



Fighting Nitrogen Pollution in Casco Bay

A Bay Paper from Friends of Casco Bay



Friends of Casco Bay
Casco BAYKEEPER

Is your lawn polluting Casco Bay?

Yes, if you are using fertilizers on your property. Anything you put on your yard can be washed downstream and into Casco Bay. You don't have to live on the water for your actions to impact the Bay.

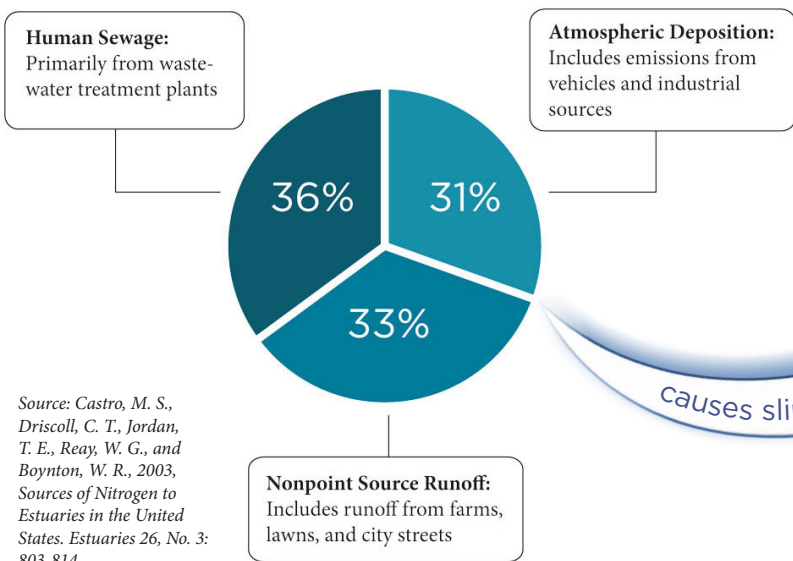
- Fertilizers that we put on our lawns can smother scenic coves with bright green slime.
- Lawn care fertilizers promote algae blooms that can choke out clams and other intertidal creatures.
- The chemical in fertilizers that is causing these problems is **nitrogen**. Other sources of nitrogen pollution are tailpipes, smokestacks, and sewage.

What you need to know about nitrogen

Nitrogen is essential for growing things, but too much nitrogen is bad! Nitrogen, one of the three components of fertilizer, can trigger algae blooms that coat coastal coves in ugly green slime. When these green plants die, decomposition sucks life-giving oxygen from the seawater. This process also releases carbon dioxide, creating acidic conditions that can make it harder for clams and mussels to build and maintain their shells. Friends of Casco Bay has found excess nitrogen at most of the coastal sites it tested.

Water quality sampling by Friends of Casco Bay has shown that nitrogen pollution is most severe in areas that are close to shore, near river mouths, at sewer overflow pipes, and other locations where stormwater runoff reaches the Bay. The further you go offshore, the better the water quality. This is an indication that what we are doing on land is impacting the Bay. We have work to do! Fortunately, unlike some environmental problems, there is a lot each person can do to fight nitrogen pollution.

Sources of Nitrogen Pollution to Casco Bay



Source: Castro, M. S., Driscoll, C. T., Jordan, T. E., Reay, W. G., and Boynton, W. R., 2003, Sources of Nitrogen to Estuaries in the United States. *Estuaries* 26, No. 3: 803-814.



causes slime

These footprints show algae smothering a mudflat near Falmouth. This "rise of slime" is caused by nitrogen pollution in our coastal waters.

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Nitrogen is one of the biggest threats to the health of our coastal waters. Yet the State of Maine has done nothing to regulate nitrogen. That is why it is important for each of us to manage our own nitrogen footprint.

Limits on nitrogen discharges are needed. In 2007, Friends of Casco Bay helped persuade

the Maine Legislature to pass a law requiring the Maine Department of Environmental Protection (DEP) to establish a limit on how much nitrogen wastewater treatment facilities may discharge into coastal waters. The DEP has yet to fulfill that directive. Tell your state legislator to make the DEP take action.

What is Friends of Casco Bay doing about it?

Friends of Casco Bay is educating homeowners and lawn care providers on how to grow healthy lawns without applying nitrogen-laden fertilizers. Ask about our “neighborhood socials” at keeper@cascobay.org.

Friends of Casco Bay is working with the Maine Department of Environmental Protection to set a responsible limit on nitrogen discharges into coastal waters.

We are working with the City of Portland on projects that reduce nitrogen-laden sewage overflows into the Bay.

Friends of Casco Bay is testing the waters throughout Casco Bay to document nitrogen levels.

Our pumpout boat removes raw sewage from the holding tanks of recreational boats. Contact pumpout@cascobay.org.

Our scientists are exploring the possible impact of excess nitrogen on survival of shellfish, such as soft-shell clams.

What can I do about it?

- Stop using fertilizers.
- Grow your grass to 4 inches long. This promotes longer roots that penetrate deep into the soil and extract the nutrients they need themselves.
- Add clover to your lawn. Clover makes its own nitrogen, enriching the soil naturally.
- Go to cascobay.org/bayscaping for tips on how to grow a green yard to keep Casco Bay blue.
- Go to cascobay.org/bayscaping for ten questions to ask your lawn care professional before you hire.
- Burn less oil, wood, and coal to reduce pollution from smokestacks.
- Keep your car tuned up to reduce pollution from tailpipes.
- Empty your boat’s holding tank at a pumpout facility to keep sewage out of the Bay.
- Pick up pet waste.
- Maintain your septic system.

Friends of Casco Bay is a community-based nonprofit organization founded in 1989, to improve and protect the environmental health of Casco Bay. Home to the Casco **BAYKEEPER**®, we are a founding member of the international **WATERKEEPER**® ALLIANCE.

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