

2025 State of the Waters: Cape Cod

by **Kristin Andres**

Each year, for the last six years, the Association to Preserve Cape Cod compiles water quality data, collected by other organizations and agencies from around the Cape, and applies a grading system for coastal embayments, freshwater ponds, and public drinking water supplies. The purpose of getting a regional perspective of the Cape's water quality is to answer the question "How healthy are the waters of Cape Cod?" The results are conveyed through visual maps, a narrative analysis, and a discussion of the underlying data, all accessible through a dedicated website, CapeCodWaters.org.

On the homepage of CapeCodWaters.org is an interactive map where the grades of embayments are visually shown by colored dots. Red indicates unacceptable water quality that requires action, and blue means good water quality and requires protection. Ponds, for which there are only a few years of data, are shown as either red or blue. And public drinking water is graded based on the quality of the "finish water" (meaning the water after treatment and before distribution to your tap). Other static maps can be found throughout the report that help to illustrate the data.

Nutrient pollution from poor wastewater and stormwater treatment and fertilizer use within a watershed to a pond and/or coastal embayments negatively impacts the water quality in these water bodies. In this latest report, of 51 embayments, 48 or 94 percent were found to be "unacceptable." If we take a look back to the 2021 report, 87 percent were unacceptable. In the 2020 report, 38 embayments or 79 percent were unacceptable, and in the 2019 report, 32 embayments or 68 percent were unacceptable. While this represents just six years of data, the trend implies continued degradation of water quality.

The worst scores relative to embayment lie on the south side of the Cape, where development is denser and there is slow exchange of water in estuaries. On the Cape Cod Bay side, ocean waters readily flush away excess nutrients and concentration of development is comparatively less. If you are in a watershed to a coastal embayment, which virtually everyone is, what you do on your property contributes to the quality of water in the coastal embayment.

Freshwater ponds are also graded. For this most recent report, 158 ponds had sufficient water quality data and/or cyanobacteria data to enable grading. The Cape has over 890 freshwater ponds, and a mere 13 percent are currently monitored. In any given year, one third of these ponds receive an unacceptable status, with variability in which ponds cross that threshold year to year. This lack of sufficient data for full assessment highlights the need for expanded and sustained monitoring.

Nineteen of the Cape's 21 drinking water supplies met all existing state and federal drinking water quality standards based on the annual consumer confidence reports required by law and were graded as "excellent." Two were graded as "good" due to the detection of total coliform bacteria, which in both instances the public water suppliers followed up with appropriate

response measures. Nearly half of the public drinking water supplies across the Cape detected PFAS (per- and polyfluoroalkyl substances, aka "the forever chemicals") but did not exceed state standards.

We've known for decades that our water quality in our coastal embayments is impacted by too much nitrogen, mostly from all our septic systems and some from the stormwater that runs off our roadways and from fertilizer use. Basically, we've gone beyond the carrying capacity of the Cape's natural ability to attenuate the excess nutrients we contribute to the land.

There are some obvious answers as to the question "How healthy are the waters of Cape Cod?" and it's not good. But if the decades of discussion, studies and advocacy have done anything, it's that we know there's a

way to fix this. Funding for towns is available through the Water Protection Fund, and the homeowner can seek assistance through the Barnstable County's Aquifund, which offers low- or no-interest loans for septic upgrades or sewer hookup costs.

There are many things that we can do toward fixing the problem. While most of us won't be here to see the positive impact of our actions, that shouldn't stop us from doing what we can to ensure the Cape Cod we love will be enjoyed by future generations. Here are just a few: Support funding wastewater planning and implementation and demand action from your elected officials to keep moving forward.

If sewer is already available in your neighborhood, hook up! Don't wait for the board of health's deadline. Cancel that lawn fertilizer program and embrace a Cape Cod lawn. After all, you live on Cape Cod.

Encourage your town to go organic in the care of town lands and skip the fertilizers and pesticide use for suburban-like aesthetics.

Get your neighborhood association to improve stormwater management on its private roadways: annually clean catch basins, street sweep paved roads, and upgrade stormwater management infrastructure to meet the heavier rainfall events.

Take action to keep stormwater from leaving your own property so that it doesn't contribute to the bigger public stormwater problem.

For more action items, information about the grading system, the status of your town's water, the data and other resources go to CapeCodWaters.org.

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