Worcester Combined Sewer Overflow Long-Term Control Plan and Green Island Flood Study Update

Community Workshop

Thursday, October 30th | 6:30 – 8 p.m.

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Meet the Team Here Tonight

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John Westerling – Commissioner of Public Works
Sean Divoll – Assistant Commissioner, Water & Sewer
Dave Harris – Director of Sewer Operations
Dylan Ludy – Assistant Director of Sewer Operations

Kleinfelder, Engineering Consultant

Mike Cunningham – Program Manager
Courtney Eaton – Project Manager
Kate Riley – Community Relations Manager

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Tonight's Meeting

Tonight's meeting consists of two parts:

Presentation

- Overview of Combined Sewer Overflows (CSOs)
- Information on how Worcester manages CSOs
- Introduction to the Long-term Control Plan (LTCP)
- Solutions/Alternatives being proposed
- Addressing Green Island Neighborhood flooding

Interactive Workshop

- Visit the boards for more in-depth information
- Speak to the project team
- Share your experiences with flooding in Green Island

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Overview: Combined Sewer Overflows in Worcester

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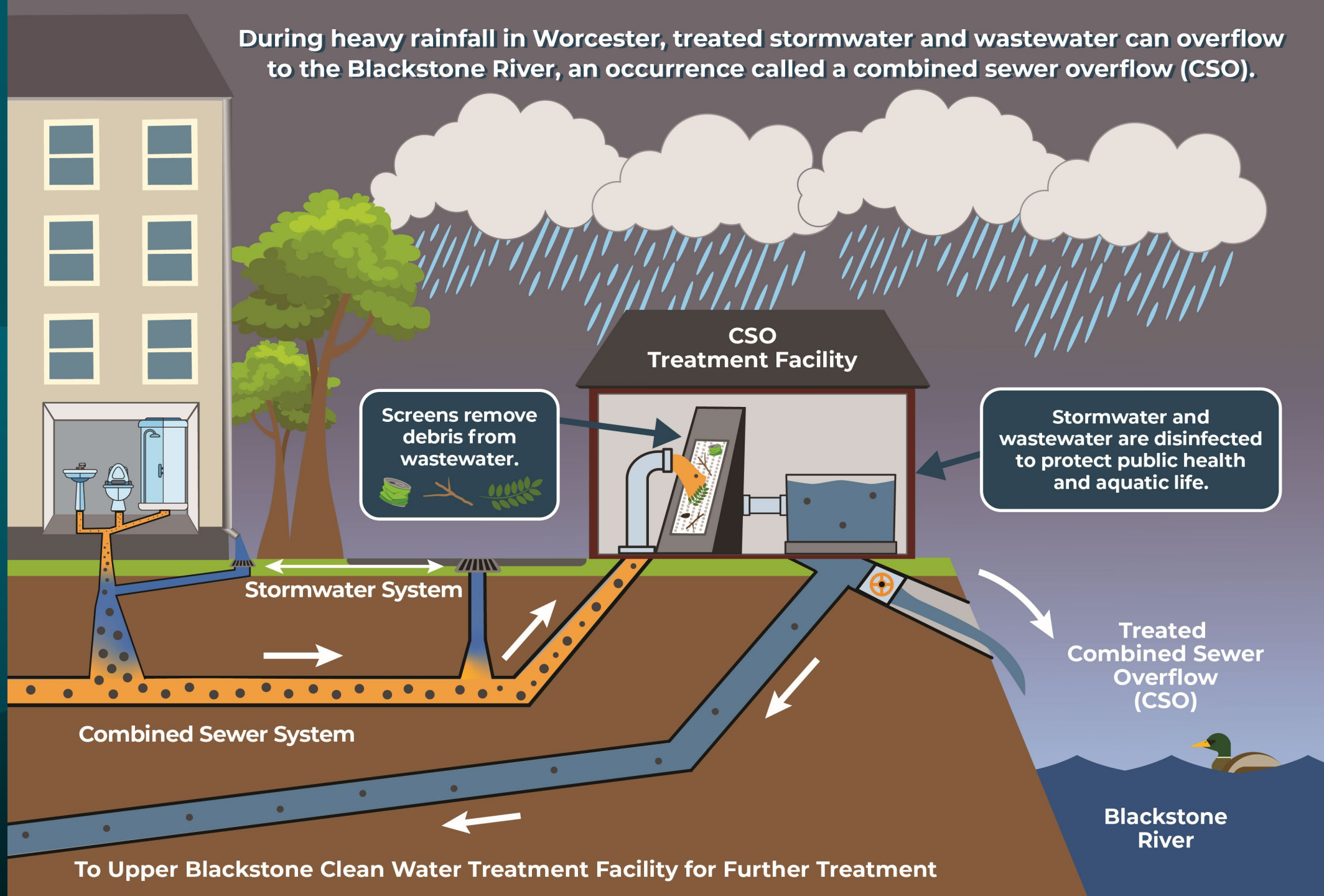
What is a Combined Sewer Overflow?



How Does the City Currently Manage CSOs?

- Average of 15-20 CSO discharges annually
- Discharges from the Quinsigamond CSO Treatment Facility
  - Built in 1980s
  - One of the first CSO treatment facilities in New England
  - Collects all combined sewer flow in the City
  - Excess combined sewage partially treated *before* discharging into the river
- Even partially treated overflows contain some levels of bacteria, so it's important that Worcester continues to work to limit CSOs.

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The Long-Term Control Plan (LTCP)

- Long-Term Control Plans:
  - are strategic plans to reduce or eliminate CSO discharges.
  - are mandated by the US Environmental Protection Agency (EPA).
  - must be compliant with the regulations in Clean Water Act.
- Failure to reduce CSOs may result in fines.
- Worcester originally developed their LTCP in 2004
  - Recommended projects developed in that plan were completed in 2008.
- The 2025 LTCP Update:
  - Aims to improve water quality in the Blackstone River.
  - Reflects new data and priorities.
  - Limits to 4 CSO discharges per year, per EPA policy.

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Key Strategies Considered in the LTCP

Alternative upgrades considered:

- Alternative 1: Maximize storage
- Alternative 2: Maximize sewer separation
- Alternative 3: Maximize treatment capacity at CSO treatment plant
- Alternative 4: Add treatment capacity at Upper Blackstone Clean Water Treatment Plant

underground storage tank

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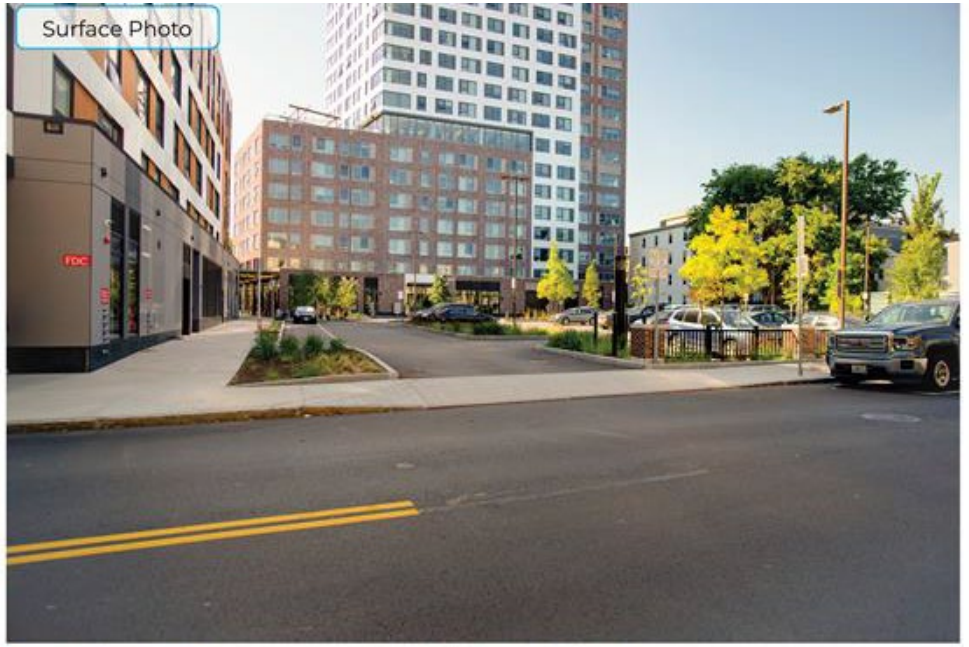
Alternative 1: Maximize Storage

Install an 8-million-gallon underground tank at Crompton Park

- Tank holds combined waste and stormwater during heavy rainstorms until the system is ready to fully treat it again.
- Playing fields and open space would be fully restored upon completion of construction.
- Tanks are fully contained. No leaking or smells associated with them.



Total cost to achieve 4 CSO discharges/year: $130M - $150M

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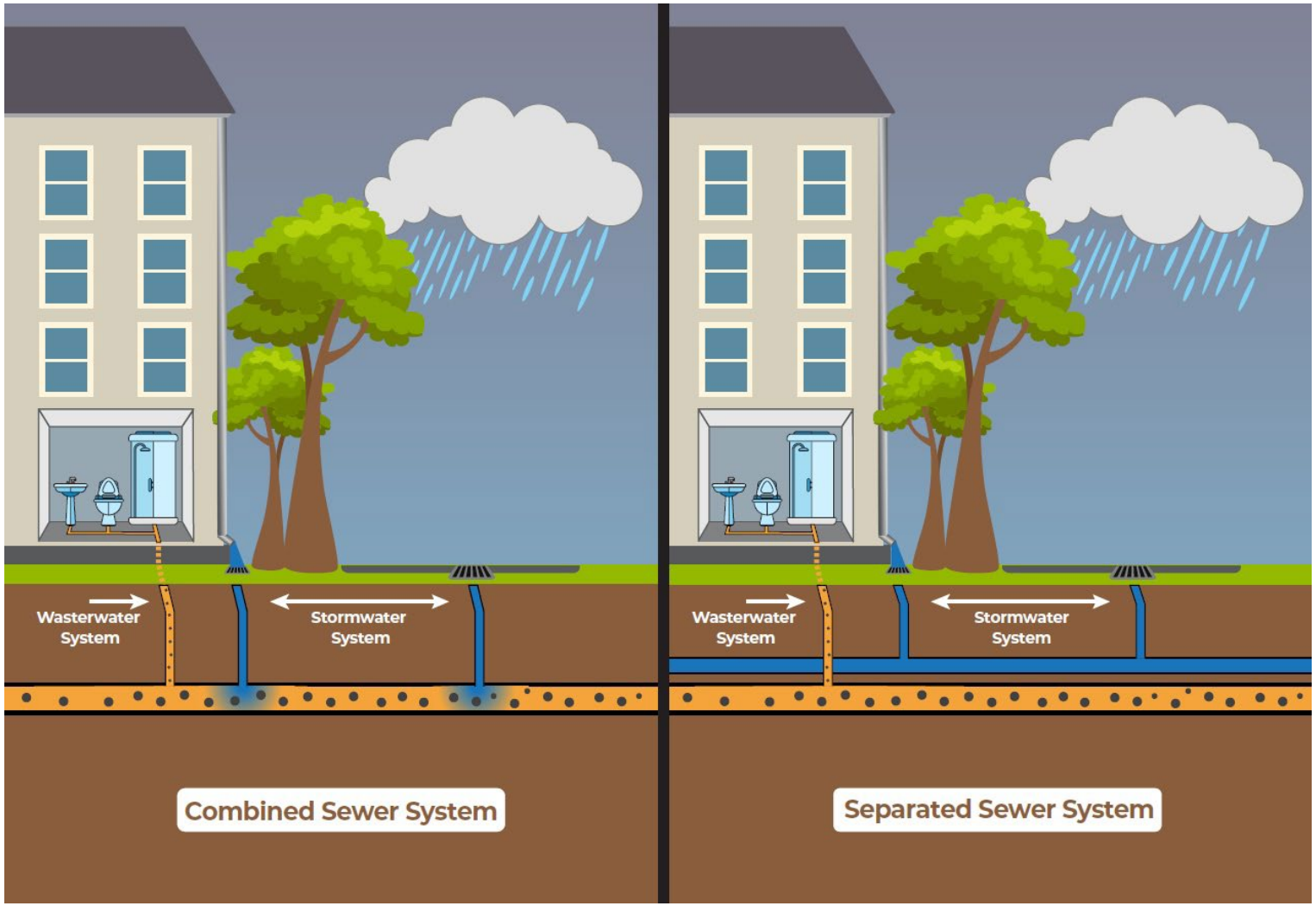
Alternative 2: Maximize Sewer Separation

- Separating the wastewater from the stormwater allows for more capacity in each system, reduces flows to the CSO facility, and reduces treated discharges.

- Approximately 370 acres identified within the combined sewer area as potential for separation.



Total cost to achieve 4 CSO discharges/year: $630M - $650M

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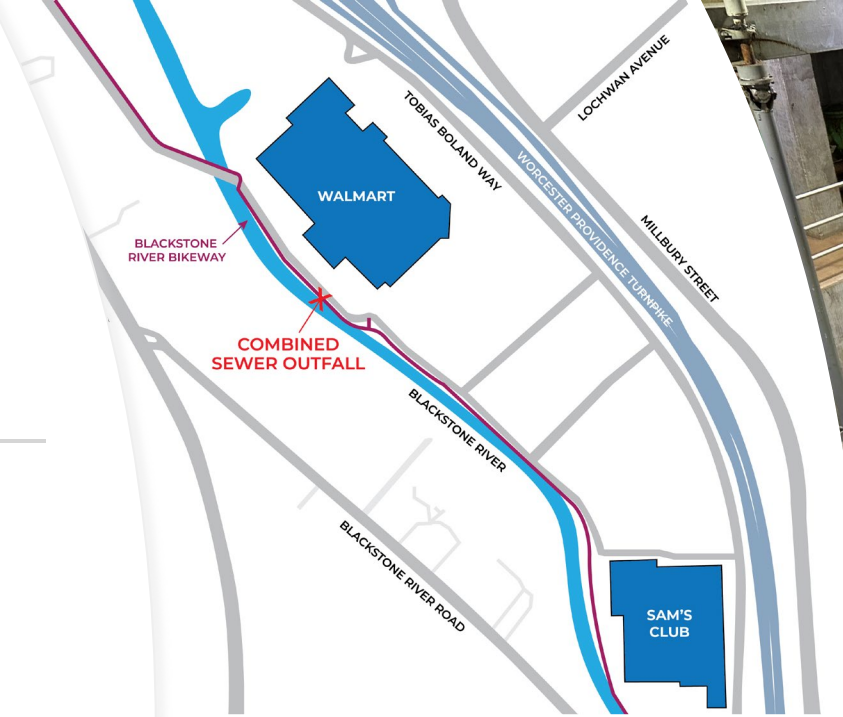
Alternative 3: Maximize CSO Treatment

- Retrofits made to existing CSO treatment facility on Quinsigamond Ave to:
  - Enhance treatment of combined sewage.
  - Improve settling of solids and disinfection before being discharged.



Total cost to achieve 4 CSO discharges/year: $180M - $200M

Alternative 4:

Additional Treatment Capacity at Upper Blackstone Clean Water Treatment Plant (UBCW)

- Increase pumping capacity at Quinsigamond CSO Facility to send more flow to Upper Blackstone Clean Water (UBCW) Treatment Plant.
- Implement retrofits to UBCW Treatment Plant to provide enhanced settling and disinfection of additional combined sewer and stormwater.

Total cost to achieve 4 CSO discharges/year: $230M - $250M

Does the LTCP Update Address Flooding in Green Island?

- The Green Island area of the City experiences significant localized flooding.
- The main regulatory driver of the LTCP is reduction of CSO volume.
- Some CSO reduction projects also achieve flood reduction.
- Added flood reduction efforts aim to lessen nuisance flooding. Severe storms will still cause flooding.

Additional Strategies Considered in the LTCP

Green Stormwater Infrastructure - slows and treats runoff

- Planting rain gardens
- Installing permeable pavement
- Other technologies being considered

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How do we evaluate different strategies?

Does this alternative help us meet the goals of the LTCP?

Limit the total number of CSO discharges

Water quality

How much will this alternative cost?

Can Worcester afford this?

Are we getting the most bang for our buck?

How much disruption to the neighborhood will this alternative cause?

Significant road work

Detours, noise, dust

Does this alternative offer the community any additional benefits?

Improved open space

Flood mitigation

Safety improvements

How Much Will This Cost?

Costs	**Alternative 1** Maximize Storage	**Alternative 2** Maximize Separation	**Alternative 3** Maximize Treatment Capacity at CSO Treatment Plant	**Alternative 4** Maximize Treatment Capacity at UBCW Treatment Plant
Cost to Achieve 4 CSO Discharges/Year	$130M - $150M	$630M - $650M	$180M - $200M	$230M - $250M
Cost of Additional Flood Mitigation	$260M - $275M	$45M - $50M	$200M - $225M	$170M - $225M
Total Cost	**$390M - $425M**	**$675M - $700M**	**$380M - $425M**	**$400M - $475M**

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What's Next?

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Stay Involved

- Sign Up for Discharge Notifications: https://lp.constantcontactpages.com/su/xMgoygz

- Stay up-to-date about the progress: https://www.worcesterma.gov/worcester-waters

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