



# Combined Sewer System Program Update

Government Operations Committee  
June 28, 2023

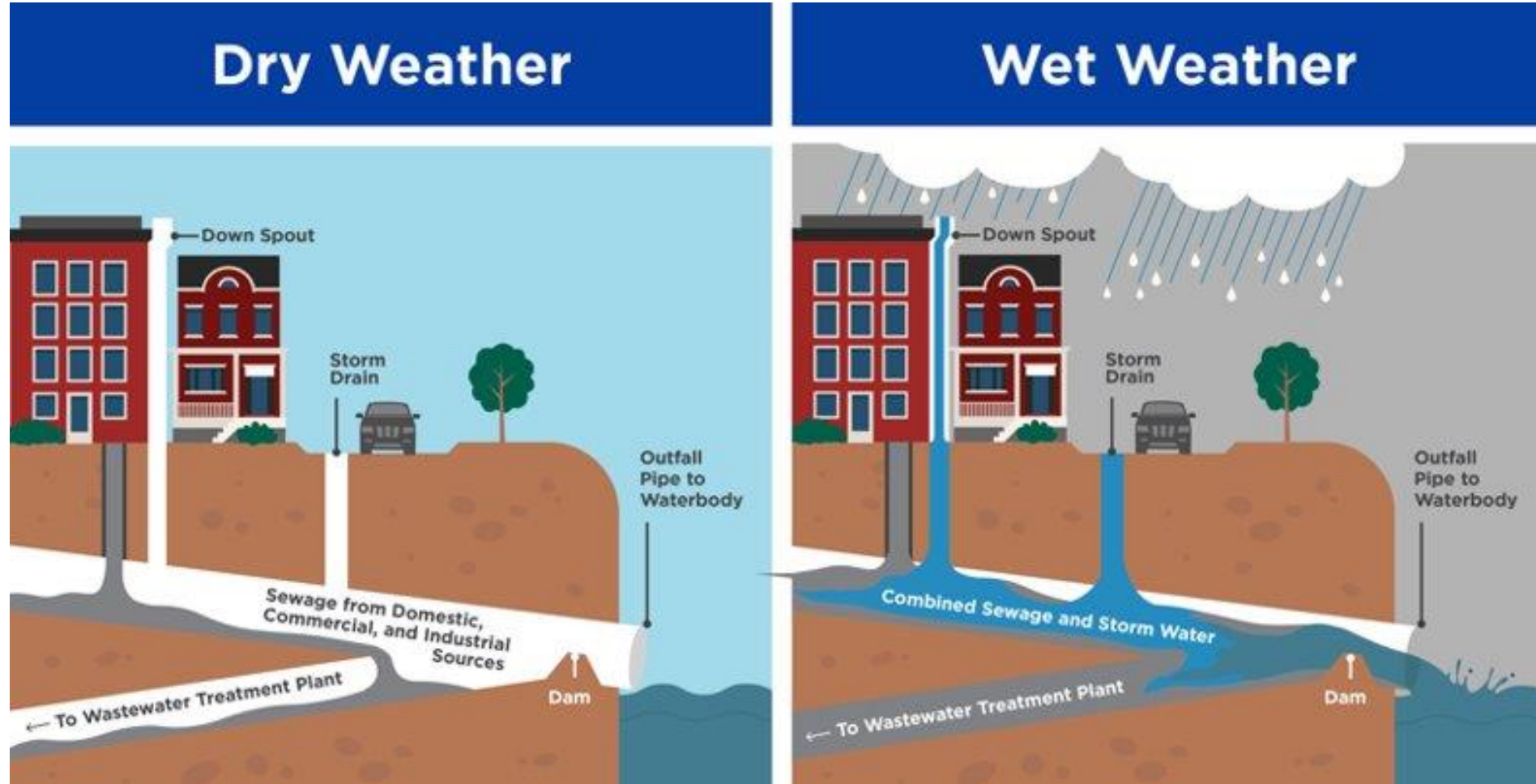


# Meet the Project Team

- April Bingham – DPU Director
- Eric Whitehurst – DPU Deputy Director
- Grace LeRose – DPU Policy Advisor
- Bob Stone – DPU Engineer
- Billy Vaughan – DPU Deputy Director
- Alan Cooke – DPU Finance Manager
- Rhonda Johnson – DPU Public Information Manager
- Megan Field – Senior Policy Analyst
- Adam Hohl – Senior Policy Analyst
- Henry Shah – AECOM Program Manager
- Christene Mitchell – AECOM Deputy Program Manager
- Brown and Caldwell – Lead design consultants
- LimnoTech – Water quality modeling
- Jacobs – Design engineer



# What is a Combined Sewer System (CSS)?



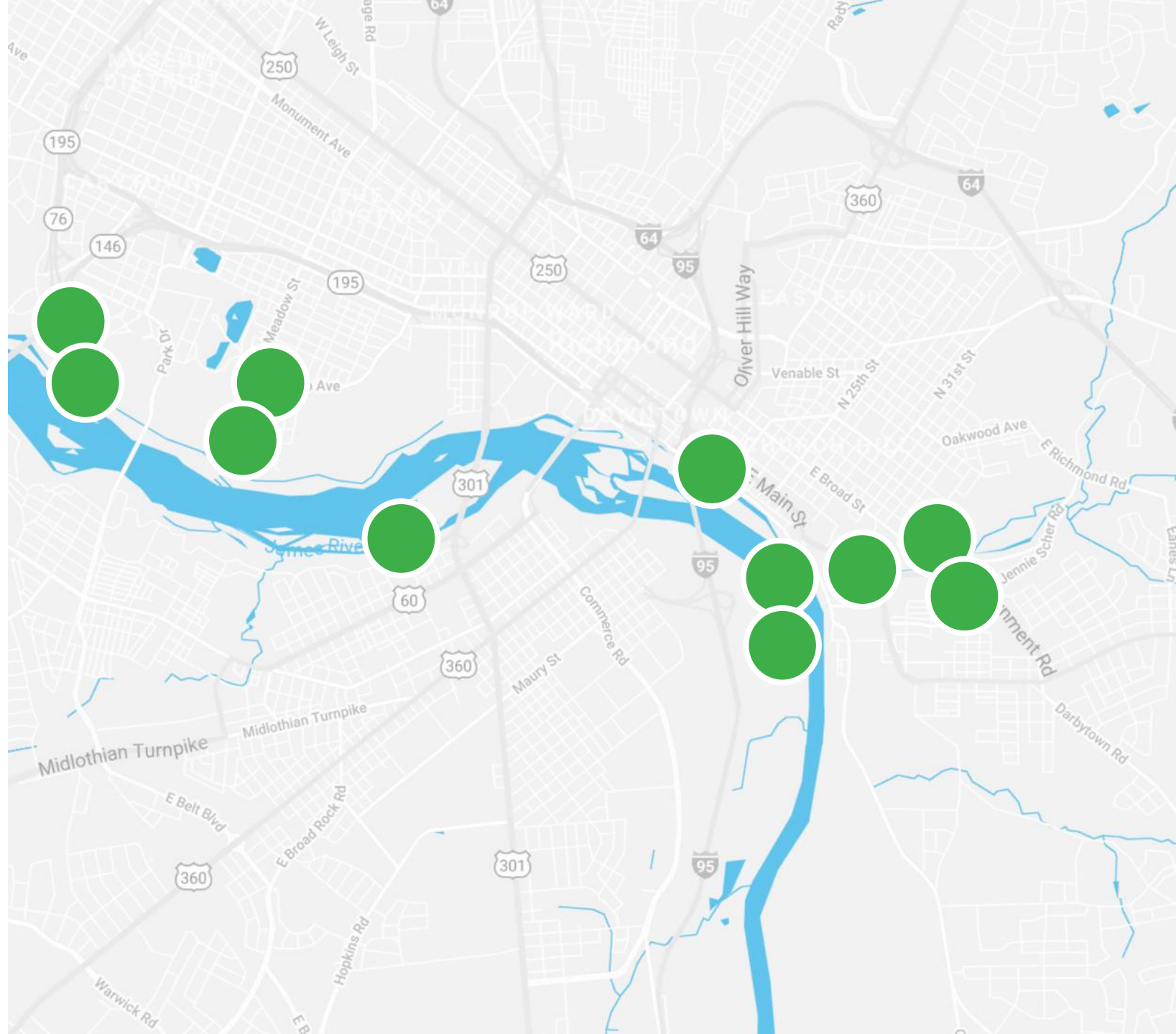
# Interim Plan

## 10 Projects

- Control overflows with existing capacity and new technology
- Capture an estimated 182.3 million gallons (MG) of overflow volume
- Must be completed by 2027

**92%** Annual Average CSS % Capture

**\$50 M** Estimated Cost



# Interim Plan Project Updates

Interim Plan Project	Description	Benefit		Milestones	
		Overflow Volume Reduction (Million Gallons)	Overflow Event Reduction (#)	Design Completion	Construction Completion
CSO Outfall 004	Relocate Regulator Structure and store flow in the 60" pipe	5.1	48	100%	Dec-24
CSO Outfall 019A	Divert flow to the existing Hampton-McCloy Retention Tunnel	10.3	2	95%	TBD
CSO Outfall 019B	Divert flow to the existing Hampton-McCloy Retention Tunnel	2.2	2	95%	TBD
CSO Outfall 021	Store wet weather flow in the existing 120" Gordon Avenue Sewer	16.2	17	90%	TBD
CSO Outfall 040 #1	Store wet weather flow in existing 78" CSO 1/2 Conveyance Pipe	12.3	1	90%	TBD
CSO Outfall 024	Divert additional wet weather flow to the Gillies Creek Interceptor	3.8	26	60%	TBD
Level 1 Controls	Automate the drainage of the Shockoe Retention Basin	78.8	7	50%	TBD
CSO Outfall 020	Divert flow to the existing Hampton-McCloy Retention Tunnel	8.9	1	50%	TBD
CSO Outfall 039	Divert additional wet weather flow to the Gillies Creek Interceptor	3.6	13	50%	TBD
Level 2 Controls	Maximize flow to wet weather UV Disinfection Facility	41.2	7	10%	TBD

\*Groundbreaking for CSO Outfall 004 will be in Summer 2023

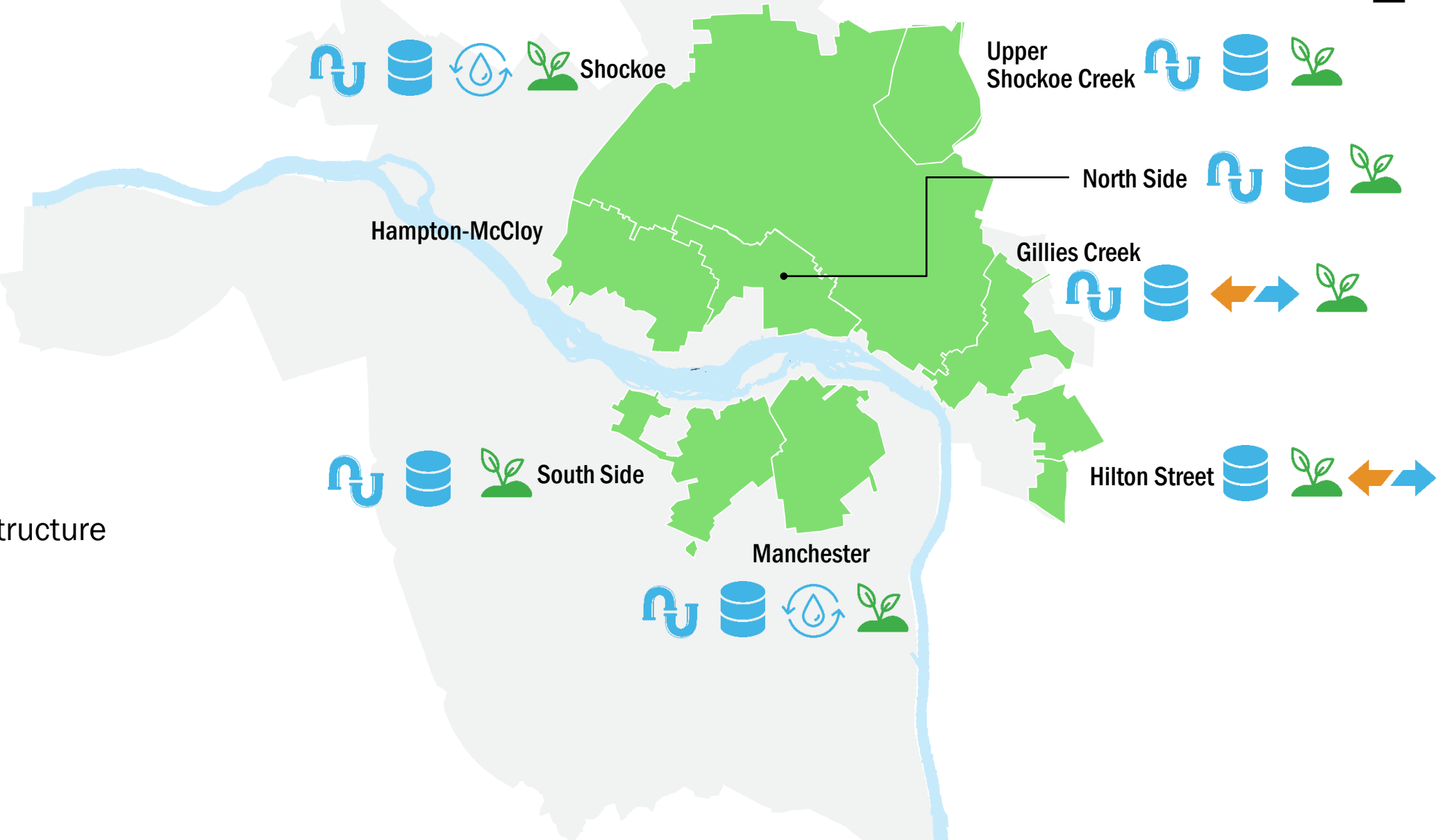


# Potential Final Plan Projects to Evaluate



## Legend

- Bigger Pipes
- Storage
- Treatment
- Separation
- Green Infrastructure



# Examples of Green Infrastructure in Richmond

Gambles Mill Eco-Corridor Stream Restoration



Green Alleys

Permeable Pavers

Capital Tree's Low Line Green

Greening Richmond Public Libraries



# Interim and Final Plan Costs

ARPA covers *SOME* but not *ALL* costs

Project	Est Costs:	Funding Source:	Completion Date:
Interim Plan	\$50 M	ARPA	July 2027
Final Plan	\$500 M - \$1.3 B	ARPA, Rates, other?	July 2035





# Potential Funding Sources

- State Funding Sources
  - Virginia CSO Matching Fund Grants
  - Virginia Clean Water Revolving Loan Fund (0% or low interest rates, possible forgiveness)
  - ARPA (Federal funds passdown)
- Federal Funding Sources
  - Congressionally directed spending (CDS) (i.e. “earmarks”)
  - Sewer Overflow and Stormwater Grant program (currently limited funding available)
  - Water Infrastructure Finance and Innovation Act (WIFIA) Loans
- City Funding Sources
  - Wastewater utility revenue bonds
  - City GO bonds



# Keeping Stakeholders Involved and Informed



Public Stakeholder Group

**7** meetings  
in the past **year**

**Equal** representation for  
each **City Council District**

Regulatory and Technical  
Stakeholder Engagement

**9** year Technical  
Stakeholder Group

**25** DEQ  
meetings



# Next Steps



- Lobby for \$100M to remain in State budget bill
- Lobby state and federal agencies for funding
- Continue work on projects and submit Final Plan
- Continue public outreach, communications, and quarterly updates to City Council



# Questions?

