



Town of

Orleans
Massachusetts

Meetinghouse Pond Area Collection System and Pumping Station

Orleans Citizens Forum

April 28, 2022



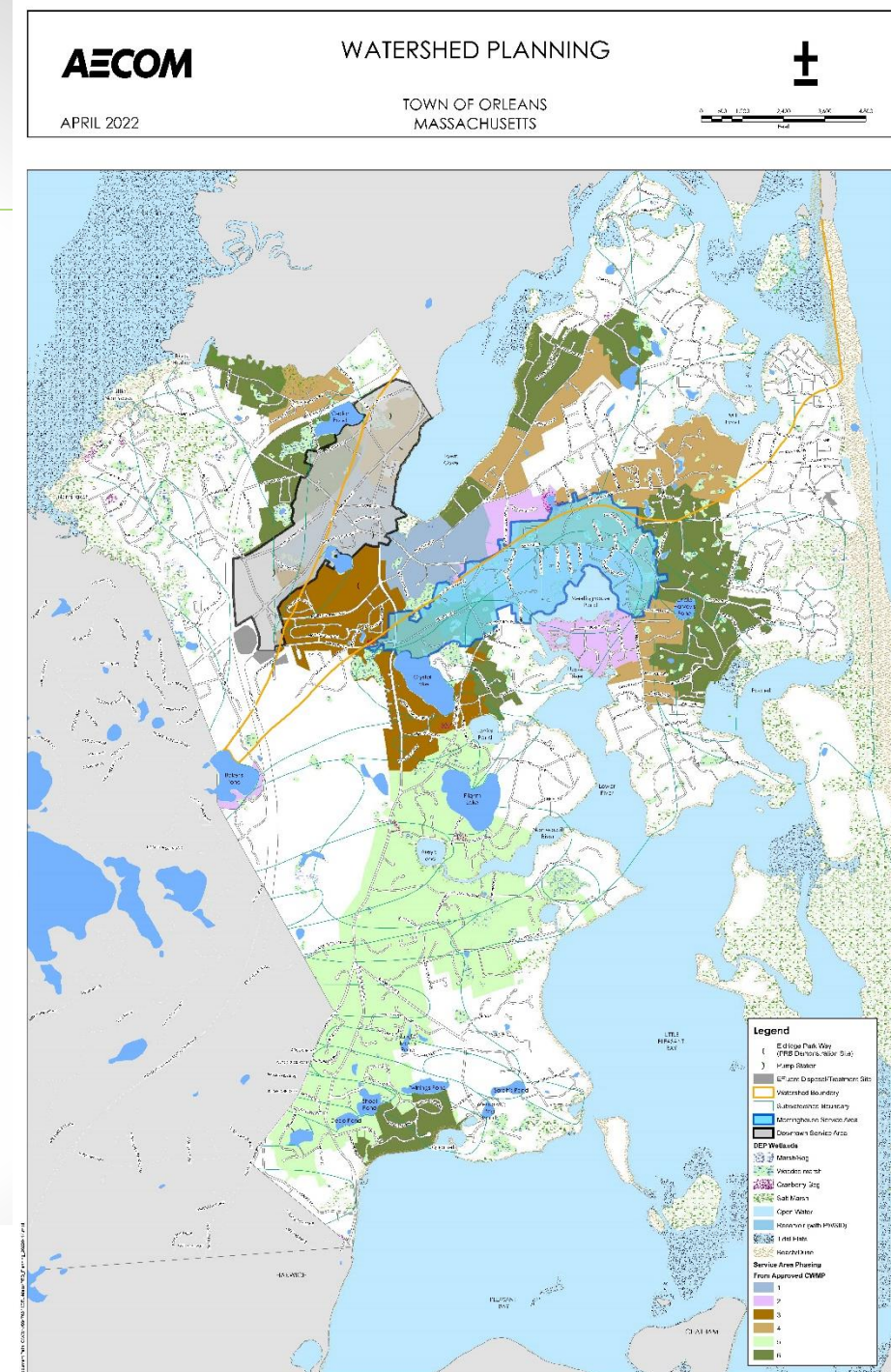
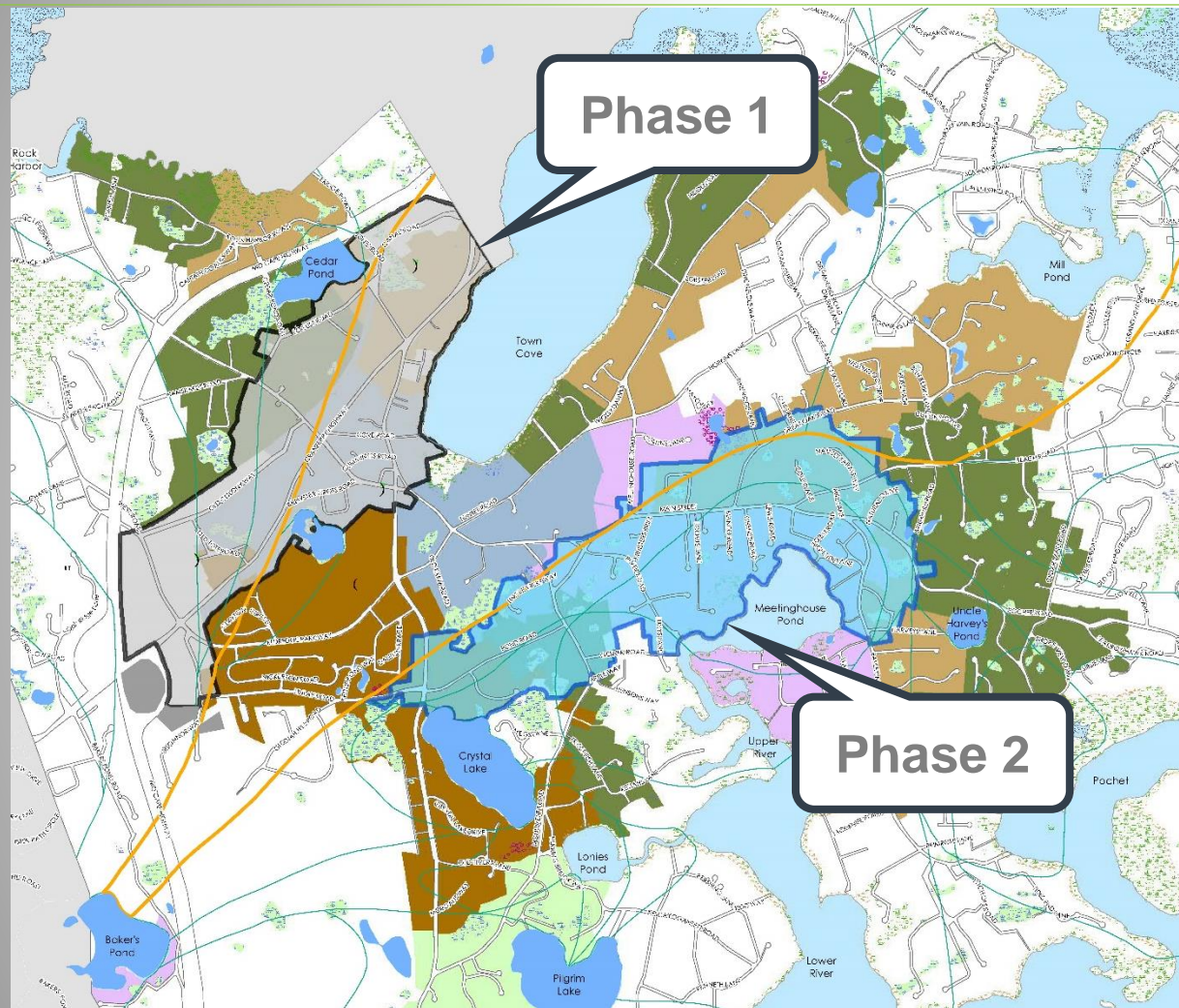
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Service Area Overview



Sewer Service Area Overview



Phase 1: Downtown Area Collection System and Pumping Station Layout

Town of Orleans, MA
Downtown Area
Collection System Layout

Legend

▲ WWTTP

● Property to be Served by Low Pressure Sewer Pump

● Pump Station

--- PS Forcemain

--- WWTF Effluent Forcemain

--- Low Pressure Sewer (LPS)

--- Gravity Sewer - Existing

--- Gravity Sewer - 8"

--- Gravity Sewer - 10"

--- Gravity Sewer - 12"

--- Gravity Sewer - 16"

--- Gravity Sewer - 18"

--- Service Lateral - Existing

▭ Downtown Service Area

▭ Parcel

▭ Waterbody

▭ Wetland

0 125 250 500

Feet

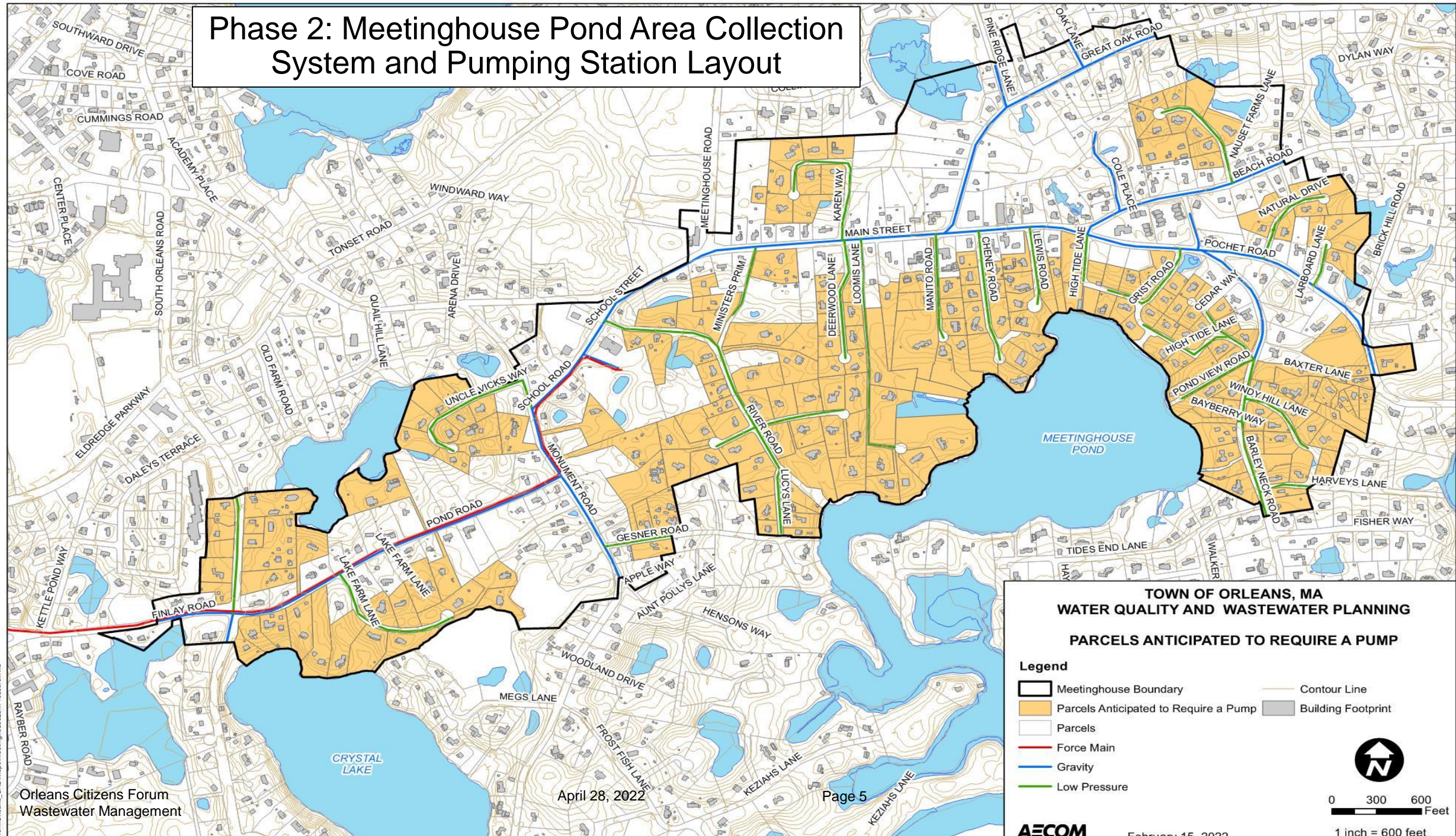
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July 2020

The map illustrates the Phase 1 collection system and pumping station layout for the Downtown Area of Orleans, MA. The layout includes the following components:

- Legend:** Defines symbols for WWTTP, Property to be Served by Low Pressure Sewer Pump, Pump Station, PS Forcemain, WWTF Effluent Forcemain, Low Pressure Sewer (LPS), Gravity Sewer (Existing, 8", 10", 12", 16", 18"), Service Lateral (Existing), Downtown Service Area, Parcel, Waterbody, and Wetland.
- Scale:** 0 to 500 Feet.
- North Arrow:** Points towards the top of the map.
- Map Features:** Shows the layout of the collection system (various colored lines) and pumping stations (Pump Station No. 1, No. 2, No. 3). The map also shows the location of the WWTTP and the WWTF Effluent Disposal Site.
- Geographic Context:** The map shows the downtown area of Orleans, MA, including streets like Main Street, Old Colony Way, and Cape Cod Rail Trail, and water bodies like Cedar Pond, Boland Pond, and Town Cove.

Phase 2: Meetinghouse Pond Area Collection System and Pumping Station Layout





Town of

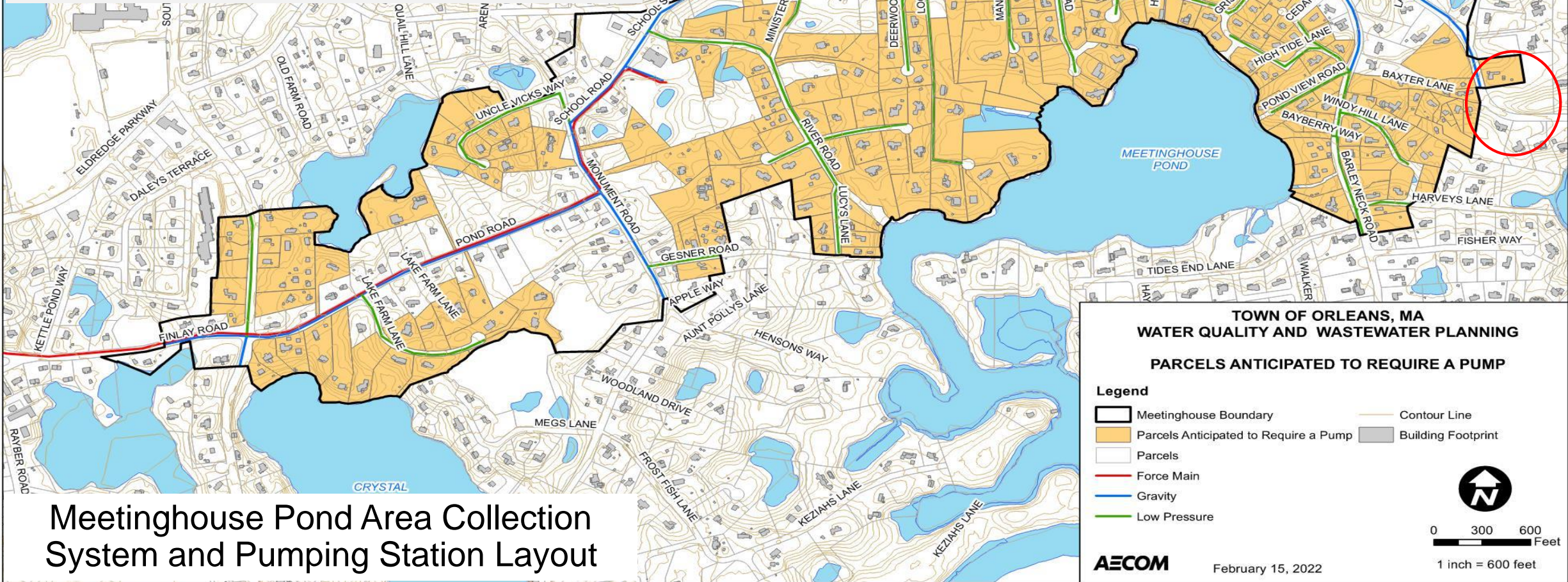
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Meetinghouse Pond Area Collection System and Pumping Station



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- ❖ About 15,750 Linear Feet of 8-inch through 12-inch PVC Gravity Sewer
- ❖ About 20,750 Linear Feet of 1.5 through 3-inch Low Pressure Sewer
- ❖ 1 Submersible Pumping Station
- ❖ About 7,500 Linear Feet of 8-inch PVC Force Main
- ❖ Estimated 480+- Connections
- ❖ Estimated 230-250 Properties Requiring Pump



Meetinghouse Pond Area Collection System and Pumping Station Layout

Preliminary Design

❖ Topographic Survey

- Aerial Survey - Completed
- Ground Survey - Completed

❖ Cultural Resource Evaluation

- Completed
- Submitted to Massachusetts Historical Commission - 10/27/21
- Received Determination that Project is Unlikely to Impact Resources

❖ Subsurface Investigation

- Preclearing and Borings Completed Except for the Two Boring Located at the Pumping Station
- Boring Logs - Completed

❖ On-site Disposal Systems

- Scanning of Board of Health Records - Completed
- Incorporate Information onto the Contract Drawings - Completed

❖ Supplemental Survey and Subsurface Investigations - Ongoing



Final Design

- ❖ ID Easement Locations for Private Roadways - Completed
- ❖ Prepare SRF Project Evaluation Form - Completed
- ❖ Perform Capacity Analysis
- ❖ Update Project Cost Estimate
- ❖ Prepare Contract Documents
- ❖ Prepare and Submit Permit Applications



MassDEP State Revolving Fund

TABLE 1
CLEAN WATER STATE REVOLVING FUND
Calendar Year 2022 CWSRF Draft Intended Use Plan
 Issued February 17, 2022

**67 Construction Projects
 Funded for \$898M**

NEW PROJECTS

Rating	Applicant	SRF ID	Project	Project Cost	2022IUP Cost
148	FITCHBURG (PF)	6936	CSO 010, 032, 045, 083 Separation/Rehabilitation	\$28,323,000	\$28,323,000
136	LYNN WATER AND SEWER COMMISSION (PF)(H)	7024	West Lynn Sewer Separation - Phases 3, 4, & 5	\$68,833,914	\$25,000,000
134	NEW BEDFORD (PF)	7004	Wastewater Collection System Improvements	\$69,165,000	\$6,820,000
131	NEW BEDFORD (PF)	7089	Pumping Station Improvements (R)	\$28,840,000	\$28,840,000
129	NANTUCKET (H)#	7163	Phase 2 Surfs		\$10,145,000
123	CHICOPEE (PF)	6973	South Fairview		\$12,298,000
123	TAUNTON (PF)(H)	7160	2023 Sewer &		\$3,000,000
120	FALL RIVER (PF)(H)	7050	Mothers Brooks Sewer	\$10,004,000	\$10,004,000
117	HAVERHILL (PF)(H)	7053	Sewer Collecti	\$1,120,000	\$1,120,000
117	ORLEANS (H)	7150	Meetinghouse Pond Area Collection System and PS	\$32,906,000	\$32,906,000
116	HAVERHILL (PF)(H)	7041	Haverhill MA Locke Street Sewer Separation Project	\$26,650,000	\$26,650,000

**The Meetinghouse Pond Area Project
 is Ranked 10th out of 67 Projects and
 is the Largest Project on Cape Cod**



Next Steps

Item	Timing
Annual Town Meeting	May 9, 2022
Voter Approval of Funding	May 17, 2022
Submit Certified Vote to MassDEP	June 30, 2022
Submit Loan Assistance Application to MassDEP	October 2022
Conduct Bidding Phase	January – March 2023
Deadline for Start of Construction	June 30, 2023
Construction Phase	Spring 2023 – Spring 2026





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Betterments and Revenue Sources



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Summary of Project Costs to Town of Orleans

Costs to Town Assume 25% Grant from Cape and Islands Clean Water Trust

Phase	Treatment and Recharge Facilities	Collection System	Total
Phase 1: Downtown	\$34,661,733	\$22,275,512	\$56,937,245
Phase 2: Meetinghouse Pond *	-	\$27,038,300	\$27,038,300
Total	\$34,661,733	\$49,313,812	\$83,975,545 **

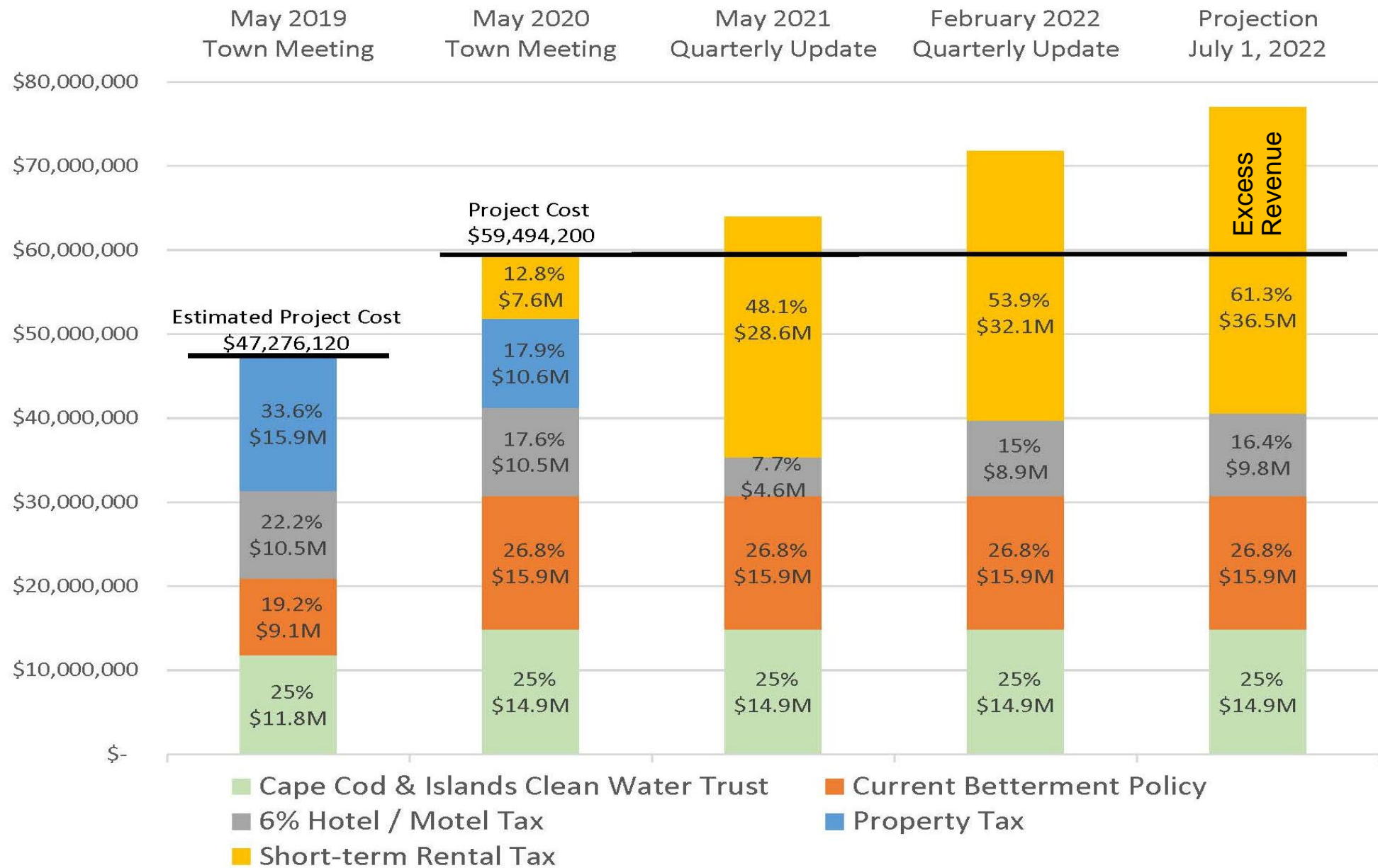
* Meetinghouse Pond Costs Are Current Estimate. Final Cost to be Determined After Bid Opening (Spring 2023)

** Net Cost to Orleans After Receiving \$23,078,800 from the Cape and Island Trust



Sources of Estimated Funding – Downtown Area Project During the Last Three Years

Note that Project Cost Does Not Include SRF Ineligible Costs for Planning and Design



Betterment Cost Summary

Betterment Approach	Downtown Area \$22,275,512 1,105 Connections	Meetinghouse Pond Area \$27,038,300 480 Connections
20% of Total Project Cost	\$4,032	\$11,266





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Annual Town Meeting



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Annual Town Meeting – Related Articles

Article	Description	Cost
19	Fund Meetinghouse Pond Area Collection System Construction	\$32,906,000
20	Water Quality Improvements	\$500,000
21	Replace Water Mains	\$575,000
22	Replace Water Services	\$500,000



Article 20 - Water Quality Improvements

- ❖ Funding Requested
 - \$500,000
- ❖ Location
 - 25 Pond Road
 - 19 Monument Road
- ❖ Proactive Actions
 - Complete with Meetinghouse Pond Area Project Construction to Avoid Re-excavation of Roadways and Reduce Construction Costs
 - Obtain Economies of Scale Savings
- ❖ **Anticipate Similar Cost Savings from Water Quality Improvements Completed as Part of the Downtown Area Project**
- ❖ **Cannot be Completed at the Funding Requested Without Passage of Article 19**



Article 21 - Replace Water Mains

- ❖ Funding Requested
 - \$575,000
 - Paid From the Water Special Revenue Fund
- ❖ Location
 - Lucy's Lane - River Road to Gesner Road
 - Baxter Lane - Pochet Road to Barley Neck Road
- ❖ Proactive Actions
 - Improve Fire Flows and System Reliability
 - Obtain Economies of Scale Savings
- Complete with Meetinghouse Pond Area Project Construction to Avoid Re-excavation of Roadways and Reduce Construction Costs
- ❖ **Anticipate Similar Cost Savings from Water Main Replacement Completed as Part of the Downtown Area Project**
- ❖ **Cannot be Completed at the Funding Requested Without Passage of Article 19**



Article 22 - Replace Water Services

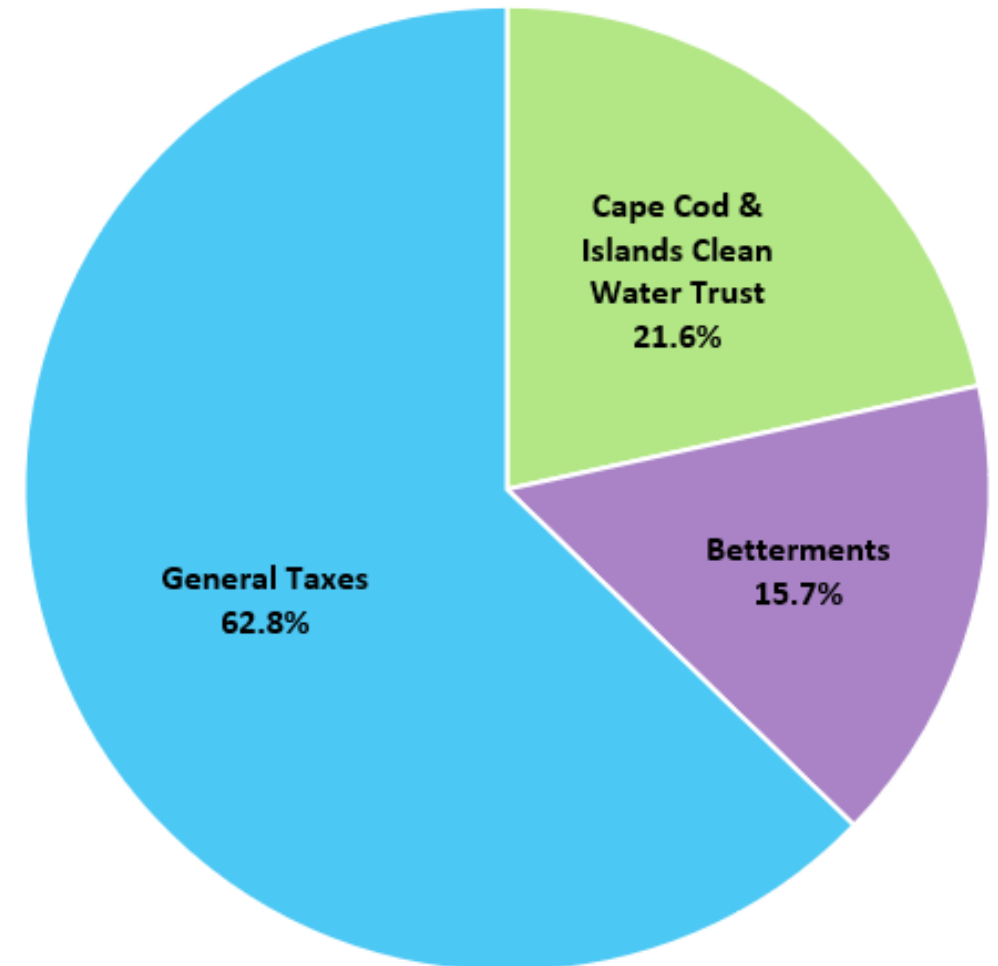
- ❖ Funding Requested
 - \$500,000
 - Paid From the Water Special Revenue Fund
- ❖ Location
 - About 4,000 l.f. of Water Services located throughout the Project Area
- ❖ Proactive Actions
 - Replace 50-Plus Year-old Water Services
 - Obtain Economies of Scale Savings
- Complete with Meetinghouse Pond Area Project Construction to Avoid Re-excavation of Roadways and Reduce Construction Costs
- ❖ **Anticipate Similar Cost Savings from Water Service Replacement Completed as Part of the Downtown Area Project**
- ❖ **Cannot be Completed at the Funding Requested Without Passage of Article 19**



Funding Strategy Summary

Description	Cost
Project Costs	
SRF Eligible	\$92,315,200
SRF Ineligible	\$14,739,145
TOTAL	\$107,054,345
Revenue Sources	
Cape Cod & Islands Clean Water Trust	\$23,078,800
Betterments	\$16,795,109
General Taxes	\$17,680,436
Wastewater Stabilization Fund	\$49,500,000
TOTAL	\$107,054,345

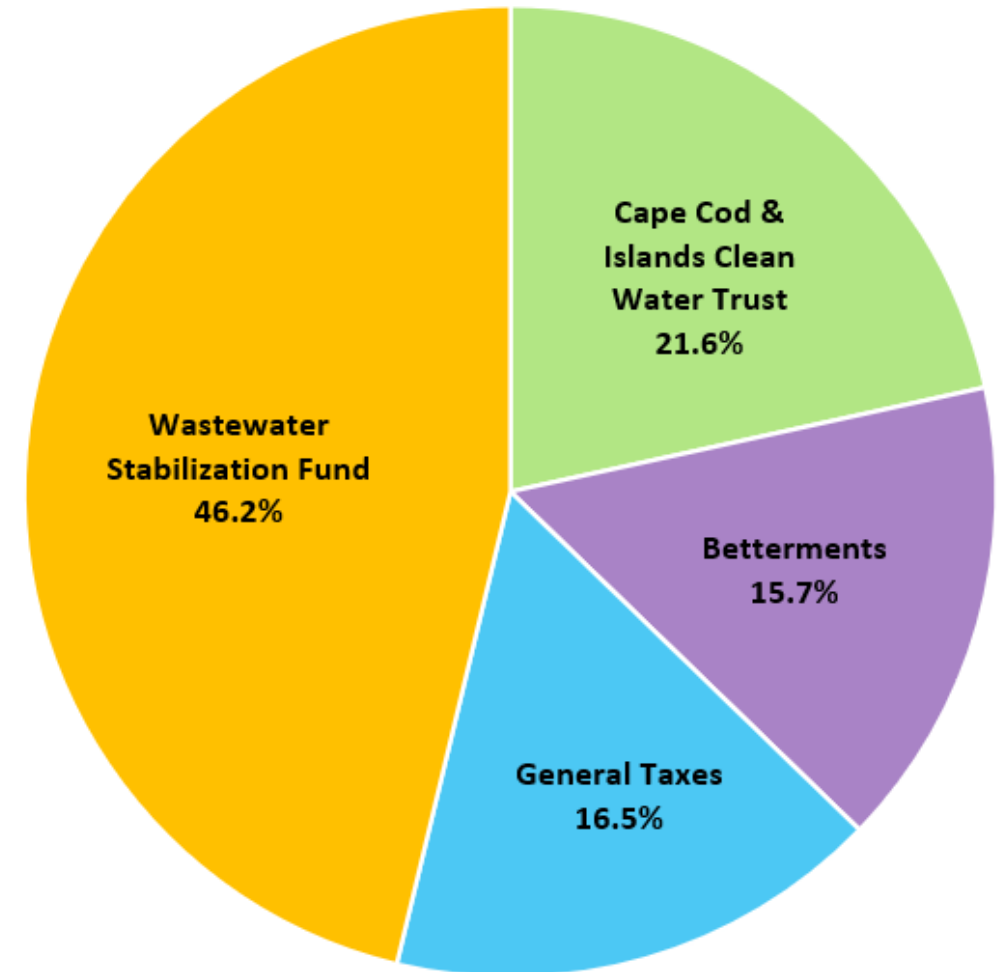
Total Project Cost Equals \$107,054,345
(SRF Eligible = \$92,315,200 Plus SRF Ineligible = \$14,739,145)



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Thank you



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