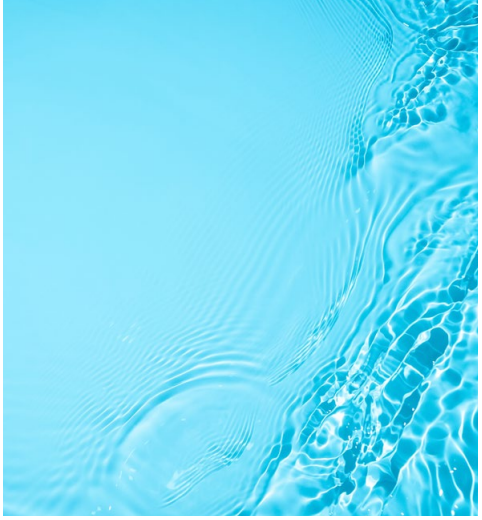


ANNUAL WATER QUALITY REPORT

Reporting Year 2023

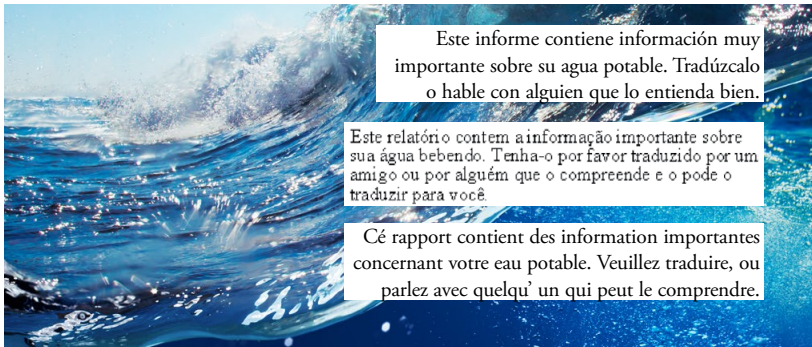
Ta broszura zawiera wazne informacje dotyczace jakosci wody do picia. Przetlumacz zawartosc tej broszury lub skontaktuj sie z osoba ktora pomoze ci w zrozumieniu zawartych informacji.

Presented By

Town Of Webster
Massachusetts
Est. 1832

Webster Water Department

PWS ID#: 2316000



Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Este relatório contem a informação importante sobre sua água bebendo. Tenha-o por favor traduzido por um amigo ou por alguém que o compreende e o pode o traduzir para você.

Cé rapport contient des information importantes concernant votre eau potable. Veuillez traduire, ou parlez avec quelqu' un qui peut le comprendre.

Our Commitment

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2023. Included are details about your source of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and providing you with this information because informed customers are our best allies.

Source Water Assessment and Protection

We are all concerned about the quality of water we drink. Drinking water wells may be threatened by many potential contaminant sources, including stormwater runoff, road salting, and improper disposal of hazardous materials. Webster's citizens and local officials can work together to better protect our drinking water sources.

DEP completed a source water assessment and protection (SWAP) report for the Webster Water Department. The complete report is available at the Webster Water Department or mass.gov/doc/webster-water-department-swap-report/download. It contains important information on land uses and potential threats within the protected areas of our wells. Webster's susceptibility ranking was determined by DEP to be high, which means we need to be extra vigilant in monitoring and restricting activities that might contaminate our water supply. The SWAP report also includes recommendations related to residential land uses, transportation corridors, hazardous materials storage and use, oil or hazardous material contamination sites, wastewater treatment plants, and wellhead protection planning. The Webster Water Department has been commended by DEP for taking an active role in promoting source protection measures in our water supply protection areas. The SWAP information can be used to set priorities, target inspections, focus education efforts, and develop a long-term drinking water source protection plan.

We can help protect these vital resources by continuing public education efforts with the schools, business community, and general public. Citizens can help protect our water supply by proper maintenance of septic systems. You can help by pumping out your septic system every two years and not using septic system cleaners. Never dump hazardous substances down septic or storm drains. For additional information or to offer suggestions or ideas to generate public awareness, please call the Webster Water Department at (508) 949-3861.

Community Participation

As a customer of the Webster Water Department, you have the right to participate in decisions concerning your drinking water. The water commissioners meet on the first Thursday of each month and post agendas and meeting minutes, as required by law. Any concerns can be addressed through the board of selectmen or the Webster Water Department. The Webster Water Department office hours are 7:00 a.m. to 3:00 p.m., Monday through Friday. We are located at 38 Hill Street. Please visit webster-ma.gov for information and forms.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. Environmental Protection Agency (U.S. EPA)/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or water.epa.gov/drink/hotline.

Water Stress

Water stress occurs when the demand for water exceeds the amount available during a certain period or when poor water quality restricts its use. Water stress causes deterioration of freshwater resources in terms of quantity (aquifer overexploitation, dry rivers) and quality (eutrophication, organic matter pollution, saline intrusion).

According to the World Resources Institute (wri.org), the Middle East and North Africa remain the most water-stressed regions on Earth. However, several states in the western half of the U.S. are similarly experiencing extremely high levels of water stress from overuse. It is clear that even in countries with low overall water stress, individual communities may still be experiencing extremely stressed conditions. For example, South Africa and the United States rank 48 and 71 on WRI's list, respectively, yet the Western Cape (the state home to Cape Town) and New Mexico experience extremely high stress levels.

There are undeniably worrying trends in water quality. But by taking action now and investing in better management, we can solve water issues before it's too late.

Questions?

For more information about this report, additional copies, or for any questions relating to your drinking water, please call Thomas Cutler, Water Department Superintendent, at (508) 949-3861.

If there is an emergency after hours, please call the Webster Police Department at (508) 943-1212.

Where Does My Water Come From?

The town receives its water from seven gravel-packed groundwater wells. Five of those wells are located at Pump Station 1 on Memorial Beach Drive. Water from these wells is blended with water from the well at Pump Station 2 and sent to the treatment plant on Memorial Beach Drive. The treatment plant consists of a state-of-the-art greensand filtration system that removes iron and manganese. Pump Station 3 is located on Bigelow Road. Each station is equipped with a sodium hypochlorite feed system for disinfection and potassium hydroxide for pH and corrosion control. Once the water is treated at each station, it goes directly to the distribution system.

The distribution system consists of 73 miles of water main, one booster station, and two water storage tanks. The Park Road elevated tank has a capacity of 1 million gallons, and the underground Rawson Road tank has a capacity of 1.65 million gallons. Together these facilities provide an average of 1.41 million gallons of water per day to 4,993 customer service connections. The department completed water main replacement on Lake Street and continued annual routine maintenance on gate valves, fire hydrants, leak repair, and water meters.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the Department of Environmental Protection (DEP) and the U.S. EPA prescribe regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and Massachusetts Department of Public Health (DPH) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material and can pick up substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and which may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through them.

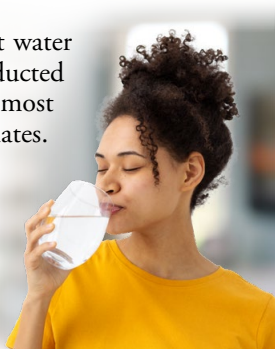
Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen and disinfectant levels and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water to prevent sediment accumulation in your hot water tank. Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at (800) 426-4791 or epa.gov/safewater/lead.

Tap vs. Bottled



Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council (NRDC), bottled water is not necessarily cleaner or safer than most tap water. In fact, about 40 percent of bottled water is actually just tap water, according to government estimates.

The FDA is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to $1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water. For a detailed discussion on the NRDC study results, visit goo.gl/Jxb6xG.

Benefits of Chlorination

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment. By far, the most common method of disinfection in North America is chlorination.

Before communities began routinely treating drinking water with chlorine (starting with Chicago and Jersey City in 1908), cholera, typhoid fever, dysentery, and hepatitis A killed thousands of U.S. residents annually. Drinking water chlorination and filtration have helped to virtually eliminate these diseases in the U.S. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water and the use of chlorine are probably the most significant public health advancements in human history.

How chlorination works:

Potent Germicide: Reduction of many disease-causing microorganisms in drinking water to almost immeasurable levels.

Taste and Odor: Reduction of many disagreeable tastes and odors from foul-smelling algae secretions, sulfides, and decaying vegetation.

Biological Growth: Elimination of slime bacteria, molds, and algae that commonly grow in water supply reservoirs, on the walls of water mains, and in storage tanks.

Chemical: Removal of hydrogen sulfide (which has a rotten egg odor), ammonia, and other nitrogenous compounds that have unpleasant tastes and hinder disinfection. It also helps to remove iron and manganese from raw water.

Fats, Oils, and Grease (FOG)

You may not be aware of it, but every time you pour fat, oil, or grease (FOG) down your sink (e.g., bacon grease), you are contributing to a costly problem in the sewer collection system. FOG coats the inner walls of the plumbing in your house as well as the walls of underground piping throughout the community. Over time, these greasy materials build up and form blockages in pipes, which can lead to wastewater backing up into parks, yards, streets, and storm drains. These backups allow FOG to contaminate local waters, including drinking water. Exposure to untreated wastewater is a public health hazard. FOG discharged into septic systems and drain fields can also cause malfunctions, resulting in more frequent tank pump-outs and other expenses.

Communities spend billions of dollars every year to unplug or replace grease-blocked pipes, repair pump stations, and clean up costly and illegal wastewater spills. Here are some tips that you and your family can follow to help maintain a well-run system now and in the future:

NEVER:

Pour FOG down the house or storm drains.

Dispose of food scraps by flushing them.

Use the toilet as a wastebasket.

ALWAYS:

Scrape and collect FOG into a waste container such as an empty coffee can, and dispose of it with your garbage.

Place food scraps in waste containers or garbage bags for disposal with solid wastes.

Place a wastebasket in each bathroom for solid wastes like disposable diapers, creams and lotions, and personal hygiene products, including nonbiodegradable wipes.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We participated in the fifth stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR5) program by performing additional tests on our drinking water. UCMR5 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water to determine if it needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data is available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2021	15	0	ND	NA	No	Erosion of natural deposits
Arsenic (ppb)	2021	10	0	4.0	ND–4.0	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2021	2	2	0.0119	0.00982–0.0119	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2023	[4]	[4]	0.71 avg.	0.19–1.16	No	Water additive used to control microbes
Combined Radium (pCi/L)	2021	5	0	0.439 avg.	0.0279–0.804	No	Erosion of natural deposits
***E. coli* [groundwater source]** (positive samples)	2023	NA	0	0	NA	No	Human and animal fecal waste in untreated groundwater
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2023	60	NA	10.00	7.30–10.00	No	By-product of drinking water disinfection
Nitrate (ppm)	2023	10	10	0.261	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm)	2021	1	1	<0.0100	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Perchlorate (ppb)	2023	2	NA	ND	NA	No	Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks, and explosives
PFAS6 (ppt)	2023	20	NA	5.84[1]	4.53–5.84[2]	No	Discharges and emissions from industrial and manufacturing sources associated with the production or use of moisture- and oil-resistant coatings on fabrics and other materials; Use and disposal of products containing these PFAS, such as firefighting foams
Total Coliform Bacteria (positive samples)	2023	TT	NA	0	NA	No	Naturally present in the environment
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2023	80	NA	37.00	15.00–37.00	No	By-product of drinking water disinfection

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2023	1.3	1.3	0.0810	0/60	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2023	15	0	6.10	3/60	No	Lead service lines; Corrosion of household plumbing systems, including fittings and fixtures; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2023	250	NA	65.50	NA	No	Runoff/leaching from natural deposits
Copper (ppm)	2023	1.0	NA	0.0195	NA	No	Erosion of natural deposits
Iron (ppb)	2023	300	NA	ND	NA	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2023	50	NA	ND	NA	No	Leaching from natural deposits
pH (units)	2023	6.5-8.5	NA	7.612 avg.	7.24–7.94	No	Naturally occurring
Sulfate (ppm)	2023	250	NA	6.53	NA	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids [TDS] (ppm)	2023	500	NA	172.0	NA	No	Runoff/leaching from natural deposits
Zinc (ppm)	2023	5	NA	0.0079	NA	No	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED SUBSTANCES [3]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2023	11.80	1.39–11.80	By-product of drinking water disinfection
Chlorodibromomethane (ppb)	2023	1.22	NA	By-product of drinking water disinfection
Hexafluoropropylene Oxide Dimer Acid [HFPO-DA; GenX] (ppb)	2023	<0.0009	NA	See sources for PFAS6
Lithium (ppb)	2023	<0.0009	NA	NA
Perfluorobutanesulfonic Acid [PFBS] (ppb)	2023	<0.0009	NA	See sources for PFAS6
Perfluorodecanoic Acid [PFDA] (ppb)	2023	<0.0009	NA	See sources for PFAS6
Perfluoroheptanoic Acid [PFHpA] (ppb)	04/19/23, 10/18/23, 11/29/23	<0.0009	NA	See sources for PFAS6
Perfluorohexanesulfonic Acid [PFHxS] (ppb)	2023	<0.0009	NA	See sources for PFAS6
Perfluorohexanoic Acid [PFHxA] (ppb)	2023	0.003	NA	See sources for PFAS6
Perfluorononanoic Acid [PFNA] (ppb)	04/18/23, 10/18/23, 11/29/23	<0.0009	NA	See sources for PFAS6
Perfluorooctanesulfonic Acid [PFOS] (ppb)	2023	<0.0009	NA	See sources for PFAS6
Perfluorooctanoic Acid [PFOA] (ppb)	2023	0.0044	NA	See sources for PFAS6
Perfluoropentanoic Acid [PFPeA] (ppb)	2023	0.0048	NA	See sources for PFAS6
Sodium (ppm)	04/18/2023	37.9	NA	Naturally occurring, runoff from road salt
Sulfate (ppm)	2023	6.53	NA	Naturally occurring

[1] Detected in finished water at Memorial Beach water treatment plant.
[2] Bigelow Well remained offline in 2023.
[3] Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist U.S. EPA in determining their occurrence in drinking water and whether future regulation is warranted.

Definitions

90th %ile: Out of every 10 homes sampled, 9 were at or below this level. This number is compared to the Action Level to determine lead and copper compliance.

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

ppt (parts per trillion): One part substance per trillion parts water (or nanograms per liter).

SMCL (Secondary Maximum Contaminant Level): These standards are developed to protect aesthetic qualities of drinking water and are not health based.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

Think before You Flush!

Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of our waterways by disposing responsibly. To find a convenient drop-off location near you, please visit bit.ly/3IeRyXy.

BY THE NUMBERS

800 TRILLION
The number of Olympic-sized swimming pools it would take to fill up all of Earth's water.

99%
of Earth's water is salty or otherwise undrinkable, or locked away and unavailable in ice caps and glaciers.

50
The average daily number of gallons of total home water use for each person in the U.S.

330 MILLION
The amount of water on Earth in cubic miles.

75%
of the human brain contains water.

71%
of Earth's surface is covered by water.

> "When the well is dry, we know the worth of water."
> *–Benjamin Franklin*

What Are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of manufactured chemicals used worldwide since the 1950s to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water. During production and use, PFAS can migrate into the soil, water, and air. Most PFAS do not break down; they remain in the environment, ultimately finding their way into drinking water. Because of their widespread use and their persistence in the environment, PFAS are found all over the world at low levels. Some PFAS can build up in people and animals with repeated exposure over time.

The most commonly studied PFAS are perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). PFOA and PFOS have been phased out of production and use in the United States, but other countries may still manufacture and use them.

Some products that may contain PFAS include:

- Some grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes
- Nonstick cookware
- Stain-resistant coatings used on carpets, upholstery, and other fabrics
- Water-resistant clothing
- Personal care products (shampoo, dental floss) and cosmetics (nail polish, eye makeup)
- Cleaning products
- Paints, varnishes, and sealants

Even though recent efforts to remove PFAS have reduced the likelihood of exposure, some products may still contain them. If you have questions or concerns about products you use in your home, contact the Consumer Product Safety Commission at (800) 638-2772. For a more detailed discussion on PFAS, please visit bit.ly/3Z5AMm8.