

# Water Infrastructure

*A briefing for new legislators*

**#InvestInWaterMA**



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

Presented by: The Water Infrastructure Alliance

March 9, 2023

# Who is the Water Infrastructure Alliance?

- 💧 Individual associations working collectively to promote the importance of investment in the Commonwealth's water infrastructure
- 💧 We worked with the Legislature to create the Water Infrastructure Finance Commission
- 💧 We worked on passage of Chapter 259 of the Acts of 2014 to begin to address our enormous water infrastructure needs
- 💧 This law created a Water Infrastructure Advisory Committee overseen by EEA
- 💧 Provided more favorable loan rates for water infrastructure projects meeting certain criteria
- 💧 Increased the cap on the Commonwealth's "Contract Assistance" line-item which bridges the gap for the Clean Water Trust to provide more favorable financing
- 💧 We've advocated for additional funding (ARPA/BIL) to close the significant infrastructure funding gap that has been identified

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# Water Infrastructure Alliance Members

495/MetroWest Partnership  
American Council of Engineering Companies of  
Massachusetts  
Associated Industries of Massachusetts  
Because Water  
Boston Society of Civil Engineers Section  
Cape Cod Chamber of Commerce  
Charles River Watershed Association  
Construction Industries of Massachusetts  
Clean Water Action  
Conservation Law Foundation  
Charles River Watershed Association  
Environmental Business Council of New England  
Environmental League of Massachusetts  
Massachusetts Association of Land Surveyors and Civil  
Engineers

Massachusetts Highway Association  
Massachusetts Rivers Alliance  
Massachusetts Coalition for Water Resources Stewardship  
Massachusetts Municipal Association  
Massachusetts Water Environment Association  
Massachusetts Water Resources Authority Advisory Board  
Massachusetts Water Works Association  
Metropolitan Area Planning Council  
NAIOP, the Commercial Real Estate Development Association  
New England Water Environment Association  
New England Water Works Association  
Pioneer Valley Planning Commission  
The Nature Conservancy  
Utility Contractors Association of New England  
Wastewater Advisory Committee to the MWRA  
Water Supply Citizens Advisory Committee to the MWRA

# Aging infrastructure needs attention





# 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.
- ◆ Reliable infrastructure enhances the economy and supports the overall quality of life we enjoy in the Commonwealth.

# Some Current Challenges

## PFAS

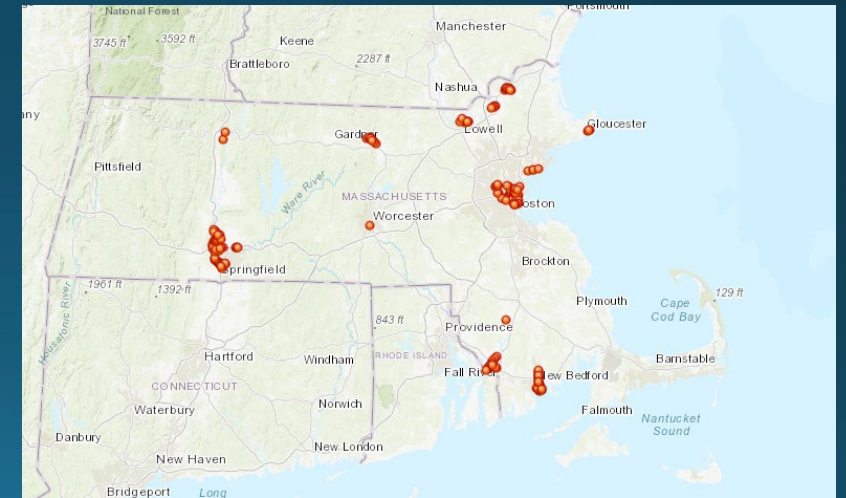
- MA has standard for PFAS in drinking water (Maximum Contaminant Level) of 20 parts per trillion for any one or combination of six PFAS compounds
- PFAS is not naturally occurring – it is a manufactured product introduced into the environment
- Drinking water treatment is possible, but expensive
- Water/wastewater utilities are facing significant costs for disposal of sludge and other states are starting to restrict the transport of sludge.



From MassDEP 2/14/23  
169 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>

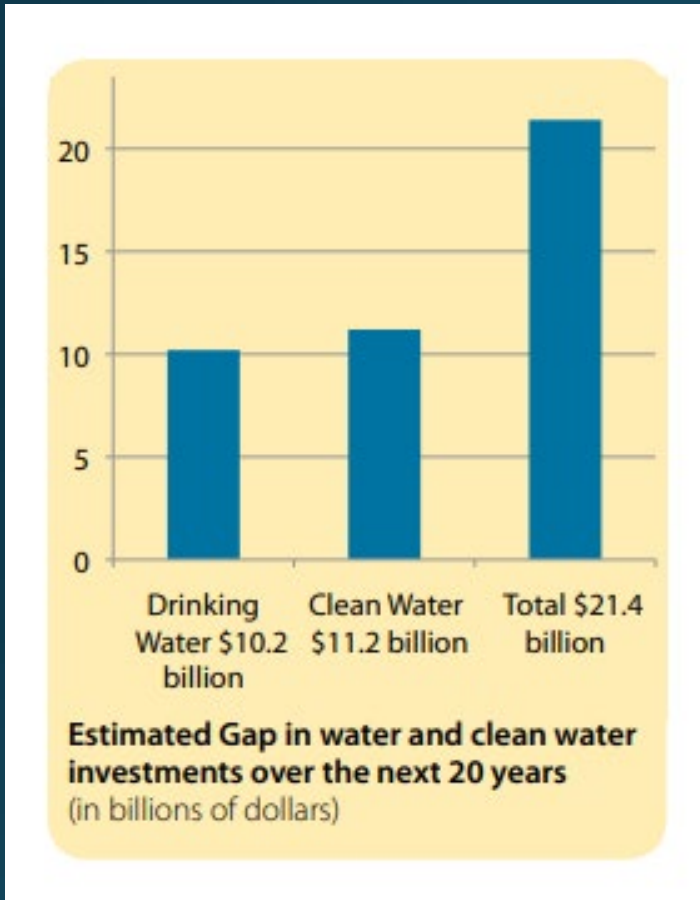
## Combined Sewer Overflows

- CSOs concentrated in urban cores
  - CSOs utilized by regional workforce, but cost burden falls on urban residents
  - Urban centers often are disadvantaged or environmental justice communities
- \$4 Billion estimated in New England (2012)
  - Utilities balancing CSO obligations with aging infrastructure, other needs
  - No Federal funding for CSO remediation from FY10 until ARPA



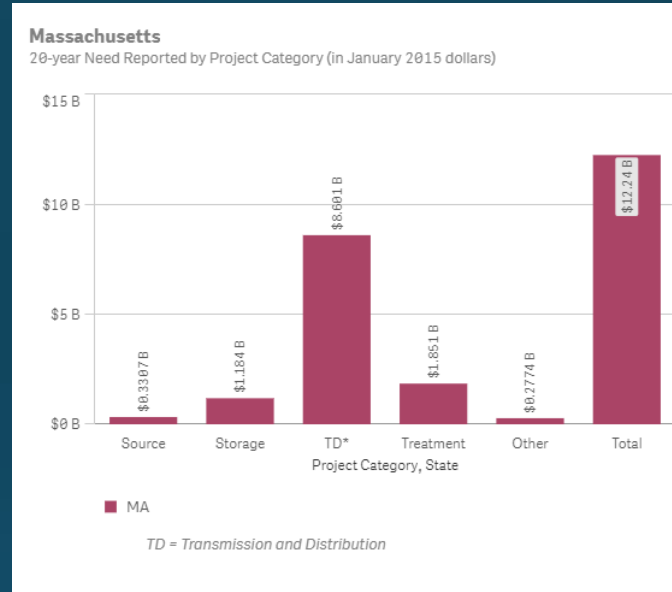
From MassDEP Combined Sewer Outfalls  
<https://mass-eoea.maps.arcgis.com/apps/webappviewer/index.html?id=08c0019270254f0095a0806b155abcde>

# How much money is needed?



2012 – MA Water Infrastructure Finance Commission Estimates

**\$21.4 Billion**



Category	\$M
I Secondary Wastewater Treatment	786
II Advanced Wastewater Treatment	1,989
III Conveyance System Repair	1,460
IV New Conveyance Systems	2,919
V Combined Sewer Overflow Correction	977
VI Stormwater Management Program	201
X Recycled Water Distribution	22
<b>Total</b>	<b>8,353</b>

2018 - EPA's 6th Drinking Water Infrastructure Needs Survey and Assessment

**\$12.24 Billion**

<https://www.epa.gov/dwsrf/epas-6th-drinking-water-infrastructure-needs-survey-and-assessment>

2012 - EPA's Clean Watershed Needs Survey

**\$8.35 Billion**

[https://www.epa.gov/sites/default/files/2015-10/documents/cwns\\_fs-ma.pdf](https://www.epa.gov/sites/default/files/2015-10/documents/cwns_fs-ma.pdf)

# What about New Federal Funding Opportunities?

## American Rescue Plan Act (ARPA)

- ◆ Only six areas that ARPA can be used and Water Infrastructure is 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
- ◆ The Commonwealth still has approximately **\$1.75 Billion** at its disposal for future disbursement

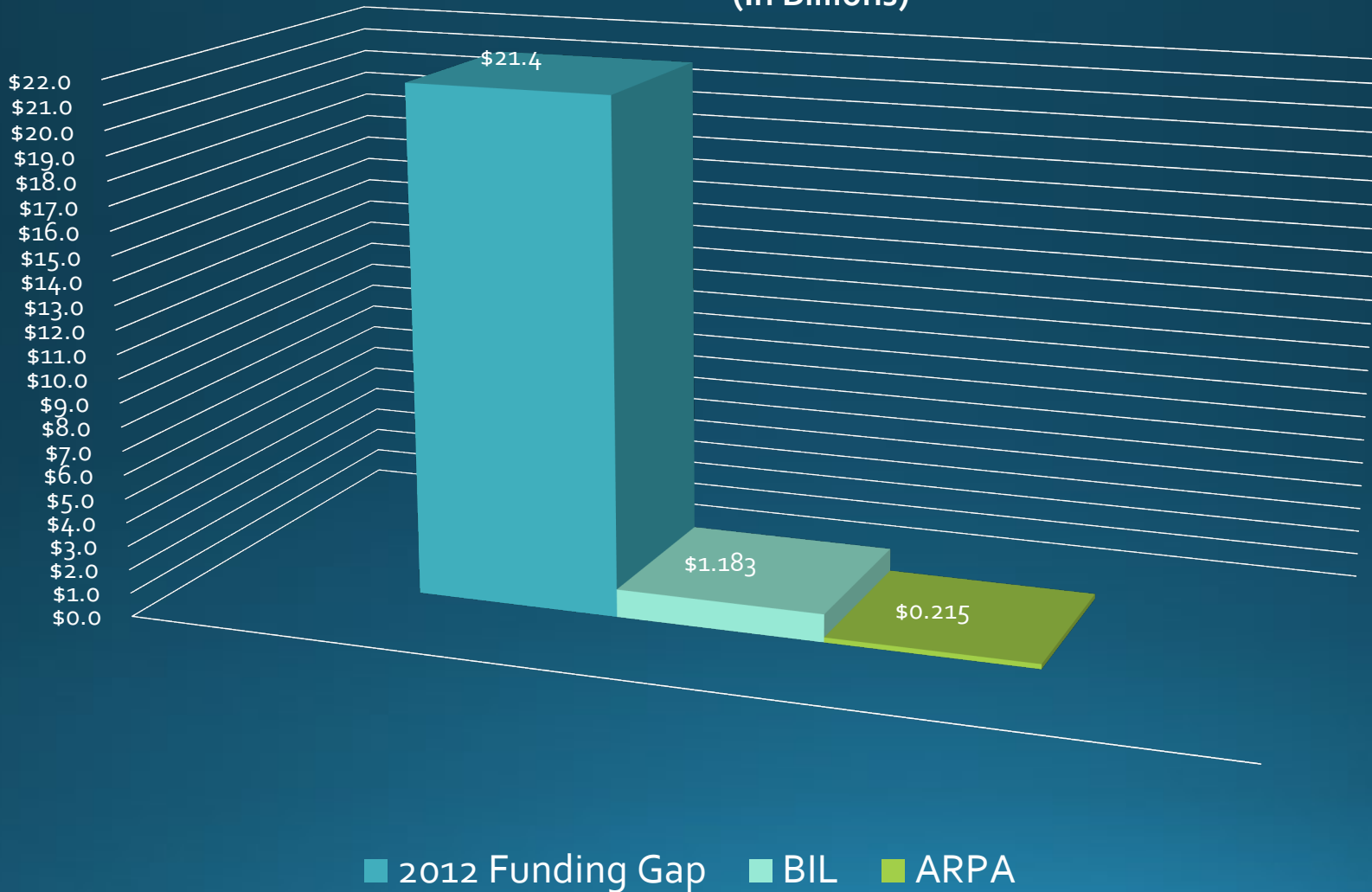
## Bipartisan Infrastructure Law (BIL)

- ◆ Drinking Water Bucket = \$714 million
  - ◆ General Projects, Lead Service Line, Emerging Contaminants
- ◆ Clean Water Bucket = \$469 million
  - ◆ General Projects, Emerging Contaminants
- ◆ **Total = \$1.183 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**



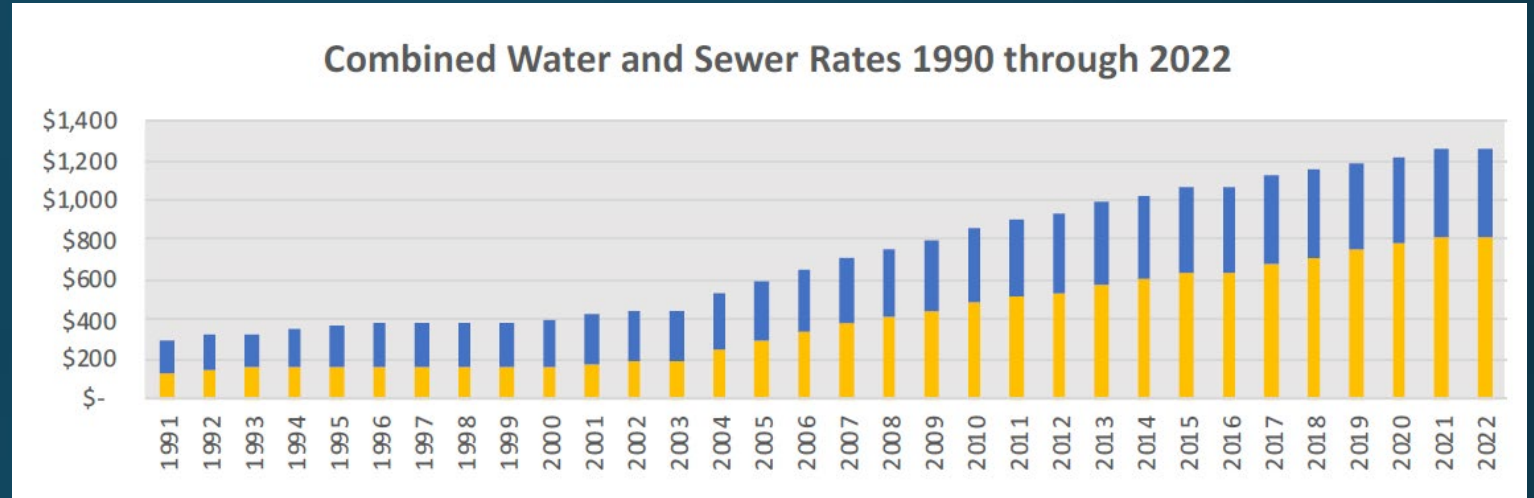
# Funding Gap

2012 Funding Gap for MA Drinking Water & Wastewater Infrastructure  
vs.  
New Federal Funding for Massachusetts  
(In Billions)

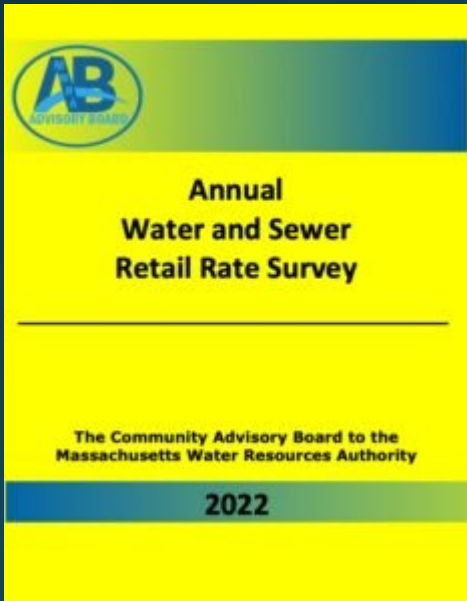
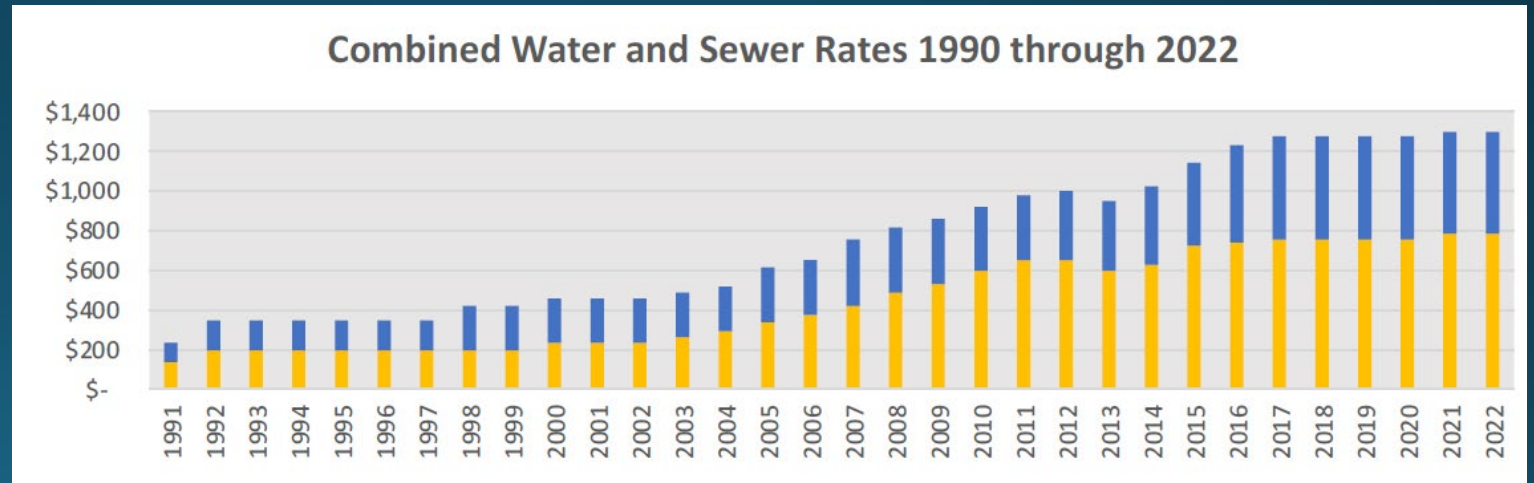


# What has been the impact on ratepayers?

## Worcester

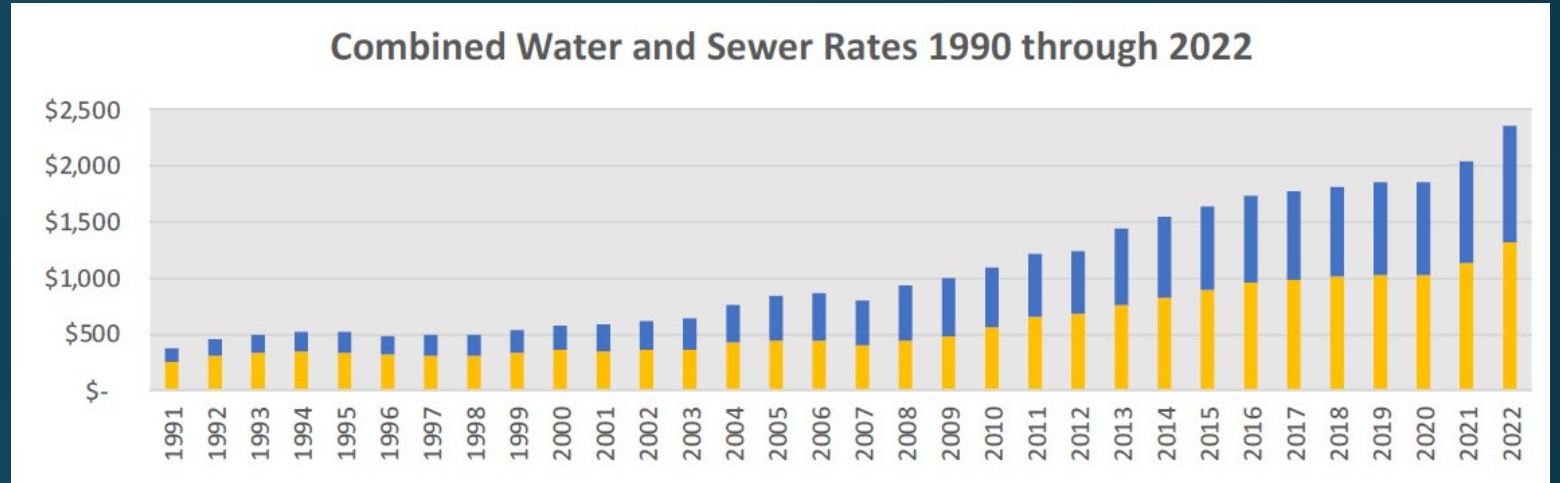


## Chicopee

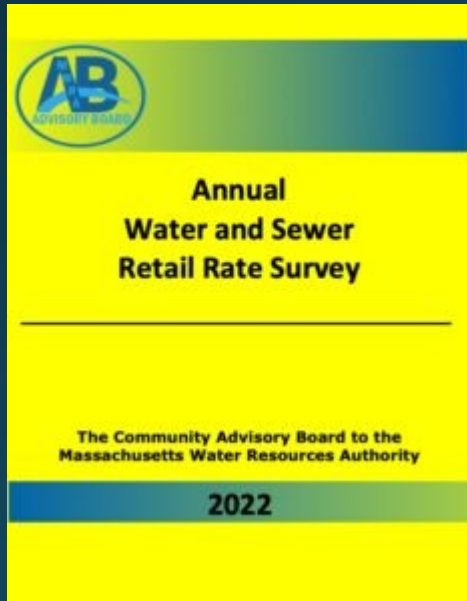
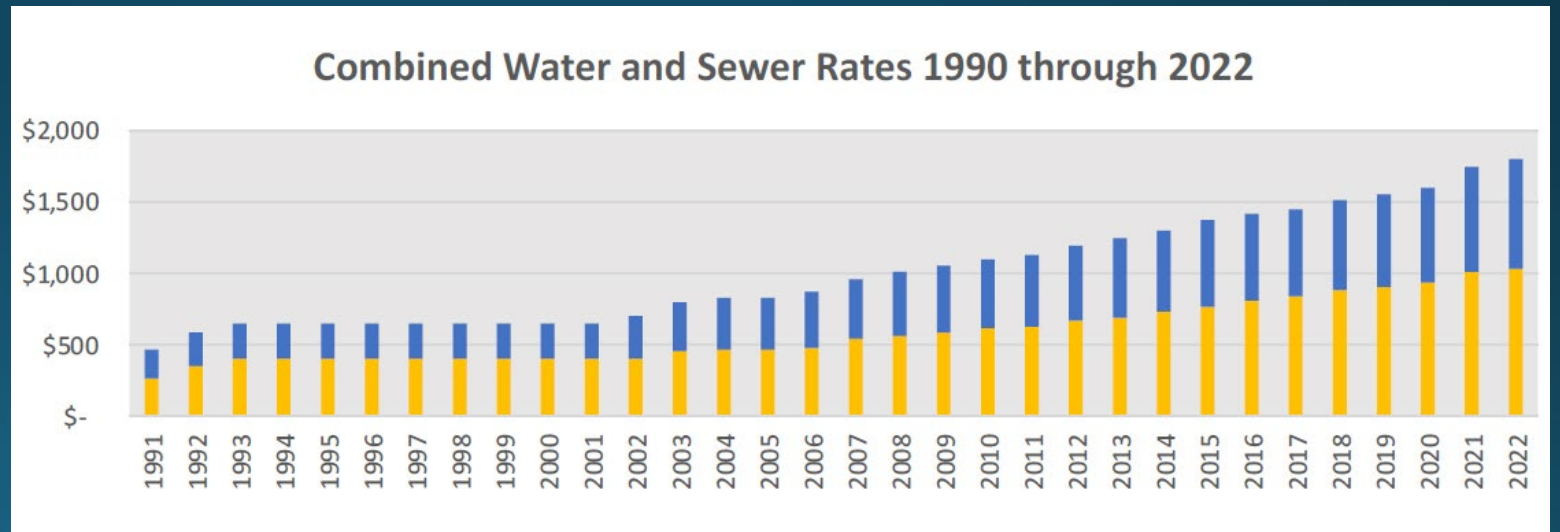


# What has been the impact on ratepayers?

Framingham



Boston



# How do infrastructure projects get addressed?

Clean Water Trust distributes the federal funding

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graph TD; A[Clean Water Trust distributes the federal funding] --> B[Multi-step process to get projects ready]; B --> C[Could take a couple of years for a community to get through this entire process];
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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



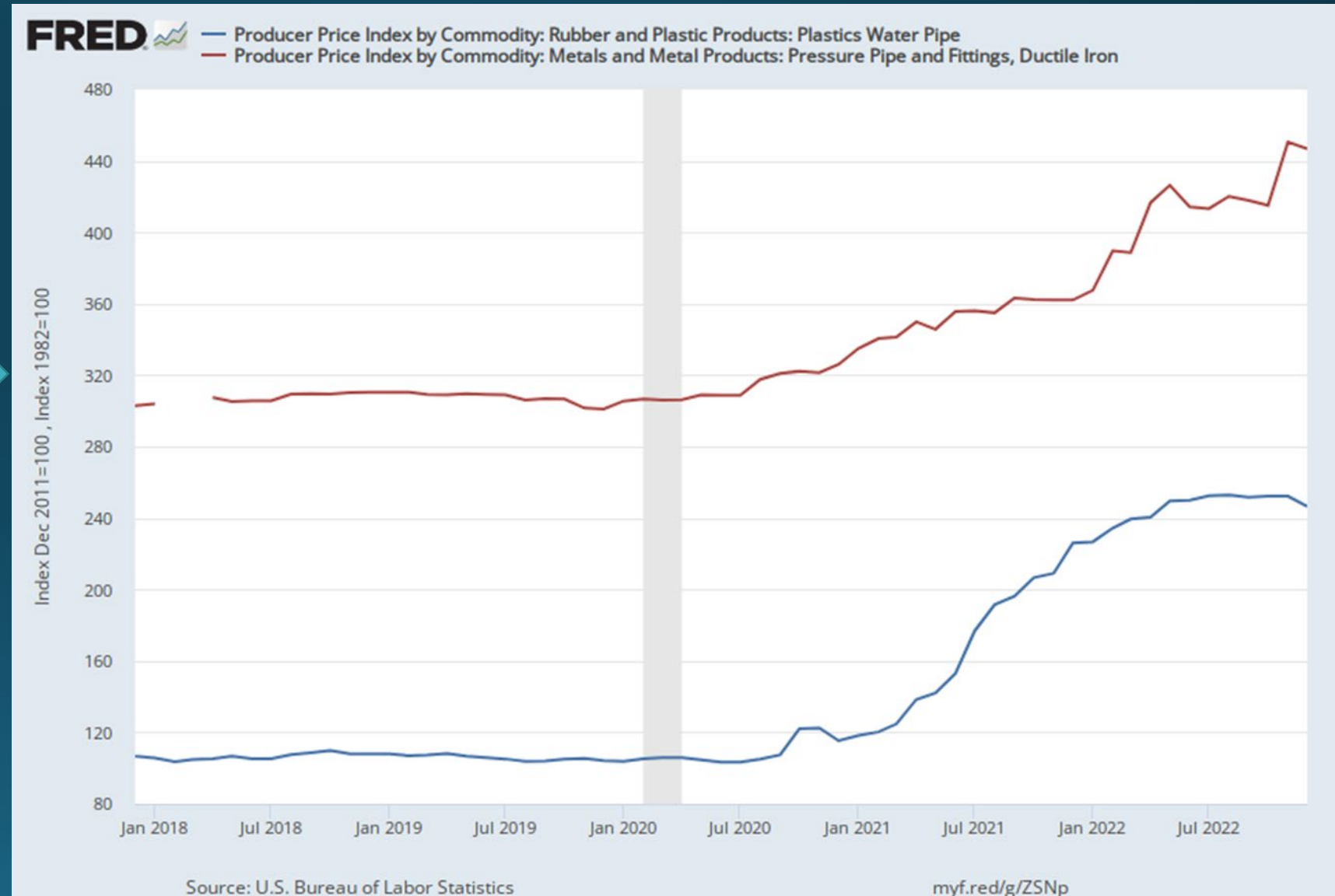
# Role of Utility Contractors

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

Rising cost of materials





# Infrastructure Investment Challenges

Lack of public awareness about the need to invest in water infrastructure



## 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!!

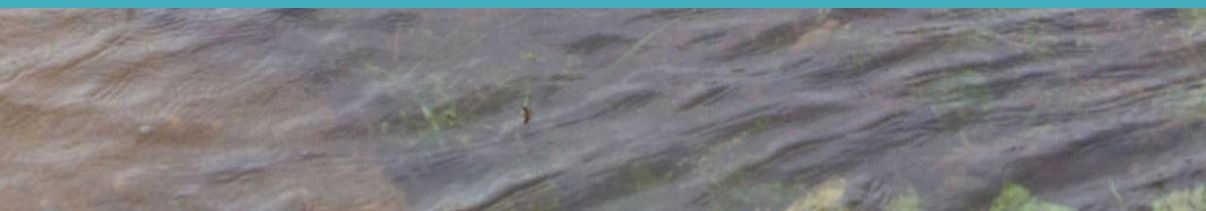
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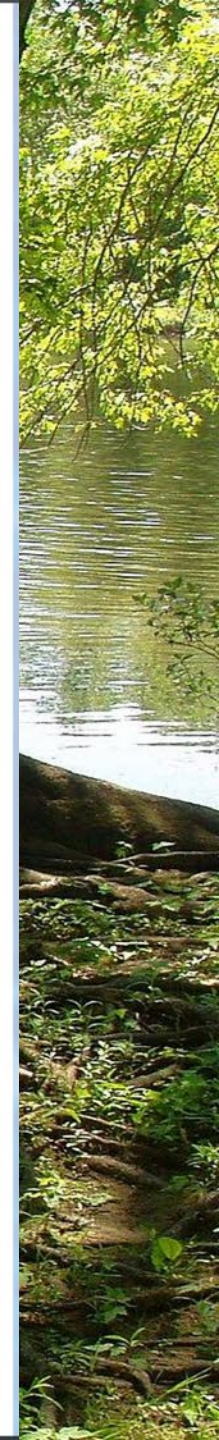
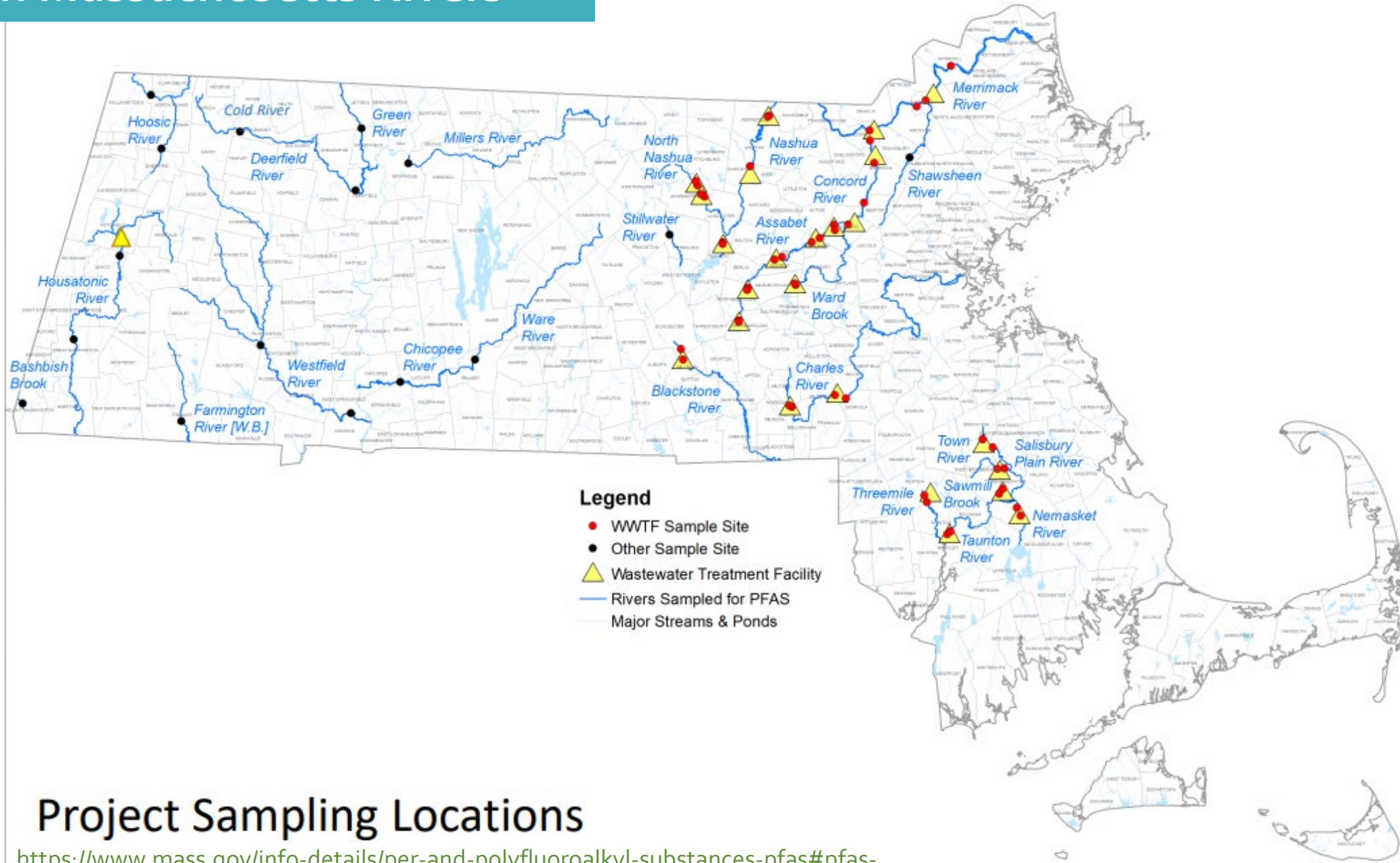




Upgraded water infrastructure protects our rivers, ecosystems, & communities



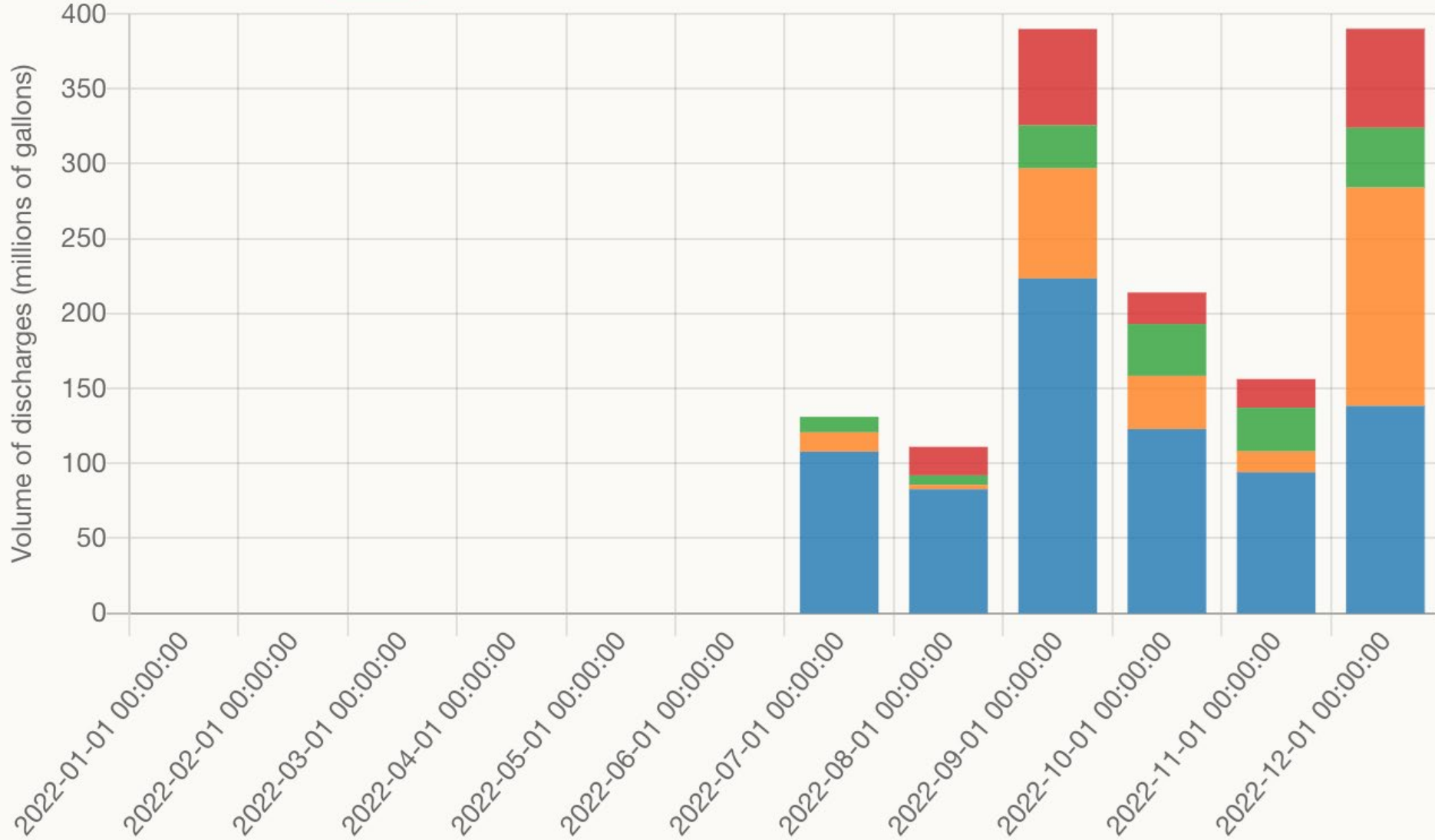
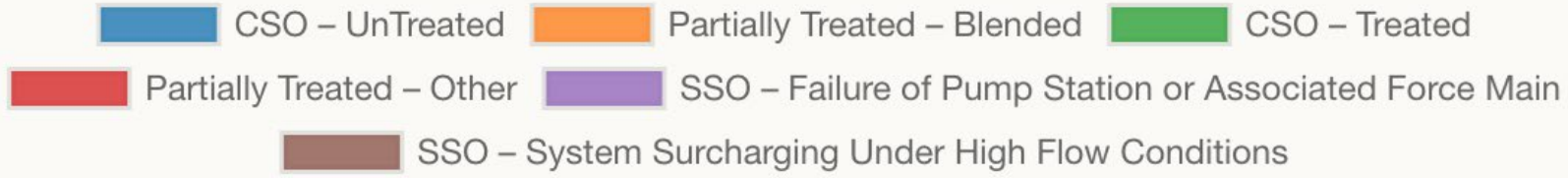
# PFAS in Massachusetts Rivers





From June 2022 to February 2023:  
**1.55 billion gallons** of untreated or  
partially treated sewage entered  
Massachusetts waterways.

# Volume of sewage discharge (millions of gal)



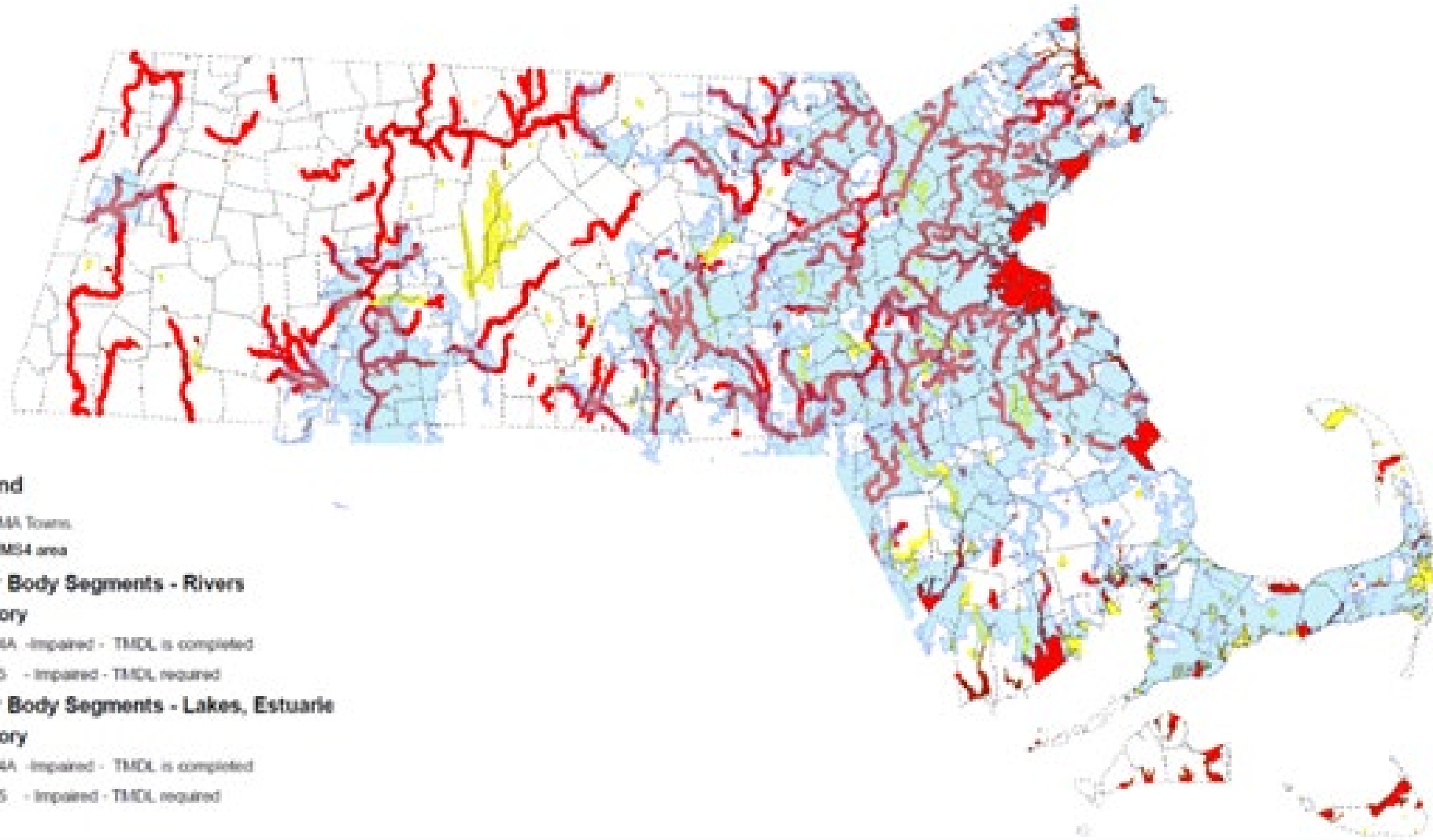


Stormwater remains the biggest threat to water quality.

Stormwater harms wildlife habitat, and is the primary reason why **more than half of our water bodies** are considered “impaired.”



## Impaired Waters and MS4 area in Massachusetts



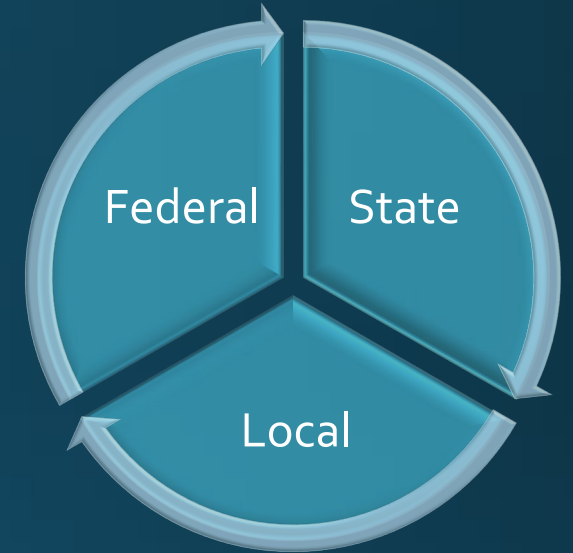


A scenic view of a river with a large tree in the foreground and a canoe with people in the middle ground. The tree's roots are exposed in the foreground, and its branches overhang the water. In the middle ground, a white canoe with four people is on the water. In the background, another canoe is visible further down the river. The water is calm and reflects the surrounding greenery.

Modern infrastructure enables a healthy environment - but municipalities need funding to make it happen!

# What can you do to help?

- 💧 Only a shared partnership can address the challenges we face
- 💧 Use your platform to make your constituents aware of the need to support infrastructure investments locally
- 💧 Make the decision leaders in your district aware of the tools that have been developed to help communities “sell” these projects to the residents
- 💧 Help direct more state funds to water infrastructure projects
- 💧 Urge Congress to make water infrastructure funding a priority beyond the BIL funding years
- 💧 **Don't let water infrastructure remain out of sight and out of mind any longer!**



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# For Questions:



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