



Town of

Orleans
Massachusetts

Lessons Learned in Orleans: Financing the Downtown Sewer System

NEWEA Specialty Conference & Workshop Series
Small Communities – Nitrogen and Phosphorous Removal
September 11, 2019

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Massachusetts

Lessons Learned in Orleans: Financing the Downtown Sewer System

Project Overview, Schedule,
Project Costs and Next Steps



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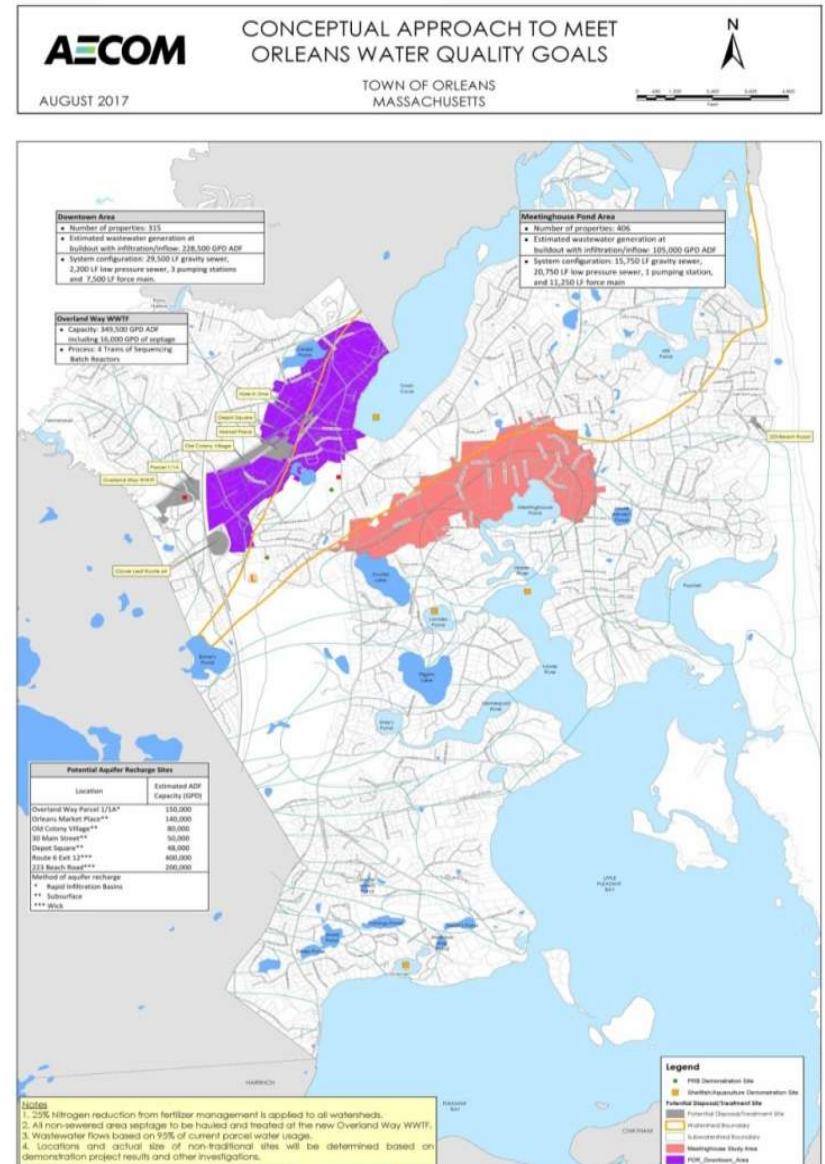


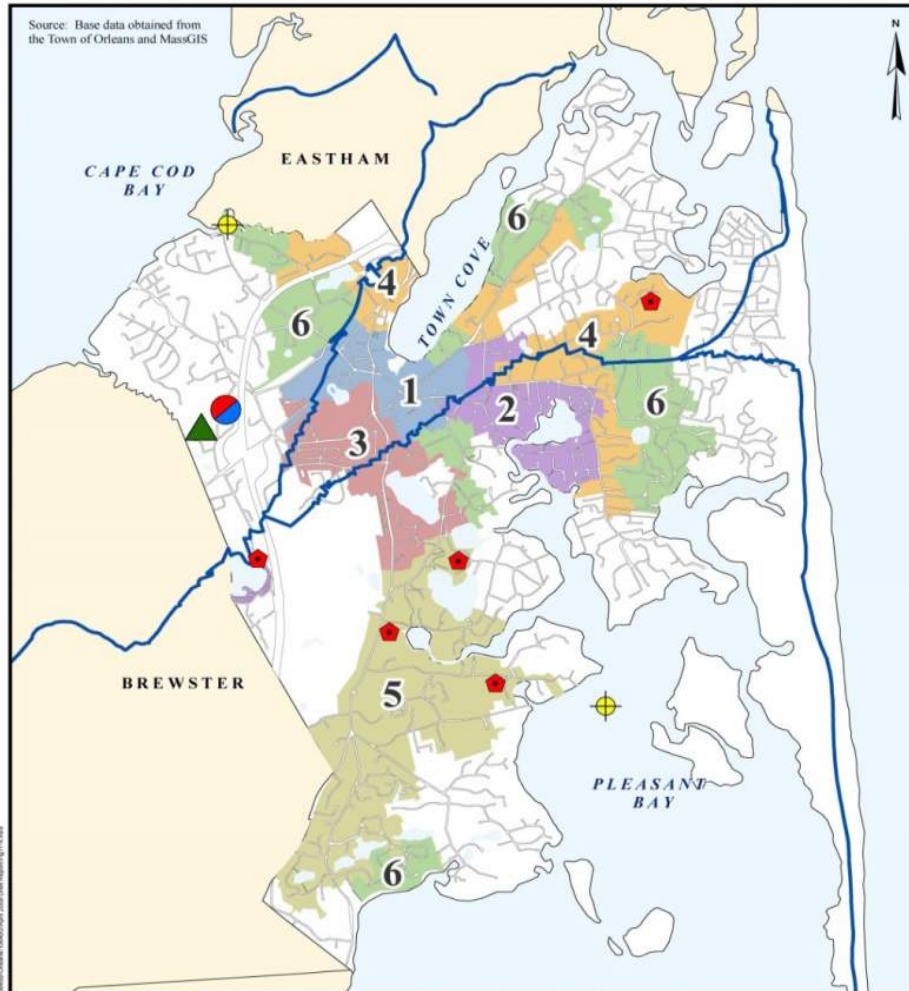
Water Quality and Wastewater Planning

- ❖ **Conceptual and Preliminary Design to Update the CWMP (2011) and To Reflect the Consensus Plan (2015)**
- ❖ **Goal: Minimize Proposed Sewered footprint to the Greatest Extent Possible**
- ❖ **Maximize Use of Non-traditional Technologies**

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Source: Base data obtained from the Town of Orleans and MassGIS

- Wastewater Treatment Site
- Effluent Disposal Site
- ▲ Septage Treatment Facility
- ⊕ Sentinel Stations
- ♦ Cluster Systems

Service Area Phasing

1	4	5
2	3	6

0 4,000 8,000 Feet

Orleans CWMP
Possible Sewer Phasing Plan

PROJ. NO: 10645G DATE: Dec 2010 FIGURE: 11-3

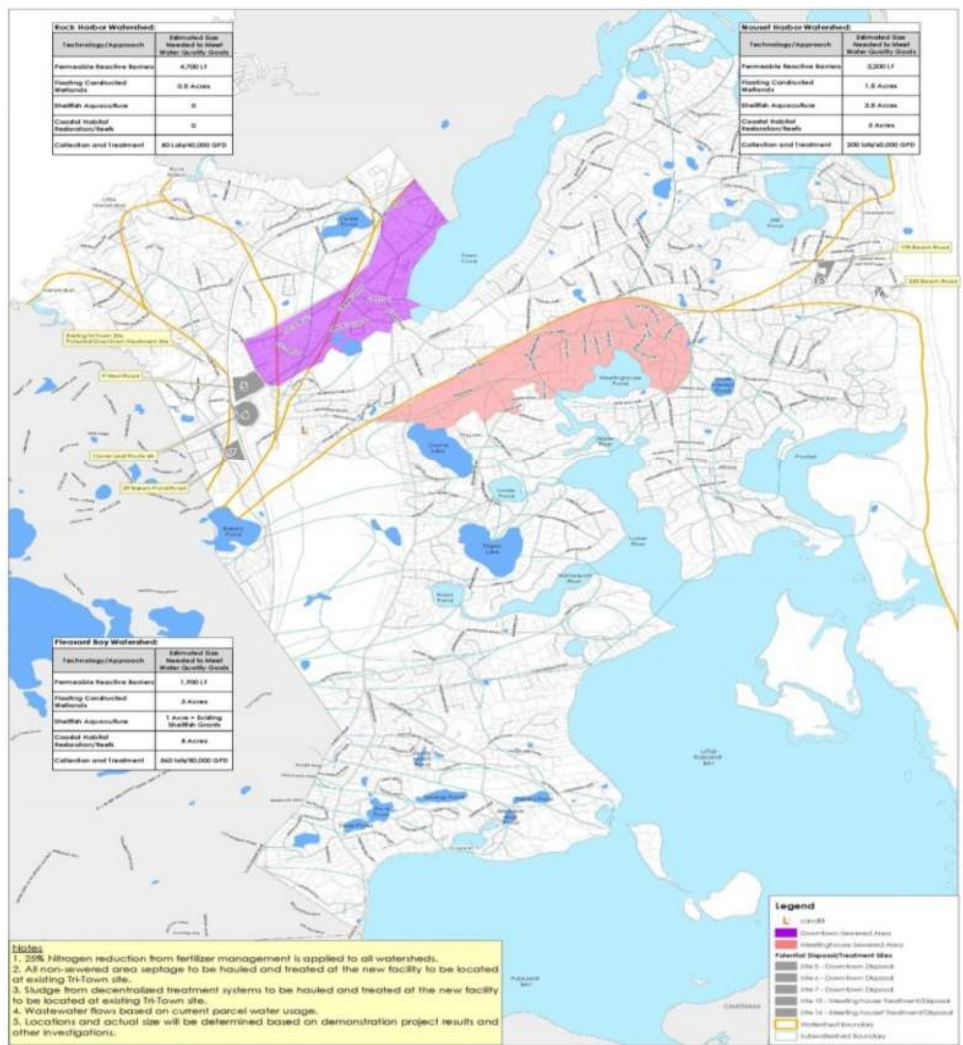
WRIGHT-PIERCE
Engineering a Better Environment

Stantec

CONCEPTUAL APPROACH TO MEET ORLEANS WATER QUALITY GOALS

TOWN OF ORLEANS
MASSACHUSETTS

MARCH, 2015



Water Quality and Wastewater Planning

Wastewater Infrastructure Components

Traditional Infrastructure	Non-Traditional Infrastructure
Gravity Sewers	Coastal Habitat Restoration
Low Pressure Sewers	Aquaculture
Submersible Pumping Stations	Floating Constructed Wetlands
Wastewater Treatment Facility via Sequence Batch Reactors	Permeable Reactive Barriers
Effluent Disposal via Wick Wells	Nitrogen Removing Barriers

Reduces Project Costs from About \$180 M to About \$100 M



Construction Costs and Financing

❖ Reduces Collection System Area

- From CWMP: About 60 Percent of the Town and 650,000 gpd (ADF)
- To: About 24 Percent of the Town and 350,000 gpd (ADF)
 - Downtown Area: 330 Parcels
 - Meetinghouse Pond Area: 360 Parcels

❖ WWTF and Effluent Disposal - Contact No. 2019-01

- Wastewater Treatment Facility
- Effluent Disposal

❖ Collection System and Pumping Stations - Contract No. 2019-02

- 30,800 l.f. of GS (8-inch to 16-inch)
- 2,000 l.f. of LPS (2-inch)
- 9,600 l.f. of FM (6-inch to 8-inch)
- 3 Pumping Stations

Construction Costs and Financing

Various Sources of Information

- ❖ Past AECOM Projects
- ❖ Manufacturers' Information / Proposals
- ❖ Orleans, MA - Main Street at Route 6A and Route 28 Project
- ❖ Other Cape Municipalities (Chatham, MA, Falmouth, MA and Harwich, MA)

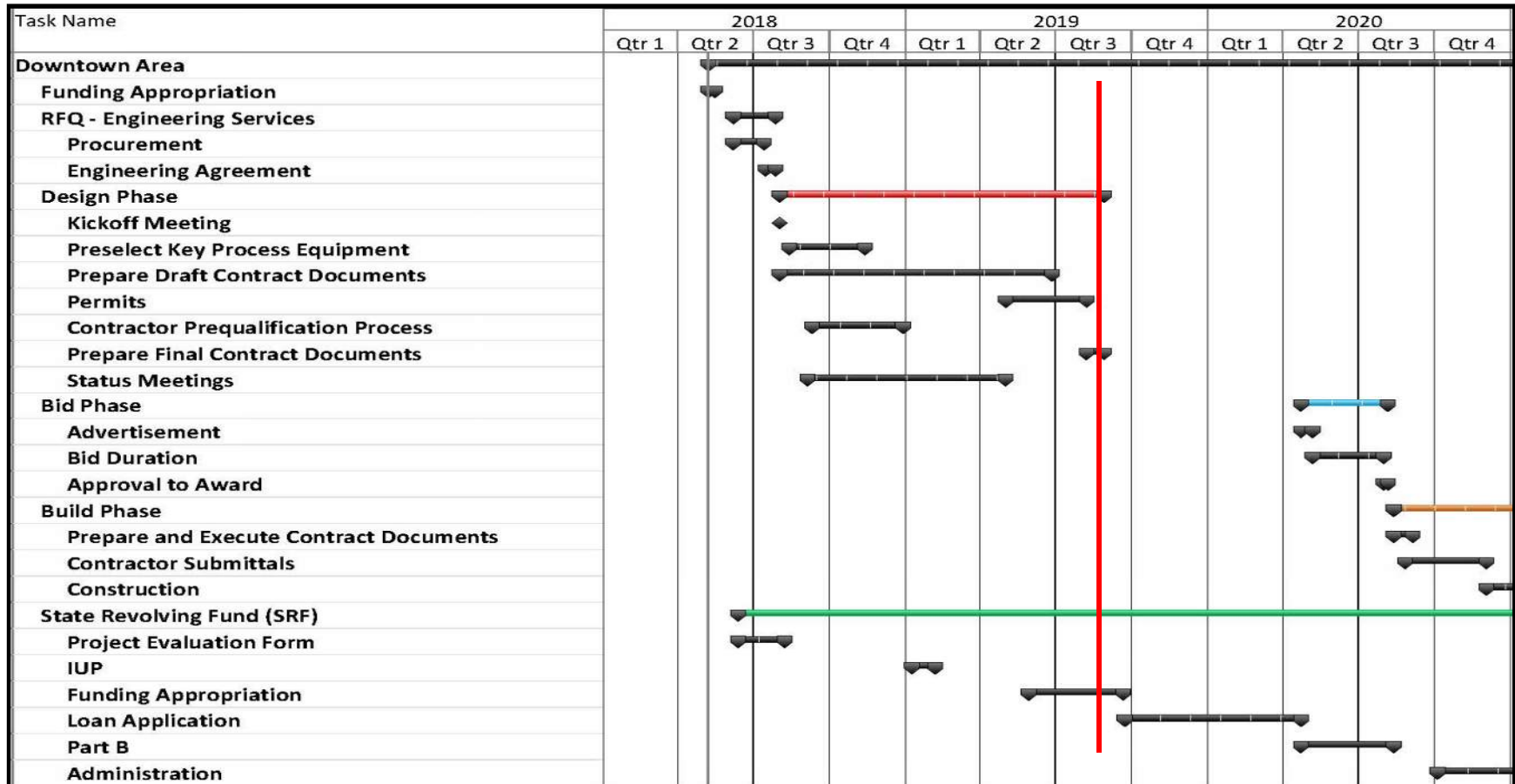
Financing

- ❖ State Revolving Fund (SRF)
- ❖ SRF Zero Percent Criteria
 - Remediate or Prevent Nutrient Enrichment
 - No Nutrient Related Enforcement Orders
 - Approved CWMP
 - Consistent with Regional Water Resources Management Plans
 - Adopted Land Use Controls
- ❖ Local and State Funding Programs

Recommended Project Appropriation

Description	Estimated Cost
Contract No. 2019-01- WWTF and Effluent Disposal	\$22,349,600
Contract No. 2019-02 – Collection System and PS	\$13,969,600
Construction Cost	\$36,319,200
Contingency a 10%	\$3,631,920
Construction Services	\$5,000,000
Traffic Police Details	\$1,125,000
Other Costs	\$800,000
Land / ROW / Easements	\$400,000
Opinion of Project Cost	\$47,276,120

Progress Schedule Status





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Financing and Funding



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Definitions/Explanations for Wastewater Funding

State Revolving Fund (SRF)

- ❖ This is a state managed fund, which receives federal and state monies to support loans for wastewater and drinking water projects. Communities who have projects focused on nutrient removal are eligible for 0% loans and the possibility of some principal forgiveness over the 30-year term. Currently, we qualify for 10% principal forgiveness.
- ❖ There are five criteria that a community must meet in order to qualify for the 0% financing. Orleans has been working for five years to meet these qualifications. And now we have.
- ❖ With the Passage of Article 16, the process of acquiring this financing has begun and by next spring Orleans will be able to commence construction with 0% construction financing.



Definitions/Explanations for Wastewater Funding (cont.)

Stabilization Fund

- ❖ Creation of a Stabilization Fund for the purpose of funding wastewater projects in town. Due to the expansion of the existing hotel/motel tax to include short-term rentals, there is a new revenue stream coming to the Town beginning July 1, 2019.
- ❖ Requires funds be deposited directly to the Stabilization Fund. Expenditures from the fund would require a 2/3rds vote from Town Meeting.

Increase the Hotel/Motel Tax

- ❖ Currently the Town receives a 4% tax from room rentals at hotels, motels and larger B&B's. Increases this tax from 4% to 6%, which is allowed by statute.

Short-term Rental Tax

- ❖ In late 2018 the Commonwealth of Massachusetts enacted an amendment to the existing hotel/motel tax to include a tax on short-term rentals in private homes for rentals less than 31 days.



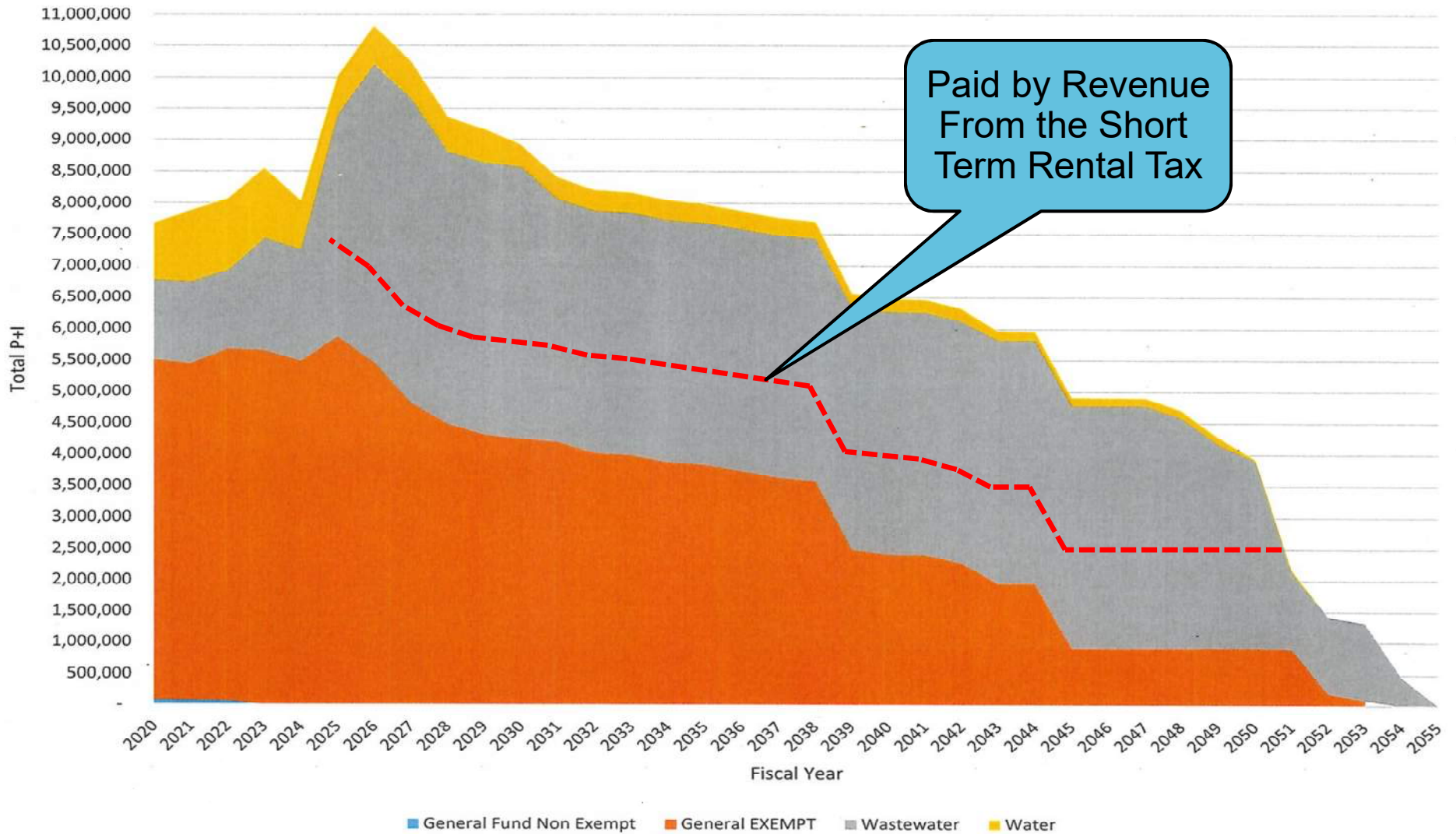
Definitions/Explanations for Wastewater Funding (cont.)

Cape Cod & Islands Water Protection Fund

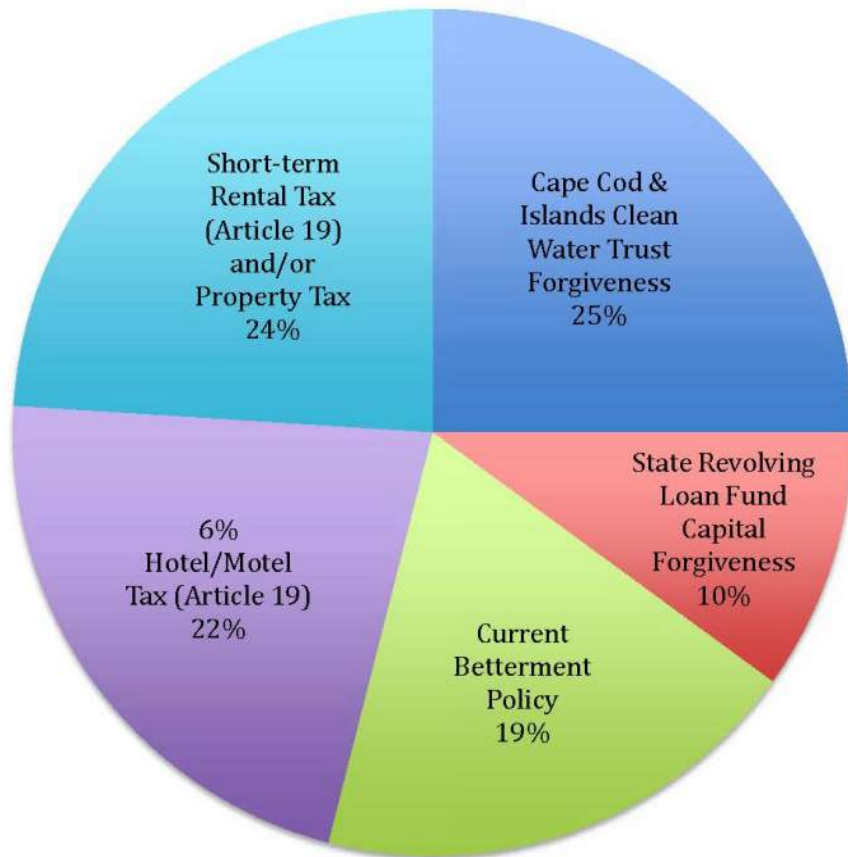
- ❖ The expansion of the hotel/motel tax law to include short-term rentals also established a Trust Fund to provide financial assistance to Cape Cod & Island towns for the construction of wastewater and water facilities.
- ❖ The Fund is financed through a 2.75% surtax on the hotel/motel and short-term rental taxes. The intent of this Fund is to provide 25% of the funding necessary to implement wastewater and water projects across Cape Cod consistent with the Cape Cod Commission's 208 Wastewater Plan.

Prepared by Alan McClennen
April 25, 2019

Town of Orleans, MA
Existing (as of June 30, 2019) and Projected Debt Service by Fund



Summary of Wastewater System Funding Sources for Total Cost of \$47,276,120



Description	Estimated Value
Cape Cod & Islands Clean Water Trust	25% = \$11,819,030
State Revolving Loan Fund Capital Forgiveness	10% = \$4,727,612
Current Betterment Policy	19% = \$9,080,240
6% Hotel/Motel Tax	22% = \$10,489,530
Short-term Rental Tax and/or Property Tax	24% = \$11,159,708

Prepared by Alan McClennen
April 25, 2019

Summary of Wastewater System Funding Sources

Debt Repayment Commencing at Project Completion in 2023

Description	Sewage Treatment & Disposal	Collection System Cost: Betterment	Soft Costs and Contingencies	Total Costs & Annual Costs Over 30 Years
Estimated Cost for Downtown Area Wastewater System	\$22,349,600	\$13,969,600	\$10,956,920	\$47,276,120 \$1,575,871
State Revolving Fund: 10% Forgiveness Grant	(\$2,234,960)	(\$1,396,960)	(\$1,095,692)	(\$4,727,612) * (\$157,587)
Cape & Islands Clean Water Trust: 25% Forgiveness Grant	(\$5,587,400)	(\$3,492,400)	(\$2,739,230)	(\$11,819,030) ** (\$393,968)
Cost after Principal Forgiveness	\$14,527,240	\$9,080,240	\$7,121,998	\$30,729,478
Increase in Hotel/Motel Tax to 6%				(\$10,489,530) (\$349,651)
Betterment Assessed at Completion				(\$9,080,240) (\$302,675)
Total Taxpayer Share Prior to Short-term Rental Tax				\$11,159,708 \$371,990
6% Short-term Rental Tax				TBD ***

Summary of Wastewater System Funding Sources (cont.) Debt Repayment Commencing at Project Completion in 2023

- * Orleans currently meets all qualifications for this 10% forgiveness
- ** Legislation for Cape & Island Clean Water Trust was passed in order to provide 25% of total cost to Cape towns for cleaning their waters under the approved 208 Plan
- *** If 25% of seasonal homes in Orleans are rented short-term for 4 weeks/year at an average rent of \$3,000/week, then annual revenue to the Town = \$396,000/year (or \$11,880,000 over 30 years), resulting in little need to increase property taxes to finance this project.

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April 25, 2019





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Thank You

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