Notes from a Pilot Watershed: Engaging Members of the Community – Lessons Learned and Future Plans

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Town of Charlestown, R.I. On-Site Wastewater Management Program
Water Resource and Environmental Protection

The University of Rhode Island Onsite Wastewater Resource Center

SAVE THE BAY® NARRAGANSETT BAY

The Pilot Watershed

A densely developed area

- 1,239 properties — 97% residential, 3% commercial in 1,549 acres (2.4 mi^2)

Impaired ground & surface water

- Septic systems represent 79% of Nitrogen load to watershed; only 28% systems use advanced Nitrogen-reducing technology
  - Fertilizers and animal waste account for another 19% of Nitrogen load
- Groundwater Nitrate concentrations average >2 mg/L; some areas exceed the EPA drinking water standard of 10 mg/L
- Degraded salt pond water quality—ecosystem shifts, algal blooms, shell fishing closures, swimming advisories

Pilot Watershed

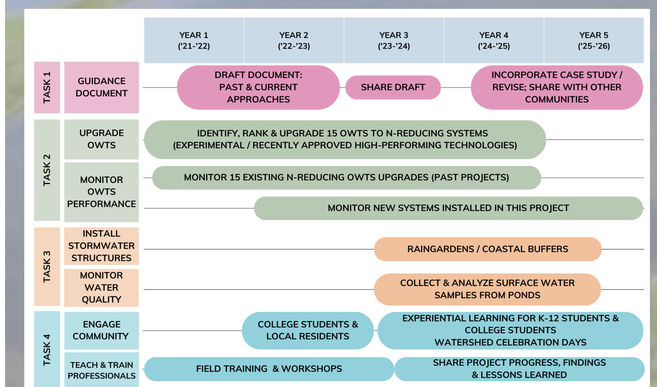
Project Goals

Reduce nutrient loading to ground and surface waters

- Develop guidance document on integrated approaches to manage water quality
- Upgrade substandard septic systems to Nitrogen-reducing systems; monitor advanced system performance
- Install stormwater management structures to treat surface runoff
- Monitor local water quality in eastern Ninigret Pond and Allen's Cove (in Green Hill Pond)

Engage community members in protecting water resources

- Technical training and workshops for septic system professionals
- Support / incentivize local landscapers and land owners to manage fertilizer use
- Support residents of all ages in adopting best practices to protect ground and surface water quality in the community



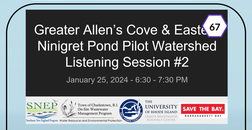
Connecting with Members of the Community

Engaging with the Residents in the Pilot Watershed through Listening Sessions

Local Library (June 2023)

Neighborhood Association (July 2023)

Small Group Chats (October 2023)



Virtual Presentation (January 2024)

Key Take-Aways

- We connected with 118 people in the pilot watershed
- Community members expect lectures—interactive sessions not always a hit
- People care about their local water resources — but don't know what to do / where to start to protect them
  - Unaware of existing resources / information
- Common questions / misconceptions:
  - What is current water quality like?
  - What is degrading local water quality? Is the relative impact of fertilizer use worse than septic systems?
  - What are best practices to protect water quality?

Sharing Information About Issues with the Broader Community via Education & Workshops

Key Take-Aways

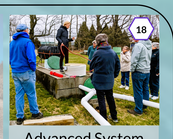
- We educated 330 people about issues relevant to the pilot watershed
- Advanced septic systems are a bigger draw / point of interest than generic septic system programming
- After-school programming is challenging
  - Logistics, scheduling, timing
  - Students' interest / knowledge retention
- Virtual programs more accessible than in-person events; better attendance (evening > lunch time)
- Common questions / misconceptions:
  - How important are advanced *vs* conventional septic systems to protect water quality?
  - Funding options for septic system upgrades
  - Septic system routine maintenance needs
  - What are best practices for well water testing?

Advanced System Field Training for Septic System Professionals (April 2023)

Farmer's Market Info Booth (Summer 2023)

Septic Systems Basics Talk

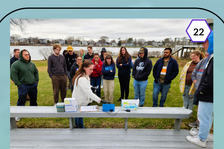
Virtual Septic Systems Basics Talk (with RCAP & RIDEM)



Advanced System Field Training for Homeowners

SepticSmart Week (September 2023)

"Become a Water Hero" After-school Elementary Enrichment Program (Spring 2024)



Field Trips for URI students (Spring 2024)

Advanced System Field Training for Septic System Professionals (April 2024)

Guided Paddle Tour Watershed Celebration (June 2024)

Future Community Engagement

Farmer's Market Info Booth (Summer 2024)

- Weekly themes centered on residents' FAQs: Watershed Characteristics, Local Water Quality, Nitrogen Sources and Impacts, Well Water Testing, Septic Systems, Climate Change Impacts, Future Events/Programs
- Goals:
  - Hear from more residents about concerns, questions, needs
  - Share local resources and information
  - Recruit residents for future participation in programming and events

Salt Pond Smart

A voluntary program to empower residents in coastal salt pond watersheds to implement best practices on their properties that protect local water quality

(Developed to address key take aways and insights from past community engagement activities where residents shared needs and concerns; inspired by other successful voluntary property certification programs nationwide)

Key Elements: Training & Documentation

- **Provide context:** coastal ecosystems & their watersheds, current water quality
- **Learn about impacts of** current infrastructure and conditions / practices on property
- **Document best** property management practices in action that protect water quality

Program Structure:

1. Voluntary participation for residents in RI salt pond watersheds (tiered/zoned)
2. Complete ~3 h of training modules (context & support for documentation required the for certification process and checklist)
3. Complete and submit property evaluation (Certification Checklist for Infrastructure, Responsible Property Management)
4. Earn certification & signage that signifies property/resident is Salt Pond Smart

Certification Criteria (Basic & Gold Levels)

- **Infrastructure Assessment & Maintenance** (Septic Systems and Private Drinking Water Wells)
- **Responsible Property Management** (Stormwater Management, Landscaping Practices, etc.)

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SNEP Southeast New England Program