Ballot Language:

“Shall the Town of Falmouth be allowed to exempt from the provisions of proposition two and one-half, so called, the amounts required to pay for the bonds issued in order to pay costs of engineering, design, construction, and other related costs to implement the Comprehensive Wastewater Management Plan and related projects including: Little Pond sewer service area; wastewater treatment plant improvements; discharge area site 7; Bourne’s Pond inlet widening; and the Woods Hole Infiltration/Inflow project, and any other costs related thereto?”
Bournes Pond Inlet Widening Project

Existing Inlet Opening

Proposed Inlet Widening

Proposed Inlet Bridge
Wastewater Treatment Facility Upgrades

*Required by DEP permit and settlement agreement*

Construct a new pH / alkalinity adjustment system; Upgrade denitrification filters; Improve sludge thickening system; Improve sequencing batch reactors; Construct odor control system at service road vent
Woods Hole Infiltration/Inflow Project

Built in late-1940’s

Reduction of saltwater and freshwater leaks by 30,000 gallons/day

Installation of resin liner within existing pipes

Required by DEP permit and settlement agreement

Liner cured in place
Little Pond MEP Watershed Delineation
Little Pond Sewering Project

1480 parcels = 1600 Sewer Equivalent Units (SEUs)

Owner-occupied primary residences
(433 SEUs) 27%

Vacation homes and rentals
(841 SEUs) 53%

Commercial/Multi-family
Senior Housing/Other
(326 SEUs) 20%
<table>
<thead>
<tr>
<th>PROJECT</th>
<th>TOTAL PROJECT COST</th>
<th>PREVIOUSLY VOTED (2013)</th>
<th>ARTICLE 28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Little Pond Sewering</td>
<td>$44,000,000</td>
<td>− $4,500,000</td>
<td>$39,500,000</td>
</tr>
<tr>
<td>Bournes Pond Inlet Widening</td>
<td>$5,520,000</td>
<td>− $300,000</td>
<td>$5,220,000</td>
</tr>
<tr>
<td>Treatment Plant Improvements</td>
<td>$5,200,000</td>
<td>− $800,000</td>
<td>$4,400,000</td>
</tr>
<tr>
<td>Woods Hole Infiltration/Inflow Repairs</td>
<td>$700,000</td>
<td>−</td>
<td>$700,000</td>
</tr>
<tr>
<td><strong>TOTAL to be voted:</strong></td>
<td></td>
<td></td>
<td><strong>$49,820,000</strong></td>
</tr>
</tbody>
</table>

Current tax rate: $8.15/$1000 - Tax impact for projects: $0.12/$1000 - $400,000 home = $48/year

PROJECTS DO NOT INCREASE TAX LEVY
Now is the Time

**Financial Impacts of delay:**
- Project costs will rise
- State commitment to 0% interest loan will expire
- Tax override for project will be required in the future

**Reduced Quality of Life:**
- Fish Kills, Algae Blooms, and Odors
- Oxygen depletion and Shellfish Decline

**MA DEP can enforce water quality standard:**
- Nitrogen pollution level currently at .84 mg/L
- Clean water standard is .45 mg/L

Fish Kills from Little Pond
Initial Proposal: a $600 M Solution
7 Years of Planning: Sewering Little Pond ONLY
Alternatives Considered for Little Pond

*Sewering achieves 88% of the required nitrogen removal*  
*Alternatives do not get close to meeting the 100% removal of septic nitrogen that is required to meet the standard in Little Pond*

- **Inlet Widening**
  - Public Meeting held: neighbors opposed to idea (flooding concerns)
  - Benefit to Little Pond: ~10% of total nitrogen that must be removed
  - By comparison: Bournes Pond inlet widening achieves ~50% removal

- **Shellfish Aquaculture**
  - Oyster Math: 8 acres = 4% of total nitrogen that must be removed
  - Liberal assumptions: max bags & shellfish/bag, all grow to 2”, 100% live

- **Permeable Reactive Barriers**
  - No perimeter road/no suitable locations

- **Wetlands Systems**
  - No land for stormwater remediation, constructed wetlands, buffers
  - Floating Islands do not remove nitrogen in saltwater without shellfish
Alternatives Considered for Little Pond

Sewering achieves 88% of the required nitrogen removal

Alternatives do not get close to meeting the 100% removal of septic nitrogen that is required to meet the standard in Little Pond

- **Eco-toilets**
  - Greywater has significant nitrogen content
  - Installation costs are high
    - Materials and plumbing modifications
    - Bathroom remodeling disruptive
    - Monitoring and liquids removal
  - Public Acceptance Issue
    - Over 155 self-selected, predisposed people requested information
    - Less than 15 have taken next steps in enrolling in program
    - Cost was NOT the reason most opted not to participate
    - Space, maintenance, aesthetics, disruption, end result

There have been Public Meetings, and Working Group Sessions to review and discuss these alternatives
Alternatives Considered for Little Pond

*Sewering achieves 88% of the required nitrogen removal*

*The Falmouth Plan includes alternatives for the remaining 12%*

- **Inlet Widening**
  - Full analysis after Bournes Pond inlet widening

- **Shellfish Aquaculture**
  - Final determination after 3 years of water quality monitoring

- **Eco-Toilets**
  - Likely fewer than 3% of homes will install
  - Nitrogen in remaining greywater still polluting the pond

- **Fertilizer Control**
  - Will remove nitrogen if there is a high level of voluntary compliance and strong enforcement of Town Bylaw
Betterment Process

A. Capital Cost Component:
Total Capital Cost with Contingency (in July 2016 dollars, Table 4-6 of CWMP) for Little Pond Sewer Service Area Collection System: $41,000,000

B. Sewer Equivalent Units:
Based on a detailed analysis of residential & commercial properties, there are 1600 Sewer Equivalent Units in the Little Pond Sewer Service Area

\[ \frac{41,000,000}{1600 \text{ SEU}} = \$25,625 \text{ per SEU} \]

C. Percent Component:
Assume a 0% interest rate (due to 0% SRF loan) with level payments, as allowed by the Special Act voted by Town Meeting (S. 1939) Betterment percent voted at April 2014 Town Meeting (Article 27): 70%

\[ 70\% \times \$25,625 = \$17,938 \]
\[ \frac{\$17,938}{30 \text{ years}} = \$598/\text{year} \]

Estimated date of first payment: 2017-18
## Cost Comparison: Septic System vs. Sewer

<table>
<thead>
<tr>
<th>Summary of Estimated Costs</th>
<th>Annualized Avoided Costs</th>
<th>Annualized Sewer Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump out: every three years @ $300</td>
<td>$100</td>
<td>na</td>
</tr>
<tr>
<td>New leach field or septic replacement for cesspool:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 years @ 5% ($10,000 - $20,000)</td>
<td>$800 - $1600</td>
<td>na</td>
</tr>
<tr>
<td>One-time hook up: 20 years @ 5% ($2500 - $4000)</td>
<td>na</td>
<td>$200 - $325</td>
</tr>
<tr>
<td>Electricity for grinder pumps:</td>
<td>na</td>
<td>$25</td>
</tr>
<tr>
<td>Sewer usage charge:</td>
<td>na</td>
<td>$300</td>
</tr>
<tr>
<td><strong>Subtotal without Betterment:</strong></td>
<td>$900 - $1700</td>
<td>$525 - $650</td>
</tr>
<tr>
<td><strong>Comparison:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Septic system versus total sewer cost including $598</td>
<td>$900 - $1700</td>
<td>$1123 - $1248</td>
</tr>
<tr>
<td>betterment (70% betterment @ 0% for 30 years)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To estimate your sewer usage charge: double your annual water bill.
Financial Help to Homeowners

- **One-time hook-up costs:** Barnstable County Department of Health & Environment's Community Septic Management Loan Program.
- **Full deferral of betterment payments:** (MGL Ch. 80, sec 13B)
- **Senior Circuit Breaker Property Tax Credit:** Property tax + betterments + 50% of water and sewer charges
- **Special Legislation:** will allow for betterments to be paid over 30 years instead of 20 years, at 0% interest instead of 2% or higher, in equal amounts (like a mortgage) instead of descending amounts, and in quarterly payments with the regular tax bill instead of once a year.
- **Personal Income Tax Credit:** for Failed Cesspool or Septic System (TIR 97-12) may apply
- **Eco-toilet Exemption** option (installations may cost as much as betterment)
Consequences of Delay: #1

Construction costs for major infrastructure projects like this only go up.

If the town had sewered the Little Pond area in 1983 when it was recommended as Phase II of the original plan, it would have cost $3.5 million.

_A Recent Example:_

In New Silver Beach, construction costs tripled due to 10 year delay. Actual betterment paid by property owners increased from $15,437 to $27,585.
Consequences of Delay: #2

The ability to fund this project is already in the Town budget: new debt replacing expiring debt.

There is no increase in the tax levy.

If the Town does not go ahead with this project, this “window of opportunity” will close.
Consequences of Delay: #3

The Town has already qualified for a 0% State Revolving Fund loan. This saves approximately $10 million in interest.

If the town does not go ahead with the plan by October 2014, this commitment for 0% interest will expire.
Next Steps

• **May 20, 2014:** Ballot vote
• **October 15, 2014:** State Revolving Fund applications submitted
• **Winter 2015:** Betterment Hearing
• **Spring 2015:** Construction begins

This presentation available at:
http://www.falmouthmass.us/depart.php?depkey=waterq