



what will protecting our water resources cost?



Town of Harwich Phase 2 Implementation

2017 Annual Town Meeting — Articles 11 and 12 and Ballot Questions 1 and 2

41 Cents Per Day

The average tax increase for a resident in a \$350,000 assessed value home to fund the Phase 2 amount is about \$150 annually assuming all construction costs are recovered via general property tax. The average annual tax increase for the entire 40-year wastewater program is about \$400. Those connected to a sewer would also pay a portion of the operation and maintenance costs and the initial hook-up cost to connect their home to the pipe in the street. **Cost breakdowns for each of the possible scenarios are presented in this handout.**

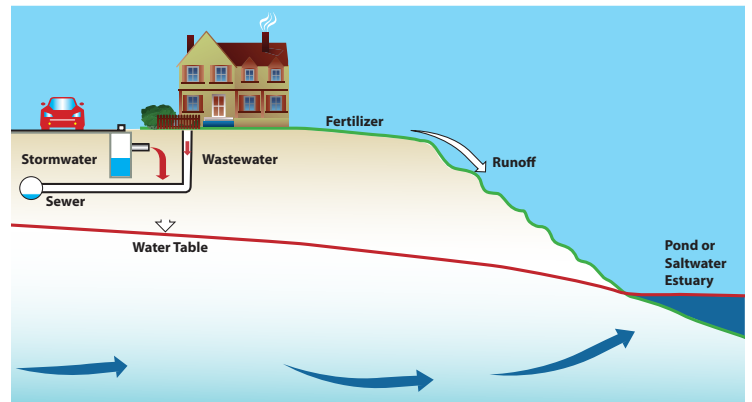


Phase 2 Funding			Total = \$34,165,000
Source	Amount	Component	
Art. 11	\$6,765,000	Capacity Purchase at Chatham WPCF	
Art. 11	\$2,020,000	Design of Pleasant Bay (South) Sewer System	
Art. 11	\$250,000	Design of Chatham Interconnector System	
Art. 12	\$2,000,000	Design, Construction and Implementation of Cold Brook Project	
FY 19	\$20,280,000	Construction of Pleasant Bay (South) Sewer System	
FY 19	\$2,150,000	Construction of Chatham Interconnector System	
CPC	\$550,000	Hinckleys Pond Restoration	
Budget	\$150,000	CWMP Implementation Services	

Connected to Sewer System

As a Harwich resident located in a proposed sewer service area, I will need to do the following:

- Hire a contractor approved by the Town of Harwich to disconnect the waste pipe currently going to my septic system and install a 6-in diameter pipe out to the street property line to connect into the sewer installed in the street. This connection must be done within one year of the sewer being available for use in the street. During sewer installation, stubs for these future connections will be coordinated with each resident. Connections from the old septic system to the new sewer connection can be switched over in a day.
- Also have the contractor pump out my existing septic tank and then crush it and fill it with clean fill or remove it. The same must be done if the leaching field uses concrete leaching chambers versus pipe and stone. All voids must be filled.
- Since the costs for this sewer connection from my house to the street is an individual homeowner's responsibility, a loan may need to be coordinated. Typical costs for septic system decommissioning and sewer connections are estimated to be about \$5,000 to \$7,000.
- Once connected to the sewer, I will pay an annual operation and maintenance (O&M) fee based on the amount of water used. The billing will utilize my existing water meter to determine that amount of flow.



Tax Rate Increase (Phase 2 - \$350K assessed value)	\$150
Connect house to sewer (\$7,000 ave, 5% interest, 15 yrs)	\$675
Sewer user cost (typical from Chatham; water use 70,000 gals/yr)	\$510
Total Annual Cost	\$1,335

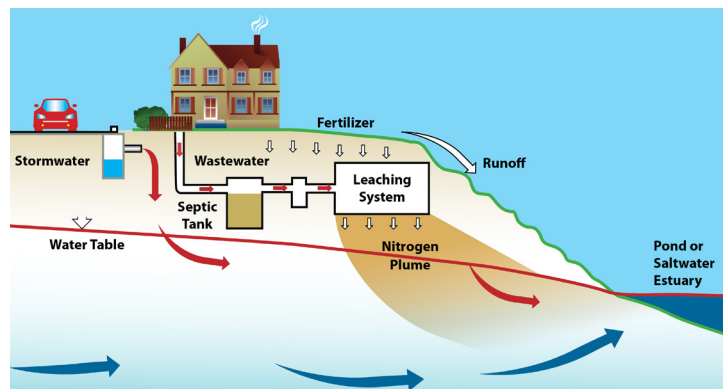
As shown in the cost table, I will pay my share of the tax increase for the sewer system, a loan payment for the sewer connection for the life of the loan and an annual O&M sewer user fee for treating the wastewater.

Standard On-Site Title 5 System

As a Harwich resident not located in a proposed sewer service area, I will need to continue to do the following:

- Pump out my septic tank once every three years to ensure that solids do not build up and overflow into my leaching field resulting in clogging of the field and potential system failure.

As shown in the cost table, I will pay my share of the tax increase for the sewer system, pay to have my septic system pumped out once every three years, and set aside money to pay for my septic system replacement projected to occur every 25 years.

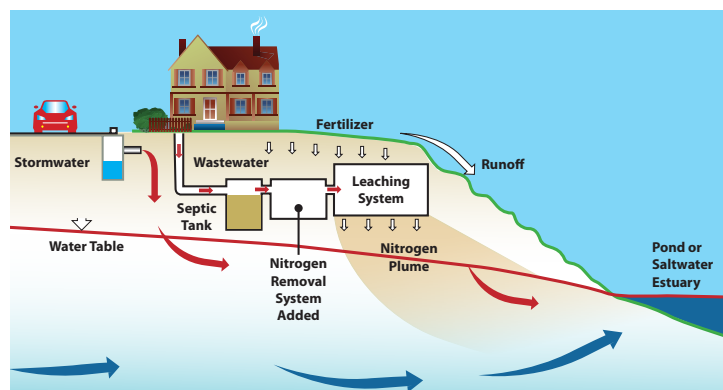


Tax Rate Increase (Phase 2 - \$350K assessed value)	\$150
Septic system pump-out/ 3 years (\$360 average cost)	\$120
Septic system replacement cost (\$15,000, 5% interest, 25 yrs)	\$1,065
Total Annual Cost	\$1,335

On-Site Nitrogen Removal System

If Harwich decides not to fund the recommended wastewater program and the Massachusetts Department of Environmental Protection (MassDEP) then revises the Title 5 septic system regulations to require every resident in a nitrogen sensitive watershed to install their own on-site nitrogen removal system, as a Harwich resident living in a nitrogen sensitive watershed I will need to do the following:

- Hire a contractor to revise my existing septic system and install additional biological and/or chemical processes to upgrade my system to one that removes nitrogen.
- Since the costs for installing this enhanced Title 5 system is an individual homeowner's responsibility, a loan may need to be coordinated. Typical costs for installing these systems are estimated to be about \$20,000 to \$25,000.
- Hire an operator to monitor and sample my new nitrogen removal system as this system is much more sophisticated than an existing Title 5 system and its performance needs to be monitored and adjusted as needed.
- Pump out my septic tank at least once every three years to remove the additional solids being generated and prevent them from overflowing into the leaching field and potentially clogging the field or causing system failure.



Septic system pump-out/ 3 years (\$360 average cost)	\$120
Upgrade to nitrogen removal system (\$20,000, 5%, 25 yrs)	\$1,790
On-site operation and maintenance cost (estimate)	\$2,615
Total Annual Cost	\$4,525

As shown in the cost table, I will pay to have my septic tank pumped a minimum of once every three years, a loan payment for installing my nitrogen removal system and annual O&M costs associated with hiring an operations firm to monitor and sample my system.

Cost Scenarios Summary

		Total Annual Cost
\$	Connected to Sewer System	\$1,335
\$	Standard On-Site Title 5 System	\$1,335
\$\$\$	On-Site Nitrogen Removal System	\$4,525



A wastewater tax calculator is on the town website at:
bit.ly/HarwichWWCalc

For additional information go to:

• <http://www.harwich-ma.gov> • <http://bit.ly/HarwichCWMP> • <http://bit.ly/HarwichWIC>