

An Overview of Baltimore City's Modified Consent Decree

June 7, 2016

Joint Public Information Session
Hosted by Maryland Department of
the Environment



Baltimore City Department of Public Works



Agenda

- Challenges and Solutions
- Maintaining Affordable Water and Sewer Rates
- Phased Approach to Consent Decree Implementation
- Overview of Phase I
- Overview of Phase II
- Additional Consent Decree Requirements
- Consent Decree Costs
- Keep Informed

Challenges Encountered During Implementation of 2002 Consent Decree

- Meeting (unfunded) Federal and State requirements for multiple water, stormwater, and wastewater utilities in addition to the Consent Decree
- **Competing** with other local jurisdictions **for contracting resources**
- Managing **aging infrastructure** and the need to balance capital expenditures across all utilities
- Frequent, expensive **emergency repairs**
- Shifting **away from reactive response** and **increasing preventive maintenance** capabilities
- Affordability of **continued rate increases** which have tripled since 2002 on a population 24 percent of which is currently at or below the federal poverty line
- Other **financial demands** of operating a large City infrastructure

Challenge: Contractor Management

- Challenge
 - Baltimore experiences project delays and contractor capacity limitations due to spending of over \$3.5 billion by mid-Atlantic utilities on sewer rehabilitation projects within the next decade.
- Solutions
 - Update City procurement processes and procedures;
 - Provide scheduling assistance;
 - Assess liquidated damages;
 - De-scope and reassign contract work; and
 - Terminate contracts based on unsatisfactory performance.

Challenge: Meeting Federal and State Requirements for Stormwater and Drinking Water During the Term of the Modified Consent Decree

- Compliance with MS4 permit: The City will spend **\$103.2 million** by 2019.
 - MS4 costs for 2019 – 2030 cannot be estimated at this time due to the nature of five-year MS4 permit cycle.
- The City will spend **\$2.3 billion** on drinking water projects over the next 13 years.
 - New drinking water filtration plant
 - Converting all finished water reservoirs to tanks
 - Water main replacement

Challenge: Continued Utility Rate Increases Between 2002 and 2015

- Baltimore has more than tripled its water and sewer rates since the entry of the 2002 Consent Decree.
- The most recent rate increase, adopted in July 2013, raised water and sewer rates by 42 percent over the last three years.
- The double-digit rate increases of the last three years are not sustainable.

Effective Date	% Increase
April 2002	10.0
April 2003	9.0
April 2004	9.0
April 2005	9.0
April 2006	9.0
April 2007	9.0
May 2008	4.0
June 2009	9.0
June 2010	9.0
May 2011	9.0
June 2012	9.0
July 2013	15.0
July 2014	11.0
July 2015	11.0

Challenge: Affordable Water and Sewer Rates

- 24 percent of Baltimore's population lives at or below the federal poverty level, as compared to a national average of 15 percent, and a state average of 10 percent (2014).
- Over 13 percent of Baltimore's population has an annual household income less than \$10,000, nearly twice as much as the national average.
- Baltimore faces a declining population and stagnant income growth.
 - Between 2000 and 2015, the City's population declined by 4.5 percent and its households declined by 6 percent.
- The loss of population places a higher financial burden on Baltimore's remaining citizens.

Challenge: Restoring Balance Between Wastewater and Drinking Water Spending

- From 2002 to 2015 Baltimore DPW dedicated an average of 68 percent of its Capital Improvement Program (“CIP”) appropriation to wastewater projects and 32 percent to drinking water projects.
- Baltimore needs to increase spending on water projects over the next 18 years to better address aging infrastructure.
- Planned spending between 2016 and 2034 includes approximately \$2.53 billion in the Water Fund, \$1.43 billion in the Wastewater Fund, and \$545 million in the Stormwater Fund.

Two-Phase Approach Provides Better Results



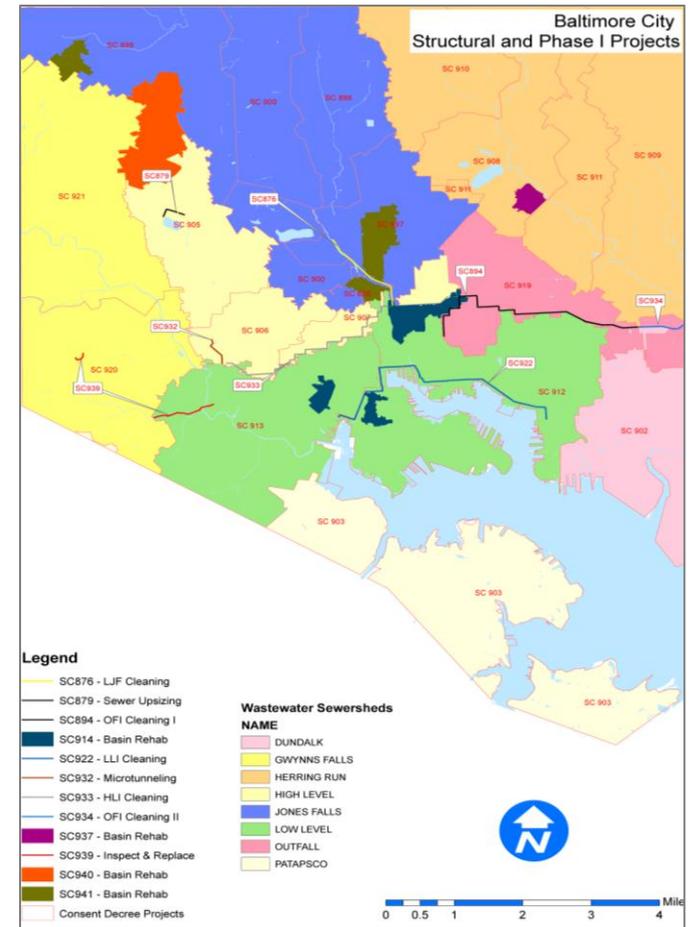
- **Structural Corrective Actions**
- **Back River WWTP Headworks & Storage Facilities**
- **I/I Reduction through Comprehensive Sewer Rehabilitation**
- **Complete post-construction flow monitoring (PCFM) (18 months)**
- **Complete evaluation of PCFM (6 months)**
- **Refine Conveyance & Storage Recommendations based on observed I/I**

The two-phase approach maximizes environmental benefits while maintaining affordable water and sewer rates for the majority of Baltimore residents.

Completion of Phase I will reduce SSO volume by 83 percent.

Modified Consent Decree Over \$900 Million for Phase I Projects

- 11 Projects already completed
- Projects in Design and Construction Phase
 - BRWWTP Headworks Modification & Flow Equalization
 - 11 Sewer Rehabilitation Projects in design and advertisement phase
 - 12 projects in construction and award phase
- Status
 - Structural Projects and Hydraulic Projects on track to be completed by January 1, 2019 and January 1, 2021 per Appendix B – Phase I Project Summary



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Phase I - Structural Rehabilitation Projects

PHASE I: Rehabilitate identified structural issues in the collection system and remove I/I. These projects will significantly reduce both the frequency and volume of SSO events.

Sewers:

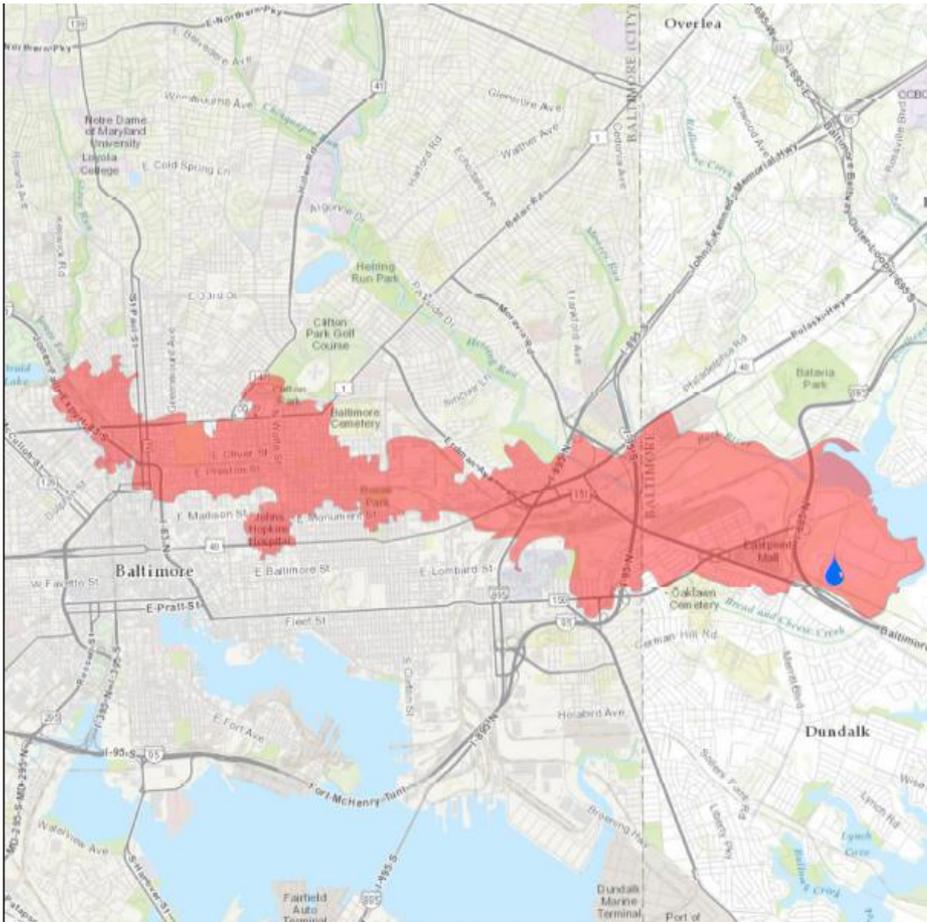
- Pipe replacement/upsizing
- New pipe construction
- Point repairs
- CIPP lining
- Sewer cleaning

Manholes:

- Manhole rehabilitation
- Manhole replacement
- New manhole construction

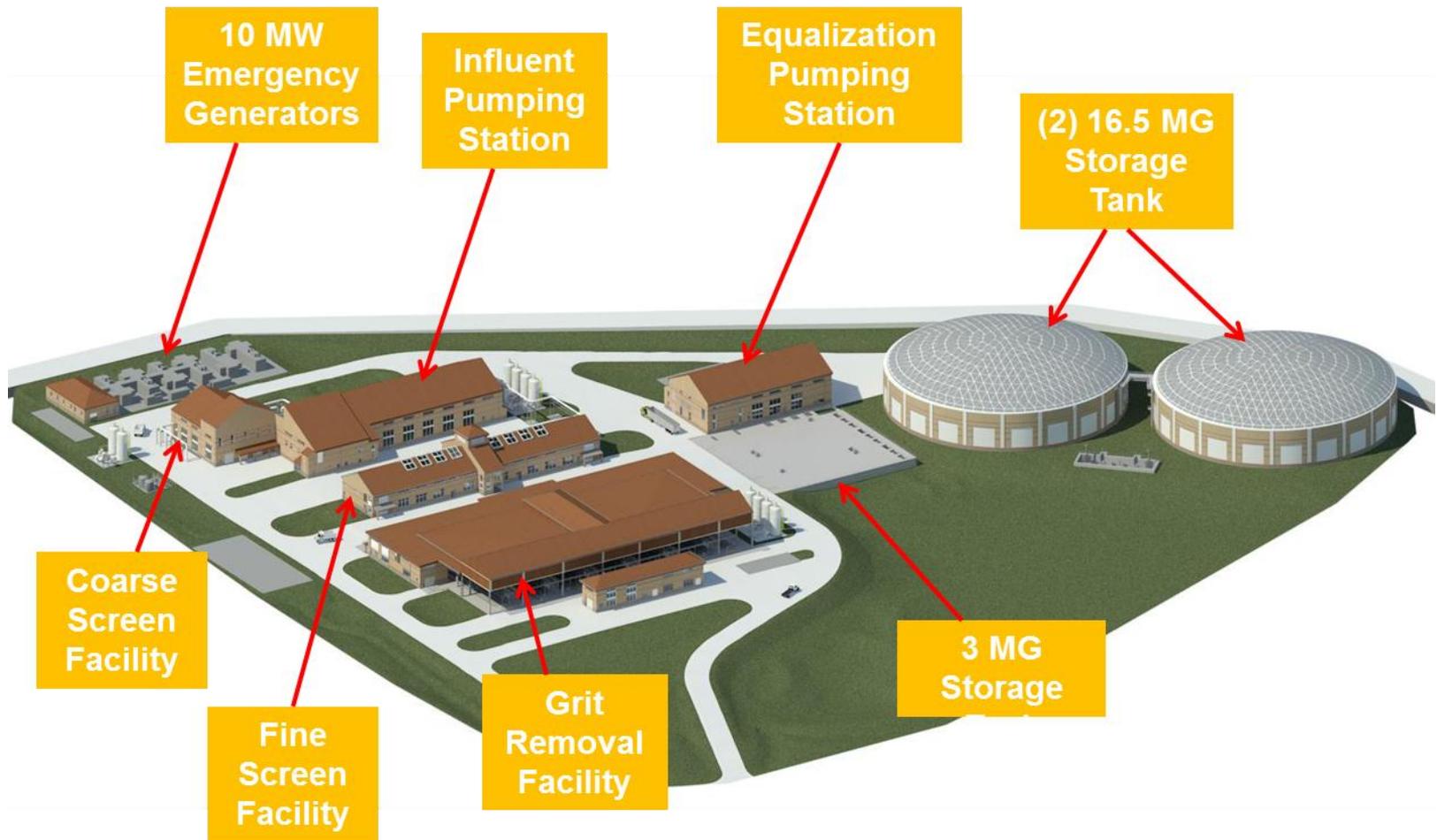
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Phase I - Back River WWTTP Headworks Project



- Hydraulic restriction at BRWWTP
- 10 mile sewage backup
- Causes SSOs and contributes to some basement backups
- When restriction removed, will have single biggest impact on SSO reduction
- Cost will be **over \$350 million**
- Completion date: 1/1/2021

Modified Consent Decree Phase I - Back River WWTP Headworks Project



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Phase II - Planned Work

PHASE II: Hydraulic rehabilitation and improvement projects based on the results of post-construction flow monitoring.

Projects in the planning phase

- Proposed rehabilitation in 5 sewersheds.
- Proposed conveyance upgrades in 6 sewersheds.
- Projects must be prioritized to address any remaining public side deficiencies that contribute to basement backups.
- Estimated cost of **\$548.4 million.**

Modified Consent Decree Enhanced Operations & Maintenance Plan

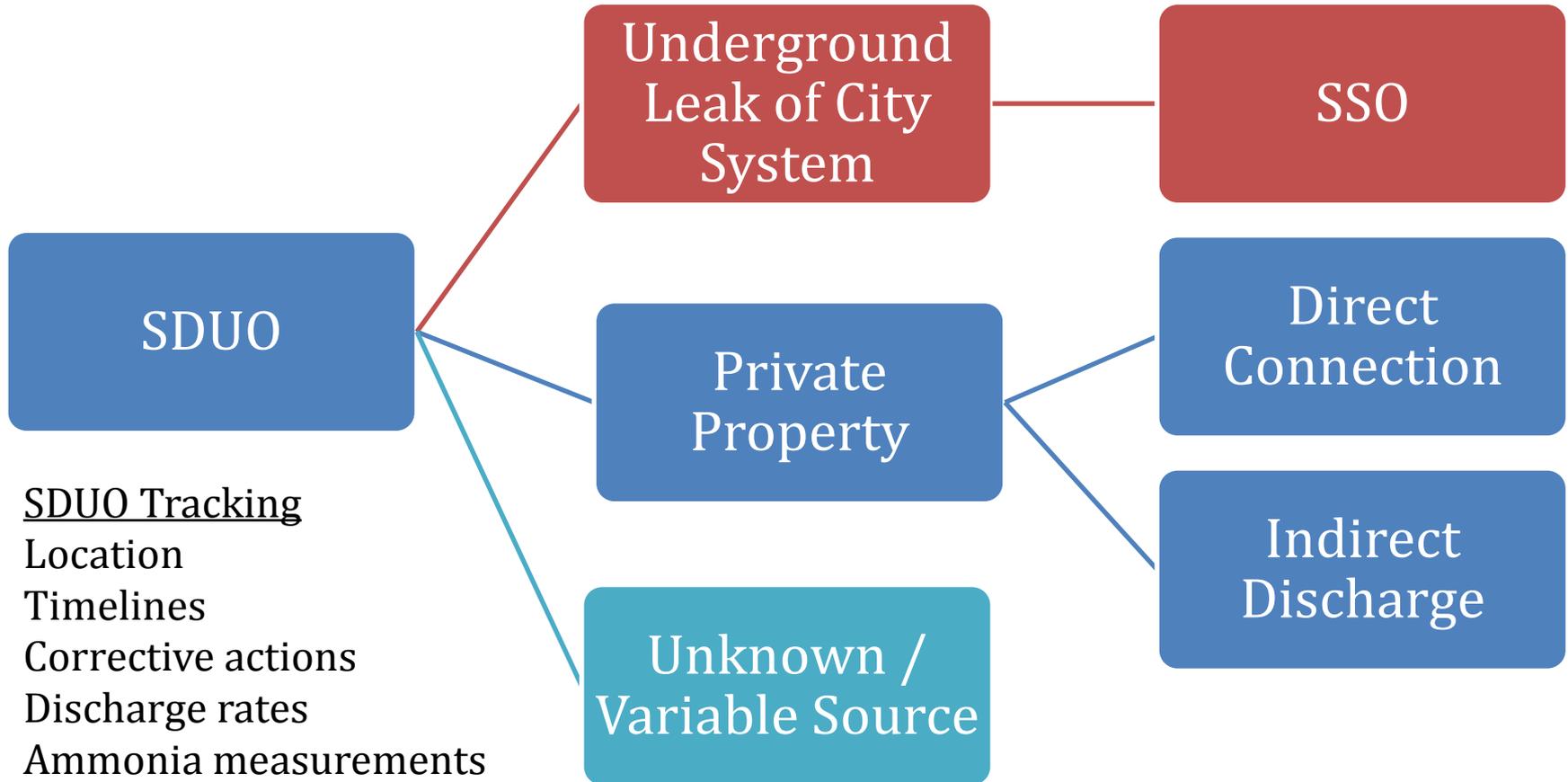
Build upon success of Asset Management programs

- Since 2014, inspections, cleanings, and proactive fixes have improved sewer operations.
- **Working harder and smarter**
 - Targeted work in areas known to accumulate debris, grease, and root infiltration
 - Targeted work on lateral house connections
 - Root cause analysis on all SSOs
 - Walking sewers in hard-to-reach areas
- **Engaging the public:** we all need to be aware of what we're putting down the drain, especially in food service



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Sanitary Discharges of Unknown Origin



Modified Consent Decree Costs

- **\$867.4 million spent** on the consent decree as of February 2016.
- Projected cost for the remainder of Phase I consent decree work:
 - From fiscal year 2017, the projected capital cost for the **remainder of Phase I projects is \$630.1 million.**
- Projected cost for Phase II consent decree work:
 - The **projected capital cost related to Phase II projects is \$548.4 million.**
- There is an additional **\$85.1 million** projected cost for Program Management, Asset Management, and Flow Monitoring.

Keep Informed

- DPW keeps the public informed via social media, the City's website, Community Liaisons, press releases, events and more.
- Every year, DPW will hold a public forum to report on progress of the consent decree.
- Project notices are also posted at:

www.publicworks.baltimorecity.gov