

# The State of Water Infrastructure

## *A briefing for legislators*

**#InvestInWaterMA**



**Don't let out of sight mean out of mind**

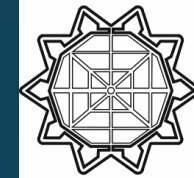
January 8, 2025

# Welcome

## Representative Jay Livingstone - Opening Remarks

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### Partnering Organizations:



**Massachusetts  
Municipal  
Association**



AMERICAN COUNCIL OF ENGINEERING  
COMPANIES OF MASSACHUSETTS



**MCWRS**

Massachusetts Coalition for  
Water Resources Stewardship



**495/METROWEST**  
PARTNERSHIP  
*Leaders for Regional Prosperity*



# Briefing Overview

- 💧 State of Infrastructure
- 💧 Water Infrastructure Funding Needs & Gap
- 💧 Economic Impacts
- 💧 Infrastructure Funding, Design, Construction Process
- 💧 What you can do to help

# Key Takeaways

- 💧 Water Infrastructure has been woefully underfunded for decades
- 💧 We are reaching a crisis point where continued reliable service is threatened
- 💧 Increasing regulatory and legislative mandates are unsustainable
- 💧 Water infrastructure funding is a shared obligation – we need additional state and federal funding to keep water and wastewater services affordable for the Commonwealth's residents and businesses



# Aging infrastructure needs attention



# Cost of service

Infrastructure (pipes, pumps, treatment plants)

Staff

Chemicals

Energy

Compliance with Regulatory Mandates

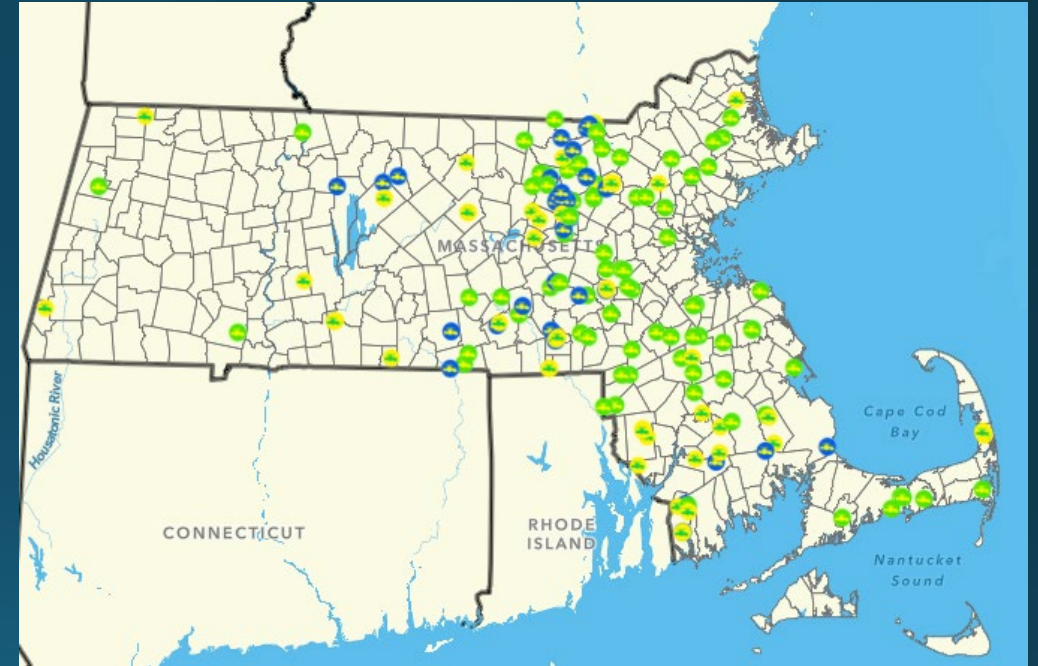




# Some Current Challenges

## Drinking Water

- 💧 Infrastructure Repair and Replacement Needs
- 💧 Lead Service Line Removal
- 💧 PFAS
  - 💧 MA has standard for PFAS in drinking water (Maximum Contaminant Level) of 20 parts per trillion for any one or combination of six PFAS compounds – EPA has lowered that to 4 ppt with compliance required by 2029.
  - 💧 Drinking water treatment is possible, but expensive



*From MassDEP*

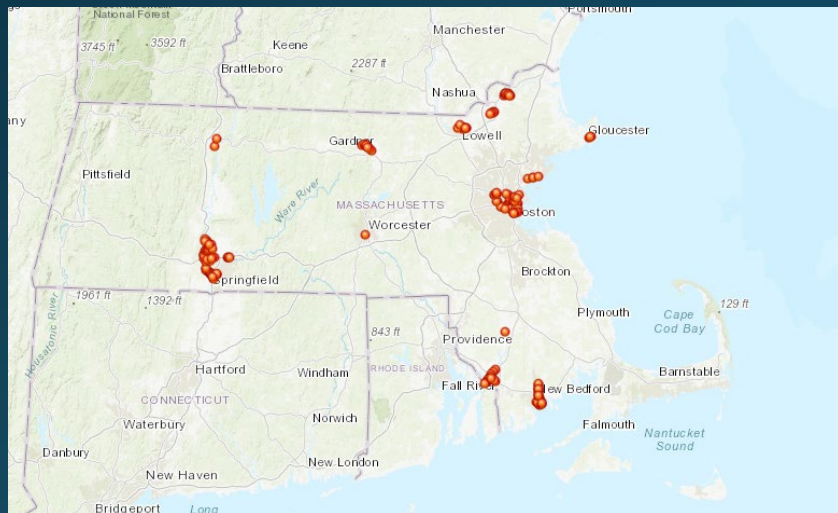
*170 Public Water Systems have detections over 20 ppt*

<https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas#pfas-detected-in-drinking-water-supplies-in-massachusetts->

# Some Current Challenges

## Wastewater

- 💧 Biosolids Crisis
- 💧 Infrastructure Repair and Replacement Needs
- 💧 Combined Sewer Overflows
  - 💧 19 communities still have combined sewer systems



From MassDEP Combined Sewer Outfalls  
<https://mass-eoeea.maps.arcgis.com/apps/webappviewer/index.html?id=08c0019270254f0095a0806b155abcde>

## Stormwater

- 💧 Increasing Storm Intensity
- 💧 New Draft MS4 Permit from EPA Region 1 (out for comment)
  - 💧 Affects over 250 communities
- 💧 Draft Permit for Commercial, Industrial, Institutional Properties in Charles, Neponset and Mystic River Watersheds (out for comment)
  - 💧 Unique to Massachusetts-Federal permit that only applies to select properties in one state
  - 💧 Puts burden for phosphorus reduction on private property owner with 1 acre or more of impervious surface





# Why is it important to support water infrastructure investment?

- ◆ Utilities play a key role in protecting public health by maintaining water quality from the source through the distribution system to the customer, and then through the sanitation process, returning clean water to the environment.
- ◆ Utilities, with the support of their engineers and their contractors, construct and maintain the infrastructure needed to collect, treat, store, and distribute the drinking water and treat the wastewater.
- ◆ The public expects dependable water and wastewater services. Reliable infrastructure enhances the economy and supports the overall quality of life we enjoy in the Commonwealth.



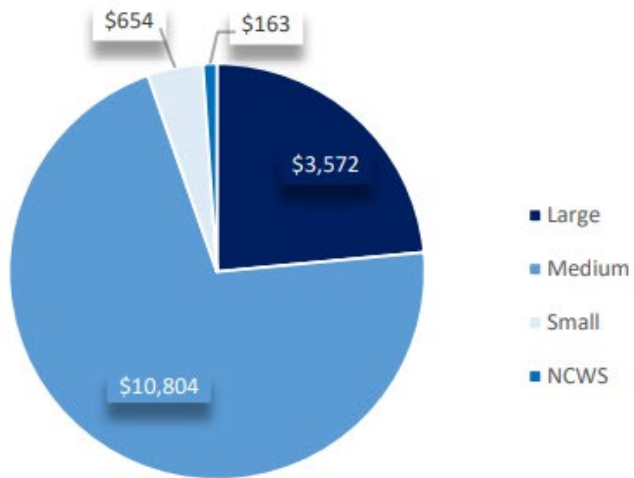
# How much money is needed?

## EPA's Drinking Water Infrastructure Needs Survey and Assessment, 7th Report to Congress. September 2023

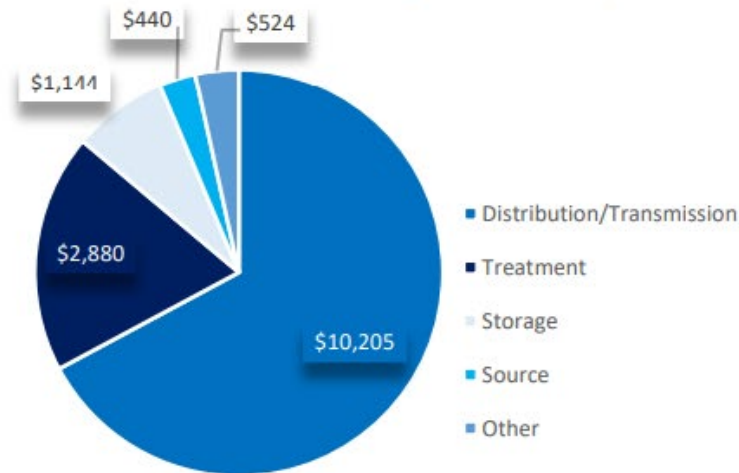
*(The findings are based on data collected in calendar year 2021)*

### Massachusetts

Massachusetts Total Need by System Size  
(in millions; January 2021 dollars)



Massachusetts Total Need by Project Category  
(in millions; January 2021 dollars)



**\$15.2 Billion**

# How much money is needed?

Clean Watersheds Needs Survey Report to Congress. April 2024

## Wastewater, Stormwater

*(This Report was designed to capture needs as of January 1, 2022, that are expected to occur within the next 20 years)*

Massachusetts  
Needs Category



**\$21.7 Billion**

- Secondary Wastewater Treatment
- Advanced Wastewater Treatment
- Conveyance System Repair
- New Conveyance Systems
- CSO Correction
- Stormwater Management
- NPS Control
- Water Reuse
- Decentralized Wastewater Treatment Systems
- Desalination

<https://www.epa.gov/system/files/documents/2024-05/2022-cwns-report-to-congress.pdf>



# What about recent Federal Funding Opportunities?

## American Rescue Plan Act (ARPA)

- ◆ Only six areas that ARPA could be utilized, and Water Infrastructure was one of them
- ◆ The Commonwealth received \$5.3 Billion in discretionary funding
- ◆ 2021 – the Legislature authorized **\$100 million** for water/sewer infrastructure from the State's ARPA funds (emphasis on addressing PFAS and CSOs)
  - ◆ \$12 million earmarked to specific projects
  - ◆ \$67 million distributed to projects **already funded** on 2021 IUP
  - ◆ \$20 million held for CSO projects 2022 IUP
- ◆ 2022 - Economic Development/ARPA 2.0 authorized **\$115 million** to the Clean Water Trust

## Bipartisan Infrastructure Law (BIL) / Infrastructure Investment and Jobs Act (IIJA)

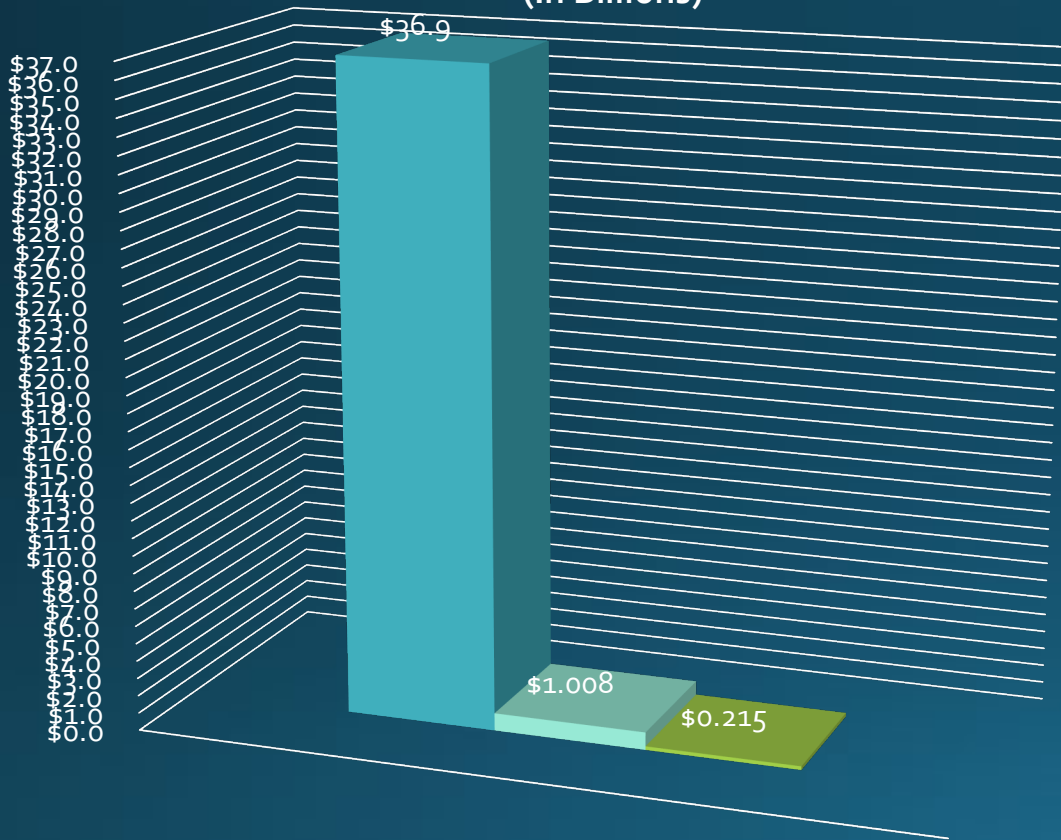
- ◆ Drinking Water Bucket = \$618 million
  - ◆ General Projects, Lead Service Line, Emerging Contaminants
- ◆ Clean Water Bucket = \$391 million
  - ◆ General Projects, Emerging Contaminants
- ◆ **Total = \$1.008 billion - distributed over 5 years**
- ◆ Emphasis on loan forgiveness for "Disadvantaged Communities"
- ◆ **The only way to access BIL funding is to apply through the Clean Water Trust**

# Funding Gap

EPA Funding Gap for MA Drinking Water & Wastewater Infrastructure

vs.

New Federal Funding for Massachusetts  
(In Billions)



■ EPA Funding Gap ■ BIL ■ ARPA



**\$1 billion BIL Funds represents just shy of 3% of the identified needs**

# Economic Impacts

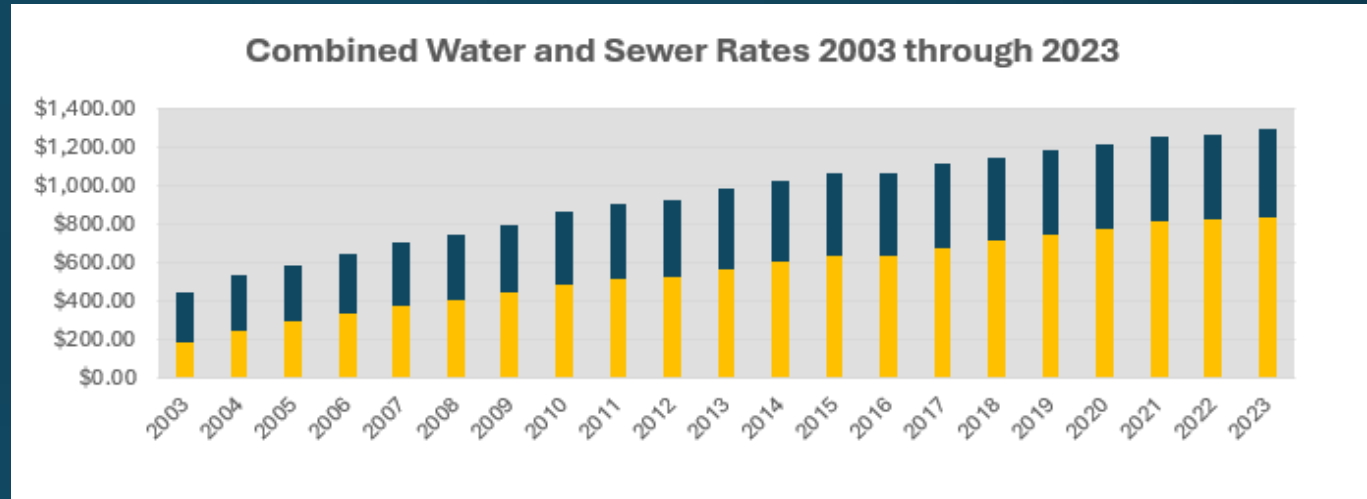
- 💧 Water-related infrastructure & capacity is critical to achieving **Housing** goals
- 💧 Economic Loss
  - 💧 MWRA estimated that the 2010 water main break economic impacts were nearly \$300 million per day. Important to note that the incident led to a boil order, but that a true loss of water to the Boston area would have significantly greater impacts
- 💧 Rate Increases
  - 💧 More debt exclusions/overrides needed, especially for water treatment to address PFAS
  - 💧 EPA Water Affordability Needs Assessment, Dec. 2024 (EPA 830-R-24-015) estimates that rates are already unaffordable for 9-15% of households (12-19 million households)
    - 💧 <https://www.epa.gov/system/files/documents/2024-12/water-affordability-needs-assessment.pdf>



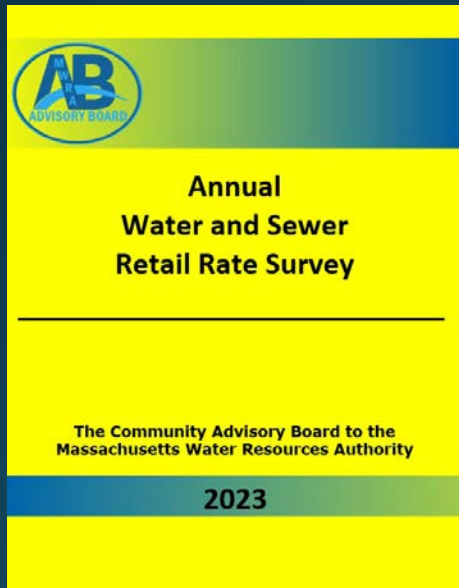
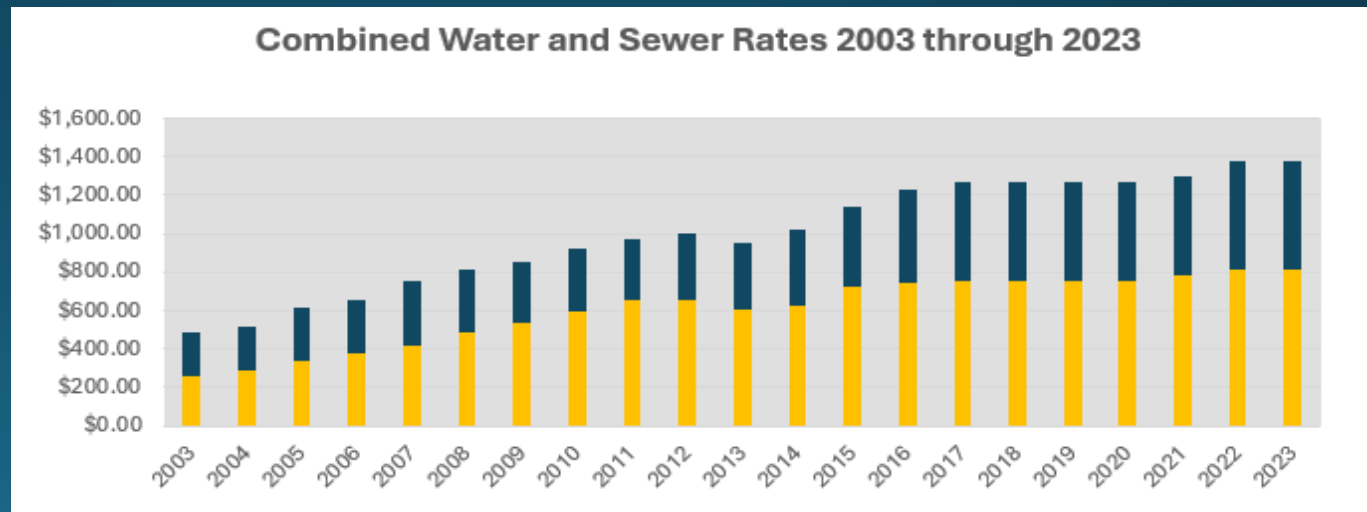


# What has been the impact on ratepayers?

## Worcester

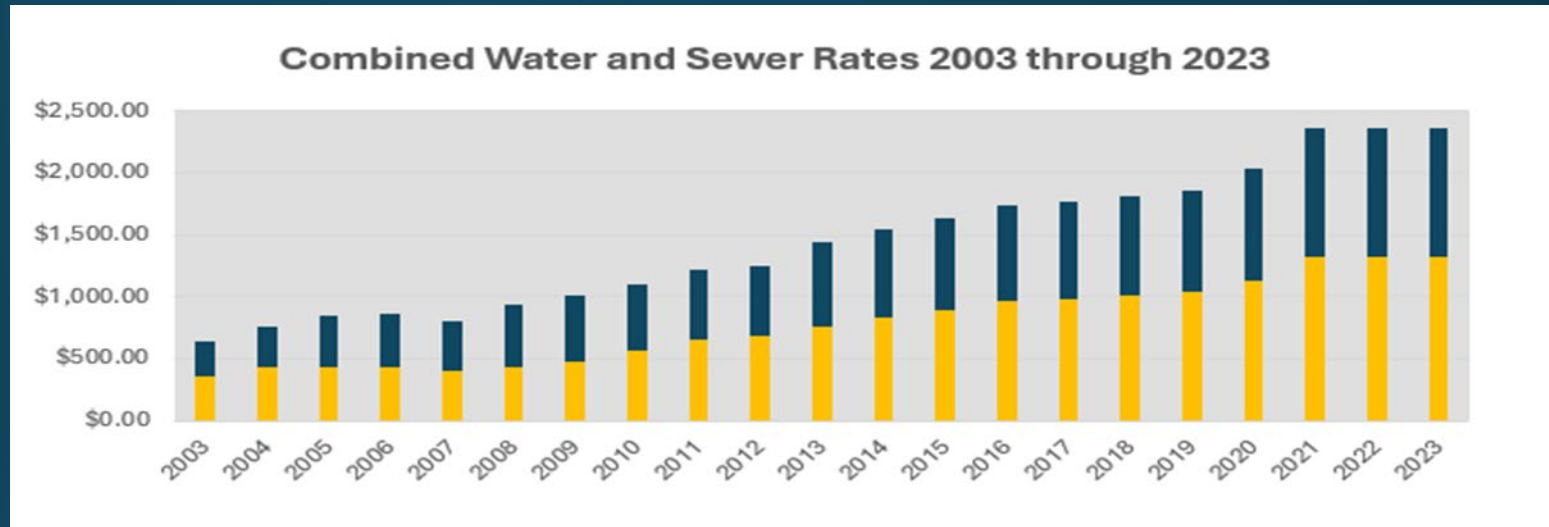


## Chicopee

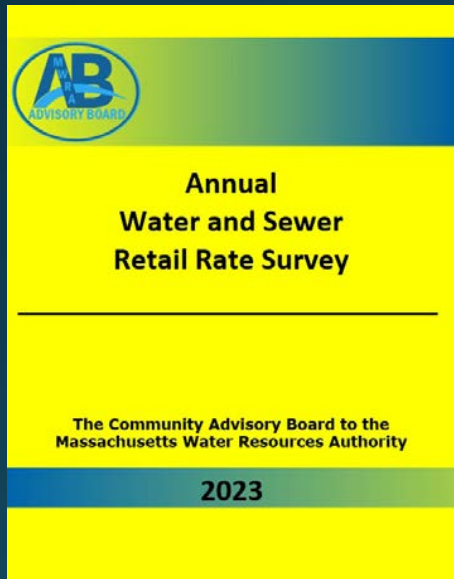
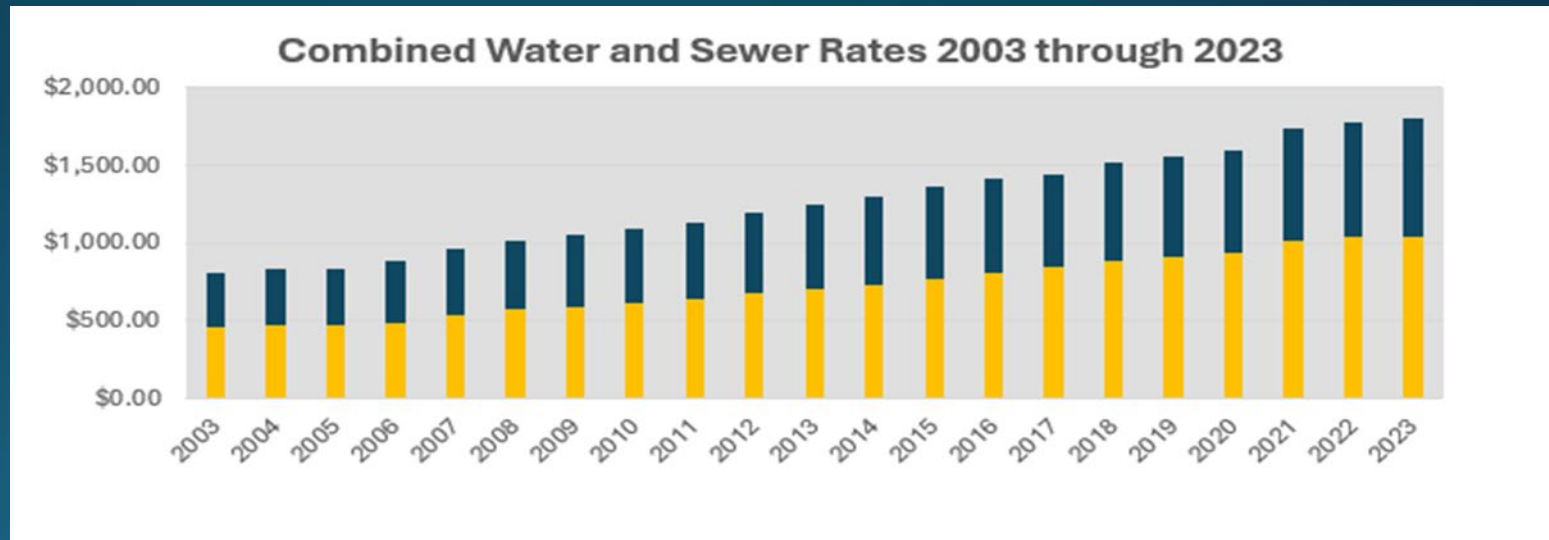


# What has been the impact on ratepayers?

Framingham



Boston



# How do infrastructure projects get addressed?



Clean Water Trust distributes the federal funding



Multi-step process to get projects ready

Communities must have needs identified, capital improvement plans  
Projects must get local approval  
Projects must be designed and put out to bid  
Construction must be awarded



Could take a couple of years for a community to get through this entire process



# Role of Engineering Firms



Work with Water System operators / municipalities on planning studies



Environmental and other permitting



Work with regulatory agencies, both state and federal



Design Systems, prepare bid documents for project to be built by contractors



Conduct needs assessments for future improvements

# Where are the bottlenecks in the process?



Most of the funding for the work done by engineering firms comes from the local system, not through the Clean Water Trust



Workforce shortages



Supply chain issues



Increased Operations & Maintenance costs for systems



Local approval



Interpretations by regulatory agencies that create uncertainty for municipalities



Buy America provisions in BIL that might not work with regulatory requirements



# Role of Utility Contractors

Perform underground utility construction projects (water, sewer, electrical, gas, fiber optics, etc.)

Build above ground water and sewer pump and metering stations, treatment plants, and storage tanks and vaults



# Infrastructure Investment Challenges

- Costs of construction have increased
- Competition for Water infrastructure dollars is increasing with mandatory **Lead Pipe** removal and **PFAS treatment**, leaving little available for essential infrastructure projects such as water main and sewer replacements, pump station repairs, tank replacements, and meter upgrades
- Federal funding will be reduced as ARPA and BIL funding ends
- We need to redouble our commitment to Water and Sewer investments across the Commonwealth before it'd too late

# Infrastructure Investment Challenges

Water Infrastructure can be literally out of sight and out of mind.



## Winning Support For Your Local Water Infrastructure Project

*A PR and Social Media Playbook*

*Spring 2022*



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# Infrastructure Investment Opportunities



Protects Public Health



Increases Climate Resilience



Improves the Environment



CREATES JOBS!!

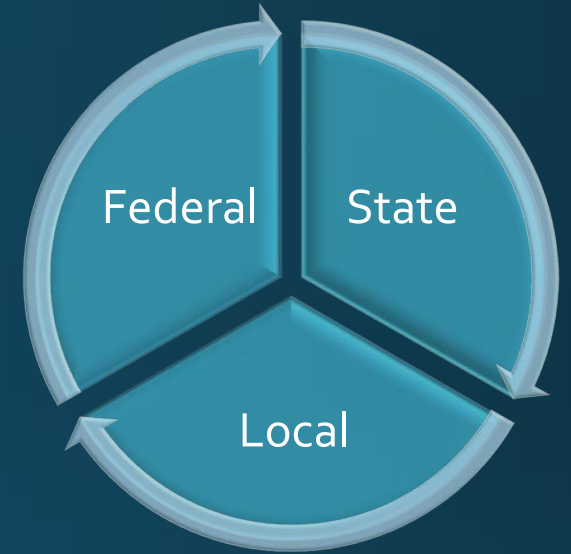
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# What can you do to help?

- 💧 Only a shared partnership can address the challenges we face
- 💧 Help direct more state funds to water infrastructure projects
- 💧 Support Water Infrastructure-Related Legislation
  - 💧 Water Bond, Omnibus Water Funding, Environmental Bond Bill
- 💧 Urge Congress to make water infrastructure funding a priority beyond the BIL funding years
- 💧 Consider carefully the impacts of legislation which may add additional cost or burden to utilities and their ratepayers
- 💧 **Don't let water infrastructure remain out of sight and out of mind any longer!**



**#InvestInWaterMA**

Don't let out of sight mean out of mind



# For Questions:

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