

**FUNDING STRATEGY FOR THE CAPE'S
WASTEWATER PROGRAM**
[Executive Summary Version]

Clean Water Protection Collaborative

Fall, 2013

What are the Benefits of the Wastewater Program?

For most residents of Cape Cod there are [seven](#) broad public benefits:

- Protection of the Cape's drinking water resources
- Protection of public health and meeting sensible sanitation standards
- Permits responsible growth and targeted economic development
- Renewal and protection of saltwater and freshwater resources
- Maintains residential and commercial property values
- Insures compliance with federal and state laws and regulations
- Recognizes that civilized communities do not foul their own nest

Funding Facts

Total capital cost of building needed wastewater system on Cape Cod:

\$5.2 billion to \$7.6 billion (est.)

There are 215,888 people living on Cape Cod, per FY10 census, and decreasing.

There are 133,215 developed properties on Cape Cod (increasing over project period).

On a *per property* basis, each property owner would be responsible for capital costs (only) between \$38,900 to \$46,000.

- Range based on two major variables: form of organization and future development of Cape Cod
- *Does* consider an amount to repair/replace Title 5 septic systems **not** connected to a WWTP
- Amounts *do not* include system operating expenses. Cape Cod's annual wastewater operating costs will range from \$38.1 to \$69.1 million
- If only half of Cape properties are system customers and payers, double per property cost estimate
- *Does not* take into consideration any cost impact from potential Clean Water Act litigation
- Property connection costs and fees *not* included
- *Does not* take into consideration any new costs resulting future increases in wastewater standards
- Neither inflation, deflation or increases in household income are included in estimates

Guiding Policies and Principles

What are the fundamental policies and principles for an affordable funding strategy?

1. Execute the desired capital program over two generations – **50 years**.
2. Everyone on Cape Cod will directly benefit from the program and everyone should contribute.
3. 50% of the capital cost and 100% of the operating costs will be paid by Cape Cod residents and businesses.
4. A significant portion of the *capital* costs (approximately 25%) should derive from one or more new sources of state-wide or regional revenue spread over a larger population base, in addition to reducing interest on project debt to 0%.
5. Another significant portion of the *capital* costs (approximately 25%) should derive from construction grant funding from the federal government.
6. Financial relief for low-income households is needed, but not as a result of shifting the cost of the relief to other rate or tax-payers.

Wastewater Program – Four Scenarios

WASTEWATER CAPITAL COSTS, INTEREST ON DEBT AND TITLE 5 GRANTS (in billions)

	Cape-wide 0% Growth	Town-By-Town 0% Growth	Cape-wide 30% Growth	Town-By-Town 30% Growth
Collection, Treatment, Disposal	\$3.361	\$3.824	\$4.021	\$5.303
Interest on Debt	1.018	1.018	1.358	1.358
Title 5 Grants	<u>.804</u>	<u>.809</u>	<u>1.121</u>	<u>.930</u>
TOTAL	\$5.183	\$5.651	\$6.500	\$7.591

Notes:

First two cases assume \$3 billion in borrowings; last two cases assume \$4 billion in borrowings

Borrowings are assumed to be at 2%, with each issuance amortized over 30 years with debt issued every other year for 50 years

100% Title 5 grants for residential property owners to repair and replace septic systems

References: See <http://www.capecodcommission.org/regionalplans/RWMP/RWMPcosts> and http://www.waquoitbayreserve.org/wp-content/uploads/Regional-WW-Funding-Strategies_Bob-Ciolek.pdf

Wastewater Program – Annual Per Property Costs for Cases

AVERAGE ANNUAL PER PROPERTY COSTS

	Cape-wide 0% Growth	Town-By-Town 0% Growth	Cape-wide 30% Growth	Town-By-Town 30% Growth
Collection, Treatment, Disposal	\$505	\$556	\$607	\$688
Interest on Debt/Title 5 Grants	274	274	307	332
O & M Costs	<u>491</u>	<u>593</u>	<u>454</u>	<u>659</u>
50 Years – Annual Cost	\$1,270	\$1,423	\$1,368	\$1,679

Notes:

First two cases assume \$3 billion in borrowings; last two cases assume \$4 billion in borrowings

Borrowings are assumed to be at 2%, with each issuance amortized over 30 years with debt issued every other year for 50 years

100% Title 5 grants for residential property owners to repair and replace septic systems

Capital costs, debt service and Title 5 Grant program costs paid by all properties, growing in number over time; Operating costs paid by properties receiving treatment, growing in number over time

Average capital and operating costs based on mid-points of projected costs and number of properties on Cape Cod or connected to system

The Federal Government Needs to Help Cape Cod

The federal Clean Water Act is the principal statute requiring the residents and businesses on the Cape to meet federal wastewater mandates. In view of any reasonable standard of affordability, it has a moral obligation to help the 215,000 people and businesses on Cape Cod who will pay most of the project costs.

- The United States government provided \$973 million in funding to repair and construct wastewater facilities in the Greater Boston area. The federal government paid between 21% to 25% of all MWRA wastewater capital costs.
- Notwithstanding the termination of its construction grant programs, the federal government has made substantial contributions (i.e., “earmarks”) to other wastewater capital projects, such as the cleanup effort for Chesapeake Bay, Lake Champlain, Mexico, the Everglades and other projects across the country.
- The federal government has significant assets on Cape Cod which should be protected. The Cape Cod National Seashore and the federal assets at the Massachusetts Military Reservation are of substantial value to the United States.

We need to ask the federal government to contribute 25% of the capital cost associated with our wastewater needs.

The State Government Needs to Help Cape Cod

In order to demonstrate where funding could derive, a “**Menu of Revenue Options**” should be offered to the Commonwealth for its consideration. While no one option is recommended, the **possible revenue options should be based on three key criteria**:

- That the revenue measure has state-wide applicability as it is not likely that the state will simply act to solve the Cape’s problems alone
- That the measure is large enough to have a major impact on affordability as it serves no purpose to fight for funding which is of little help
- That the revenue rests on a wide base of funding as any funding measures need to be raised from the greatest number of individuals as possible

An exception to the criteria would be lesser revenue measures which may be used to assist with rate relief for low-income households and not cause a shift of those costs to other tax or rate payers.

We need our state government to provide the means to raise revenue equal to 25% of the capital cost associated with the Cape’s wastewater program, plus 0% loans.

Self-Help Decisions Will Save Money

What MUST we do to help ourselves? If we ask for money from the federal and state governments, what must we do to justify their financial assistance? Basically, we have the ability to save significant dollars as a result of making two key decisions:

1. Choosing the appropriate (least cost) organizational model.
2. Directing growth into non-nitrogen sensitive (least cost) areas of Cape Cod.

The appropriate organizational model will reduce capital costs – we do not need a dozen or more wastewater treatment facilities and wastewater disposal sites in most towns. We need to focus on shared watersheds and avoid duplicative efforts, prevent over-building of wastewater facilities and use I/A technology and adaptive management approaches where economically and environmentally feasible .

Directing future development into primarily non-nitrogen sensitive parts of the Cape avoids the need to build additional and expensive treatment facilities. Set a firm goal of keeping future growth on Cape Cod to **15%** over project period.

Both policy decisions, if selected, ***will save an estimated \$1.2 billion.***

Menu of Revenue Options – Suggested Measures

The suggested “**Menu of Revenue Options**” will be targeted to meet needed expenditures to repair or build needed water and wastewater infrastructure. The various suggested options for state consideration are:

- Increase Motor Fuels Tax by 5 cents per gallon: 5 cents = \$138.5 million per year
- Create a 1 to 3 mill excise on water consumption: 1 mill = \$82 million per year
- Earmark new gaming revenue: 25% of revenue = \$115 million per year
- Earmark expected Internet sales tax: 25% of revenue = \$84 million per year
- Toll canal bridges (with new bridge) \$8.7 to \$48.2 million per year

Each measure would, if acceptable to the Commonwealth, create sufficient revenue to have a major and positive impact in meeting statewide revenue needs for unmet water and wastewater infrastructure projects.

Menu of Revenue Options – Low-Income Assistance

The suggested “**Menu of Revenue Options**” should also include a list of measures producing less revenue, but targeted to provide relief for tax and rate payers. Some work on a state-wide basis, others work best for the Cape alone.

Statewide Measures:

- Restructure boat values and tax = amount is uncertain
- Bottle bill amendment = \$20 million in new funding annually (speculative)
- Create Septic Improvement Fund with an excise tax of \$200 per installation and \$20 per pump-out = \$3.9 million statewide annually

For Cape Cod Only:

- Increase Ferry Embarkation excise tax by \$1.50 = \$2.5 million annually for ferry traffic
- Expand room occupancy tax to seasonal rentals = \$10 million annually (speculative)
- Create Air Embarkation excise tax (equal to current federal embarkation fee) of \$1.50 = \$277,000 annually
- Re-dedicate existing local option meals and room occupancy excise taxes = \$18.8 million annually

Menu of Revenue Options – Suggestions For Discussion

The suggested **“Menu of Revenue Options”** list also includes three important items which need further discussion with the Commonwealth. They are:

- Create a program of business investment credits for state tax relief
- Pledge the Commonwealth’s “full faith and credit” for initial financings
- Commit to 0% interest for loans from Statewide Revolving Loan Fund, saving approximately \$1.0 to \$1.4 billion in project costs

In addition to the menu of options, the legislation creating the revenue measures should contain appropriate language to target the funds for water and wastewater infrastructure projects and for tax and rate relief as designated. The Cape needs to insure that any targeting language in legislation will achieve our revenue or cost savings goals.

Wastewater Program – Success Scenario

WASTEWATER CAPITAL COSTS, INTEREST ON DEBT AND TITLE 5 GRANTS (in billions)

Collection, Treatment, Disposal [<i>If Town-By-Town and if 30% Growth</i>]	\$5.303
Interest on Debt	1.358
Title 5 Grants	<u>.930</u>
Highest Cost Scenario Total	\$7.591
<i>Less Self-Help Savings [Choose Cape-wide effort and growth at 15%]</i>	<u>(1.158)</u>
Subtotal Prior to State and Federal Assistance	\$6.433
<i>Less Title 5 Adjustment</i>	.191
<i>Less State and Federal Assistance</i>	(2.000)
0% Interest on Debt	<u>(1.358)</u>
REVISED TOTAL	\$3.266

Notes:

Assumes \$4 billion in borrowings for base case

Base case borrowings are assumed to be at 2%, with each issuance amortized over 30 years with debt issued every other year for 50 years

100% Title 5 grants for residential property owners to repair and replace septic systems

Wastewater Program – Annual Per Property Costs, Revised Case

AVERAGE ANNUAL PER PROPERTY COSTS

Collection, Treatment, Disposal [<i>If Cape-wide and if 15% Growth</i>]	\$443
Interest on Debt/Title 5 Grants [<i>0% Interest</i>]	150
O & M Costs	<u>531</u>
REVISED TOTAL	\$1,124

Notes:

100% Title 5 grants for residential property owners to repair and replace septic systems; Further savings possible by lowering grant to a dollar for dollar match (50% grant)

Capital costs, debt service and Title 5 Grant program costs paid by all properties, growing in number over time; Operating costs paid by properties receiving treatment, growing in number over time

Average capital and operating costs based on mid-points of projected costs and number of properties on Cape Cod or connected to system

In addition, [creating a monthly utility billing system](#) will make managing household budget for wastewater utility costs easier

Success results in an annual per property savings of \$555.00, a reduction of 33.1%

All estimates based on engineering analyses performed from 2011 to 2012; Final numbers will require development of a construction plan.

Author's Note:

The material contained in this presentation is the work of the author and has not been accepted or approved by any other person or governmental body. It is intended to be a useful model showing the Cape-wide financial impact resulting from the efforts of fifteen Cape Cod communities in addressing their wastewater issues. It also is a model showing the Cape-wide financial impact of possible reductions in the cost of addressing those wastewater issues.