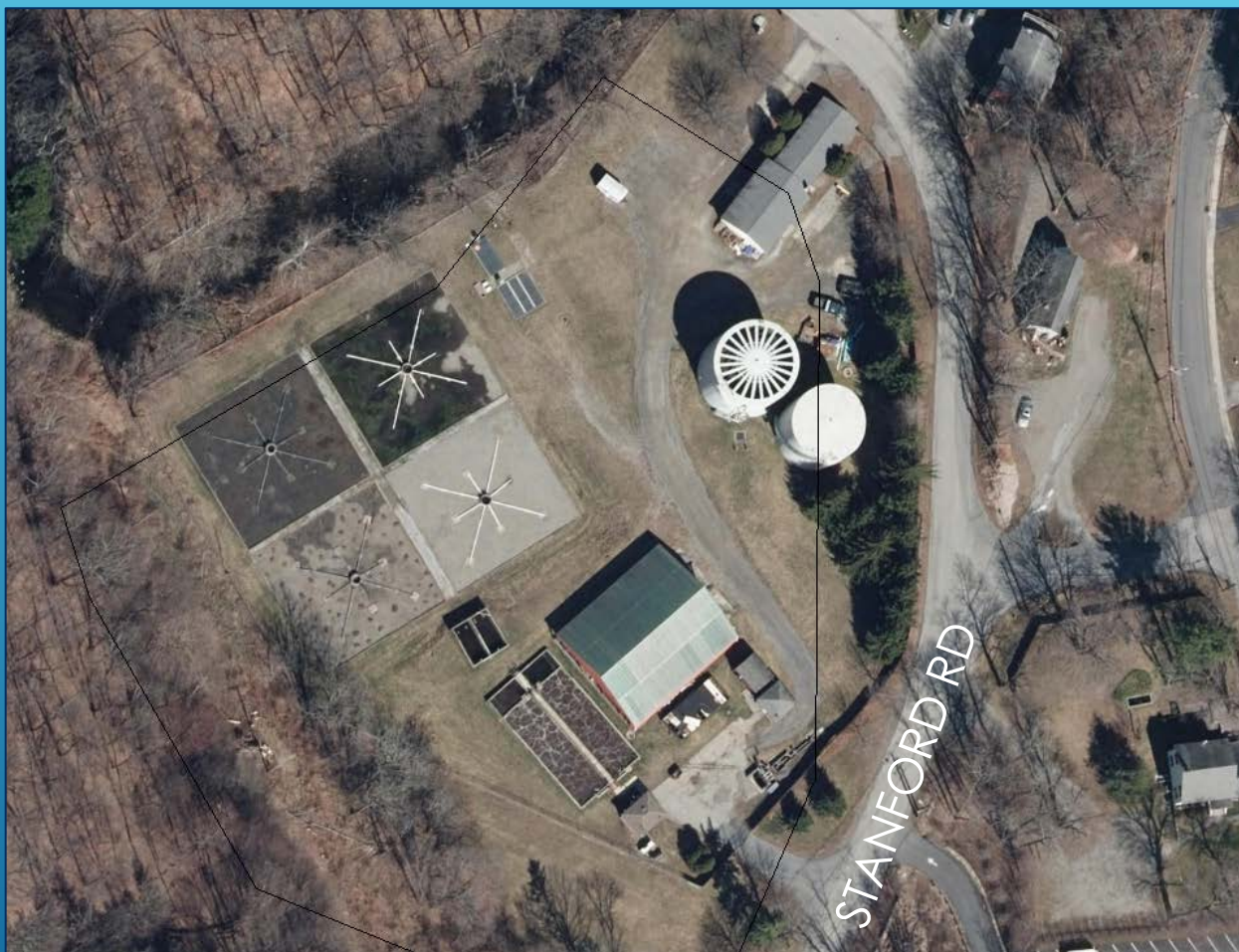


VILLAGE OF MILLBROOK

Wastewater Treatment Plant Upgrades

July 27, 2022

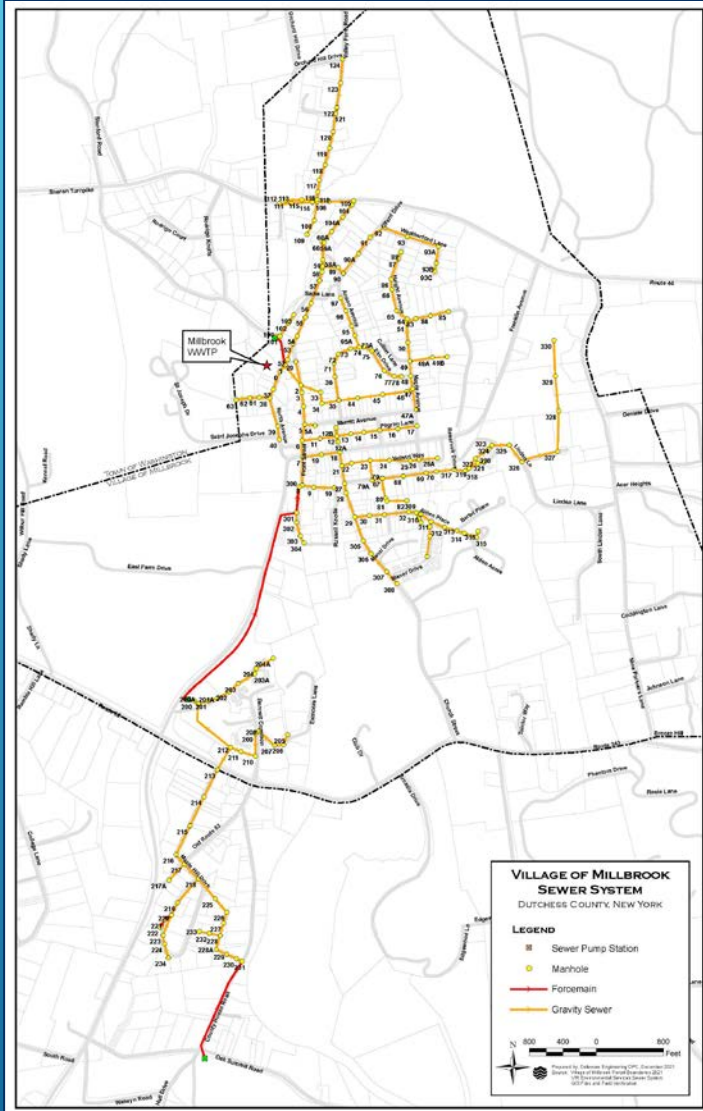
Presented by: Delaware Engineering, D.P.C.



WASTEWATER TREATMENT PLANT UPGRADES

Multiple Reasons for the Project:

- DEC Regulations
- Systems that are 50+ years old
- Flushable Wipes, etc
- Improve operations
- Improve Water Quality
- Improve Health and Safety



SEWER SYSTEM OVERVIEW

Approximately 215 Manholes

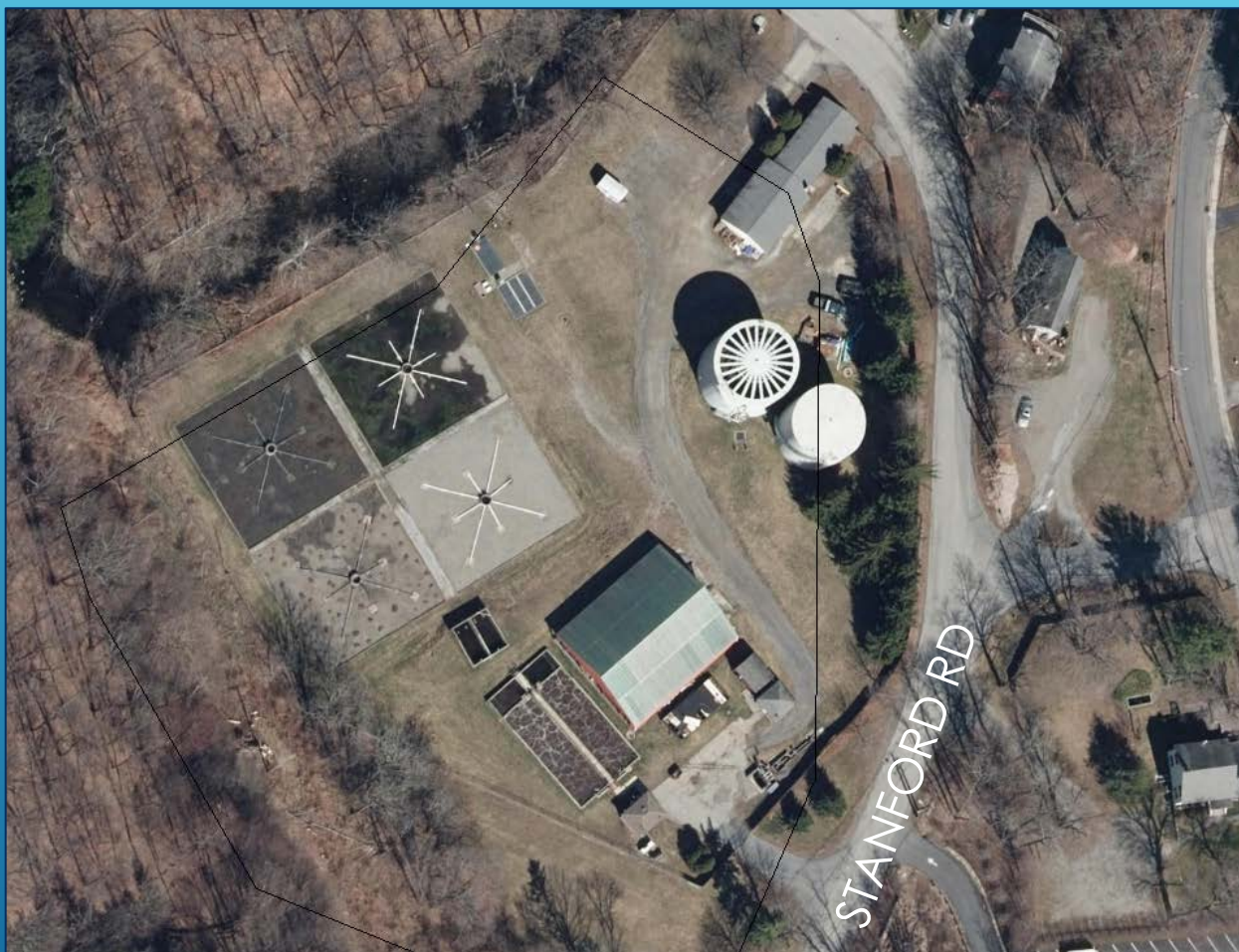
48,000 Linear Feet of Sewer

Approximately 1,500 Services

WWTP Constructed in 1971

Capacity of 250,000 GPD

Discharge to East Branch of the
Wappinger Creek



WASTEWATER TREATMENT PLANT

Built in 1971 – End of Useful Life

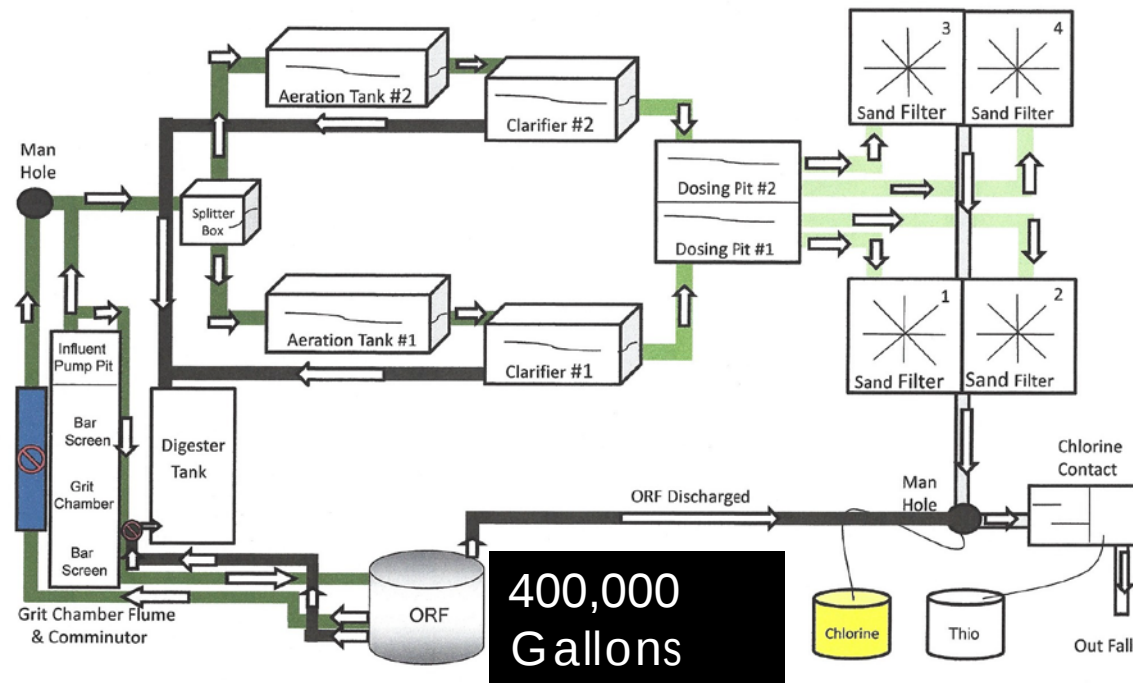
Ave Flow 0.17 MGD (0.25 MGD)

Upgrade Needed Because:

- By- Pass Flows
- In the Flood Zone
- New SPDES Permit
- End of Useful Life

MillBrook W.W.T.P
Flow Diagram
250,000 GPD

MillBrook
Influent / Effluent - Dark to Green as goes
through the process, White = Effluent,
Waste / Return Sludge - Dark Brown

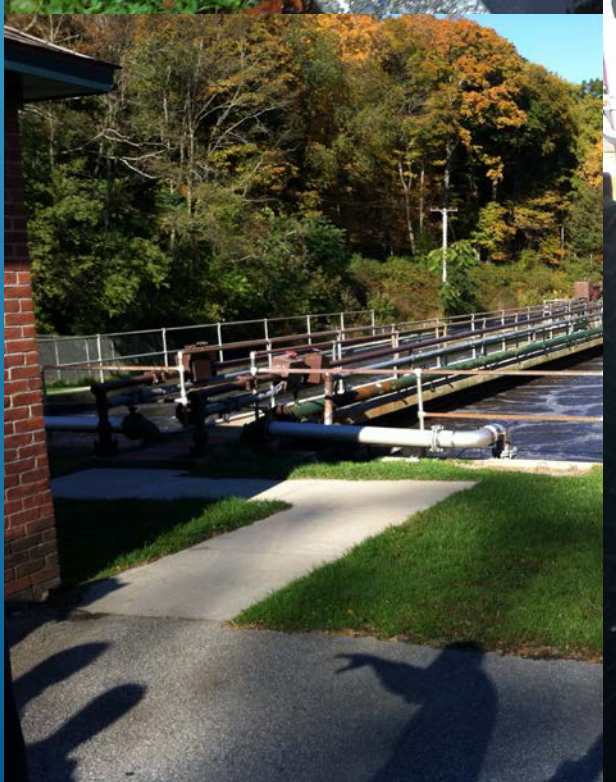


WASTEWATER TREATMENT PLANT

By-Pass Treatment

Overflow Retainage Facility (ORF)

Not Permitted Anymore





WASTEWATER TREATMENT PLANT UPGRADES

Eliminate By-Pass – Regulatory

New Headworks – Improve Treatment

Upgrade Aeration Tanks – Replace Old

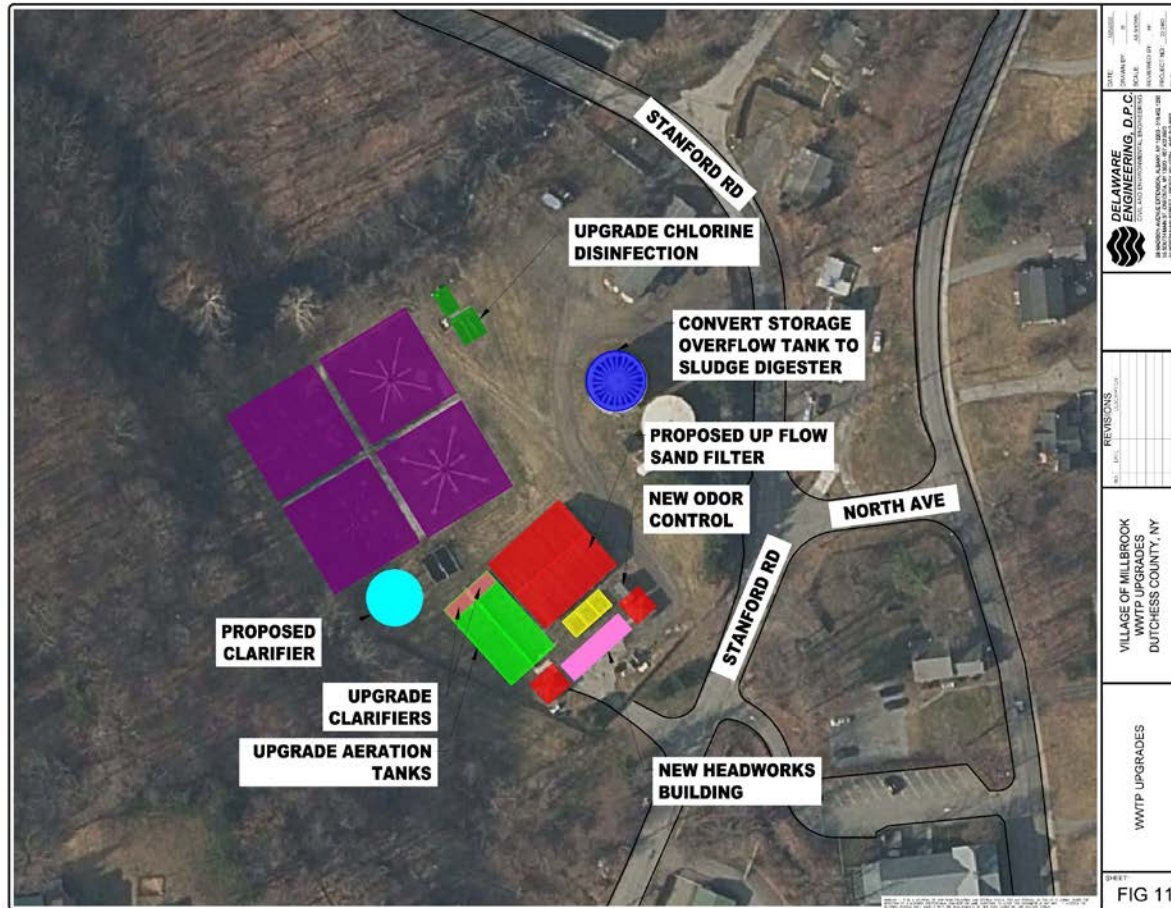
Upgrade Clarifiers – Replace Old

New Clarifier – Improve Treatment

New Sand Filter – Relace Old/Improve
Treatment

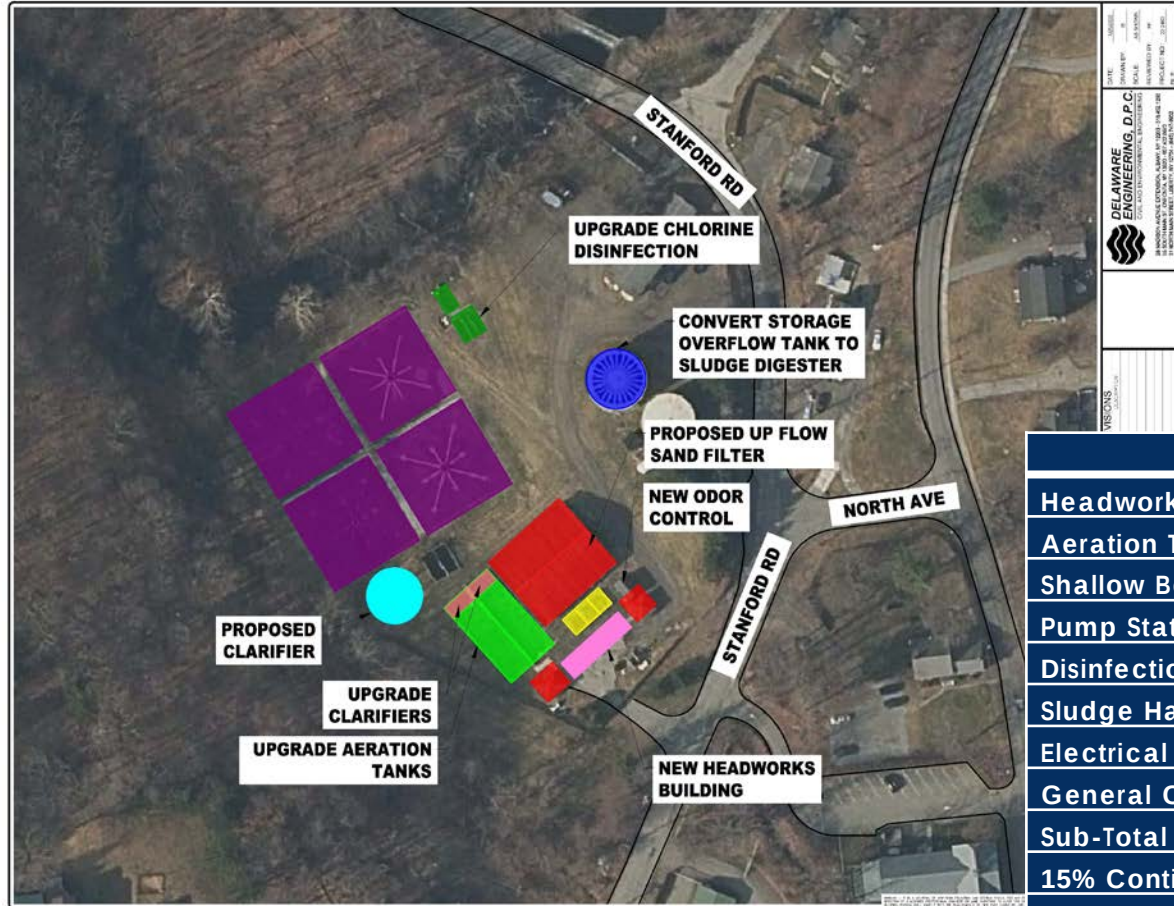
Upgrade Disinfection – Flood Resiliency

Convert ORF to Sludge Tank – Replace
Old/Improve Treatment



WASTEWATER TREATMENT PLANT UPGRADES

Estimated Capital Costs \$7M



Item	Cost \$
Headworks	\$1,061,000
Aeration Tanks and Clarifiers	\$1,850,000
Shallow Bed Upflow Sand Filters	\$970,000
Pump Station EQ	\$205,000
Disinfection Upgrades	\$245,000
Sludge Handling Upgrades	\$660,000
Electrical Contract	\$370,000
General Conditions	\$650,000
Sub-Total	\$5,346,000
15% Contingency	\$800,000
15% Engineering	\$800,000
Legal	\$10,000
Admin	\$30,000
Total (Rounded)	\$7,000,000

NEXT STEPS

What	Who	When
SEQRA/Bond Resolution	Village Board	July 27, 2022
WIIA Application Authorize Final Design	Delaware Engineering	September 9, 2022
Submit to DOH	Delaware Engineering	April 2023
Authorize Bidding	Village Board	September 2023
Construction	Contractor	Start March 2024 End November 2025