

Comprehensive Wastewater Management Plan



Town of Plymouth, Massachusetts

Citizen's Advisory Committee - Groundwater Discharge

November 25, 2024

Plymouth CWMP

Agenda

- Introductions
- Key Wastewater Issues – Project Drivers
- CWMP Process
- Status
- Next Steps

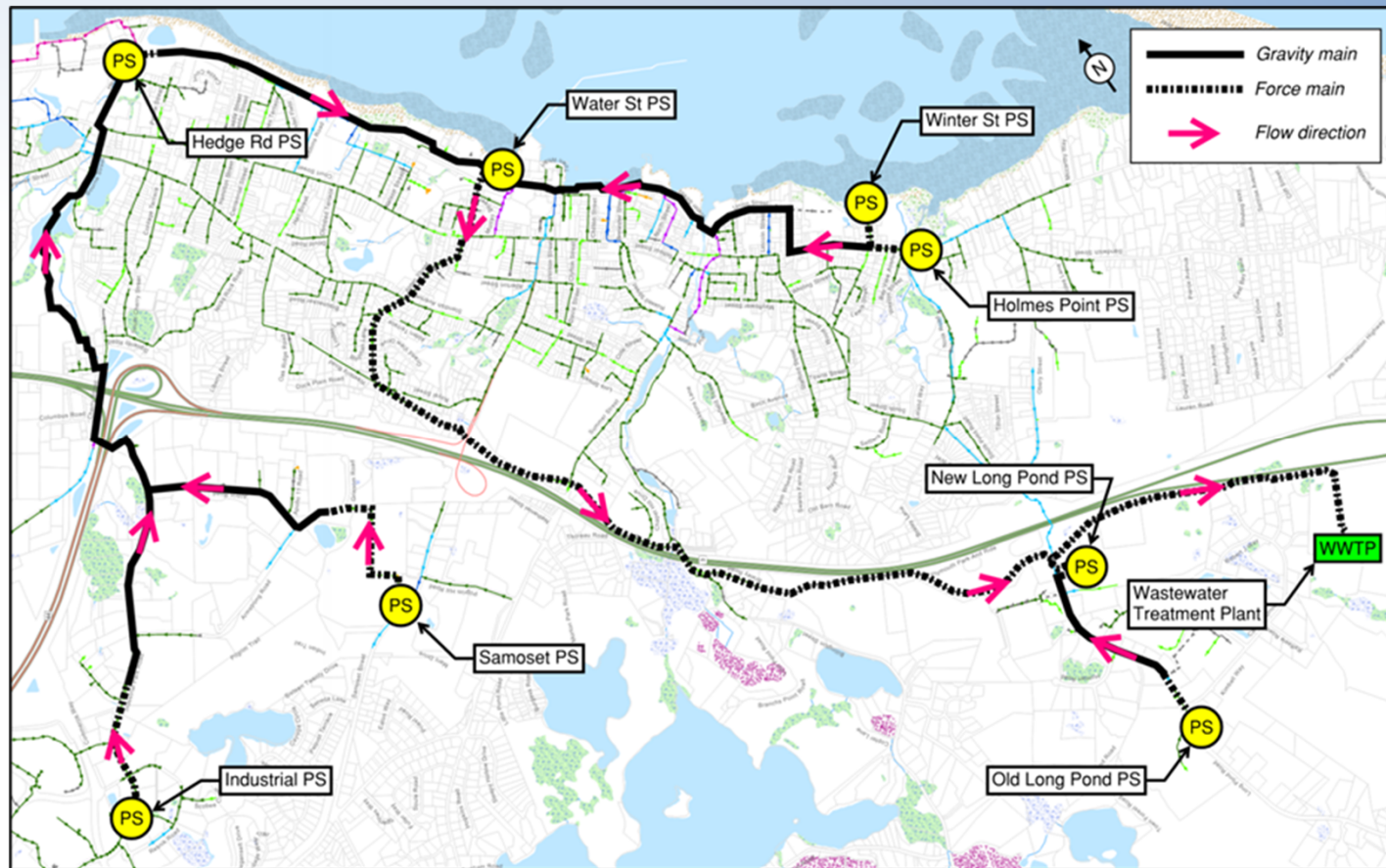


Plymouth Wastewater System



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Plymouth Wastewater System



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Town of Plymouth's Goals

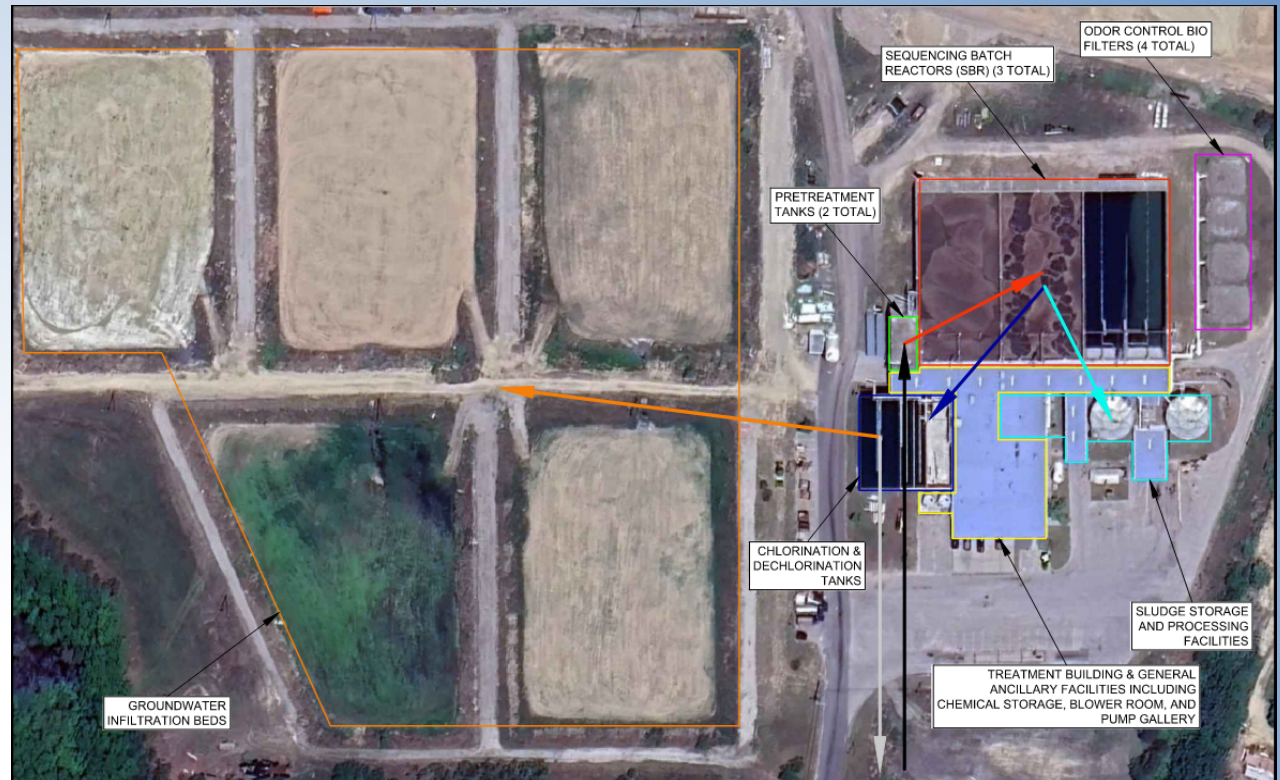
- CWMP = Roadmap for Wastewater Management
 - Regulatory Requirements
 - Local Wastewater Solutions vs Centralized
 - Wastewater System Resiliency
 - System Extensions & Protection of Natural Resources
 - Take Stock of the Existing Wastewater Systems
 - Engage Public Stakeholders
 - Financial Sustainability



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Key Planning Issues – Project Drivers

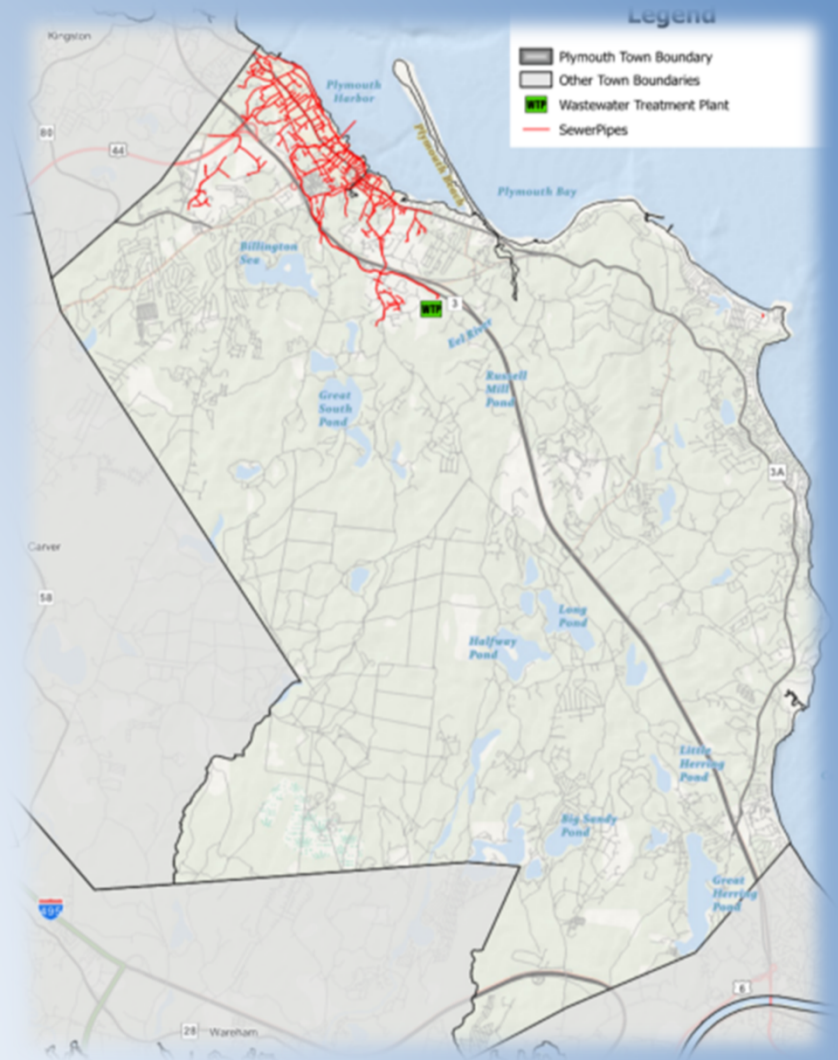
- Compliance with NPDES Permit & Groundwater Discharge Permit
- Future Permit Considerations
 - Flow
 - Nutrient Limits



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Key Planning Issues – Project Drivers

- Local and Centralized Solutions
 - Understanding Plymouth's Multiple Alternatives
 - Cost Information and Role of Stakeholders in Selecting Right Plan for Plymouth



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Key Planning Issues – Project Drivers

- System Resiliency
 - Infrastructure proximity to mapped coastal flood zones and projected storm inundation areas
 - Projected impacts of climate change on flooding & coastal storms



Flood Zone Mapping



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Key Planning Issues – Project Drivers

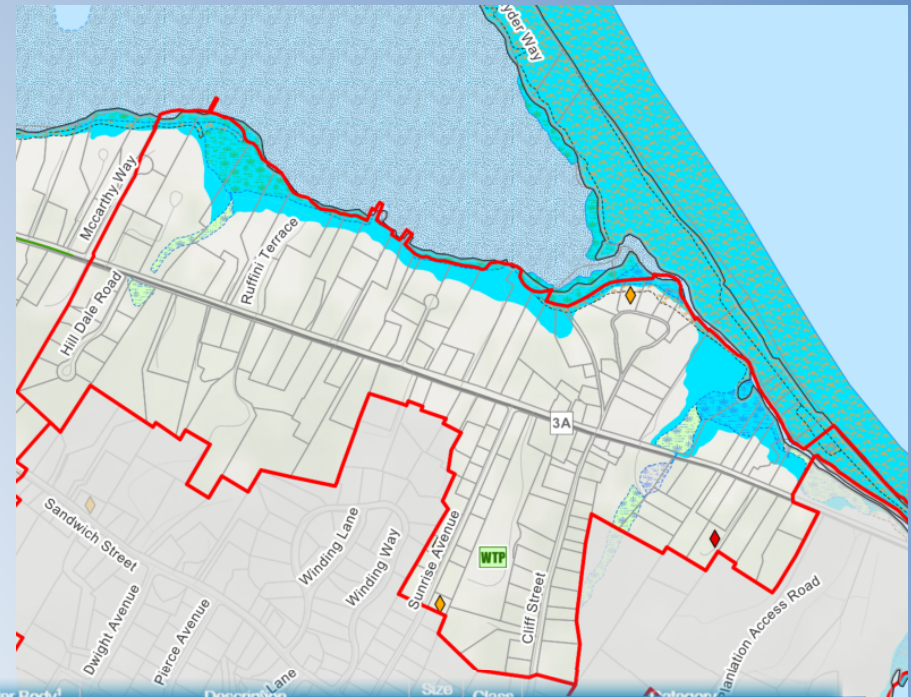
- Continued Environmental Resource Protection
- Aging Infrastructure and Modernization Needs
 - Collection System
 - WWTF
 - Pump Stations



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Key Planning Issues – Project Drivers

- System Expansion Needs
 - Service to Additional Areas
 - Capacity Planning
- Financial Considerations
 - Local Cost Mitigation
 - Rates & Affordability
- Stakeholder Outreach & Public Involvement
 - Importance of Understanding the Wastewater Plan
 - Local Support for Needed Actions



Water Body ¹	Description	Size (mi ²)	Class	Category
Island Pond (MA94074)	(west of the locality of Cedarville) Plymouth	0.08	B	5 Mercury in Fish Tissue
Plymouth Bay (MA94-17)	The waters southeast of a line drawn from Saquish Head to the top of Plymouth beach, Plymouth and west of a line drawn from Gurnet Point to Rocky Point, Plymouth	10.30	SA	5 Fecal Coliform
Plymouth Harbor (MA94-16)	The waters south of a line drawn from the top of Plymouth Beach to High Cliff, Plymouth	2.53	SA	5 Estuarine Bioassessments; Fecal Coliform
Russell Millpond (MA94132)	Plymouth	0.07	B	5 Algae; Dissolved Oxygen
Savery Pond (MA94136)	Plymouth	0.05	B	5 Harmful Algal Blooms; Nutrient/Eutrophication Biological Indicators; Phosphorus, Total
Triangle Pond (MA94160)	Plymouth	0.02	B	5 Harmful Algal Blooms

Notes: ¹ The Water Body descriptions in this table are from the impaired waters identified in the MassDEP 303d list.

² Total Maximum Daily Load not required (Non-pollutant)



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CWMP Approach

1. Introduction & Background
2. Existing Conditions Assessment
3. Future Conditions Assessment
 - Flows and Loads
4. Identification of Project Needs
5. Alternatives Screening
6. Recommended Plan
7. Implementation & Financing
8. Public Participation



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CWMP Approach

- Existing and Future Conditions
- Project Needs
 - Needs Areas
 - Infrastructure
- Screen Alternates & Plan Development
- Implementation



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Current Status

- Existing Conditions
- Future Flows
- Draft Needs Area
- Formation of Citizen's Advisory Committee



Review Criteria										
Estimated Total Nitrogen Loading (lb/day)		Proximate Nitrogen Impairment	Average Age of System (years)	# BOH Variances since 2000 (% of Systems)	Land Use & Zoning	Avg Lot Size (acres)	Soil Characteristics		Flood Plain Protections 100-year, 500-year, and Coastal floodplain	Other
BEST CASE	WORST CASE						Excessive Draining	Poor/Very Poor Draining		



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Role of CAC

- Provide community perspective on what is important to Plymouth
- Participate in discussion of key wastewater issues facing Plymouth
- Support prioritization of local wastewater needs
- Support development of recommendations based on knowledge of local issues/concerns
- Foster communication with others about wastewater issues in Plymouth

