

The Gulf Association, INC

PO Box 140, Scituate, MA, 02060

The Gulf River and Its Impact on the Water Quality of the Cohasset Harbor and Its Recreational and Operational Use

We are a non-profit organization founded in 1961 to protect the Gulf River

<https://gulfriverassociation.org>

Presented by:

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Board Member, Gulf Association

Presented to:

Cohasset Harbor Committee

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About the Gulf Association



We were founded in 1961 to protect the Gulf River!

- A non-profit 501(c)(3) organization
- Members are individuals who believe in the protection of the river as a vital environmental resource to the Cohasset and Scituate communities
- We invite you to join our Board and Committees, including [The Gulf River](#) Facebook Group

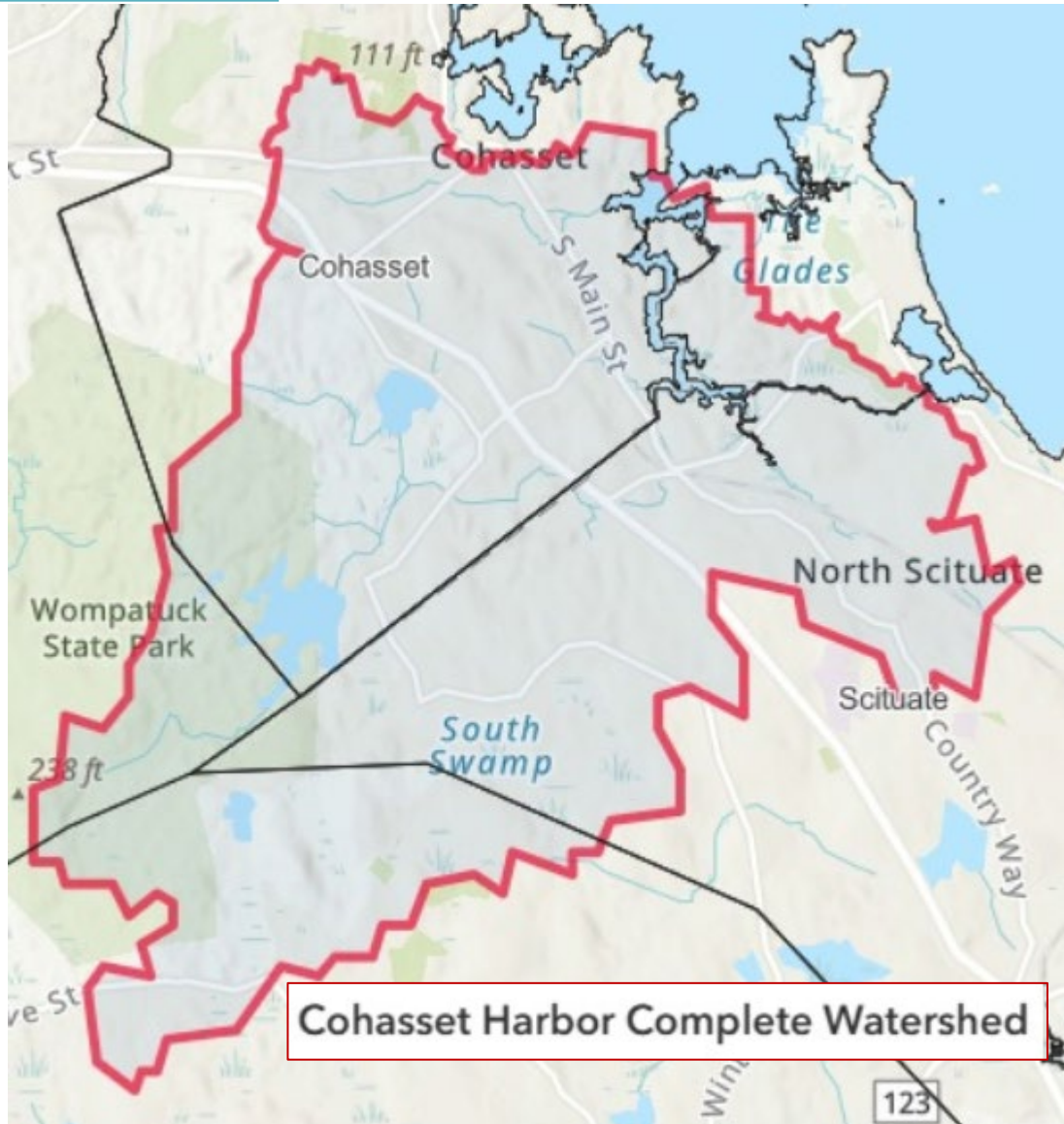
Visit gulfriverassociation.org to learn more about:

- Protecting the Gulf River
- Information for Property Owners and Recreational Users
- Water Quality Monitoring
- The History of the Gulf River

Did you know that: In 1640, the Gulf River was set as the official boundary between the Massachusetts Bay and New Plymouth Colonies to avoid conflicts over the plentiful salt grass. In 1691, the Great-Great-Great Grandfather of President Abe Lincoln built the first mill on the river. In 1792 a mill dam was built at the mouth of the Gulf River (where the Border Street Bridge is now), which kept saltwater out of the river and allowed for the harvesting of ice.

WHY ARE WE HERE?

The Gulf (and broader watershed) is directly linked to the Harbor



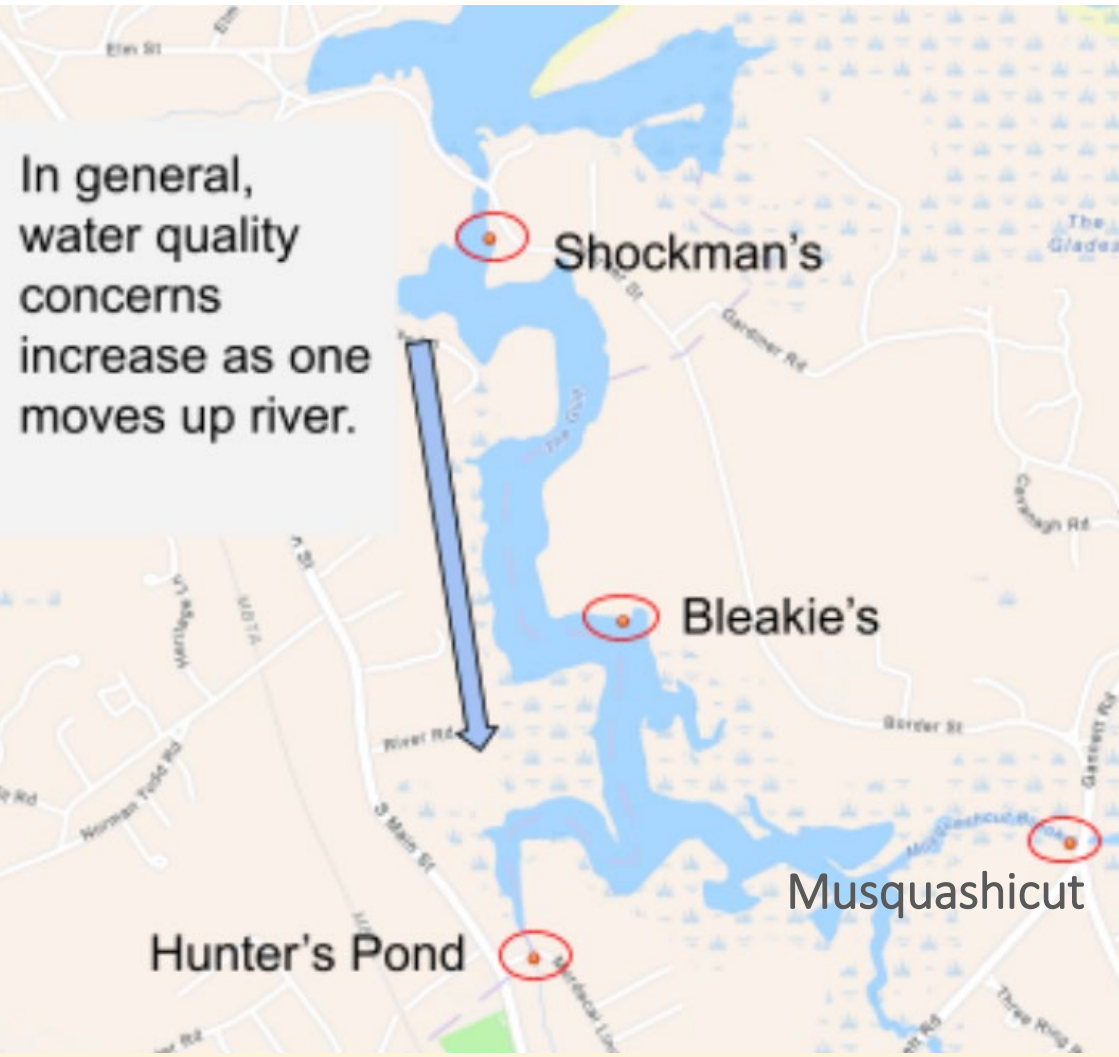
Pollutants in the Gulf River and James Brook flow into the Cohasset Harbor, which directly affects the harbor and its recreational use and operations.

During periods of poor water quality in the Gulf River and James Brook, **water quality reaches unsafe levels in the inner harbor, closing Bassings Beach.**

- Bacteria levels in the harbor cove, at the Fisherman's Dock and Yacht Club, exceeded safe limits during about 30% to 40% of the last two summers ([2024](#), [2025](#))
- Bassings Beach often has higher bacteria levels (and risk of beach closing) than most of the other Cohasset and Scituate beaches

Collaboration is needed to address the problem.

Gulf River Water Quality: Needs Improvement



CSCR Water Quality Reports:

- Water quality concerns are greater at the upper reaches of the Gulf River
- Greatest problem at Hunter's Pond (Bound Brook, North Scituate):
 - Significant bacteria concerns exceeding dangerous levels 5 out of 14 times
 - Optical brighteners (dyes found in laundry detergent) suggest wastewater entering the water
 - These areas in Scituate and Cohasset are not sewered
- Dissolved oxygen is approaching dangerous levels as water temperature is trending up
- Nitrate levels increase going up the river and are getting worse over time
- As a result, 2025 algae bloom has exceeded 2-3 times acceptable levels in the upper half of the river
- Algae aggravates the formation of polluted harbor foam

CSCR Sources:

[2023 Gulf Water Quality Report](#), [2025 Bacteria Test Results](#), [2025 Summary](#), [2010-2025 Gulf River Summary](#)

The Harbor is directly affected!

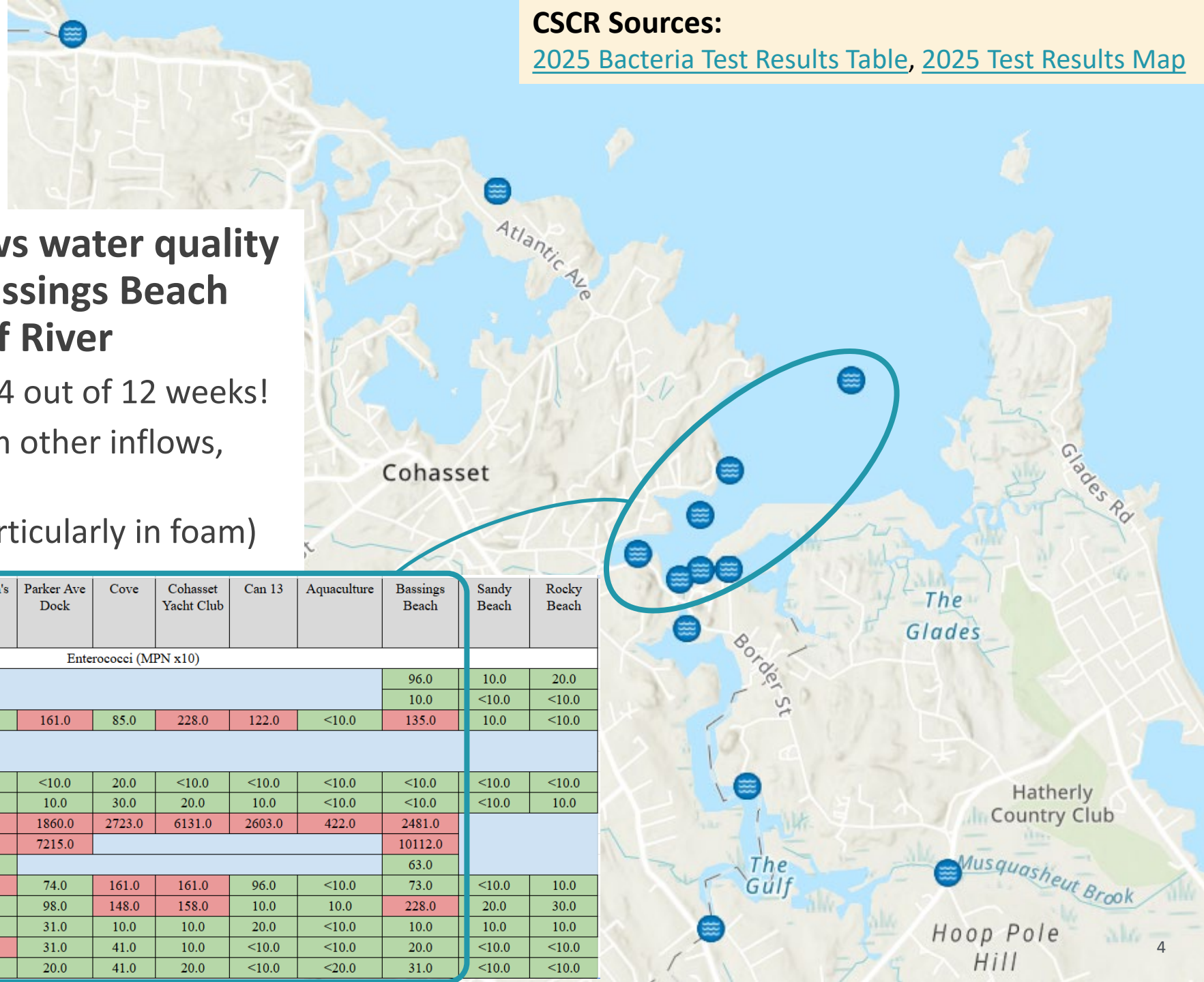
In 2025, CSCR testing shows water quality in the inner harbor and Bassings Beach was worse than in the Gulf River

- Unsafe levels (in red) during 4 out of 12 weeks!
- Indicates likely pollution from other inflows, such as James Brook
- PFAS is a concern as well (particularly in foam)

CSCR Sources:

[2025 Bacteria Test Results Table](#), [2025 Test Results Map](#)

2025	* Hunters Pond (Mordecai Lincoln)	Gannett Road Culvert (Musquashieut)	Gulf River Midpoint (Bleakies)	Border Street Bridge (Shockmans)	Fisherman's Dock	Parker Ave Dock	Cove	Cohasset Yacht Club	Can 13	Aquaculture	Bassings Beach	Sandy Beach	Rocky Beach
	E Coli (MPN)	Enterococci (MPN x10)											
6/10/2025											96.0	10.0	20.0
6/17/2025											10.0	<10.0	<10.0
6/24/2025					97.0	161.0	85.0	228.0	122.0	<10.0	135.0	10.0	<10.0
6/25/2025	96.0	85.0	10.0	84.0									
6/30/2025	61.3	<10.0	20.0	10.0									
7/1/2025					<10.0	<10.0	20.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
7/8/2025	68.0	<10.0	31.0	<10.0	10.0	10.0	30.0	20.0	10.0	<10.0	<10.0	<10.0	10.0
7/9/2025					4611.0	1860.0	2723.0	6131.0	2603.0	422.0	2481.0		
7/10/2025					15531.0	7215.0					10112.0		
7/14/2025					41.0						63.0		
7/15/2025	209.8	74.0	175.0	135.0	132.0	74.0	161.0	161.0	96.0	<10.0	73.0	<10.0	10.0
7/22/2025	118.7	148.0	31.0	<10.0	97.0	98.0	148.0	158.0	10.0	10.0	228.0	20.0	30.0
7/29/2025	133.4	41.0	<10.0	41.0	10.0	31.0	10.0	10.0	20.0	<10.0	10.0	10.0	10.0
8/5/2025	52.9	98.0	<10.0	20.0	11199.0	31.0	41.0	10.0	<10.0	<10.0	20.0	<10.0	<10.0
8/12/2025	77.6	63.0	<10.0	<10.0	20.0	20.0	41.0	20.0	<10.0	<20.0	31.0	<10.0	<10.0



The Harbor Foam: Loaded with Pollutants



The harbor foam is created by the rapids of the Gulf River as it flows into Cohasset Harbor.

While sea foams are often harmless, the foam in our harbor is not: It contains bacteria and other pollution at levels well beyond the safety thresholds that close our beaches, which can irritate skin and eyes, and poses a health risk to those with asthma and other respiratory conditions.

Sources: [The Cohasset Harbor Foam: What do we know about it?](#)
[PFAS in our Watershed](#)

CSCR research has found:

- Decomposing algae and other inorganic matter forms a soapy substance in the water that is churned into foam as the water cascades down the rapids
- It's particularly bad after heavy rains when the rapids are stronger and create more foam; when fertilizers, pesticides, bacteria, and other pollutants—including from septic systems—are swept into the river
- The bacteria and chemicals in the water are then concentrated in the foam, exceeding safe swimming levels levels 10 to 100 times
- DNA testing confirmed that the foam contains bacteria from human waste
- CSCR testing also documented high levels of PFAS (forever chemicals) in the harbor foam and (to a lesser extent) in the harbor water

We are not alone: 2025 “[State of Duxbury Bay](#)” report

Duxbury Water Quality

Understand the threats to water quality in Duxbury, and learn what you can do to help mitigate them. Sponsored by the Duxbury Bay Management Commission and The Town of Duxbury.

Threats to Water Quality in Duxbury

Learn how excess nutrients and chemical pollutants find their way to our cherished water supply creating serious risks to aquaculture, agriculture and human life.



Excess nutrients from lawn fertilizers and septic systems



PFAS

We hope to collaborate with the towns, state, other organizations and residents to address our water quality concerns. We can:

1. **Extend town sewers to properties in North Scituate and South/North Main Streets in Cohasset** (all of which still rely on septic systems and cesspools)

Putting these neighborhoods on town sewer—as Scituate is now pursuing for the North Scituate center with anticipated completion in 2028 ([link](#))—is urgent to address the pollution in the Gulf River and Cohasset Harbor watershed.

It is also timely, now that the state is making available funding ([link](#)) that can be used to reduce towns' cost of wastewater management. the experience in Cohasset's Little Harbor shows ([link](#)), replacing septic systems and cesspools with town sewers directly increases water quality and reduces algae blooms

2. **Educate/motivate residents to:**

- **Maintain and improve their septic systems** to protect public health and water quality (see [link](#) and these tips from the NSRWA [here](#))
- **Avoid chemical fertilizers and pesticides** anywhere near watersheds (i.e., much of Cohasset and Scituate)
Use only organic, low-nitrogen fertilizers ... or, even better, “greenscape” with fertilizer-free, drought-resistant, and pet-resistant clover and fescue lawns (for tips see [here](#)). Even with organic low-nitrogen fertilizers, use Duxbury's [fertilizer best practices](#)
- **Pick up after their pets, even in the woods**, to reduce fecal material washed into the rivers during heavy rains (see [here](#), [here](#), and [here](#))

3. **Learn from others:** as Duxbury points out ([here](#) and [here](#)), towns on the Cape, Nantucket, Wareham implemented (a) full or seasonal fertilizer bans, (b) passed new septic system regulations (e.g., within 150 ft of waterways) to reduce nitrogen pollution; (c) had to cull overpopulations of Canada geese, which can contribute to bacteria pollution (as covered [here](#))

4. **Coordinate with other Scituate/Cohasset conservation efforts** (e.g., the joint [Gulf Estuary Coastal Habitat Project](#))

Example: “State of Duxbury Bay” report and new initiatives

What You Can Do to Help

As a business owner or home owner in Duxbury, there are specific measures you can take to limit risks to water safety in our community. From following fertilizer best practices at home to choosing a landscaper who is committed to responsible fertilization programs, to maintaining the integrity of your septic system; we’ve outlined some steps you can take to be an agent of change.



Caring for Your Septic System



Lawn Fertilizer Best Practices



Choosing a Landscaper

Community Efforts



Duxbury Landscaper Pledge



Citizen Science



Aquaculture & Shellfishing



Agriculture



Well Water



Duxbury Beach



Town Water Supply

Questions?

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