

Massachusetts and PFAS

Per- and polyfluoroalkyl substances (PFAS) are a class of human-made chemicals that make products non-stick, stain-resistant, and waterproof. First developed in the 1940s, they have been widely used in hundreds of industries. Unfortunately, we now know that minute amounts of PFAS can be toxic. There is evidence that PFAS suppress the immune system, making vaccines less effective. They can also increase the risk of cancer, liver disease, birth defects, and other health conditions.¹

Despite not even existing before the 1940s, PFAS are in the blood of 98% of Americans² —and these chemicals have contaminated air, water, land, and wildlife worldwide.



What do we know about how Massachusetts residents are impacted by PFAS?

Drinking Water: Elevated levels of PFAS have been found in 115 drinking water systems across Massachusetts, as of April 2022. Data on PFAS in Massachusetts drinking water can be found at: <https://eeaonline.eea.state.ma.us/portal#!/search/drinking-water>. When using this data portal to search, select “PFAS” under contaminant group.)

Massachusetts has set some of the nation’s most stringent limits on PFAS in drinking water. Massachusetts tests for 18 PFAS and has a maximum level in drinking water (known as a Maximum Contaminant Level or MCL) for 6 PFAS. Together these chemicals are known as PFAS6. Drinking water samples must contain no more than 20 parts per trillion (ppt) of these six PFAS.

Public water suppliers do regular testing to detect PFAS and other contaminants. If public water suppliers find more than 20 ppt PFAS, they will do additional tests to confirm findings. If the average of 3 monthly tests shows PFAS6 are above 20 ppt, water suppliers must take action to reduce the amount of PFAS.

They can:

- Link the water system to new sources of water
- Install treatment to filter out PFAS
- Blend water from wells with high levels of PFAS with water from wells with low or no PFAS

The cost of drinking water cleanup is considerable. Since 2019, Massachusetts has allocated \$30 million in state budget funds and \$140 million in federal funds to clean up PFAS in drinking water. Local cities and towns have also had to contribute to the cost of water treatment.

Communities near military bases and airports: Some of the first Massachusetts communities to find out that they had PFAS in drinking water were towns near military bases and airports. In Massachusetts, as in other states, firefighting foam with high levels of PFAS was used for many years. As part of training exercises, the foam was sprayed over the ground, where it sunk into the soil and contaminated groundwater, then drinking water, in towns like Ayer, Barnstable, and Westfield.

Surface Water: In 2020, the Massachusetts Department of Environmental Protection and United States Geological Survey tested Massachusetts rivers and found all had PFAS. Highest concentrations were found downstream of wastewater treatment facilities. Lowest concentrations were in less populated areas. PFAS have also been found in ponds and lakes on Cape Cod.

Animals: PFAS are also found in animals, including deer, freshwater fish, lobsters, and other marine animals.



How does PFAS get into the environment?

PFAS are used in hundreds of consumer products and industrial processes. The manufacture, use and disposal of PFAS has created widespread contamination. Contamination may come from:

Direct release into the environment: PFAS are directly released into the environment, when PFAS-containing pesticides are sprayed into the air or onto the ground. During manufacturing of products, PFAS are released to air and water.

Wastewater/waste: When waste (human waste, industrial waste and waste discharged to sewers) is treated, the wastewater and leftover waste (biosolids) contain PFAS. Biosolids are sometimes applied to agricultural land, where the PFAS are absorbed in the soil — and then into our food supply.

Landfills and incinerators: When products are thrown in the trash, the PFAS can leach out of landfills and get into groundwater and surface water. PFAS can also be emitted from the smokestacks of incinerators.

Food: PFAS in food packaging migrates into food. If food packaging is composted, it contaminates the compost. When compost is applied to plants, the PFAS in compost is absorbed by the plants and animals that eat them, including people.



Where can I get more information?

The State of Massachusetts has information about PFAS in Massachusetts, including multilingual consumer fact sheets at: <https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas>

pfas-exchange.org is a resource for people living in communities with elevated levels of PFAS in drinking water. The website has tools to help people understand water test information and blood test results, helpful information for working with medical professionals, and other tips.

Northeastern University is home to the **PFAS Project Lab**, a team of researchers and activists working on PFAS. News and updates along with a national map of PFAS sites and resources are at: <https://pfasproject.com>

Green Science Policy Institute, a California-based nonprofit research center, has news, science, and data on all things PFAS at: pfascentral.org

1 <https://www.atsdr.cdc.gov/pfas/health-effects/index.html>

2 https://www.cdc.gov/biomonitoring/PFAS_FactSheet.html

FOR MORE INFORMATION, PLEASE CONTACT:

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