

Westford Water Department



Per and Polyfluoroalkyl Substances
(PFAS) Presentation

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Board of Water Commissioners

Hugh Maguire, Chair
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What are PFAS?

- Per and Polyfluoroalkyl substances
- Class of over 5,000 Fluorinated Synthetic Chemicals
- Strong Fluorine Bond – Limited Degradation (“Forever Chemicals”)
- Industrial and Commercial Use Since 1940s
- Studies Link PFAS to Increase Risk for:
 - Cancer
 - Higher Cholesterol/Obesity
 - Immune Effects
 - Developmental Effects
 - Reproductive Effects



Where are they found?

Fire fighting foams
(AFFF) – aqueous
film forming foams

Clothing,
carpeting,
upholstery, textiles

Food
packaging/food

Cookware

Personal products

Detergents, stains

Biosolids

Industrial uses
(plating, textile,
paper, electronics)

Where are they Found (Cont.)

SOIL

GROUNDWATER

SURFACE WATER

WASTEWATER

AIR

Brief Regulatory History of PFAS (State)

- October 2020 MADEP published a Maximum Contaminant Level (MCL) of 20 ppt for six PFAS (PFOA, PFOS, PFHxS, PFNA, PFHpA, and PFDA)
- Sum of the concentration for all of these PFAS
- Compliance is determined for Quarterly Average of monthly sampling



A Brief Regulatory History of PFAS (Federal)

- 2016 EPA Interim Health Advisory (HA) 70 ppt for PFOA and PFOS
- Lowered Interim HA to 0.004 ppt for PFOA and 0.02 ppt for PFOS in 2022
- March 2023 Proposed National Primary Drinking Water Regulation for 6 PFAS
- April 10, 2024 Finalized Rule



New EPA Drinking Water Standard...

- MCL of 4.0 ppt for PFOA and PFOS
- MCL of 10 ppt for PFNA, PFHxS, and HFPO-DA (Gen X)
- Hazard Index of 1 for 4 PFAS:
 - PFNA
 - PFHxS
 - PFBS
 - HFPO-DA (Gen X)



Westford Water Dept PFAS Levels (April 2021 – Present)

Forge WTP

Monthly Range:

- 2.90 ppt – 20.6 ppt

Quarterly Range:

- 3.87 ppt – 15.0 ppt

Nutting WTP

Monthly Range:

- 13.3 ppt – 19.1 ppt

Quarterly Range:

- 14.8 ppt – 17.3 ppt

Westford Water Department In Compliance with MADEP MCL

Current MCL (20 ppt) > WWD > Proposed MCL (4 PPT)

PFAS Treatment

- The Westford Water Department Consistently Meets Current State MCLs for PFAS
- Why Treat for PFAS?
- State Drinking Water standards must meet or exceed EPA standards
- The WWD can meet the state standards – not EPA standards
- MassDEP has 2 years to develop new standards at least as stringent as EPA



Proposed PFAS Treatment Plants

- Centralized Treatment
- Forge Village WTP
- Nutting Road WTP



Cost, Funding, and Timeline

\$24.5 Million for two plants
(engineering and
construction)

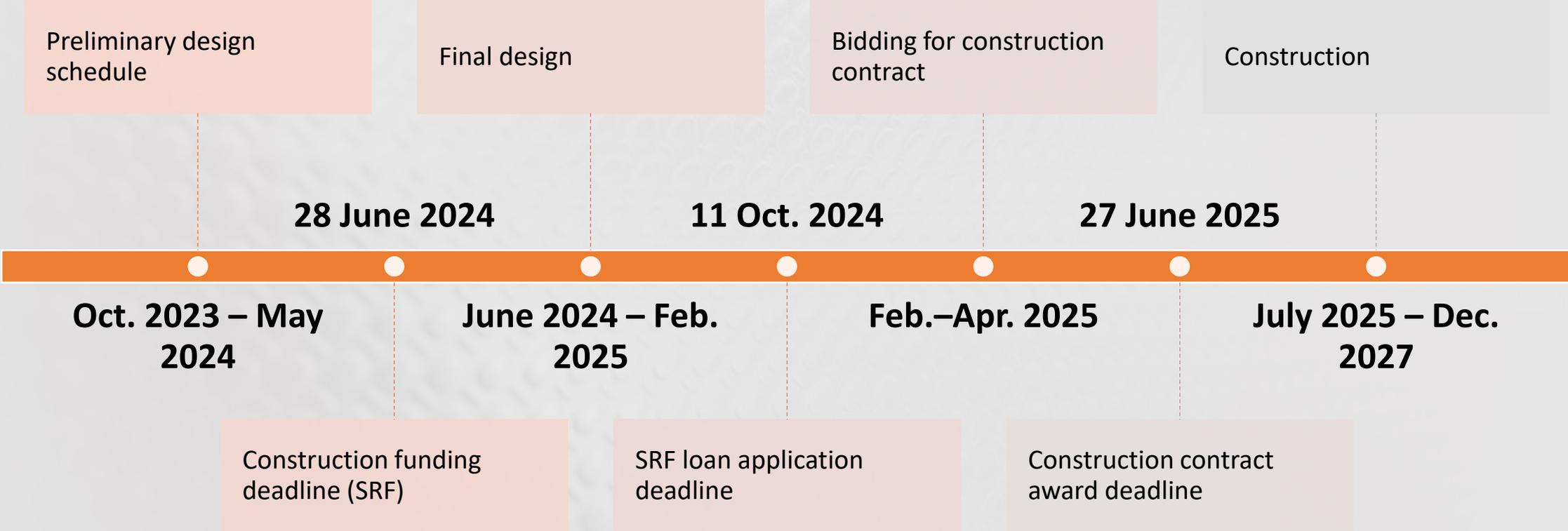
Seeking funding from State
Revolving Fund thru Clean
Water Trust

Bonding a portion of
Engineering cost

Enterprise Fund -

No Impact to
Tax Rate

Timeline





PFAS Multi District Litigation (MDL)

- Cost recovery litigation
- Manufacturers of PFAS chemicals
- Public Drinking Water Suppliers
- 3M, Dupont, and Tyco settlements
 - (\$12.5 billion, \$1.185 billion, and \$750 million respectively)
 - Waiting approval by court (Tyco)
 - Westford is among phase one plaintiffs
 - Offset treatment costs



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QUESTIONS?