

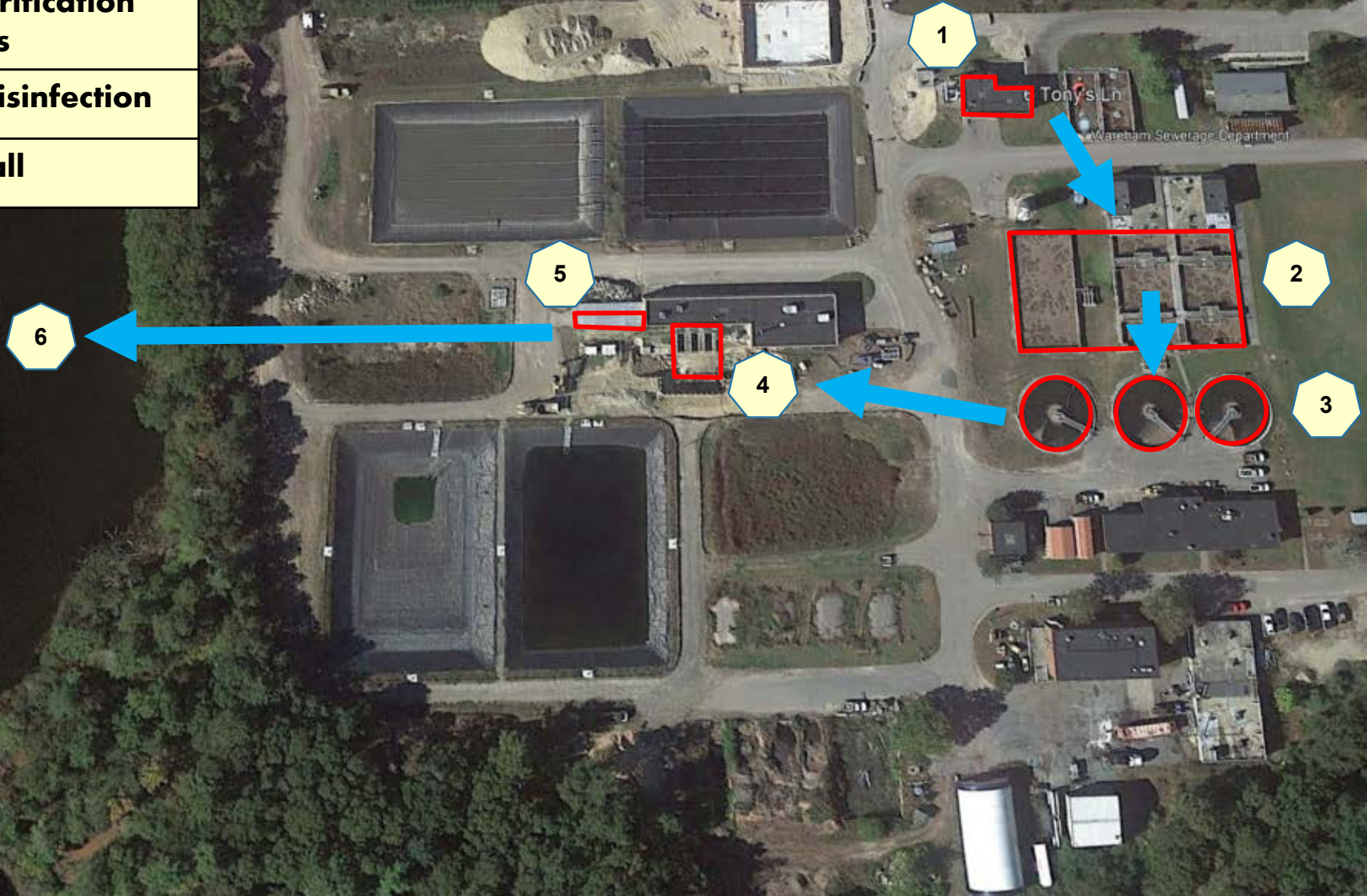
Wareham Water Pollution Control Facility (WPCF) Clarifier and Headworks Upgrade Project

Fall Town Meeting Article 26

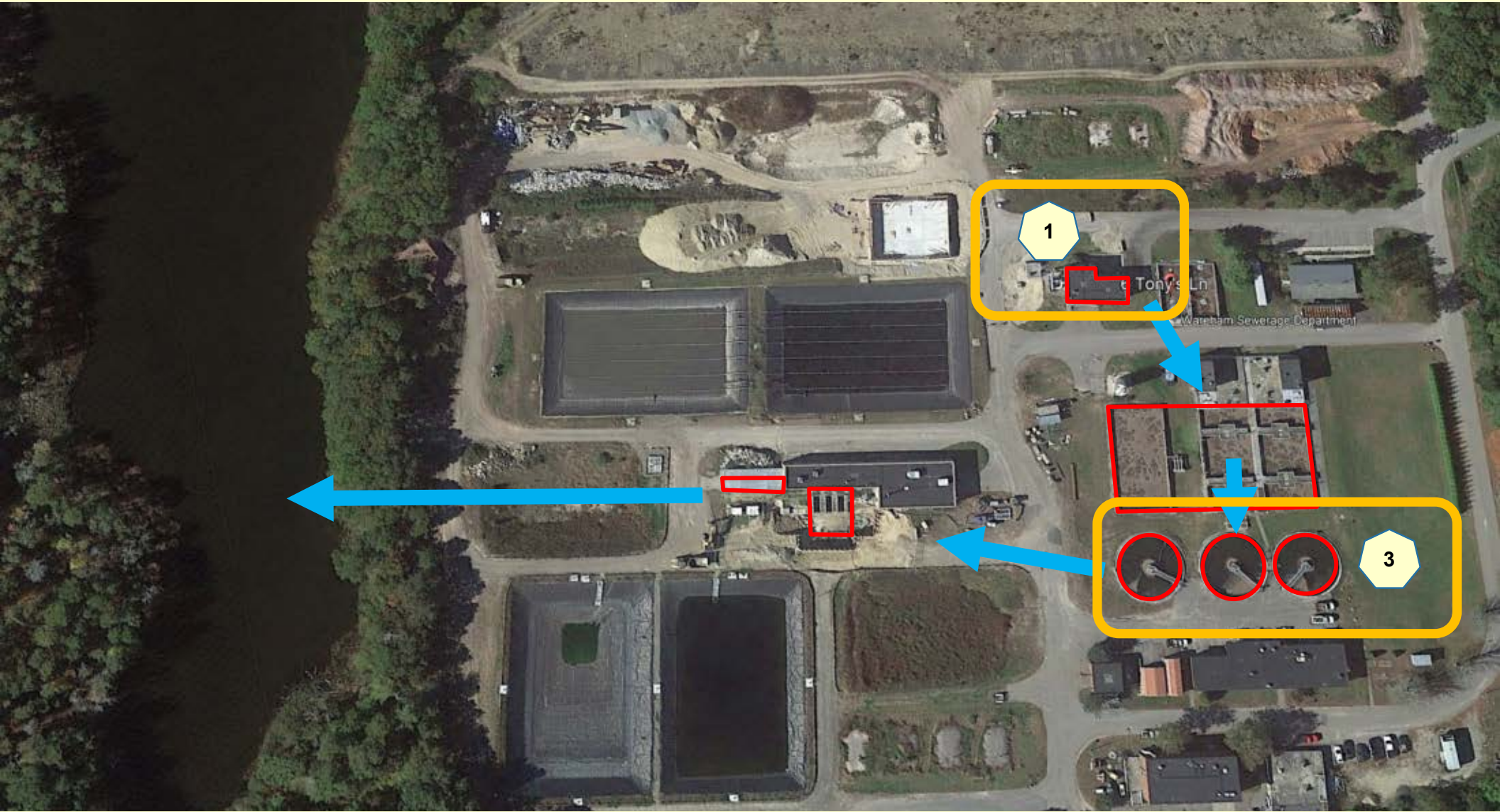


Wareham WPCF

Item	Process
1	Headworks
2	Aeration Basins
3	Secondary Clarifiers
4	Denitrification Filters
5	UV Disinfection
6	Outfall



Article 26 – Clarifier and Headworks Upgrade



- **Most of the existing water pollution control facility is at or beyond its life expectancy (20 years)**
- **Although many needs have been identified over the years, there are two needs that have become urgent**

Headworks Upgrade

- **The first process in the treatment facility and gets the most abuse as it protects sensitive downstream**
- **Air is highly corrosive**
- **Equipment is corroding and failing**
- **Processes at its life expectancy of about 20 years**



Headworks Upgrade



Septage Hauling



Rags and Grit Cause Issues and Add Additional Maintenance Costs



Clarifier Upgrade



- **Critical to meeting the permit**
- **Clarifiers do not meet current design standards**
- **Most of the equipment is 40 years old, or double the life expectancy**
- **Clarifier equipment is failing**

Working vs. Broken Clarifier



Criticality of Facility Permits



- **Environmental contamination**
- **Beach Closures**
- **Regulatory fines (Consent Order)**
- **Loss of access to State funding**

City of Quincy Agrees to Remedy Discharges of Stormwater Containing Sewage

Cost of remedial measures is expected to be in excess of \$100 million

June 9, 2021

Contact Information

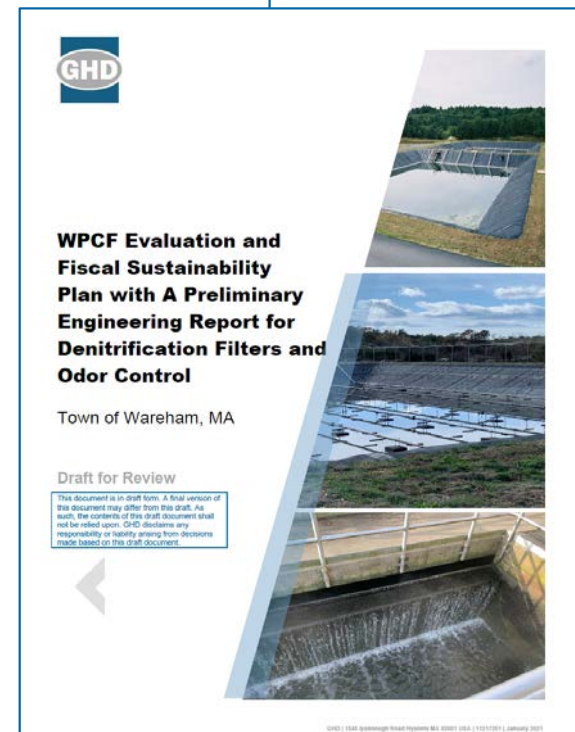
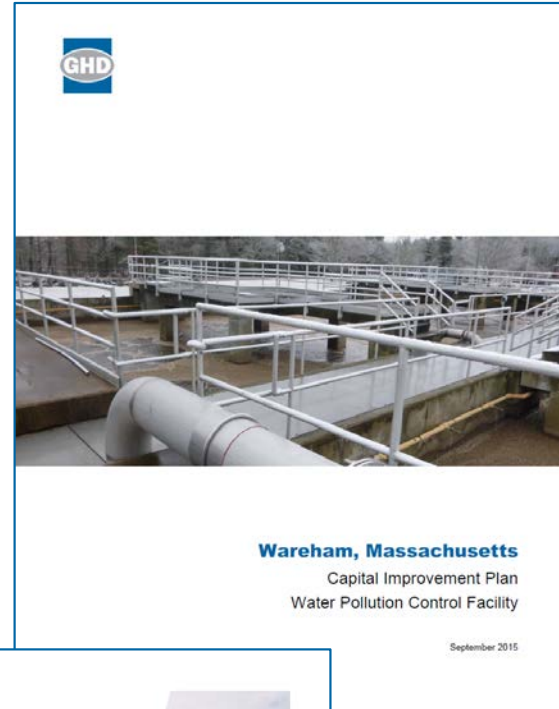
David Deegan (deegan.dave@epa.gov)

(617) 918-1017

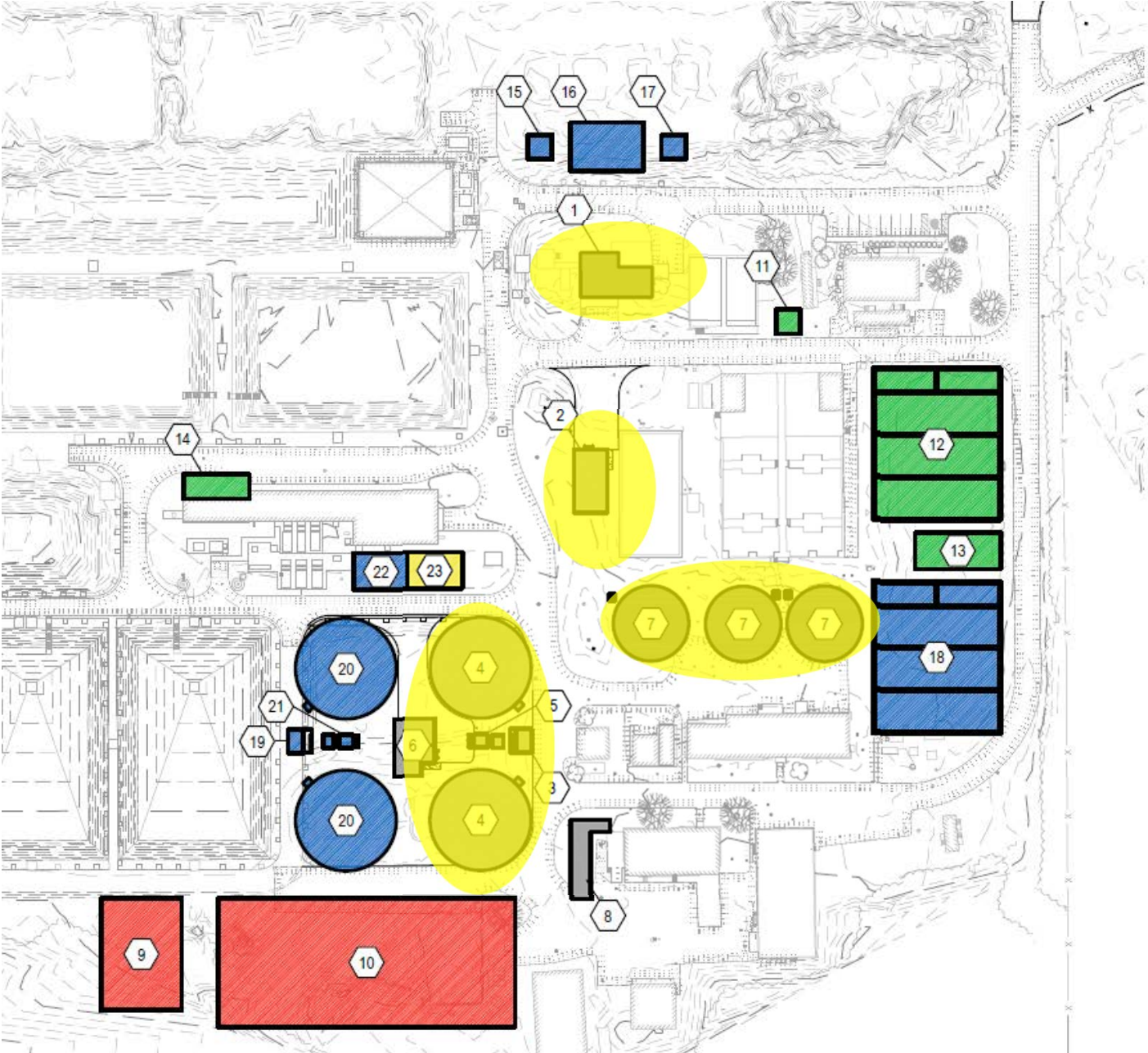
BOSTON – The U.S. Attorney's Office and the U.S. Environmental Protection Agency (EPA) New England regional office has entered into a consent decree with the City of Quincy, Mass. to resolve violations of the Clean Water Act regarding the City's stormwater and sanitary sewer systems. Water sampling indicated untreated sanitary sewage discharging from numerous Quincy stormwater outfalls, including outfalls discharging at beach areas.

How much is this work needed?

- Some needs were identified as far back as 8 years ago
- Within 2 years, all equipment that is the subject of this project will be beyond its useful life. The project will take up to 4 years to complete.
- The need for this work is **urgent**



This work is NOT a Bandaid, it's a Foundation for Future Growth as part of Planning Efforts



SHEET KEYNOTES

1. EXISTING PRELIMINARY TREATMENT UPGRADES
2. ALKALINITY BUILDING
3. CLARIFIER DISTRIBUTION BOX
4. FINAL CLARIFIER
5. SCUM PUMP STATION No. 1
6. CLARIFIER SLUDGE PUMPING BUILDING
7. SLUDGE STORAGE TANKS (CONVERTED EXISTING SECONDARY CLARIFIERS)
8. ODOR CONTROL UNIT
9. SLUDGE HOLDING TANKS
10. SOLIDS PROCESSING BUILDING
11. RETURN SLUDGE DISTRIBUTION
12. BIOREACTOR
13. BLOWER BUILDING
14. UV DISINFECTION
15. INFLUENT DISTRIBUTION CHAMBER
16. PRELIMINARY TREATMENT
17. BIOREACTOR INFLUENT DISTRIBUTION
18. BIOREACTOR
19. CLARIFIER DISTRIBUTION BOX
20. FINAL CLARIFIER
21. SCUM PUMP STATION No. 2
22. DENITRIFICATION FILTER EXPANSION
23. DENITRIFICATION FILTER EXPANSION

PROJECT PHASING

- PHASE 2
- SOLIDS HANDLING
- 2.0 MGD EXPANSION
- 3.0 MGD EXPANSION
- 4.0 MGD EXPANSION

What else is needed?

Centralized Wareham WPCF Upgrades (Treatment Only)

Phase	Facility Capacity (Average Annual)		Estimated Project Costs (2023\$)	Status
1	1.5 mgd	- Equipment / process upgrades to age related needs		Completed
2	1.5 mgd	- Equipment / process upgrade to address age related needs - Foundation for future facility expansion	\$36 M	In Design
2a	2 mgd	- Facility expansion to treat peak flows (without storing raw wastewater)	\$50 M	Future (larger capacity for entirety of facility)
3	3 mgd	- Facility expansion (1 mgd of capacity)	\$55 M	As needed to get another 50% increase in capacity
4	4 mgd	- Facility expansion (1 mgd of capacity), if needed	TBD	Beyond 20 year planning period

What else is needed?

- **Centralized Treatment and Discharge**

- Solids handling

- **Effluent Discharge**

- **Collection System**

- Existing collection upgrades / replacement

- Sewering to meet environmental needs

Upgrades Include

Replacement of equipment that has exceeded its life expectancy

Design considers the future needs of the town

Anticipated costs

Up to \$36M

How will it be paid?

Minimum of 10% principal forgiveness

17% by Bourne through IMA

Remaining balance funded through sewer budget; will cost Wareham users approximately \$46 per year per user

Proposed Schedule

(as required by SRF funding cycle)

Milestone	Tentative Date
Submit Project Evaluation Forms (SRF Funding) <input checked="" type="checkbox"/>	Mid-August 2022
Approve Design Funds (Fall Town Mtg.) <input checked="" type="checkbox"/>	Fall 2022
Approve borrowing authorization (Town Mtg.)	October 2023
Submit SRF application to DEP (last day)	October 2023
DEP Authorization to Bid	January 2024
Notice to Proceed	June 2024
Begin Repayment of Loan Debt	2027

Town Action Required

If the Town wishes to be considered for this funding, the Town must approve the borrowing in Fall Town Meeting or the state will give funding to other communities.



Summary

Article 26 – Construction Cost For WPCF Projects

Clarifier and Headworks Upgrades

