January 1, 2021 – COMPLETE WITH EXCEPTION OF TWO PROJECTS WITH EXTENUATING CIRCUMSTANCES
  - Phase I included rehabilitation of collection system and reduction/mitigation of Sanitary Sewer Overflows (SSOs)
- Phase II deadline – December 31, 2030
  - Reducing infiltration/inflow and upgrading hydraulic capacity of the collection system citywide
- Some CD compliance deadlines are extended because of extenuating circumstances about which the City has engaged with Regulators

# MCD Project Team

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- Department of Public Works
  - Office of Engineering and Construction
  - Office of Asset Management
  - Wastewater Facilities Division
  - Utility Maintenance Division
  - Office of Research and Environmental Protection
  - Office of Boards and Commissions
  - Office of Communications and Strategic Alliances
  - Office of Fiscal Management
  - Program Management Team (AECOM)





# MCD Program Elements

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- Elimination of SSO Structures (8)
- Implementation of Sewer shed Plans (9)
- Regulatory Studies and Deliverables (9)
- Illegal Sewer Connections (10)
- Pumping Station Inspection, Repair & Rehabilitation (11)
- Collection and Transmission System Model (12)
- Collection System Operation and Maintenance (13)
- Information Management System Program (14)
- Sanitary Discharges of Unknown Origin (15)
- Revised Emergency Response Plan (16)
- Reporting Overflows and Recordkeeping (17)
- Stream Quality Monitoring (19)
- Review and Approval of Deliverables (20)

(#) – Depicts the paragraph being referenced from the MCD Legal document



# Elimination of SSO Structures (Paragraph 8)

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***The City of Baltimore shall eliminate the identified Sanitary Sewer Overflow (SSO) Structures and comply at all times with the Clean Water Act***

- 60 of 62 SSO structures identified in 2002 CD have been eliminated
- Remaining 2 SSO structures from 2002 CD will be eliminated once sediment issues have been mitigated in the large interceptors upstream of the Back River WWTP
- An additional 15 SSO structures identified since 2002; 7 have been eliminated
- Currently, 10 SSO structures are being monitored
- DPW is progressing on approved action plans and schedules to eliminate the remaining SSO Structures

# Elimination of SSO Structures (Paragraph 8)

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## *Over the past 12 months...*

- Progressed on project to clean interceptors upstream of Back River WWTP to mitigate SSO Structures # 67, 72, 152, 154.
- 1,215 tons of material have been removed across 7,050 linear feet of interceptor (as of 12/1/22)
- Began official Post Construction Flow Monitoring (PCFM) on SSO Structures # 135, 138, 139. Elimination is dependent on Project SC 940 that was completed in July 2022. No activations have occurred since completion.
- Continuing design of project needed to eliminate SSO Structure #155
- Completed project needed to eliminate SSO Structure #156. Began PCFM.
- Completed rehabilitation of sewerage assets needed to eliminate SSO Structure #157. Began PCFM.
- Eliminated SSO Structure #158. No PCFM needed because flow completely re-routed.

# Implementation of Sewershed Plans (Paragraph 9)

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*The City of Baltimore shall complete all projects specified in Phase I and Phase II Plans by implementing an adaptive management process*

## ***Over the last 12 months***

- 3 consent decree construction projects reached MCD completion
- 2 consent decree projects still in construction
- Advance Phase II project procurement in progress
- As of public meeting, construction has been completed for 37 Consent Decree projects (including Headworks)



# Implementation of Sewershed Plans (Paragraph 9)

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***The City of Baltimore shall complete all projects specified in Phase I and Phase II Plans by implementing an adaptive management process***

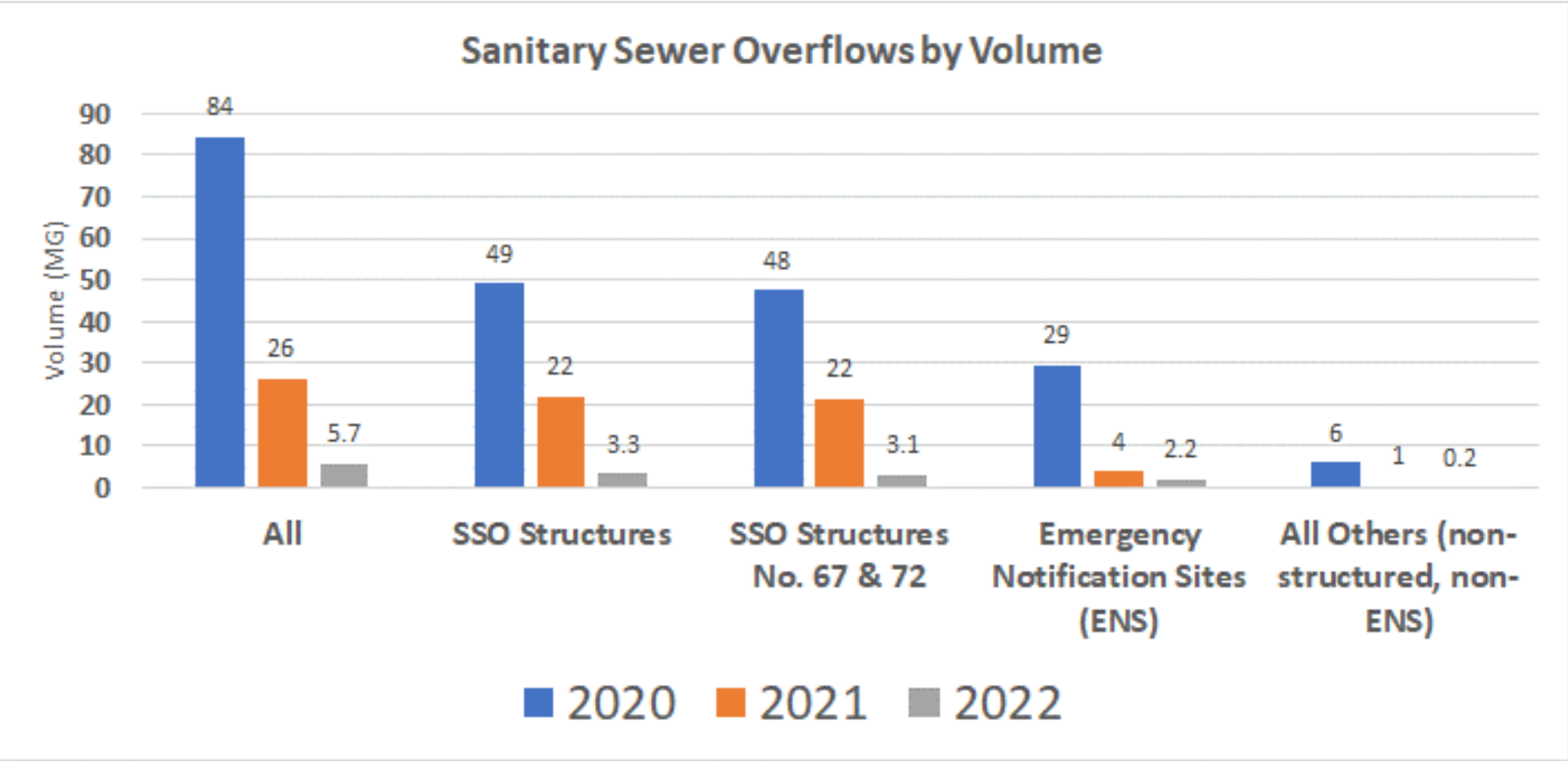
## Types of Projects

- Cured-in place pipe (CIPP)
- Point repair
- Manhole rehabilitation
- Sanitary House Connection / rehabilitation

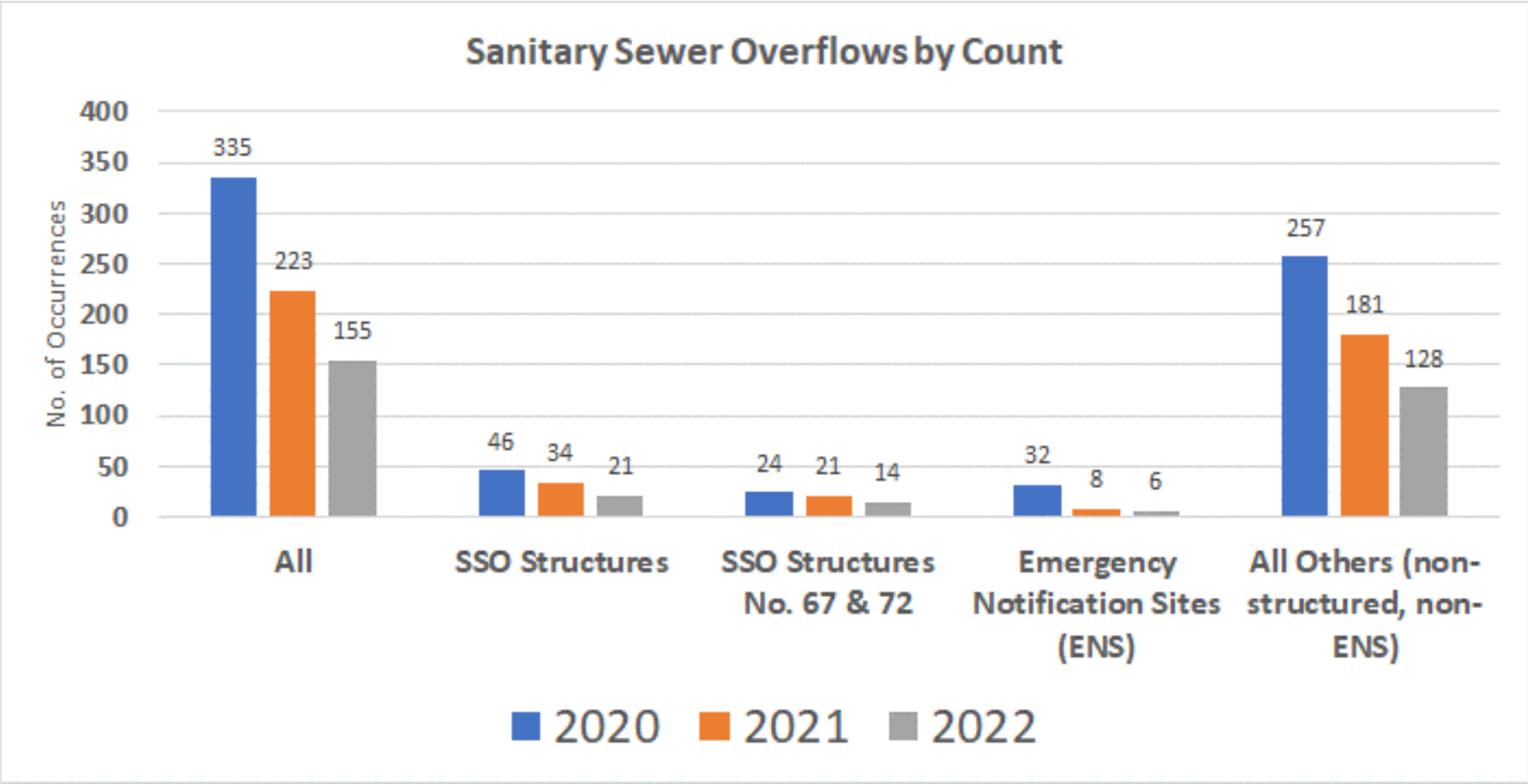
## Back River WWTP Headworks Project

- New Influent Pumping Station
- New screening & grit removal facilities
- 36 MG Storage

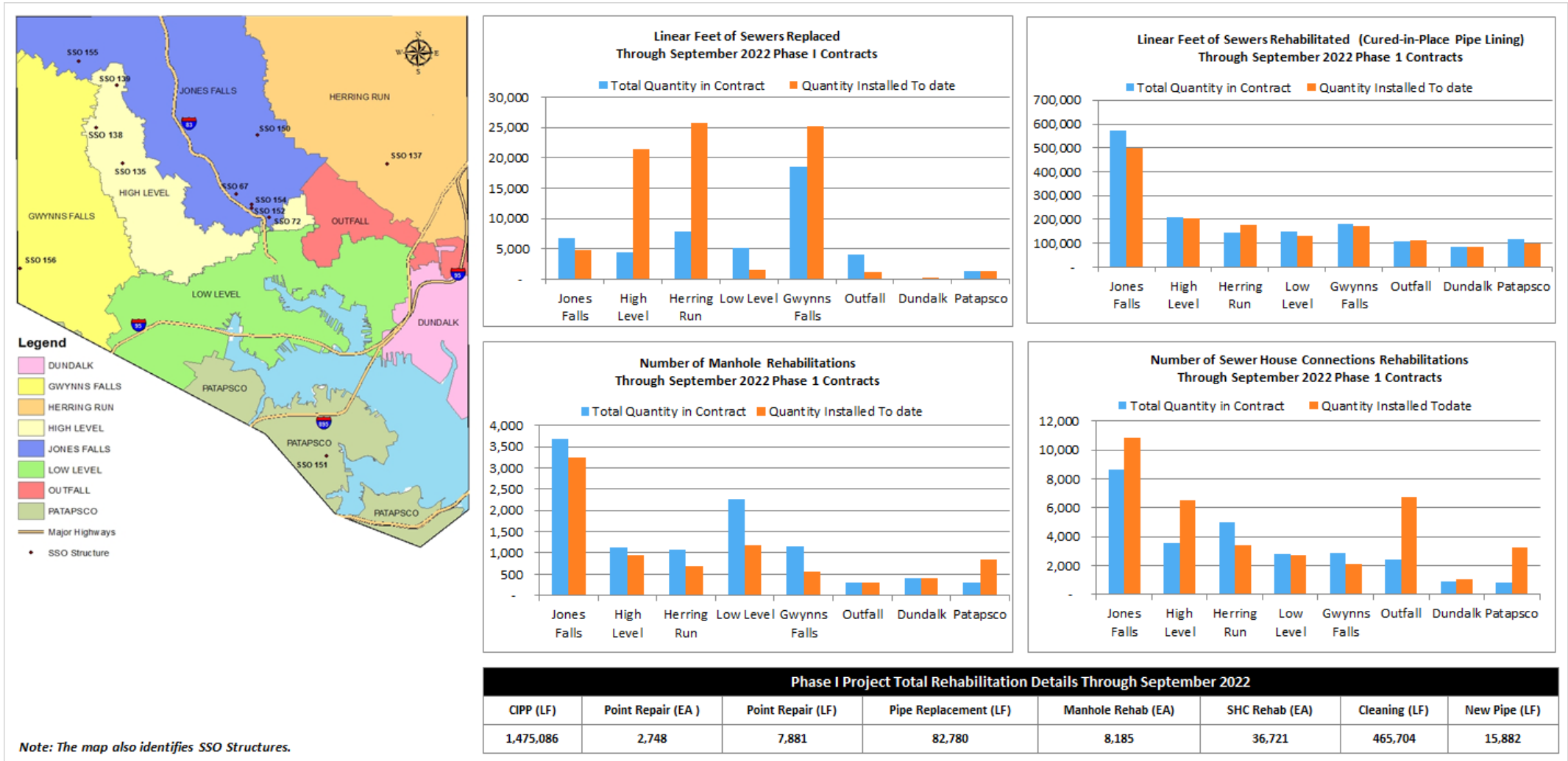
# Key SSO Volume Reduction Accomplishments



# Key SSO Frequency (Counts) Reduction Accomplishments



# Regulatory Studies and Deliverables (Paragraph 9)





# Regulatory Studies and Deliverables (Paragraph 9)

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## *Over the past 12 months...*

- Continued implementing Phase 1 Post-Construction Flow Monitoring (PCFM)
- Continued analysis that resulted in Phase II Plan Report

# Illegal Sewer Connections (Paragraph 10)

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***The City of Baltimore shall continue to identify and eliminate each illegal connection to the Collection System.***

- Baltimore continues to implement its illegal private connections enforcement action plan
- Illegal connections are identified in the Quarterly Progress Reports
- Baltimore will notify owners of privately-owned portions of laterals that cause or contribute to overflow of the collection system

***Over the past 12 months...***

- No illegal connections discovered, therefore, no enforcement actions were needed by City



# Pumping Station Inspection, Repair & Rehabilitation (Paragraph 11)

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*The City of Baltimore shall continue to perform the following activities:*

- Daily pumping station inspections
- Pumping station remote monitoring and SCADA system maintenance
- Pumping station preventative maintenance program
- Pumping station updates provided in Quarterly Progress Reports

*Over the past 12 months...*

- No overflows
- No near misses



# Collection and Transmission System Model (Paragraph 12)

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***The City of Baltimore shall maintain the computerized collection and transmission system model for the Collection System***

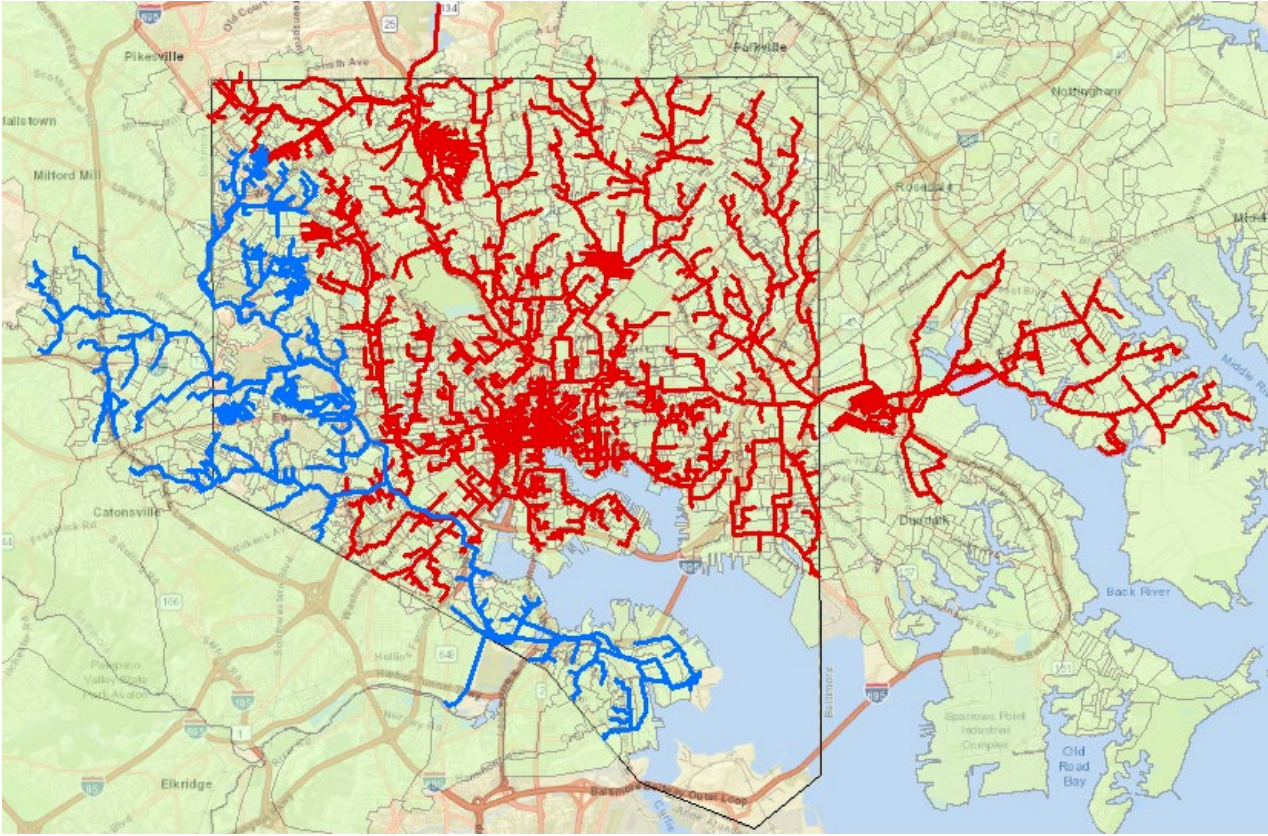
- The model simulates baseline and future or build-out conditions

***Over the past 12 months...***

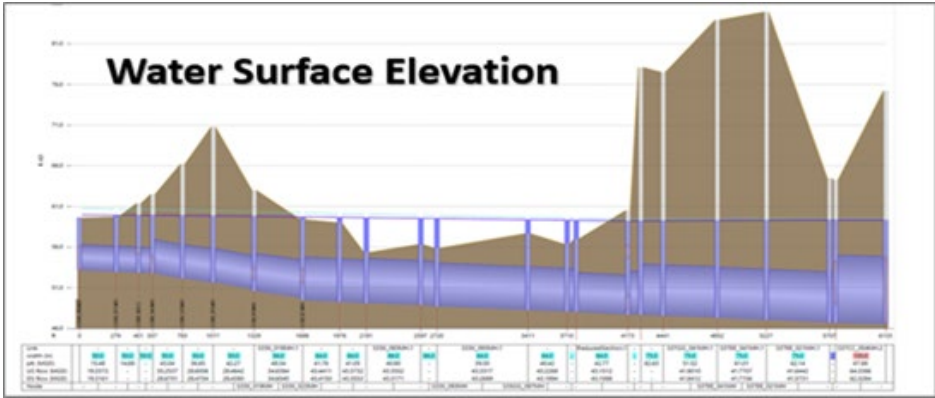
- Finished model update and recalibration based on 2021 flow and rainfall data.
- The updated and recalibrated model was used to support development of the Phase II Plan.



# Collection and Transmission System Model (Paragraph 12)



- Back River System
- Patapsco System



# Collection System Operation and Maintenance (Paragraph 13)

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***The City of Baltimore shall perform a comprehensive review of its operation and maintenance (“O&M”) Plan and prepare a revised O&M Plan for the Collection System, detailing how Baltimore will evaluate and maintain an effective program to prevent and minimize dry weather overflows.***

- Revised O&M Plan Approved by EPA and MDE November 29, 2018
- An annual update was Submitted to EPA and MDE November 30, 2022

# Collection System Operation and Maintenance (Paragraph 13)



*Over the past 12 months:*

Activity	Results
O&M Progress Report published to DPW website for public comment	Submitted 10/28/2022
Developed Targeted Cleaning program to inspect and clean collection system sewers	2.1 miles cleaned
Conducted Fats, Oils, and Grease (FOG) treatment of sewer lines	8.3 miles treated
Treated sewer lines for root intrusion	6 miles treated
Conducted Food Service Establishments (FSE) inspections in 2022	1,632 inspections



# Information Management System Program (Paragraph 14)

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***The City of Baltimore shall maintain its information management system for the collection system including:***

- GIS database
- Inventory of collection system assets
- Updates to inventory based on rehabilitation
- Baltimore uses the Cityworks application for customer service requests (coming into the 311 system) and work order management

***Over the past 12 months:***

- Expanded use of Cityworks, DPW's computerized maintenance management system (CMMS)
- Maintained services and level of engagement during the Covid-19 pandemic



# Addressing Sanitary Discharges of Unknown Origin (SDUO) (Paragraph 15)

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*The City of Baltimore shall develop and implement a plan for the investigation and the elimination of SDUOs.*

- SDUO plan approved by MDE/EPA on November 29, 2018
- An SDUO is a discharge of sewage through Baltimore's separate storm sewer system, where the source of the sewage is unknown

**Over the past 12 months...**

- 10 SDUO's discovered, 6 abated
- 12 from previous year (2021) abated
- 4 SDUOs are outstanding



# Revised Emergency Response Plan (Paragraph 16)

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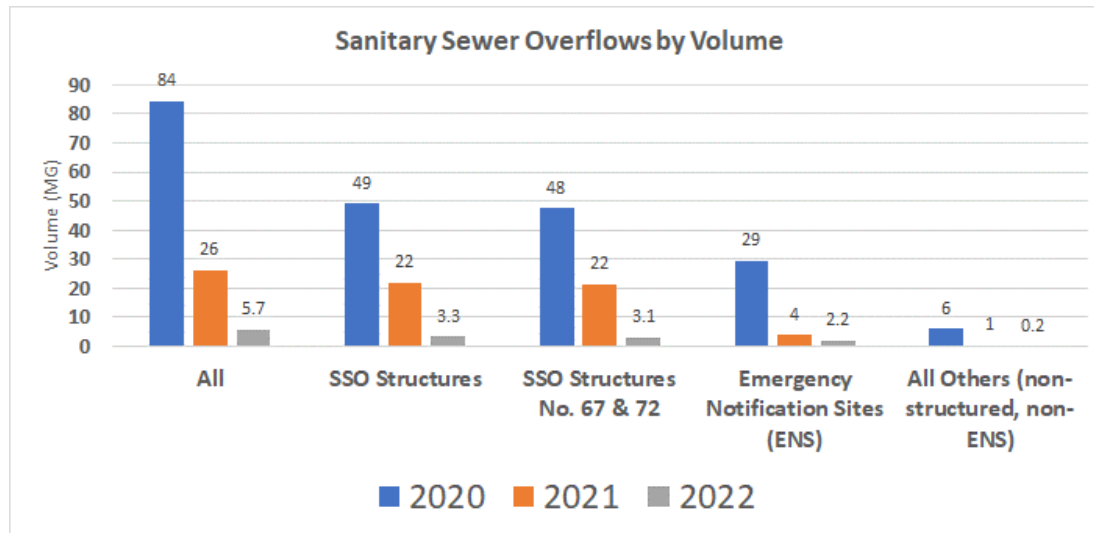
***The City of Baltimore shall revise and submit to EPA and MDE its Emergency Response Plan (ERP) to adequately protect the health and welfare of persons in the event of an unpermitted release, spill or discharge of pollutants from the Collection System or in the event of a reported Building Backup.***

- ERP training conducted annually for DPW operations, maintenance and response staff
- All ERP outstanding discussion items with MDE/EPA were resolved
- Revised ERP dated September 15, 2022 submitted to MDE/EPA



# Reporting of Overflows and Recordkeeping (Paragraph 17)

*Baltimore continues to implement various collection system improvements, repairs, and preventive maintenance programs*



## Programs to reduce SSOs

- Sewer Target Cleaning
- FOG Abatement
- Root Control
- Trunk Walk
- Lateral Assessment/Repair
- SSO Root cause analysis
- Collection system repairs/upgrades

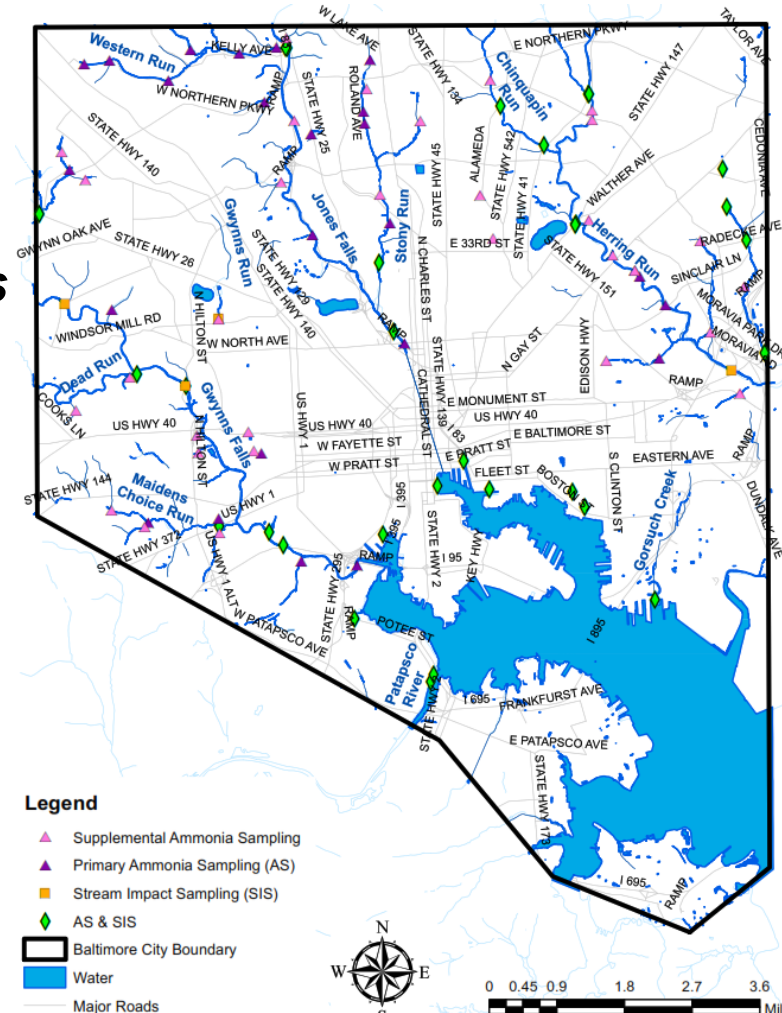


# Stream Quality Monitoring (Paragraph 19)

***Baltimore shall post on the DPW website the results of its water quality monitoring programs***

Baltimore continues to take action to monitor stream quality including:

- Ammonia Screening, weekly
- Stream Impact Sampling, monthly



# Water Quality Monitoring In 2022



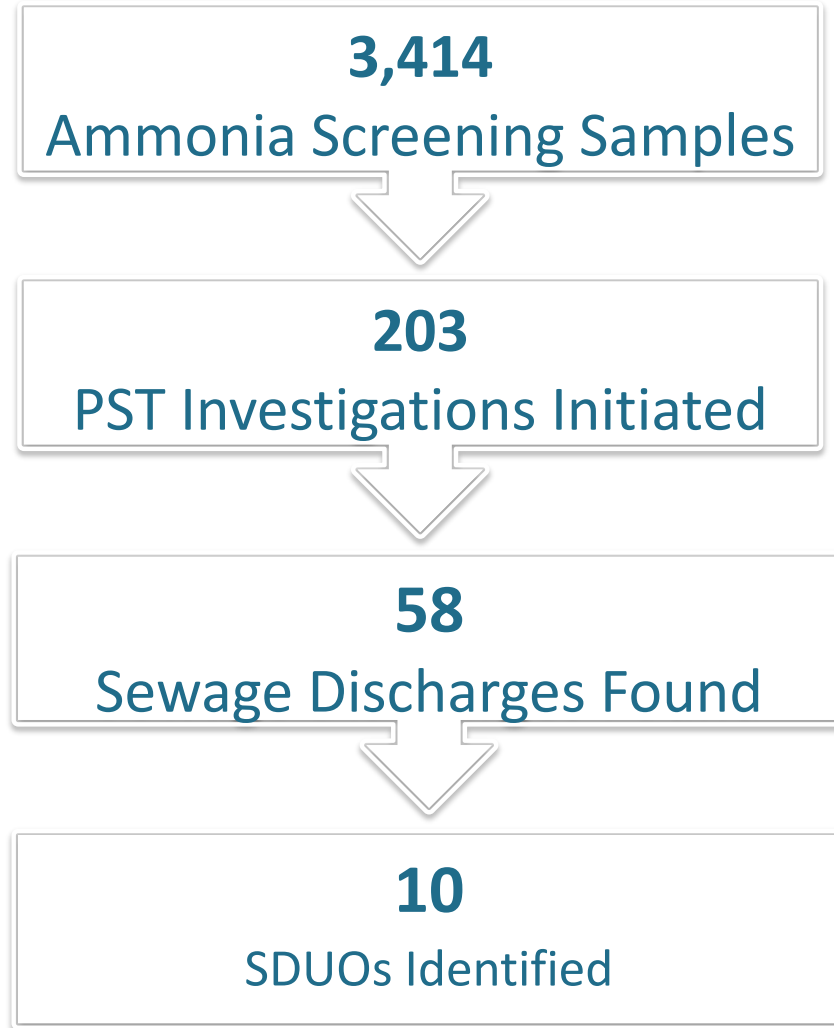
**12**  
Scientists



**126**  
Stations Routinely Sampled



**575**  
Samples Tested for Bacteria



# Review and Approval of Deliverables (Paragraph 20)

- Website provides access to information on the Modified Consent Decree
- Public can sign up for Consent Decree-related notifications

**GET NOTIFICATIONS**

Sign up to get the latest information about our work to improve Baltimore's sewer system delivered to your inbox.

**SUBSCRIBE**

**SOS**  
SEWAGE ONSITE SUPPORT CLEANUP PROGRAM  
Professional sewage backup cleaning... at no cost to you.

**HANDLING SEWAGE BACKUPS**

**SEWAGE BACKUP EXPEDITED REIMBURSEMENT PROGRAM**

**UNDERSTANDING AND PREVENTING SEWAGE BACKUPS**

## Sanitary Sewer Consent Decree Program

Reports | [FAQ's](#) | [Glossary](#) | [Upcoming Projects & Public Meetings](#)

Publication	Posting Date	Links to Comment Form	Comments Accepted Until	Final Version submitted to the Regulators	Regulator Approval Date
FY 22 Annual O & M Plan Update	Nov. 30, 2022				
FY 22 Annual O & M Progress Report	Nov. 1, 2022				

<https://publicworks.baltimorecity.gov/sewer-consent-decree>



# Small Business Development Program

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The Small Business Development Program positions Minority / Women Business Enterprises (M/WBE) to successfully compete for utility construction work, including Consent Decree sewer rehabilitation.

- Over 350 firms graduated
- Over 100 firms M/WBE certified
- 60 firms prequalified for \$50K to \$2.5 MM
- Over \$4 MM in contracts, related services
- 2022 class successfully completed; new class to begin in Fall 2023

# Modified Consent Decree 2022 In Review

## HIGH LEVEL ACCOMPLISHMENTS

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- The City is doing more to prevent SSOs
- The City is thoroughly evaluating the collection system
- The City is working smart, completing projects in a way that is economical for the people of Baltimore
- The City is investing in local small businesses
- In 2022 the City invested \$45,650,678 on MCD projects

# Thank you for attending

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**Please submit comments here**

<https://www.surveymonkey.com/r/2023MCD-AnnualMeetingComments>



**Visit our virtual room:**

<https://aecomviz.com/Baltimore-MCD/>

**Visit our website:**

[publicworks.baltimorecity.gov/sewer-consent-decree](https://publicworks.baltimorecity.gov/sewer-consent-decree)



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