PFAS

Fact Sheet

WESTERN WATER

PFAS, short for per- and polyfluoroalkyl substances, are a group of more than 4,700 synthetic chemicals created to repel water, oil, grease and stains. The chemicals, dating to the 1940s and nearly indestructible over time, appear in a range of industrial and everyday consumer products, including makeup, food wrappers, nonstick cookware, carpets, stain repellents, and firefighting foams.

Because PFAS have been so widely used, most Americans have been exposed to them.

Based on research cited by the State Water Resources Control Board, PFAS is able to enter the body through various routes, including the consumption of contaminated food or liquids (including water), inhalation of PFAS particles, and contact with products treated with PFAS, such as carpets or clothing.

Over time, PFAS also have accumulated in land near airports, industrial sites, military bases, and landfills. Once PFAS leach into the land, the chemicals can, in some cases, seep into groundwater.

Reducing PFAS Nationwide

According to the U.S. Environmental Protection Agency (EPA), "Scientists have found PFOA and PFOS in the blood of nearly all the people they tested, but these studies show that the levels of PFOA and PFOS in blood have been decreasing."

The EPA has implemented a range of regulatory actions to address PFAS substances, including reviewing alternatives for PFAS related chemicals, developing a global stewardship program, proposing a significant new use rule to regulate inactive PFAS, and issuing rules to strengthen regulation on PFAS importation and use. These actions are part of the EPA's efforts to mitigate the risks associated with PFAS and protect human health and the environment. Additionally, the EPA has been working on developing regulatory standards for PFAS in drinking water.

New Testing Technologies

Regulators and stakeholders, including water agencies, have monitored PFAS for years. But only recently have technologies been developed to detect extremely low amounts of PFAS in food and water—down to the level of parts per trillion. One parts per trillion (ppt) is akin to one grain of sand in an Olympic-size swimming pool, or a pinch of salt in ten tons of potato chips.

Emerging Regulations

While water is not the primary source of PFAS, new testing methods have raised awareness, and concerns, about trace levels of PFAS in some drinking water.

In response, legislators and regulators in California have stepped up oversight of PFAS. The state's Division of Drinking Water has set the following guidelines:

- In August 2019, California regulators set the Notification Levels of 5.1 ppt for perfluorooctanoic acid (PFOA) and 6.5 ppt forperfluorooctanesulfonic acid (PFOS), down from 14 ppt and 13 ppt, respectively. This is equivalent to five to seven grains of sand in an Olympic-size swimming pool.
- In 2020, state regulators set new Response Levels at 10 ppt for PFOA and 40 ppt for PFOS. Previously, the Response Level was 70 ppt for the total concentration of the two chemicals combined.
- In 2021, Notification and Response Levels for perfluorobutane sulfonic acid (PFBS) of 500 ppt and 5000 ppt, respectively, were established
- In 2022, Notification and Response Levels for perfluorohexane sulfonic acid (PFHxS) of 3 ppt and 20 ppt, respectively, were established.

If PFAS levels exceed notification levels water agencies must notify local governing bodies such as city councils or board of supervisors. Additionally, when response levels are exceeded, water agencies must take the impacted water source out of service or provide public notification.

In April 2024, the EPA established federal limits called Maximum Contaminant Levels (MCLs) for some of the PFAS constituents as shown in Table 1. The federal PFAS rule set a 3 year (April 2027) initial monitoring period, followed by ongoing monitoring, with all water systems having to be in compliance with the PFAS MCLs in 5 years (April 2029). To be in compliance in April 2029 and thereafter, the average of all samples taken over the course of a year cannot exceed the MCLs shown in Table 1.

Table 1. PFAS constituents with EPA MCLs

Compound	EPA MCL
PFOA	4.0 ppt
PFOS	4.0 ppt
PFHxS	10 ppt
PFNA	10 ppt
HFPO-DA (aka Gen X Chemicals)	10 ppt
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	1 (unitless) Hazard Index*

**EPA established MCLs for PFAS mixtures containing at least two or more of PFHxS, PFNA, HFPO-DA, and PFBS using a Hazard Index MCL to account for the combined and co-occuring levels of these PFAS in drinking water. For more details about Hazard Index refer to EPA's factsheet at: pfas-npdwr_fact-sheet_hazard-index_4.8.24.pdf*

PFAS and Your Health

As research into PFAS continues, it is unclear if, or how, microscopic levels of the chemicals affect people's health. However, the chemicals can build up in the human body over time, and high concentrations of PFAS have been linked to health concerns.

Across the board, scientists still have much to learn about PFAS and human health. Many areas of PFAS testing and research remain in development.

Western Water's Commitment to You

Providing safe, reliable water to each of its 25,000 residential and business connections in portions of Riverside, Murrieta and Rainbow, is Western Water's top priority. Most of Western Water's drinking water that goes to our Riverside, Murrieta and Rainbow service areas comes from North California snowmelt, which yields the purest water available. In addition, Western Water can treat locally sourced groundwater at regional desalters. The Arlington and Chino desalters use reverse osmosis, a method proven to remove the most common PFAS, like perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) – from the drinking water.

Western Water's Murrieta service area is supplied with water from North California snowmelt and two groundwater wells. One of the groundwater wells has a single sample that exceeded the notification levels for PFHxS and PFOA. Western Water made all notifications to local governing bodies in compliance with state regulations. Additionally, Western Water is undertaking enhanced monitoring and studies so that the most effective treatment option can be assessed and implemented by the April 2029 compliance deadline.

Rigorous monitoring and testing of the water at over 148 locations within the water system, performing over 41,000 tests to monitor for contaminants and impurities.

The continuous monitoring of innovation in chemical detection and treatment technology.

Regular, transparent communication with customers about water quality, treatment and safety.

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