

State of the Waters: Cape Cod 2023



The Association to Preserve Cape Cod's fifth annual *State of the Waters: Cape Cod* report shows that the Cape continues to experience a significant number of coastal embayments and freshwater ponds with unacceptable water quality, while the quality of the Cape's public water supplies for the most part remains excellent.

The report is a comprehensive assessment of the quality of the Cape's coastal embayments, freshwater ponds and public water supplies. It grades water quality based on up-to-date sampling and monitoring data collected by organizations, towns, and other sources. Three grading systems are used for the report, one each for coastal embayments, freshwater ponds and drinking water. Each of the grading systems utilizes specific water quality parameters to develop scores, and the scores are translated into grades of either **acceptable** or **unacceptable** water quality for coastal embayments and freshwater ponds, and **excellent, good** or **poor** for public water supplies.

The purpose of the *State of the Waters* report is to generate greater public awareness of the Cape's water resources and to motivate policy makers to adopt measures that will improve water quality.



EMBAYMENT STATUS

Red dots show embayments with unacceptable water quality; blue dots indicate acceptable water quality.

Data sources: BBC, BCWC, CCS, Towns, PBA, SMAT, WBNERR

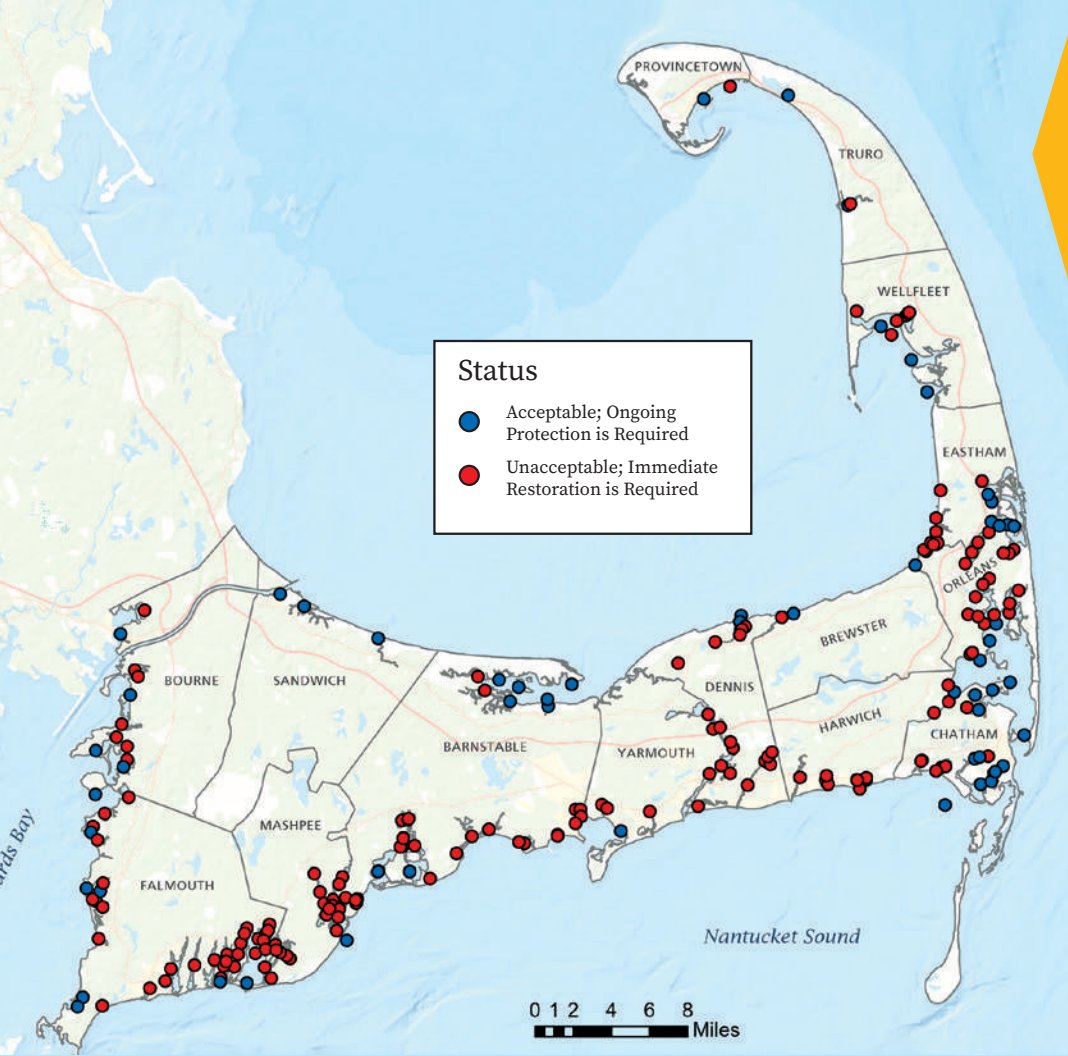
The number and percentage of embayments with unacceptable water quality in 2023 remained the same as 2022. A total of 43 embayments—or 90 percent of embayments graded—had unacceptable water quality. Over the past five years of reporting, the number of embayments with unacceptable water quality steadily increased to the high of 43 embayments documented last year and again this year. No embayments graded as unacceptable in the previous year improved to having acceptable water quality this year.

EMBAYMENT MONITORING STATIONS

Red dots show embayment monitoring stations with unacceptable water quality; blue dots indicate acceptable water quality.

Grades for coastal embayments were based on the data collected by several organizations, towns and agencies from 226 monitoring stations located in 48 embayments and estuaries across Cape Cod.

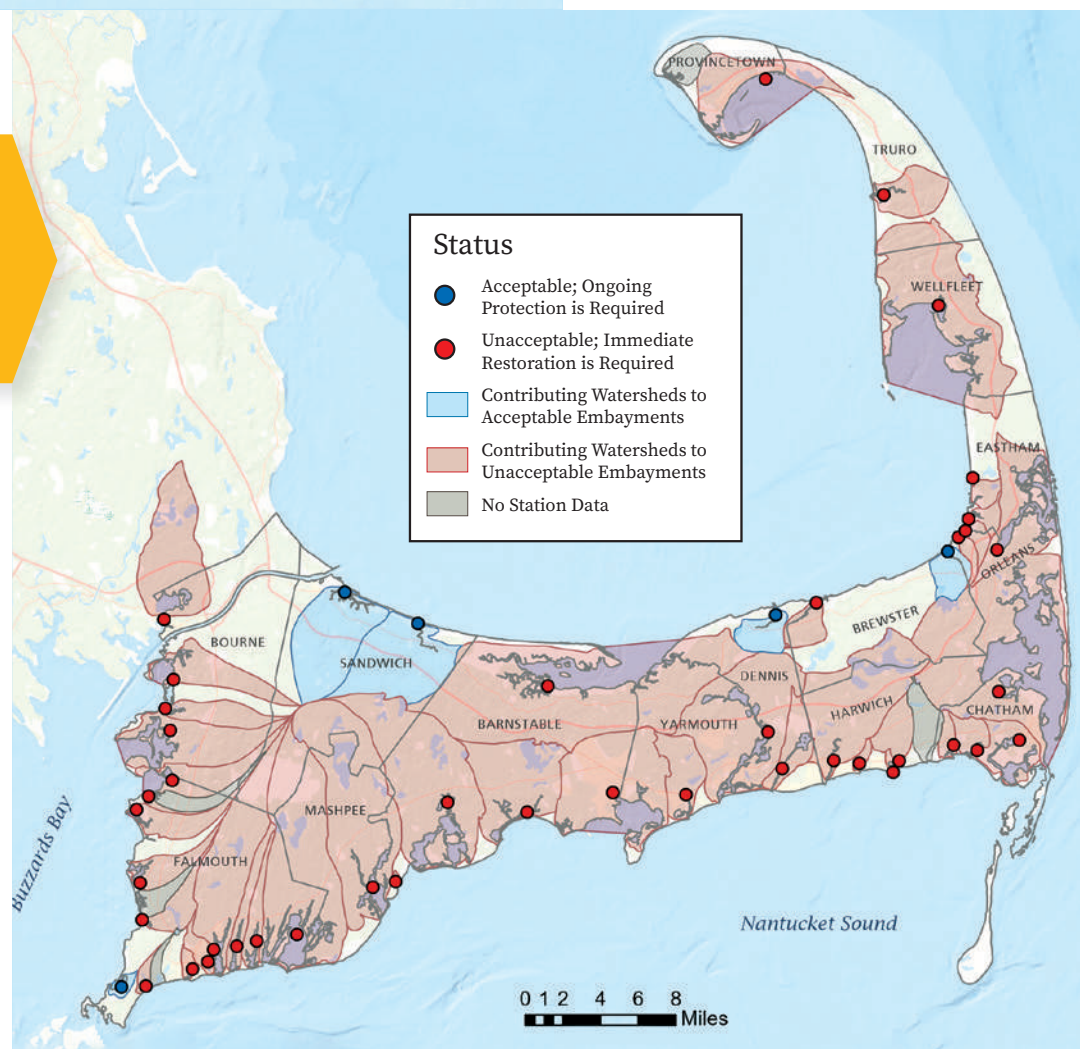
Data sources: BBC, BCWC, CCC, CCS, Towns, PBA, SMAST, WBNERR



EMBAYMENT WATERSHEDS

This map shows graded coastal embayments and their watersheds—the area of land that channels groundwater, precipitation and runoff into a body of water. Nutrient pollution from wastewater, stormwater and fertilizers originating within a watershed impacts the water quality of its embayment.

Data sources: BBC, BCWC, CCC, Towns, PBA, SMAST, WBNERR.



POND STATUS

Ponds in blue were graded as having acceptable water quality. Red ponds indicate unacceptable water quality.

The percentage of ponds with unacceptable water quality has remained fairly consistent over the past five years. Over one-third—37 percent—of all graded ponds in the 2023 *State of the Waters* report were determined to have unacceptable water quality. A total of 139 ponds were graded, representing only 16 percent of the Cape's 890 freshwater ponds. The small number of graded ponds demonstrates the ongoing shortage of water quality data available for most of the Cape's ponds.

Data source: Towns, Cape Cod Commission, Mashpee Wampanoag Tribe, BCWC, APCC

PUBLIC WATER SUPPLY STATUS

Green stars indicate excellent water quality, green stars in circles indicate the detection of PFAS6 within state standards, and yellow stars indicate good water quality.

Nineteen public water supplies received an "Excellent" water quality grade, meeting all state and federal drinking water standards. Two public water supplies received a "Good" grade due to the detection of total coliform bacteria, but both suppliers followed up the detection with appropriate response measures. There were no "Poor" grades this year. The report covers the second year of new state regulations limiting concentrations of six types of per- and polyfluoroacetate substances, referred to as PFAS6. Of the 19 public water supplies with "Excellent" grades, 10 had detected PFAS6 in some groundwater wells, but still met the state standard.

Data sources: Consumer Confidence Reports

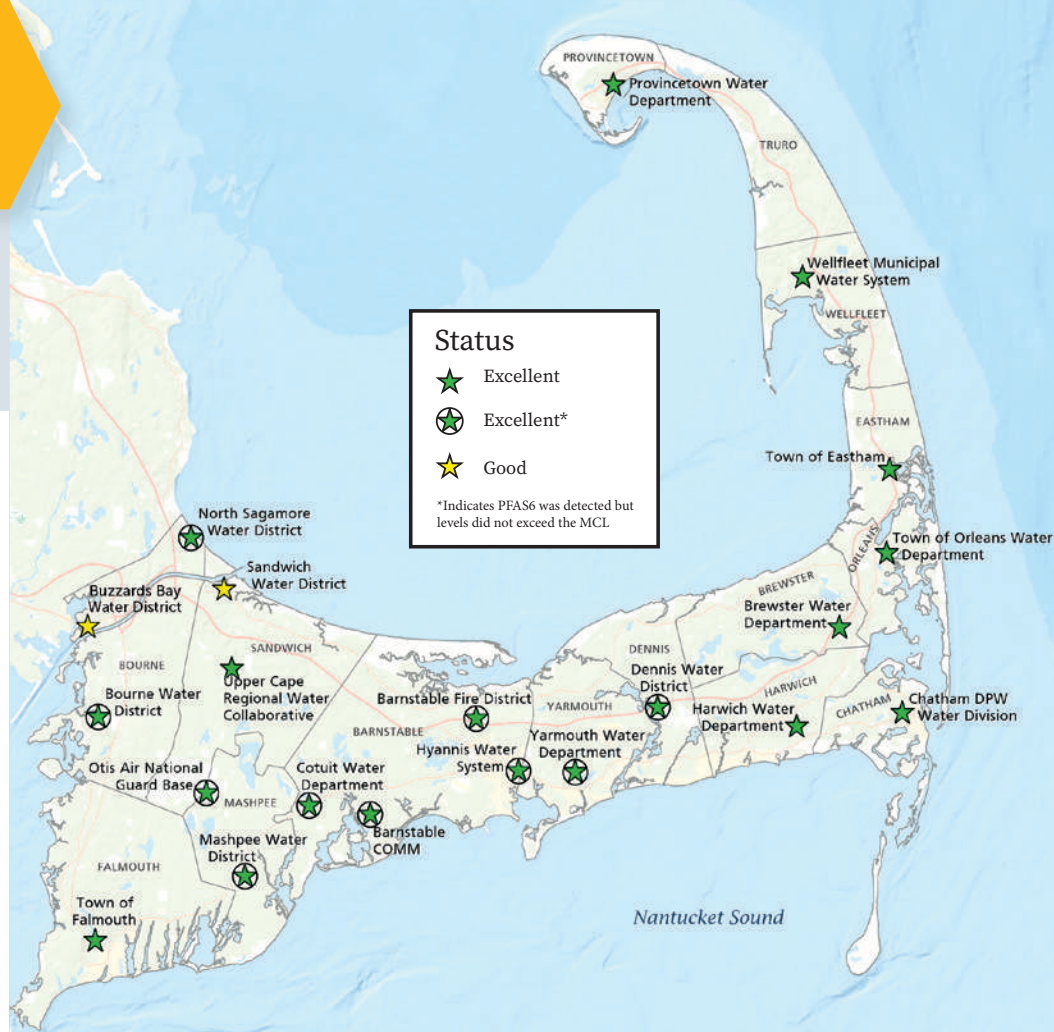




Photo: Gerald Beetham



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State of the Waters: Cape Cod is an annual water quality report by the Association to Preserve Cape Cod.

Please visit **CapeCodWaters.org** to view the full report, interactive map, Atlas of Water Restoration Needs and Solutions, and State of the Waters Action Plan.



 Visit **CapeCodWaters.org**

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