

# Milford WWTF Upgrades

Deliberative Session

4 February 2023



# Milford WWTF History

- 1978 the Town voted to build the WWTF (completed in 1982)
- Built with Clean Water Act Funds
  - 75% Federal Grant
  - 20% State Grant
  - 5% Town Funds
- WWTF Cost \$6.7M (>\$27M in 2023 dollars)
- Collector Sewers Cost \$7.8M (built 78,000 LF)
- Cost Shared by Sewer Users & Tax-Payers



# Infrastructure: Expected Useful Life



Typical lifespan of WWTFs is 50 years. Major upgrades need to happen every 20-30 years.



Replace mechanical/electrical/process equipment (M/E/P) every 20-25\* years.

*\*Currently, much of Milford MEP is original.*



Incorporate advances in technology & upgrades for regulatory requirements.

*No Major Upgrades*

*Targeted Upgrades*

*Diligent Staff Maintenance*

# Milford WWTF Need For Improvements



NPDES Discharge Permit has added requirements for phosphorus reductions & metals removal



Existing Facility can't meet the new requirements without advanced treatment process



2 Studies completed: One for advanced treatment alternatives and one to identify age-related needs



Combined improvements will support and improve operational efficiency over the next 20+ years

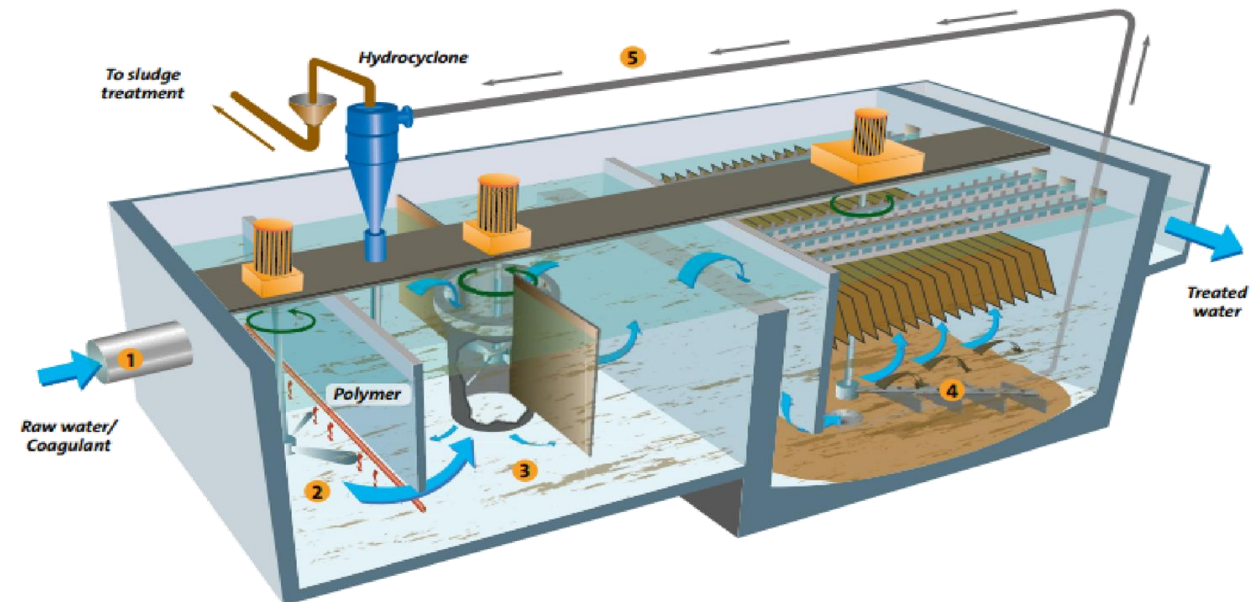
# Major WWTF Upgrade Components

- ① Advanced (Tertiary) Treatment
- ② Main Pump Station
- ③ Primary Clarifiers
- ④ Aeration Tanks
- ⑤ Sludge Holding Tanks
- ⑥ Sludge Processing
- ⑦ Chemical Storage and Blowers
- ⑧ Electrical Duct Bank



# Advanced Treatment Process

- New Permit includes phosphorous & metals removal - new process required
- Advanced treatment process options studied
- Pilot tested 3 technologies in 2021
  - Best performing option for Milford (Veolia Actiflo)
- Other improvements needed to support advanced treatment



# Cost Sharing for Milford WWTF Upgrade



Connected Residents



Connected Commercial & Industrial Businesses



Non-Connected Residents & Businesses

Presentations made to Board of Selectmen, CIP Committee, and Budget Advisory Committee



Consider:  
Impacts to User Rates  
Impacts to Tax Rates  
Bond Terms (Interest Rate & Payback Period)



Equitable cost sharing

# Funding the Major Upgrades

Estimated \$23.9 Million Project Cost

## *Assumptions*

**\$3,600,000**

CWSRF Loan with 15%  
Principal Forgiveness

**14.89%**

Town of Wilton  
contribution  
(after grants)

**2.536%**

CWSRF interest rate

June 2023 MWU  
applies for 20% State  
Aid Grant (SAG)

**20 Years**  
Payback period



# Shared Payback (users 55%; tax-payers 45%)



- Payback Amount \$17,328,438.55 (*with SAG \$13,260,028.50*)

***Projected Rate Changes based on a \$23.9M loan are as follows:***

Customer	Current (2022-2023)	2026 Increase (with SAG)	2026 Increase (no SAG)
Taxpayer (annual increase per \$100K assessed value)	--	\$19.60	\$25.10
Residential User Charge (\$/1000CF)	\$6.93	\$1.73	\$2.08
Residential Annual Bill at 125 gpd (avg)	\$423.00	\$105.00	\$127.00
Commercial Usage Charge (\$/1000CF)	\$8.67	\$2.17	\$2.60
Commercial Annual Bill at 500 gpd (avg)	\$2,115.00	\$529.00	\$635.00
<b><i>NH State Average</i></b>	197 GPD/ERU	\$888.00	
<b><i>Milford</i></b>	At 197 GPD/ERU	\$832.00	\$866.00

# Why Now?

- Must meet new permit limits
- Age-related upgrades needed
- Accommodate community's future
- Current low interest rate
- Reduced payback with loan forgiveness & Wilton contribution
- Potential for additional grant funds
- Single construction project costs less



WWTF benefits everyone in Town of Milford



Milford Businesses & Industry thrive from a well-operated WWTF



30 more years of continued service to the community



Spread the word about the good work our Water Utilities Department does

# Stay Informed



Water Utilities Department Facebook

<https://www.facebook.com/MilfordWaterUtilities>



Wastewater Treatment Facility Project Website

- <https://milfordnhwwtf.com/>

Jim

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or

[gov](#)

CONTACT US

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*Water & Sewer Commissioner, Chair*

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### Key Facility Areas

- 1 Future Advanced Treatment
- 2 Main Pump Station
- 3 Primary Clarifiers
- 4 Aeration Tanks
- 5 Sludge Storage
- 6 Sludge Processing
- 7 Chemical Storage & Blowers
- 8 Electrical Duct Bank

