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CAPE COD HOME

PFAS Contamination & Well Water on Cape Cod: What Homeowners Need to Know

A free field guide from the people who actually live here.

If you own or are buying a home in Sandwich, Bourne, Falmouth, or parts of Barnstable, there is a water quality issue you need to understand before anything else: PFAS contamination from Joint Base Cape Cod.

This guide explains what PFAS are, where the contamination is, how to test your well, and what you can do to protect your household.

What Are PFAS?

PFAS stands for per- and polyfluoroalkyl substances — a family of thousands of synthetic chemicals used since the 1940s in nonstick coatings, stain-resistant fabrics, food packaging, and most critically for the Cape: **aqueous film-forming foam (AFFF)**, the firefighting foam used extensively at military installations and airports.

The defining characteristic of PFAS: they **do not break down** in the environment or in the human body. This is why they're called “forever chemicals.” They accumulate in tissue over time, and the EPA has concluded that even extremely low concentrations pose health risks, including increased cancer risk, immune system effects, and thyroid disruption.

The Source: Joint Base Cape Cod

Joint Base Cape Cod (JBCC) — which encompasses Camp Edwards, Otis Air National Guard Base, and the Massachusetts Military Reservation — used AFFF foam for decades of firefighting training and emergency response. Those chemicals soaked into the sandy, highly permeable Cape Cod aquifer and created a contamination plume that has been migrating through the groundwater.

The plume primarily affects **Sandwich, Bourne, and portions of Barnstable and Falmouth** — the towns closest to the base. Because the Cape's aquifer moves, the contamination has spread considerably from its original source locations.

Current Standards and Health Thresholds

In 2024, the EPA finalized a **maximum contaminant level (MCL) of 4 parts per trillion (ppt)** for several individual PFAS compounds and a combined limit for mixtures. This is an extremely low threshold — set at this level because of the chemicals' potency and persistence.

Massachusetts had already adopted some of the most protective PFAS standards in the nation even before the federal rule. The state's drinking water limit for PFAS6 (the six most common compounds) was set at 20 ppt total.

How to Test Your Well

If your property is on a private well in or near the affected towns, testing is the only way to know your actual exposure.

Options: 1. **Mass DEP certified labs** — The Massachusetts Department of Environmental Protection maintains a list of certified labs that can test for PFAS. Testing typically costs **\$150–\$300** for a full PFAS panel. 2. **Free state**

testing near the base — If your well is within the identified impact zone near JBCC, the state has offered free testing through various remediation programs. Check mass.gov/dep for current availability.

The DEP maintains updated plume maps at **mass.gov** — search “JBCC PFAS” for the most current groundwater monitoring data.

What to Do If Your Well Tests High

Do not panic, but do act. Several effective filtration options exist:

- **Activated carbon (GAC) filters** — granular activated carbon point-of-entry or under-sink units can remove most PFAS compounds effectively. These need regular filter replacement to remain effective.
- **Reverse osmosis (RO) systems** — under-sink RO units are highly effective at removing PFAS at the point of use. Ideal for drinking and cooking water.

Do not boil your water to address PFAS — boiling concentrates PFAS rather than removing them.

If your well tests above the MCL, the state may require the water supplier or the responsible party (the federal government, in JBCC’s case) to provide alternative water. Connect with your local board of health for guidance.

What If You’re Buying Property?

Ask for well test results — specifically for PFAS — as part of any purchase in Sandwich, Bourne, Falmouth, or Barnstable. If the seller doesn’t have recent results, make testing a contingency. A \$150–\$300 test is cheap insurance against a much larger problem.

Frequently Asked Questions

Are all Cape Cod wells affected by PFAS? No. The contamination plume is concentrated in towns near Joint Base Cape Cod — primarily Sandwich, Bourne, and parts of Falmouth and Barnstable. Eastern Cape towns (Chatham, Orleans, Wellfleet, Truro) are not in the affected zone, though any well can be tested for peace of mind.

How much does PFAS testing cost? A full PFAS panel from a Mass DEP certified lab typically costs \$150–\$300. In some impact zones near JBCC, the state has offered free testing — check mass.gov/dep for current programs.

Will a standard Brita filter remove PFAS? Standard pitcher filters (including Brita) are NOT effective at removing PFAS. Use a certified activated carbon under-sink filter or a reverse osmosis system, and verify the filter is certified by NSF/ANSI Standard 58 or 53 for PFAS reduction.

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