



Town of

Orleans
Massachusetts

Finance Committee and Board of Selectmen

Water Quality and Wastewater Planning Financial Model Workshop

August 17, 2017

Financial Plan Update

Past Status/Objectives

- ❖ **Develop Functional Financial Model to Allow Inputs and Inform Town Decisions**
- ❖ **Allow Rate Payers to See Annual Wastewater Costs for Their Property**
- ❖ **Provide “Built-in Flexibility” to Allow Changes to Cost Allocations to User Groups to Produce Fair Financial Plan**
- ❖ **Provide Tool that Town Can Continue to Use in the Future**



Financial Plan Update (cont.)

Enhancements

- ❖ **“De-couple” Septage Revenue from Septage Construction and Operation and Maintenance Costs: Ability to Utilize Revenue for Properties Who Continue to Utilize On-Site System**
- ❖ **Ability to Change Distribution of Operation and Maintenance Costs: By User Group and Revise Distribution of Costs**
- ❖ **Incorporate Minimum and Maximum Calculations with Input via the User Selection Tab: All Properties and Address Very High and Low Cost Allocations**
- ❖ **Incorporate Possible New Tax Revenue Source: Proposed Short Term Rental Tax to Off-set Operation and Maintenance Costs**
- ❖ **Ability to Better Represent the Per-parcel Results in Graphical or Table Format: Based on Input from BOS and Finance Committee Workshops**



Financial Plan Update (cont.)

Cost Allocation Assumptions

❖ Capital Costs- WWTF and Collection System

- Case 1 – 100% Tax Rate
- Case 2 – 50% Tax Rate, 50% Downtown Area/MHP Special Assessment

❖ Capital Costs Effluent Disposal and NT - 100% Tax rate

❖ O&M&R&M - 100% User Fees Allocated to Respective User Groups

❖ Financing

- 30-year 0% SRF
- 10% Grant
- Short Term Rental Tax (\$200,000)
- Septage Revenue (\$584,000 annually)
- 15% Contingency for Capital/ Replacement Costs

❖ Non-traditional and Septic Only costs do not include individual owner costs to pump and maintain on-site septic systems



Financial Model Flow Chart

Input Selections

Cost Estimate Sheets	Financing	Downtown Area	Downtown Area Special Assessment Breakdown	Meetinghouse Pond Area	Non-Traditional Technology Area	Septic System Only Area	Discounts, Offsets, and Additional Funds	Financial Model Outputs
Upload Files	Type (SRF or Conventional)	Special Assessment Percentage	Same for Residential, and Non-Residential/Mixed Use Properties	Special Assessment Percentage	Property Taxes Percentage	Property Taxes Percentage	Grant(s) Percentage	Project Complete "All in Year 1" – Average Property Costs
Number of WWTFs	Term (Years)	Property Tax Assessment	Residential Percentage	Property Tax Assessment			Design/Build Savings Percentage	Program Phased over 40-Years – Average Property Costs
Folder for Saving Files	Interest Rate		Non-Residential/Mixed Use Percentage				Design/Build/Operate Savings Percentage	Program Phased over 40-Years – Per Property Costs
							Local Tax Options Percentage	
							Annual Septage Revenue	



Financial Analysis Update - Cost Allocation

Setting Minimum and Maximum Costs Methodology

Basis: Cost Estimate v61

- ❖ Apply Maximum Annual Cost
- ❖ Apply Minimum* Annual Cost
- ❖ Re-allocate* the difference of costs Town-wide

*Excludes undevelopable parcels

	Case 1	Case 2
	100% Tax Rate	50% Tax Rate, 50% Special Assessment

Number owners with annual cost above:	\$7,000	49	69
Total costs owed by owners with costs above maximum:		\$ 730,591	\$ 1,094,352
Amount if owners with costs above maximum only pay maximum instead of calculated cost:		\$ 343,000	\$ 483,000
Balance to cover if they only pay the maximum:		\$ 387,591	\$ 611,352
Number of Owners to Increase to Minimum:	\$300	1007	1399
Surplus after minimum charge applied:		\$ 148,381	\$ 205,820
Net amount remaining to allocate:		\$ 239,210	\$ 405,532
Number of Owners to allocate to:		6,398	6,398
Additional cost allocated per owner:		\$ 37	\$ 63



Financial Analysis Update (cont.)

Cost Allocation Summary

Annual Costs (Year 20)

Basis: Cost Estimate v61

Annual Costs - Year 20

			Case 1		Case 2	
			100% Tax Rate		50% Tax Rate, 50% Special Assessment	
	Area of Orleans	Number of Users in Category	Total Average Annual Charges (Year 20)	Range of Total Annual Charges (Year 20)	Total Average Annual Charges (Year 20)	Range of Total Annual Charges (Year 20)
Sewered Areas	Sewered Area	387	\$1,720	\$7 - \$7,048	\$2,014	\$5 - \$7,079
	Downtown Non-Residential					
	Downtown Residential/Meetinghouse Pond	1,074	\$1,149	\$0 - \$7,048	\$1,455	\$0 - \$7,079
Unsewered Areas	Nitrogen Sensitive Areas	4,208	\$996	\$0 - \$7,048	\$891	\$0 - \$7,079
	Non-Traditional Areas					
	Non-Nitrogen Sensitive Areas	791	\$586	\$0 - \$7,048	\$486	\$0 - \$7,079
Septic Only						

Notes

1. NT Technology = Shellfish, PRB, NRB or On-site I/A System
2. The WWTF will be implemented in phases and therefore users do not pay user charges or special assessments until their phase is implemented. All costs shown here represent "Year 20" when everyone will be connected and paying user charges.
3. Wastewater flows were determined as 95% of the average 2014-2015 water usage data.
4. Assessed values based on FY 2015 assessor's data.
5. Special Assessments are applied to applicable user groups (Downtown and Meetinghouse Pond).
6. Non-residential categories include all parcels that are not 100% residential, such as mixed use, conservation, developable, etc.
7. Maximum and minimum total annual costs were applied, Town-wide. The minimum charge was not applied to the 161 undevelopable parcels. The cost differential was allocated equally Town-wide (with the exception of the 161 undevelopable parcels).
8. The minimum shown for the re-allocated costs does not include undevelopable parcels, which may have an annual cost less than the minimum charge.
Minimum: \$300 Maximum: \$7,000



Financial Analysis Update (cont.)

Cost Allocation Summary

Annual Costs (Year 20)

Basis: Cost Estimate v63

Annual Costs	Year:	20	Case 1		Case 2	
			100% Tax Rate		50% Tax Rate, 50% Special Assessment	
	Area of Orleans	Number of Users in Category	Total Average Annual Charges	Range of Total Annual Charges	Total Average Annual Charges (Year 20)	Range of Total Annual Charges (Year 20)
Sewered Areas	Sewered Area	387	\$1,656	\$7 - \$7,033	\$1,960	\$5 - \$7,058
	Downtown Non-Residential					
	Downtown Residential/Meetinghouse Pond	1,174	\$1,051	\$0 - \$7,033	\$1,358	\$0 - \$7,058
Unsewered Areas	Nitrogen Sensitive Areas	4,208	\$984	\$0 - \$7,033	\$872	\$0 - \$7,058
	Non-Traditional Areas					
	Non-Nitrogen Sensitive Areas	791	\$572	\$0 - \$7,033	\$466	\$0 - \$7,058
Septic Only						

Notes

1. NT Technology = Shellfish, PRB, NRB or On-site I/A System
2. The WWTF will be implemented in phases and therefore users do not pay user charges or special assessments until their phase is implemented. All costs shown here represent "Year 20" when everyone will be connected and paying user charges.
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Financial Plan Update (cont.)

Additional Next Steps

- ❖ **Continue to Account for Users within Large Housing Complexes**
- ❖ **Continue to Refine and Reduce Both Capital and O&M Costs**
- ❖ **Review Cost Allocation Methodology with Department of Revenue to Confirm Details of Application**
- ❖ **Review Billing Mechanisms with Water Department and Assessor's Office**
- ❖ **Review Affordability Pending Final Cost Numbers at Bid Phase**
- ❖ **Include Low Income Provision**
- ❖ **Provide Rate Stabilization Fund**
- ❖ **Plan for Funding Reserve Accounts**





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Thank You

❖ **Extra slides**



Financial Analysis Comparison of April and August Model Results

			Case 1		Case 2	
			100% Tax Rate		50% Tax Rate, 50% Special Assessment	
	Area of Orleans	Cost Description	Total Average Annual Charges (Year 20)	Range of Total Annual Charges (Year 20)	Total Average Annual Charges (Year 20)	Range of Total Annual Charges (Year 20)
Sewered Areas	Sewered Area Downtown Non-Residential	April 2017 Model Results	\$1,285	\$307 - \$7,007	\$1,727	\$307 - \$7,028
		<i>August 2017 Model Results</i>	<i>\$1,720</i>	<i>\$7 - \$7,048</i>	<i>\$2,014</i>	<i>\$5 - \$7,079</i>
	Downtown Residential/Meetinghouse	April 2017 Model Results	\$738	\$307 - \$7,007	\$1,091	\$307 - \$7,028
		<i>August 2017 Model Results</i>	<i>\$1,149</i>	<i>\$0 - \$7,048</i>	<i>\$1,455</i>	<i>\$0 - \$7,079</i>
Unsewered Areas	Nitrogen Sensitive Areas Non-Traditional Areas	April 2017 Model Results	\$939	\$307 - \$7,007	\$801	\$307 - \$7,028
		<i>August 2017 Model Results</i>	<i>\$996</i>	<i>\$0 - \$7,048</i>	<i>\$891</i>	<i>\$0 - \$7,079</i>
	Non-Nitrogen Sensitive Areas Septic Only	April 2017 Model Results	\$518	\$307 - \$7,007	\$418	\$307 - \$7,028
		<i>August 2017 Model Results</i>	<i>\$586</i>	<i>\$0 - \$7,048</i>	<i>\$486</i>	<i>\$0 - \$7,079</i>

Notes

1. The increase in user costs between April 2017 and August 2017 is primarily associated with an increase in WWTF O&M costs (correct number of staff identified, utility pricing updated, and increase in sludge disposal costs).
2. The range of total annual charges presented for August 2017 Model Results includes undevelopable parcels which are not charged the \$300 minimum user charge. The range presented for April 2017 excluded these undevelopable parcels in order to reflect the implementation of the \$300 minimum.
3. Costs are continuing to be reviewed to reduce user costs to levels predicted in late spring 2017 through the following means:
 - Reduction in inflation rate,
 - Further reducing capital and O&M contingency,
 - Evaluating whether contract ops saves on labor, and
 - Updating the financial model to account for number of users at locations such as the Rock Harbor Village Apartments (model does not account for individual users).





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Hand-Out

Financial Model Inputs - Costs

❖ Number of Wastewater Treatment Facilities

The financial model accepts Cost Estimates sheets for one or two facilities.

- Two treatment facilities – Costs separate for each of the facilities. Properties pay for operations of facility in their area.
- One treatment facility – Costs for Downtown facility and collection in Meetinghouse Pond area. Downtown and Meetinghouse Pond properties pay for facility operations.

❖ Septage Handling

The financial model ensures costs for septage are only included if necessary. The Cost Estimates sheets include septage for the Downtown facility. The model removes septage costs if the facility is not to handle septage.

❖ Financing

The financial model allows selection of different financing options. Each option impacts the amount of financing costs to be paid over the financing period.

- SRF – SRF financing generally has low interest rates, but includes origination and administrative fees. The Town has been focused on 30-year, 0% SRF financing.
- Conventional – Conventional borrowings, generally with higher interest rates than SRF borrowings, can be produced in the model.
- Term – The model accepts a term (number of years) for the borrowings from 5-50.
- Interest Rate – The model accepts an interest rate for the borrowings $\geq 0\%$.



Financial Model Inputs – Allocation of Costs

❖ Capital and Financing Costs

Capital costs from the Cost Estimates sheet. Financing costs from borrowings created to pay for the capital.

- Property Taxes – A percentage of capital and financing costs for the treatment facility/facilities to be paid by property taxes. Capital and financing costs for the other solutions are funded by property taxes. This option allocates costs town-wide.
- Special Assessments – A percentage of capital and financing costs for the treatment facility/facilities to be paid by special assessment. Downtown assessments can be weighed the same for residential properties and non-residential properties or different.
- Combination – A combination of property taxes and special assessments, like 50% each, can be selected in the model.

❖ Annual Costs

These costs include operations and maintenance (O&M) costs, replacement costs, and monitoring costs.

- Users in area only – Properties in the area of the solution pay for the solution's costs. The Town has been focused on this option.
- NT costs town-wide – Costs of the non-traditional technologies paid by all properties in town.
- NT costs non-sewered – Costs of the non-traditional technologies paid by all non-sewered properties in town.



Financial Model Inputs – Other Selections

❖ Offsets/Additional Funding Sources

Each of these selections can reduce the amount of costs paid.

- Grants/Principal Forgiveness – The percentage of town-wide capital costs not included as costs allocated. The Town is focused on 10% in the model.
- Design/Build (D/B) Savings – The percentage of town-wide capital costs not included as costs allocated. The Town is focused on not using this in the model.
- Design/Build/Operate (D/B/O) Savings – The percentage of town-wide O&M costs not included as costs allocated. The Town is focused on not using this in the model.
- Additional Local Tax Options – The percentage of town-wide annual costs not included as costs allocated. The Town is focused on not using this in the model.
- Septage Revenue – The calculated annual amount of revenue collected from septage disposal that, if applied, reduces the annual costs for each area. The model supports septage processing, without a septage revenue offset, which mimics the setting aside of that revenue for another purpose. The Town is focused on an amount of \$584,000.
- Short Term Rental Tax – An amount to be applied as an offset to town-wide capital costs or to town-wide O&M costs. The Town is focused on a \$200,000 O&M offset.

❖ Minimum and Maximum Annual Costs

The model supports the setting of a minimum and maximum amount of costs annually by property, which ensures each property pays at least a certain amount and at most a certain amount.

