

NEWEA Charrette  
January 24, 2022

# Buzzards Bay Coalition

- Nonprofit, membership organization founded in 1987.
- Supported by over 10,000 members.
- Dedicated to restoration, protection and sustainable use & enjoyment of the Bay and its watershed.
- Work to improve the Bay ecosystem's health through advocacy, research, conservation, and education.







# Proving Retrofits Work

# West Falmouth Pilot Project



Proving Retrofits  
Work

# West Falmouth Pilot Project

30 systems  
10 more to  
come

West Falmouth Harbor Shoreline Septic Remediation Project



## Proving Retrofits Work

# West Falmouth Pilot Project

## Results

Technology	Average % TN Reduction	Median % TN Reduction
Hoots	67%	76%
Eliminites	61%	71%
NitROEs	92%	93%
Layer Cake	91%	91%
Blackwaters	51%	77%

Data combined for all systems installed to date. Amount of data available per system varies depending on installation date. Outlier 'events' affecting system performance NOT removed from datasets (ie. electricity disconnected, broken tank alarm, toxic cleaners dumped down drain by contractor, etc). Performance greater when these outliers removed.



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## Why we need an RME



### Homeowner Responsibility:

- Select & Pay for Engineer
- Select & Pay for System
- Select & Pay for Installer
- Select & Pay for O & M Provider

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## Why we need an RME



### Challenges of current structure:

- Heavily Reliant on Homeowners
  - Flush it and forget it
  - Select cheapest technologies and operators
  - Stifles innovation and performance
- Case by Case provides no economies of scale... \$\$\$\$
- No cohesive oversight and enforcement to ensure performance. If they are not watched, they are not working
- Structure doesn't support TMDL achievement



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## EPA Models

March 2003

Proposes 5 RME  
Models

Voluntary – RME  
Full Ownership



## Voluntary National Guidelines for Management of Onsite and Clustered (Decentralized) Wastewater Treatment Systems



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## Falmouth Model

# Meeting TMDL

- Town of Falmouth TWMP to meet TMDL using I/A systems that meet 10mg/L or at least 75% removal of TN.
- Town Responsibility:
  - Supply the physical components of the I/A system at no charge to homeowner.
  - Designate RME.
- Homeowner Responsibility:
  - Engineer, permit, install, and pay for Title 5 components of the system.
- RME Responsibility:
  - Record keeping, inspection, nitrogen monitoring, pumping and other maintenance, enforcement and state reporting on TMDL compliance.
  - May engage public or private contractors to perform some or all of these duties.

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## Falmouth Model

# Meeting TMDL

- Performance Monitoring
  - Probation Period: RME to monitor year-round systems every other month for one year. Seasonal systems sampled during occupied months which may be contiguous.
  - If after Probation Period 10mg/L or 75% TN removal not met, owner responsible for bringing system into compliance.
  - Post Probation Period, 1/12 of the systems in the watershed are sampled each month.
- TMDL Compliance Achieved when:
  - All systems meet 10mg/L or 75% removal of TN, or
  - Average of all systems meet 10mg/L or 75% removal, or
  - TMDL water column nitrogen at sentinel station is met, or
  - Watershed load meets TMDL target load.
- Fee Charged to Cover RME Costs.